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OBITUARIES

IVAN DONALD MARGARY, M.A., F.S.A.

By the death of Ivan Donald Margary on 18 February, 1976, many people and organizations lost a sincere friend, scholar and benefactor, a man whose life may be summed up in the five words used as a text for the address at his funeral service: " He went about doing good."

Margary, the only son of Colonel Alfred Robert Margary, R.A., and Elizabeth Walker Margary (née Larnach) was born at 21 Kensington Palace Gardens, London, on 23 November, 1896. To use an old-fashioned term, he was " privately educated " before matriculating at Exeter College, Oxford, in 1913. He served as an officer in the 1914-18 war with the Royal Sussex Regiment, and the diaries he kept of this experience were given by him to the library of the Sussex Archaeological Society. After the war, he returned to Oxford where he took a degree in chemistry in 1921. In 1932 he married Dorothy, daughter of R. W. Jolly, M.D., of Peterborough, who survives him: to her we extend sympathy for the loss in which we share. There were no children of the marriage. Margary inherited a considerable fortune which he not only increased by his ability in financial matters, but which he employed in ways to be mentioned later on. From 1932 he resided at Yew Lodge, East Grinstead, engrossed in his scholarly and country pursuits.

Although archaeology (especially the Roman period) became his major concern, meteorology was his first and life-long interest; he was elected a Fellow of the Royal Meteorological Society in 1913, he served on its Council from 1933 to 1936, and contributed several papers to the Society's *Journal* between 1924 and 1934. His contributions to the Society's annual Phenological Report and to the " structure of the atmosphere " (with J. Edmund Clark, C. J. B. Cave and others) involved him in an enormous amount of work until just before the Second World War; he alone assembled and tabulated reports on the atmosphere from nearly 500 observers scattered throughout the British Isles. He maintained weather records at East Grinstead to the end: no wonder that he was such a reliable prophet when asked what the weather was likely to be on any particular day. In Margary's earlier years, meteorology and botany were closely allied studies, and as Professor Gordon Manley has written to me, Margary " was one of the last representatives of those many Fellows who brought with them the older traditions of thoughtful countrymen interested in the observation of every aspect of their surroundings." When " professionalisation " became the order of the day, with characteristic modesty Margary was inclined to retreat as a mere " amateur," but his bequest to the Royal Meteorological Society and the annual Margary lecture there will ensure that his work in this field is not forgotten.

Another learned Society with which Margary was early connected was the Royal Geographical. He was elected a Fellow in 1927 and although he does not seem to have published any articles in *The Geographical Journal*, he gave a handsome donation in 1962 with the expressed wish that the interest should be used to help that publication. From 1928 to 1938, he made careful observations on the erosion of the Norfolk coast from Sheringham to Eccles and took a series of measurements at over a hundred fixed points with the object of getting an average figure for

the extent of erosion over the period. A short account (35 lines) of this work was printed in *The Geographical Journal*, vol. xciii (1939), pp. 509, 510. The Society conferred Honorary Fellowship on Margary in 1973, an award which evidently he very much appreciated. In accepting the Diploma from the President, Lord Shackleton, Margary said how much the study of Roman roads was influenced by geography, and indeed geology, and that he therefore accepted the honour on behalf of all archaeologists who are interested in that form of work.

His interest in archaeology, and in particular in Roman roads, developed from the discovery of a stretch of Roman road on his East Grinstead estate, and led Margary to become the recognized authority on the subject. In a foreword to Margary's first book, *Roman Ways in the Weald* (1948), O. G. S. Crawford said that it " is a record of the most important investigation of the Roman roads of England that has ever been undertaken, and it will become a classic." How true those words have proved, and from such a humble beginning grew that immense two-volume work, *Roman Roads in Britain* (1955, 1957), which displays a depth of learning and interpretation based on personal observation to an extent which has seldom been paralleled.

On 14 January, 1932, Margary was elected a Fellow of the Society of Antiquaries of London; he served on its Council in 1948-9 and again in 1959-60, besides being on the Finance Committee from 1965 until the end of 1971. He gave large sums to the Society's general and publication funds, and was one of the most regular attenders at the Thursday meetings; his presence showed the diversity of his interests, and he also used the Society's fine library very extensively. He had joined the Sussex Archaeological Society a few years before, in 1927; he was a member of Council for 42 years and its chairman from 1946 to 1964, and President of the Society from 1964 to 1967. In whatever capacity he served, Donald Margary was courteous and patient; he is remembered as always smiling when in the chair or joining in the Society's excursions. At the same time he was very firm with anyone who inclined to depart from the subject under discussion.

Whatever Margary did was done to perfection. He was the first to spot a misprint or an error in the minutes; inaccuracy annoyed him and he could be quite belligerent about statements by individuals which distorted the facts. He had no time for half-measures and even the clock in the Council Room at Barbican House had to be right to the minute; I have seen him at an advanced age climb on a chair to wind and regulate that erring timepiece! He was a great benefactor to the Society and ' The Margary Room,' opened in May 1974, will remind future generations of his munificence which was also evident in earlier years when, if the Society found itself with an adverse balance at the time the accounts were presented, a cheque would be quietly handed over so that the new financial year would not begin with any outstanding liabilities. He contributed papers to our *Collections* ranging from Roman and other roads, Ashdown Forest and military field kitchens, to obituary or other appreciative notices.

Margary was also a member of, and benefactor to, the Kent and Surrey Archaeological Societies, and the Royal Archaeological Institute; he sometimes used to go on the latter's marathon annual excursions of a week's duration visiting archaeological sites, cathedrals and other churches, stately homes and so forth. He took the keenest interest in everything he saw and obviously enjoyed such a concentration of sight-seeing in the company of like-minded people. Yet he was not interested in foreign travel, and friends were surprised that he never visited Rome. He first joined the Council for British Archaeology's Executive Committee in 1949, and served as a representative of Group 11 (and later Group 11B) from then until 1954 and from 1959 to 1965; during the intervening period, 1955 to 1958, he was a Vice-President. He endowed the

Margary Trust Fund for field work, which has benefited so many archaeological groups throughout the country. By his will, Donald Margary left his residuary estate to the Society of Antiquaries, the Royal Geographical Society, and the Sussex, Surrey and Kent Archaeological Societies; may each of these ultimate beneficiaries ensure that some permanent memorial of their benefactor is provided.

We must now go back to 1930 when he gave 15½ acres at Wych Cross (near his Sussex home) to the National Trust; this was followed in 1943 by a munificent donation, which, with an even larger sum from the Pilgrim Trust, enabled the Avebury Stone Circle, Windmill Hill and Manor Farm to be secured for the National Trust and to form the nucleus of an estate which now exceeds 900 acres. In the 1970s the National Trust received further gifts towards the acquisition of properties in various parts of England; Margary's concern for the preservation of buildings, areas of outstanding natural beauty, or for objects which ought to be part of the national heritage knew no geographical boundaries. His greatest single contribution was the purchase of the site of Fishbourne Roman Palace and the erection of the buildings which now protect the precious mosaics and other remains. The capital outlay was enormous, but in the years when the site was being excavated and when Margary was chairman of the Committee, the cost of the work continued to rise and at almost every meeting a folded cheque was passed (almost surreptitiously) to the treasurer " because we must do the job properly." Fishbourne was Margary's " archaeological baby," and no child could have been more lavishly nurtured; a beautifully inscribed stone in the main building at Fishbourne records his gift. To the end of his life, Margary used to visit the Palace, either to receive such distinguished visitors as the late King of Sweden (see Frontispiece), or to encourage members of the staff and approve any changes on the site.

The catalogue of Donald Margary's gifts could be continued. They include, among a host of organizations, his College at Oxford, the Sussex Historic Churches Trust, his local church, the village clubs, " Friendless Churches," homes for the blind and old people, the Salvation Army, and hospitals. With regard to the latter, he made his family home, Chartham Park, available to Westminster Hospital from 1946 until 1963 when it became a convalescent home under the direction of the W.R.V.S. at (so typically) a token rent of £1 a year "if demanded." All these gifts were made with the minimum of fuss; he would say nothing at the time, but noted if mention was made of a need at some meeting, and soon after would arrive a short, but delightfully worded letter enclosing a cheque; any expression of thanks was almost received with surprise. These were all *real* gifts: Margary never attempted to exercise a continued control on how his money was spent—he never used his wealth as a means of influencing its recipients.

Margary may be described as the perfect example of the rich country gentleman who lived quietly on his estate where he maintained a prize-winning herd of Sussex cattle. He was ever mindful of the needs of other people and gave such help as they required. He was a well-built man with a rosy complexion and white moustache, and was nearly always dressed in a dark suit as conservative in cut as one would expect of his generation. His kindly nature and gentle, old-fashioned manner, endeared him to all who had the privilege of his friendship. His letters, in a clear and bold handwriting, expressing thanks, encouragement, advice (and occasionally criticism) were always gently worded, and the writing of them must have always been regarded as a priority.

Many people have helped me to compile this inadequate appreciation and all the letters I have received testify to Donald Margary's impact on the writers: "My personal recollection . . . is wholly pleasurable—quiet, retiring, very agreeable in conversation," says one correspondent;

he " was always interested in my own research and gave me great help and encouragement " writes another; he "was a wonderful friend . . . for nearly half a century"; " he will long be remembered by very many for his kindly but unobtrusive helpfulness "; " it was a pleasure to welcome the quiet and retiring figure who came up to it " [the annual Margary Lecture of the Royal Meteorological Society]; " there was nothing ostentatious about his munificence"; " a kind and gracious friend, one to whom I could always turn for help and guidance." Even if these remarks are those of persons who had special reasons to be grateful to Donald Margary, they demonstrate affection and gratitude for, and to, a man whose friendship was available to all who sought it. Margary knew that true scholarship is the sharing of knowledge, and he was almost prodigal in his sharing.

Humility and scholarship do not always go hand in hand, but Margary was both a scholar of distinction and the most modest and self-effacing of men. He firmly declined all academic or other honours offered to him; he knew that he was a rich man and he regarded it as his privilege to share his wealth as he thought fit. When his mind was made up on any subject, he was unshakeable. Never would he entertain for a moment any suggestion that his generosity should be officially recognised; the Honorary Membership or the Vice-Presidency of a Society was, in his view, an expression of friendship, and that was enough.

It was the evening before the official opening of Fishbourne (30 May, 1968) that Donald Margary made a confession to me. He was in my study and, in the course of conversation, said, " Do you know that I am very embarrassed? " Thinking that something had gone horribly wrong with Fishbourne, I asked what was troubling him. He then said, " As you know, I was at Exeter College and I gave a little towards the cost of building a new quadrangle; but, to my astonishment, they have called it the Margary Quadrangle." He went on to say that " Colleges shouldn't do that sort of thing." I happen to know the amount of that " little " donation—it was far from small and given at a time when the £ had a much bigger purchasing power than it has today. The quadrangle was officially opened by Archbishop Lord Fisher of Lambeth on 3 October, 1964.

With advancing years, Donald Margary tended to resent changes although he never rebelled against them because he accepted the fact that they were inevitable. As examples of that attitude, it may be mentioned that he gave up the chairmanship and then membership of the Sussex Archaeological Society's Council well before anyone could even begin to think that his powers of concentration were failing—they were certainly not! Good churchman that he was, he may have preferred the 1662 Order of Holy Communion, but he was equally content with the new forms of service as they had been devised by those in authority. In all things he endeavoured to see the other person's point of view; even if he did not always approve, he showed a remarkable degree of tolerance.

A simple service at the church of St. John, Felbridge, on 24 February, allowed many of his friends and representatives of the numerous societies and organizations with which he was concerned to bid farewell to Donald Margary. It was a day when the sun was shining; the tiny church was full of people who were there not only to pay their last respects, but to thank God that their friend had been spared a long and painful illness. In a moving tribute, the vicar of Felbridge referred to Margary as a loyal and humble son of the Church; he mentioned his wise counsel and material help in a variety of ways, his readiness to meet his Maker because his whole life had been based on the sure belief that there is a right time for everything and that God has that timing in His own hand. Donald Margary's remains were, in accordance with his will,

cremated and his ashes scattered; there is a tablet in Felbridge Church to join those of his father (died 1936) and his mother (died 1940). A memorial tablet is in the nature of a genealogical record, but for those of us who knew the man whose name is now engraved in stone, his way of life is sufficient. Perhaps an appropriate epitaph, if one is needed, would be a line from Gray's *Elegy:* Large was his bounty, and his soul sincere.

As a postscript, it may be recorded that on 1 October, 1852, a grant of arms was made to Joshua John Lloyd Margary of Kensington, which took the form of a blue and silver shield charged with three daisies—a pretty pun—marguerites for Margary. I like to think that these arms demonstrate that Donald Margary's puckish wit was inherited. Although the daisy is a humble flower, it is not to be despised; humbleness and generosity are two of the greatest virtues, and in no one of my acquaintance have they been more evident than in the subject of this memoir.[1]

I have repeated here a little of what I have written elsewhere and which may not be generally available. I am deeply grateful to the many friends who have provided me with information, but I am particularly indebted to Miss K. M. E. Murray whose comments on my first draft were so valuable. Mrs. M. Rule was so kind as to supply the photograph which shows I.D.M. with the late King Gustav Adolf of Sweden at Fishbourne on 9 November, 1968.

F.W.S.

[1] The Margary family claim descent from the Norman family of de Marguery who bore three marguerites de pré for their arms. One branch of the Margarys went to Guernsey in 1570 and later settled in Dorset; a member of it (from whom I.D.M. was descended) went to London in 1680. From 1764, members of the Margary family have been Liverymen of the City of London and, at the time of his death, Donald Margary was the senior member of the Worshipful Company of Salters; his great-grandfather, Joshua John Lloyd Margary, was Master of the Company in 1832, and his father Alfred Robert Margary, in 1871. I am indebted to Mr. Harry Margary and to J. Steven Watson, *A History of the Salters' Company* (1963), for the information in this footnote.

ARTHUR ERNEST WILSON, M.A., D.LITT., F.S.A. 1891-1976

Dr. A. E. Wilson was born in Birmingham and educated at the King Edward VI Grammar School Aston, and Birmingham High School. Although he had a great gift for mathematics he studied history at Birmingham University and took his B.A. degree in 1912. In 1914 he received his M.A. degree and his D.Litt. in 1927. His first teaching appointment was to Loughton School, Essex in 1912 and in 1915 he came to Sussex and joined the staff of the Brighton and Hove Grammar School, then situated in Buckingham Road, Brighton. In 1916 he joined the Armed Forces and served for two years in the Royal Engineers (Signals) and the Army Education Corps. In 1918 he returned to the Brighton and Hove Grammar School where he became senior history master. In 1946 he moved to the Brighton Technical College as head of the Arts and Social Studies Dept. from which he retired in 1957.

In 1933/34 when lecturing to London University B.A. Extension Courses at the Brighton Technical College he became friendly with a student by the name of George Philip Burstow and through him became interested in local archaeological activities. He was soon a member of the team which included Dr. E. Cecil Curwen, G. A. Holleyman and G. P. Burstow. His first experience in the field was at the Early British agricultural village site at Telscombe excavated for the Brighton and Hove Archaeological Society under the direction of George Holleyman in 1935, and in 1936 he joined the team at Harrow Hill near Worthing where an Early Iron Age hill fort and a series of Neolithic flint mines were being investigated for the Worthing Archaeological Society also under the direction of G. A. Holleyman. In 1935 a small team of Sussex archaeologists comprising Dr. E. Cecil Curwen, Dr. A. E. Wilson and G. A. Holleyman spent a few days at Maiden Castle in Dorset where Dr. and Mrs. Mortimer Wheeler were engaged in their first season's work on this monumental site. The comparatively new technique of gridding the areas to be excavated was being employed both at the eastern gateway and on occupation areas within the earthwork and the use of this method on Sussex sites in the next few years was to have important results.

After assisting G. P. Burstow on the Celtic village site at the Devil's Dyke in 1937, Dr. Wilson became the director of two important excavations on Mount Caburn in 1937 and 1938 when the complex fortifications of the Early Iron Age hill fort were examined under the auspices of the Brighton and Hove Archaeological Society. It was here for the first time in Sussex the techniques used at Maiden Castle were put into practice. This was followed in 1939 by work on Highdown Hill, near Worthing. Here the target was a small Early Iron Age hill fort and a number of graves belonging to the early Saxon cemetery. This work was done on behalf of the Worthing Archaeology Society, but was interrupted by the commencement of war against Nazi Germany.

In most of these excavations the work was done by a team of volunteer helpers of both sexes backed by a small number of paid labourers who were employed on some of the heavier work and filling in. Valuable assistance was also given by a team of Rover Scouts from Brighton and Hove Grammar School led by Dr. Wilson.

After the Second World War Dr. Wilson resumed work on Highdown Hill in 1947 assisted by G. P. Burstow, G. A. Holleyman and R. Merrifield. Then followed a series of excavations on Roman sites in West Sussex including villas at Angmering and Sidlesham and the bath-house on Highdown Hill. This involvement in local Roman sites led Dr. Wilson to taking charge of the

important series of rescue digs in Chichester occasioned by the clearance of sites and buildings damaged by enemy action in World War II (1939-1945).

From 1947 to 1961 Dr. Wilson made his final and most important contribution to Sussex Archaeology as director of excavations in the City of Chichester. His background of sound academic knowledge and fine record of field work on a number of sites from the Bronze Age to pagan Saxon times made him admirably qualified for this great task. As well as the examination of many buildings, the Roman cemetery site at St. Pancras, the medieval kiln in Orchard Street and the temple of Neptune and Minerva, Dr. Wilson's patient investigation of the city walls gave for the first time a clear history of the city's fortifications.

Among the large team of volunteer helpers the following need special mention—Mr. A. H. Collins, Mr. John Holmes, Mrs. Margaret Rule, Miss K. M. E. Murray and Mr. Alec Down. In 1961 Dr. Wilson resigned the Directorship of the Executive Committee and handed over control to John Holmes, F.S.A. In 1971 " Chichester Excavations I " by Alec Down and Margaret Rule was published by the Chichester Civic Society Excavations Committee as a tribute to Dr. Wilson from the City of Chichester.

Apart from his practical work in the field Dr. Wilson performed many other services in the cause of archaeology. He joined the Sussex Archaeological Society in 1937 and became a member of the Council in 1945. He became a President of the Brighton and Hove, the Worthing and the Sussex Archaeological Societies and was elected a Fellow of the Society of Antiquaries in 1944. He was also a founder member of the Sussex Archaeological Society Research Committee formed in 1947 and from 1957 to 1966 was General Secretary of the Sussex Archaeological Society. He lectured widely on archaeology and the Roman, Saxon and Medieval periods of English history and his archaeological reports and historical papers were a regular feature in *Sussex Archaeological Collections* and other archaeological periodicals.

In all his work as an archaeologist he had the unfailing support of his wife Lilian (née Martin) whom he married in 1917 and his daughter Clare (b. 1928) who followed her father into the teaching profession.

Dr. Wilson's erudition and organising ability made him one of the most important members of the team of amateurs who made Sussex famous in the field of archaeology in the half century between 1920 and 1970. He will be sadly missed by all who knew him.

G. A. HOLLEYMAN

GEORGE PHILIP BURSTOW, B.A., F.S.A. 1910-1975

Philip Burstow was an only child whose father died when he was very young. With considerable self-sacrifice his mother sent him first to Prestonville Preparatory School and then to Brighton College as a day boy. In his teens he became a junior master at Brighton College Preparatory School which was then situated in Lewes Crescent, Brighton. During this period he studied at the local Technical College and obtained an external London University B.A. degree. After World War II he returned to teaching, becoming the second master of Brighton College Junior School where he remained for 30 years until a few months before his death.

Philip Burstow remained a bachelor all his life but he had many loves. They included teaching, cricket, travel, stamp collecting and ecclesiology, but the greatest was archaeology. His enthusiasm and devotion in this field was enormous.

His first venture was to join the team of volunteers under S. E. Winbolt and R. Ward who excavated Southwick Roman Villa in 1929. Then in 1932 he assisted Dr. E. Cecil Curwen in his excavation of Thundersbarrow Hill behind Shoreham-by-Sea on behalf of the Brighton and Hove Archaeological Society. The site comprised a small Early Iron Age hill fort and a Romano-British settlement and it was here that he first met George Holleyman. Dr. E. Cecil Curwen was one of the most able amateur archaeologists of his day and Philip Burstow and George Holleyman became two of his most ardent admirers and disciples.

From 1932 until the year of his death Philip Burstow missed no excavation of any importance in the county of Sussex. In the 1930's he was present at Plumpton Plain, Highdole Hill, the Devil's Dyke, Harrow Hill, Mount Caburn and Highdown Hill, the last dig being interrupted by the outbreak of the Second World War in 1939. After the war, work was resumed on Highdown Hill in 1947 when Philip Burstow and George Holleyman assisted Dr. A. E. Wilson who was in charge of operations. About this time he assisted Norman Norris in his excavation of the West Blatchington Roman Villa and associated settlement sites. These were followed by large scale excavations at Itford Hill, a Late Bronze Age settlement, on behalf of the Brighton and Hove Archaeological Society (1949-1953), and Muntham Court, an Early Iron Age site on behalf of the Worthing Archaeological Society (1954-1957), both of which were directed jointly by Philip Burstow and George Holleyman. His last two large scale excavations on behalf of the Brighton and Hove Archaeological Society were Ranscombe unfinished Early Iron Age hill fort (1959-1960) and Glynde Early Iron Age Settlement (1961-62). In the post-war years he also assisted Dr. A. E. Wilson in his work on Roman Chichester and Prof. Barry Cunliffe at the Roman Palace, Fishbourne.

It was not only in the field that Philip Burstow was able to demonstrate his enthusiasm and skill. He became a first class lecturer on archaeology and was the author and joint author of several important papers and reports. He served on the Committees of the Brighton and Hove and the Worthing Archaeological Societies and was a member of the Council of the Sussex Archaeological Society for over 25 years. He was a President of the two former Societies and for some years Chairman of the Museum Committee of the Sussex Archaeological Society. He was also a founder member of the Research Committee of the Sussex Archaeological Society and was its Secretary and Chairman for many years. He was elected a Fellow of the Society of Antiquaries in 1946.

From his Junior School days in 1924 until the time of his death Philip Burstow kept a very detailed diary covering every aspect of his life, as a pupil and master at Brighton College, his

George Philip Burstow, B.A., F.S.A.

experiences during World War II and his work as an archaeologist. Under the conditions of his Will these diaries are now in the possession of the Society of Antiquaries and should prove a valuable source of information to the research workers of posterity.

Owing to a life long disability he was unable to join the Forces but at the time of Munich he had already joined the Auxiliary Fire Service. In 1942 he was appointed Chief Instructor at Withdean Fire Service Training School and later became Section Leader Instructor at the Training School for Overseas contingents under Mr. Glandfield, stationed in Kent, and it was here during 1944/5 that he saw active service during the V.1 and V.2 attacks on South East England.

His love of Brighton College combined with his passion for teaching lead him to write in 1957 a history of Brighton College in collaboration with Mr. M. B. Whittaker, edited by Sir Sidney Roberts. He also worked on the college register and took over the college archives—a task in which he was fully engaged at the time of his death.

He ran the Junior School cricket from 1933 until 1971 and had done much research into the early history of cricket in the county of Sussex.

Apart from all these activities, interests and achievements he had qualities which endeared him to his many friends. He was a man of high moral and religious principles and was always ready to help students and young people in the subjects in which he was so competent himself. Perhaps his most memorable characteristics were his cheerful enthusiasm, his sincerity and his great sense of humour.

His life of devotion to Sussex archaeology, embracing as it did so much work for our Society and other Societies, will give him a permanent place in the history of twentieth century archaeological research.

G. A. HOLLEYMAN

SUSSEX WEALTH AND SOCIETY IN THE REIGN OF HENRY VIII

by Julian Cornwall

The sixteenth century experienced acute social stresses caused, or at the very least, certainly aggravated, by severe economic pressures. The general character of the crisis has never been much in doubt. Contemporary observers knew all about it, or thought so. Confidently, with broad strokes of the brush, they painted a gloomy picture of the rich becoming richer, the poor poorer; of landlords racking rents, merchants manipulating prices, and whole farming communities uprooted and reduced to vagabondage to make room for sheep. Strong stuff! but with few exceptions these writers cast themselves as prophets of doom, polemicists, not analysts. Sure of their ground, fired by righteous anger, yet unaware of any obligation to cite evidence, they freely committed themselves to sweeping generalisations which have perplexed scholars ever since. For while they are entitled to be credited as intelligent men familiar with their subject, the results of modern research frequently conflict with their assertions, imputing to them at the very least gross over-simplification and ignorance of the very real differences between one region and another, even between adjoining counties.

What has often been lacking is the means of quantifying not merely the general problem but also its regional manifestations, for it never occurred to anyone to collect statistics at the time. Nevertheless, subject to certain reservations, the subsidy returns for 1524-5 can be used to fill the gap. Their virtues are threefold. In the first place they embraced an exceptionally large number of people, virtually everyone who owned any significant amount of land or personal property. Secondly, they were almost unique in taxing the wages of labouring people, a class normally considered too poor. Finally, unprecedented precautions were taken to stamp out, or at least minimise evasion. In 1522, partly to assess a forced loan, but partly also in preparation for future parliamentary grants, a novel form of musters was held which added to the routine survey of defence resources made on the renewal of war with France, a special view of wealth, ostensibly to ascertain the ability of individuals to finance the purchase of munitions, and no means, fair or foul, were neglected to secure accurate valuations, on which the new assessments were based.[1]

Like most of the others the Sussex musters have disappeared. The subsidy rolls, on the other hand, are well preserved. Half the county is represented by two complete returns for the instalments collected in April 1524 and January 1525, respectively, and there is one complete list for almost every township, subject only to relatively minor lacunae. Rushmonden is the only hundred for which there is no usable return.[2] The Cinque Ports—Rye, Winchelsea, Hastings, Pevensey and Seaford—were customarily exempt from parliamentary taxation. Westbourne was excused " at such time as the town was lately destroyed by fire . . ." as were the English inhabitants of Brighthelmstone,[3] presumably because it had been burnt down by a French raid in 1514. These, unfortunately, mean the exclusion of two or three of the larger towns, but otherwise the record is remarkably comprehensive.

[1] J. Cornwall (ed.) *The Lay Subsidy rolls for the county of Sussex*, 1524-25, Sussex Record Society (hereafter S.R.S.), vol. 56 1957). For the coverage of the subsidy see my " English population in the early sixteenth century," *Economic History Review*, 2nd ser. vol. 23 (1970), 33-6. For the musters see J. J. Goring, " The general proscription of 1522," *English Historical Review*, vol. 86 (1971), 681-705.

[2] These hundreds suffer from sundry, mainly small, defects: Bury, West Easewrithe and Avisford in Arundel rape; Buttinghill in Lewes; Totnore, Shiplake, Loxfield, Danehill Sheffield in Pevensey; Shoyswell in Hastings.

[3] *Statutes of the Realm*, iii, 230-9.

Population

The population of the county is estimated in round figures at 60,000; statutory exemptions and the defects noted above rule out greater definition. From just over 54,000 in 1377 it had grown by almost exactly one-ninth, compared with the national total which had remained virtually stationary, and many counties which had undergone a decline. In the south of England much of what growth had taken place was concentrated in forested areas, and Sussex was no exception, the percentage of taxpayers in the Wealden hundreds having risen since 1332 from 55.7 to 60.6.[1] Since the proportion of the population affected by fourteenth century subsidies was much smaller than in 1524-5 it is highly probable that the degree of real change was appreciably higher. Formerly the grain producing region had almost certainly contained a huge substratum of wretchedly poor, landless peasants, confined by villeinage to its labour intensive farming system, while in the pastoral economy of the woodlands such a pool of labour was unnecessary and probably did not exist on the same scale. Whatever the fate of this proletariat, whether it succumbed *en masse* to the plague, or the relaxation of manorial bonds enabled many of its members to migrate to the less crowded Weald, we may confidently postulate a major shift in the demographic centre of gravity during the later middle ages.

Distribution in 1524 raises several problems resulting from errors and omissions in the returns. Undue significance should not be attached to the often abrupt contrasts between individual hundreds. Much hinged on the location of the towns, the bigger centres of population, which, in proportion to their size and importance, were economically and administratively integrated with the surrounding countryside. Chichester city, for example, was clearly the hub of the whole coastal plain and not merely Box and Stockbridge hundred just outside the gates. Consequently it is more realistic to attempt geographical groupings of hundreds and market towns. At the same time it remains necessary to observe the boundaries of the rapes because they were assessed by different commissioners whose criteria varied to some extent.

Table 1: TAXPAYERS PER THOUSAND ACRES

Regions[2]	Rape	Taxpayers	'000 acres	Ratio
Weald	Chichester	610	55	11.1
	Arundel	1026	87	11.8
	Bramber	1167	97	12.0
	Lewes	879	104	8.4
	Pevensey	1557	133	11.7
	Hastings	1993	155	12.8
Coastal plain	Chichester	1468	69	21.3
	Arundel	657	35	18.8
	Bramber	495	22	22.5
Downs	Lewes	655	34	19.3
	Pevensey	589	32	18.4

[1] *Econ. Hist. Rev.* 2nd ser. vol. 27, 38-43; J. C. Russell, *British medieval population* (Albuquerque, 1948), pp. 132-3; W. Hudson (ed.) *The three earliest subsidies for the county of Sussex*, S.R.S. vol. 10 (1909), *passim.*

[2] Where necessary the data has been rearranged. Wealden Outliers of coastal hundreds, e.g. Marlepost in Tarring, and Sedgwick and The Forest in Brightford, are moved to the appropriate Wealden group.

In simple terms, the predominantly corn growing districts were much more populous than the pastoral and generally less fertile Weald: around 21 persons per thousand acres compared with less than twelve.

The anomaly is the Wealden division of the rape of Lewes. The hundreds of Barcombe, Poynings, Lindfield and Streat, produce a " normal " 12.5 persons per thousand acres. The problem is Buttinghill which comprised more than half the area. On the one hand much of it consisted of the Forest of Worth which might have been very thinly peopled at the time, and the district as a whole lacked substantial urban settlements. On the other, even though the overt defects in the list are not crippling in themselves, the suspicion remains that one or two parishes were overlooked; unfortunately the format of the return inhibits any effective check.[1] An analogy can, however, be drawn from the Downland division which is heavily weighted by the large population of the borough of Lewes; the ratio of the rural area alone was only ten, largely because of the number of deserted or shrunken villages such as Hangleton and West Blatchington.

The Pevensey returns are not in good shape. Here too major towns were conspicuously absent: East Grinstead was tiny. The true density might easily have reached twelve or more. It was certainly higher in Hastings rape, for Rye may have been at least as big as Chichester, and Hastings was a town of medium size.[2] Thus fifteen taxpayers per thousand acres becomes feasible, particularly in view of the proximity of Kent where the population of Wealden parishes is said to have been generally high at this time, and consequently to have stimulated industrial growth.[3]

Social Structure and Wealth

Since the rapes bore no relationship to geographical regions, the return for each reveals, if anything, more about the local commissioners' interpretation of their brief than of the influence of nature on the economy.[4] It is, therefore, appropriate to rearrange the data, relegating the raw figures to the appendix.

Table 2: DISTRIBUTION OF WEALTH, 1524-5

	Number of Assessments									Value of goods (to nearest £)								
	under	£	£	£	£10	£20	£40	£100		under	£	£	£	£10	£20	£40	£100	
Region	£2	2	3-4	5-9	-19	-39	-99	+	Total	£2	2	3-4	5-9	-19	-39	-99	+	Total
Coastal Plain	1041	573	301	300	171	119	47	9	2561	1068	1168	1007	1819	2072	2866	2541	1666	14207
Downs	595	213	136	140	81	54	26	2	1247	608	431	626	844	991	1302	1248	210	6260
Low Weald	1193	693	346	462	218	181	56	7	3156	1211	1406	1185	2728	2480	3976	2614	1580	17180
High Weald	1637	585	426	447	309	112	30	7	3553	1758	1193	1494	2835	3946	2757	1505	876	16364
	Percentages																	
Coastal Plain	40.5	22.4	11.8	11.7	6.7	4.7	1.8	0.4	100	7.5	8.2	7.1	12.8	14.6	20.2	17.9	11.7	100
Downs	47.7	17.1	10.9	11.2	6.5	4.3	2.1	0.2	100	9.7	6.9	10.0	13.5	15.8	20.8	19.9	3.4	100
Low Weald	37.8	22.0	11.0	14.6	6.9	5.7	1.8	0.2	100	7.1	8.2	6.9	15.9	14.4	23.1	15.2	9.4	100
High Weald	46.1	16.5	11.9	12.6	8.7	3.2	0.8	0.2	100	10.7	7.3	9.1	17.3	24.1	16.9	9.2	5.4	100

[1] The 1524 list does not show townships. The 1525 one identifies Balcombe, Crawley, Cuckfield, Hurstpierpoint, Slaugham, and the half hundred of Windham (Bolney and Twineham), but it is in poor condition. Two more possible divisions can be tentatively distinquished, but Ardingly, Clayton, Keymer, West Hoathly and Worth remain unaccounted for. Boundaries here were fluid: in 1327 Ardingly, Balcombe and West Hoathly had been returned in Streat hundred; *S.R.S.* x, 178-81.

[2] In 1565 the population Rye was put at 2,468, or 530 households, Hastings 280 households, Winchelsea 109: P.R.O., SP 12, v, no. 28.

[3] J. Thirsk, "*Industries in the countryside*," in F. J. Fisher (ed.), *Essays in the economic and social history of Tudor and Stuart England*, ed. F. J. Fisher (Cambridge, 1961), pp. 70, sqq. But it should be remembered that Wealden parishes were mostly very extensive, and hence anumerous population may not invariably have meant a dense one.

[4] L. F. Salzman, " Early taxation in Sussex," *Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 99 (1961), 5-8.

Even this exposition remains at best an approximation in that it stops short of breaking up the hundreds, many of which straddled geological boundaries. However, in many cases they were the smallest divisions to be shown.[1]

Contrary to prima facie expectations, the effects of different terrains were less than dramatically reflected in the structure of the assessments.[2] The outstanding feature is the comparative poverty of the Weald, as average per capita wealth simply demonstrates:

Coastal plain	£5.55
Downland	£5.03
Low Weald	£5.44
High Weald	£4.64

Between the other regions there is little to choose. The fertile coastal strip west of the Adur —the granary of Sussex—naturally held the lead, while the Downs not unexpectedly lagged somewhat behind. The intriguing contrast was that between the two sectors of the Weald. Somewhat surprisingly it was not the parishes astride the fertile Greensand beneath the Downland escarpment which enhanced values in the mainly Weald Clay district, in fact their wealth was noticeably below average. Nor was it the striking dissimilarity in the proportion of twenty-shilling assessments. Excluding this class the Low Weald does indeed trail well behind the chalk country as a whole, averaging approximately £8.14 per person compared with £8.66, but nonetheless still stands well clear of the £7.67 of the High Weald. The incidence of high assessments, i.e. £20 and upwards, seems to place the matter beyond dispute:

Coastal plain	49.8%
Downland	44.1%
Low Weald	47.5%
High Weald	31.4%

Not only did the High Weald house few rich inhabitants, it is further noteworthy that the largest concentration of wealth occurred among men rated at £10-19, in contrast with everywhere else where it was in the £20-39 range. The advantage of the Low Weald lay in its ability to support a richer, more diverse agriculture than the Hastings Beds where a combination of impoverished, sandy soils and abrupt contours restricted farming very largely to stock rearing, and grain had often to be imported.[3] As elsewhere in England, the broad tracts of woodland and common along the Forest Ridge proved an irresistible attraction to squatters; by this time the Wealden country as a whole teemed with people, and indeed it is not inconceivable that many obscure forest dwellers contrived to evade the taxman altogether. In arable districts usable land must already have been largely taken up, and the commons jealously guarded by farmers to whom they were essential for the support of the animals on which corn growing depended. In such circumstances the landless man stood a much better chance of finding a niche for himself by

[1] See Appendix for structure of Table 2.

[2] Joan Thirsk, *English peasant farming* (1957), *passim*, tends to overstate the contrasts between regions in Lincolnshire; her sample appears to be on the small side.

[3] J. Cornwall, "Farming in Sussex, 1560-1640," *S.A.C.* vol. 92 (1954), 67-81.

migrating to a less developed, mainly pastoral area. Nonetheless, in the long term the prospect was apt to prove illusory; poverty seems to have been the enduring characteristic of such regions which, in consequence, became the scene of by-employments of many kinds.[1]

Superficially the extreme contrast between rich and poor is impressive. On the coastal plain a mere nine men monopolised no less than 11.7 per cent of all wealth when at the same time a clear two fifths of the population had to make do with a wretched $7\frac{1}{2}$ per cent. Elsewhere in the county this inequality was indeed less pronounced, though only because so few men attained the dizzy height of a three-figure assessment. Nevertheless, the two percent or so of people worth £40 or more owned a clear quarter of the community's assets. Here too the forest hundreds stood apart with the richer people forming one per cent yet having no less than fifteen per cent of the wealth, while the 10.6 per cent shared among the teeming poor emphasises its overall poverty.

Yet appearances can be deceptive. The individual property of the top people—the gentry, plus a handful of merchants and yeomen—was in no case so great that it added up to an overwhelming proportion. Almost everywhere men of intermediate status—minor gentlemen, yeomen and tradesmen in a modest way of business, assessed at £20-39—owned nearly as much wealth, while the £5-19 range merits particular attention.

Table 3: WEALTH OF TAXPAYERS WORTH £5-19

Region	*Persons %*	*Wealth %*
Coastal plain	18.4	27.2
Downland	17.7	29.3
Low Weald	21.5	30.3
High Weald	21.3	41.5

Here was a group that was at once numerically large and collectively quite as well endowed as the gentry. For all that they were individually persons of modest means, the mere fact of numbering nearly 4000 all told not only made them a force to be reckoned with, but also lent rural society its essential characteristic as a community of small producers. For this is precisely what they were, husbandmen leavened with the smaller yeomen—like John a Stabull of Henfield[2] who was worth £13. 6s. 8d.—master craftsmen, tradesmen, and even the occasional gentleman; men who were taxed at only half the rate fixed for those who were better heeled, yet, nonetheless, in 1523 had been deemed capable of contributing to the forced loan, and to that extent better able to bear the burdens of citizenship than men rated below £5. It is a fair asumption that they could count on tolerably secure livelihoods from small farms, even if these were nothing more ambitious than good sized family holdings cultivated primarily for subsistence. The fact that they ranked merely as a superior stratum of the peasantry was no bar to acting as leaders of village society, as clearly they must have done in at least a quarter of the townships of the rape of Chichester alone; in several more the top man only just attained £20. In the Weald the fewness of rich men made them even more prominent, indeed the £10-19 class was easily the wealthiest. In all Rotherfield hundred there was only a single £20 taxpayer, which was one more than in either Danehill or East Grinstead.

[1] Thirsk, loc. cit, in *Essays in economic and social History;* A. Everitt, "Farm Labourers," in J. Thirsk (ed.) *Agrarian history of England and Wales*, iv, 1500-1640, ed. J. Thirsk (1967), 425-9.

[2] W. D. Peckham (ed.), *The White Act Book*, S.R.S., vol. 52 (Lewes, 1952), no. 165.

In 1529 certain inhabitants of Westdean (near Eastbourne) were named as " the greater, or at least the sounder part of the parishioners." Apart from William Seger, a gentleman, and Richard Frybodye, probably a yeoman, worth £40 in goods apiece, the description embraced John Venyall, £5, and John Colyn, £2, also another gentleman named John Bray, lord of the manor and patron of the living, whose assessment of £10 on land indicates that his personal property did not exceed £20 in value.[1] How many more like him may have lurked behind a modest assessment on goods? Neither he nor Seger was described as a gentleman in the Subsidy. Other than these men there was one more with £2 in 1524, plus a string of £1 assessments. Sir Thomas Smith lumped together " day labourers, poor husbandmen, merchants and retailers which have no freehold land, copyholders and all other artificers " as " the fourth sort of men which do not rule." Contrasted with gentlemen, yeomen and the burgesses of towns, he added:

> They have no voice nor authority in our commonwealth, and no account is made of them but only to be ruled, and not rule others . . . And in villages they are made churchwardens, sidesmen, aleconners, now and then constables, and many times enjoy the name of headboroughs'.

Parishioners of S. Andrew, Lewes, who served as churchwardens during the decade were variously assessed from £40 right down to 20s., but more than half were between £5-20.[2]

Contemporary social philosophy idealised the small producer as the rock on which the commonwealth was built. Government was ever solicitous of his interest, striving on the one hand to shield him from the aggression of rapacious landlords, and on the other from the insolent demands of his servants.[3] The 1593 Act for the maintenance of husbandry would stress that " . . . The Wealthe of the Realme is kepte dispersed and distributed in many hands, where it is more ready to answer all necessary charges for the service of the Realm . . ."[4] Only lately, in 1517, commissions had probed enclosures and the decay of arable farming. The report on Sussex has not survived, but it is unlikely to have uncovered anything really startling, for not only was strip farming largely confined to the south western third of the county, any objection to the immense flocks of sheep which grazed on the South Downs would have amounted to condemning the ground to revert to the scrub which nowadays disfigures so much of it.[5] Not that the Sussex peasantry stood in much need of protection. In addition to the numerous freeholders, the majority of copyholders benefited from customs which made them virtually owner occupiers. And not merely were they perfectly capable of taking care of themselves, on occasion they carried the offensive to the enemy, as when, in 1545, the tenants of Ecclesden sought to enlist the aid of the Courts in a bid to enlarge their holdings at their landlord's expense.[6] The same sort of men provided the backbone of the peasant risings of 1549, to the distress of observers who preferred to believe the insurgents a rabble of discontented servants and idle beggars. In Norfolk Robert Kett was able to set up an alternative administration thanks to the wealth of experience in parish affairs possessed by many of his followers. Fully half the sub-collectors of the subsidy, who operated at parish level in Bramber rape, were drawn from this class.

[1] All land, and goods worth £20 and over paid a shilling in £; goods worth £2-19 paid sixpence.

[2] *White Act Book*, no. 104; Sir Thomas Smith, *De republica Anglorum*, L. Alston (ed.) (1906), p. 46; H. M. Whitley, " The Churchwardens " Accounts of St. Andrew's and St. Michael's, Lewes from 1522 to 1601," *S.A.C.* vol. 45 (1892), 40-61.

[3] R. H. Tawney, *The Agrarian problem in the sixteenth century* (1912), pp. 313-50.

[4] *Statutes of the Realm*, iv, ii, 893.

[5] J. Cornwall, " *The agrarian history of Sussex, 1560-1640*," unpublished, University of London, M.A. thesis (1953), *passim.*

[6] J. Cornwall, " The Ecclesden outrage: A fresh interpretation," *S.A.C.* vol. 112 (1976), 7-15.

Men worth £3-4 may be regarded primarily as smallholders, though frequently the difference between then and the others may have reflected quality of soil rather than acreage, some temporary setback, or even plain inefficiency. They paid the same rate of tax but had escaped the loan.

Fiscally the £2 people were indistinguishable, but in practice they shared important features in common with twenty-shilling men, or wage earners. A good many men taxed on goods were classified as servants;[1] also a complete pair of returns is likely to contain men whose assessments fluctuated between the two figures. In Chichester city two-fifths of the workmen had £2 or more. Some must have been skilled artificers, but William Sampford of West Street, whose salary amounted to ten marks per annum, was actually the Receiver of S. Mary's Hospital; the stipend was reported as 26s. 8d. in 1535, but there must have been fees and perks in addition, and he was also a lay clerk of the cathedral.[2] Two-pound assessments based on wages could be found everywhere. In the town of Arundel £1 assessments look surprisingly few, but since nearly forty per cent of the inhabitants owned goods valued at £2 it is permissible to infer that the working man was relatively fortunate there; it was of course the seat of the earl of Arundel whose exalted status required him to be a big spender'[3] The comparative rarity of these superior wage earners in rural parishes reflects the lower rates paid for agricultural work. They tend to be found in the service of eminent persons. Although not so labelled, the household of the bishop of Chichester is readily identifiable at Aldingbourne where eleven of the 28 wage earners were returned at either two or three pounds; approximately half, including all the better paid ones, look like the Bishop's men. The Offington section is sub-headed, " The howsehold seruants of the lord la Warr in yerely wages." Three men, who must have been his chief officials, actually owned large amounts of land or goods, otherwise the establishment consisted of 32 men of whom seven had salaries of £4 and ten of £2. Richard Shirley of Wiston paid half his staff no less that five marks. Although for other £2 men " smallholder " seems the aptest description, it is far from certain that they were able to " live of their own " without supplementing their incomes by seasonal labouring. The expression " cottage farmer "[4] sums them up admirably, though some few were small craftsmen, such as smiths, carpenters and tailors.

Grouped together the one and two pound classes formed just over sixty per cent of taxpayers everywhere. Perhaps merely a statistical oddity, this is also consistent with the probable condition of the poorer folk, i.e. a big labour force in the arable chalk country, represented by £1 assessments, and a much smaller one in the pastoral Low Weald region balanced by a relatively high proportion of cottage husbandmen. In the High Weald the generally lower level of wealth pushed many of the latter down to £1. On the Downs, where wages exceeding twenty shillings were not recorded, the £2 folk appear more sharply differentiated, and the proportion of £1 assessments is correspondingly very high.

One-pound assessments pose a host of problems. In Arundel and Bramber rapes they rarely exceeded 37 per cent, and the 46.8 per cent of West Grinstead hundred forms a conspicuous enclave. In Chichester the 33-37 per cent of Dumpford, Singleton and Manhood hundred contrasts vividly with the 45-47 per cent of the rest. The deep discrepancies between adjacent

[1] Cf. also Rutland, P.R.O., E.179/165/110, 112, 113.

[2] W. D. Peckham, " The Vicars Choral of Chichester Cathedral," *S.A.C.* vol. 78 (1937), 156; idem., " The valuation of Chichester Cathedral, 1535," *S.A.C.* vol. 92 (1954), 170, 177.

[3] See L. Stone, *The crisis of the aristocracy*, 1558-1641 (1965), pp. 547-88.

[4] Everitt, pp. 412-25.

hundreds all along the coastal plain admit of no ready explanation. Box and Stockbridge (47.1) was sandwiched between Manhood (37.0) and Avisford (34.1). However, the exceptional 59 per cent in Tarring and Patching in the Liberty of the archbishop of Canterbury may reflect the backward condition of the inhabitants of ecclesiastical estates where bondage tended to linger later than on most others.[1] Equally baffling contrasts abound on the Downs where fifty per cent or more is common, yet in Holmstrowe it was as low as 29.3. Some of these may result from differences in administrative practice, but date of assessment is also a contributory factor: over most of Hastings rape the £1 assessments averaged above 45 per cent, but in Baldslow and Staple, for which there is only the second, or 1525, return, they scarcely exceed a third.

Practically all assessments below £2 in the western rapes were attributed to wages. As the tax due on goods was identical at this level, i.e. a flat 4d., the basis was immaterial, and consequently " wages " could serve as a blanket term, quite legitimately since the majority of people affected can have owned little in the way of moveables. Conversely, " goods " were cited almost exclusively in much of Lewes rape. Obviously some labourers possessed household effects, tools, and the odd animal; the question is, how many? In Pevensey and Hastings rapes some attempt was evidently made to discriminate between goods and wages, as well as introducing the term " profits," following the Subsidy Act's definition, " wages or profits for wages . . ." intended perhaps to cover cottagers of the poorer type, or outworkers who, while nominally independent craftsmen, were in practice little better than employees of the capitalists who organised rural industry—usually clothiers. In the Wealden setting these " profits " could well have been applied to the earnings of woodcutters, colliers and others working in the Forests.

Unfortunately the proportions fluctuate wildly: in Hartfield hundred only a single assessment on goods, and not one in Goldspur or Gostrow. In hundreds where each category accounted for at least a fifth of the £1 assessments,[2] 700 were based on earnings (including profits) compared with 585 on goods, which at least suggests that little more than half the class were wholly dependent on wages, probably the younger men. The distinction between wages and profits is unclear. In some hundreds profits were ignored, but the fact that in Guestling and Henhurst they displaced wages almost entirely implies interchangeability. In Alciston, Battle and Baldslow a total of 87 assessments on wages, 95 on profits and 15 on goods indicates that the last may be none too reliable either. Corroboration of the apparent equality of the two sorts of earnings may be provided by Goldspur where only profits were quoted in 1524, but in 1525 the collectors tried harder, starting by rounding up many more small taxpayers, and then proceeding to classify them scrupulously to end up with 51 on wages, 46 on profits and seven on goods.

Many wages entries are qualified with the phrase " by the year," and in Bramber rape " by the day " as well. For the village of Wiston the picture is even more complete. Here, first of all, were listed the servants of Richard Shirley, three taxed on goods, and four on annual wages. Ten more, for example John Broke, servant to Philip Polard, were also paid by the year. At the foot of the list, eight men assessed on day wages were grouped under the heading " Day Labourers." In the whole rape 139 men (24.7 per cent) paid on annual wages, and 380 (70.8 per cent) on day wages. The evident care taken over this return leaves little doubt that approximately a quarter of the wage earners were servants living in their masters' households, and the rest

[1] R. H. Hilton, *The decline of serfdom in Medieval England* (1969), pp. 47-51.

[2] Eastbourne, Dill, Willingdon, Loxfield, Ringmer, Danehill, Rotherfield, Foxearle, Bexhill, Ninfield, Shoyswell, Netherfield, Hawksborough, Henhurst, Robertsbridge, Guestling, Baldslow.

casual labourers, mostly cottagers supporting families on whatever work they could pick up. Seven of the 25 men assessed on wages without further qualification were described as servants, the rest may be regarded as day labourers.

Many collectors were content to enter the minimum qualifying pound. Others meticulously record sums such as 26s. 8d., 30s. and 33s. 4d., intending no doubt to identify supervisory grades and skilled workman. The statutory maximum for a farm bailiff was 26s. 8d. per year, plus 5s. for clothing; for a chief hind or shepherd, 20s. plus 5s., and for a common farm hand 16s. 8d. plus 4s.[1] Besides showing the significance of the minimum assessment it also explains the omission of female servants whose maximum pay was 14s. gross. However, day wages ranged from 2-3d. to 6-7d., according to the time of year, the occupation, and whether or not the employer provided food and drink. A farm labourer continuously employed for, say three hundred days, without meals, should have taken home something like £5 in a year, inclusive of bonus rates at harvest time. Since wages at this level are very much the exception, it is to be inferred that only the disposable surplus remaining after due allowance for basic needs was subject to tax, and that the wage of the in-servant, with all found, was adopted as the norm. In Foxearle and Ninfield hundreds, and a handful of other cases, wages as low as 12-15s. were taxed, and as this was *ultra vires* the collectors may have neglected to count the allowances of common servants. Since, except in the case of annually hired servants, uninterrupted employment cannot be assumed, there must have been a good many men whose net earnings were insufficient to bear tax. Some historians, indeed, have advanced the theory of a " submerged third " of the population. There is no doubt that few, if any, returns embraced anything approaching the entire adult male population even of a single village, so that it is a safe rule of thumb than an average of one third failed to make each list,[2] due in all probability to poverty. There is considerable evidence to support this, especially the fact that when we can compare two lists in detail it became apparent that the bulk of the discrepancies are provided by the wage earners, the £1 men.

The precise status of any of such humble people can only be stated in these general terms except in rare instances, and then not always for the best of reasons. William Skennar (Skynner) of West Street, Chichester, had a wage of two pounds a year as keeper of the bishop's palace. We know this because on 7 September 1533 he had too much to drink in the White Horse and got into an altercation with other customers, in particular Edward Holand, a tailor. When he left towards one a.m. he was pursued by Skennar, brandishing a sword, down South Street until, cornered, he turned on his assailant and smashed his skull with a stone. Reasonably enough he was pardoned.[3]

Landowners

Properly speaking the trifling number of assessments on land tell us only that values were low. It is not a guide to distribution, although we can safely assume that property owners were a minority. Nevertheless, the figures are suggestive. In four rapes land accounted for less than three per cent of assessments, and something like half of them were for £5 or more. In Pevensey and Hastings, however, the percentage jumps to nearly six; four-fifths were below £3, indeed practically half were under £2. Small freeholds were numerous in East Sussex, far more so than in the west,[4] and the fact that a number of people were taxed on tiny landed incomes further

[1] C. H. Williams, (ed.) *English historical documents* v, 1485-1558 (1967), pp. 995-6: Statute, 6 Henry VIII, c. 3, 1514-15.

[2] J. Cornwall, *Econ. Hist. Rev.* 2nd ser. vol. 23, 33-6.

[3] R. F. Hunnisett, " The last Sussex abjurations," *S.A.C.* vol. 102 (1964), 50-1.

[4] Cornwall, thesis, ch. 8.

emphasises the relative poverty of that part of the Weald. A concentration of them in the general area of Ashdown Forest is particularly noticeable. It smacks strongly of owner-occupied, poor quality smallholdings, twelve per cent of which yielded less than a pound per year, some as little as 6s. 8d., which can only mean that in terms of personal effects the holders were no better than labourers. Unlike goods and wages, there was no minimum for assessments on land, an omission that must have borne rather hard on these small men, all the more so in that the rate, one shilling in £ was the same as for goods worth upwards of £20. The inference is that only men of considerable wealth were expected to have to pay it.

As things turned out, the dull state of land values meant that many major landowners, the gentry, were in fact taxed on goods, (A vast amount of land belonged, of course, to the Church, especially to prelates and monasteries, but these cannot be dealt with here.)

At a time when there were barely fifty peers all told five had close connexions with Sussex.[1] Three were taxed as residents, but only a total payment is recorded for " the earl of Arundel and other barons," which must mean Lord De la Warr, whose household was returned at Offington and Lord Dacres whose establishment may perhaps be inferred from the location of several Fiennes in Danehill Sheffield hundred. The amount paid relates to a total of £2,272, but at this time Arundel's income alone was independently computed at £2,207, and ten years later he was assessed at £1,821. We may hazard the guess that the other two had incomes comparable to Lord Bergavenny's who was taxed on £500 and ranked about thirtieth in order of wealth.[2] Bergavenny was a courtier, perhaps not wholly from choice since in December he had had to enter into a recognizance not to visit Sussex or Kent, or indeed come into the King's presence.[3]

The problem with the untitled gentry is one of recognition, for not many are labelled. The eighty who were taxed on a minimum of £10 in land present no difficulty. Others had much less: Walter and Vincent Fynch of Battle as little as £2 13s. 4d. each, in spite of belonging to the eminent family headed by Sir William of Netherfield who was assessed at £100. Since humbler men rarely possessed more than about £2 a year, it is feasible to regard everyone on £5 as a gentleman, so raising the total to about 120. Without corroborative evidence, however, gentlemen taxed on goods are much harder to spot unless their names are familiar. Yet we must remember that the sixteenth century was noted for social mobility, and hence that families which had established themselves by Elizabethan times[4] might only have been approaching the threshold of gentility in the 'twenties. The dozen men outside the major towns whose goods ran to three figures were almost certainly gentle, but below this level they overlapped with successful yeomen. By no means all who claimed to be gentlemen were rich: John Covert of Ifield had a mere £7 in goods, in contrast with the £180 per annum of the great Richard Covert, J.P., of Slaugham, while Richard Comys of Ford got away with a trifling £2 assessment. Apart from this fairly exceptional pair, £20 seems to have been the effective minimum, but there could easily have been lesser undetected men, especially in the Weald, so that while assessments on goods appear to swell the total to some 170, the real figure could well have been nearer 200.

[1] Stone, op. cit. p. 758.

[2] P.R.O., E. 314, 41; *Letters and papers*, iii, 3504, IV, 2972; H. Miller, " The Tudor peerage, 1485-1558," unpublished thesis, University of London (1950), p. 29; Idem, " Subsidy assessments of the peerage in the sixteenth century," *Bulletin of the Institute of Historical Research*, vol. 27 (1955), 15-34.

[3] *Letters and papers, Henry VIII*, iii, 2712. This was probably connected with his marriage to the daughter of the duke of Buckingham who had been executed in 1521 on a trumped up charge of treason.

[4] F. W. T. Attree, " Lists of Sussex gentry at various dates," *S.A.C.* vol. 29 (1894), 106-8 (1570).

The limited circumstances of so many of the gentry depresses the median income to as low as £13 6s. 8d., although those of some solid worth—ignoring men whose status was more a matter of pretension than substance—averaged £24. The top half covered a wide range. Some two dozen were worth £50 or more, half of them £100 and upwards; additionally, as many as twenty who were taxed on goods may have had incomes of this magnitude. The eight knights all had at least £100 a year. An income of £480 placed Sir Roger Lewkenor of Trotton in the same league as the lesser baronage. Sir Thomas West of Halnaker (£200) was in fact De La Warr's heir, while Richard Sackville of Buckhurst (£133 6s. 8d.) a lawyer who later waxed fat on monastic spoils, was first cousin to Anne Boleyn and father to the first earl of Dorset. Sir David Owen of Cowdray, the second richest man with £400 per annum, was the King's cousin. A cantankerous old man, he had recently sued Wiliam Stert for making slanderous remarks about himself and his son in the market place at Midhurst. There being nothing to stop him provided he could avoid manual labour, Stert, a small property owner with £2 per annum, may have sought to pass as a gentleman,[1] and been put in his place. (One wonders, did he call Owen a bastard?—which he was!). Two years later Stert with others damaged Owen's fishpond at Midhurst, netted the fish and insulted Lady Owen. Sir David also engaged one John Bowyer to hold his courts at a fee of 20s. a year, and after a couple of years sued him for recovery of the records of the manors of Easebourne and Midhurst.[2]

Esquires averaged about half the incomes of knights, although their personal estates were often comparable. " Mere " gentlemen usually had much less of each, although there was much overlapping, and their status was sometimes confused. The minimal income of £5 would have been just enough to scrape by on; realistically these tiny landowners might be better described as gentlemen farmers. Office holding provided a supplementary source of income as well frequently conferring gentle status. John Nysell of Mayfield was one of several men taxed on " fees," and was perhaps an official of the archbishop of Canterbury, for Mayfield was an archiepiscopal manor and half a century earlier a Thomas Nysell had been employed on one of the Kentish manors.[3] Avery Bartwick, esq. of Horsham had until recently been Comptroller of the Port of Chichester.[4]

Although independent checks on assessments are comparatively rare the results are not discouraging. Sir Roger Lewkenor's £460 per annum compares with a valuation of £343 made after his death, while Thomas Shirley of West Grinstead's income of £47 6s. 8d. was, not surprisingly, rounded down to £40 for taxing. Thomas Mylle of Greatham had £24 per annum when he died, but was taxed on goods because they were valued at £27. John Shelley of Clapham was taxed on £200 per annum, and even thirty years later his inquisition post mortem did not put it higher than £240 or so. Edward Lewkenor of Fishersgate was indeed assessed at a hundred marks rather than his true income of a hundred pounds, and John Ryman of Appledram at £13 6s. 8d. instead of the true figure of £27, but for aught we know they might have been able to claim deductible liabilities.[5]

[1] Smith, *De republica Anglorum*, p. 41.
[2] W. H. Blaauw, " On the effigy of Sir David Owen in Easebourne . . ." *S.A.C.* vol. 7 (1854), 22-43; W. H. St. John Hope, *Cowdray and Easebourne Priory* (1919), p. 11.
[3] F. R. H. Du Boulay, *The Lordship of Canterbury* (1966), p. 400.
[4] S.R.S. 57, p. 84.
[5] P.R.O., Wards 9/129, ff. 170-1, 130 f. 229, 131 ff. 203, 271v-272v, 133 f. 58.

Certain public offices were hallmarks of superior status. Some 35 members of the Commission of Sewers appointed in 1534 can be identified; most were either rich men themselves or cadets of eminent families, with an average income of £40-50. More exclusive were the 26 Commissioners for the Subsidy itself, the median of eleven incomes being £100, and of eighteen personal estates £75. The pinnacle of the local hierarchy consisted of the nineteen resident Justices of the Peace who were men of similar standing. Chosen for their loyalty as well as influence and fortune, they did not automatically embrace all the top people, some of whom must, of course, have been elderly, others deficient in public spirit.[1] The great names on the Commission of the Peace were balanced by a handful whose means were distinctly modest, brought in perhaps to do the chores. Thomas Michell of Buttinghill hundred, with fifty marks in goods, served as a Subsidy Commissioner. As son of the Chief Justice of the Common Pleas, William Earnley, J.P., of West Wittering had a legal background; his £40 a year was produced by a medley of very small properties, in addition to which he leased Cakeham manor from the Bishop.[2]

The Village Community

Most country folk had very little contact with the gentry except to pay their rents. Not one village in five of Chichester Rape was the seat of a squire. Most were inhabited simply by farmers and labourers, occasionally a craftsman or two, the richest of whom might, as often as not, own no more than £10 or £15 in personal estate, although on the rich coastal plain yeomen worth upwards of £40 or £50 were fairly numerous.

The details of village life are elusive since we do not know for certain what assessments on personal property represented, unlike those on wages which conformed to official rates. No probate inventories made before 1560 have survived; however, a handful from other counties show that even the smallest assessments could be quite genuine, for many of them were fixed after substantial reductions in respect of debts and losses due to mischances such as crop failure and diseases among livestock.[3] Rough parallels can be traced between the returns and the occasional manorial survey, although the obstacles are formidable, for no survey is quite contemporary, few coincide with a single township, and the structure of landholding was constantly changing. Nevertheless, one of Boxgrove dated 1537, plus a couple more made, unfortunately, half a century later, do appear to have the requisite long-term stability.[4]

[1] *S.R.S.* vol. 57, pp. 25-26; H. Ellis, "Commissions of sewers for the Lewes Levels" (1534), *S.A.C.* vol. 10 (1858), 96-7; *Letters and papers*, iv, 297, no. 18, 961, no. 22.

[2] M. S. Holgate (ed.), *Sussex Inquisitions*, S.R.S. vol. 33 (1927), no. 20; *White Act Book*, S.R.S. vol. 52, no. 51.

[3] J. Cornwall, "*The squire of Conisholme*" in C. W. Chalklin and M. A. Havinden (eds.) *Rural change and urban growth*, (1975), pp. 44-5.

[4] P.R.O., SC 11/647, SC 12/15/76; S.A.T., Aber. 129.

Table 4: ASSESSMENTS COMPARED WITH MANORIAL HOLDINGS

BOXGROVE		RODMELL		PRINSTED	
£ 1524	*Ac. 1537*	*£ 1524*	*Ac. (1575)*	*£ 1524*	*Ac. 1586*
10	31		65		57
10	31	20	52	13	48
8	28	10	39	10	46
5	23	10	28	10	42
5	17	8	26	9	36
3	16	6	21	7	36
3	16	5	21	6	30
2	12	5	19	6	22
2	10	5	16	6	20
2	9	2	16	6	18
2	8	2	14	5	17
2	5	2	11	4	16
2	4	2	10	4	15
2	4		9	3	15
2	4	1	2	2	14
2	3	1	Cottage	2	14
1	3	1	,,	2	12
1	3	1	,,	2	8
1	3	1	,,	2	7
1	3	1	,,	1	6
1	2		,,	1	Cottage
1	1		,,	1	,,
1	1		,,	1	,,
1	Cottage		,,	1	
1	,,			1	
	,,			1	
				1	
				1	

Names are immaterial: not only was there a high turnover of tenants, many of the taxpaying residents would in fact have been sub-tenants.[1] The interest lies in any significant correlation between the rankings in order of magnitude. Boxgrove naturally yields the best result, revealing a community without extremes of either wealth or poverty. There must of course have been a proportion of servants and landless labourers; as many as a third of the inhabitants of each village may have escaped the subsidy, almost all of them poor. At Rodmell, in the lower Ouse valley, differentiation had progressed some way, half the farms being the result of the consolidation of two or more ten-acre virgates, leaving nothing more than a cottage and garden for the labourer. The arrangement of the figures here is frankly arbitrary, based on the assumption that £1 assessments (actually made on goods) would not represent as much as whole virgates. Tenements

[1] E. Kerridge, *Agrarian problems in the sixteenth century and after* (1969), pp. 48, sqq.

which, as a result, appear vacant could have managed by bailiffs drawn from among the poorer inhabitants. The demesne might very well have been, and in later times was actually leased by absentee gentlemen. As none of the taxpayers looks a likely owner of the 400 sheep it was capable of supporting, it has been omitted. Prinsted, on the Hampshire border, is a less satisfactory example, especially since the acreages of the three freeholds are not stated[1]. Although situated like Boxgrove on the coastal plain, assessments seem to relate to much bigger farms. The disabilities of serfdom, which still persisted, may have affected the prosperity of some tenants, on top of which entry fines might have been arbitrary, as opposed to the fixed ones, equivalent to two years' rent, customary at Rodmell.

Despite obvious inconsistencies, certain broad conclusions may be drawn. Few farms exceed forty acres. The £10 taxpayer was likely to occupy one approaching this figure. The £5 man with twenty acres or a little less would have a holding of median size—even at Boxgrove if we choose to disregard the obvious cottage tenements, those with less than, say, eight acres. The situation of the poorer people varied: in one village a fair proportion might hold an acre or two of land, in another, cottage tenements, even without land, might be all too few. Account must also be taken of the common grazing rights appurtenant to these acreages of arable strips in open fields; Prinsted holdings must have been effectively some 25 per cent larger, while Rodmell ones would have been more or less doubled by the broad expanse of downland pasture.[2] The size of the Boxgrove common is not known.

Rough and ready as they are, these pointers enable us tentatively to translate assessments into terms of the peasant economy as it existed in the nucleated township of the arable, predominantly strip farming region. There is no comparable evidence relating to the Weald where the characteristic hamlet settlements and scattered farmsteads are certain to have given rise to a markedly different structure, and where, moreover, it is necessary to assume that the generally less productive soils meant that at all levels assessments represented substantially greater acreages.

Towns

Upwards of twenty market towns can be identified, but few were of any size and none was large. At this date the populations of scarcely any provincial towns reached five figures; nonetheless a good many counties had at least one centre with something like 3000 inhabitants. Yet in Sussex, although it was a big county, not a single town had as many as 2000. Its elongated shape and lack of east-west communications dictated not one county seat but two at least: the traditional East and West divisions are of course very ancient. Chichester and Lewes (including Southover) each had a population upwards of 1500. So too, perhaps, did Rye at the eastern extremity of the county, indeed it may even have been the most populous, being almost certainly the fastest growing: a poverty stricken place around 1400, its population is thought to have climbed to between 1150 and 1350 by 1491-2, and was estimated at 2468 in 1565.[3] Perhaps it displaced Battle as a result of its growing maritime commerce, although the inland town was unquestionably better sited for a centre of local business and administration. Clearly Battle was no mean place; its hundred contained 233 taxpayers, equivalent to some 1150 inhabitants, and although these included the rural dwellers as well as the small parish of Whatlington, the town

[1] Nor do they tally with those in a later survey, P.R.O., SC 12/3/57.

[2] For Rodmell see W. H. Godfrey (ed.), *The book of John Rowe*, S.R.S. vol. 34 (1928), pp. 56-62.

[3] P.R.O., SC 12/98/28; A. J. F. Dulley, "The early history of the Rye fishing industry," *S.A.C.* vol. 107 (1969), 63.

itself may have accounted for about eight hundred. Along with Hastings, which numbered 1250 in 1565, it formed a fairly well marked class of the second rank. Eastbourne and Petworth (allowing for their rural parishes), along with Horsham, Midhurst, and perhaps Winchelsea were all around the five hundred mark. Finally there were the miniature ones, hardly distinguishable from villages except for having markets and fairs, indeed places like West Tarring, Broadwater, Storrington and Hailsham were hardly more than that. Cuckfield was perhaps a fair sized place; Arundel the biggest of the group had the best part of 400 people, and was also a borough, but another borough, New Shoreham, had barely a hundred. The borough of East Grinstead had not much more than 200, Steyning about 300. Bramber ranked as a borough but was minute and had lost its market. Robertsbridge is a somewhat doubtful case. However, a fair was held there, for when a certain John Ray had taken a freehold called " Fairfeild," in 1465, the Abbot of Robertsbridge " reserved to himself and his successors the said Fairefeild iij several days every year for ever for the fair to be kept thereon, on Holyrood Day, Holy Rood Even and the morrow after Holy Rood Day."[1]

Mere size is not all, wealth was equally important. Gross wealth naturally tended to correspond with population. Per capita wealth is perhaps more revealing even though it produces some apparent anomalies. Horsham held first place with £6 per person, with Chichester second at £5.5. Rather surprisingly, Broadwater came third at £5.3, Cuckfield fourth, £5.2, and Battle fifth, £4.9. Lewes, with £4.6 ranked no higher than eighth. The tendency for towns to attract large numbers of poor inevitably depressed the average, but to disregard this element merely confuses the issue by, for example, pushing Chichester down to eighth position. What does emerge is that however viewed Sussex towns were a long way from being centres of wealth and were not relatively more prosperous than many villages.

It was an age of mixed fortunes for towns. Urban decay was a familiar theme, and a depressing picture of cities scarred by derelict buildings is preserved not only in the notes John Leland made on his travels, but also in a group of statutes, 1536-42, which optimistically decreed the instant remedy of a general rebuilding on pain of suitable sanctions.[2] Yet, notwithstanding proven cases such as Lincoln,[3] the problem is something of a mare's nest. The contracting populations betokened by abandoned houses can rarely be confirmed in the absence of comparative figures, and the fact that Chichester's 1300 or so inhabitants of 1377 had increased to 1600 or more by 1524 seems to make nonsense of the Act of 1542 which named the city as one of three dozen where

> many beautiful houses . . . now are fallen down, decayed, and at this day remain unre-edified, and do lie as desolate and vacant grounds, many of them nigh adjoining to the high streets, replenished with much uncleanness and filth, with pits, cellars and vaults lying open and uncovered to the great peril and danger of the inhabitants . . . passing by the same, and some houses be feeble and very like to fall down dangerous to pass by . . .[4]

Unless the populations had reached some larger, but unrecorded, total in the interim the only possible comment is that these alleged ruins did not lead " to the great impoverishing and hindrance " of the city. Quite the contrary. Everything points to it consolidating its position as the chief urban centre of the west of the county, " a pretty large city, and wall'd about " in Camden's

[1] R. H. D'Elboux, *The Survey of Robertsbridge*, S.R.S. vol. 47 (1944), 10. Robertsbridge is included by F. E. Sawyer, " Sussex markets and fairs," *S.A.C.* vol. 36 (1889), 184-92, though not by Everitt in " The marketing of agricultural produce," *The Agrarian History*, iv, 475.

[2] G. R. Elton, *Reform and renewal* (1973), pp. 106-9.

[3] J. W. F. Hill, *Tudor and Stuart Lincoln* (Cambridge, 1956), pp. 19-22.

[4] P.R.O., E. 359/14; 32 Henry VIII, c. 18, *Statutes of the realm*, iii, 768.

day. Similarly Lewes—" for largeness and populousness one of the chief towns of this county"—had clearly achieved the same status in mid-Sussex, competing for precedence as county town: in 1496 the standard weights had been located there, but in 1510 it had been ordained that the sheriff should hold his tourn at the two in alternation.[1] The rise of Lewes was not inconsistent with the decline of some of its numerous medieval parishes. The absorption of St. Mary in Foro in 1538, and St. Andrew, 1545, into St. Michael implies that it was not so much deserted houses as redundant churches that were falling down in many places. Also in 1538 St. Peter's was united with St. Mary Westout precisely because the parson's resources did not suffice to keep it in repair.[2]

A sad contrast, New Shoreham was now but a shadow of its former self, returning a mere twenty taxpayers, compared with 56 in 1332 and almost a hundred in 1296. Ranked second to Chichester in 1327,[3] its prosperity was already declining by 1334; its tax quota was slashed by two-thirds in 1433 and temporarily remitted altogether in 1445. Enemy action is as good an explanation as any of this catastrophe, but the abject poverty of its inhabitants in 1524 should rather be sought in natural causes, perpetuated by a possible inundation in 1509, for Camden remarks that " the greatest part . . . is ruin'd and under water, and the commodiousness of its Port, by reason of the banks of sand cast up at the mouth of the river, wholly taken away."[4]

Since the fourteenth century urban wealth had in fact grown faster than that of the county as a whole, the average for fourteen towns being 470 per cent compared with 264 overall.[5]

Table 5: WEALTH OF TOWNS, 1327-1524

Town	*£ 1327*	*Rank*	*£ 1524*	*Rank*	*Growth %*
Horsham	53	12	648	6	1130
Lewes	124	5	1488	2	1100
Battle (hundred)	107	6	1138	3	964
Chichester	217	1	1809	1	734
Midhurst	52	13	410	8	689
Cuckfield (parish)	75	9	491	7	555
Petworth (parish)	128	4	837	4	554
East Grinstead	38	14	155	13	308
Steyning and Bramber	74	10	295	9	299
Storrington	70	11	231	11	230
Eastbourne (hundred)	202	2	649	5	221
Arundel	100	7	271	10	171
Hailsham (parish)	85	8	162	12	91
New Shoreham	187	3	36	14	—81

[1] William Camden, *Britannia*, E. Gibson (ed.), (1695), pp. 163, 173; J. Dallaway, *History of the Western Division of the County of Sussex*, i (1815), 152.

[2] W. H. Godrey, " The parish churches of Lewes in the fourteenth century," *S.A.C.* vol. 68 (1927), 175; *The Book of John Rowe*, S.R.S. vol. 34, 197.

[3] Actually third, after Eastbourne which, however, included the rural parts of the hundred in addition to the town.

[4] P.R.O., E. 179/189/9, 189/80, 189/88; W. Hudson (ed.), *The three earliest subsidies for the county of Sussex*, S.R.S. vol. 10 (1909), 66, 227; G. D. Johnston, " The possible encroachment in 1509," *Sussex Notes and Queries* vol. 13 (Aug. 1951), 155-6; Camden, p. 173.

[5] *S.R.S.* 10, *passim*. The assessments seem generally more realistic than those of 1332. Those finally settled in 1334 were mostly similar, but certain significant revisions suggest that some of the trends indicated by the table were already well advanced, e.g. Shoreham reduced to £120, Arundel to £64, and Petworth raised to £169.

The absence of reference to the Cinque Ports does not seriously impair the list. It is known that Rye had progressed from a poverty stricken community around 1400 to the point of having five burgesses worth £400 apiece, and was well able to afford improvements like replacing its board water pipes with lead ones,[1] while Winchelsea must have lost ground rapidly, though perhaps not so hard hit as Shoreham.

The changing fortunes of Sussex towns involved a host of factors. Horsham, Battle and Cuckfield reflect the burgeoning of the Weald, particularly the more forested parts, while Leland, who visited Petworth around 1540, learnt that it had " right well increased since the earls of Northumberland used little to lie there, for now the men there make good cloth . . ." Prosperity had brought improved amenities.[2]

> Parson Edmondes of late days perceiving the great lack of water at Petworth caused chiefly a great spring, the head whereof is about a mile from the town, to be brought in lead to Petworth, part of the water coming to the manor place, part to the parsonage, the residue to ij or iij places in the street of the town.

At the same time smaller places like Hailsham and Storrington were trailing badly; in common with Ditchling and Winchelsea they were to lose their markets by the eighteenth century.[3] East Grinstead maybe was too isolated to flourish, its environment too poor. Arundel stagnated: " except for the Castle and its Earls Arundel hath nothing memorable,"[4] perhaps situated too close to Chichester to be able to compete effectively. Everything, indeed, points towards a few favoured towns, well spaced out, coming to dominate districts of some size, while others, established in an earlier age and in very different circumstances, were fading into obscurity. In the twelfth and thirteenth centuries markets had often been created more in hope of attracting business and of yielding a profit than to meet any demonstrable need, and it may be no accident that at Horsham, the fastest growing town, two fairs and the additional Monday market had been granted as recently as 1461.[5]

Industry

By omitting the occupations of almost all taxpayers the subsidy says virtually nothing about the location and scale of industries. However, the evidence of some eight hundred wills made between 1525 and 1560 leaves little doubt but that at least four men out of five were more or less directly engaged in agriculture. Granted that with some forty per cent of testators either gentlemen or yeomen it was mainly the better off who left wills, but even then the inconsiderable number of merchants and craftsmen must be regarded as conclusive.[6]

Textiles, the one great national manufacture, achieved only limited importance. The virtual extinction of the earlier trade in raw wool—Chichester had been one of the staple towns set up in 1337—was only partially replaced by the direct export of cloth. During the reign of Henry VIII it passed through several phases. At first it never reached 200 pieces in any year. Then in 1518-19 commenced a mild boom which attained a peak of 1036 pieces in 1524-5 only to fall away to 300 or less for most of the thirties. Finally the forties saw something of a recovery but the total never exceeded 500. Worsteds added very little; the largest number was the equivalent of 66 broadcloths in 1514-15, while nothing at all cleared the customs in several years. Correspondingly, the wills of only four drapers, or dealers in worsted and other light cloths, have

[1] E. Lipson, *Economic history of England*, (6th edition 1955), iii, 459; L. A. Vidler, *A new history of Rye* (Hove, 1934), pp. 47, 60.

[2] L. T. Smith (ed.), *The itinerary of John Leland.* (1907), iv, 92.

[3] F. E. Sawyer in *S.A.C.* vol. 36, 184-92.

[4] Camden, p. 170.

[5] Dallaway, ii, part 2, 334.

[6] R. G. Rice (ed.), *Abstracts of Sussex Wills*, S.R.S. vols. 41-3, 45 (1941-5).

survived, as opposed to fifteen mercers who handled broadcloths and kersies. Oddly enough, the annual average for worsteds, 1509-47, was 18 cloth equivalents, or 4.6 per cent of the average number (393) of broadcloths, while nationally the ratio had long since declined to a mere 0.1 per cent.[1] How much of the trade was actually generated inside Sussex is less clear. The port of Chichester embraced the coastline as far as New Romney in Kent; its hinterland included much of the Kentish Weald where textiles flourished, and furthermore, much of the cloth exported from Rye during the 1560s was shipped by London merchants after being conveyed overland by packhorse.[2]

The chief local product scarcely features in the port records. This was the rather coarse fabric called Hampshire kersey, or Guildford cloth, most of which was dispatched to Blackwell Hall in London for shipment to Antwerp. More is known about the problems of the industry than its achievements. In 1537 the weavers petitioned against the provisions of a recent act designed to protect the consumer, which they alleged hampered exports: kersey was made primarily for overseas markets and Sussex was one of the five leading counties producing it. The justice of their complaint may be judged in the light of their own performance. In 1562-4 clothiers of Chichester, East Grinstead and Alfriston were fined at Blackwell Hall for marketing sub-standard " watchet kersies." The offence of Petworth man Richard Goble was " tranting," or straining, the cloth to make it appear to be a full length. By 1524 the Gobles were already prosperous, one being worth £20; a namesake of Thomas Page, the Alfriston offender, had twenty marks, and a possible forebear of George Partrych of East Grinstead was a small landowner of £5 a year. Misdemeanours like these were not necessarily typical of the industry in general, although it is perhaps significant that implementation of the 1536 act had to be delayed to enable the fullers and tuckers of Chichester to acquire suitable implements.[3]

Only Chichester, which produced both broadcloth and kersey, Midhurst, and possibly Petworth counted for much, although wills also indicated a minor concentration of activity centered on Steyning. Much of the work is likely to have been executed in the surrounding villages such as West Grinstead where, exceptionally, the subsidy lists three weavers. In the sixties at least five clothiers operated from Midhurst, and weavers were located in nearby villages like Bepton and Lodsworth, although one weaver was taxed in the borough, and names like Dyer, Fuller and Webbe seem at the very least to indicate a longstanding connexion with textiles. All the men in question were clearly artificers or labourers. With eleven out of 41 entries, " weaver " is the commonest trade mentioned in the returns, yet widely dispersed, as also were fulling mills, they hardly amount to evidence of industrial development, and it is probable that most of them merely made up cloth for local customers. Significantly enough, tailoring was the second largest trade.[4] A fleeting impression of what proved to be a short lived vitality is preserved in Leland's glowing account of Petworth and its weavers. There were also dyers and presumably other clothworkers too. But by the end of the century the modest boom was over, going the way of the clothing trade in other south eastern counties, although the Midhurst trade remained active

[1] Figures from G. Schanz, *Englisches Handelspolitik gegen Ende des Mittelalters* (Leipzig, 1881), ii, 96; E. M. Carus-Wilson and O. Coleman, *England's export trade*, 1275-1547 (1963), 133, 150-1, 200.

[2] R. F. Dell (ed.) *Rye shipping records, 1566-1590*, S.R.S. vol. 64 (1966), 16-20, 57 sqq; J. Thirsk, op. cit., p. 70, sqq.

[3] P. J. Bowden, *The wool trade in Tudor and Stuart England*) 1962), 50-1; *Victoria County History of Sussex*, ii, 256-7; L. F. Salzman, *English industries in the middle ages* (Oxford, 1923), pp. 230-1, 241; G. D. Ramsey, " The distribution of the cloth industry in 1561-2," *Econ. Hist. Rev.* vol. 7 (1942), 367; Elton, op. cit. pp. 78-9.

[4] *V.C.H.*, loc. cit.

far into the seventeenth century.[1] Sussex wool went to the bustling Cotswold mart at Cirencester, although tiny quantities continued to go abroad, and more may have been smuggled.[2] An interesting sideline was the export of sheep to Calais, averaging 900 head annually, and exceeding a thousand for most of the twenties. Sandwich was the only other port in this business, but its trade was always slight.[3]

Just over half as many wills were made by leather workers as by textile workers: 3.7 per cent as against 7.2. " In most villages of the realm," wrote a contemporary, " there is some one dresser or worker of leather, and . . . in most of the market towns iij or iiij or v, and many great Towns and cities x or xx." With cattle and timber as its chief products the Weald was an obvious location, and local bark, of which colliers and iron masters had plenty to spare, was much in demand by tanners.[4] Horsham, where there was little evidence of textiles, looks to have been a centre. At Marlepost in the southern part of the parish dwelt a Frenchman, John Fraunces, " servant to William Waller in the art of tanning." William managed to avoid taxation, but another tanner named Richard Waller had died there three years earlier. Richard Stydolf, who made his will some years later, was assessed at £20 and was clearly a well to do man. The potential of the trade is even better exemplified by Richard Mascall of Wivelsfield who was probably the man taxed on £50 in Streat hundred, though there was another of this name worth £20. A tanner, a shoemaker and a glover all died at Horsham in 1557-9, victims perhaps of the influenza epidemic. Barcombe, with three deaths in 1557-8, was another centre of activity, as also were Mayfield, Wadhurst and, less obviously, Eastergate near Arundel. Tanners, who accounted for two-thirds of wills made by leather workers, were to be found all over Sussex, though predominantly in the Weald, but manufacturing crafts are not greatly in evidence.[5] There was a small but fairly steady export trade in hides, the smallest quantity being sixteen dickers in 1538-9. As with cloth the peak occurred in the twenties, especially in the years 1526-30, reaching just over twenty lasts (each of 20 dickers) in 1528-9.[6]

Traces of other industries tend for the most part to be sporadic and elusive. Glass manufacture was barely established before Jean Carre arrived from France in 1567. Richard Mose of Kirdford was an active glassmaker by 1547, but was also a substantial yeoman. In 1524 men of this name were living both there and at Ebernoe, but neither was assessed at more than £2. However, John Strudwick the elder, one of a family prominent in the trade, had £40 in goods.[7] Testators at Newick included a potmaker and a bottle maker; seven potters were at work in Ringmer in 1530. Bricks were produced in the Forests; tiles had been made at Mayfield in the previous century, and in 1512 the Abbot of Battle had granted a kiln to John Treve of Battle, though it hardly made his fortune, for his assessment was £2.[8]

[1] Leland, loc. cit; C. Wilson, *England's apprenticeship, 1603-1763* (1965), pp. 68-9; Bowden, op. cit. p. 51; G. H. Kenyon, " Petworth town and trades, 1610-1760," *S.A.C.* vol. 96 (1958), p. 40.

[2] Bowden, op. cit. p. 58; E. Kerridge, " The agrarian development of Wiltshire, 1540-1640," unpublished Ph.D. thesis, University of London (1951), p. 264; Lipson, op. cit., ii, 23-4; R. H. Tawney and E. Power, eds., *Tudor Economic Documents* (1924), i, 196.

[3] Schanz, op. cit. ii, 83.

[4] British Library, Lansd. MSS, 74, f. 154; L. A. Clarkson, " The leather crafts in Tudor and Stuart England, *Agricultural History Review*, xiv, part 1 (1966), 25-6, 35; E. Searle, *Lordship and community* (Toronto, 1974), pp. 301-2.

[5] *V.C.H.* ii, 259-60.

[6] Schanz, op. cit. ii, 113.

[7] *V.C.H.* ii, 233; G. H. Kenyon, *The glass industry of the Weald* (1967), cc. I, VIII.

[8] W. Martin, " A forgotten industry: pottery at Ringmer," *S.A.C.* vol. 45 (1902), 128-38; *V.C.H.* ii, 251-3.

Iron Working

The absence of any direct reference to iron working, even in wills, is singularly disappointing. The Wadhurst miller, who was assessed at £4 on land, can be identified as John Barham of Woodlands and Butts who purchased Brooklands Forge along with Bartley Mill in 1521. Eight other Barhams were taxed including his brothers, Richard and William, at £15 and £8, respectively, in goods. Henry Barham was only a wage earner, but was probably the son—albeit described as servant—of Thomas who was worth £10. At this time most of them were small landowners, but they were of gentle descent, and although John of Faircross, son and heir of John the ironmaker, styled himself yeoman all his life, his descendants definitely became gentry.[1]

This reticence is not really surprising. Notwithstanding that iron, commonest of all metals, had been worked in Sussex from the earliest times, the Wealden industry was still, in 1525, no more than poised on the threshold of greatness, with only three blast furnaces in operation, and indeed the original one at Newbridge standing idle for want of a tenant. Not till about 1540 did the number of undertakings begin to multiply, and even then the trade was never a whole time occupation, production being organised in " campaigns " lasting from two to six months, mainly in the winter when the rains swelled the Wealden streamlets and filled the ponds which powered the bellows of the furnaces and the tilt hammers of the forges. Only three out of 26 hands at the Sheffield works (opened c.1540) were permanently employed: a manager " hired by the year to attend upon the works and workmen at all times, and weigh the iron from the workmen to the merchant . . ." plus two waggoners from whose presence it may be inferred that the process of gathering raw materials and delivering the forgings was slow and laborious. At Worth the supervisor was the sole full-timer. Only one out of eight men employed carrying coals, mine and sows of iron at Robertsbridge worked the full campaign of 140 days in 1542-3, the remainder putting in anything from two to forty-eight.[2] In the slack season these hands tended their own smallholdings. It would not be surprising to find many of them working a few days at a time on different sites; until quite recently the " lump " was a regular institution in extractive industries where the custom was to contract out much of the work in small stints on a labour-only basis. The common use of " profits " rather than " wages " in the returns seems to reflect this system. Alongside the newfangled indirect process of the blast furnace, the ancient bloomery method no doubt continued to occupy numerous people for short periods every year. Mildred Campbell's notion of a forge in the yard of every sizable farm[3] is no doubt far fetched, but in principle it would have been perfectly consistent with the fragmented and seasonal character of the industry.

If individuals are not identified, families prominent in the iron trade are easily recognised and the broad picture begins to emerge. Most of them came from the yeomanry and minor gentry, although there were one or two bigger men. One was Richard Sackville of Buckhurst, a major landowner with two hundred marks a year who was in the business of making shot. William Wybarn of Ticehurst (£110 in goods) took on Bayham forge in 1525, while Thomas Oxenbridge of Northiam (£52) was the man who in 1539 demised the Darfold Wood furnace in Mountfield

[1] R. G. Fitzgerald-Uniacke, " The Barhams of Shoesmiths in Wadhurst," *S.A.C.* vol. 56 (1914), 100-60; E. Straker, *Wealden Iron* (1931), pp. 270, 278-9.

[2] Salzman, op. cit. p. 21 sqq; H. R. Schubert, *History of the British iron and steel industry to 1775* (1957), p. 160 sqq; H. Ellis, " Inventories of goods . . . in Sheffield and the Forest of Worth," *S.A.C.* vol. 13 (1861), 128-9; D. W. Crossley, *Sidney Ironworks Accounts*, Camden 4th ser. 15 (1975), p. 52n.

[3] Schubert, loc. cit; M. Campbell, *The English yeoman* (New Haven, 1942), p. 163, q. S. Smiles, *Industrial biography*.

and a forge in Etchingham to one Thomas Walsh who may have been the man taxed on an income of £5 in Danehill Sheffield hundred. John Levett, gentleman, of the same district (£30 in goods) must have been the brother—also an ironmaker—of William, the parson of Buxted, who superintended the casting of the first one-piece cannon there in 1542. John Warner of Hartfield (£20 on land) was probably the supplier of gunstones as well as a relation of Richard Warner who owned the Parrock works in 1518.[1]

Men of this class were mostly considerable landowners in the first instance; families similar to the Barhams were more typical. John Bowley, or Bowyer, a shot maker who took over the steel forge in Hartfield in 1525, must have been related to either Valentine or Nicholas Bowyer who had £3 and £2, respectively, from land. John Collins(Collen), who already owned Socknersh furnace in Burwash, had £28 in goods. If William Spycer of Dallington nursed dreams of easy fortune when he leased the site on which Panningridge was to be built, they soon faded; he transferred his interest to the wealthy Sir Henry Sidney, and carted stone and timber for the constructors instead.[2] Having been taxed on a mere £3 worth of goods, he was probably under capitalised.

The impact on the local economy is not easy to determine, but like primary industry in general iron is not likely to have contributed much to the wealth of the district. The profit, like that from Cornish tin, was creamed off by London capitalists. A goldsmith named Henry Fyner had financed the erection of Newbridge, and local entrepreneurs doubtless relied heavily on City backing.[3] Jobs were certainly created, though for most workers they were no more than by-employments. The pastoral economy allowed people ample leisure for subsidiary pursuits, and the availability of labour was as powerful a stimulus to industrial growth as natural resources. This again often proved a necessity because these very regions, by attracting surplus population from corn growing areas, tended to become over-populated.[4] How much employment actually was created is debatable. If Sheffield and Worth were representative, twenty or thirty men were required at each site, but of course for only a few weeks at a time. A considerable number profitted from the building work at Panningridge in 1542-4. In addition to Spycer, John Rabet of Brightling contracted to carry stone, while John Stonestret of Robertsbridge carried sow iron; each had £12 in moveables in 1524. William Goldsmith, who dug the stone, may have been related to John who lived in Rotherfield hundred and was a servant. One Cogger, a mason, must have been related to the Ticehurst family which consisted of William, John and Thomas Cogger who were taxed on £4, £8, and £10, respectively. John Sawnder, who cleaned out the pond, and William Henley, who performed four days' unspecified work, can be linked with families of smallholders or labourers in the area.[5]

Wages on the whole were good. In 1540s Sir Henry Sidney paid his founder eight shillings and the filler six shillings for a six-day " founday," while labourers got from 4½d. to 8d. a day. The Sheffield carters received forty shillings a year plus clothing; a works manager might take home as much as £4 a year, with a livery or ten shillings in lieu.[6]

[1] Schubert, op. cit. pp. 166-71; Straker, op. cit. pp. 49, 146, 202; *Dictionary of national biography*, s.v. Sackville. John Levett, ob. 1535, was tenant of Strumlet furnace and steel forge in Ashdown, a fact not mentioned by Straker.

[2] Schubert, op. cit. pp. 166-8; Straker, op. cit. p. 247; Crossley, op. cit. p. 43.

[3] A. L. Rowse, *Tudor Cornwall* (1941), pp. 63-4; Schubert, op. cit. pp. 147, 162-3.

[4] J. Thirsk, " Industries in the Countryside," *passim*.

[5] Crossley, op. cit. pp. 43-7.

[6] Ibid. pp. 23-5; *S.A.C.* vol. 13, 128-9.

In the early stages any benefits may have appeared illusory to the local community since almost certainly the key posts, and perhaps many others, were filled by Frenchmen. The new era in iron had dawned with the introduction of the blast furnace from France in 1496, and naturally French experts had been recruited to install it. The first water-driven hammer (at Newbridge) was operated by one Frenchman, and another managed Newbridge furnace until 1512.[1] By 1524 there were 38 Frenchmen in Hartfield hundred,* forming almost a third of the taxpayers and well over half the labourers. This, the biggest single concentration, implies that the original undertaking was unique in continuing to depend on imported labour, also that there had been no great pool of native labour in the first place. Later works made much greater use of English workmen, but there are clear indications of a continuing need for foreign experts, at Socknersh, for instance, and the Sidney works at Panningridge and Robertsbridge. At Sheffield there were five or six, a quarter of the production workers; they were naturalised in 1544 during the war with France.[2]

The distribution of strangers, almost all of them labourers and servants, furnishes a rough directory to the iron industry in 1524-5. Twenty Frenchmen lived in Hawksborough hundred. The arrangement of the list indicates that eight were employed by John Collen at Socknersh.† Richard Isted of Bibleham (worth £3 6s. 8d. on land) must have been connected with the Joan Isted who employed French artificers at Bibleham forge in 1550.[3] Other groups of aliens were settled as follows:

Battle	14	Robertsbridge	4
Henhurst hundred	9	Loxfield hundred	4
Ticehurst	8	Wadhurst	4
Netherfield hundred	5	Foxearle hundred	3
Chiddingly	5		

Naturally the mere presence of foreigners cannot be taken as conclusive proof of iron working. Like other maritime counties Sussex accommodated significant numbers, amounting indeed to fully four per cent of all taxpayers. But not only did they rarely penetrate the inland shires, relatively few strayed outside the ports. Thus there were sizable colonies of 65 in Rye, 48 in Lewes, and 40 in Chichester, as well as smaller ones in Hastings and Winchelsea, but even good sized inland towns like Midhurst, Petworth and Horsham attracted no more than the merest handful. Dotted sparsely around the villages of the interior, foreigners only congregated in an strength in those parishes where the new iron process was first established. On the whole immigrants settled in well enough and were assimilated without undue difficulty: Gaskyn Hacford and Hans Legon served as churchwardens of St. Andrew, Lewes, in 1522 and 1523, respectively. Inevitably the ironworkers must have arroused some resentment at times, but it probably had no special significance, particularly when it was a fact that all outsiders, regardless of origin, had a thin time in the town of Battle.[4]

* One of two only are stated to be French, the rest simply as aliens; in towns Frenchmen outnumbered others by two to one.

† Actually in Brightling, Netherfield hundred, on the boundary of Burwash parish; however, there was little correspondence between parish and hundred boundaries in the Weald.

[1] Schubert, op. cit. pp. 148, 162-5; Straker, op. cit. p. 246.

[2] Crossley, op. cit. pp. 24n, 46, 61; Straker, op. cit. p. 412.

[3] *S.N.Q.*, xiii, 324; Schubert, op. cit. p. 148.

[4] *Tudor Economic Documents*, iii, 82-90; T. Wyatt, "Aliens in England before the Huguenots," *Proc. Huguenot Society*, 19 (1953-4), 74-94; H. M. Whitley, "The Churchwardens' Accounts of St. Andrew's and St. Michael's, Lewes from 1522 to 1601," *S.A.C.* vol. 45 (1902), 41; Searle, op. cit. pp. 292-3.

At this stage production by the new process was still relatively exotic, originating, according to Schubert, from state policy at a time when the simpler bloom process supplied nearly all needs, and the saving on capital outlay more than offset the enhanced productivity of the blast furnace. The motive was simply to make cannons, the need for which had been proved by the superiority of French artillery in the wars of the 15th century. Newbridge, which was Crown property, produced the first successful gun in 1509.[1] Why the new technique was slow to take root, and whether it remained largely dependent on imported labour in consequence must remain open questions, but certainly the amount of employment it generated was still limited as late as the 1520s. At the same time it stimulated other activities, charcoal burning, for instance. The Sidney works and others on great estates did their own coaling, but Ralph Hogge at Buxted purchased it from outside colliers and it formed one of the biggest items in his accounts. Carriage of wood, charcoal and iron also created work for carters and lightermen: William Boys of Battle (£30 in goods) had inherited a profitable business, employing several wagons and assistants, from his father, plus a leading position in the town hierarchy.[2]

Timber was one of the chief products of the Weald, possibly the most valuable of all. Much of it was exported. At Robertsbridge coaling was merely one branch of a major operation which produced cordwood for fuel, as well as inch-board, ship board and ship planking for which of course sawyers were employed. Almost certainly most of this went to Rye, the chief centre of ship building; later on there were rope makers there and at Playden.[3] The whole Robertsbridge undertaking was indeed a highly diversified one which incorporated a large farm that sold corn and beer to the workmen, and hides to tanners and glovers. Parrock furnace was similarly linked with a forty-acre farm.[4] This is highly significant. Ordinarily it was the conflict of interest between ironmasters and the rest of the community that gained attention. By 1549 furnaces were alleged to be consuming 1500 loads of timber annually, raising the spectre that " within short time tanners should not be able to occupy their tanning for lack of tan because (the colliers) fell the woods out of season;" in a word the early demise of normal life was confidently predicted[5]—

> . . . if the iron mills be suffered to continue there will not only be such " scantie " of timber that there will not be to build in the parts near them, either houses, watermills or windmills, bridges, sluices, ships, crayers, boats, and especially for the King's Majesty's town and pieces on the other side of the sea; besides the lack of timber that will be for the making of gunstocks, wheels, arrows, pipes, hogheads, barrels, buckets, sieves, saddletrees, " dossers," bellows, showles, " skopets," bowls, dishes, bills, spears, morrispikes with such like necessaries; but also the aforesaid towns of Hastings and Rye which are at a daily charge in making of " jutties " and piers for defences of safeguard against the seas shall not be able to have . . . timber sufficient to maintain their piers and " jutties!."

The role of wood needs no further emphasis.

As so often reality was less dramatic. Far from exhausting timber stocks the demands made on them lay well within their capacity, and landowners took the lead in developing the iron industry because it was the only way to exploit their woods profitably.[6] Taken in conjunction with Schubert's theory of defence needs and the large scale importation of foreign workers, this also suggests some modification of the thesis that the establishment of rural industry depended on the existence of a pool of cheap labour. But to the matter! All contemporary conservationists knew was that the number of active blast furnaces almost quadrupled during the 1540s, while, to do

[1] Schubert, op. cit. pp. 161-75.

[2] Crossley, op. cit., *passim*, and " Ralph Hogge's ironworks accounts 1576-81," *S.A.C.* vol. 112 (1974), pp. 55-97; Searle, op. cit., p. 433.

[3] *V.C.H. Sussex*, ii, 235-8.

[4] Crossley, *Sidney ironworks accounts, passim;* Straker, op. cit. pp. 241-5.

[5] *Tudor Economic Documents*, i, 234-5.

[6] G. Hammersley, " The charcoal iron industry and its fuel," *Econ. Hist. Rev.* 2nd ser. vol. 26 (1973), 593-613.

them justice, it would appear to be a fact that the early furnaces were heavy on fuel, and so it is not surprising that in their momentary panic they wrung out every drop of juice they could. Quite the best touch was the predicted " lack of necessary fuel for the relieving of the poor fishers after their arrival from their daily fishing to dry their clothes and warm their bodies . . ." Had they been forced out of business the economies of Hastings and Rye would have ground to a halt.[1]

The concern was genuine enough for more than half the householders in each town were fishermen, and probably most of the poorer people depended on fishing for their livelihood. In 1522 there were 26 boats working out of Rye; in 1565 Hastings had 25. Scattered along the coast were other fishermen—seven at Seaford, two at Winchelsea, and more in townships like Worthing and Selsey. Sixty Rye men were mariners, as were sixteen at Hastings, while at Winchelsea they actually outnumbered fishermen.[2] The growth of the fishing industry of Elizbethan Brighthelmstone would not appear to have begun much before 1540, until when the town may have been unimportant. In noting the incident of 1514 a chronicle described it as a poor village, although a contemporary sketch depicts it as an unmistakable town.[3] Whalesbone hundred, to which it belonged, was very poor by any reckoning in 1524.

No survey of pre-Reformation society which virtually ignores the Church can hope to be regarded as comprehensive. However, the subsidy was levied on the laity only, and since nearly all assessments were made on goods or wages it cannot be compared directly with clerical taxes which were levied on the incomes of benefices. At the same time, evidence from other counties indicates that most clergy can be slotted into the economic structure without undue difficulty. The bishop of Chichester, the abbot of Battle and the prior of Lewes sat in the House of Lords by virtue of their great wealth and influence. The heads of the smaller religious houses, cathedral dignitaries, and a few very fortunate parish clergy can be regarded as being on a level with the gentry, while the general run of beneficed clergy were much the same as farmers and smallholders, indeed they mostly came from a peasant background.[4] The parish priests who often undertook the cure of souls on behalf of absentee incumbents were paid little better than labourers. The numerous fringe personnel were almost certainly taxed as laymen. John Russell of Chichester was a vicar Choral of the cathedral,[5] and here and there parish clerks are identified in the rolls. It is tempting to speculate that the likes of summoners and pardoners contrived to get off scot free.

[1] Ibid. p. 605; *Tudor Economic Documents*, i, 235.

[2] P.R.O., SP 12/98, no. 28; Dulley, op. cit, in *S.A.C.* 107, pp. 36-64.

[3] E. W. Gilbert, *Brighton: Old Ocean's Bauble* (1954), p. 47; C. Webb and A. E. Wilson, *Elizabethan Brighton* (Brighton, 1952), pp. 22-3, 33; Dulley, op. cit. in *S.A.C.* 107, p. 43.

According to a fragment of the return Brighton was taxed in 1525, and from it a few names can be identified in the 1524 list. But since there is a total of only 98 taxpayers for the five vills of Whalesbone hundred, it looks doubtful if the whole town was assessed, unless the other parishes were virtually depopulated at the time: certainly the churches of Hove and West Blatchington were in ruins.

[4] Cf. M. Bowker, *The secular clergy in the diocese of Lincoln, 1495-1520* (Cambridge, 1968), *passim;* P. Heath, *The English parish clergy on the eve of the reformation* (1969), passi.

[5] W. D. Peckham, op. cit. in *S.A.C.* vol. 78, p. 156.

APPENDIX 1
DISTRIBUTION OF GOODS IN SUBSIDY, 1524-5

Hundred, etc.	Number of Assessments									Value of goods (to nearest £)								
	under £2	£ 2	£ 3-4	£ 5-9	£10 -19	£20 -39	£40 -99	£100 +	Total	under £2	£ 2	£ 3-4	£ 5-9	£10 -19	£20 -39	£40 -99	£100 +	Total
Chichester Rape																		
Aldwick	125	52	29	26	18	9	4	2	265	125	105	100	152	232	230	243	200	1387
Bosham	71	32	29	19	14	6	3	1	175	72	64	95	113	171	145	160	100	920
Box and Stockbridge	222	89	57	47	24	18	7	4	468	231	182	183	285	278	479	367	733	2738
Manhood	85	51	28	36	21	5	3	1	230	91	103	91	220	282	138	170	133	1228
Westbourne	88	28	20	29	17	7	3	1	193	88	56	68	189	194	170	130	110	1005
Singleton	51	35	31	17	12	6	4	—	156	52	71	109	100	150	130	180	—	792
Dumpford	80	54	35	34	20	5	1	1	230	81	109	122	199	226	104	44	460	1345
Easebourne	131	59	31	31	13	8	3	1	277	131	120	106	182	134	185	140	400	1398
Chichester city	114	105	46	22	25	11	6	1	330	122	211	174	144	312	287	363	200	1813
Midhurst boro'	43	34	10	2	8	6	—	—	103	43	68	36	13	90	160	—	—	410
Arundel Rape																		
Avisford	76	60	23	35	14	10	5	—	223	77	130	77	216	165	218	250	—	1133
Poling	126	69	41	46	25	39	11	1	358	127	138	137	275	288	885	511	100	2461
Bury	50	35	39	32	8	11	2	—	177	51	70	133	193	99	232	107	—	885
West Easewrithe	112	83	46	45	21	19	3	1	330	120	166	149	250	244	410	167	200	1706
Rotherbridge	223	114	42	76	36	17	10	1	519	224	228	145	461	437	364	413	200	2472
Arundel boro'	17	30	12	12	3	2	—	—	76	17	61	40	70	41	42	—	—	271
Bramber Rape																		
Brightford	161	82	38	37	17	17	8	1	361	166	168	131	237	191	388	477	200	1958
Burbeach	27	27	11	14	4	8	2	—	93	28	56	37	90	40	177	90	—	518
Fishersgate	19	1	3	5	2	1	1	—	32	21	3	9	27	20	30	67	—	177
Tarring	60	12	8	16	12	10	—	—	118	60	25	29	97	134	223	—	—	568
East Easewrithe	49	39	13	25	16	11	3	—	156	49	79	40	149	162	237	140	—	856
Steyning	110	48	26	39	23	22	9	1	278	111	100	89	219	258	478	430	120	1805
Tipnoak	53	32	12	12	12	8	1	2	132	55	69	42	73	143	164	40	200	786
West Grinstead	47	44	16	28	15	10	7	—	167	48	91	58	177	175	230	303	—	1082
Windham	20	11	2	6	8	8	2	—	57	20	22	7	33	87	190	90	—	449
Bramber boro'	10	4	—	2	1	—	—	—	17	10	8	—	10	10	—	—	—	38
Horsham boro'	52	21	7	11	4	7	5	—	107	54	43	23	68	49	170	241	—	648
New Shoreham boro'	12	6	—	2	—	—	—	—	20	12	12	—	12	—	—	—	—	36
Steyning boro'	41	10	—	4	2	5	1	—	63	41	20	—	26	23	107	40	—	257
Lewes Rape																		
Fishersgate	7	20	4	8	2	1	1	—	43	7	40	13	40	20	20	80	—	220
Holmestrowe	22	16	14	14	3	4	2	—	75	22	32	49	82	30	95	90	—	400
Swanborough	29	10	2	5	3	3	—	—	52	29	20	6	26	30	80	—	—	191
Whalesbone	46	21	12	10	3	5	1	—	98	46	43	42	56	38	113	66	—	404
Younsmere	23	12	9	4	2	2	2	1	55	23	25	30	20	25	42	90	100	355
Barcombe	51	15	23	27	4	4	3	—	127	51	30	79	158	54	94	156	—	622
Buttinghill	139	61	47	47	21	22	3	3	343	142	128	124	293	240	498	178	413	2046
Lindfield	42	13	7	16	1	1	1	—	81	43	26	21	88	10	20	50	—	258
Poynings	31	16	11	7	1	6	2	1	75	31	32	38	39	10	130	117	133	530
Streat	73	50	26	59	16	25	4	—	253	73	100	95	333	165	537	213	—	1516
Lewes and Southover	141	71	38	30	9	20	3	1	322	141	142	144	158	208	475	120	100	1488

APPENDIX 1 (*continued*)

Hundred, etc.	Number of Assessments under £2	£2	£3-4	£5-9	£10-19	£20-39	£40-99	£100+	Total	Value of goods (nearest £) under £2	£2	£3-4	£5-9	£10-19	£20-39	£40-99	£100+	Total
Pevensey Rape																		
Alciston	38	18	15	13	5	2	1	—	92	39	37	55	90	59	50	50	—	380
Eastbourne	130	19	9	5	10	9	1	—	183	135	38	31	30	135	227	53	—	669
Flexborough	29	9	7	12	6	2	1	—	66	29	18	23	73	81	60	40	—	324
Totnore	30	19	11	9	10	8	1	—	88	30	38	37	55	124	195	40	—	519
Willingdon	98	13	6	20	12	3	8	—	160	102	26	21	122	152	63	362	—	848
Danehill Horsted	30	17	15	6	3	—	—	—	71	33	35	53	37	30	—	—	—	188
Danehill Sheffield	51	17	11	14	7	3	1	—	104	55	35	37	86	77	77	40	—	407
Dill	35	23	15	23	5	1	1	—	103	40	46	56	136	68	20	45	—	411
East Grinstead	29	8	5	10	10	—	—	—	62	36	18	18	61	118	—	—	—	251
Hartfield	70	31	13	12	9	6	—	1	142	84	63	47	78	117	130	—	133	652
Longbridge	91	46	20	22	12	7	8	—	206	96	93	70	266	157	180	418	—	1280
Loxfield	196	78	71	72	56	13	4	—	490	216	160	246	476	743	326	206	—	2373
Ringmer	112	21	22	9	12	8	3	1	188	130	42	89	53	162	197	150	100	923
Rotherfield	69	39	29	12	11	1	—	—	161	74	79	101	72	146	20	—	—	492
Shiplake	59	31	19	20	11	9	—	—	149	60	62	61	120	146	186	—	—	635
East Grinstead boro'	18	9	6	8	1	2	—	—	44	18	18	20	49	10	40	—	—	155
Hastings Rape																		
Baldslow	44	20	19	23	20	4	1	—	131	44	40	63	150	269	118	50	—	734
Battle	113	26	29	28	27	7	3	—	233	123	56	101	172	339	197	150	—	1138
Bexhill	30	16	7	15	6	—	—	—	74	29	33	22	111	92	—	—	—	287
Foxearle	117	31	24	18	20	8	2	1	221	129	62	80	121	229	215	90	100	1026
Goldspur	83	30	23	24	12	6	3	—	181	98	60	81	157	184	133	128	—	841
Gostrow	38	20	7	10	11	10	1	—	97	39	40	26	64	156	266	40	—	631
Guestling	39	16	8	11	4	4	3	—	85	39	33	29	64	49	102	200	—	516
Hawksborough	125	39	25	30	20	3	—	1	243	130	79	88	186	244	75	—	200	1002
Henhurst	60	15	13	9	3	2	—	—	102	61	31	45	50	39	48	—	—	274
Netherfield	53	21	11	21	11	2	—	1	120	57	42	41	124	148	50	—	100	562
Ninfield	79	14	9	17	4	7	2	—	132	79	32	29	113	49	174	122	—	598
Robertsbridge	34	6	8	6	8	3	1	—	66	36	12	29	37	41	98	41	—	294
Shoyswell	61	19	15	13	14	4	1	1	128	55	39	54	92	166	104	49	110	669
Staple	50	25	15	20	23	8	3	1	145	50	50	55	138	314	161	144	133	1045

APPENDIX 2

COMPOSITION OF TABLE 2

Coastal Plain: hundreds of Aldwick*, Bosham, Box and Stockbridge, Manhood, Avisford, Poling, Brightford*, Tarring*, boroughs of Chichester, Arundel.

Downs: hundreds of Singleton, Westbourne*, Fishersgate (two half hundreds), Holmstrowe, Swanborough, Whalesbone, Younsmere, Alciston, Eastbourne, Flexborough, Totnore, Willingdon.

Low Weald: Dumpford, Easebourne, Bury, Rotherbridge, West Easewrithe, Burbeach*, East Easewrithe*, Steyning, Tipnoak, West Grinstead, Barcombe, Streat, boroughs of Midhurst, Horsham, Steyning.

High Weald: hundreds of Lindfield, Danehill Horsted, Danehill Sheffield, Hartfield, Loxfield, Ringmer, Rotherfield, Shiplake, all Rape of Hastings, borough of East Grinstead.

Lewes and Southover, and the hundreds of Buttinghill and Longbridge (which have some defects) are difficult to place, and are therefore omitted. Otherwise hundreds are assigned to the most appropriate group, except that where there is a clear case, denoted by *, individual townships have been transferred to another group; these are nearly all detached Wealden outliers.

RURAL EMPLOYMENT AND POPULATION IN SUSSEX BETWEEN 1550 AND 1640

By C. E. Brent, M.A., D.Phil.

The agrarian region is now acknowledged to be a fundamental unit for the analysis of pre-industrial rural English society in all its aspects—economic, social, demographic and ideological. This article seeks to examine the very different patterns of employment and land tenure which had evolved by 1640 in the downland, wealden and marshland communities of eastern Sussex, and to correlate these patterns with regional and parochial household densities in the 1620s and 1630s (as reflected in the distribution of conceptions leading to baptism).

PART ONE

The agrarian environment

During this period eastern Sussex, defined as the three rapes of Lewes, Pevensey and Hastings, extended across some 500,000 acres and enjoyed considerable administrative and economic coherence. Its borders were well defined by substantial physical barriers, by the Channel to the south, by the Rother levels and the marshes of Guldeford and Walland to the north-east and east, and by the upland ridges and the Forests of Waterdown, Ashdown, Worth and Tilgate to the north and north-west. Quarter sessions for the area were normally held at Lewes, while the jurisdiction of the archdeacon's court there was excluded only from the peculiars of South Malling and Battle.[1]

Eastern Sussex was also drawn together by its lines of water communication, which often offered rapid and convenient access to external markets. Its long coastline was subject to erosion and to a persistent eastward drift of shingle which choked river outfalls and overwhelmed quays. Camden remarked that "the south-west wind doth tyrannize thereon, casting up beach infinitely."[2] Nevertheless coasters of between 20 and 40 tons, no smaller than those normally frequenting other provincial ports, continued to ship grain, iron and timber at the harbours and "stades" which studded the coast.[3] Equally important was the barge navigation, along the Ouse to Barcombe Mills, along the sewers of Pevensey levels to Boreham bridge and Ashburnham, along the Brede to Brede bridge and along the Rother to Udiam bridge, which rendered most of eastern Sussex, except its northern fringes, reasonably accessible to river transport and diverted southwards through its own ports the carriage of most commodities produced internally and exported

[1] F. W. Steer, *A descriptive report on the quarter sessions, other official, and ecclesiastical records in the custody of the County Councils of East and West Sussex* (issued jointly by East and West Sussex County Councils, 1954), pp. 2, 92.

[2] William Camden, *Britannia*, (ed.), Edmund Gibson (1695), p. 166.

[3] T. S. Willan, *The English coasting trade, 1600-1750*, Manchester University Reprint, (1967), p. 12; C. E. Brent, *Employment, land tenure and population in Eastern Sussex, 1540-1640* (unpublished D.Phil. thesis, University of Sussex, 1974), pp. 296-304; Public Record Office (abbreviated hereafter to P.R.O.), E 190/737-767, *passim*.

by sea.[1] Although the eighteenth-century writers Young and Marshall condemned Wealden roads as the worst in the kingdom, their strictures were probably occasioned by flat surfaces on the Weald Clay, which in eastern Sussex was small in extent and flanked by more passable roads in the downland.[2] In the High Weald the long east-west ridges afforded tolerable trunk-routes, such as the " sinuous rather than devious " ridgeway between Uckfield and Rye, which was 28 miles long and crossed by only two small streams.[3] Moreover, overland movement to London could be surprisingly rapid. Regulations made in the early sixteenth century assumed that *rippiers* could transport fresh fish from Rye or Hastings to the capital within twenty-four hours. In 1626 two thieves who stole oxen from Laughton Park were arrested next day in Lewisham where the evident exhaustion of the animals had aroused suspicion.[4]

During this period contemporaries were vividly aware that there existed within eastern Sussex three agrarian environments, each utterly distinctive although often mutually dependent, which they distinguished as " the downes " (the downland), " the wild " (the Weald), and " the mersh " (the coastal levels).[5] In other counties Tudor commentators also differentiated between " fielden " areas of ancient, nucleated villages engaged in an open-field husbandry which pivoted on corn production, " forest " localities of later settlement, dispersed across an enclosed landscape and mainly devoted to dairying and livestock, and " fen " parishes.[6] Modern historians, although further sub-dividing between forest areas and " wood-pasture " localities in which clearance was well advanced, have accepted this classification as fundamental to the study of rural communities during this period, and it has therefore determined the shape of my own analysis.

The downland economy and employment

Farming was, of course, crucial to rural employment and by 1550 " the downes," " the wild " and " the mersh " had each evolved a distinctive system. In the downland region, which for agrarian purposes consisted of the eastern tip of the coastal plain, the South Downs and the scarpfoot bench beneath,[7] sheep-corn husbandry was the norm, as it was across most of the Chalk and limestone upland of England. The South Downs were formed by a south-facing dip-slope, between four and six miles in length, and by a steep, north-facing escarpment running for almost 25 miles between Poynings and Eastbourne, with a detached outcrop around Mount Caburn. Young ascribed to the " very short, sweet and aromatic herbage " of the Upper Chalk east of the Ouse the fine mutton and wool later produced by the South Down breed.[8] The

[1] East Sussex Record Office (abbreviated hereafter to E.S.R.O.), RA/C/1/1/15; (*note that the location of a manuscript collection will be cited only on the first occasion it is referred to*), L. F. Saltzmann, ' The inning of Pevensey Levels,' *Sussex Archaeological Collections* (abbreviated hereafter to *S.A.C.*), vol. 53 (1910), p. 59; Ernest Straker, *Wealden Iron*, (1931), p. 189.

[2] Rev. Arthur Young, *General view of the agriculture of the county of Sussex*, 2nd ed., (1813), p. 416; William Marshall. *The rural economy of the southern counties*, vol. ii, (1798), p. 98; G. J. Fuller, *A geographical study of the development of roads through the Surrey-Sussex Weald to the south coast during the period 1700 to 1900* (unpublished Ph.D. thesis, University of London, 1950), *passim.*

[3] Ernest Straker, ' A Wealden ridgeway,' *Sussex Notes and Queries* (abbreviated hereafter to *S.N.Q.*), vol. 6 (1936-7), pp. 171-73.

[4] A. J. F. Dulley, ' The early history of the Rye fishing industry,' *S.A.C.*, vol. 108 (1969), p. 54; E.S.R.O., QR/E/29/68.

[5] E.S.R.O., PAR 498/1/1/2/34, DAN 2072, W/A 9/139.

[6] Joan Thirsk, ed., *The agrarian history of England and Wales*, vol. 4, (1967), pp. 1-112; Eric Kerridge, *The agricultural revolution* (1967), pp. 41-180.

[7] For a fuller discussion of the geology, drainage and relief of eastern Sussex see J. C. K. Cornwall, *The agrarian history of Sussex, 1560-1640* (unpublished M.A. thesis, University of London, 1953), pp. 10-20, P. F. Brandon, *The common lands and wastes of Sussex* (unpublished Ph.D. thesis, University of London, 1963), pp. 21-31, and J. L. M. Gulley, *The Wealden landscape in the early seventeenth century and its antecedents* (unpublished Ph.D. thesis University of London, 1960), pp. 23-47.

[8] Young, *op. cit.*, p. 311.

gentler slopes together with the lower flanks of the valleys of the Ouse and Cuckmere above the alluvial brookland of their floodplains, were often overlaid with light loams, marl and gravels suited to arable cultivation. Camden noted the " fat " and fertile soil of the Downs,[1] but he may have been referring to the adjacent brick earth of the coastal plain rated by Young as an arable soil " probably equal to any in the kingdom," or to the mingled Chalk and Upper Greensand of the scarpfoot bench which the same authority judged " a slip of very rich and stiff arable land . . . of very inconsiderable breadth . . . that must rank amongst the finest in this or any other county.[2] Beyond the Upper Greensand to the north lay a second " slip," of infertile Gault, which marked the southern limit of the Wealden region.

Intensive colonization in the early medieval period had closely studded the downland region with nucleated settlement and with relatively small manorial and parochial units. Each downland manor normally united a sheepwalk on the Upper Chalk with adjoining or nearby arable below—on the coastal plain, on the lower dip-slopes, on the flanks of the river-valleys or on the scarpfoot bench.[3] Shortage of cattle pasture had often been eased by the inclusion in a manor of floodplain brookland or of Low Weald pasture, sometimes as an " outlier." Farm and parish boundaries normally followed this manorial pattern. A later commentator observed how " the soil and surface " of South Malling parish in the Ouse valley varied " from the low and marshy brooklands to arable upland, and lastly to the bold and verdant down."[4] Brandon has analyzed the organization of the common fields and the common flocks which survived on many downland manors into this period and prolonged their vigour as agents of agrarian discipline.[5] These characteristics underline the similarity of the downland region to fielden localities elsewhere.

The rather formal evidence derived from manorial surveys of such dip-slope manors as Falmer, Preston and Stanmer suggests a very heavy bias of land-use towards arable and sheepdown, while virgate stints at Patcham, Preston, Rottingdean and Stanmer envisaged the tenantry as keeping only the minimum draught-animals and kine. The presence of extensive brookland on manors centred in the lower valleys of the Ouse and Cuckmere, and of Low Weald pasture on manors centred in the scarpfoot bench, reduced the preponderance of arable and sheepdown within them and permitted more generous stints for horses, " beasts " and bullocks. At Preston, Rodmell and Stanmer the tenantry acreage by comparison with the demesne acreage contained a higher ratio of arable to sheepdown, which was also more heavily stinted.[6]

Direct evidence relating to the balance within the sheep-corn husbandry of the region, although meagre, does indicate that large acreages of wheat and barley were sown. On the larger farms they were normally in balance or tilted slightly in favour of wheat; on the smaller farms the bias towards wheat was perhaps greater. The location of farms on the dip-slope or the scarpfoot made little difference to the balance of crops, whereas in the downland region of western Sussex Cornwall found little barley on the scarpfoot bench and little wheat on the Upper Chalk, where rye took second place to barley.[7] In eastern Sussex rye crops are not recorded in the downland region, although some acreage was often devoted to peas, beans and oats. At Southwick the parishioners sowed tares annually in the common fields and in some years " did eat them up with their working horses before harvest."[8]

[1] Camden, *op. cit.*, p. 166.

[2] Young, *op. cit.*, p. 6.

[3] Walter Godfrey (ed.), *The Book of John Rowe* (Sussex Record Society, abbreviated hereafter to *S.R.S.*, vol. 34, 1928), pp. 56-73, 199-216, 219-224.

[4] William Lee, (ed.), *The Ancient and Modern History of Lewes and Brighthelmston*, (1795), p. 304.

[5] Brandon, *Common Lands*, pp. 255-272, 286-305.

[6] Brent, *op. cit.*, pp. 35-38.

[7] *Ibid.*, pp. 38-40, Cornwall, *op. cit.*, p. 35.

[8] West Sussex Record Office, Ep II/5/16/81-82.

The sheepflock was clearly vital to the downland farmer during this period as a " moving dunghill,"[1] besides being a source of marketable wool and meat, but the exact contribution of the sheepflock the dairy herd, beef cattle, pigs and poultry, cannot be gauged. However an analysis of grain and stock valuations taken between May and August in 1710-1720 on nine downland farms, containing a sown acreage of between 34 and 195 acres, reveals that crops on the ground and sheep formed from 63 per cent to 79 per cent of their combined crop and livestock valuation. The sheepflock normally constituted between 25 per cent and 33 per cent of the total valuation, but on the three farms with the largest sown acreages its share rose to 42 per cent and 45 per cent. All supported dairy cows, " young beasts " and pigs.[2] Minor specialisms of the region were rabbits, pigeons and wheatears, all of which were supplied to Lord Ashburnham from Eastbourne in 1687. Defoe praised wheatears from the South Downs as " the English ortolans, the most delicious taste for a creature of one mouthful . . . that can be imagined."[3]

The sheep-corn husbandry of the downland region must have been among the least labour intensive of arable-centred farming systems in the country. The arable soils of the region—loam, marl, malmstone and gravel, often intermixed with Chalk, were normally light to dig, to plough and to clean. Natural drainage on the Upper Chalk and on the scarpfoot bench was usually sufficient to make deep ditching unnecessary, while any hedges surrounding the large open-fields and the sheepdowns must have been largely wind-pruned. The arable acreage was manured without much expenditure of human toil by the nocturnal sheep-fold. Little meadow existed to be mown. In many communities the tenantry sheepflock, sometimes together with the demesne flock, was committed to the care of a single shepherd.[4] At Portslade the tenantry shared the services of a common " heardesman."[5]

Craft employment in the downland region was also limited. Towards the end of the eighteenth century Young was informed that in Glynde parish " We have no tradesmen or artificers, but what are connected with and dependent on agriculture, as carpenters, wheelwrights, blacksmiths, bricklayers etc."[6] A springline along the scarpfoot provided perhaps the only effective water-power. Water-supply on the Upper Chalk was a cause for concern during the period. The common well at Telscombe was " now in great decay." The scouring of Friston pond was momentous enough to be recorded in East Dean's parish register, and access to others generated inter-manorial discord.[7] Although cornmills were projected near Exceat bridge in 1626, the lower reaches of the Ouse and Cuckmere were difficult to harness for water-power.[8]

Wood and wood-fuel, like water-power a normal prerequisite of " pre-industrial " manufacturing, were also scarce in the region. In 1743 Dean Milles complained that the locality of Bishopstone was " disagreeable enough, being in a naked, open country, where there is hardly a tree to be seen."[9] Wood was supplied from the Weald. In 1552 James Burton had timber carted from Hellingly and Heathfield to build a house in Eastbourne. Downland residents along the lower Ouse bought timber and wood-fuel owned by the Pelhams at Laughton and elsewhere in the Low Weald. In the 1620s waggons "laden with wood and faggots out of the wild of Sussex " regularly crossed Danny Park in Hurstpierpoint bound for Pyecombe and

[1] Young, *op. cit.*, p. 348.
[2] Brent, *op. cit.*, pp. 41-43.
[3] E.S.R.O., ASH 933/68-69; Daniel Defoe, *A tour through England and Wales*, G. D. H. Cole, ed., Vol. i, Everyman (1928), p. 129.
[4] Brandon, *Common Lands*, pp. 208-209.
[5] W. H. Godfrey (ed.), *op. cit.*, p. 210.
[6] Young, *op. cit.*, pp. 461-2.
[7] E.S.R.O., QR/E/63/10, PAR 304/1/1/1/44; Sussex Archaeological Trust (abbreviated hereafter to S.A.T.), G5/44.
[8] S.A.T., G13/8.
[9] E.S.R.O., XE/6/33.

Brighton. In 1632 two Wealdsmen from Heathfield carted to Alfriston 400 " wists " to bind sheaves and 12 " swingells " to thresh corn, which they bartered for mutton.[1] Wood was, therefore, more expensive in the downland than in the Weald. In 1549 a Lewes jury claimed that a load of wood sold on the downs for three shillings and in the Weald " among the woods " for one shilling.[2] In 1580 prices at Brighton, where there was " greate scarcitye and dearthe of tymber and wood," were appreciably higher than at Winchelsea.[3]

Elsewhere in England " arable regions did not give warm hospitality to domestic crafts," unless, as in the case of cloth-making around Norwich and Salisbury, the activity was " basically a town industry " which had overspilled into the countryside.[4] Thus in the downland region, where wool, sheepskins and hides were products of sheep-corn husbandry, although the domestic carding and spinning of wool provided widespread female employment, often combined with the preparation and spinning of flax and hemp, plots of which were locally tended,[5] few weavers were resident, even fewer clothiers, glovers, and tanners, and perhaps no warpspinners or fullers.[6] Quarrying, however, was a possibly expanding source of employment. Flints were used to surface Low Weald roads and 24 tons of stones from the seashore at Eastbourne were shipped to London in 1608.[7] Wealden demand for chalk and for lime as fertilizers grew during the period.[8] In 1620 a quarry at Southerham in South Malling was alleged to have encroached across three acres of tenantry down.[9] Marshall noted that Wealden farmers in western Sussex carried chalk ten or 12 miles from the Downs, and Young remarked on the employment of sloops to ship chalk from Beachy Head to kilns in Hastings and Rye.[10] In July 1630 it was claimed that Wealden inhabitants in western Surrey " continually employ waggons at this time of year in fetching chalk from the Downs," and Norden commented that Weald farmers, in their zeal for improvement, were erecting kilns.[11]

Fishing also generated some employment. In Kent, Camden noted a race of " Amphibious Creatures " who " get their living by sea and land . . . According to the several seasons, they make nets, fish for Cod, Herring, Mackerel . . . and also dung their ground, plough, sow, harrow, reap, being quick and active in both employment."[12] In such sheep-corn areas as Thanet their fishing was fitted in between the autumn and spring sowings and the summer harvest.[13] In the downland region of eastern Sussex similar opportunities existed for such amphibious activity. Fishing boats, often inshore cockboats and hookers, were based at Hove, Brighton, Rottingdean, Telscombe, Seaford and Eastbourne, and along the Ouse estuary.[14] In 1565 the largest boat at Seaford, where seven fishermen resided, was only two tons; at Eastbourne, which housed 12 fishermen, the four largest craft ranged from three to nine tons, and each was part-owned.[15] At Hove seven copyholders rented cottages, tenements or "shops" by the seashore in 1608.[16]

[1] S.A.T., CP183; British Library (abbreviated hereafter to B.L.), Add. MS. 33142, *passim*; E.S.R.O., DAN 2072; QR/E/3O/113.
[2] Straker, *op. cit.*, p. 120.
[3] E. Turner, 'The early history of Brighton,' *S.A.C.*, vol. 2 (1849), p. 51; E.S.R.O., WIN 53/148.
[4] Thirsk, *Agrarian history*, pp. 13-14, 45.
[5] *The Victoria history of the county of Sussex* (abbreviated hereafter to *V.C.H.*), vol. ii (1907), p. 257.
[6] Brent, *op. cit.*, pp. 107, 118.
[7] DAN 2072; CP168.
[8] Kerridge, *Agricultural revolution*, pp. 246-8.
[9] G8/49.
[10] Marshall, *op. cit.*, Vol. ii, pp. 142-3; Young, *op. cit.*, pp. 201-212.
[11] Calendar of State Papers Domestic (abbreviated hereafter to C.S.P.D.), (1629-1631), p. 302; Cornwall, *op. cit.*, p. 179.
[12] Camden, *op. cit.*, p. 202.
[13] C. W. Chalklin, *Seventeenth century Kent*, (1965), p. 150.
[14] W/A/1/107 (Hove), W/A/4/536 (Rottingdean), W/A/1/108 (Telscombe), W/A/5/153 (Meeching), W/A/4/23 (Piddinghoe), W/A/4/314 (Southease), W/A/3/106 (Seaford), W/A/7/72 (Eastbourne).
[15] P.R.O., S.P. 12/38/28.
[16] Brighton Museum, Preston Manor, Stanford MS. ES/ET/74.

Some part-owners were also occupiers of land. John Allen of Meeching (Newhaven) left " a quarter of my little bote with netts " as well as three yardlands of arable, and John Duplake of Southease " one third of a boat betwixt Thomas More, John Barnden and me," together with land in Telscombe. Thomas Stanmer of Rottingdean bequeathed part of a cockboat, six loads of nets and over 40 sheep, and William Worger of Hove a third part of " The John," two kine and ten sheep.[1] Temporary labour was also recruited to man the large fleets which left Brighton twice yearly for the North Sea. In 1612 John Seagar of Brighton was permitted to discharge at Yarmouth a crew-member from Preston, who, overcome by sea-sickness, was to make his way home by land.[2]

Evidence from Piddinghoe by the estuary of the Ouse suggests a narrow range of non-agricultural employment in the region. Of 25 married men or widowers described between 1636 and 1639 in the registration of baptisms and burials, 11 were husbandmen, two yeomen, two shepherds and three labourers. Three others were essential craftsmen—a blacksmith, a tailor and a weaver, while a fourth, a slater, was probably itinerant. Of the remaining three, one was a vicar, one a gentleman, and the third was not described.[3]

Since only a minimum of craft employment existed in the region, harvest labour had necessarily to be imported each year. In 1580 John French of East Blatchington gave instructions for the lodging and payment of temporary hands to be recruited for the harvest;[4] in 1714 Samuel Ridge's farmhouse at Westdean included a " Reepers garret."[5] Some labour was drawn from very local urban centres. In 1600 three fishermen from Brighton helped to bring in the barley harvest at " Mouscombe lane " in Falmer, and in 1616 Robert Wright, a tailor from Lewes, harvested at Kingston Buci, just across the border in Bramber rape.[6] Since the harvest on the southern dip-slopes of the Downs tended to be earlier than in the Weald, Wealden labourers swelled this seasonal influx. In 1645 a Rotherfield girl succumbed to the blandishments of a local gallant while her guardian was away " at harvest in the downes."[7] This mobile labour-force, typical of wood-pasture regions elsewhere,[8] was described in 1802. " On Midsummer Day when the crop was sufficiently advanced in Ear to enable a person to calculate on the quantity of straw to be cut, one or two men used to come out of the Weald . . . to agree as to the number of men required to reap the wheat . . . and the price per Acre."[9] By the early seventeenth century harvesters were tramping to Kent from Essex, London and even Yorkshire, where the harvest was also later than in the southern downlands.[10]

Downland grain surpluses were distributed across a wide area.[11] The Weald was regularly supplied either by road or by shipments from Eastbourne, Newhaven and Shoreham (with Brighton) to Hastings and Rye, which also consumed heavily. In the 1540s James Burton of Eastbourne sold his wheat and malt to buyers in Rye, Winchelsea, Brightling, Burwash and Westfield.[12] During the dearth of 1630 the justices emphasized the dependence on downland supplies of Wealden areas in Lewes and Pevensey rapes.[13] The Pelham household at Halland in East Hoathly and the Montague household at Battle received corn-rents from the leasehold-

[1] W/A/5/153, W/A/4/314, W/A/4/536, W/A/11/230.
[2] Kent Archives Office, Cinque Ports MS. Y2/16.
[3] PAR 444/1/1/1.
[4] W/A/7/197.
[5] E.S.R.O., W/INV/587.
[6] EpII/5/6/263-4; EpII/5/11/61-2.
[7] QR/EW/72/120.
[8] Thirsk, *Agrarian history*, p. 434.
[9] G. S. Bagley, ' The Life and Times of William Holloway, Historian of Rye,' *S.A.C.*, vol. 100 (1962), pp. 26-27.
[10] P. Clark & P. Slack, (eds.), *Crisis and Order in English Towns* (1972), p. 147.
[11] Brent, *op. cit.*, pp. 78-84
[12] CP183.
[13] *V.C.H.*, Vol. ii, pp. 222-7.

ers of their demesne farms at Bishopstone and at Chinting in Seaford.[1] The markets at Lewes and Hailsham were perhaps best sited to supply the Weald. The wide influence of Hailsham seems clear from an agreement made in 1581 by purveyors appointed at Winchelsea that they would supply grain at the prices then current in Hailsham market.[2]

Only at Eastbourne did wheat predominate amongst grain shipped coastwise from eastern Sussex between 1565 and 1633; at Newhaven it took second place to malt and at Shoreham to barley. The bias of coastal shipments was heavily eastwards. London received most of the wheat and east Kent, an important malting area, most of the barley. Malt was more widely distributed, being shipped to west country ports, such as Plymouth and Dartmouth, as well as to London. A straggling trade in oats, mainly to London, and in pulses, mainly to Devon, probably tapped the Wealden hinterland. Evidence is too fragmentary to reveal any trend in the volume of these coastwise grain exports, but shipments were often considerable. Wheat exports at Newhaven reached 2,088 quarters between Christmas 1619 and 1620, and at Shoreham 1,548 quarters between Michaelmas 1588 and 1589 and 1,245 quarters between Christmas 1614 and 1615. Combined malt and barley shipments were sometimes higher—2,270 quarters at Newhaven between Michaelmas 1588 and 1589 and 3,490 quarters at Shoreham between Christmas 1614 and 1615. In bountiful harvest years a surplus of grain remained for overseas shipment. Between 1566 and 1639 wheat generally predominated over barley and malt. The United Provinces and northern and western France received the most regular shipments, but heavy exports of wheat were occasionally made to Ireland and to Mediterranean ports in Spain, France and Italy. Between Michaelmas 1604 and 1607 4,635 quarters were shipped overseas through Newhaven, chiefly to Mediterranean ports.[3] Remoter markets were sometimes served. In December 1639 William Williams was licensed to ship 300 quarters of wheat from Newhaven to the Canary Islands.[4]

The market for downland grain during this period was clearly insistent as well as far-flung. London's demand was rising sharply. Between 1500 and 1638 the capital's annual coastwise imports of English grain " expanded from 17,380 quarters to 95,714 quarters. There was a threefold increase in wheat imports, a ninefold increase in oats, and a sixteenfold increase in malt." This rising metropolitan demand reflected a national trend which caused the price of wheat to increase sevenfold between c.1450 and c.1650, and the price of cheaper grain to increase eightfold, a rise which outstripped all other common foodstuffs and necessities.[5] Large profits might well accrue to downland farmers able to gear their production to such a market.

Over the same period profits from the downland sheepflock were perhaps more uncertain. The price of sheep rose by almost sevenfold, but that of wool by only fourfold.[6] Locally James Burton of Eastbourne, who received 11s.-13s. a todd in 1538-1542, profited from a final boom which sent prices rising from 13s. to 23s. between 1545 and 1549.[7] Local prices seem to have been sluggish after 1591. In 1592-1594 the price per todd for the Pelham clip from Bishopstone was only 29s.-30s., and was to fluctuate only between 28s. and 36s. in 1597, 1600, 1603-1604, 1606-1610, 1612-1618, 1620-1621 and 1626-1627. The Pelham clip was regularly supplied to the Kentish broadcloth industry around Cranbrook and Staplehurst, which probably absorbed

1 B.L., Add MS. 33142/14, 147; PAR 236/7/4/7.
2 WIN 53/154.
3 Brent, *op. cit.*, pp. 78-84.
4 Privy Council Register, Vol. viii, Nov. 1639-Jan. 1640 (reproduced in facsimile, H.M.S.O., 1968), p.100.
5 Thirsk, *Agrarian history*, pp. 507, 602.
6 *Ibid.*, p. 602.
7 CP183.

much of the best downland wool.[1] Only isolated shipments are recorded through the region's ports,[2] but in 1614 " one Wilson " of Eastbourne was claimed to be " a merchante for wolle and other uncustomed goods into Fraunce," while Edward Paine, also of Eastbourne, was imprisoned in 1622 for abetting the smuggling of wool.[3] At Pevensey in 1624 20 armed men were alleged to have fought off an attempt to prevent them loading wool, leather and cloth onto a waiting ship.[4] By the later seventeenth century Sussex wool was gaining in national esteem as Midland and Lincolnshire fleeces deteriorated in quality.[5]

In spite of an insistent demand for grain, the downland farmer's opportunity to expand production may often have been limited. Yields per acre may have been improved by the adoption of " convertible " husbandry.[6] But the absence of woodland and waste in the region meant that any major extension of its arable acreage would be at the expense of sheepwalk and might therefore threaten the sheepflock, the " moving dunghill," on which arable fertility depended. The heavy stinting of the tenantry sheepdown, already noted, may therefore have limited any major extension of arable to demesne farms. Thus in 1593 Thomas and Hugh Elphick, leaseholders of Sutton Sandore manor, had recently converted pasture there into arable.[7] Shortage of pasture may have precluded any but demesne farmers from laying less emphasis on wool and more on lamb and mutton production, a change which occurred throughout Norfolk during this period to meet growing demand from Norwich and London.[8] Predominantly wether flocks were perhaps necessary if the tenantry sheepfold was to be adequately maintained. Moreover, since folding demanded of downland sheep vigorous daily movement to and from the upper pastures, conditions were not ideal for their fattening.[9]

A general land hunger in the region may have strengthened the pressure to enclose Low Weald waste annexed to manors centred on the scarpfoot in Clayton, Ditchling, Westmeston, Streat, Plumpton and East Chiltington, a movement which encountered strong opposition, both legal and physical.[10] Energy was also focussed on local brookland. In the 1540s the cutting of a new outlet for the Ouse at " Newhaven " released from annual inundation several thousand acres of the Ouse floodplain which lay within the valley-flank manors between Glynde, Malling and the sea.[11] This achievement was periodically threatened by shingle drift at Newhaven where the choking of the outfall required attention in the 1630s and in 1664.[12]

As in other chalk and limestone areas devoted to cereal production, such as the wolds of Yorkshire and Lincolnshire and the downland of Hampshire and Dorset, the economics of a sheep-corn husbandry geared to an insistent market tended to favour the high farmer and to discourage the family farmer. Large-scale cereal production allowed technical economies in the use of labour and equipment which lowered costs. Moreover the ampler resources normally available to high farmers often enabled them to shun the market when prices were low, whereas the family farmers could not. Again small producers, who consumed part of their crop, were

[1] B.L., Add, MSS. 33142, 33144, *passim.*
[2] E190/739/8.
[3] QR/E/12/20; C.S.P.D. (1619-1623), p. 434.
[4] *Ibid.*, (1623-5), p. 321.
[5] P. J. Bowden, *The wool trade in Tudor and Stuart England* (1962), pp. 34. 38-39.
[6] Brandon, *Common lands*, pp. 292-4.
[7] S.A.T., M368.
[8] K. J. Allison, ' Flock management in the sixteenth and seventeenth centuries,' *Economic History Review* (abbreviated hereafter to *Ec.H.R.*), 2nd Series, Vol. 11 (1958), pp. 108-109.
[9] Kerridge, *Agricultural revolution*, p. 43.
[10] Brandon, *Common lands*, pp. 158-160; QR/EW/35/14.
[11] P. F. Brandon, ' The origin of Newhaven and the drainage of the Lewes and Laughton Levels,' *S.A.C.*, vol. 109 (1971), pp. 94-106.
[12] J. H. Farrant, ' The evolution of Newhaven Harbour and the Lower Ouse before 1800,' *S.A.C.*, vol. 110 (1972), pp. 44-47.

often ruined by such successive years of national grain shortage and dearth as 1594-1598, 1621-1623, 1630-1637 and 1645-1651.[1] So disadvantaged, many family farmers may have been obliged to sell out to men who were eager and able to extend the scale of local high-farming.

Certainly the norm during the period was to block-lease the demesne, which was often very extensive, exceeding 500 acres at Alciston, Berwick, Exceat in West Dean, Falmer, Heighton in Firle, Northease in Rodmell, Plumpton, Preston, Rodmell, Rottingdean and Sutton Sandore in Seaford. Elsewhere 300 or 400 acres of demesne were not uncommon. Between 1613 and 1630 annual demesne rents exceeded £100 at Denton, Folkington, Meeching and Wilmington and reached £169 at Kingston with Swanborough, £195 at Beddingham with Combe, £200 at Poynings, £245 at Hangleton and £310 at Milton with Lullington. About 1650 demesne lands at Northease in Rodmell, West Blatchington and Patcham were valued at £180, £220 and £240 per annum. At some point between 1577 and 1624 the leasing policy for the entire demesne is known on 19 manors established on the dip-slope. On 18 of these the demesne was block-leased, apart from the occasional small parcel of brookland or pasture. Elsewhere on the dip-slope 450 demesne acres were leased out at Clapham in Litlington in 1582, 420 arable acres at Sandore Sutton in 1593, and 325 acres at Litlington in 1643. At some point over much the same period in 12 out of 22 manors established in the Ouse valley or along the scarpfoot, where the full leasing policy is known, the entire demesne, apart again from odd parcels, was rented by one leaseholder or partnership, and in eight others by two, three or four leaseholders, one of whom was often very predominant. In the remaining two manors, seven held demesne at Wilmington and 21 at Heighton in Firle. Elsewhere, at Beddingham, Charleston in Firle, Plumpton, Poynings, Tilton in Alciston and Wootton in Folkington, where evidence is incomplete, large, or at least valuable, demesne farms were also rented by single leaseholders.[2]

Although these large demesne farms were doubtless sub-let, it seems unlikely that they were partitioned in the process. Direct evidence of high farming on demesne acreages certainly exists. In 1596 a husbandman, John Jackson, testified that the only dwelling in West Blatchington parish was the household of the leaseholder of the manor, Mr. Richard Scrase, " with whom and with his father hee hath dwelled these 26 years."[3] Henry Owden claimed in 1637 that " John Pollard has used Hangleton farm with William Wakefield of Poynings and Richard Gun of Brighton and John Bennett has occupied Benfields " and that " the parish of Hangleton doth consist of the two families belonging to the said Pollard and Bennett and no more."[4] In 1621 there were " noe inhabitants at Sutton Sandore Chinting and Sutton but onely one Richard Elficke who . . . dwelleth at Chinting and occupieth the farm and the lands there."[5] The case of John Vinall is instructive. Although in 1614 he occupied in Iford " Swanborow farm, Stuckles and the Demesne of the manor of Iford," he resided at Kingston, where in 1618 he leased most of the demesne. Since, however, he farmed such an extensive acreage in Iford and lodged his servants in the manor-house attached to " Swanborow " farm, he was obliged to act as Constable of Swanborough Hundred.[6]

[1] Thirsk, *Agrarian history*, pp. 33-34, 64-66, 575; J. Thirsk, ' Seventeenth century agriculture and social change,' *Agricultural History Review* (abbreviated hereafter to *Ag.H.R.*), Supplement, vol. 18 (1970), p. 157; Eric Kerridge, *Agricultural problems in the sixteenth century and after*, (1969), p. 128.

[2] Brent, *op. cit.*, pp. 186-190.

[3] EpII/5/6/148; E.S.R.O., ABE 18R/2/52.

[4] EpII/5/15/21.

[5] EpII/5/12/17.

[6] W. H. Godfrey (ed.), *op. cit.*, p. 139; E.S.R.O., ADA 45/44.

Since the block-leasing of extensive demesne acreages seems to have been a corner-stone of high farming in the region, demesne extension would have consolidated its presence. Such extension certainly occurred. Former " tenant land," normally copyhold, had been incorporated into manorial demesne at Eastbourne by 1575, at Sandore Sutton by 1589, at West Dean by 1615, at Heighton in Firle by 1619, at Kingston by the 1620s and at Preston by 1639.[1] In the early seventeenth century the Dobells bought in copyholds in Streat and Westmeston. The consolidation of the Morley estate at Glynde had eliminated a numerous tenantry by 1697.[2] A spectacular reduction in the freehold and copyhold acreages occurred at Stanmer. In 1608 Sir Richard Michelbourne was leasing from the Crown the demesne and also renting 3½ copyhold virgates. Some 23 other tenants held eight freehold and 37½ copyhold virgates, amounting to about 600 arable acres, of which John Michelbourne held six virgates and Lawrence Michelbourne one. But by 1635 Sir Richard had bought the manor and held 34 virgates, which he had purchased from 12 tenants, although whether before or after his purchase of the manor is unclear.[3]

On the tenantry acreage direct tenure was often concentrated into a few hands, sometimes armigerous, gentle, professional or commercial, rather than yeoman, and holdings were often much in excess of the virgate of between ten and 20 acres which was the traditional endowment of the family farmer in the region. The downland freehold acreage was small. On 17 out of 19 dip-slope or Ouse valley manors freeholders, renting four acres or more of arable, did not exceed three per manor. Only at Portslade and Jevington did their numbers reach nine and ten. Fourteen of the freeholders whose acreages are precisely known held more than 50 arable acres, and a further six more than 21 acres. Moreover 14 of these 42 knights, gentlemen, clerks and yeomen also leased local demesne, which was, presumably, often farmed with the freehold.[4]

The surviving copyhold acreage was much more extensive. Again large holdings were apparent, although less dominant than on the freehold acreage. On 18 dip-slope and Ouse valley manors, out of 182 copyholders who rented four arable acres or more, 17 held more than 50 acres, and a further 52 more than 20 acres. Seventeen holding fewer than ten acres were in the manors of Falmer and Jevington. Significant penetration by the gentry, or at least by " gents," had occurred at Falmer, Patcham, Houndean and Southease, while certain yeoman families, perhaps grasping, or poised to grasp, the lowest rung of gentility, held large concentrations at Piddinghoe, Preston, Ramscombe, Rodmell, Rottingdean and Stanmer. On 16 scarpfoot manors freeholders, renting four arable acres or more, were more numerous than on the dip-slope or in the Ouse Valley. But knights and gentlemen, especially members of the Burton, Gildredge and Parker families, were prominent, accounting for 23 of the 70 freeholders, and for all those renting over 50 acres. Large copyholds, although present at Berwick and at Willingdon, were generally less apparent along the scarpfoot. Of 206 copyholders, renting four arable acres or more, 12 held over 50 acres, another 48 over 20 acres and 73 under 10 acres. Much conflation of tenantry holdings, unassociated with demesne expansion, probably occurred within the period. The process can be observed at Eastbourne, Exceat, Friston, Heighton in Firle and Ramscombe. Evidence often points to recent conflation. Thus in 1624 the 16 virgates

[1] CP116, W. Budgen, *Old Eastbourne* (1912), pp. 315-335; M364; M429, M462, M498; S.A.T., G/Acc/917/1-2, 918/14-15, 921/34-35; W. H. Godfrey (ed.), *op. cit.*, p. 139; C. T. Stanford, (ed.), *Court rolls of the manor of Preston*, (S.R.S., vol. 27 1921), p. 51, ES/ET/47.

[2] Brandon, *Common lands*, pp. 159, 355.

[3] P.R.O., LR2/227/145-190; S.A.T., A146.

[4] Brent, *op. cit.*, pp. 192-5.

rented at Northease by Stephen and Richard Aridge were " nuper Garwayes," " Bottinges," " Jefferyes," " Pickcombes " and " Budds."[1]

The tenure of many freeholds and some copyholds in the region by landowners and demesne leaseholders, and the reduction in their number through conflation, probably further consolidated the presence of high farming, since sub-leasing may not often have involved partition. This trend, reinforced by the block-leasing of demesne may well have ensured that farms occupying " the greatest part if not the whole of their respective parishes," later noted as a commonplace by Young,[2] were already present in the region, especially away from the scarpfoot.

High farming in the region required a work-force, perhaps mainly consisting of cottagers and unmarried labourers living-in. As in fielden regions elsewhere, downland cottages were meagrely endowed, rarely having more than a garden attached to them.[3] No common waste and few small parcels of pasture existed to provide a springboard for enterprise. The arable-centred character of downland common pasture rights excluded participation by " bare " cottagers.[4] Initiative was perhaps further sapped by the scarcity of by-employment, and even by the high cost of timber and wood-fuel. With the partial erosion of family farmers, labourers living-in probably became relatively more numerous, such as those lodged by the engrosser, John Vinall, in Swanborough manor-house, or those residing in the " families " of Richard Scrase, John Pollard, John Bennett and Richard Elphick in the otherwise deserted parishes of West Blatchington, Hangleton and Sutton. In 1622 Henry Spooner of Willingdon, a husbandman, left bequests " to all the husbandmen in my masters house," and in 1639 William Scrase of Pangdean in Pyecombe remembered " my men and maidservants . . . and all the Boyes that shall be dwelling with me."[5] In 1574 a lodging for " menservants " stood by the stable at Beddingham manor-house. Downland inventories for 1710-1720 frequently list two or three beds in the " Men's Chamber."[6]

Agrarian society in the downland was not yet, however, everywhere starkly polarised between high farmers on the one hand and bare cottagers and servants living-in on the other. Family farmers still survived, especially along the eastern scarpfoot. Manorial custom may have contributed to their survival by partially shielding them from seigneurial aggression.[7] The custom of the Borough English was seemingly universal in the region and allowed the copyholder absolute security for life—provided that the rent was paid. Such rents were, moreover, fixed and immutable and usually bore little relationship to rental value since they were not adjusted upwards to reflect the rampant inflation of the period. Thus at Stanmer in 1608 the estimated yearly value of copyhold arable was 13 or 14 times higher than the customary rent.[8] On a few manors, such as Willingdon, Jevington, Falmer (bovate holdings) and Preston Becklewin, the heir to a copyhold paid only a relief, equivalent to a year's rent, but elsewhere he faced a fine which was only loosely defined by custom. John Rowe, the scrupulous steward of Lord Bergavenny's downland and Wealden manors, cited Coke's judgement that " two yeares profitt of the land was an unreasonable fyne," which the tenant might refuse.[9] However at Streat and Westmeston a fine was " commonly twice the yearly value of the land . . . by waye of improvemente, or thryse at the moste," a custom which Kerridge has argued was normally regarded

[1] *Ibid.*, pp. 193-200.
[2] Young, *op. cit.*, pp. 23-24.
[3] Thirsk, *Agrarian history*, pp. 422-5; Brent, *op. cit.*, pp. 205-7.
[4] W. H. Godfrey (ed.), *op. cit.*, p. 70.
[5] W/A/18/63/; W/A/26/8.
[6] E.S.R.O., GLY 1355, W/INV/50-1299, *passim.*
[7] Brent, *op. cit.*, pp. 202-5.
[8] LR2/227/145-190.
[9] W. H. Godfrey (ed.), *op. cit.*, p. 83.

as reasonable, and which seems to have been adhered to on Keymer manor between 1600 and 1617.[1] At Preston in 1629 the admission of James Bradford to a cottage and half a virgate, valued at 43 shillings per annum in 1608, and his immediate surrender of it to another, occasioned two fines, of 40 and 50 shillings.[2]

Manorial custom also allowed the routine of the downland family farmer to be pursued within a framework of common rights, which hinged around the common sheepdown, the common sheepfold, the common cattle pasture and, on some manors, a yearly allocation from common brookland. Although by 1640 the demesne arable and sheepdown on many manors had been enclosed and lay in severalty, no evidence suggests dismemberment of the tenantry sheepdown and dispersal of the common flock, except on manors where copyholds were already concentrated into two or three hands.[3] Among common flocks surviving into the 1640s were those at Bishopstone, Norton in Bishopstone, East Blatchington, Falmer, Kingston, Glynde, Rottingdean and Piddinghoe.[4]

The farming economy of the Weald

To the north and east of " the downes " lay " the wild," a region possessing a landscape, an economy and a social structure very different from that of the downland. By 1540 a pattern of dispersed settlement and enclosed fields had been long established comparable with that created in other forest or wood-pasture areas by late, piecemeal and incomplete colonisation of woodland rooted in clay and sand.[5] The vale of the Low Weald, four or five miles wide on average, was composed of a heavy, retentive and, according to travellers, " bottomless " clay,[6] fringed to the south by a slip of Lower Greensand. To the north and north-east rose the High Weald, formed chiefly of the Tunbridge Wells and Ashdown Sands and the Wadhurst Clay, often intermingled. Its southern and south-eastern flanks reached no more than 300 or 400 feet, while flattish corridors were created by the upper reaches of rivers flowing from its upland core to the sea. This core, rising to between 400 and 800 feet, formed a northern barrier against Surrey and Kent, consisting of the central plateau of Ashdown Forest and the ridges running westwards through Worth and Tilgate Forests and eastwards, principally from Heathfield north-east to Burwash and south-east to Battle. Their flanks were eroded into steep-sided gullies by the many streams which formed the headwaters of the rivers flowing to the sea.

Both Young and Marshall were insistent that the sands and clays of the Weald were suited to cattle rather than corn[7]—intensive grazing of sheep being precluded by the rankness and dampness of the grassland. The sands were often acid and infertile, especially on the Ashdown plateau and the northern ridges, which Marshall thought as " bleak and barren as the Moreland of Yorkshire or Westmoreland," an opinion echoed by Young and by Cobbett.[8] A little more attractive were the heavy clays of the Low Weald, but even these Marshall judged to be " colder " and less productive than in other vales,[9] and on them were sited such acres of degenerate wood-

[1] DAN 1126/226; Kerridge, *Agrarian problems*, pp. 38-39; SAT., Aber 1, *passim;* W. H. Godfrey (ed.), *op. cit.*, pp. 34-39.
[2] C. T. Stanford, (ed.), *op. cit.*, pp. 45-46, ES/ET/74.
[3] Brandon, *Common lands*, pp. 353-8, 360-6.
[4] QR/E/70/72 (Bishopstone, Norton, East Blatchington); QR/E/75/73 (Falmer); WR/E/212/5 (Kingston, Glynde); QR/E/160/50 (Rottingdean); QR/E/130/47 (Piddinghoe).
[5] Gulley, *op. cit.*, pp. 226-7.
[6] Defoe, *op. cit.*, p. 129.
[7] Young, *op. cit.*, pp. 471-3; Marshall, *op. cit.*, pp. 132-3.
[8] *Ibid.*, p. 93; Young, *op. cit.*, p. 473; William Cobbett, *Rural rides*, George Woodcock, ed. (Penguin, 1967), p. 113.
[9] Marshall, *op. cit.*, p. 336.

land, subject to common rights, such as the Dicker and the Broyle.[1] But a correspondent reminded Young that some second-class arable soils did exist. Away from the upland core was " much good land, rich sandy loam and fertile clay, generally mixed with some sand; capable of producing every kind of crop."[2] Even so, however, nature had biased the region towards a livestock-centred husbandry.

During the period the region, away from the more intractable upland, possessed a landscape of isolated farms and hamlets set amid a tangle of small, hedged fields, shaws, woodland, streams and uncultivated heath.[3] Young was later to lament the survival in Sussex of so much common pasture and of 170,000 acres of woods, plantations, coppices and shaws, chiefly composed of oak, interspersed with ash, hazel, birch and beech.[4] No system of common fields may ever have been known, except on the Lower Greensand.[5] The loose regulation of common waste was the only collective discipline imposed by the Wealden manor on tenants who farmed in severalty. Since parishes were often very large, parochial control must normally have been weak. Clearly the region has close affinities with forest and wood-pasture areas elsewhere in lowland England.

Whereas woodland and waste were virtually unknown on downland manors, except in Low Weald appendages, woodland remained common in the Weald, forming 17 per cent of 5,263 demesne acres, excluding waste, on Buckhurst manors in East Grinstead, Withyham and Hartfield,[6] 26 per cent at Wyligh in Ticehurst (308 acres), 30 per cent at Ninfield (351 acres), 37 per cent at Hawksden in Mayfield (1,023 acres), 40 per cent on an estate in Brede and Udimore (1,038 acres), 41 per cent at Possingworth in Waldron (271 acres), 44 per cent at Robertsbridge in Salehurst (2,515 acres) and 53 per cent at Netherfield in Battle (473 acres).[7] Defoe was later to find the Sussex Weald an " inexhaustible store-house of timber," " prodigious, as well in quantity as in bigness."[8] The tradition that the period saw widespread eradication of Wealden woodland has been rejected by Gulley and by Brandon.[9] Wealdsmen were aware of the need to conserve and to replant and were familiar with the art of coppicing. In 1580 Sir John Pelham commanded that, after felling, an area was " to be incopsed, for the preservation of the spring of that wood for the better continuance of the wood there."[10] Lesser men were equally solicitous. The wife of Nicholas Bodle of Playden was required " to mayntayne and Cherishe the younge Coppices." Another testator warned that grazing must be conducted " without hurting the growth of the woods." Robert Relfe of Waldron directed that his timber was to be felled and coaled and the area coppiced for seven years.[11]

Pasture and meadow often dominated the remaining Wealden acreage. In the 1560s no demesne arable acreage was recorded at Robertsbridge in Salehurst (1,409 acres, excluding woodland and waste) or at Possingworth in Waldron (159 acres), and not more than 100 acres at Sheffield in Fletching (524 acres).[12] In 1597-1598 on ten Buckhurst manors arable occupied 1,329 acres, meadow 1,026 acres and pasture 2,052 acres.[13] On Framfield manor in 1617 between

[1] W. E. Tate, *A handlist of Sussex Inclosure Acts and Awards*, (1950), p. 35.
[2] Young, *op. cit.*, p. 473.
[3] E.S.R.O., De La Warr MS. DLW 392A, maps, *passim*, ADA 137.
[4] Young. *op. cit.*, pp. 178, 464.
[5] Brandon, *Common lands*, pp. 216-223.
[6] Ernest Straker (ed.), *The Buckhurst Terrier*, (S.R.S., 39 1933), pp. 2-29, 31-40, 44-56.
[7] S.A.T., CO d4 (Ticehurst, 1611); ASH 4379 (Ninfield, 1689); GLY 3116 (Hawksden, c.1650); E.S.R.O., FRE 7985 (Udimore, 1679); S.A.T., J606 (Possingworth, 1565); R. H. D'Elboux (ed.), *Surveys of the manors of Robertsbridge, Sussex*. (S.R.S., vol. **47** (1944), p. 155; ASH 4377 (Netherfield, 1639).
[8] Defoe, *op. cit.*, pp. 125, 128.
[9] Gulley, *op. cit.*, pp. 50-52; Brandon, *Common lands*, pp. 128-9.
[10] Straker, *op. cit.*, pp. 123-4.
[11] W/A/12/234; W/SM/E/118; W/A/12/329.
[12] R. H. D'Elboux (ed.), *op. cit.*, p. 155; J606; E.S.R.O., Searles MS. (uncat.), Box 5/4.
[13] Ernest Straker, (ed.), *Buckhurst Terrier*, pp. 2-29, 31-40, 44-56.

22 per cent and 31 per cent of the extensive tenantry acreage was devoted to arable and on Newick manor in 1582 37 per cent. Stock was also pastured in woodland and on the waste.[1]

That livestock played a central role in the husbandry of Wealden communities is suggested by an examination of the cereals and pulses grown. Kenyon has established that by the early seventeenth century in the Low Weald parish of Kirdford in western Sussex a typical farmer, sowing approximately 34 acres, would normally allocate about 14 acres to wheat and the rest to oats and pulses.[2] Over half his acreage was devoted to the production of animal foodstuffs. Kenyon believed this balance to have been typical of the Low Weald, while both Marshall and Young claimed that it had not been entirely superseded in their day.[3] Certainly in May 1660 John Linfield of Hurstpierpoint in the Low Weald of eastern Sussex was cultivating 11 acres of wheat and 20 acres of oats and pulses.[4] In the High Weald of eight farms containing between 18 and 74 sown acres the bias was perhaps less strongly towards animal foodstuffs, 130 acres being allocated to wheat and 143 acres to oats and pulses.[5] However, over much the same period, between 1580 and 1650, the balance on nine farms with only between three and seven sown acres was tilted more sharply towards oats. Eleven acres of wheat were sown and 36 acres of oats, although pulses were rare.[6] If the size of the arable acreage may be broadly equated with the size of the farm, these figures would suggest that larger farms aimed to produce some wheat for the market, whereas the smaller farmer concentrated heavily on animal foodstuffs. Almost no Wealden acreage was devoted to barley or to rye.

On a medium sized farm of 120-135 acres at Kirdford the crop value averaged 43 per cent of the farm's combined crop and livestock valuation, and cattle formed in terms of value to the farm 66 per cent of all livestock.[7] The evidence for Wealden farms in eastern Sussex indicates a yet heavier emphasis on livestock. At Hurstpierpoint where John Linfield sowed an acreage close in extent and balance to the average Kirdford acreage, the crop value was only 30 per cent of the combined crop and livestock valuation, while his cattle formed in terms of value to the farm 74 per cent of all livestock. On six High Weald farms with a combined crop and livestock valuation of £50 or more,[8] taken between late March and June, the emphasis on livestock was heavier still. On two no crops were recorded, while on the other four they formed, excluding hops, only 10 per cent, 10-13 per cent, 22 per cent and 27 per cent of the total valuation. Since the smaller the acreage sown in the Weald the greater the bias towards oats, it seems probable that this heavy emphasis on livestock was shared by the smaller farms and smallholdings for which no inventories survive. This was the case at Kirdford.[9]

Nonetheless the arable element in Wealden farming was of some importance. Both Young and Marshall were to lament what was in their view the irrational attachment of Wealden farmers

[1] ADA 137; DAN 1126/213-215.

[2] G. H. Kenyon, 'Kirdford Inventories, 1611-1760,' *S.A.C.*, vol. 93 (1955), p. 94.

[3] Marshall, *op. cit.*, p. 139; Young, *op. cit.*, pp. 99-100.

[4] E.S.R.O., AMS 2212.

[5] E.S.R.O., DUN 49/22 (Ticehurst, 1639); AMS 2214 (Cuckfield, 1676); FRE 520/10, 4 (Sedlescombe, 1619 & 1620); EpII/5/7/49 (Withyham, 1605); EpII/5/15/28 (Burwash, 1636); EpII/5/10/51 (East Grinstead, 1614); EpII/5/10/8 (Brightling, 1612); EpII/5/5/182-3 (East Hoathly, 1589).

[6] DUN 49/25 (Whatlington, 1650); FRE 166 (Northiam, 1628); EpII/5/6/23 (Battle, 1598); EpII/5/2/192 (Chailey, 1583); EpII/5/6/175 (Cuckfield, 1595); EpII/5/6/149 (Rotherfield, 1595 & 1596); EpII/5/2/143 (Brightling, 1580); EpII/5/5/275 (Heathfield, 1590); EpII/5/2/120 (Rotherfield, 1582).

[7] Kenyon, '*Kirdford inventories*,' pp. 90-94, 125.

[8] DUN 49/22 (Ticehurst); *S.N.Q.*, Vol. vii (1939), pp. 201-204 (Waldron); AMS 2214 (Cuckfield); CO95 (Ticehurst); FRE 166 (Northiam); FRE 520/10, 14, 130-1 (Sedlescombe). Brent, *op. cit.*, p. 47.

[9] Kenyon, '*Kirdford inventories*,' pp. 90-91.

to the cultivation of wheat.[1] Earlier Norden commented on recent improvements in the Sussex Weald: "In so much as the people lack not, but can to their great benefit yearly afford to others both butter, cheese and corn."[2] The significance of the Wealden cereal harvest is underlined by the details of grain (in quarters) imported into Rye in harvest-years 1581-1584 and set out below.[3]

Harvest Year	Wheat	Barley	Malt	Wheat & Malt	Barley & Wheat	Wheat Index
1581	1,107	45	2,496	680	—	381
1582	1,009	58	3,646	276	140	333
1583	540	20	3,414	225	40	316
1584	152	—	3,128	400	—	299

That the port, together with its largely Wealden hinterland in Hastings rape, was heavily dependent on these imported supplies of malt is reflected in the relatively stable level of malt imports and this dependence confirms the absence of any significant Wealden barley acreage. But the falling volume of imported wheat which occurred during these years of ever more abundant "national" harvests would suggest that in a good year, such as 1584, the Wealden hinterland of the port could supply its own needs and largely provision the port itself. Probably as a result of the abundant harvest of 1639 926 quarters of wheat were exported from Rye between Christmas 1638 and 1639, and 180 quarters from the neighbouring Wealden port of Hastings. But oats was the only cereal exported from these ports with any frequency, normally to London. Since it was rarely, if ever, imported, the inference must be that the Weald normally produced enough oats for its needs, and quite often more than enough. Of the grain imported into Hastings and Rye, most of the malt was shipped from east Kent and most of the wheat from Sussex ports to the west of Pevensey, including Newhaven, Brighton and Shoreham which served the downland region of eastern Sussex.[4]

Fruit and hops were grown, as well as grain. Fruit production was sufficiently important in the north-eastern Weald to merit in wills the mention of apples, pears and plums at Wadhurst, Mayfield, Battle and Peasmarsh,[5] and of "apple mills" for cider-making at Rotherfield, Ticehurst, Burwash, Etchingham and Northiam.[6] Another existed at Robertsbridge manor-house.[7] The cultivation of hops was established across the Weald during the period. They were grown at Rotherfield by 1593[8] and at Salehurst by 1597.[9] "A stranger . . . using ye trade of making hopp gardens" was buried at Mayfield in 1581.[10] By 1640 hops were cultivated as far west as Cuckfield and Horsted Keynes.[11] By the 1650s contemporaries claimed for Sussex a quarter of the hop acreage in south-eastern England.[12] As in Young's day cultivation was perhaps most

[1] Young, *op. cit.*, pp. 44-52; Marshall, *op. cit.*, p. 139.
[2] John Norden, *The surveyor's dialogue* (1607), p. 216, cited in Thirsk, *Agrarian history*, p. 58, fn.
[3] E.S.R.O., RYE 66/15-26.
[4] Brent, *op. cit.*, pp. 50-52.
[5] W/SM/B/28 (Wadhurst); W/SM/C/66 (Mayfield); W/Battle/1/240 (Battle); W/A/12/261 (Peasmarsh).
[6] W/A/3/46 (Rotherfield); W/A/9/264 (Ticehurst); W/A/8/257 (Burwash); W/A/8/407 (Etchingham); W/A/5/544 (Northiam).
[7] R. H. D'Elboux (ed.). *op. cit.*, p. 126.
[8] Catherine Pullein, *Rotherfield* (1928), p. 92.
[9] S. P. Vivian (ed.), *The manor of Etchingham cum Salehurst* (S.R.S.), vol. 53 1953), pp. 175-6.
[10] PAR 422/1/1/1.
[11] E.S.R.O., D990/45/96; GLY 2057.
[12] J. H. Andrews, *The geographical aspects of the maritime trade of Kent and Sussex, 1650-1750* (unpublished Ph.D. thesis, University of London, 1954), pp. 211-6.

intensive in the north-east around Salehurst; in 1617 only seven hop " parcels ," covering under seven acres, were noted on over 12,000 cultivated acres in the south-western manor of Framfield.[1]

The livestock to which Wealden cereal and pulse production was often heavily geared seems to have varied with the scale of farming. On five farms which were small in size, to judge from the acreage sown and the number of livestock kept, a dairy herd of two, three or four cows was normally a major element, but no " young beasts " were fattened.[2] However, two such farmers kept four and six oxen, perhaps for general haulage as well as ploughing. Thus Samuel Leech of Salehurst, who planted a mere five acres with hops and flax in 1634, kept six working oxen " employed in carriages by the high ways,"[3] transport being a major enterprise in a region of many crafts and much manufacturing. Some sheep, pigs, poultry, and a horse or two completed the livestock range. Evidence will later be cited to suggest that Wealden smallholding was reinforced by many craftsmen or retailers who rented a parcel of pasture or exploited common rights on the waste to maintain a cow or two, some sheep, pigs and poultry.

On 11 larger Wealden farms in eastern Sussex, however, there was an emphasis on fattening. All supported a dairy herd of from four to nine cows for the production of milk, cheese and butter in the " milkhouse," " butterye," " cheesehouse " and " cheesepress," but the bulk of their cattle consisted of young beasts and steers, which, together with some of the oxen and calves, were destined to be fattened for the butcher.[4] At Kirdford on a comparable farm a typical herd contained six draught oxen, four cows and 11 young beasts. Defoe was to pause, after describing Battle and Standard Hill, to note " the abundance of large bullocks . . . fed in this part of the country; and especially those they call stall'd oxen, that is, housefed, and kept within the farmers sheds or yards, all the latter season, where they are fed for the winter market . . . these oxen are generally the largest beef in England."[5] In March 1608 Walter Everenden of Sedlescombe sold four oxen " out of the stall," while in 1643 his son recorded " setting up my fatting oxens lodg in the lane."[6]

For seven of these larger Wealden farms details survive of the value to the farm of the cattle herd and the sheep flock.[7] On four the sheep flock formed 20 per cent or less of the total livestock valuation, whereas on the other three the flocks of John Fuller of Waldron, of Walter Everenden of Sedlescombe and of his son John, also of Sedlescombe, constituted 37 per cent, 41-47 per cent and 71-72 per cent of that valuation. Such flocks were clearly not kept to fold any small and damp arable acreage, but rather for their meat and wool. Their inclusion in the farming regime depended, in the case of the Everendens at least, on the annexation of coastal " mersh " to the home farms in Sedlescombe, thereby greatly increasing the resources of summer pasture and winter feed, and tipping the balance of husbandry still further from cereal production. Walter leased marshland from Henry Guldeford and his son rented marshland in Winchelsea.[8] The latter's " mersh " flock was pastured permanently in the levels, although many lambs and tegs, together with the runts and bullocks which grazed beside them in the summer, were withdrawn to the home farm in the winter months.[9]

[1] Young, *op. cit.*, pp. 129-137; ADA 137.
[2] EpII/5/6/232 (Battle); EpII/5/2/143 (Brightling); EpII/5/2/192 (Chailey); EpII/5/2/143 (Brightling); EpII/5/6/149 (Rotherfield).
[3] EpII/5/14/36.
[4] Brent, *op. cit.*, pp. 53-55.
[5] Defoe, *op. cit.* p. 125.
[6] FRE 520/49, 133.
[7] DUN 49/22 (Ticehurst, 1639); *S.N.Q.*, Vol. 7, (1939), pp. 201-204 (Waldron, 1615); AMS 2214 (Cuckfield, 1676); CO95 (Ticehurst, 1577); FRE 166 (Northiam, 1628); FRE 520/10, 14, 130-1 (Sedlescombe, 1601-7, 1619-20).
[8] FRE 520/47, 214.
[9] FRE 520/47, 55-57.

The rich alluvial soils of the marshland which fringed the coastline between Westham and Bexhill and between Fairlight and East Guldeford, and of the brookland which flanked the lower courses of the Brede and the Rother, allowed a variety of land use. In 1340 the corn value of the parishes in Pevensey levels was among the highest in Sussex,[1] yet Defoe was later to describe the sweep of marshland between Eastbourne and Sandgate in Kent as " full of feeding grounds . . . where an infinite number of large sheep are fed every year," together with an " abundance of large bullocks."[2] In Young's day hardly an acre of arable existed in the parishes of Westham and Pevensey.[3] By 1640 the transition to pasture must have been far advanced. In 1610 the corporation of Rye claimed that the immediate hinterland of their town was entirely given over to graziers.[4] Between 1583 and 1622 only two out of ten farms probably sited in the marsh contained any acreage of grain. Thus at various times John Davies had stocked over 30 acres near Rye with feeding oxen, 13 horses and colts, 15 young beasts and 260 sheep, but he sowed only four acres of oats. This range was typical of the other farms.[5] Already in 1547 James Burton of Eastbourne was pasturing in April at Horsye in Pevensey levels 31 cows, three bulls, 18 oxen and 56 steers and young beasts, and in the following June he added 470 ewes and wethers.[6] Mares and colts were prominent among the horses pastured; Young was later to regard Sussex-bred horses as second to none in England.[7]

In 1872 Pevensey marsh was hailed as " the Goshen of Sussex," in which most good farms in the south-eastern Weald had a parcel of grazing land.[8] Evidence will later be cited to show that by 1640 other affluent Wealden farmers, apart from the Everendens, were already leasing " mersh." The less affluent might at least rent " agistment " for their stock. John Everenden noted that " The keepeing of yonge bease in the sumer, by the weeke, amongst sheepe is worth for 3 yeareing Cattell 1s. for two yearings 11d. for twelvemonthlings 9d."[9] In 1617 John Carter, a husbandman from Westfield, kept six sheep on the land of Mrs. Cheney in the Brede levels at Snailham, which he drove home to Westfield for shearing.[10] From at least the 1590s " Instrument " livestock—cattle, sheep and horses whose grazing was paid for by the week, were pastured in the brooks of Laughton park, normally between April and October. In May 1607 88 cattle, 57 of them steers, were grazed there by 28 farmers from as far afield as Lindfield, Ardingly and East Grinstead.[11] Competition clearly stimulated marshland rents which stood at between 19s. and 21s. an acre on Bestnover manor in Pevensey in 1619, and at 26s. or 27s. at East Guldeford in 1607 and 1611.[12] In 1649 the two parishes in eastern Sussex which were probably most exclusively composed of marshland, East Guldeford and Pevensey, had by far the highest " yearly valew of Lands, Quitt rents, Tithes etc." per square mile, £460 and £400 respectively.[13] The annexation of marshland pasture to home farms in the Weald, whether by lease or agistment, clearly biased Wealden farming yet more heavily towards livestock, towards the fattening of cattle and dairying, a bias also apparent in wood-pasture regions in East Anglia, Essex, Wiltshire and Somerset.[14]

[1] A. J. F. Dulley, ' The level and port of Pevensey in the middle ages,' *S.A.C.*, vol. 104 (1966), pp. 36-37.
[2] Defoe, *op. cit.*, p. 125.
[3] Young, *op. cit.*, p. 29.
[4] RYE 47/78.
[5] Brent, *op. cit.*, pp. 57-59.
[6] CP183.
[7] Young, *op. cit.*, p. 380.
[8] J. R. Daniel-Tyssen, ' The parliamentary surveys of the county of Sussex, 1649-1653,' pt. ii, *S.A.C.*, vol. 24 (1872), p. 285, fn.
[9] FRE 520/56.
[10] QR/E/19/93.
[11] B.L., Add. MS. 33142/30-31, 126.
[12] RYE 140/49, 35/66.
[13] FRE 520/5-7; Brent. *op. cit.*, pp. 62-69.
[14] Thirsk, *Agrarian history*, pp. 46-49, 54, 69, 79-80

Wealden husbandry, especially on the larger farms, contained elements which were markedly labour-intensive. Wheat, oats and pulses were won only after much toil. The clays, especially in the Low Weald, were laborious for the ploughman as well as for the traveller. They were heavy to plough and to clean, and needed to be constantly cross-ploughed and ditched to avoid their becoming water-logged.[1] These acidic Wealden clays and sands were often fertilized by a heavy application of chalk, lime or marl, which needed to be dug, carted and spread. Young and Marshall noted the immense effort expended by later Wealden farmers on carting and spreading lime, mainly extracted from downland chalk or from an Oolitic outcrop running northwards from Ashburnham through Brightling and Mountfield.[2] Norden commended those " industrious people " who at an " extraordinarie charge and toyle " limed their fields.[3] In 1687 a Mountfield tenant of Lord Ashburnham used the excellent limestone on his holding " to mend the land " and " did vent great quantities yearly."[4] In 1631 John Everenden limed the " Brakiefeild " at a cost of £18, laying 822 bushels on each square rod.[5] Kerridge has accepted the opinion of contemporaries that the better Wealden soils were sometimes improved by the application of between 300 and 500 loads of marl per acre.[6] Certainly instances of marling are met with in the region during the period.[7] In 1626 a leaseholder in East Grinstead undertook to put " 160 wads of marle " on every acre of pasture or woodland which he ploughed up to sow corn.[8]

The livestock element in Wealden husbandry also generated much employment. The miles of shaws, hedges and ditches, which surrounded its patchwork of small and irregular fields, needed continuous attention. Except in the winter months, the dairy herd provided constant employment in the milkhouse, buttery and cheesehouse. In Young's day the large acreage of meadowland might engage a labourer for four or five weeks from the end of June in its mowing.[9] On some larger farms the droving of cattle and sheep to and from the summer fattening grounds in the marsh and the " looking " over of the feeding livestock engaged the energies of a second group of Wealden workers identified as making a seasonal summer migration across the frontiers of their region. Permanently resident farm labourers in the marsh must have been largely confined to a small force of " lookers " who minded such livestock as remained to brave the snows of winter. Such a one was Henry Greenyer of Westham who " served the cattle with fodder and did look to the ground all the year long."[10]

The spread of hop gardens injected a further labour-intensive element. Marshall estimated that three or four acres of hops yielded work for a hop-groundman throughout the year, except in hay-time and harvest.[11] Each acre might contain up to 10,000 bines rooted in a thousand hills and supported by 3,000-4,000 poles. Digging, planting, hoeing, dunging, poling and tying, pruning, picking and drying, packing and transport succeeded between March and October.[12] By Young's day hop-picking, which normally began in September, provided an interval of intensive labour in some Wealden parishes equivalent to hay-time and harvest. In an average year the 300-400 acres in Salehurst employed 1,000-1,200 pickers—men, women and children.[13] In 1643 John Everenden noted the amount due " to my Hoppickers hired this year besides my

[1] Cornwall, *op. cit.*, pp. 15-16.

[2] Young, *op. cit.*, pp. 44-52, 201-212, 420; Marshall, *op. cit.*, pp. 142-3.

[3] Norden, *Surveyor's dialogue*, p. 224, cited by Cornwall, *op. cit.*, p. 179.

[4] ASH 931/1.

[5] FRE 520/43.

[6] Kerridge, *Agrarian revolution*, pp. 246-7.

[7] E.S.R.O., DYK 369 (Rotherfield); DYK 616 (Buxted); W/A/11/200 (Chailey); S.A.T., FA471 (Wadhurst); Aber 1/36 (Balcombe).

[8] G35/27.

[9] Young, *op. cit.*, p. 153.

[10] EpII/5/4/12.

[11] Marshall, *op. cit.*, p. 286.

[12] *Ibid.*, pp. 191-284.

[13] Young, *op. cit.*, pp. 129-137.

familie."[1] The succession from the end of June until late September of hay-time, downland harvest, Wealden harvest and hop-picking provided a period of intensive employment for Wealden labour, which may have influenced the seasonality of Wealden marriages. Between harvest years 1561 and 1640 in two groups of six parishes in the eastern Weald the months of May (12.7 and 11.5 per cent) and June (11.6 and 11.5 per cent), and of October (12.1 and 11.9 per cent) and November (11.6 and 11.4 per cent) were markedly the most popular for the celebration of marriage. But marriages fell sharply in July (8.7 and 7.6 per cent) and fell again in August (5.6 and 7.2 per cent) to their lowest level for any month, except March and December which were affected by ecclesiastical prohibition. September brought only a partial recovery. Marriages seem to have been brought forward or postponed rather than coincide with hay-time and harvest when the labour of the individual was valuable and money could be earned, perhaps at some distance, with which to set up or sustain a household.[2]

Like downland farming, Wealden husbandry during the period was clearly stimulated by the rising price of foodstuffs, occasioned by a sharply rising population and an increasing standard of living among those able to profit from inflation. Certain Wealden products, such a fruit, butter, cheese and poultry, were probably hawked no further afield than Lewes, the downland region and the fishery ports of Brighton, Hastings and Rye. They are unrecorded as seaborne exports. In contrast to Kent, the market for the apples, pears, plums and cider of the north-eastern Weald remained localized.[3] In 1649 a Mayfield man sold butter and cheese in the streets of Lewes,[4] but their quality was not apparently high enough to encourage their export. William Newton of Lewes commented in 1598 that " a Banberie cheese is meate to be sett . . . before welcom gestes onlie especiallie in Sussex (wher good cheese is scantie)."[5] The Weald was to become celebrated for its crammed poultry[6] and already its fat geese were coaxed in flocks into the markets of Brighton and Hastings to be exchanged for fish.[7] Wealden bacon may have been more widely eaten. In 1595 Sussex was assessed for 400 " porks " and 500 " flitches " to provision the royal navy, the largest contribution required of any county.[8]

Stone noted a concerted effort between 1560 and 1600 to encourage the growth within England " of those raw materials such as woad, flax and hops, which it might reasonably be hoped would prosper."[9] Certainly Wealden hop-growing seems to have extinguished the import of French and Flemish hops. Thus none were unshipped at Rye between Christmas 1611 and 1613 or between Christmas 1634 and 1636.[10] By contrast the export of hops, principally to London, built up at Rye from at least 1613-1614 and at Hastings by 1638-1639. Shipments at Newhaven from 1608-1609 were mainly despatched to Devon and Cornwall,[11] although a consignment was destined for Ireland in 1639.[12] But many hops grown in the Weald were carried overland to London—in 1634 the cost of their land-carriage from Ticehurst was a mere three per cent of their sale price in the capital.[13] In the later seventeenth century large quantities flowed up to London along the Lewes-East Grinstead and the Rye-Tonbridge roads.[14] By the 1620s a second new export traffic had emerged at Rye, where in 1622-1623, 1632-1633, 1635-1636 and 1640-1641

1 FRE 520/49.
2 Brent, *op. cit.*, pp. 75-77.
3 Chalklin, *op. cit.*, pp. 91-92.
4 QR/E/86/105.
5 ' Letter from William Newton of Southover to his Sister,' *S.N.Q.*, Vol. 12 (1948-9), p. 131.
6 Young, *op. cit.*, p. 391.
7 QR/E/66/84, QR/E/37/62.
8 Cornwall, *op. cit.*, p. 242.
9 L. Stone, ' Elizabethan overseas trade,' *Ec.H.R.*, 2nd Series, vol. 2 (1949), p. 38.
10 E 190/756/1, 11, 766/5, 24.
11 Brent, *op. cit.*, pp. 94-96.
12 E 190/767/20.
13 E.S.R.O., Dunn MS. (uncat.), note of debt by Captain John Roberts.
14 Andrews, *op. cit.*, pp. 211-6.

some 50,000-80,000lb. of wool were shipped annually to London.[1] There is no evidence to suggest that the appearance of this wool resulted from the collapse of a cloth industry at Rye.[2] Its source was probably the large marshland flocks of Wealden-based farmers and " mersh " graziers. From at least 1594 Walter Everenden of Sedlescombe sold his annual clip to Kentish clothiers; so did his son, John, until 1657 when a Mr. Carter of London was the buyer. If this change reflected a weakening of Kentish demand, other producers may have diverted their sales earlier.[3]

Although prices for the Everenden clip were sluggish between 1594 and 1657, wool was probably something of a by-product in a husbandry which hinged around the fattening of sheep and cattle for the market, often a metropolitan one. Between c.1450 and c.1650 the price of cattle rose sevenfold and of sheep almost sevenfold.[4] Fatstock production in the Weald and in the marshland was further stimulated by the proximity of the fast-growing London market, which these regions were ideally placed to serve. In 1587 40 fat oxen and 150 " fat and good muttons " were required to be delivered from Sussex to the Royal Household in London.[5] The Everendens dealt with metropolitan butchers. Mr. Lewke of London bought 100 fat wethers from Walter in 1603; he was doubtless the same " master luck " to whom Walter had entrusted the rent of marshland in 1592.[6] In 1594 Walter was owed for two runts by Thomas Hodgkin, and in 1597 the steward of the Battle Abbey household noted the receipt of £78 for 11 oxen from Mr. Hodgkinson.[7] From 1606 Walter itemized the sale of fat cattle and sheep to John Hogkinson, who was described in 1624 as " of London."[8] John may well have been the John Hogkinson, " butcher and citizen " of St. George, Bottolph Lane, who died in 1652.[9] In 1619 John Everenden sold 50 fat sheep to Mr. Allwinckle, a butcher of Eastcheap, and in 1643 59 wethers and two oxen to Mr. Chaiers of London.[10] Metropolitan links existed in the central and western Weald. In 1592 the sale was noted in the Pelham accounts of two calves and ten lambs to " bowchers of Croyden," and of 30 bullocks in 1599. In 1600 Mr. Russell, " the butcher of Southwarke," bought 33 wethers, a ewe, seven lambs and three runts, and in January 1601 a further 60 wethers and six oxen.[11] From Hickstead in Twineham, Anthony Stapely sold in 1643-1644 eight oxen to Mr. John Fleer of London.[12] In 1657 Edward Hilder of Pevensey complained that, although a burgess of that Cinque Port, he was denied the privilege of selling his cattle at Smithfield prior to 8 a.m.,[13] while in 1659 a drover acting for a butcher from Ripe mistakenly drove to London a sheep belonging to Alice Lucas of Chiddingly.[14]

Wealden and marshland livestock farming was, moreover, fully integrated into the inter-regional organisation which satisfied the consumer demands of London. Much of the fatstock had been bred in Wales, Cheshire, " the north," and, perhaps, Scotland or Ireland. In 1585 12 northern runts were pastured at Westham.[15] In 1597 northern beasts were sold in Winchelsea market and in 1610 Welsh cattle were bought at Ewhurst fair.[16] Walter Everenden dealt in northern cattle and Pembrokeshire steers. In 1617 the northern cow of a Dallington clothier

[1] E 190/760/8, 764/9, 766/19, 767/26.
[2] Cornwall, *op. cit.*, p. 245.
[3] FRE 520/9-86, 130-134.
[4] Thirsk, *Agrarian history*, p. 603.
[5] B.L., Harleian MS. 1877/20.
[6] FRE 520/131, 214.
[7] FRE 520/214; E.S.R.O., RAF (uncat.), Box 3/4.
[8] FRE 520/130-4.
[9] P.R.O., Wills proved in the Prerogative Court of Canterbury, 205 Bowyer.
[10] FRE 520/11-47.
[11] B.L., Add. MS. 33142/30, 77, 84.
[12] E.S.R.O., HIC 467/3.
[13] Felix Hull, (ed.), *A calendar of the White and Black Books of the Cinque Ports, 1432-1955*, H.M.S.O. (1966), p. 504.
[14] QR/E/126/32.
[15] EpII/5/4/11.
[16] WIN 54/166; W. D. Cooper, *The history of Winchelsea* (1850), p. 166.

was allegedly destroyed by witchcraft.[1] In the 1630s Cheshire steers figured in the Pelham accounts.[2] Some Wealden farmers like Walter Everenden and Walter Roberts of Ticehurst, bought lean cattle direct at the major fairs held in and around London, at Smithfield, Kingston and Uxbridge.[3] By the 1690s farmers from the Ashburnham vicinity attended fairs at Norwich and at Seeling in Norfolk to buy Scottish cattle.[4] Moreover, by 1600 the droving trail into Kent from the Marches was " well established."[5] John Everenden bought runts from a Welsh drover and Cheshire oxen from Mr. Johnson the " Drover."[6] In May 1646 Thomas Meredith, a gentleman from Breconshire, and Howell Phillips, a Radnorshire drover, stood security for two Breconshore drovers charged with wronging the daughter of a Brightling kemmer.[7] Some years later a theft committed by a drover that " belonged to Welch beast " also occurred in May, the start of the summer fattening season.[8]

A cycle of Wealden fairs and a network of local butchers sustained more local dealing in livestock. Lean stock tended to be bought at fairs in April and May and sold in the autumn fairs " against Christmas." By the 1690s the April fair at Nutley in Maresfield was reckoned the best for dairy cows and for steers,[9] while local farmers depended on the November fair at Battle for their " winter provision of Cattle."[10] Walter Everenden dealt at Battle, Bodiam, Lewes and Pevensey,[11] while in 1635-1637 John Milward of Pevensey attended fairs at East Grinstead, Robertsbridge, Lewes and Rotherfield, buying ten bullocks at each.[12] Some local butchers bought and sold over a wide area. " Goodman Adams of Nuhaven " bought cattle from Walter Roberts of Ticehurst.[13] In 1659 John Lulham of Ripe co-ordinated the droving of sheep to London.[14] John Craddock of Rye acted as a local agent for Mr. Chaiers of London.[15]

A distinctive aspect of local livestock trading was the export of live horses, principally " mares and jades," to northern France, especially Dieppe. In the mid-1590s perhaps 400 or 500 were transported annually, mostly through the ports serving the marshland feeding grounds between Pevensey and East Guldeford. Newhaven and Shoreham saw a more straggling traffic. This concentration reflects the widespread pasturing of horses, mares and colts in the marshland. Some mares may have been bloodstock, but the jades were probably destined for the knacker's yard.[16] Stone has noted the export to France of other " left-overs," such as " Butter Corrupte " and " Old Shoes," as evidence of the comparative wealth of England during this period.[17]

Kerridge has implied that by 1640 many Wealden farmers, stimulated by the inflation of foodstuff prices, had adopted the new techniques of " up-and-down " or " convertible " husbandry to increase the yield of grain and grass, and that about 1600 many Wealden improvers placed a new emphasis on the application of lime or chalk, which " grew so greatly in extent, frequency and volume, that it became effectually revolutionary."[18] Certainly under the same stimulus the cultivated acreage was significantly extended during the period. Widespread

1 FRE 520/130, 133; QR/E/18/60.
2 Cornwall, *op. cit.*, 177-8.
3 FRE 520/131-2; DUN 37/4.
4 ASH 1178/259-260.
5 Clark and Slack, *op. cit.*, p. 146; K. J. Bonser, *The Drovers* (1970), pp. 199-200.
6 FRE 520/62, 82.
7 QR/EW/72/57; QR/E/73/64.
8 QR/EW/162/48.
9 ASH 1178/259-260.
10 R. A. Beddard, ' The Sussex general election of 1695,' *S.A.C.*, vol. 106 (1968), p. 153.
11 FRE 520/130-4.
12 Hastings Museum, Milward MS. G6.
13 DUN 37/4.
14 QR/E/126/32.
15 FRE 520/50.
16 Brent, *op. cit.*, 92-94.
17 Stone, *loc. cit.*, p. 38.
18 Kerridge, *Agricultural revolution*, pp. 216, 246-8.

disparking occurred, at Cuckfield, Danny in Hurstpierpoint, More Park in Ringmer, Laughton,[1] Mayfield and Battle.[2] In 1580 Edward Knight, a former keeper in Ditchling Park, testified that four years earlier he had restocked it with deer, " not being then tilled or manured with cattle as the same park now is."[3]

By the 1540s much Wealden waste still survived, except perhaps on north-eastern manors such as Robertsbridge and Etchingham.[4] The balance may often have been similar to that on Possingworth Manor in Waldron in the 1560s, where, out of 1,230 acres, 600 were common, " free for cattle, sheep and hogs without number," and a further 218 were demesne " heath."[5] By 1640 a major assault had been launched by encroachment and enclosure. Thus in the Low Weald 246 acres were enclosed at Barcombe in 1574 and 300 acres at Wivelsfield in 1617.[6] At Chailey in 1622-1623 " strangers having noe wright of Common there " did " labour by indirecte meanes to hinder the inclosing " of 269 acres.[7] In the High Weald between 1596 and 1650 in Mayfield and Wadhurst 1,000-1,500 acres of common were allotted to manorial tenants or leased out. At Catsfield 200 acres of waste were leased out in 1598 and 440 acres were enclosed at Heathfield between 1577 and 1590.[8] In the 1590s a tenant on Rotherfield manor complained of depreciating pannage rights through clearance and enclosure in Waterdown Forest by Lord Bergavenny.[9] But much waste remained to allow the smallholder to encroach and the landless to squat. The tide of reclamation also encompassed the marshland. In Pevensey levels the emphasis was on the maintenance of seawalls and drainage channels.[10] But further east 730 acres were " inned " to the south-west of Winchelsea between 1537 and 1562.[11] By 1604 some 230 acres had been lately reclaimed along the Tillingham to the north of Rye.[12] It was alleged in 1562 that " 3 great cricks ", which scoured the Camber harbour to the south of Rye, had been inned in the late 1530s and three more in the early 1540s.[13] In 1589 permission was sought to reclaim more saltmarsh to the east.[14] Major schemes were also implemented between 1629 and 1644 to improve the drainage of the levels around the Isle of Oxney along the middle Rother.[15]

TO BE CONCLUDED

[1] Brandon, *Common lands*, p. 165.
[2] S.A.T., D140; Thomas Thorpe, *Descriptive catalogue of the muniments of Battle Abbey* (1835), p. 157.
[3] EpII/5/1/56.
[4] R. H. D'Elboux (ed.), *op. cit.*, pp. 1-155; S. P. Vivian, (ed.), *op. cit.*, pp. 1-219.
[5] J606.
[6] Brandon, *Common lands*, pp. 159-160.
[7] Aber 27/16-23.
[8] Brandon, *Common lands*, pp. 186-7, 335.
[9] Aber 99.
[10] Dulley, ' *Pevensey level*,' pp. 33-34.
[11] E.S.R.O., DAP (uncat.), Box 54, 55, Depositions before an enquiry into the decay of Rye harbour, May 1562.
[12] RYE 95/1-2.
[13] DAP, Box 54, 55.
[14] RYE 47/39/8.
[15] Kerridge, *Agricultural revolution*, p. 225.

THE HOWARD INTEREST IN SUSSEX ELECTIONS 1529 to 1558

by R. J. W. Swales

For most of the sixteenth century the nobility were the dominant force in Sussex local politics. An anonymous writer even suggested in 1583 that some of the five noble families then living in Sussex should be moved into counties ' whear they ar not native nor landed and should haue lesse authoritie '.[1] In 1529 there were six magnates with substantial estates in Sussex and between 1525 and 1547 they owned at least 146 manors there; over 200 manors if one includes the estates of noblemen who entered the county or were ennobled between those dates. This rough total of 200 manors owned by noblemen in one shire was surpassed only in Yorkshire. And in Sussex it is noteworthy that those families with property in the county were all at sometime resident there.[2] For some years, however, in the 1530s and 1540s the rising courtiers and government officials from the families of Gage, Sackville and Browne partially eclipsed the nobility's influence which was undermined by several pressures. In the late 1520s the Percy Earls of Northumberland surrendered much of their Sussex property in an exchange with the Crown. George, Lord Abergavenny, concentrated his interests in Kent until his death in 1535, after which the family endured a lengthy minority. The foolish assault by Lord Dacre of the South upon the tenants of Nicholas Pelham led to his execution in 1541 and the Dacre estates were not restored until 1558. William, Earl of Arundel (d. 1544) was apparently a political nonentity ' of little wit and less experience.'[3] Thomas, Lord de La Warr suffered the disability of adherence to the old religion without the compensation of relatives close to the king or a role in government. Both the de La Warr and Arundel families reasserted themselves under Edward VI and Mary and the entry of the Brownes as Lords Montagu added further to the nobility's role in local politics in the middle years of the century. Prominent among the noble landowners in Sussex throughout the period, the Howards stood a little aloof from local politics in which they were principally engaged in East Anglia. But the influence which they exercised for long periods between 1529 and 1558 over the elections to the parliamentary boroughs of Bramber, Horsham, Lewes and Shoreham gave them a political role in the county and a larger share of the parliamentary patronage there than any other Sussex figure.

The baronies of Bramber and Lewes formed the core of the Howard estates. The former comprised properties in the boroughs of Bramber, Horsham and Shoreham and seven manors with adjacent parks; the latter included property in the borough of Lewes and about eleven manors. In addition the Howards owned iron works in Sheffield and the Forests of Worth and

[1] Public Record Office (hereafter P.R.O.), SP, 12/165/22. For dating the document to 1583 see SP 12/164 pp. 122, 124.

[2] Helen Miller, *The early Tudor peerage 1485-1547*, unpublished M.A. thesis, University of London (1950), Additional Appendix.

[3] *Letters and Papers Foreign and Domestic of the Reign of Henry VIII*, Brewer, Gairdner, and Brodie, eds., (hereafter LP Hen. VIII), xiii (ii), 732.

St. Leonard.[1] Recently it has been suggested that the family's Sussex property, as well as their lands elsewhere, formed a liberty which no royal official could enter. The Duke's bailiffs had the right to return all writs and precepts whether from the Crown or from the judges and commissions, the Duke might keep all fines imposed in any court in the kingdom upon men residing in the liberty and might enjoy all the goods and chattels of felons, fugitives and outlaws.[2] There can be no doubt that such privileges were granted to the third Mowbray duke in 1468 and that this charter was confirmed for the fourth Howard duke in 1559, but there is no evidence that the Howard estates formed a liberty between those dates. Despite the frequent leasing and resale of Howard property no reference to the ducal liberty has been found before 1559. The parliamentary returns from boroughs subject to Howard influence have no special character.[3]

The boroughs of Bramber, Shoreham and Horsham were easily dominated by the local lord. Bramber was a very small, unincorporated township governed by a constable chosen annually at the court leet. After John Howard's attainder in 1486, his property came to the de La Warrs but it reverted to the Howards in 1495 and the third Howard duke consolidated his holdings nearby through an exchange with the King in 1540.[4] A flourishing port in the thirteenth century, Shoreham had declined by the early sixteenth into a community not above petitioning for relief from the subsidy. Like Bramber it had been out of the Howards' hands from 1486 to 1495 but thereafter it was they who doubtless influenced the annual appointment of the two high constables.[5] Horsham, with a population of five or six hundred in the 1520s, was a larger town but still firmly under Howard influence. One mile to the southeast lay the residence of the family in Sussex. In 1547 Chesworth House was described as:

> " a maner and a goodly pryncely howse with a goodly mott and a very grett pond and many fayre stwes or small ponds within the compass of the gardyn about the place and a fayre parke adioynyng to the same by estymacon about a myle and a half about of very good lond and a gret pond new made therein.'

The poet Earl of Surrey may well have been born where Catherine Howard spent her youth under the eye of the dowager Duchess Agnes.[6] It was from Horsham and its neighbourhood that the estate officials of Howard property came in the middle years of the century. Henry Voyce, keeper and understeward of Chesworth House and receiver of the baronies of Bramber and Lewes, was a burgess of Horsham, as was Thomas Bradbridge, the bailiff of Bramber; Edward Michell, steward of Lewes barony, and John Allen, steward of Meeching, were also Horsham men. The most distinguished of the Howards' servants in Sussex, John Caryll, lived nearby: and it was no great distance to Clayton where Thomas Colstock, bailiff of the barony

[1] The descendents of the manors in the barony of Bramber are set out in D. G. C. Elwes and E. J. Robinson, *Castles and mansions of western Sussex* (1879). For accounts of the barony of Lewes see Victoria County History, Sussex, vol. vii, pp. 1-6; J. H. Cooper, 'The manor of Cuckfield,' Sussex Archaeological Collections (hereafter S.A.C.) vol. 11 (1859), pp. 79-94. For manuscript sources see British Library (hereafter B.L.). Additional MS. 5701; PRO C142/69/192; SC 6 Hen. VIII, 3496, 6305; SC 6 Ed. VI 453-7; SC 6 Ph.M. 285, 286; SC 6 Eliz. 3354; L.R. 1/42 f. 401; E178/2274.

[2] Neville Williams, *Thomas Howard, 4th Duke of Norfolk* (1964), pp. 65, 104-5; his view is accepted by A. Hassell Smith, *County and court: government and politics in Norfolk 1558-1603* (Oxford, 1974), p. 24.

[3] The confirmation of Edward IV's charter in 1559 took no account of alterations in the estate.

[4] Elwes and Robinson, op. cit., p. 48.

[5] Burton Green, 'New Shoreham,' S.A.C., vol. 27 (1877), pp. 69-109, B.L. Additional MS. 5686 ff 78-9.

[6] W. H. Albery, *A millenium of facts in the history of Horsham* (1947), pp. 39-43, 50, 60, in which is printed an important survey of 1611; J. C. K. Cornwall, 'English county towns in the 1520s, *Economic History Review*, 2nd series, 15 (1962), p. 60; P.R.O. E315/479 f. 19; S.P. 10/6 ff 5-10; D.N.B. *sub* Howard, Henry, Earl of Surrey; Lacey Baldwin Smith, *A Tudor tragedy* (1961), chap. 3 *passim*. References to Norfolk's presence in Horsham are rare; he seems to have spent Christmas there in 1522 and 1542, *LP Hen VIII* i(ii), 2772 (4); *State Papers Henry VIII*, v. p. 216.

of Lewes and crown receiver of Howard possessions under Edward VI, lived. Most of the burgesses of Horsham seem to have been Howard tenants.[1]

By far the most important of the parliamentary boroughs where Howard influence was felt, Lewes had occupied a central place in the administration and the economy of Sussex for centuries. Situated on one of the most active rivers in the county and supplied by the downland, the Weald and the coast, this flourishing market had a population in the region of two thousand and doubtless prided itself on its self-governing character. The corporate identity of the town, the importance of the local Gage family, and the complexity of the descent of the barony of Lewes all probably played a part in limiting the influence of the Howards.[2] There is evidence that the third Duke was actively interested in the affairs of Lewes priory and of his own property near Lewes. His ' servant ' Sir Edward Bray frequently sent reports of incidents on the coast. In April 1537 Norfolk himself viewed the condition of the Levels near the priory during a survey by the commissioners of sewers and it was doubtless at his suggestion that Bray and the prior travelled to Flanders from where they returned with two drainage experts. Certainly the Duke put the sewer commissioners in touch with some experienced men at Dover. Sir John Gage described him as

> ' a great lord within the levell [who] toke the payn to cum vewe and se the same at the whiche tyme ther was assembled meny noble folke and other wise and well expert men bothe of knowledge of the see and lond.'[3]

Both in the later fifteenth century and the 1530s the dukes of Norfolk claimed that they could nominate members of parliament for the borough.[4] Certainly the other interests in the barony, the earls of Derby, the lords Abergavenny and the descendants of the Everard family, were not apparently active at parliamentary elections. However, the adjacent borough of Southover not only maintained a separate government under its constable and burgesses but also claimed in 1553 ' of old Antiquity and Custom out of time beyond the memory of man,' to nominate one of the two parliamentary burgesses from Lewes to each alternate parliament.[5] The independence which such a declaration implied was hardly able to withstand very strong outside pressure.

The parliamentary patronage within the Howard interest was the largest in the county and was probably at least as considerable as the influence the family could wield in Norfolk elections. The difficult and puzzling relations between the Howards and Thomas Cromwell, the third Duke's attainder and the acquisition of the parliamentary interest first by Thomas Seymour, the Lord Admiral, and then by the Crown; the Duke's restoration and the conflicts over his lands; his death and the minority of his grandson and heir—all these political circumstances altered the nature of the influences playing upon these Sussex boroughs. Furthermore, the evidence about members is often fragmentary and confusing.

[1] P.R.O. SC 6 Edward VI 457; W. Comber, *Sussex genealogies* (*Horsham*), pp. 27, 231; Sussex Record Society (hereafter S.R.S.) xiii, (1911) pp. 24, 336.

[2] V.C.H. Sussex, vii (19..) pp. 1-7: W. H. Godfrey (ed.) *The Book of John Rowe*, S.R.S., vol. 34 (1928), p. 120.

[3] LP Hen VIII, iv (ii) 3277, 4162; x 1078; P.R.O. SP 1/24 f 59. The ascription of this last undated document to 1536 is doubtful since the ' Mr. Gifford ' who assisted Bray was almost certainly George Gifford of Poynings, at that time surveying monasteries in the Midlands. He had moved to Buckinghamshire in the early 1530s, LP Hen VIII, x, 858, 916, 1166, 1191, 1215.

[4] Sir Gerald Ryan and Lilian Redstone, *Timperley of Hintlesham* (1931), p. 12; B.L., Cotton Caligula B. vi, f. 373.

[5] Barbican House Library, Lewes, Elliott Papers, G. 1, p. 1. The manor and borough of Southover, which had belonged first to Lewes priory and later to Thomas Cromwell, was granted to Anne of Cleves for life from January 20 1541. It was acquired by John Stempe of Lewes in September 1557; LP Hen VIII, xvi, g. 503 (32); CPRPM, iv, p. 198.

The third duke of Norfolk was never higher in the king's favour than at the time the writs were issued for the parliament of 1529. Several parliamentary writs are known to have been despatched by him, and when Thomas Cromwell was seeking a seat he was advised to use Norfolk as his intermediary with Henry, ' so that you wolde order yourself in the said Rowme according to suche instructions as the saide Duke of Norffolk shall gyue you from the king.'[1] One might expect to find the Howard interest exercised on the king's behalf if Edward Hall was right to aver that ' the moste parte of the commons were the kynges servantes.'[2] But the Duke did not fill the Sussex boroughs with members of the household or administrative and legal figures; most of those returned were his own servants or clients. Shoreham elected in John Michell a man whose father had been understeward and whose uncle had been receiver of the barony of Lewes for the second Duke and who himself lived but one mile from Horsham. And his fellow member, John Covert, who lived seven miles north east of Horsham, seems to have been in the Duke's household. At Horsham itself both members were local men one of whom, Alfred Berwick, may still have been exercising the surveyorship of Reigate that he had held since at least 1514. Although the other member, Henry Hussey, cannot be directly linked with the Howards in 1529, his son was later to be one of their household. One of the Lewes members was a townsman, but Sir Edward Bray was a servant of Norfolk's. Only Bramber returned members not resident in Sussex.[3]

William Roper and Henry See shared accommodation at Lincoln's Inn and both men had personal interests in the coming parliament. The Roper family had a bill for the first session by which a five year old dispute occasioned by his father's will was to be settled in William Roper's interest. See was an active parliamentary lawyer: he represented the city of York in their dispute with the Earl of Rutland which was to be resolved by an Act of Parliament in 1536, and he is known to have drafted other private bills and worked on parliamentary committees. Their personal initiative most probably brought Roper and See into the Commons, though it is possible that they saw themselves as part of a circle of Sir Thomas More's relatives. Roper was not alone among More's sons-in-law: William Dauntsey and Giles Heron sat for Thetford, and John Rastell, his brother-in-law, sat for Dunheved.[4] Exactly how Roper and See came to sit for Bramber is unknown but the relations between More and Norfolk were amicable at the time and the Duke later regretted the Chancellor's failure to acknowledge the royal supremacy.[5] Despite the appearance of these outsiders at Bramber it is clear that Norfolk had not used the Sussex boroughs to return prominent royal servants to the parliament of 1529.

The absence of the returns makes it impossible to assess whether the king's request in 1536 that the same members should be elected as had sat in the Reformation parliament was observed in Sussex, but for the next parliament in 1539 there is evidence that Thomas Cromwell supervised some of the elections in Hampshire, Surrey and Sussex.[6] From 1536 to 1539 Cromwell was him-

[1] BL., Cotton Cleopatra B iv, f 178, A. F. Hattersley, ' The real position of the Duke of Norfolk in 1529-30,' *History*, vol. 3, (1914), pp. 203-8; F. R. Grace, *Thomas Howard, Third Duke of Norfolk*, unpublished M.A. thesis, University of Nottingham (1961), pp. 115-23.

[2] Edward Hall, *Chronicle* (1809), p. 767. Hall sat for Much Wenlock.

[3] BL., Additional MS. 5701; LP Hen. VIII, iv (ii), 3277, where Norfolk sent a letter from Herefordshire to Wolsey by the bearer his ' servant ' Sir Edward Bray in July 1529.

[4] 27 Hen. VIII, c. 23, c. 32, c. 43; *Roper's Life of More*, edit., E. V. Hitchcock, Early English Text Society, orig. series 197 (1906), p. 71; LP Hen. VIII, viii, 856 (2); ix, 705; *Yorkshire Archaeological Society*, vol. 106 (1942), *passim;* cviii, (1945) pp. 4, 13.

[5] The continuing relationship between the More and Norfolk circles may perhaps be illustrated by marriage alliances: Thomas Elrington, son of More's step-daughter, had become Sir Edward Bray's son-in-law by 1549; William Roper's daughter was married to Sir Edward's son by 1547.

[6] LP Hen. VIII, xiv (i), 520, 573, 662.

self buying land in Sussex, notably within the barony of Lewes; one might see in this a reflection at the local level of the conflicts at court between him and Norfolk. However, the two men appear to have worked together closely and amicably on several occasions in these years not only on royal business but on more personal matters. Their joint purchase and division of the lands of Lewes priory in 1537, by which those in Sussex came to Cromwell and those in Norfolk to the duke, have left no hint of rancour in the record. By 1538 Cromwell had not only purchased over thirty manors and at least twelve rectories in the county but he had also established his son Gregory in Lewes as a landowner and justice of the peace.[1] At the time of preparations for the elections Norfolk was sent into the north of England to survey the coastal defences and a note, apparently from the Duke, survives among Cromwell's papers referring to his parliamentary patronage. Headed ' the name of such townes as in tymes past I coulde haue made burgeses of parliament of in the Shire of Sussex,' it names Horsham, Shoreham, Steyning, Lewes and Gatton ' where Syr Roger Copley dwelleth ' and continues,

> ' as for Reigat I doubte whither any burgeses be theire or not. In all the Shires in my commission sauf Lancashire, I haue put such order that such shalbe chosen that I doubt not shall serue his highness according to his pleasyr, and in likewise I did in Norffolk and Suffolk before my last cumming thens.'

It is surprising that Norfolk should have named Steyning and not Bramber, and even more striking that he was ignorant of Reigate's status as a parliamentary borough. To include Gatton and Reigate in Sussex is perhaps, pardonable, if erroneous.[2] It rather looks as if this note was intended to inform Cromwell, or his agents, of boroughs into which men in the king's interest could be placed in view of Norfolk's absence from the centre of affairs. In most cases the outcome is unknown, but it is clear that Cromwell, through his confidant the Earl of Southampton, attempted to influence Gatton, as well as the county elections in Sussex and Surrey.[3] Our information on the preparations for the elections made by Norfolk and the Earl of Southampton largely comes from the reports they made as commissioners for surveying the coasts. These and similar commissions covered a wide area of the country and may well have been one of the means by which Cromwell effectively influenced the returns to the parliament of 1539 in counties and boroughs.

The parliament of 1542 met under the shadow of Queen Catherine Howard's disgrace for she was arrested in November 1541 shortly before the elections. The dowager Duchess of Norfolk was accused of presumptive treason for having destroyed letters which might have furnished evidence of her grand-daughter's guilt, and Chesworth was officially locked up on 6 December by the solicitor-general. Duchess Agnes was found guilty at the end of the month and the Howard property in Sussex came into Crown hands.[4] Whether these events prevented the Duke from influencing the elections must remain unknown in the absence of all but one parliamentary return, but he was granted at an unknown date, the farm of the Howard property retrospective to 1 Oct. 1541.[5] The damaged and undated indenture for Bramber records the return of Sir John Clere and one Richard Wa——.[6] Although described by an enemy as ' of covetous appetite and ungodly dispo-

[1] G. R. Elton, ' Thomas Cromwell's Decline and Fall,' *Cambridge Historical Journal*, vol. 10 (1951), pp. 150-185; LP Hen. VIII, xi, 214, xii (ii) 1030, 1151 (2), 1154, 1159, g. 1311 (30); xiii (i), 1059, (ii) 201; xvi, g. 503 (32); P.R.O. SC 6 Hen. VIII, 3498.

[2] B.L. Cotton Caligula B vi f 373, misdated to 1536 in LP Hen. VIII, see LP Hen. VIII, x 816; xiv (i) 398. The double shrievalty for Sussex and Surrey presumably led those dealing with parliamentary returns to see the two counties as one.

[3] LP Hen. VIII, xiv (i), 645.

[4] L. B. Smith op. cit., chap. 8 *passim*; LP Hen. VIII, xvi, 1413; *Proceedings and ordinances of the privy council*, edit., Nicholas, vii, p. 279.

[5] LP Hen. VIII (i), 1383 (104); PRO SC 6 Hen. VIII 3496.

[6] PRO C 219 / 18 B m. 95.

sitions ' Sir John was the leading member of a Norfolk family intimate with the Howards. The Duke had been overseer of his father's will. His younger brother, Thomas, was a friend of Surrey who in 1545 wrote a sonnet to the younger Clere's memory. Sir John had himself attended Norfolk at the reception of Anne of Cleves and in 1543 was to be one of a group around Surrey arrested for contravening Lent.[1] The name of Clere's fellow member cannot be recovered from the damaged indenture, but he may have been Richard Watkins of London and Somerset, prothonotary of the court of arches, collector of customs for Bristol and registrar of the Admiralty court.[2] Watkins' deputy at Bristol was to sit for Bramber in the last parliament of the reign and if Sir John Clere was already a naval captain, as we know him to have been in 1543, Watkins' Admiralty associations may have brought him to Norfolk's attention. Whether Watkins was the member or not, Clere's return suggests that Norfolk was exercising his customary patronage at Bramber.

A group which included some notable courtiers was returned for the Howard boroughs at the next elections in December 1544. At Horsham sat no less a figure than Sir Anthony Wingfield, who was not only vice-chamberlain and captain of the Guard, but also a very active privy councillor usually to be found sitting in parliament as one of the knights of the shire for Suffolk. Returned with him was Francis Knollys, master of the horse to Prince Edward, whose wife was a cousin of Princess Elizabeth and whose father had been a household figure for nearly forty years. Knollys was to introduce a private bill into parliament. The ambitious opportunist and skilful gentleman of the privy chamber, John Gates, was returned for Shoreham with his brother. Sir John Clere again found a seat at Bramber, this time with Watkins' deputy at the Bristol customs, John Gilmyn. But Gilmyn's connections stretched much further for he was joint keeper of Bristol Castle and serjeant of the Woodyard, while his wife had been the first lady-in-waiting to Anne of Cleves whose chamberlain was the leading Sussex gentleman Sir William Goring.[3] Apart from Clere, none of these members was in Norfolk's close circle though he would obviously have been familiar with them all at court. In terms of the factions in the government in 1544 and 1545 Wingfield, Knollys and Gates might be associated with the Parr and Seymour groups rather than with Norfolk, but the Duke, especially in view of his recent service in command of the army in France, was still a central figure close to the king. It seems unlikely that anyone would have been nominated for these Sussex boroughs without his approval. Certainly by the 1540s, and perhaps in those parliaments in the 1530s for which no returns survive, the invasion of the Howard boroughs by outsiders was evident: not one of those returned in 1545 had more than marginal Sussex connections.

The grant of the larger share of the baronies of Bramber and Lewes to Thomas, Lord Seymour of Sudeley, on 19 August 1547 reflected the fall of the Howards in the previous year. The Earl of Surrey was executed for treason, a fate avoided by his father only with the king's death on the day before the expected execution. Until the accession of Mary, Norfolk remained in the Tower. Seymour acquired most of the Howards' lands in Sussex and, as befitted a former master of the ordnance, he leased the iron works.[4] His hand may be seen clearly in the elections

[1] R. J. W. Swales, *Local politics and the parliamentary representation of Sussex 1529-1558*, unpublished Ph.D. thesis, University of Bristol (1965) ii, pp. 94-97.

[2] I owe this information to Mr. Alasdair Hawkyard.

[3] Swales op. cit., ii, pp. 199-211, 228-32, 277-82, 497-501.

[4] CPR Ed. VI (i), pp. 27, 29, 33; PRO SC 6 Ed. VI, 453 m. 64v. Seymour took a close interest in the iron works which were very active under his ownership and continued to be administered by Norfolk's former chaplain, the archdeacon of Lewes, PRO SP, 10/6 f 12; SP 46/124 f 41. See also M. S. Guiseppi, ' The accounts of the iron works at Sheffield and Worth 1546 to 1549,' *Archaeological Journal*, vol. 69 (1912), p. 279.

for the first parliament of the new reign, in which he had a strong personal interest. After Seymour's fall the Marquis of Dorset deposed that ' at the first Session of this parliament (Seymour) spake these words vnto me, my Lorde Clynton Beinge behinde my backe and hering the same. They speke, said the admyrall of a black parliament; by Godd's pretious soule, if it be thus used, I woll make this the blackest parliament that euer was in Englande.'[1] An uncle of the king, Seymour aspired to be governor of his person, and thereby to share authority with the Lord Protector. He showed Sir George Blagg a bill which he intended to introduce

> ' to haue the kynge better ordered and not kept kloss that no man may se hym, and so entrid wythe sundre myslikynges of my Lord protector's prosedinges touchinge the bringinge vp of the kynge his maieste.[2]

Seymour's designs were presumably unknown in the autumn of 1547 when preparations were being made for the election and assembly of parliament: with his brother in the north campaigning against the Scots the Lord Admiral must have been free to exercise great influence. His personal adherents and men close to the king are to be found sitting for his Sussex boroughs.

From among his Wiltshire dependants the inept and irresponsible, if scholarly, Andrew Baynton was returned for Horsham and the corrupt under-treasurer of the Bristol mint, Sir William Sharrington, for Bramber. From the household and council of Catherine Parr came Anthony Bourchier, her principal auditor and one of the auditors of the remodelled court of augmentations, who sat for Shoreham with a man well known to Edward. William Fitzwilliam, an Irishman by birth, had been a familiar figure in Sussex as secretary to the Earl of Southampton. Afterwards principal gentleman in Prince Edward's privy chamber, he may well have become an associate of Seymour's when the Lord Admiral purchased Southampton's London residence. Other household men were John Vaughan, who may already have been married to the widow of a Wiltshire Knyvet, and Edward's tutor, Sir Anthony Cooke. The latter sat for Lewes, but it is not certain that Seymour was responsible for his return since the Lord Admiral's interest there was not extensive. Cooke's fellow member, Walter Mildmay, was Bourchier's brother-in-law, but he was also a general surveyor of the court of augmentations which was administering those Howard estates not in Seymour's hands.[3] But the balance of probability is that their return was approved by Seymour. The indentures of the borough elections exhibit some interesting features. The names of Anthony Bourchier at Shoreham, Sir William Sharrington and John Fylde at Bramber and John Vaughan at Horsham are all entered over erasures, and all three indentures have the appearance of blank returns. That for Shoreham was originally headed Bramber and the burgesses who appear in the body of the return are still erroneously described as residing in that borough.[4] Seymour may also have had a hand in the county election. If we may trust the names listed on the election indenture this county election excited more than usual interest. Alone among the surviving lists of county electors this group came from both the west and east of the county.[5] Of the knights of the shire, Sir William Goring looks a likely Seymour candidate.

[1] P.R.O. SP 10/6 f 19v. There is some evidence of the pressure Seymour brought to bear upon the House of Lords. Clinton reported him as saying ' I do intend to pott a byll into the parlement hous whych shalbe bot resonabyll as I am sewar it shall apere to all indeffrent men, which I pray you grant me your consent unto and gett me as many of your frends in the hous as you can.' To the young Rutland he said ' he was glad that I shuld be of the house for that he trusted to have my voyce with him.' P.R.O. SP 10 / 6 ff. 29, 30.

[2] P.R.O. SP 10 / 6 f 47.

[3] Swales op. cit. (ii), pp. 24-29, 42-46, 100-103, 154-64, 299-304, 413-21, 471-74. A file of Bourchier's correspondence including details of Seymour's lands and estate officials is in P.R.O. E 163/12/17.

[4] P.R.O. C 219/19 m. 106, m. 107, m. 108.

[5] The indentures have survived for seven of the county elections from 1529 to 1558: in Sept. 1547 thirty-nine persons signed the indenture. Eighteen persons signed the only other complete indenture; that for Oct. 1554. P.R.O. C 219/19 m. 105, /20 m. 126, /21 m. 150, / 22 m. 82, /23 m. 125, /24 m. 157, /25 m. 114.

His wife—or possibly his daughter—was one of Catherine Parr's gentle-women in 1547, while he was himself a noted court figure as former chamberlain to Anne of Cleves and a gentleman of the privy chamber. Furthermore it was to him that the keepership of Howard property had been granted before Thomas Seymour's entry into the lands.[1] Whether or not he owed his return to Seymour he was probably among the Lord Admiral's adherents.

Thomas Seymour's tenure of the Howard estates abruptly ended with his trial and execution for treason in the spring of 1549. Of the Sussex members of parliament only Sharrington was closely implicated in his schemes and he avoided total disgrace by confessing all he knew of his patron's reckless adventures. He, Vaughan and Mildmay were to be associated with the future Duke of Northumberland. Before the final session of the parliament in 1552 by-elections were held in some of the boroughs in Sussex.[2] Bourchier died in 1551, Sharrington lost his seat on attainder, the unknown John Fylde was replaced and John Vaughan became a knight of the shire for Surrey after the last session had begun, although his seat at Horsham apparently remained vacant. At Bramber Lord Chidiock Paulet and Richard Bunny replaced Sharrington and Fylde. Both were receivers for the court of augmentations which was once more administering the Howard interest in the borough. One of the principal Hampshire gentlemen and the third son of the Marquis of Winchester, Paulet had enjoyed some military distinction at the end of Henry's reign, but his Catholic views may have discouraged him from sitting in the second Edwardian parliament. Bunny had received his post in augmentations at the suit of Sir Edmund Peckham, who had received a reversion of some of the Howard property near Horsham in 1550, and Bunny was to be entrusted with the key post of treasurer of the town and castle of Berwick-upon-Tweed. Unlike Paulet he was soon to be noted for his protestantism.[3] The man who replaced Bourchier at Shoreham was Sir Henry Hussey, one of only two Sussex men to sit for the Howard boroughs in the Edwardian parliaments. Hussey's return in 1551 or 1552 is surprising for one who had been a servant of both Norfolk and Somerset, but his election at Horsham for the second Edwardian Parliament and his successful purchase in 1553 of Howard property suggests he was accepted as a prominent local figure by the new regime.[4]

For the parliament of March 1553 the government might have been expected to nominate reliable and prominent men for the Howard boroughs, especially in view of the Duke of Northumberland's active intervention elsewhere. Although several of those returned were in the royal household or were related to the Duke himself they were not among his most reliable and prominent supporters. Two Sussex men sat for Horsham, both former clients of Norfolk, both owners of some of his former property and both protestants. One of them, Edward Lewkenor, was to be designated in May 1553, a ' king's servant.' If he were in the royal household he could be counted with both Shoreham members. John Fowler was not only a gentleman of the privy chamber, but he had also been a deponent against his former master Thomas Seymour; Thomas Harvey was a gentleman pensioner later to reveal a devotion to Catholicism. Lawrence Owen (Bramber) was probably a first cousin of the duchess of Northumberland and his fellow member was George Rithe of Petersfield, a protestant lawyer important in Hampshire local government like the most recent member for Bramber, Lord Chidiock Paulet.[5] While none of these men, save Fowler, was prominent at court, several had local connections; Fowler

[1] P.R.O. E 101/426/2; APC 1547-50, pp. 15-19.
[2] Hatfield House MS. 207, transcript in the History of Parliament Trust files.
[3] CPR Ed. VI, iii, p. 350; Swales op. cit. (ii), pp. 79-84, 347-52.
[4] Ibid., pp. 272-76.
[5] Ibid., pp. 170-74, 240-46, 288-91, 323-24, 368-70.

had secured his keepership of Petworth Park from the Earl of Arundel; Harvey, Owen and Lewkenor were associated with Lord de La Warr and Sir Anthony Browne. Whether or not they nominated any of these members the Earl of Arundel and Lord de la Warr were jointly lord lieutenants of Sussex at the time of the elections. Whichever influence at court or in the locality secured the return of the members for Bramber, Horsham and Shoreham it is clear that the practice of returning officials of the court of augmentations ceased.

At Lewes an indenture was drawn up on 2 February 1553 confirming the apparently ancient practice whereby the borough of Southover nominated one burgess for every two elections. The constables of the respective boroughs bound themselves in a sum of £100 to observe the custom in future.[1] The burgesses of Southover perhaps had good reason to fear that the recent changes in the ownership of Howard property, and the influence of the government especially, might erode their rights. They may also have wanted to secure the return of a man of local standing. Thomas Gravesend, whom they chose, was a client of Sir John Gage. Living in London he was nonetheless well known locally as the farmer of the land of Lewes priory which had been situated in Southover. The member returned by Lewes twenty-three days after the local agreement had been drawn up had the appearance of a government nominee. A Middle Temple lawyer, later to be returned for the Crown borough of Steyning, John Southcote had no known connection with Sussex.[2]

There are then traces of Northumberland's influence in the elections for the Howard boroughs for the parliament of March 1553 but the strength of local interests and opinion is also evident. Certainly the leading county figures gave him no active support at the time of Edward's death. Not only was the Duke of Norfolk released from the Tower on Mary's accession but also the leading county figures received rewards for their loyalty. Lord de la Warr was granted an annuity of 200 marks for 'service against Northumberland.' The Earl of Arundel was appointed Lord Steward of the household and was given extensive privileges over his lands 'on account of his service against the traitor Northumberland.'[3] Sir John Gage became Lord Chamberlain of the household, and in 1555 Sir Anthony Browne, or Lord Montagu as he had become, received manors in Buckinghamshire, Surrey and Sussex for his loyalty during the rebellions of Northumberland and Wyatt. With such prominent figures at court resident in Sussex and loyal to both her person and her religion Mary had little to fear from the county.[4] The now aged Duke of Norfolk was neither required, nor perhaps inclined, to play a crucial role in local politics.

At first glance the Duke's parliamentary patronage in Sussex at the elections in September 1553 was more extensive than it had ever been. The two knights of the shire, John Caryll and John Covert, had been his servants. It is especially notable that Caryll sat for boroughs outside Sussex while Norfolk was in the Tower, and Covert, who had sat for a Howard borough in 1529 and perhaps in later parliaments of Henry's reign for which no returns survive, was not returned to parliament under Edward despite his becoming head of the family in 1547. Although named on the three sheriff rolls between 1550 and 1552 he was not pricked as sheriff until 1554. Other servants of the Howards like Sir Henry Hussey and John Michell were returned for Lewes and

[1] See note 14 above.

[2] Swales, pp. 237-79, 431-33.

[3] CPRPM, i, pp. 69-70, 82. The privileges granted to Arundel were almost exactly those said to have been enjoyed by the duke of Norfolk in his 'liberty.' S.A.C., xxiii, p. 240.

[4] CPRPM (ii), p. 314. A group of prominent Kentish figures, including Lord Abergavenny and Sir Thomas Wyatt wrote to Sir Nicholas Pelham 'and all other the gentilmen of the shere of Sussexx' on 14 July 1553 reporting that they had 'denounsid the ladie Jane (a quene of a new and pretie Invention).' BL. Add MS. 33230 f 26.

Horsham. Sir Henry's cousin, Anthony Hussey, who had been appointed a judge of the Admiralty court under Norfolk's aegis in 1540 and had fallen foul of Somerset in 1547, sat for Horsham. A son of the William Roper who had represented Bramber in the Reformation Parliament sat for Shoreham with Thomas Elrington, who had spent the first twenty years of his life in the More household, and was now a Surrey iron master and relative of Norfolk's old client Sir Edward Bray. The chancellor of the Exchequer, who was Norfolk's old friend Sir John Baker, was returned for Bramber with one of the Duke's Suffolk grandsons. Midhurst, a borough normally reserved for the servants or relatives of Sir Anthony Browne, returned a man from Norfolk. Sir Thomas Lovell had evidently been an active supporter of the Queen in the summer but his patron at this election cannot be identified with certainty.[1]

The formidable array of legal talent representing the Duke's boroughs no doubt reflects his need to obtain an act reversing his attainder and restoring to him the Howard lands sold by the Crown in the preceding reign. But Caryll, Hussey and Michell were themselves patentees of pockets of Howard property. Indeed Hussey and Michell were in a dispute with him which required the privy council's intervention: their desire for seats may represent an attempt to safeguard their own interests.[2] Strong opposition was offered in the Commons to ' the bill to avoid the Act made for the attainder of the Duke of Norfolk ' which received a first reading on 30 November 1553. On the following day several persons ' exhibited a Bill for Preservation of their Interests in the late Duke of Norfolk's lands.' Their lawyers entered objections and the bill received a second reading. When it came forward for a third reading it was not passed until further arguments had been heard.[3] The imperial ambassador noted late in November that parliament should have risen but was delayed because Norfolk insisted upon the restoration of all his property. In fact there were many important bills awaiting final passage including that confirming the Duke of Northumberland's attainder. Norfolk's affairs were probably not wholly responsible for parliament's continuing.[4] Although this Act declared the previous act of attainder illegal because it had been signed by stamp, a proviso was introduced that grants of Howard property by patent under Edward VI should stand and that the Duke could claim no rents from the Crown during his imprisonment. No mention was made of arbitration, but in his will the Duke was to record that the bill had been debated and reasoned at length in parliament until he had agreed to abide by the decision of eight councillors.[5]

Full of years and moving into the last months of his life, Norfolk seems to have allowed a number of influences to play upon his patronage for the elections to the parliament of April 1554. The steward of the barony of Bramber and the distinguished attorney-general of the Duchy of Lancaster, John Caryll may have proposed his soldier relative Sir Henry Palmer and the fervent catholic lawyer John Story. Yet both would have been remembered by Norfolk

[1] Swales op. cit. (ii), pp. 91-94, 108-12, 139-42, 265-69, 291-94, 297-99, 373-75, 460-63. George Darrell, one of those returned for Lewes, appears to be linked with the Gages.

[2] APC, iv. p. 381. By his will of February 1555 Hussey bequeathed the manor of Washington which he had purchased in March 1553 to his brother, but it does not appear in his inquisition *post mortem;* CPR Ed. VI, v, p. 157; PCC, 34 Wrastley; PRO C 142/114/24/.

[3] *Commons Journal*, vol. i, p. 32. The duke's bill was first introduced in the Lords and arrived late in the Commons. Several patentees were peers: Lords Clinton, de la Warr and Grey of Wilton held former Howard land as did the Earls of Arundel and Derby. Norfolk brought an action in Chancery against Derby's servants for occupying his lands and iron works in Worth Forest. It is interesting that John Caryll, John Covert and John Michell were among those of Derby's servants who received fees in Sussex, PRO C1/1440/43; Lancashire Record Office, Preston, D.D.K. 6/3 f 17.

[4] CSP Spanish 1553, p. 401; *Commons Journal*, op. cit.

[5] PRO C 65/162 no. 34; PCC. 14 More.

for their valuable work with him in the last great service he had performed, the Boulogne campaign of 1544, when Palmer was master of the ordnance, a member of the council at Boulogne and a friend of Surrey's, and Story was the most outstanding advocate in the Earl Marshal's court. Sir John Baker doubtless requested Norfolk for seats at Horsham for two of his sons, but at Shoreham both members were closely linked with Lord de la Warr; Leonard West was his fourth son and William Modye his servant. At Lewes Sir John Gage's influence prevailed, with the return of his third son and his client George Darrell.[1]

The period of minority which followed the old Duke's death and during which two parliaments were held, led to similar dilution of Howard control. The Queen issued a circular letter to the sheriffs for the election in October 1554 urging the return of ' wysest graue and catholycke ' members, as far as possible resident within the boroughs.[2] Two townsmen were returned for Lewes for the first time since Henry VIII's reign, but elsewhere in the Howard interest five of the six members were not even residents of the county.[3] Thomas Elrington and the younger John Baker at Bramber had previously represented Howard boroughs and one may speculate that Sir John Baker once again acted as their patron. The return at Horsham, of William Tooke, an auditor of the court of wards, may reflect the wardship of the young Duke, but his Hertfordshire neighbour and friend John Purvey, who sat with him, was the auditor for the south parts of the Duchy of Lancaster; these two may, therefore, have been nominated by John Caryll, or, perhaps, by the Earl of Arundel in his capacity as steward of Duchy lands in Sussex. For the second time William Modye was returned at Shoreham, though his master had recently died, and Lord Montagu may have shared the patronage since the prominent merchant taylor who sat with Modye seems to have been associated with him.[4]

The question of the patentees of Howard property was not raised again until the parliament of 1555. By this date the marriage of the Earl of Arundel's daughter to Norfolk may have complicated matters further. The bill for the Patentees of the late Duke of Norfolk's lands received a first reading on 9 November but immediately William West, a nephew of the late Lord de la Warr, led a group in a petition for their interests. Five days later a first reading is again recorded, suggesting that some alteration of substance had been made. This bill passed by a narrow majority with 152 for and 125 against, but the lords rejected it.[5] Several patentees were sitting in Sussex. John Caryll was again a knight of the shire; Francis Shirley, who had received the manor of West Grinstead, and Thomas Hogan, who occupied the manor and iron mills at Sheffield, were returned for Shoreham, probably with the help of William West who claimed his uncle's title and was to be sued by the young Duke of Norfolk for wrongfully detaining Howard property. Hogan's brother sat for Horsham with a rising young lawyer who may be linked with the Earl of Arundel. And Thomas Gravesend who occupied Keymer, sat for Lewes. Finally, the patentee Sir Henry Hussey found a seat outside Sussex for the first time.

[1] Swales, ii. pp. 16-20, 121-3, 198-9, 303-6, 329-33, 439-43, 483-5.

[2] On 12 Oct. 1554 Francis Yaxley wrote fron the court to inform Cecil ' that parliament is summoned to begynne the xiith of the next. And for the better elecion of knightes and burgesses her majestie hathe addressed forth her letters to the sheriefs of the shires.' BL. Lansdowne MS. 3 f 93; HMC, xiv, Appendix 8, p. 255.

[3] Residents were also returned at Arundel, Chichester, East Grinstead and Steyning. So far as the record shows neither Arundel nor Steyning had returned a resident since before 1529, nor East Grinstead since 1529. Chichester had not returned a resident since 1547. PRO SP 11/11/61.

[4] Swales, ii, pp. 294-47, 365-68, 466-69.

[5] *Commons Journal*, vol. i, pp.43-44; *Lords Journal*, vol. i, p. 506. The young duke brought actions against John Michell of Stamerham and William West, ' naming himself Lord La Warr,' for wrongfully holding the property of his grandfather, PRO C 1/1360/57; /1480/42.

His return for Gatton might have been secured through another patentee, Edward Lewkenor, whose grandmother owned the borough.[1] These members were unsuccessful in their attempts to secure a private bill, but it is a measure of the decline of the Duke's influence during his minority that they found seats in boroughs of the Howard interest.

None of the patentees sat in Sussex for the last parliament of Mary's reign. Indeed the emphasis was weighted in favour of men resident in Norfolk rather than in Sussex. Whereas in the parliament of 1555 only one Norfolk resident with no Sussex connection was returned there,[2] several prominent Norfolk figures closely allied with the Duke were returned at the first elections after he had attained his majority. John Blennerhasset who was returned for Horsham with Richard Fulmerston, had been employed by the Howards as a lawyer since at least 1546. Following the old Duke's restoration in 1553, Blennerhasset was to be found on the Suffolk commission of the peace and was in receipt of an annuity for his services against Northumberland. Early in Elizabeth's reign he was to succeed Fulmerston as the fourth duke's treasurer. Fulmerston had also rallied rapidly to Mary's support in 1553, not only because of his long-standing service to the Howards, but also perhaps because one who had been comptroller of Somerset's household could expect little from Northumberland. Probably by the time of his return for Horsham Fullmerston was once more in the Howards' service as the fourth duke's treasurer.[3] Two men of the duke's Norfolk dependants sat for Bramber. The employment of Nicholas Mynn of Great Fransham in Norfolk to negotiate the papal dispensation for Norfolk's second marriage suggests that he was a canonist, and we later find him as collector of the duke's revenues in Norfolk and London. His relative Henry Mynn was common clerk of Norwich at the time of his return and an important figure in the duke's East Anglian patrimony.[4] The election of Anthony Hussey and Richard Baker for Shoreham brought back men who had earlier sat in the county under Howard patronage, but the fourth duke had not supplanted the now firm control of the Gage family at Lewes. The young duke did not possess his grandfather's political might; for this parliament as for those under Elizabeth his nominees tended to be gentlemen servants and dependants rather than such notable government officials as Sir John Baker or Sir Anthony Wingfield. Nonetheless it was some time since the influence of the Howards had been so firmly re-established in their Sussex domain.

Acknowledgement

I am grateful to Professor S. T. Bindoff and his assistants at the History of Parliament Trust for commenting upon an earlier draft of this paper.

[1] The property acquired by these patentees may be found in CPR Ed. VI, v. pp. 73, 102, 115, 157, 261.
[2] Sir Thomas Knyvet for Bramber.
[3] Swales, ii, pp. 35-39, 174-80.
[4] Ibid., pp. 316-19.

FURTHER NOTES ON DESERTED AND SHRUNKEN MEDIEVAL VILLAGES IN SUSSEX

by G. R. Burleigh

In a recent volume of the *Collections* the writer published a detailed gazetteer of Deserted Medieval Villages in East Sussex (abbreviated hereafter to D.M.V.s), together with some account of the sources used in identifying sites and dating the periods of their depopulation.[1] The purpose of the present essay is to supplement the previous article with a few further notes on sites in East Sussex (one or two not being previously mentioned in print), drawing in part on Dr. P. F. Brandon's unpublished work,[2] as well as with a brief history of the study of D.M.V.s in the county. The latter is a subject of some interest when it is realised the study dates back to the early years of the Sussex Archaeological Society, although until recently no comprehensive survey had been undertaken.[3] This history is partly based on Mr. J. G. Hurst's account of the development of the subject in England.[4] However, the present writer feels Mr. Hurst did not do justice to the early work in Sussex, and an attempt is made to present a fuller picture here.

THE STUDY OF DESERTED MEDIEVAL VILLAGES IN SUSSEX

The earliest recorded mention of village earthworks in Sussex was in September, 1848 when the Rev. A. Hussey recognised the earthworks of former houses at Kingston-by-Ferring, near the presumed site of the medieval church. The Rev. Hussey began his perambulations in the autumn of 1844 and his ' compilation ' was published eight years later.[5] About the year 1850 Hussey noted two further Sussex deserted sites. Of the hamlet of Balmer in the parish of Falmer he wrote the ' ground north-west from the hamlet presents plain marks of former edifices '; while near Piddinghoe he recognised parch marks of buried walls by the ' withered herbage ' in hot, dry weather, which he interpreted as evidence for an ' extensive settlement ', although he also thought the site could be a Roman villa.[6]

Within a few years of Hussey's observations, the famous Sussex antiquary M. A. Lower, in the company of H. Simmons, E. Turner, and a Mr. Figg, recorded the extensive earthworks of the deserted village of Chinting near Seaford, although Lower suggested the remains were those of an abortive new town of Seaford.[7]

[1] G. R. Burleigh, " An introduction to deserted medieval villages in east Sussex," *Sussex Archaeological Collections* (abbreviated hereafter to *S.A.C.*), vol. 111 (1973), pp. 45-83.

[2] I am very grateful to Dr. Brandon who gave his permission for me to quote from his unpublished Ph.D. thesis, *The commonlands and wastes of Sussex* (University of London, 1963).

[3] Professor W. G. Hoskins wrote in connection with his pioneer work on deserted villages in Leics. " that such sites had been known for years . . . but they had never been systematically written up " (*Fieldwork in local history* (1967), p. 56). Sussex sites too have long been known but as M. A. Lower wrote in connection with the " lost " sites of Northeye and Hydneye, " As ' *ruinae etiam periere*,' few readers will feel deeply interested in the matter." (*The history of Sussex*, vol. 1, 1870, p. 234). One trusts that the attitude of present readers has changed.

[4] M. W. Beresford and J. G. Hurst, *Deserted medieval villages* (1971), pp. 80-84.

[5] A. Hussey, *Notes on the churches in the counties of Kent, Sussex and Surrey* (1852), p. 246.

[6] Ibid., pp. 209 and 268. For the site at Piddinghoe see below (p. 67), where I suggest the earthworks represent no more than a homestead.

[7] M. A. Lower, " Memorials of the town, parish and cinque port of Seaford, historical and antiquarian," *S.A.C.*, vol. 7 (1854), p. 84.

Not long after in the summer of 1859, Mr. T. Ross of Hastings visited the site of Northeye on Hooe Level, where he identified buildings of the former port by parch marks in the way that Hussey had done a decade previously.[1] While at Northeye Ross sketched the ruins of the thirteenth century chapel. This visit was in turn followed in the early 1860s by the fieldwork of Messrs. Lowe, Lower and Turner who tracked down the likely site of the lost Hydneye on Willingdon Level from field names, and subsequently identified the earthworks which still existed at that time.[2] Thomas Ross appears again in connection with D.M.V.s as the excavator of the medieval chapel at Bulverhythe in 1861. William Durrant Cooper, who noted Ross's excavation and published a plan of the chapel, clearly realised Bulverhythe was once a larger settlement.[3] It was Cooper too who apparently recognised earthworks of a deserted village at Parham in West Sussex about the year 1870.[4]

There followed a break in the recording of Sussex desertions until the end of the century, when Mr. P. M. Johnston remarked on the considerable earthworks at Ford near Arundel, concluding that it ' must have been a place of much greater population and importance in the Middle Ages than today '.[5] The following year (1901) Johnston published a paper on Norden's map of Atherington in which he mentions the destruction of villages by coastal erosion at Atherington, Cudlow, Kingston-by-Ferring, Middleton, and other Sussex sites.[6]

Mr. J. G. Hurst claimed that the eminent Sussex antiquary A. Hadrian Allcroft was the first to describe a Midland D.M.V. in his *Earthwork of England* (1908).[7] However, this distinction must surely go to the earliest county historian of Northants., John Bridges, writing *c.* 1720.[8] What Hurst does not mention is that Allcroft also suggested three Sussex desertions: Botolphs, Coombes, and Lullington.[9] In 1916 the Rev. W. Budgen published the results of his 1913 excavation on the medieval church of Exceat (including a long parish and manorial history of the lost village), in one of the lengthiest articles on a D.M.V. published anywhere in the country at that time.[10]

Work during the next twenty years or so included the mention of earthworks at several sites in A. H. Allcroft's book *Downland Pathways* (1924);[11] the observation of medieval wells at Middleton in the winter of 1923-4;[12] the observation of medieval remains at Bulverhythe in 1925,[13] and the excavation at the chapel there in 1929;[14] the publication by the Ordnance Survey

[1] E. Turner, " The lost towns of Northeye and Hydneye," *S.A.C.*, vol. 19 (1867), pp. 1-35; G. R. Burleigh, " An introduction to deserted medieval villages in East Sussex," *S.A.C.*, vol. 111 (1973), p. 72.

[2] E. Turner, loc. cit.; G. R. Burleigh, loc. cit., p. 69.

[3] W. D. Cooper, " Notices of Hastings and its municipal rights," *S.A.C.*, vol. 14 (1862), pp. 117-18; G. R. Burleigh, op. cit. (in note 1), p. 65. In fact it was commonly known that Bulverhythe was a decayed port, e.g. see *A survey of the coast of Sussex*, ed. M. A. Lower (1870), p. 5.

[4] W. D. Cooper, " Parham," *S.A.C.*, vol. 25 (1873), p. 3.

[5] P. M. Johnston, " Ford and its church," *S.A.C.*, vol. 43 (1900), pp. 106, 110-12.

[6] P. M. Johnston, " Notes on an early map of Atherington Manor," *S.A.C.*, vol. 44 (1901), pp. 147-66.

[7] M. W. Beresford and J. G. Hurst, op. cit. (in note 4, p. 61), p. 82; A. H. Allcroft, *Earthwork of England* (1908), pp. 551-3.

[8] J. Bridges, *History and Antiquities of Northamptonshire* (ed. of 1791), references quoted by Beresford in M. W. Beresford and J. G. Hurst, op. cit., pp. 49-50.

[9] A. H. Allcroft, op. cit. (in note 7), p. 553.

[10] W. Budgen, " Excete and its parish church," *S.A.C.*, vol. 58 (1916), pp. 138-71; G. R. Burleigh, op. cit., p. 66.

[11] Allcroft recorded the earthworks at Arlington, Balmer, and Berwick (pp. 61, 118, and 60 respectively), and showed that he was aware of depopulation at Bottolphs (p. 159), Lullington (p. 57), Pyecombe (p. 121), and Warningcamp (p. 217). In addition he mentioned the earthworks at Ford in his work *Waters of Arun* (1930), p. 89.

[12] Note in *S.A.C.*, vol. 66 (1925), pp. 237-8.

[13] Ibid., p. 240.

[14] Notes in *S.A.C.*, vol. 71 (1930), p. 263 and in *S.A.C.*, vol. 72 (1931), p. 277.

of plans of the Northeye and Barnhorne earthworks;[1] the trial excavation at Hydneye in 1930;[2] the publication of A. A. Evans' book *On Foot in Sussex* (1933) which included a chapter on Cudlow; Winbolt's recording of ' great quantities ' of medieval pottery at the shrunken village of Hardham when a road was cut through probable house-sites;[3] W. D. Peckham's article on the lost parishes of Cudlow and Ilesham;[4] and, finally, the unpublished excavations at Northeye by Normandale Preparatory School, Bexhill, in 1938.[5]

During the war Curwen published his observations of medieval burials and rubbish pits at Sutton,[6] and this was followed in 1950 by the excavations of Messrs. N. E. S. Norris and E. F. Hockings at Balsdean.[7] In 1952-54 E. W. Holden and J. G. Hurst were excavating at Hangleton, the first scientific excavations on medieval house sites in a Sussex deserted village.[8] At the same time, in 1952, H. J. Sargent and W. C. Woodhouse dug at the site of Northeye, but unfortunately the results were again not published.[9] From 1953-55 Mr. A. Barr-Hamilton revealed the complex phases of the Saxon and medieval church at Upper Barpham;[10] while in 1957 Holden was at Old Erringham near Shoreham uncovering medieval structures there.[11]

In the early 1950s, the period when deep ploughing was becoming wide-spread, Mr. E. W. Holden did a certain amount of fieldwork on deserted settlements, noting a number of sites particularly in west Sussex, and with Graville planning the earthworks at Cobden (or Muntham as it is sometimes known). In 1958 Dr. G. J. Copley's book *An Archaeology of South-East England* was published which included a distribution map of deserted and shrunken settlements (p. 182), and referred to a number of known and probable sites in the county gazetteer for Sussex (pp. 297-311).[12]

A list of Sussex D.M.V.s appeared in the 8th Annual Report of the Deserted Medieval Village Research Group (1960), a revised version of which was compiled two years later by E. W. Holden.[13] It was in 1962 also that Richard Bradley recorded medieval structures at Racton,[14] while in 1959 Mr. D. J. Pannett had surveyed the earthworks at Balmer, first observed by the Rev. Hussey more than a century previously.

In 1963 Dr. P. F. Brandon completed his unpublished University of London Ph.D. thesis in which he noted a number of Sussex D.M.V.s[15] A. Barr-Hamilton was excavating the church of another probable deserted village in 1965, this time at Lullington.[16] Fieldwork was continued in the 1960s by a handful of workers, particularly Messrs. D. Haselgrove, E. W. Holden, and J.

[1] 1928 revision to Six-Inch sheet LXX N.W.; a plan of the earthworks at Hydneye had already appeared on the 1st. ed. of O.S. Six-Inch sheet LXXX N.W. (1879-80).

[2] Note in *S.A.C.*, vol. 72 (1931), p. 277.

[3] Note in *Sussex Notes and Queries* (abbreviated hereafter to *S.N.Q.*), vol. 6 (1937), p. 148.

[4] W. D. Peckham, " The lost parishes of Cudlow and Islesham," *S.N.Q.*, vol. 6 (1936), pp. 109-12.

[5] Note by L. Beesley in *The Norman*, 1939 (magazine of Normandale Preparatory School, Bexhill); G. R. Burleigh, op. cit., p. 72.

[6] *S.N.Q.*, 10 (1944-45), p. 67.

[7] N. E. S. Norris and E. F. Hockings, " Excavations at Balsdean chapel, Rottingdean," *S.A.C.*, vol. 91, (1953), pp. 53-68.

[8] E. W. Holden, " Excavations at the deserted medieval village of Hangleton, Part I," *S.A.C.*, vol. 101 (1963), pp. 54-182; Part II by J. G. and D. G. Hurst, *S.A.C.*, vol. 102 (1964), pp. 94-142. In his review of archaeological research in *Deserted medieval villages* (see note 4, p. 61), Mr. Hurst fails to mention under " Excavations 1939-1959," the important excavations at Hangleton (pp. 83-4).

[9] See *S.A.C.*, 103 (1965), p. 78.

[10] A. Barr-Hamilton, " The excavation of Bargham Church site, Upper Barpham, Angmering, Sussex," *S.A.C.*, vol. 99 (1961), pp. 38-65.

[11] Interim note in *Medieval Archaeology*, vol. 2 (1958), p. 194.

[12] M. W. Beresford had mentioned a number of Sussex sites in the county list published in his pioneer study, *Lost villages of England* (1954), pp. 387-8.

[13] E. W. Holden, " Deserted medieval villages," *S.N.Q.*, vol. 15 (1962), pp. 312-15.

[14] R. Bradley, " The deserted medieval village of Racton," *S.N.Q.*, vol. 16 (1967), pp. 328-29.

[15] See note 2, p. 61.

[16] A. Barr-Hamilton, " Excavations at Lullington Church," *S.A.C.*, vol. 108 (1970), pp. 1-22.

Hopkins, all operating in west Sussex. In the summer of 1969 the present writer commenced his research on Sussex D.M.V.s as an undergraduate at University College, Cardiff. Fieldwork is continuing especially by Messrs. C. Ainsworth, E. W. Holden, and C. F. Tebbutt, and the writer. Tebbutt has recently discussed two new sites in the Weald.[1]

FURTHER NOTES ON SELECTED SITES IN EAST SUSSEX

Balmer. 183 TQ 359102.

Burleigh, 1973, p. 63.[2] Reference has been made above to the Rev. Hussey's description of the site in the mid-nineteenth century.[3] In 1580 its downland was used by the demesne and tenant flock of Falmer.[4] Apparently the site was reduced to a single farm by the late sixteenth century. Dr. G. J. Copley wrote ' In the Middle Ages a monastry might force villagers to migrate to a new site in order to create sheep pasture (e.g. Balmer, Sussex),' but it is not clear upon what evidence Copley based this statement as far as Balmer is concerned.[5]

Berwick. 183 TQ 521052. N. B. S.

1316. 1327: 29, 102*s.* 5¼*d.* 1332: 23, 100*s.* 1¾*d.* 1334: 109*s.* 4*d.* 1524: 8 paid. 1676: 70. 1801: 170.[6]

Berewice was a settlement in 1086 but in Domesday Book is probably included in the royal manor of Beddingham or that of Eastbourne. This is yet another example of a shrunken settlement at the scarp-foot of the Downs. It is interesting that nearly every settlement from Beddingham in the west to Alfriston in the east shows at least some evidence of desertion. This group of settlements would repay further study.

The evidence for shrinkage at Berwick is archaeological. A. H. Allcroft seems to be the only person to have recorded the site previously. More than half a century ago he wrote: " . . . shrinking amongst its tall elms, is what is left of the village of Berwick . . . now dwindled to the barest anatomy of a village . . . under the heaving green of its grass fields you may see the steads of a whole multitude of buildings, big and little, that have vanished."[7] Allowing for some romantic exaggeration, unless more was visible in Allcroft's day than now, a visit to the site will confirm Allcroft's observations. In the field called the Tye, which seems to be the Sussex term for village green, and where at one time village fairs and games were held, are still to be seen the earthworks of a number of buildings as well as the possible line of a former street. The field is under grass and appears never to have been ploughed, and the earthworks are fairly well preserved by Sussex standards, comparable with the earthworks at nearby Arlington. In the larger field immediately to the east are possibly further earthworks which, however, appear to have been disturbed by drainage ditches.[8] The Tye was so called in 1721 when it was used for sheep pasture, and the site must have been deserted by that date.[9]

[1] C. F. Tebbutt, " Two newly-discovered medieval sites," *S.A.C.*, 110 (1972), pp. 31-6.

[2] Op. cit. (note 1, p. 61). As I shall be making frequent references to this article in the text it has been thought best to use this form of reference.

[3] *Supra*, p. 61 and note 5, p. 61.

[4] *Sussex Record Society* (abbreviated hereafter to *S.R.S.*), vol. 34 (1928), p. 146; S.A.T. (manuscripts held by Sussex Archaeological Trust, Barbican House, Lewes), M.119; P. F. Brandon, op. cit. (in note 2, p. 61), p.361.

[5] G. J. Copley, *An archaeology of South-East England* (1958), p. 196.

[6] For an explanation of the system of abbreviations used here the reader is referred to G. R. Burleigh, op. cit. (in note 1, p. 61), pp. 60-61.

[7] A. H. Allcroft, *Downland pathways* (1924), pp. 59-60.

[8] A building appears in the extreme north-west corner of this field on Yeakell's and Gardner's map of Sussex, 1778-83 (West Sussex Record Office, P.M. 48).

[9] G. M. Cooper, " Berwick parochial records," *S.A.C.*, vol. 6 (1853), p. 241.

Birling. 183 TV 557969. N. *(Not visited).*
1296: 10, 160*s.* 4¾*d.* 1316. 1332: 16, 66*s.* 8*d.* 1334: 87*s.* ¼*d.*

Now a farm in Eastdean. The site is mentioned in the writer's B.A. thesis.[1] There was a medieval chapel here, and from 1267 a weekly market was held on Tuesdays, and a yearly fair on the vigil, feast and morrow of SS. Simon and Jude (27th-29th October).[2] It is possible that Eastdean and Friston were assessed with Birling for the fourteenth century subsidies noted above.

Bishopstone. 183 TQ 472010. C. S.
1086: 39. 1316. 1327: 12, 15*s.* 1¾*d.* 1332: 8*s.* 3½*d.* 1334: 22*s.* 0*d.* 1603: 80.

Burleigh, 1973, p. 79. The number of landholders was reduced from 21 in 1591 to 14 in 1685, of whom only four held land at Bishopstone itself and the remainder at Norton (TQ 471019).[3]

Charlston. 183 TQ 521007. (Not visited).

In Westdean. A small Domesday vill with six villeins, eight bordars, and three serfs, but only a farm by 1500.[4] In 1296 the manor was assessed under the vill of Exceat for 26*s.* 8*d.*

Charleston. 183 TQ 491069. (Not visited).

In West Firle. Burleigh, 1973, p. 79. Another small Domesday vill with three villeins and three bordars which was merely a farm by 1614.[5] It may always have been small.

Chinting. 183 TV 506986. III. C.
1296 (with Sutton): 48, 195*s.* 4¼*d.* 1316. 1327: 21, 57*s.* 6*d.* 1332: 20, 49*s.* 8¼*d.* 1334: 58*s.* 6*d.*

Now a farm in Seaford. There was a medieval chapel here. Although not mentioned in my previous article, the site was discussed in my unpublished Cardiff dissertation.[6] Chinting retained its own common fields in the fifteenth century,[7] but a subsidy of 1590 shows only four persons assessed here and within the liberty of Seaford,[8] and it seems fairly certain that by this date Chinting was no more than a farm. Dr. Brandon too concluded that Chinting was probably a large farm by the early seventeenth century.[9] In my previous article it was suggested the earthworks of " Poyning's Town " were those of an abortive new town of Seaford (following the idea of M. A. Lower),[10] but they are more likely to represent the site of the medieval village of Chinting.

Endlewick. 183 TQ 547061.

In Wilmington. Burleigh, 1971, p. 30. There is enough documentary evidence to show that a manor of this name existed from the late thirteenth century if not earlier. The name occurs in connection with a bailiwick including 24 manors which, even as late as 1862, paid " Endleweek Rents."[11] Cooper said that a piece of land on Moor's Hill showed " appearances of a mansion once having stood there," and Stenton and Mawer maintained that the " remains of banks of a habitation-site were still visible."[12] Dr. Copley followed the latter authors in saying

[1] G. R. Burleigh, *Deserted medieval villages in East Sussex*, unpubl. thesis, Dept. of Archaeology, University College, Cardiff, 1971. I refer to this in the text hereafter as Burleigh, 1971.
[2] *Cal. Charter Rolls*, 51 Henry III (1906), p. 74.
[3] B. M. Add. MS. 33184; P. F. Brandon, op. cit. (in note 2, p. 61), pp. 363-4.
[4] P. F. Brandon, op. cit. (note 2, p. 61), p. 366.
[5] S.A.T. G4/77; P. F. Brandon, op. cit. (note 2, p. 61), p. 356.
[6] See note 1.
[7] East Sussex Record Office (abbreviated hereafter to E.S.R.O.), Add. MS. 660, f. 53.
[8] M. A. Lower, " Further memorials of Seaford," *S.A.C.*, vol. 17 (1865), pp. 141-63.
[9] P. F. Brandon, op. cit. (note 2, p. 61), p. 364.
[10] G. R. Burleigh, op. cit. (note 1, p. 61), pp. 73-74.
[11] *S.A.C.*, 14 (1862), p. 263.
[12] G. M. Cooper, " Illustrations of Wilmington priory and church," *S.A.C.*, vol. 4 (1851), p. 64; A. Mawer and F. M. Stenton, *The place names of Sussex* (1930), part 2, p. 48.

earthworks survived, and suggested they could represent a deserted hamlet.[1] There is no real evidence that Endlewick was ever more than a manor.

Exceat. 183 TV 523988.

Burleigh, 1973, p. 66. In 1404 one John Wolf acquired five tenements here. This would suggest enclosure was already underway in the parish. Although " common fields " are mentioned in 1521 they were not occupied by small proprietors, for by 1428 only one householder was resident in the parish, although there were two houses inhabited in 1460.[2] In 1528 (when Exceat parish formally united to Westdean) it was said that " from time unremembered Excete parish chrrch is laid even with the ground and the site desecrated " (the church was said to be in ruins by 1460 in fact), " and that owing to the small number of inhabitants, there is no prospect of rebuilding it . . . " Roger Blythe was the head of the only household then resident in the parish.[3]

Hydneye. 183 TQ 609028.

Burleigh, 1973, p. 69. The medieval church referred to under Hydneye in my previous article is in fact the chapel of St. Mary-of-the-Sea at Bulverhythe. Hydneye did not possess a church.

Itford. 183 TQ 434055. (Not visited).

In Beddingham. " This was a small Domesday vill," with four villeins and two serfs, " and had common fields in the fourteenth century, but it was a farm by the 16th century."[4]

Lullington. 183 TQ 528031.

Burleigh, 1973, pp. 70-71. As mentioned above, Hadrian Allcroft suggested Lullington could be a deserted village, and he referred to the reduced size of the church, remarking that only the one house of the men who built the church remained, " and the tell-tale pottery which litters the surrounding fields."[5] All the tenants' arable lay in tenantry. It was a very small manor with 200 acres of arable, 50 acres of meadow, and 500 acres of sheepdown. The demesne farm was in severalty from the early fifteenth century, and, according to Dr. Brandon, the church was sited in the midst of the common fields.[6]

Newtimber. 182 TQ 271134.

Burleigh, 1973, p. 71. In my earlier paper I said the date of desertion of this village was uncertain, though it was suggested depopulation may have occurred between 1603 and 1621 on the evidence of the ecclesiastical returns for the former year and of the Lay Subsidy in the latter year. As was emphasized in that paper, seventeenth century subsidies are notorious for the amount of evasion. It would seem a terrier of 1675 mentions a " tennants laine " suggesting a common field system still in operation.[7] Thus the 12 houses recorded by the Hearth Tax and the 47 parishioners of the 1676 religious census could indicate a nucleated village survived into the later seventeenth century or after. The emparkment here apparently took place after 1675, and this could be the clue to the depopulation of a nucleated village by the church.

[1] G. J. Copley, op. cit. (note 5, p. 64), p. 310; since writing this I have visited the Moor's Hill area in Wilmington parish, but have been unable to locate any earthworks. Large parts of the area have long been ploughed and it seems likely the earthworks no longer exist.

[2] S.A.T. M.108 and M.116; P. F. Brandon, op. cit. (note 2, p. 61), p. 365.

[3] *S.R.S.*, vol. 52 (1952), p. 24. At the time it was also suggested that " In future all parishioners of Excett shall be parishioners of Westden . . . till Excet church is rebuilt "!

[4] P.R.O. C. 135/47; P. F. Brandon, op. cit. (note 2, p. 61), p. 356.

[5] A. H. Allcroft, op. cit. (note 7, p. 62), p. 57.

[6] P.R.O. SC6/1025/2, et seq.; P. F. Brandon, op. cit. (in note 2, p. 61), p. 365.

[7] P. F. Brandon, op. cit. (note 2, p. 61), p. 353.

Pangdean. 182 TQ 294117.

Burleigh, 1973, pp. 72-3. A charter of *c.* 1095 mentions the " church of *Pingeden.*" Dr. Brandon believed Pangdean to be a hamlet with its own fields.[1]

Piddinghoe. 183 TQ 431033.

The Lydds. Burleigh, 1971, p. 60. As mentioned above, the Rev. Hussey recognised earthworks here as early as *c.* 1850, which he thought were of an " extensive settlement."[2] The site has been observed by more recent fieldworkers, and both Professor Beresford and Dr. Copley record the site as a possible deserted village or hamlet.[3] The site has really nothing of the character of a nucleated settlement, consisting of a massive embanked platform, at least 100m. N-S x 70m. E-W, and associated with a sunken track to the W, part of the old Lewes to Newhaven road, and strip lynchets to the N and NE. Within the platform, at its N end, are slight irregularities and disturbances on the ground, possibly indicating the site of buildings. The Lydds is most probably a medieval homestead site, although there is no positive evidence for its date.

Pyecombe. 182 TQ 293126.

Burleigh, 1973, p. 75. The Victoria County History contains the following entry for this village: " The medieval village may have been . . . near the point where the church now stands . . . Pyecombe, however, appears to have declined towards the end of the medieval period, and there is some indication that after the fifteenth century the village was revived a quarter of a mile westwards of the earlier site."[4] However, the evidence of the parish registers is not to be denied, and it may still be claimed migration took place in 1603 as the result of a visitation of the plague.

Southerham. 183 TQ 427094. (Not visited).

Now a farm in South Malling. Dr. Brandon recorded that there were six small customary landholders and cottagers here at one time.[5] Lower said that there was chapel here " which had long been occupied as a cottage and was destroyed upwards of 30 years since."[6]

South Heighton. 183 TQ 451028.

1296 (with Denton and East Blatchington): 32, 237*s.* 11¼*d.* 1327: 15, 33*s.* 4¼*d.* 1332: 14, 12*s.* 2¾*d.* 1334: 36*s.* 0*d.*

Burleigh, 1973, p. 79. In 1086 there were two villeins and three bordars here. The whole parish was in common fields, and there were 12 small landholders in 1623, but only four by 1753.[7] The church was badly damaged by lightning in 1769, and the parishioners were apparently so few and poor that the structure was not repaired, and a century later was a total ruin.[8]

Sutton. 183 TV 494997.

Burleigh, 1973, p. 75. In 1382, when the manor of Sutton-Sandore was held by Michelham Priory, it comprised the demesne farm with pasture for 1000 sheep, several shepherds, and six customary tenants each holding one wist of land.[9] By January 1404 it was found that there were " many notable defects in the chancel of the church, houses, buildings and closes " belonging to

[1] P. F. Brandon, op. cit. (note 2, p. 61), p. 361; Victoria County History, *Sussex*, vol. 7 (1940), p. 214 considers church of *Pingeden* should be identified with Pyecombe church.

[2] A. Hussey, op. cit (note 5, p. 61), p. 268.

[3] M. W. Beresford, op. cit (note 12, p. 63), p. 388; G. J. Copley, op. cit. (in note 5, p. 64), p. 305. Other workers too have been aware of this site, e.g. A. H. Allcroft, op. cit. (in note 7, p. 64), p. 18. I wish to thank Mr. E. W. Holden, F.S.A., for making available to me his notes on The Lydds.

[4] V.C.H., *Sussex*, vol. 7 (1940), p. 212.

[5] S.A.T. G/45/15; P. F. Brandon, op. cit. (note 2, p. 61), p. 355.

[6] M. A. Lower, op. cit. (note 3, p. 61), vol. 2, p. 173.

[7] *S.R.S.*, vol. 34 (1928), p. 223; S.A.T. Woolgar MSS.; P. F. Brandon, op. cit. (note 2, p. 61), p. 363.

[8] M. A. Lower, op. cit. (note 3, p. 61), vol. 2.

[9] S.A.T. M.369.

Sutton prebend.[1] Sutton vicarage was united with Seaford vicarage on 4th June, 1509, together with the parishioners of Sutton, " if any." It was represented to Robert Sherburne, Bishop of Chichester, " that the parish church of Sutton next Seforde is utterly destroyed, and that the vicarage of ancient ordination has no parishioners, save for a few neatherds, and has long been void; the cure of the few inhabitants has been undertaken, time out of memory, by the Vicar of the neighbouring parish of Seford . . . Once a year . . . the Vicar shall say Mass in the chapel there, where the church once stood."[2] The last part of this quotation suggests perhaps that although the church was already largely in ruins, the chancel was maintained for services. Dr. Brandon wrote that by 1589 most of the estate was held as two moities and Sutton survived only as a large farm.[3]

Tilton. 183 TQ 495067.

Burleigh, 1973, p. 79. In Alciston. There were two Domesday estates each with two villeins; later Battle Abbey and Bayham Abbey had land here. The hamlet had its own common fields. In the reign of Edward I Battle Abbey had six tenants in the common field who had commons on the downs with the tenants of Bayham Abbey. " The Black Death seems to have been responsible for the virtual extinction of the common fields there for in 1433 all the land not in the lord's own hand, apart from an odd acre or two, was farmed by a single tenant."[4]

Winton. 183 TQ 520038. S. (Not visited).

In Alfriston. A single cottar is recorded here in 1086, but in the later middle ages there were 25 tenements, and in 1625 12 landholders still occupied the fields. Tenant land was almost all in common fields.[5]

CONCLUSION

The purpose of this essay has been to give a brief account of the development of the study of Sussex D.M.V.s, and to add a few further remarks relating to known and suspected sites in East Sussex, both shrunken and deserted. For the material in this article, it will be obvious how much the writer's own work has relied on that of other researchers, particularly on the work of Dr. P. F. Brandon.

My two papers have simply presented the basic evidence, using a limited number of sources, for a large number of sites. The need now as stressed in my earlier article, is for local workers to study individual sites in much greater depth, using all the manuscript material available, coupled with a more thorough examination of local topography. A few more sites will probably come to light as a result of detailed archaeological fieldwork; it is only recently that the earthworks at Buckham and Buxted were recognised for instance. The documentary sources will provide a fuller picture, confirming periods of desertion and providing reasons for depopulation where these are not already known. Some of the more tentative sites will undoubtedly be rejected after a more complete examination of the evidence.

Ideally it would be of tremendous assistance to scholarship if a programme of excavations could study a few selected sites over a number of years. Failing that, all threatened sites should see at least small " rescue " excavations as and when necessary.

[1] *S.R.S.*, vol. 8 (1908), p.81.
[2] *S.R.S.*, vol. 52 (1952), pp. 46-7.
[3] P. F. Brandon, op. cit. (note 2, p. 61), p. 364; cf., map of Sutton-Sandore manor in 1624 (E.S.R.O. Seaford MS. 688) and G. R. Burleigh, op. cit. (note 1, p. 61), p. 75.
[4] P. F. Brandon, " Arable farming in a Sussex scarp-foot parish during the late middle ages," *S.A.C.*, 100 (1962), p. 63.
[5] S.A.T. G/23/34; P. F. Brandon, op. cit (in note 2, p. 61), p. 357.

THE POOLES OF CHAILEY AND LEWES: THE ESTABLISHMENT AND INFLUENCE OF A GENTRY FAMILY, 1732-1779

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This article examines the transplantation from Cheshire to mid-Sussex of two branches of the Poole family, subsequent to a double marriage alliance with the Pelhams of Lewes. Zealous local activity in the Newcastle interest was rewarded by the Duke with lucrative places in national administration. The profits of office, supplemented by the fruits of judicious marriage, allowed the consolidation by one branch of a small estate in Chailey where model husbandry was practised and the achievement by the other of a leading position in Lewes society. This prosperity was coincident with a disengagement from the Pelham interest.

On 13 March 1723, Frances, daughter of Henry Pelham of Lewes and first cousin of Thomas Pelham Holles, Duke of Newcastle, Lord Chamberlain and from 1724 Secretary of State for the Southern Department, married Francis Poole,[1] eldest surviving son of Sir James Poole, whose estate centred on Poole Hall in the Wirral of Cheshire. The marriage was regarded by Frances' sisters as a love match.[2] Certainly Francis Poole's estate, computed to yield £791 per annum, was judged to be small by the Pelhams.[3] Moreover, the Poole family had a somewhat chequered political record.[4] James Poole, a fervent royalist and Roman Catholic, died of wounds at the siege of Chester in 1645 without male heirs. At the Restoration, his nephew and heir, James, was selected by Charles II for investiture with the Order of the Royal Oak, a project which was however, abandoned as potentially too divisive.[5] James died in 1669 but his second son, James, was created a baronet on his coming of age in 1677. A politically active Catholic, James was threatened with deportation from his county during the Popish Plot crisis; was appointed Deputy Lieutenant of Cheshire in 1687 by James II; was arrested for high treason in 1690; and was listed in 1694 as a captain in the army of James " the Pretender."[6] However, it seems improbable that Francis maintained the active Jacobite sympathies of his father, especially since although noted as a Roman Catholic in December 1722,[7] his marriage revealed him as having conformed to the Anglican church. Eight years later, on 20 December 1731, the alliance between the two families was further cemented by the marriage of Grace Pelham, the sister of Frances, to William Poole, the cousin of Francis Poole.[8] Whether this was a second love match is unknown. Although his

[1] At St. Giles-in-the-Fields, London. See W. H. Challen, " Sussex Entries in London Parish Registers," *Sussex Notes and Queries*, 3 (1931), p. 208.

[2] British Library (abbreviated hereafter to B.L.), Addit. MS 33,085, fos. 64, 66.

[3] B.L., Addit. MS 33,084, fo. 201.

[4] Margaret E. Poole, " The Poole Family of Poole Hall," *Transactions of the Historical Society of Lancashire and Cheshire*, vol. 52 (1902), pp. 165-216.

[5] W. W. Mortimer, *A History of the Hundred of Wirral* (Birkenhead, 1847), p. 228.

[6] Rosamund Meredith, " The Eyres of Hassop and some of their connections from the Test Act to Emancipation," *Recusant History*, vol. 9 (1967-8), p. 8; *The Diary of Dr. Thomas Cartwright*, ed. Rev. Joseph Hunter (Camden Society), 1843, p. 79; *Calendar of State Papers Domestic*, 1689-90, pp. 527, 530.

[7] J. H. E. Bennett and J. C. Dewhurst, eds., *Cheshire Quarter Sessions Records* (Lancashire and Cheshire Record Society (abbreviated hereafter to L. and C.R.S.), vol. 94, 1940), p. 13.

[8] At St. Mary, Chester. Cheshire Record Office, E.D.B. 56.

father is listed as a Roman Catholic in 1715,[1] William like his cousin, clearly conformed to the established church before or upon his marriage. His financial position in 1731 is not documented but his father may have owned property at Birchley in Billinge, Lancashire, to which he had moved soon after his marriage in 1694.[2]

This second marriage alliance was rapidly followed by the establishment of both cousins in Sussex. In 1732 William purchased the Hook, a small estate of 179 acres in Chailey,[3] a nucleus which he systematically expanded over the years. His correspondence testifies to his close financial and political dependence on the Duke of Newcastle and his establishment at the Hook may have been expressly arranged to further the Duke's influence in mid-Sussex. Certainly by 1735 William was already active locally as a Commissioner of Newhaven Harbour[4] and as a Justice of the Peace.[5] Indeed he frequently complained that few of his colleagues on the bench shared his zeal.[6] Thus in 1754 he lamented that for many years he had borne two thirds of the whole business of the eastern division of the county, that people from miles around crowded his house on official business and expected refreshment and that " in Parliament or term time " no other justice was available to assist him between Lamberhurst and Horsham.[7] William clearly saw himself as a client of the Duke and in 1746 expressed to him the fear that his old friends might no longer constitute a clear majority on the bench.[8] Moreover, as a manager of the Duke's local interest, he advised Newcastle on the most effective deployment of ecclesiastical patronage in the area.[9] Some compensation for the energy and money expended in public service was forthcoming in 1736 when he was appointed Receiver General of the Stamp Office at a salary of £500 per annum.[10]

Although Francis after his marriage seems to have resided at Poole Hall, in 1734 within two years of William's establishment at the Hook, he had taken up residence in Lewes at the Friars, a house which had been judged by Lord Ashburnham in 1687 to be the second best in the town.[11] His advent was also calculated to reinforce Newcastle's local political influence. It had been anticipated that the parliamentary election of that year would be closely fought, the sitting members, Thomas Pelham of Stanmer and Thomas Pelham of Lewes, both Newcastle's clients, being reputed " lazy, incapable ne'er-do-wells."[12] Moreover, it was strongly rumoured locally that the government of which Newcastle was a pillar intended to impose an excise on bread and meat.[13] In addition, two opposition candidates were in the field, Nicholas Garland and Thomas Sergison of Cuckfield Park who were reputed to command a strong following among the Dissenters and the high Tories respectively. Apart from " wholesale treating " and the establishment of a drinking club for supporters at the White Hart, Newcastle's agent Robert Burnet

[1] Public Record Office (abbreviated hereafter to P.R.O.) F.E.C./P41/1, p. 23.

[2] He is described as of Bebington, Cheshire, on his marriage in 1694 (W. F. Irvine, ed., *Marriage Licences granted within the archdeaconry of Chester in the Diocese of Chester* (L. and C.R.S., vol. 8, 1924,) p. 91) but of Birchley, Lancashire in 1702 (W. A. Tonge, ed., *Marriage Bonds of the ancient archdeaconry of Chester now preserved at Chester*. Part I 1700-1706-7 (L. and C.R.S., vol. 82, 1933) p. 66).

[3] East Sussex Record Office (hereafter E.S.R.O.), Hook MSS. 1/30, 31. Part of this estate and family archive was deposited by Brig. J. A. S. Tillard, of Southam, Chailey.

[4] E.S.R.O., QM/EW7; B.L., Addit. MS 32,689, fo. 483.

[5] B.L., Addit. MS 32,690, fo. 18.

[6] B.L., Addit. MSS 32,700, fo. 207; 32,709, fo. 275.

[7] B.L., Addit. MS 32,737, fo. 455.

[8] B.L., Addit. MS 32,707, fo. 3.

[9] B.L., Addit. MSS 32,703, fo. 119; 32,714, fos. 357, 397; 32,854 fo. 242; 32,856, fo. 213; 32,857, fo. 289; 32,921, fo. 420; 32,934, fo. 163.

[10] *Calendar of Treasury Books and Papers 1735-8*, p. 202.

[11] E.S.R.O., Ashburnham MS 933, p. 7.

[12] Basil Williams, " The Duke of Newcastle and the Election of 1734," *English Historical Review*, vol. 12 (1897), p. 480.

[13] *Ibid.*, p. 465.

sought to fill every burgage tenement under the control of the Duke or his supporters with householders willing and eligible to vote for the Duke's unprepossessing candidates.[1] To this end pressure was put on Mrs. Short,[2] lessee of the Friars, to quit her tenancy by Christmas 1733 in favour of Sir Francis Poole[3] but apparently to no avail since his name does not appear in the 1734 poll book.[4] However, he was certainly living there by the end of that year[5] and it would seem that, although Poole Hall was retained, the Friars became the principal residence of Sir Francis and his descendants until 1804. As in the case of his cousin William, Francis' close identification with the Newcastle interest in mid-Sussex was accompanied by tangible rewards, this time in the shape of the Deputy Paymastership of Minorca at a salary of £550 per annum, bestowed on him by his wife's cousin Henry Pelham, Paymaster of the Forces.[6]

The very narrow margin, nine and eight votes respectively, by which the Pelham candidates were elected in 1734,[7] underlined the need for the Newcastle interest in the borough to be more tightly managed. The full mobilisation of that interest rested on a variety of factors. In 1734 the franchise lay with some 156 scot and lot voters in the parishes of All Saints, St. Michael's, St. Anne's and St. John's sub Castro. A significant number lived in property owned by the Duke or to a lesser extent by other branches of the Pelham connection but their relative importance may have been somewhat reduced by recent new building.[8] However, the Duke recognised that secure control rested on a sustained appeal to personal self interest and to local patriotism. His candidates needed ideally to possess social standing and local connections. Borough interests needed to be furthered and the support of the strong dissenting element cultivated. Care had to be taken to ensure that the provisioning and servicing of the ducal estates at Halland and Bishopstone and of the Pelham estate at Stanmer were ostentatiously bestowed on influential Lewes tradesmen and artificers, while crumbs from the rich feast of official patronage controlled by Newcastle needed to be distributed periodically to Lewes electors. Applications received ranged from a carpenter in the dockyard at Chatham to a musician in the King's band.[9] Effective mobilisation of support also depended on securing the appointment of known supporters as parochial overseers of the poor who drew up lists of ratepayers and borough constables with whom rested the decision as to the validity of a vote in case of dispute.[10]

By 1739, William Poole, conveniently sited at the Hook, was co-ordinating this ambitious programme of borough management in conjunction with Thomas Stonestreet, a Lewes resident.[11] In readiness for an expected election in 1741, agents were appointed in each parish. Thereafter William's correspondence with the Duke abounded in the minutiae of schemes to attach individual electors to his interest. A flaxdresser was to be settled in the borough and a new butcher established in business. " Dumbrell " the cooper who had come voluntarily into the Duke's interest was to be rehoused and a new oven provided for the gingerbread maker. William[12]

[1] *Ibid.*, pp. 481-86.
[2] B.L., Addit. MS 32,689, fos. 86, 91, 134, 176.
[3] Francis had succeeded to the baronetcy in 1731 on the death of his father on the Isle of Man. See Rev. G. P. Crawfurd, " The Diary of George Booth of Chester and Katherine Howard his daughter . . .", *Chester Archaeological and Historical Society*, vol. 28 (1928-9), p. 49.
[4] E.S.R.O., Lewes MS C5/3/5.
[5] T. Woollgar, *Spicilegia sive Collectanea ad Historiam Antiquitates municipii et viciniae Lewensis*, vol. 1, p. 436 (Sussex Archaeological Society Library).
[6] B.L., Addit. MS 32,890, fo. 460.
[7] Basil Williams, *loc. cit.*, p. 487.
[8] William Durrant Cooper, *Parliamentary History*, Appendix III in T. W. Horsfield, *The History, Antiquities and Topography of the County of Sussex*, vol. 2 (Lewes), 1835, p. 46.
[9] Margaret Cramp, *The Parliamentary Representation of Five Sussex Boroughs, Bramber, Midhurst, Lewes, Rye and Winchelsea 1754-68*, (unpublished M.A. thesis, Univ. of Manchester, 1953), p. 91.
[10] Basil Williams. *loc. cit.*, pp. 483-486.
[11] B.L., Addit. MS 32,058, fos. 389-91, 395, 397.
[12] B.L., Addit. MSS 32,692, fo. 318; 32,702 fo. 40; 32,703 fos. 140, 413.

attempted to ensure that the Duke's supporters were elected to parochial office and urged him to increase the houses in his gift[1] and to prevail on his friends among the local gentry to settle themselves or relatives in the borough. It may have been in pursuance of this policy that Dr. Edward Poole, William's brother, moved into a house belonging to Thomas Pelham in 1753.[2] William's regular attendance at Lewes Races and at the assemblies which accompanied them and his subscription to political clubs at Lewes and Seaford in 1756 and 1757[3] were doubtless more congenial methods of promoting the Duke's interests.

William's task of political management[4] was probably made easier by the death from drink in 1737 of Thomas Pelham of Stanmer and his replacement as member of parliament in the Pelham interest by John Morley Trevor, a local landowner at Glynde. However, the deaths in 1743 of both Trevor and the other sitting member, Thomas Pelham of Lewes, posed an acute problem since no Pelham was available to contest the seat. But a happy solution was occasioned by the adoption of Sir Francis Poole who held the seat until his death in 1763. Francis was eminently acceptable to the borough, since he was a close relative of the Duke and a baronet of ancient lineage who had been resident at the Friars since 1734. His appointment in 1742 as trustee of the Lewes Pest House, to the building of which he contributed five guineas, suggests an active involvement in the town's affairs.[5] An energetic and affable candidate, he was described as " a good-humoured, downright, hearty John Bull."[6] His election together with Sir John Shelley, a Sussex landowner related to Newcastle, preserved Pelham control. However, at the general election of 1747, the withdrawal of Shelley precipitated an accommodation with Thomas Sergison, who since 1734 had provided a somewhat unsteady nucleus of opposition to the Duke. Although his advent may be interpreted as a diminution of ducal influence in the borough, Sergison proved to be a fairly reliable auxiliary to the Newcastle interest until his death in 1766. It was probably this union of Pelham and Sergison interests which ensured that the general elections of 1754 and 1761 were ultimately uncontested.

Constant service to the Newcastle interest guaranteed the Pooles continued access to the official patronage in the gift of the Duke. On being elected member of Parliament for Lewes in 1743, Sir Francis Poole was required under the terms of the Place Act to vacate his post as Deputy Paymaster of Minorca.[7] However, in compensation, he was awarded annually from the secret service fund £200, afterwards increased to £300 until his death in January 1763.[8] Moreover, the place was held in trust for his eldest son, Henry, who came of age in 1747. His second son, Ferdinando, was appointed collector of the petty customs of aliens in the port of London in 1751[9] and an underclerk in the Treasury the following year.[10] The loss of Minorca to the French in 1756 unexpectedly robbed Henry of his emoluments and precipitated a crisis in the family's financial affairs. Indeed Frances Poole intimated to the Duke that poverty might oblige the family to quit Lewes.[11] In August 1757 Newcastle failed to persuade the Chancellor of the Exchequer to create

[1] B.L., Addit. MSS 32,058 fos. 389-90; 32,692 fo. 278; 32,711 fo. 9.

[2] B.L., Addit. MSS 33,087 fos. 263, 270, 281, 285.

[3] E.S.R.O., Hook MSS 16/8, 9.

[4] The essential factual framework for the following discussion of Lewes electoral history has been found in Romney Sedgwick, *The History of Parliament: The House of Commoms 1715-54*, vol. 1, H.M.S.O. (1970), pp. 335-6 and Sir Lewis Namier and J. Brooke, *The History of Parliament: The House of Commons 1754-90*, vol. 1, H.M.S.O. (1964), pp. 393-5.

[5] Verena Smith, (ed.), *The Town Book of Lewes 1702-1837* (Sussex Record Society, vol. 69, 1972-73), p. 34.

[6] T. W. Horsfield, *op. cit.*, vol. 1, p. 211.

[7] Romney Sedgwick, *op. cit.*, vol. 2, p. 361.

[8] B.L., Addit. MS 32,890, fo. 460; Sir Lewis Namier, *The Structure of Politics at the Accession of George III*, Macmillan, (1961), pp. 436-479.

[9] *The Gentleman's Magazine*, 1751, p. 92.

[10] J. C. Sainty, *Office Holders in Modern Britain*, Vol. 1, Athlone Press (1972), p. 145.

[11] B.L., Addit. MS 32,870, fo. 165.

an additional post of Commissioner of Stamps for Henry[1] but in July 1758 had him appointed Paymaster of Exchequer Bills.[2] In October 1760 he was made Commissioner of Excise at £1,000 per annum and although he nominally retained the Exchequer post, the profits were awarded to H. V. Jones.[3] Between December 1758 and March 1761 Henry also received £1,325 as compensation for the loss of the Minorca post from the secret service funds.[4]

The entire Newcastle interest, however, faced a crisis upon the resignation in May 1762 of the Duke from the Treasury, as a result of the new king's increasingly manifest hostility both to his personal influence and to his policy of sustained expensive involvement in Continental war. The resignation signalled the celebrated " massacre of the Pelhamite innocents " authorised by the King and the Earl of Bute, whereby the Newcastle interest built up over several decades was rudely demolished. In January 1763 the Duke lamented that forty of his followers had been dismissed from offices, including sixteen from Sussex.[5] Since Sir Francis Poole had remained loyal to the Duke by voting in the commons against the peace preliminaries favoured by the King,[6] it was hardly surprising that his sons, Henry and Ferdinando should have lost their posts of Commissioner of Excise, Paymaster of Exchequer Bills and Petty Customer, while William Poole seems to have lost his post at the Stamp Office.[7] However, for the Pooles the " massacre " was much less bloody than it might have been. Ferdinando would appear to have retained the chief clerkship of the Treasury to which he had been promoted in February 1762 and indeed held it until 1782.[8] Henry was in January 1763 appointed by an affable Lord Bute to the compensating post of Receiver General of Excise[9] while William was sworn in as a Commissioner of the Lottery in April.[10] The whirligig of political fortunes which restored Newcastle in July 1765 to government office also caused the restoration of the posts of Commissioner of Excise and Paymaster of Exchequer Bills to Henry, in place of Receiver General of Excise[11] and of the post of Receiver General of Stamp Duties to William, a position he retained until his death.[12] Moreover Henry and Ferdinando received posts in the Lottery, the latter retaining his until at least 1772.[13]

Chagrin at the " massacre " may have contributed to the demise of Sir Francis in his eightieth year on 14 February 1763.[14] His death precipitated a by-election at Lewes in which Treasury influence might have been deployed against the Newcastle interest as it had been with marked success at Hastings.[15] This threat did not in the event materialise and the combined Sergison and Pelham interests were able to secure the unopposed return of William Plumer, a wealthy landowner in Hertfordshire, related to the Duke of Devonshire. Newcastle would have preferred a relative of his own, especially perhaps Sir Henry Poole who had succeeded to his father's position of influence in the borough but Henry was precluded by his place from standing. A second by-election was occasioned in December 1766 by the death of Thomas Sergison and again Newcastle's nominee Lord Edward Bentinck was returned unopposed as a temporary expedient until the General Election which was known to be imminent.

[1] B.L., Addit. MS 32,873, fo. 244.
[2] P.R.O., T54/37 p. 70.
[3] B.L., Addit. MS 32,909, fo. 382; 32,911, fos. 272-73.
[4] Sir Lewis Namier, *op. cit.*, pp. 454, 461, 467.
[5] Sir Lewis Namier, *England in the Age of the American Revolution* (1963), p. 407.
[6] Sir Lewis Namier and J. Brooke, *op. cit.*, vol. 3, p. 307.
[7] E.S.R.O., Hook MS 20/2; B.L., Addit. MSS 33,001, fo. 407, 32,946, fos. 173, 177, 323; P.R.O., T54/39 pp. 88, 101.
[8] J. C. Sainty, *op. cit.*, p. 145.
[9] E.S.R.O., Hook MS. 20/2.
[10] P.R.O., T54/39, pp. 98, 100.
[11] B.L., Addit. Charter 29,335; Addit. MS 32,969, fos. 62, 167; E.S.R.O., Hook MS 20/7; P.R.O. T54/40 p. 26.
[12] P.R.O., T54/40, p. 34, T54/42, p. 565.
[13] P.R.O., T54/39, p. 469, T54/41, p. 308.
[14] E.S.R.O., Hook MS 20/2.
[15] Margaret Cramp, *op. cit.*, p. 110.

However, at that General Election in March 1768, the Pelham interest sustained its first distinct defeat.[1] Newcastle, ageing, in ill health and robbed of his Treasury influence, agonised over his choice of candidates. No Pelham was forthcoming, while the death of Sir Henry Poole in 1767[2] had bereft Newcastle of a loyal and locally influential supporter whose candidature, if available, would have been difficult to resist. Newcastle made a firm commitment to Thomas Trevor Hampden, the nephew of the Bishop of Durham, whose seat and estates were at Glynde but his endorsement of Colonel Thomas Hay of Glyndebourne, never enthusiastically given, was precipitately withdrawn at the eleventh hour, ostensibly because of opposition to Hay from the Pelhams of Catsfield who controlled an interest in the borough. But Newcastle may have feared that Hay might use his East Indian wealth to purchase the Sergison interest in Lewes, thereby building up an electoral position which in the event of any understanding with the Hampdens of Glynde could overwhelm the Pelham interest itself. His final endorsement of Thomas Miller, a gentleman without established local connections in place of Colonel Hay confused some traditional supporters and irritated others.

Sir Ferdinando Poole who had succeeded to his brother's baronetcy and to his property in Lewes was especially incensed and threw his entire influence behind Hay who was a close friend, thus breaking a family tradition of service to Newcastle already strained by quarrels with the Pelhams of Stanmer and the Pelhams of Catsfield. In 1763 Sir John Pelham had refused to permit the body of Sir Francis Poole to be interred beside his wife in the Pelham vault at St. Michael's in Lewes.[3] The election was keenly fought but many of the voters were so confused as to whether Hay or Miller was Newcastle's nominee that the Duke was forced to send a narrative explaining the whole affair. Ferdinando and Colonel Hay were supported financially by Lord Palmerston, Ferdinando's brother-in-law, and actively by John Fuller, Sir John Shelley and Lord Abergavenny.[4] On the eve of poll a dinner and ball at the Friars was preceded by " a grand entertainment " at which one of Ferdinando's " poor runts " was roasted whole.[5] These festivities were not misplaced. Although Hampden headed the poll with 115 votes, Hay secured 110, a majority of eighteen over Miller. Newcastle angrily blamed the indolence and obstinacy of friends and agents and threatened to punish the Lewesians by giving no plate for the races, providing no entertainments and by evicting or withdrawing custom from those who had voted for Hay. However, the Duke of Richmond warned that such actions might suggest that he regarded the townsfolk " as slaves who were not only to obey your orders, but to guess your will."[6] In the end Newcastle rested content with an apology from his erring tenants. The election of Hay followed by the Duke's death in November 1768 permanently impaired the Pelham interest in Lewes. Sir Ferdinando maintained his independence by casting single votes for Hay at the elections of 1774 and 1780.[7]

The Pooles were themselves establishing new connections. Ferdinando was well thought of by the Duke of Grafton,[8] while his sister Frances had in October 1767 married the second Viscount Palmerston.[9] Her powerful intellect, shrewd common sense and capacity for wry observation had earlier attracted the local Sussex magnate, Earl De La Warr, whose letters to her

[1] *Ibid.*, pp. 119-153.
[2] Buried at All Saints, Lewes, E.S.R.O., PAR 410/1/1/5.
[3] E.S.R.O., Hook MS 20/2.
[4] The Trustees of the Broadlands Archives Trust and the Hampshire Record Office (hereafter abbreviated to H.R.O.), 27M60. Box V/4/15.
[5] H.R.O., 27M60. Box V/4/14.
[6] B.L., Addit. MS 32,990 fo. 196.
[7] E.S.R.O., Lewes MSS C5/3/7, 8.
[8] H.R.O., 27M60. Box V/G/30.
[9] At All Saints, Lewes, E.S.R.O., PAR 410/1/1/6.

are full of avuncular advice on the value of Locke, Voltaire and Madame de Maintenon.[1] In 1765 Lord Nuneham, heir to the Earl of Harcourt and a former suitor, described her as having " a love of dress and a taste in it, and not to despise making a cap, or forming a ruffle, though she reads voltaire, rousseau (*sic*) and my Lord Shaftesbury,"[2] while her marriage to Lord Palmerston occasioned the composition of an ode by a previous suitor, General Burgoyne.[3] Her discriminating taste was in much demand both in the furnishing of her brother Henry's house in Charles Street, London,[4] and during the reconstruction of the Palmerston mansion at Broadlands in Hampshire.[5] In June 1769 however, her life was tragically ended by a fever consequent on the stillborn birth of her first child.[6]

Although inheriting from his brother property in Lewes and Ringmer[7] as well as the family estates in the Wirral, Ferdinando retained his post as chief clerk at the Treasury until his retirement in 1782 with a pension of £500.[8] His financial position may also have been strengthened by his marriage in 1772 to Charlotte, the daughter of William White, of Horsham.[9] Certainly by the late 1780s he had emerged as the most munificent, flamboyant and well connected of Lewesians. His passion for horseracing and breeding achieved spectacular success when his horse " Waxy," trained by Robson, won the Derby in 1793.[10] His sporting interests may have occasioned his close friendship with the Prince Regent and other grandees who regularly attended Lewes races and dined at the Friars. " During the races the good baronet's roomy family coach, brilliant with his armorial bearings, was placed at the disposal of various ancient ladies and trades people of the town, whose age and infirmities prevented them from walking to the hill."[11] In 1789 Ferdinando as sheriff of the county, to honour the Prince's birthday, escorted to Brighton a procession of " javelin men " drawn from the chief tradesmen of Lewes each attired in " a superfine blue coat, buff waistcoat and buckskin breeches." Their loyalty was later rewarded by a turtle dinner in the Pelham Arms at Lewes at the expense of Colonel Pelham.[12] On Ferdinando's death in 1804[13] the direct links of the Poole family with Lewes were severed.

Ferdinando's own breach with the Newcastle interest during the 1768 election was paralleled by a declaration of independence on the part of his father's cousin, Dr. Edward Poole. Like Dr. Richard Russell, Edward had studied under the eminent Herman Boerhaave at the University of Leyden and in 1759 William Poole had solicited Newcastle's aid in securing Edward's succession to Russell's Brighton practice.[14] In March 1760 the *Sussex Weekly Advertiser* announced that Dr. Poole " will attend at Brighthelmstone during the ensuing season."[15] Although buying a house in East Street at Brighton in 1762 and building another on the Steine in 1766,[16]

[1] H.R.O., 27M60. Box V/44, 45.
[2] H.R.O. Box V/E/100 (27).
[3] Brian Connell, *Portrait of a Whig Peer* (1957), p. 86.
[4] E.S.R.O., Hook MSS 22/2/2-4.
[5] Brian Connell, *op. cit.*, p. 89.
[6] *Ibid.*, p. 94.
[7] E.S.R.O., Adams MS 25 p. 257; Glynde MS 2772; Hook MS 13/2.
[8] P.R.O., T29/52, pp. 516-17.
[9] R. Garraway Rice, " Genealogical Memoirs relating to the Family of White of Horsham, Steyning, Shipley, and Cowfold . . and of London," *Sussex Archaeological Collections*, (abbreviated hereafter to S.A.C.), vol. 34 (1886), p. 134.
[10] Roger Mortimer, *The History of the Derby Stakes* (1973), pp. 26-27.
[11] George Holman, *Some Lewes Men of Note*, W. E. Baxter (1905), p. 40.
[12] J. D. Parry, *An Historical and Descriptive Account of the Coast of Sussex*, (Brighton, 1833), p. 63; C. T. Phillips, " Lewes A Hundred Years Ago," *S.A.C.*, vol. 40 (1896), p. 254.
[13] Buried at All Saints, Lewes, E.S.R.O., PAR 410/1/1/5.
[14] B.L., Addit. MS 32,900, fo. 256.
[15] Edmund W. Gilbert, *Brighton: Old Ocean's Bauble* (1954), p. 62.
[16] E.S.R.O., South Malling will, D10, p. 179; Hook MS 23/1/3.

Edward resided at Antioch House in Lewes between 1767 and 1774,[1] at least outside the season and thereafter by Cliffe Bridge.[2] His marriage in 1765 to a rich " West Indian " widow Sophia Bourryau,[3] rendered him independent of his medical practice and of the Duke of Newcastle. In 1768 he confided to Thomas Pelham of Stanmer that " thank God and Mrs. Poole I am now and have always wished to be an independent man . . . the Duke has never done me the honour of paying me the common civilities of a gentleman and has used me personally very ill . . ."[4]

Even before Ferdinando's own breach with the Newcastle interest, William Poole of the Hook seems to have disengaged himself from the Duke's service. It was with obvious reluctance that in 1753 he broke off attendance on business at Pontefract to attend Lewes races at the Duke's insistance.[5] By 1761 he had been replaced in Lewes as election agent by Rideout[6] and thereafter his political correspondence with the Duke ceases. His disengagement may have been occasioned by a new financial independence. After the death of his wife Grace in 1743[7] he had married the following year, Dorothea, the daughter of Rev. Daniel Walter, of Cuckfield, her dowry of £1,000 at least temporarily easing his circumstances.[8] After her death in 1750,[9] he married in 1753[10] Mary, the daughter of William Lee, an alderman of Pontefract in Yorkshire, who had died in 1752.[11] A friend of Lady Rockingham and Lady Fitzwilliam,[12] she moved in the best circles in Yorkshire society and was heiress to urban and landed property in that county, wealth which William drew upon to rebuild the Hook and improve the estate[13] on which his energy and enthusiasm were to be increasingly concentrated until his death in 1779.

On his establishment in Sussex in 1732 William had purchased from John Langford of Lewes, the Hook, a farm extending over 179 acres to the west of South Common in Chailey.[14] In 1735 he leased from Anne Langford, John's widowed sister-in-law, the farm of Southam and Motts containing ninety four acres immediately to the south of the Hook which he eventually purchased outright in 1754.[15] In the same year Holmwood, a farm of 114 acres immediately to the west of Southam and the Hook was leased by William from Charles Goring of Wiston.[16] This compact estate of almost 400 acres was extended still further westwards by the purchase of Gurrs Farm in 1747, fifty four freehold acres in Plumpton, to which was added, again by purchase Westlands, in 1750, a parcel of fifty acres immediately to the north of Gurrs.[17] In 1753 he bought Townings, comprising fifty two copyhold acres adjoining the Hook to the north west and bordering on the North Common of Chailey on the north.[18] Between 1754 and 1765 he leased Birches, a small neighbouring farm, probably of about fifty acres in extent.[19] Although he leased out Townings to John Falconer between about 1763 and 1772, Westlands also to Falconer from about 1763 and Gurrs to John Coppard from 1773, he himself leased South Holmwood Farm, covering perhaps 200 acres, adjacent to Great Holmwood, from 1772 until his death.[20]

[1] W. H. Godfrey, " The High Street Lewes," *S.A.C.*, vol. 93 (1955), p. 15.
[2] E.S.R.O., QDE2/1/E1.
[3] At St. Michael's, Lewes, E.S.R.O., PAR 414/1/1/4. See also B.L., Addit. MS 33,088, fos. 54, 56.
[4] B.L., Addit. MS 33,088, fo. 200.
[5] B.L., Addit. MSS 32,731, fo. 393; 32,732, fo. 447; 32,858, fo. 88.
[6] Margaret Cramp, *op. cit.*, p. 87.
[7] E.S.R.O., XE1/289/5.
[8] E.S.R.O., Hook MSS 1/32, 33.
[9] E.S.R.O., XE1/289/5.
[10] George J. Armytage, " The Register of Baptisms and Marriages at St. George's Chapel, Mayfair," *Harleian Society's Registers*, vol. 15 (1889), p. 233.
[11] West Yorkshire Record Office, AG p. 155, no 207.
[12] H.R.O., 27M60. Box V/A/75.
[13] B.L., Addit. MS 32,854, fo. 242.
[14] E.S.R.O., Hook MS 1/30, 31.
[15] E.S.R.O., Hook MS 9/2; Adams MS 187, pp. 39-40.
[16] E.S.R.O., Hook MS 16/1, p. 79.
[17] E.S.R.O., Hook MSS 11/24, 25 and 10/19, 20.
[18] E.S.R.O., Addit. MS 4599, p. 127-28; Hook MS 7/1.
[19] E.S.R.O., Hook MSS 16/6-16; TD/E136; Tithe Book in the custody of the Rector of Chailey.
[20] E.S.R.O., Hook MSS 16/12, 14-25.

Thus by purchase and by lease William consolidated an estate of some 600 acres and the evidence suggests that apart from the years when he leased out Townings, Westlands and Gurrs, he farmed most or all of this estate himself. His diaries suggest a passion for agriculture and agricultural innovation which caused him to undertake detailed supervision of the farm in spite of his local political commitments and his official duties requiring attendance in London. He noted in his diaries with loving care the daily minutiae of farming routine and was clearly anxious when illness or business required him to leave others in charge.[1] As a gentleman amateur, zealous to improve his husbandry by intelligent innovation, he belonged to a class which proved crucial to the success of the agarian revolution.

The soils of his estate certainly presented a challenge to his perseverence and good husbandry. More than half its acreage was located on the cold waterlogged and acidic Weald Clay and the rest lay to the north on Tunbridge Wells sands which were marginally more amenable to arable farming. Its fields formed a typically Wealden kaleidoscope of small enclosures dispersed between shaws and coppiced woodland. Some idea of the balance of William's farming may be gauged from a diary entry which itemises the " profits of the farm " during 1753. His crop sale brought in £350 9s. being £137 10s. from wheat (115 quarters), £55 6s. from barley (69q.), £52 10s. from oats (75q.), £24 11s. from peas (19q.), £7 16s. from buck (wheat) (13q.), £44 16s. from crop (hay) (56q.), £12 from clover (12 bushels) and £16 from hops. Livestock sales yielded £167, being £4 for a cow " to the workhouse," £35 13s. for sheep, £25 for hogs, £61 for oxen, £12 for horses and £30 for unspecified stock sold to butcher " Whapham." In addition William received £10 from the sale of wool and £64 10s. from timber, wood and faggots. Apart perhaps from the importance of barley, the figures would suggest a spread of mixed farming not untypical of larger Wealden farms at this date.

From the early 1750s until his death in 1779, the diaries yield much detail on the sale of his farm produce. His wheat was purchased by a wide scatter of Wealden millers in Plumpton, Chailey (" Hoather "), Isfield, Uckfield, Horsted Keynes, East Grinstead (" Turl " and Benjamin Heaver), Forest Row (" Snelling "), by the South Malling miller " Hoather " and by two Lewes dealers, " Juden " and " Rickman." William purchased malt-dust from " Juden " between 1760 and 1772 and coals from " Rickman " in 1767. " Rickman " was almost certainly one of the family of corn and coal merchants whose business was located in the Cliffe in 1784[2] and " Juden ' may well have been another such merchant.[3] William's hops were often marketed in London or sold to George Beard, possibly for use in the Chailey workhouse. Sheep, lambs, oxen, heifers and bullocks were disposed of at Smithfield market in London, at local fairs held in Cuckfield, Uckfield, Horsted Keynes, Nutley, Lewes and the Cliffe, at East Grinstead market, to butchers Harland (Newick), Weston (Fletching), Whapham (probably Chailey[4]), Dobel (East Grinstead), Bob Smith, John Fuller, Boice and Balcombe (Lewes) and to Holybone who was probably a drover from Lewes.[5] Cows, calves and pigs were mainly sold very locally, in Chailey (to Whapham and Benjamin Cornford) or to Lewes butchers. Also noted are frequent sales of hides to John Fuller, the Lewes butcher, and of wool to George Beard, possibly again for use in the workhouse. Occasionally timber was sold, such as elm wood to a carpenter and ash wood to a wheeler, but far

[1] The following description of William's husbandry is founded on entries in his diaries (Hook MSS 16/1-29) unless otherwise stated.

[2] Bailey's British Directory (transcript in E.S.R.O. library).

[3] E.S.R.O., Shiffner MS 325.

[4] E.S.R.O., QR/E534, fo. 84.

[5] E.S.R.O., Lewes MS C5/3/7.

more prominent were regular sales of faggots, variously described as " hedgerow," " stick " and " hop pole," to Lewes, downland parishes such as Rottingdean, Falmer and Stanmer and above all to the rapidly expanding resort of Brighton. Bark was sold in Lewes in 1762 and tan in London in 1760.

William's sales of grain, livestock and wood must have been facilitated by the contemporary extension of the turnpike roads across the Weald, a movement in which he actively participated as a trustee, from 1752, of the Offham to Wych Cross turnpike and from 1771, of the Hodges to Cuckfield turnpike.[1] From 1735 he was also a commissioner of Newhaven Harbour[2] which serving as the outport of Lewes, was of vital importance to the Wealden consumer and distributor. Through Newhaven were presumably imported many of the goods which William regularly bought from Lewes tradesmen:[3] deal boards from tradesmen named Attersol and Rice, coal from Woodgate and Rickman, wine and spirits from Blackman, Campion and Holt and groceries from Brett, Tench and Gilbert. The improvement of the Offham to Wych Cross turnpike which ran close to the Hook was probably especially important since William also transported from Lewes bulky consignments of chalk, soot, soap ashes (from Edmonds and Verrall) and malt-dust. He also purchased chalk from Streat and Brighton occasionally and malt-dust regularly from Brighton and Shoreham. These materials were imported to fertilize the unpromising soils of the Hook estate and the care he took over their carriage is evidence of Poole's devotion over thirty five years to experimental Wealden farming which was rewarded in 1770 with the ultimate accolade, a visit from Arthur Young. William subsequently received a warm commendation from the great agricultural publicist.[4] Young describes Poole's adaption of the seed drilling techniques, " the new husbandry in Mr. Tull's methods " which he had used at the Hook from the late 1730s and details a wide range of other activities, manuring with malt-dust, coal ashes, soot and wood ashes often mixed together in lime and fine mould, the growing of lucerne, sainfoin and potatoes in " lazy bed manner," the development of a new variety of turnip, the popularisation of hollow drainage, the construction of machines for hoeing, drilling and earthing peas, the comparative experimental fattening of hogs and the study of the results of seeding by drill and by broadcasting.

William's diaries which provide a meticulously detailed daily chronicle of his farming practice also record the purchase of books on husbandry in 1755 and 1774, subscriptions to an agricultural journal in 1773 and 1774, and amid the press of political business, a visit to a " Museum Rusticum " in London in 1764. His zeal for innovation caused him to purchase in London seed for oats, hay, barley, turnips, " Scotch " cabbage and broccoli while he normally bought his wheat seed at Tonbridge. At Lewes were delivered for him cabbage seed via the Canterbury newsman, seed potatoes from Liverpool and black and white oat seed from Devonshire. Species of seed named in the diaries include " red wheat," " Duke William wheat," " Lincolnshire wheat," " Siberian and Egyptian barley " and " white Scots," " Longtail," " Devonshire white knott," " Essex white " and " Tartarian " oats. In May 1772 he planted " drum " cabbage, " Anjou " colewort, " Jerusalem " colewort, green broccoli, " Scotch " cabbage and " turnip " cabbage and remarked the following year after various experiments with feeding lambs, sheep, cows and hogs that " I doubt very much whether this green Borecole be

[1] E.S.R.O., Hook MSS 16/6-24.
[2] E.S.R.O., QM/EW7.
[3] Their location in Lewes is clear from the diaries or from a poll book 1774 (E.S.R.O., Lewes MS C5/3/7) and Bailey's British Directory 1784 (transcript in E.S.R.O.).
[4] Arthur Young, *The Farmer's Tour through Eastern England,* vol. 3, (1771), pp. 134-43.

not the most profitable of all the Cabbage tribe and its lasting so long in spring when all other green food is wanting is no small addition to its value." William's livestock purchases which included Dorset and Wiltshire ewes and Scotch and Welsh cattle, were normally made at local fairs or from local dealers. He seems to have had a passion for agricultural machinery and gadgets. Arthur Young describes his special double plough and illustrates his machine to earth peas and his hoe drawn by a man instead of a horse.[1] The diaries mention " a great rowler," a hay cutter, a straw cutter (bought from London), and a Yorkshire mill to grind barley besides giving details of how to make a screen or riddle. Many of these implements were locally assembled and modified and William occasionally supplied other innovators with drill ploughs and corn machines.

Besides expanding his estate and improving his husbandry, William's marriage to the Yorkshire heiress, Mary Lee, allowed him between 1754 and 1756 to partially rebuild the Hook, which he had earlier renovated in 1735.[2] The most spectacular embellishment was the construction of two canted window bays crowned with battlements, a feature reminiscent of Strawberry Hill and reflecting a contemporary vogue for the " Gothick." The builder employed, " Morris of Lewes," was almost certainly the mason John Morris whose other work included the east front and stables at Glynde Place 1755-60, the Sessions House in Lewes in 1761, Glynde Church 1763-65 and the rebuilding of Ashburnham Place 1758-63.[3] Craftsmen mentioned as being employed at the Hook included Mr. Wood and Mr. Snell (carpenters), a London joiner, Blackstone, Constable and Turl (plasterers), John Wicker (glazier) and Mr. Crips (mason) who was paid " sixpence a foot for the Plane Stone work and a shilling a foot for the Cornish." William's wife helped with the papering of the bedchamber. The bricks were made on the estate and the tiles obtained from Ditchling Common, while the stone was fetched from Scaynes Hill and the deals imported through Attersol and Whitfield of Lewes. From 1753 the gardens were also replanned, their principal feature having previously been a Chinese house adjacent to a " canal." However, in 1757 the canal was filled in and the Chinese house moved across the ice of the frozen lake to an island especially constructed for it.[4] In 1766 a bridge doubtless spanning the lake was painted by " Mr. Lamber " who may well have been James Lambert the younger of Lewes who was later employed by William's son Henry to paint a bookcase in 1783 and a coach in 1784.[5] Since in the 1750s the rage for Chinoiserie equalled that for " Gothick," the gardens were now as modish as the house, an achievement no doubt stimulated by William's frequent and lenghy visits to Bath.[6] By 1757 with his son Henry at Harrow and his daughters Harriet and Grace at Philpot's school for young ladies in Lewes,[7] William could surely feel that he had become securely entrenched among the gentry of mid-Sussex.

Chailey which was notorious for its concentration of commons and paupers, gave William ample scope to fulfil the public and philanthropic duties of a conscientious landowner. He regularly employed pauper labour on haymaking, harvesting, thrashing and hop picking and workhouse children on pulling turnips and collecting flints. The parish poor received from him in 1774 " a pretty good runt " which had choked on a turnip and in 1776 he despatched turnips to a soup kitchen for the poor established at the parsonage.[8] His son, a clerk in Holy Orders,

[1] *Ibid.*, pp. 142-43.
[2] E.S.R.O., Hook MSS 16/6-8, 16/2.
[3] Arthur Oswald, " Glynde Place," *Country Life*, 28 April 1955, pp. 105-6.
[4] E.S.R.O., Hook MSS 16/4, 9.
[5] E.S.R.O., Hook MSS 16/17, 32, 33.
[6] E.S.R.O., Hook MSS 16/4, 8, 9, 16.
[7] B.L., Addit. MS 33,087 fo. 355; E.S.R.O., Hook MS 16/9; Stanley Godman, " A Collection of Lewes Handbills 1768-77," *S.A.C.*, vol. 97 (1959), p. 60.
[8] E.S.R.O., Hook MSS 16/25, 26.

inherited this established position on his death in 1779.[1] Maintaining his father's interest in farming, he paused at Arundel in December 1784 to purchase twenty Welsh heifers while returning from Chichester after his institution as rector of Chailey. This appointment he celebrated locally by entertaining sixty two poor children " on Mutton and Broth and Plump pudding," remarking that " all look'd Healthy and cleanly and tidily clad tho but Two Days Notice given for their coming."[2] His sermon in 1783 to inaugurate the Chailey Friendly Society suggests a positive commitment to the raising of rural living standards.[3] In 1804 he inherited the baronetcy from his second cousin Ferdinando but with his death in 1821[4] the male line became extinct, his only son having died tragically as a child of eleven at Westminster School, by choking on an orange pip.[5]

The rapid establishment of the Pooles as a major force in the political and social life of Lewes and mid-Sussex not only illustrates the very substantial rewards within the gift of those controlling the machinery of government in the mid-eighteenth century but also serves to emphasize the meticulous cultivation of the local power base on which that control partially rested. The creative role of the gentry in eighteenth century society is moreover well illustrated by William Poole's career as a local magistrate, as a practicioner of agricultural improvement and as a local benefactor.

[1] Buried at Chailey, E.S.R.O., XE1/289/5.
[2] E.S.R.O., Hook MS 16/33.
[3] E.S.R.O., Hook MS 16/32.
[4] Buried at Chailey, E.S.R.O., XE1/289/5.
[5] Margaret E. Poole, *loc. cit.*, p. 191.

PLATE I. Haywards Heath, 1794. A section of the draft for the first edition of the Ordnance Survey map (P.R.O., MP HH 132), showing the westward extension of the heath through Muster Green
(*Crown copyright. Reproduced by permission of the Public Record Office*)

BOLTRO FARM, CUCKFIELD[1]

by Wyn K. Ford

INTRODUCTION

In the area east of Cuckfield town, farming was never a very profitable business. The soil is only of medium quality, suitable for both crops and grass. The farms themselves were small; although some were fairly substantial. For the most part they were less than a hundred acres in extent.[2] A survey compiled of the Abergavenny estates, that included part of the parish, during the early years of the seventeenth century shows clearly that a number of small holdings were scattered around the area; for example, the nineteen-acre farm on the southern edge of the large Petlands Wood was evidently assarted from the wood at some period. Some of these were established more recently than this.[3] The density of the woodland areas has also attracted the attention of writers on this region.[4]

One of the earliest of these settlements was the demesne of the manor of Hayworth.[5] This is now represented by Great Haywards Farm, but originally it probably extended eastwards to Little Haywards and westwards to Isaac's Lane, its southern boundary being represented by Ashenground Road.

Boltro Farm lay immediately to the north of the demesne. Unlike other holdings, even in its immediate vicinity, it seems never to have changed its name, although its extent altered with the passage of time. The farmhouse itself still lies beside the green, surrounded by a line of tall trees, at the corner of a road to which the farm has given its name. The house as it stands seems to date from the early seventeenth century, and there are some modern additions; but in fact there are also traces of medieval building. In 1966 its grounds extended to one and a quarter acres, but the original extent of the farm is a matter for conjecture.

[1] References to Census material are by date only; the full P.R.O. references are: 1841, HO 107/1111, section 6; 1851, HO /107/1642;1861, RG 9/582 (microfilm in the East Sussex Record Office); 1871, RG 10/1061. The only volume of court minutes known to have survived for the manor of Hayworth and Trubweek covers the period 1809 to 1863, and ends with a series of copies of later documents to 1905. The volume was deposited in the East Sussex Record Office; however, this and other documents utilized have now been transferred to Chichester.

[2] E. Kerridge, *The Agricultural Revolution* (1967), p. 132. The Tithe Award for Lindfield (1848) shows the same picture as does that of Cuckfield.

[3] W. H. Godfrey (ed.), *The Book of John Rowe* (1928) (Sussex Record Society (hereafter cited as S.R.S.), vol. 34), pp. 16-31. That assarting on a small scale was still practised in the area during the sixteenth century is shown by depositions before the Archdeacon's court at Lewes (W.S.R.O., Ep. II/5/5, fol. 230b (1590); II/5/6, fol. 202a (1598)). See also G. E. Fussell, ' Four Centuries of Farming Systems in Sussex,' *Sussex Archaeological Collections* (hereafter cited as *S.A.C*), vol. 90, (1952) pp. 68-70. As late as 1798 it was remarked that ' the lands are under worked ' (W. Marshall, *The Rural Economy of the Southern Counties* (1798), vol. 2, p. 134). See further P. F. Brandon, *The Sussex Landscape* (1974), pp. 75-84, 94-102; and his ' Medieval clearances in the east Sussex Weald,' *Inst. Brit. Geogrs. Trans. and Papers* (1969). Deeds relating to Petlands, to the north of Boltro, date from 1437 (S.A.S. MS D5) and 1506 (E.S.R.O., Add. MSS 294-5).

[4] Marshall, *Rural Economy*, vol. 2, p. 102; id., *Review and Abstract of the County Reports*, vol. 5 (1818), pp. 453-4; A. Young, *General View of the Agriculture of the County of Sussex* (1813), p. 479; J. Caird, *English Agriculture in 1850-51* (1852), p. 126. Cf. also W. Page (ed.), *V.C.H., Sussex*, vol. 2 (1907), pp. 273-4.

[5] A. J. Taylor (ed.), *Records of the Barony and Honour of the Rape of Lewes* (1939) (S.R.S., vol. 44), pp. 9, 14, 18, 21 (1266); A. Mawer and F. M. Stenton, *The Place-names of Sussex*, vol. 2 (1930), p. 268 (1261).

SURVIVAL

The series of deeds which is our main authority for the early history of the farm[1] is defective. It now starts in 1633-4, but it is clear that originally it commenced in 1590.[2] The earliest occurrence of the name known at present is in the Cuckfield parish registers, which record that on 20 February 1603-4 Richard Nicholas married Margaret Underhill, widow, of Bultrowe;[3] and Richard himself was buried on 4 August 1608.[4] But this is not the earliest information we have. On 14 June 1590, Lawrence Homewoode, a yeoman of Cliffe beside Lewes, conveyed the farm to Richard Johnson, a yeoman of Cuckfield, who took possession of it. Homewoode evidently had considerably interests in Cuckfield. Not for another two years did he relinquish his moiety of a third of the manor, together with all tithes of corn and grain from 1,400 acres of land in Cuckfield.[5] Of Johnson we know nothing. His burial is not recorded at Cuckfield, but Margaret Johnson was married to Thomas Whitpayne on 16 April 1599, and possibly she was Johnson's widow. Whitpayne's burial is not recorded at Cuckfield, but it is quite possible that Margaret Johnson eventually married Richard Nicholas.[6]

On 22 April 1624, William Bounde, a yeoman of Cuckfield, parted with the farm to Anthony Attree, gentleman, of Cuckfield. Some years later, Attree found himself short of ready cash, and did what several were to do after him. In about January 1629 he borrowed £200 from one Francis Luxford, gentleman, of Keymer. Unfortunately Luxford died before the date appointed for the redemption of the mortgage, which would have enabled Attree to resume his full rights in the property. Luxford's two sons, Francis and Thomas, could not agree over the disposition of two of their father's properties, one of which was Boltro, a tenement then of 30 acres. It appears that Francis was a simpleton, and the father had decreed that Thomas was to enjoy all his lands. In the event, the younger Francis died some time in the latter half of 1632 or early in 1633. In his will he bequeathed all his leases to his executor Leukenor Middleton of Chailey, and to Herbert Morley, who himself proved the will on 9 April 1633. Thomas agreed to accept the redemption of the mortgage and to release the property again to Attree; but Middleton and Morley were not so easily satisfied. Together with one James Smith, in the words of a Chancery deposition, they ' had made severall entries into this messuage . . . and had much disturbed the said Anthonie Attree . . . did comitt much wast & spoyle on the property . . . Bultrowe.' Chancery decided that Middleton, Morley and Smith were not entitled to any part of the money due on the mortgage, which belonged entirely to Thomas, who had expressed himself willing to accept the outstanding sum of £216 with no further interest. On 14 May 1637 it was agreed that the property should be re-conveyed to Attree, and that the debt should be discharged. Attree should thereafter enjoy the property without further disturbance.

But he died intestate before the matter was settled, leaving his widow, Mary, to wind up his estate. His goods were assessed at £14 14s. 1d. when letters of administration were granted on 9 February 1637-8. It seems that Middleton and Morley thought that they had a defenceless widow in their power, and that they continued to harass her. But Mary evidently was made of

[1] National Grid reference TQ 328244.

[2] W.S.R.O., Brookeborough papers (uncatalogued). The papers include a schedule of deeds relating to the Sergison estates dated 1849 which lists many documents now missing. In the discussion below further use is made of these papers without citation.

[3] S.R.S., vol. 13, p. 100.

[4] Ibid., p. 136.

[5] E. H. W. Dunkin (ed.), *Sussex Manors, Advowsons, etc.*, vol. 1 (1914) (S.R.S., vol 19), p. 147.

[6] S.R.S., vol. 13, pp. 98, 102. See *Sussex Family Historian*, vol. 2, no. 3 (1975), p. 74.

sterner stuff, and she took the matter again to Chancery. The outcome of this long action is not known.[1]

At this point we are given our first description of the farm. We have already seen that it was not a very profitable venture, and that Anthony Attree was scarcely a prosperous man when he died. Richard Nicholas had been better off in 1608: the act of administration granting probate to his relict Margaret on 20 August shows that his goods were worth £23 8s., and his whole estate £40.[2] The farm itself is described in the Chancery records as a messuage, barns, stables, buildings, etc., with seven parcels of land, meadow and pasture, extending to about thirty acres, ' comonlie called Boultrowe '. All the descriptions that we have among the Brookeborough papers of the boundaries of the farm are the same. On the east and the south lay Haywards Heath[3] itself, and to the north and to the west the farm was bounded by Paddock Lane. Despite this however, the extent of the farm, as shown in the deeds over the years, gradually diminished. In 1633, as we have seen, the farm extended to thirty acres; but by the end of the century it had shrunk to twenty-eight acres, and in 1711 it was described as covering twenty-four acres. Thereafter the acreage of the farm seems to have remained fairly constant, save that in 1773 we hear of a detached parcel of ground extending to half an acre called ' the Muster Oak '.

We see from the manorial map of Hayworthe (or Haywards) that the farm is shown as belonging to Thomas Vicars, the vicar of Cuckfield, and that the farmhouse is shown separately as ' Mr. Vickers house '.[4] Already, inroads had been made on to the farm. Herbert Morley is shown with a house on the land, and he had a plot alongside the farm. Thomas Vicars himself did not survive long. The parish registers record that he was buried on 29 August of that year.[5] A few months earlier, in April, he had drawn up his will, in which he left all his estate to his widow, Ann.[6]

On 21 October 1641 Mary Vicars married Samuel Greenhill, clerk, who had been curate at Cuckfield since 1638, and was later to become vicar in 1643. The Cuckfield registers at that period, in common with many others, were maintained not very scrupulously; Mary died at some time during the Commonwealth, and was buried in the chancel of the church, but her burial is not recorded. Samuel himself was buried on 26 March 1666, and his will is of interest. He bequeathed ' my interest in my house called . . . Baltrow ' to his daughter Ann; evidently the girl was expected to receive profits from the land, for there is a reference to ' a halfe yeares rent for Baltrow ' due two months earlier.[7]

[1] P.R.O., C2/Chas I/A6/39 (cf. A50/105) on the second action. E.S.R.O., Will Register A23, fol. 3a; Administration Act Book B7, fol. 71a. The earliest record of Attree's name in the Cuckfield registers is the baptism of his son Richard at Slaugham; his burial took place on 27 February 1636-7 (S.R.S., vol. 13, pp. 25, 164). The registers show also the names of Morley and Luxford in 1630-1 (ibid., pp. 36, 111).

[2] E.S.R.O., Administration Act Book A3, fol. 133b.

[3] The earliest known occurrences of the name Hayward's Heath are: E.S.R.O., Add. MSS 4113 (1504); 4125 (1540); A. Mawer and F. M. Stenton, *The Place-names of Sussex*, part 2, p. 268 (1544); E.S.R.O., Add. MS 4130 (1549).

[4] For an incomplete account of him, see J. H. Cooper, ' The vicars and parish of Cuckfield in the seventeenth century,' *S.A.C.*, vol. 49, pp. 14-30; see also *D.N.B.*, s.v. On the map, see F. W. Steer, *A catalogue of Sussex estate and Tithe Award Maps* (1962) (S.R.S., vol. 61), pp. 12-13.

[5] S.R.S., vol. 13, p. 165.

[6] The will (E.S.R.O., Will Register A25, fol. 159) is given by Cooper (*S.A.C.*, vol. 49, p. 29). The transcript, although incomplete, is sufficient for our purpose. See further *Sussex Family Historian*, loc. cit.

[7] S.R.S., vol. 13, pp. 114, 60, 177, 186, 52; P.R.O. Prob. 11/321, gathering 98; *S.A.C.*, vol. 45, p. 31.

Ann Greenhill was a girl of eighteen when her father died. In due course she married one Richard Bacon of the Middle Temple, and thereafter she lived in London. She was buried on 9 March 1679 at the age of 31, having died in childbed.[1]

On 16 March 1694-5 Bacon acquired a further quarter share in the messuage at that time occupied by William Bannister. He had now secured outright possession of the property for £50, and in the bargain had acquired other property in Cuckfield. Sixteen years later, on 3 May 1711, the farm, still in the occupation of William Bannister, was sold by Anne Bacon, a spinster living in London, the only daughter of Richard and Ann Bacon, to John Chatfield of Cuckfield for £350.

John Chatfield died between 13 June 1714 (the date of the will) and 21 July (the date of probate). In his will he bequeathed Southlands, probably to be identified with the farm which in the following century lay between Queens Road and Sydney Road, which at this time extended to twenty acres, to his eldest son, John. His widow, Ann, received Bulltrow. Just a month after probate had been granted on her husband's will, on 22 August, Ann paid £10 to Walter Batchelor, and by November 1718 the mortgage was cleared. In April 1723 Ann, again widowed, found herself once more in need of ready cash. On 29 April she effected a mortgage of the property with one Sarah Burt, a widow of Lindfield, for £100. Mrs. Burt may have had some connection with Richard Burt, a weaver noted in the registers as living on the heath. The form of the mortgage was a popular one at that period. Ann granted a lease for a thousand years. If she failed to redeem the mortgage in two years, Sarah Burt was entitled to take possession of the property, of which Ann possessed the fee simple. But a mortgagor was not compelled to relinquish his property unless he defaulted to an extent that made it possible for the mortgagee to foreclose.[2] This helps to explain the complicated series of deeds, not unique for this area at this period, which tells us so much about the history of the farm.

In 1727 both ladies were in need of money. Sarah Burt wanted the repayment of her £100, but Ann Plumer could not oblige. So they approached another widow, Frances Board of Lindfield, and together they entered into another agreement. On 28 October Mrs. Board lent £200—twice the amount of the original mortgage—to Mrs. Plumer at four per cent., half of which sum was to go to Mrs. Burt. The mortgage was redeemable on the same terms as before, that is that the capital plus interest was repayable to Mrs. Board at her dwelling house in Lindfield a year later. Mrs. Board now held the mortgage on the property, but Ann Plumer still had the freehold, and on 1 November 1735 she transferred it to her only surviving son, Walter Chatfield, yeoman, who already lived there.

Although William Bannister seems to have quit at some time between May 1711 and the following May, he did not die until 1725. The total value of his estate was reckoned to be £478 2s. 6d., and the inventory included amongst the farm implements 1,800 hop poles in the hop garden, as well as chalk at the kiln and a considerable mass of other equipment. At the two earliest courts baron of which we have a record in this manor (1809, 1816) mention was made of a lime kiln on the heath.[3] The enclosure map shows one near the site of St. Wilfrid's Church. There was also a quantity of oats and hay kept in barns at Wigperry, just to the west

[1] Her baptism on 13 June 1647 is noted in S.R.S., vol. 13, p. 52. See also *S.A.C.*, vol. 46, p. 98; the authority given cannot be checked.

[2] A. W. B. Simpson, *An introduction to the history of the Land Law* (1967), pp. 226-9.

[3] Court Book, pp. 4, 10.

of Boltro, and at Burchetts, a mile away to the south-west, but of hops there is no mention.[1] A possible site for the hop-garden is Hopgarden Shaw, shown by the Ordnance Survey half a mile beyond Burchetts; but there may have been another at Boltro. When his son, another William, died ten years later, in 1735, his inventory[2] shows that he possessed only 400 hop poles. It seems likely that the father was more active in hop growing than the son, and this may have been his principal interest at Boltro.

In November 1737 Walter Chatfield, yeoman, was once more in need of money. He offered as security the only property he possessed—the farm of Bulltrow. We notice here a significant change in the description of the property. It then consisted of a messuage, a malthouse and other appurtenances. It is evident that the function of the farm had radically changed. Henceforth its prime function was not to produce food but as a storehouse. The malthouse is shown at the northern tip of the farm on the draft Ordnance Survey of 1794.[3] What is perhaps more significant, however, is that from about this time Walter Chatfield ceased to describe himself as a yeoman, but instead called himself ' maltster ', as did his successors.

Conditions in the agricultural industry at this period were difficult. Grain prices in particular were falling, although consumption was increasing.[4] At this period also, greatly increased drinking habits in England were accompanied by an increasing demand for malt in London. This demand was satisfied by the growth of a new class of middleman operating within an area easily accessible to the metropolis.[5] These were the maltsters, who had been active at least since the sixteenth century. Some were farmers who had abandoned farming for this activity, buying up the grain for sale to brewers.

No doubt Walter Chatfield was induced to become a maltster by the precariousness of the trade in hops. The unreliability of this crop is indicated by comments written towards the end of the eighteenth century,[6] and even at the beginning of the present century some Wealden parishes were losing by its cultivation.[7] The crop returns of 1801 show that only a moderate amount of wheat and barley were grown in this area.[8] The lack of malthouses in this neighbourhood was in marked contrast to other areas.

However, things remained difficult for Walter Chatfield. In November 1737 he was compelled once again to raise a sum of money—this time £140—by a mortgage on the security of the farm from William Holford, a Cuckfield yeoman. But by the beginning of 1740 he had made no repayment, and Holford's executor, Emray Streeter, was suing for payment.[9]

It is at this point that Richard Fuller, a Cuckfield timber merchant who had previously been involved with the Chatfield inventories, became the mortgagee. But a little under a year later the farm was sold outright to Edward Hollingdale, a Lindfield yeoman. His widow, Katherine, dated her will 13 April 1753. In it she mentions her daughter Phoebe, the wife of

[1] E.S.R.O., Will Register A52, p. 121; inventory 1824.
[2] Will Register A55, fol. 45; inventory 2606.
[3] P.R.O., MP HH 132=Brit. Lib. Map SH 94.
[4] G. E. Mingay, ' The Agricultural Depression, 1730-1750,' in Carus-Wilson, *Essays*, vol. 2, pp. 309 ff.; A. H. John, ' Aspects of economic growth in the first half of the eighteenth century,' ibid., pp. 364-6.
[5] R. B. Westerfield, *Middlemen in English business* (1915), p. 172; cf. the example of a farmer's malting activity in the previous century in Kerridge, *Agricultural Revolution*, p. 212.
[6] Young, *General View*, p. 129; cf. Caird, *English Agriculture*, p. 127.
[7] A. D. Hall and E. J. Russell, *A report on the agriculture and soils of Kent, Surrey and Sussex* (1911), p. 33.
[8] *S.A.C.*, vol. 90, p. 52. The returns for some parishes, including Cuckfield and Lindfield, are missing from P.R.O. HO 67/7. The figures from elsewhere in this part of the Weald show that a much smaller acreage was devoted to barley than to wheat. Hops were not included in the enquiry.
[9] E.S.R.O., Hickstead Place MS 312.

Walter Chatfield, to whom she left Bulltrow. By the time her mother's will was proved in May 1772, Phoebe herself was a widow; Walter had died by the middle of the previous year, and had bequeathed the farm to his son Walter, leaving to his wife, Phoebe, a messuage and garden in Wivelsfield. But when Phoebe came to draw up her own will in February 1772, she described herself as living at Bultrough, Cuckfield. The bequest of the property to her son Walter was confirmed, and probate was granted at the beginning of June the following year.

Immediately the new owner took out a mortgage on the ' Messuage or Tenement, Malthouse, Barns, Buildings, Farmlands, Tenements & Hereditaments commonly called . . . Bultrough ', extending to twenty-four acres, but excluding the half acre known as the Muster Oak, which his father had sold to John Hall. This time the mortgagee was his brother-in-law, Thomas Compton, mentioned in Katherine Hollingdale's will (1753) who described himself as of Lindfield, gentleman.

The position of the Muster Oak is not given in the Brookeborough deeds. In 1638 there was an isolated tree beside a smith's shop opposite the site of the Sergison Arms, at the spot now occupied by Muster House. The Ordnance Survey draft map of 1794 shows a small enclosure at that place. The will of Thomas Hall, yeoman, of Slaugham, but formerly of Cuckfield, mentions in 1788 a freehold messuage ' lying and being on or near ' Haywards Heath. This was called Bankes, which lay on the south of the green, but it may have included the Muster Oak. We shall see later that this corner of Boltro Farm was separately occupied in the next century.[1]

It seems that Thomas Compton was not very accommodating, for at Christmas the same year Walter Chatfield, still describing himself as a maltster, sold the property to Henry Tuppen, also of Lindfield. But Walter was still there in September 1776, when the farm was sold to James Walder, a Cuckfield tanner, for £945. A fortnight later Walder himself took out a mortgage on the property for £500 with James Wood of Hickstead. The land tax returns for the parish show that he lived there, and that after his death in 1783[2] his wife continued to occupy the property, at least until 1795. At the end of July 1797, however, when she came to sell the property the occupier's name was given as Isaac Walder, who was perhaps a relative managing the farm; the name Isaac suggests that he, like the others, was a Baptist. In October of the following year the freehold of the farm again changed hands. This time the purchaser was Ann Sergison, of Cuckfield Park, and thereafter the farm became once again part of the lands of the lord of the manor.

The land tax return for 1801 does not include the farm; but in 1803 it is shown in the occupation of Samuel Molineux, and he seems to have lived there until his death.[3]

With its new occupant, the farm showed signs of increasing prosperity. The land tax assessments show that in 1789 the rent was assessed at £15, but by 1806 it had risen to £19 10s., although it remained at this figure at least until 1820, and perhaps throughout the remainder of his life. In its issue covering the years 1832-4, *Pigot's Directory* for the first time shows the inn at the south-west corner of the farm known variously as The Dolphin or The Sergison Arms. Its landlord was George Taylor, who was listed as an elector in 1832 in respect of 100 acres at Bridge Farm, which he occupied. In 1839 the entry in the *Directory* covered a wider area than formerly; it includes a category for maltsters, and there were two names, of which

[1] E.S.R.O., Will Register A65, pp. 678 ff. The deeds relating to Muster House are in private hands, but have not been available to the present writer.

[2] E.S.R.O., Will Register A64, p. 676.

[3] On the family, see *Sussex Family Historian*, loc. cit., where both men with this name are discussed.

Samuel Molineux was the only one for Cuckfield. But he must have died within the next few years, for probate of his will was granted on 3 May 1842;[1] Sarah, the younger Samuel's widow, lived on at the farmhouse by herself, independently of the new tenants, at least until 1871.

Before he died, Samuel was to witness the beginning of the disintegration of the farm. This was caused by the coming of the railway, and we can see in detail how this process took effect. Our authorities for this are basically two: the plans deposited by the London and Brighton Railway Company tracing the path of the proposed line, with additional information from the schedule annexed to the Act enabling the construction of the railway; and the tithe award, dated 30 November 1843.[2] With these we may compare the map of 1794.

In 1837 the whole area is shown as in the occupation of Samuel Molineux the elder, apart from a cottage near or on the site of the present police station in the occupation of John Godsmark, and two cottages looking on to the heath, half-way down the eastern boundary of the farm, occupied by John Willett and John Streeter. Two further cottages on the northern boundary lay in the path of the proposed railway. These were occupied by Thomas Willett and Henry Carter, presumably labourers living in tied accommodation, since Samuel Molineux himself is also shown as occupier. The remainder of the farm consisted of a pattern of arable fields and meadows, the larger of which ranged along its western perimeter of the land, with the remainder scattered to the east and to the south. On the southern boundary abutting on Muster Green, where lay the main farm buildings, the malthouse itself now stood; and by 1867 it had been converted into four cottages. It seems to have been situated at or near the eastern border of the meadow that extended from the farmhouse and outbuildings to the Sergison Arms, for in the tithe award it is not listed separately, but apparently was included with the other farm buildings.

The general plan of the farm seems to have remained undisturbed by the construction of the railway. The track followed the line of the field boundary running the length of the farm. Only one field, a rectangle running northwards from beside the farmyard, was obliterated; a narrow strip called in the tithe award Common Field Corner Meadow was all that remained of it. Naturally enough, the railway cutting became the property of the railway company; the vestry minutes between March and July 1839 are concerned with payments in respect of the farm made at that time. It was not until December 1863 that the bank formed by earth from the cutting was regained from the company.

Dwellings still stood along the northern boundary. John Godsmark, who was described in the 1841 Census as a butcher, still occupied his cottage opposite the Station Inn, known in the early 1840s as Paddock Cottage or Paddockhall Cottage, and later as Station Cottage; but of the two cottages to the east, in what was later to be Station Road, only one remained —that occupied by Thomas Willett. The enclosure was that formerly occupied by Herbert Morley's house in 1638, although apparently much diminished since 1794, and this suggests that the site had been continuously occupied for more than two hundred years. The cottage on the east side of the farm, apparently consisting of the two there earlier, and now called Perrymount Cottage, was still occupied by John Willett. In 1841 evidently he was absent, for his name is not shown in the enumerator's return. Instead we find living there an elderly lady

[1] 1841, fol. 49b; P.R.O. Prob. 11/1962, fols. 166b-9a.

[2] E.S.R.O., Q/DP 156, 164; 7 Wm. IV & I Vict., c.119; E.S.R.O., TD/E91. There is also a document in P.R.O., MAF 20/55/837.

aged 80, together with George (? or John) Streeter, his wife and three children.[1] By 1843 the family seems to have moved, to leave John Willett in sole occupation of the cottage. The two small closes immediately to the north of this cottage seem to have remained. The one adjacent to the cottage seems to have been formed after 1794, as it does not appear on the draft Ordnance Survey map. Doubtless it was made to make regular the shape of the large field, and this would suggest an attempt by one or other of the Molineux tenants to make the farm more efficient.

By 1843 the farm had been taken over by Robert Harmes, a man of fifty years of age.[2] He was already in the vicinity in 1841, but by 1845 he had moved to Kidd's Farm, which four years earlier had been occupied by John Broomfield.[3]

There is one other thing that the Tithe map shows us. We have already noticed that the south-western corner of the farm had been separately developed. The schedule shows that this plot, together with the whole of the southern side of Muster Green towards the present Victoria Park, was owned and occupied by the Misses Elizabeth and Ann Kennard, who had property elsewhere in the parish. This supports the suggestion that the Muster Oak had been linked earlier with Bankes. It seems that by 1841 this corner of the farm was the home of the family, for the entry following Samuel Molineux's in the Census return relates to one Thomas Kennard, aged 85, his two unmarried daughters, Elizabeth and Ann, a bailiff (presumably controlling their property) and an eighteen-year-old male servant.

The two spinster sisters were still there when the 1851 Census was taken. The house is not named in the 1851 return, but by 1861 it was called Muster House. Then the family included two shop assistants—a token of things to come.[4]

In 1851 the farm was occupied by David Davey, his wife, two nieces, a retired relative and two servants, one of whom worked on the farm. The site previously occupied by Perrymount Cottage apparently had been developed into premises housing five families, and there seems to have been another house called Lower Perrymount further to the north, which contained one household with four lodgers, all of whom worked on the railway. Things seem to have been much the same six years later, for a map dated 1857 shows little sign of change.[5]

The farm itself seems to have been failing long before this, for as early as 1845 the only maltster in Cuckfield listed by *Kelly's Directory* was, not the occupant of Boltro Farm, but Thomas Best, described in 1855 as an innkeeper and brewer. On the other hand, there was increasing commercial activity north of the farm. The enclosure map shows that a timber yard had appeared by 1861 to the east of the railway line, on the site of the present station at the top of Perrymount Road, and timber merchants were in the vicinity of the railway station as early as 1851.[6] A corn market also had been held in the vicinity of the station since 1846, and the 1861 Census shows the presence of George W. Bailey, a miller and corn merchant, in the same area.[7]

The enclosure award shows signs of commercial activity on the south of the farm, where Alfred Curtis, a grocer and draper, was allotted a small plot of thirty-six perches by Muster

[1] Fols. 51a-52a. In this Census ages given are only approximate, and there are palpable inaccuracies in this return.

[2] His age is given as 58 in 1851 (fol. 228b).

[3] Register of Electors, East Sussex, 1841/2, Cuckfield parish; 1841, fol. 49a & b. *Kelly's Directory, Sussex* (1845), s.v., Cuckfield.

[4] 1851, fol. 197a; 1861, fol. 49a.

[5] 1851, fols. 197a-8a; Court Book, opposite pp. 44, 48, 54.

[6] Fol. 209b.

[7] The corn market's inception is inferred from references in the *Brighton Gazette* for that year. The merchant appears on fol. 46a.

House, presumably for the post office, as he was listed as postmaster at Haywards Heath that year in *Kelly's Directory*. The post office is shown in that position on the Ordnance Survey of 1874. It is listed in the 1871 Census, but Muster House does not appear.

Further encroachments on to the farm were to follow the enclosure of the heath.

DISINTEGRATION

The sanction of the enclosure award relating to the heath on 9 January 1862[1] heralded a building boom in its vicinity. Although the poor were to remain a very significant element in the population, it is quite clear that the area suffered from the ' villa mania ' rampant at that time. The rapid expansion of Hove in particular at this period has been noticed elsewhere. There had indeed been a builder just north of the farm since 1847, but his resources were probably inadequate to meet the growing demand.[2] The name of other builders appear as interested parties in the enclosure award. The rapidity of the development of the district at this period may be gauged from a remark made in October 1865: ' The District is very rapidly increasing. The present population of 1,000 people has increased from 500 at the rate of 100 a year.' Even in 1861 a prominent local antiquary commented: ' Haywards Heath . . . has become a centre of civilisation and commercial activity.'[3]

Although David Davey continued at Boltro Farm at least until 1882, the Sergison trustees wasted little time in splitting up for building development the seventeen acres that remained. No doubt their task was made easier by the fact that David Davey suffered from some sort of physical disability towards the end of his life. This presumably impaired his efficiency as a farmer, and it seems that by that time he was employing other means to earn a living.[4] The Vestry minutes record that in 1870 his tender was accepted for the carriage of stone to repair the roads in one area of the parish, and that he was successful again the next year in obtaining the contract for carrying flints for road work in two other areas of the parish. But we have no details of his tenancy agreement, although we know that he also held Wigperry Farm, to the west.

In any event, the trustees of the estate were disposing of parts of the farm by 24 June 1864, when they sold just over three acres to Harry Treacher on which to build a house called Oaklands.[5] He is described in 1871 as a bookseller and stationer aged 39; even in 1866 he seems to have been senior partner in a Brighton firm engaged in bookselling and printing that existed

[1] P.R.O., MAF 1/636; the copy used in this study is that in E.S.R.O. The enclosure was sanctioned in the Annual Inclosure Act, 1858 (21 Victoria, c.8).

[2] On ' villa mania,' see the letter quoted from *The Builder* of October 1848 in J. P. Lewis, *Building Cycles and Britain's Growth* (1965), pp. 85-7; see also Brandon, *Sussex Landscape*, pp. 249-60. Francis William Holloway, whose house stood at the junction of Paddockhall Road with Milton Road, stated in *Kelly's Directory* for 1870 the date of his establishment; the present firm of Thomas White, first noticed by the *Directory* in 1878, claims to have been established in 1860.

[3] Church Commissioners, file 28510; *S.A.C.*, vol. 13, p. 210.

[4] *Kelly's Directory* (1882) lists ' David Davey, farmer, Muster Green '; but he had disappeared by 1887. 1871, fol. 65a, has a tick against his name in the column relating to disabilities; but the impairment is not specified.

[5] The following discussion is based principally on two sources; the deeds relating to Floretta, Perrymount Road, now in the possession of Messrs Ayling & Strudwick (for access to which the writer is indebted to Mr. P. S. Strudwick); and a series of abstracts of deeds relating to Oaklands, now the offices of the Mid Sussex District Council. The originals have not been available for inspection, and the abstracts are principally concerned with restrictive covenants. A power of attorney dated 17 December 1867 in P.R.O., MAF 20/55/837, has also been used, and 1871, fol. 64a.

well into the present century.[1] He was evidently a person of some affluence. His household contained four young children, plus two teenage visitors and two young domestic servants. The restrictive covenants contained in this conveyance show clearly the influence of ' villa mania '. The purchaser agreed not to build a house on the land at a cost of less than £300, and any such house was to be set back at least twenty feet from the surrounding wall that had yet to be constructed. No trade or business was to be carried on in these newly built houses; they were to be used as private dwellings only. He also agreed not to interfere with the interests of adjacent lands and buildings.

A more interesting feature of these covenants is an undertaking for the joint maintenance of the footpaths adjoining Bulltrough (or Boltro) Road and the road leading across to Paddockhall Road. This is the first direct mention we have of Boltro Road, which cut right across the farm, roughly parallel to the railway, and it is yet further evidence of the intention to develop the whole of the farm. But at this time it can hardly have been constructed; on 28 July the vestry decided that sixty tons of flints were to be put on ' the Road at the back of Haywards Heath station leading to the Hodges Road '; the lengthy description given to the road in contrast to a reference to the recently constructed Sydney Road in the same minute suggests that the name Boltro Road was not recognised: on the following 13 April the vestry decreed that the ' new road ' on Muster Green by the railway tunnel was not the responsibility of the highway surveyors. Thus the road was not considered a parish highway, although the vestry had co-operated in its construction. Of the two maps of Haywards Heath dated 1865[2] only one shows Boltro Road.

At the same time the trustees sold land at the north-east corner of the farm to developers, of whom one was a Brighton builder named Henry Corney. Here the restrictive covenants stated that no cottage fronting Station Road (now Clair Road) was to be inferior to the adjacent railway cottages, and they were to stand back ten feet or more from Station Road, and not less than 100 feet from Perrymount Road. Any house built on this land was to be built at a minimum cost of £250, and the frontage was to be not less than ten feet away from the main road. The houses were to be separated from the road by dwarf walls surmounted by iron railings. Like the houses to be built on Boltro Road, these also were to be private dwelling houses only, and no trade or business was to be carried on in them.

The Census returns show quite clearly that the dwellings in Station Road and the yard immediately in front of the station were for working men or artisans and their families, and we have seen that those who had lived in Perrymount Road were of no greatly elevated social status; but the development around the farmhouse itself was for comfortable upper-class villa-type residences. Subsequent developments showed all too clearly the different fortunes of these two building projects. On 1 November 1865 Harry Treacher added to his land by buying a small plot of a little more than three rods, just to the north of his existing holding, from Richard Coates, whom *Kelly's Directory* at this period describes as an agent for the Unity, Fire and Life Office, and George William Bailey, the corn merchant who in 1861 was living at or near

[1] For this comment I am indebted to Mr. B. C. Treacher of Uckfield. The firm of Harry and Charles Treacher, 1 North Street, is shown in *Kelly's Directory* between 1867 and 1915.

[2] A plan of the district of St. Wilfrid's in the parish of Cuckfield dated 12 September 1865 (Church Commissioners, loc. cit.), and an engraved map of the same area belonging to St. Wilfrid's Church, Haywards Heath. The second shows the road, and internal evidence suggests a date after 1870.

the junction of Paddockhall Road with the Market Place, near the site of the present telephone exchange; by 1879 he was classed as a private resident, and was living in Church Road.[1] Again there is an undertaking to maintain the standard of housing on the land: Harry Treacher covenanted not to build any house facing Paddockhall Road at a cost of less than £200, including outbuildings, but on the remainder of the land the cost was not to be less than £300. No house was to be set back less than twenty feet from Boltro Road; but along the Paddockhall Road frontage the distance stipulated was only ten feet. Not more than ten detached or five pairs of semi-detached houses ' in a good condition ' were to be allowed, and by 10 January 1867 there was to be a fence along the eastern boundary of the land (facing Paddockhall Road). Again there is mention of the upkeep of Boltro Road and the footpaths running along either side, until such time as they were adopted by the local board.

In the context of later developments, however, the repeated stipulation that only private dwelling-houses should be built is particularly interesting. By 1870 Thomas Bannister, an enterprising local estate agent, built his villa Limehurst immediately to the north, with its entrance facing Lucastes Avenue, and he is shown as practising as an auctioneer, surveyor and estate agent from the house. ' Mr. Bannister's villa, including the servants' dwelling over the stables ' is mentioned, along with the Dolphin (or the Sergison Arms) and ' Bulltro ', as a feature of the district in 1871.[2] Nevertheless, as late as 4 April 1876 Harry Treacher covenanted with the Sergison family, in order to preserve the amenities of the adjacent land, that he would not erect ' on the purchased hereditaments any buildings . . . within 40 feet of the said Boltro Road', and that he would allow no trade, business or ' any nuisance or annoyance.'

Others also took land from the farm during the 1860s. John Bennett, landlord of the Station Inn, secured just over an acre; and William Edwards, a timber merchant, seems to have taken over Thomas Willett's cottage beside the railway, although apparently he had no interest in the adjacent timber yard.

Naturally enough, there is no trace of a house alongside Boltro Road in 1865. On the Ordnance Survey map of 1874 development is shown concentrated in seven buildings at the northern end of the road alongside the railway. An undated photograph of Charles Clarke, perhaps the first tradesman to establish himself in the road,[3] shows the buildings at the top of the road as a through-terrace of three-storied houses that can still be identified as extending from Cheall's hairdressing salon to the Y.W.C.A. Nearly New Shop, next door to the premises still occupied by the firm, represented on the photograph as a small shop dwarfed by the houses to its left. In 1878, the year before Clarke issued the first of his own directories, the only other ' commercial ' addresses in Boltro Road listed in *Kelly* are those of a basket and sieve-maker at no. 4, the French Wine Company (which Mr. Clarke's directory shows at no. 1) and Frederick Whall, hairdresser and picture-frame maker, next to the present Cheall's. Only the basket maker is listed in 1870, but he does not appear here in 1871. To the south was a string of three villas with their gardens extended along the road, although no building had then appeared alongside Oaklands and Limehurst. There was a field on the north of Limehurst, empty save for a well, and Paddockhall Cottage.

[1] 1861, fol. 46a; *Clarke's Local Directory and Year Book* (1879), p. 37.

[2] Fol. 59a.

[3] Reproduced in the firm's calendar for 1970.

When the 1871 Census was taken,[1] the villa at the corner with Muster Green, Railway Villa, later The Yews,[2] was occupied by a broker's clerk and his family, which included a domestic servant—a sure sign of middle-class respectability, if not of affluence. From the children's birthplaces, it appears that the household had moved from south London, itself expanding at that time. The only other villa at that time, Albion Villa, was occupied by the family of Frederick Willard, described as a ' tailor and woollen draper,' who was recorded in December 1867 as having already taken a little more than an acre from Boltro Farm. His business interests seem to have been in Brighton, where a firm of that name and description is listed in 1870 at 2 Western Road.

Only four houses in Portland Place, as the terrace was called, were built; these can be identified as those nearest Lloyds Bank. The first belonged to a private schoolmistress, Sarah Anne Pace, who appeared in 1866 at Chasemore House, and presumably had retired, although she was shown as late as 1878. She shared her home with a railway porter, Frederick Ferguson, and his family. Eight years later the household had split up. The porter had become landlord of the Burrell Arms at the top of Perrymount Road, and Miss Pace had disappeared. The occupier of the second house, a gardener named William Mays, had likewise disappeared by 1879, but William Cook, a fly driver, was still there when Mr. Clarke compiled his directory, where he is described as an ostler living at 5 New Road (he was, curiously enough, listed as a ' private resident ' by *Kelly* in the previous year). The family in the fourth house seemed to have been there at least since the previous year; the name of Henry Hart, a bootmaker from Brighton, appears in *Kelly's Directory* for 1870; but he too had departed by 1878. It does not seem, therefore, that there was early a settled community here, although a change of household at no. 4 between 1879 and 1882 did not involve a change in occupation.

We have yet to discover why the road was built. Wychperry Road, which is shown by the Ordnance Survey in 1874 running from and parallel to Paddockhall Road, gradually disappears, until in 1910 it is shown merely as a boundary to the gardens of the houses around the Sergison Arms. The focal point was obviously the railway station, with the Station Inn and shops in the Market Place—the 1871 Census shows that there was a butcher and a grocer. But the post office was still at Muster House, at the corner of Paddockhall Road. In 1865 Alfred Curtis had transferred his mortgage on the house to Henry James Green, grocer and draper of Cuckfield,[3] apparently a new arrival in the area, who therefore appears as postmaster in 1866. But by 1870 he had given way to John Meux, who seems to have come from Hove; the 1871 Census shows Meux presiding over a household that included a telegraphist as well as a grocer's assistant, and this suggests that the business was well established. He was still there in 1887, when there was still only one other office in the parish—at Sussex Road, some distance to the east. But Paddockhall Road would have been quite adequate for transport purposes, and Perrymount Road itself was no distance to the east.

The only reasonable explanation seems to be that it was intended for building development. A permanent benefit building society was established at Horsham in 1856 and a permanent

[1] Fols. 65b-6a. The name New Road used by the enumerator appears also in *Clarke's Directory* (1879). There are other instances of alternative names in the area at that period; see below.

[2] The identification is established by comparing *Kelly's Directory* for 1878 with *Clarke's Directory* of the following year.

[3] S.A.S., MS WA 183. It will be noticed that Green had the same designation as Curtis when he took over at Muster Green.

society had been started in Peckham in 1855; since the 1871 occupant of The Yews had come from south London, this latter society would have been a potential source of funds for building in the area. More definite interest in building development in the area was to be shown in the formation of a society at Lewes in 1870 and of the Sussex Mutual Society two years later. Clearly there was some need for Harry Treacher to renew in 1876 his covenants with the Sergison family, the lords of the manor and the largest landlords in the area.

Matters did not prosper, however, with the development at the northern boundary of the farm with Perrymount Road. Henry Corney, the Brighton builder who had acquired the site, evidently was no businessman, and became enmeshed in the kind of mortgage difficulties with which the earlier farmers at Boltro had been involved. A year after he had taken possession of the land, he was compelled to take out a mortgage on it for £500, and just under a year later he raised another £600. In April 1869 the mortgagee, Warden Sergison, the original landlord, was still owed the full sum borrowed. Corney therefore agreed to sell a piece of land to John Bruton for £80, and the two villas already built alongside Perrymount Road for £550 (only a trifle more than the minimum cost specified in the original agreement) to William Reason, described in the deed as of Brighton, gentleman, but as an insurance agent when he was living in one at the time of the Census two years later. A general medical practitioner was then living in the other. The return[1] shows that there was a terrace of six cottages, one of which was returned as empty on Census night

Peter Finch, a grocer and baker, was living in the cottage nearest the station, which still had a shopfront when it was demolished in the 1970s. Since the family included a year-old infant born in Cuckfield, presumably they had arrived only shortly before. The other houses contained the families of a gardener, a blacksmith, a carpenter and a railway porter; these households without exception included both children and lodgers, and were consequently large. Gross overcrowding in each of these small cottages occurred, and living conditions must have been quite indescribable.

In contrast, the small semi-detached villas further up the main road, in their little closes, must have seemed palatial. Save for one unoccupied pair each contained a small family, mostly with a domestic servant. At the end of this row stood Oakfield House, where lived a timber merchant, his wife and son, with one domestic servant. None of these villas was standing ten years earlier. Further along stood a row of three labourers' cottages in a large enclosure, and beyond that was a house occupied by Thomas Richards, an estate agent, with his wife and daughter, and an ornamental garden stood on the edge of the old farm lands. The precise topography of the road does not appear from the enumerator's return ten years earlier, but it is evident that it was a working-class neighbourhood. Clearly there had been a middle-class invasion in the intervening period.

On 22 October 1872 William Reason obtained a small plot at the corner of Station Road and Perrymount Road in exchange for a further £300 to help the builder out of his difficulties. He died on 30 April 1882, and his son and son-in-law, as his executors, sold the two semi-detached houses on the land for £840 to William Mills, a stock- and sharebroker of Hassocks Gate and Brighton. Mills, however, seems not to have found the houses a worthwhile investment; a year after he had bought them he raised a mortgage on them with Frederick Mills,

[1] Fols. 73a-4b.

an East Molesley ironmonger, and three months later the houses were sold for £650 to Charles Callow, who described himself as ' of Cuckfield, gentleman.'

By the end of the following year Callow had left the district. He had transferred his business as a butcher to St. Leonards[1] when he sold the houses on 30 November to Samuel Sparrow, the organist at the parish church, for £800. Sparrow himself moved from South Road, near the church, to one of the houses, Oak Villa; the other, Floretta, was occupied by G. W. Bailey, who had been living in Church Road.[2] For some reason, however, this arrangement was not satisfactory; although Sparrow continued at the church until 1894, he sold both houses in 1890 to Esther Reeves, a widow from Staplehurst, Kent, for £75 less than he had paid for them.

Although no one seems to have stayed long in the small villas on the former edge of the farm, matters were otherwise in the more palatial houses west of the railway. It was left to Harry Treacher's widow to sell Oaklands in June 1892 to James Bradford, the refreshment contractor to the railway, who thereupon retired from his catering interests in Brighton to live in Haywards Heath and devote himself to other matters.

His alterations to the house were substantial, as the Ordnance Survey maps show. The inscription EJB 1906 on the wall of the lodge (which housed a gardener in 1912) gives the initials of his wife, Emma Jane, whom he had married in 1876 and to whom evidently he was devoted, since after her death in 1922 he retired completely. Originally a stone archway spanned the drive at this point, but this has long disappeared.[3]

When he died in 1930, his daughter, Mrs. Burgoyne, who had been living there for a number of years, inherited a life interest in the house, and bought it outright in 1932. Later, however, the offices of the Urban District Council were moved there and Mrs. Burgoyne moved to live in The Old House, as Boltro farmhouse had become known since David Davey's departure. By 1910 it had become a high-class villa with a semi-circular drive and a neatly enclosed garden.

With the transformation of Boltro farmhouse, the farm disappeared. John Meux had retained the post office at Muster House until about 1890, but subsequently the office moved to Stamford Place, at the top of South Road, with a new chief office in Boltro Road. Muster House was taken over as a nursery by Richard Humphrey, who had been a baker with premises in Stamford Place,[4] and the grounds are shown thus by the Ordnance Survey maps between 1896 and 1909. By 1924 Muster House, like the Old House, had become a private dwelling.

As the town of Haywards Heath developed, the site of Boltro Farm linked different foci of activity in the growing community. At its apex stood the Market Place, with the railway and the Station Hotel. The growing commercial activity here was reflected in the establishment here of the branches of two banks—a sub-branch of the Brighton Union in the Station Hotel, opened under the supervision of Edward Waugh, an energetic local solicitor, in 1878, which had advanced to the status of a full branch by 1899, and the Capital and Counties at the end of Boltro Road in 1889[5]—and in the cattle market, which seems to have expanded considerably about 1885. The Ordnance Survey revision of 1896 shows the cattle market extending between

[1] *Kelly's Directory* shows him as a butcher in Haywards Heath from 1870. *Clarke's Directory* (1879) gives his address as ' opposite Station.'

[2] *Kelly's Directory* (1882, 1887).

[3] *Clarke's Mid-Sussex Directory* (1912), photograph on p. 228. Other details have been taken from his obituary in the *Mid-Sussex Times*, 29 April 1930.

[4] *Clarke's Directory* (1879), p. 42 (advertisement). The name does not appear in the text.

[5] Information from *Kelly's Directory*, a private communication from the archivist of Barclays Bank Ltd., and Appendix 2 of R. S. Sayers, *Lloyds Bank in the History of English Banking* (1957), which notes also the establishment of a bank in Burgess Hill in 1875. These two banks were the first in Haywards Heath.

the Station Hotel northwards to the corner of the Market Place. There seems to have been no further extension by 1909. Bannister is described in *Kelly's Directory* in 1887 as owning the market, but not in 1882. He had transferred his business activities to the Market Place from Limehurst in 1883, although he still lived in the house; at that time he exchanged over eleven acres of the mill lands for just over three acres of arable near the railway for the site of his market; the deal included two semi-detached cottages with their gardens, later enlarged into the firm's present offices.[1]

At the junction of Paddockhall Road with Boltro Road lay the police station, on the site of Paddockhall Cottage, and behind it was the new head post office, built in about 1887.[2] The parish room was also there.

A further development in Boltro Road was the concentration of local government offices. The foundation stone of the Rural District Council offices was laid on 22 November 1901, and the Urban District Council had its offices in the road from its formation in 1894. The row of shops as it exists now had been built before the turn of the century, but little further villa building took place.

To the south ran Muster Green, through which passes the thoroughfare running eastwards from Cuckfield across the Weald to Maresfield, turnpiked until 1866. To the east ran Perrymount Road linking Muster Green with the north of the town; as we have seen, this was developing as a residential area which encroached upon the perimeter of the farm. At the southern end a row of shops appeared along the edge of the farm at the turn of the century, while just beyond lay the parish church and the commercial activity of South Road.

Against these odds, a small farm that had never prospered could not hope to survive. Its surface was scarred, first by the railway, and then by a road built to meet the growing demand for housing. Its perimeter was eroded by building; and finally even the larger residences which absorbed most of the land succumbed to the demands of the developers. Limehurst, the house Thomas Bannister built, survived little more than half a century; it had disappeared by 1924, and its grounds are now covered with offices and smaller houses with gardens. Oaklands itself probably owes its survival to its adoption as council offices in the mid-1930s, although now considerably extended, and perhaps the farmhouse itself survives for the same reason. The disappearance of the farm itself results from that financial interest in land reflected in so much of its history.

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I should like to express my indebtedness to Dr. Peter Brandon for having helped to crystallise some of my thoughts, although he is in no way responsible for my views. I am grateful also to Miss M. E. M. Walton for drawing my attention to material that would otherwise have escaped me, and to Mrs. Judith Brent of the East Sussex Record Office for her help. More especially am I in the debt of Mr. Geoffrey Cohen for allowing me to make a photo-copy of his unique copy of the first (1879) edition of *Clarke's Local Directory* (later the *Mid-Sussex Directory*).

[1] P.R.O., MAF 11/167/5724.

[2] When Thomas Bannister bought from the Sergison trustees in 1887 just over three and a half roods of land that lay to the north of his villa, the deed (dated 29 September) stated that the plot that lay between it and the road junction, later the site of both these premises, had 'recently' been sold to the local justices. I am grateful to Messrs. George Coleman and Son for allowing me to see this.

The derivation of the name ' Boltro '

A. Mawer and F. M. Stenton (*The Place-Names of Sussex*, part II (1930), p.269) derive Boltro from a ' bull trough ' said to have formerly stood there. Reference to the Old English *bula* and *trog(h)* seems suspect on the ground that neither word appears in Mawer and Stenton's glossary of place-name elements. This suggests that no other occurrence of either word has been traced in Sussex. E. Ekwall (*The Concise Oxford Dictionary of English Place-names*, 4th edn. (1960), s.v.) indicates that *bula* ' must have been in common use,' although he points out that confusion with a personal name is possible; but *trog(h)* he seems to confine to Lancashire and Cheshire, an area with different place-name characteristics (see P. H. Reaney, *The Origin of English Place-names* (1960), pp. 88-9; also K. Cameron, *English Place-names* (second edn., 1969), pp. 45, 183). The name of Vinnetrow Farm in North Mundham (*S.A.C.*, vol. 113, p. 123) is given an etymology by Mawer and Stenton (part I, p. 75) which suggests an alternative derivation for Boltro. The forms of ' Boltro ' are all much too late for an etymology to be established with any confidence; that for ' Vinnetrow ' is based on forms extending back to *c.* 1180-7 (S.R.S., vol. 59, p. 17), and here ' -trow ' is taken to mean ' tree.' The same goes for Light Row in Fletching, which appears as ' Lythtetrowe ' in a deed of 1419 (*S.A.C.*, vol. 64, p. 70), a piece of land that has now disappeared, and there are other examples in Sussex of this element occurring in a place-name.

It seems reasonable, therefore, to suggest that the ' -tro ' element means ' tree,' and not ' trough.' Similarly, because place-names compounded with a personal name are so prevalent in the area, it seems more likely that the first syllable is derived from a personal name, Bol(l)a, as in Bolney, and that the name means ' Bol(l)a's tree.'

I am indebted to Professor Kenneth Cameron for his comments.

THE SEABORNE TRADE OF SUSSEX, 1720-1845

By John H. Farrant, M.A.

The volume of cargo-carrying commercial shipping which used the Sussex Ports (Rye, Newhaven, Shoreham, Arundel and Chichester) increased at least five fold between 1701 and 1789-90 and about three fold between 1789-90 and 1841 (when railway competition began). This represents an annual average growth rate of 2 to 2½%. Rates of growth varied substantially between ports. Coastal imports expanded relatively faster than other branches of trade, reflecting the decline of local self-sufficiency in foodstuffs and fuel. Foreign trade declined as a proportion of the whole. The average tonnage of vessels increased at least threefold, 1701-1841, thanks to harbour improvements which began in the 1720s and are described. Commodities specifically discussed are corn, timber and underwood, coal, wool, hops, fish, iron, chalk, boulders, animal products, salt, stone and manufactured goods. The coasting trade with London is considered separately.

INTRODUCTION

The role of transport in 18th and 19th century economic development has long been recognised, but local studies have tended to concentrate on the provision of track and terminal facilities, and even then for only some forms of transport, to the neglect of the traffic carried. Certainly for south-east England before the coming of the railway inland waterways have probably received attention disproportionate to their importance relative to roads and harbours, and the connection with other developments is inferred rather than demonstrated. This study seeks to supply a counterweight by concentrating on the goods carried by sea and landed or embarked on the coast of Sussex.

The starting date is chosen first because the 1720s saw the beginning of continuous harbour development in Sussex and secondly because Dr. Andrews's work[1] is based on the Port Books which, as a moderately complete series, end in 1714. The terminal date marks the advent of the railway which, from 1841, was to transform the nature of the Sussex harbours' trade. The information on the chosen period is therefore sparse compared with both preceding and following periods.

THE HARBOURS

For the purposes of Customs administration the coast of Sussex was divided into five Ports and most statistics of trade relate to these.[2] Hence ships may not have berthed at the actual place from which the Port took its name, but elsewhere in the Port. The places to which ships traded and the facilities available are therefore described under the heading of their Port, beginning at the east end of the county. ' Port ' with a capital letter is used in this legal sense: ' harbour ' is used loosely for any place frequented by shipping even if harbour works properly so called were lacking. Schemes of improvement proposed but not started are usually not mentioned.

[1] J. H. Andrews, '*Geographical aspects of the maritime trade of Kent and Sussex 1650-1750*' (unpublished Ph.D. thesis, University of London (1954), cited hereafter as Andrews). I am grateful to Dr. Andrews for permission to make use of his thesis.

[2] J. H. Andrews, ' The Customs Ports of Sussex 1680-1730,' *Sussex Notes and Queries* (hereafter abbreviated to *S.N.Q.*) vol. 14 (1954-7), pp. 1-3. The rest of this section is wholly based on J. H. Farrant, *The harbours of Sussex 1700-1914* (Brighton, 1976), in which full source references are given, and which also discusses harbour development and seaborne trade in the railway age.

The Port of Rye extended from the county boundary with Kent to Beachy Head. Pevensey's trade had been killed by a sluice built across its haven in 1694, so in our period it was Rye, Hastings, Bexhill and Eastbourne which shipping frequented. Bexhill was receiving a few cargoes a year over the beach in the 1830s; Eastbourne had a continuous history of such traffic. Hastings's trade was also across the beach which had long since lost the protection of the pier built in 1578 and 1596-7. The excellent roadstead below the town of Rye, at the mouth of the river Rother, was progressively inundated by shingle until by 1720 it was no more than a tortuous channel down the east side. Hence in 1724 work began on digging a new, locked, channel down the west side of the former lagoon. It was completed after 63 years, only to be abandoned as useless within three months. In 1799 to 1808 the mouth of the old harbour was recut and with limited success protected by a pier and wharfing on the east side. These were extended in 1834-42. The Tidal Harbours Commission sourly observed in 1845 that the tidal rise in the bay was, at 23 feet, greater than anywhere else in south-east England; on a spring tide the rise was 17 feet at the pierhead and 14 feet at the town. Yet the approach was very intricate and difficult because of the sandbanks and the tortuous course of the channel, and at low water the harbour was dry.

The limits of the Port of Newhaven were Beachy Head and Rottingdean. Shipping activity was almost entirely in the estuary of the river Ouse at Newhaven. A few barges from there took coal up the Cuckmere River and the occasional ship beached in front of Seaford. The beginning of the 18th century found the entrance to Newhaven harbour diverted eastwards by a spit half a mile long. In the next 30 years the spit's length doubled. In the face of this deterioration a harbour commission was established in 1731. Within four years it had dug through the spit at its west end and protected the cut by piers. In 1791-3 the piers were rebuilt on a different orientation in an attempt to prevent a bar forming between them. From 1827 the interior of the harbour was deepened and in 1843-5 a trap groyne was built to the west of the piers, with considerable success in keeping the shingle clear of them.

Within the Port of Shoreham (whose western boundary was at Heene) the main landing places were in Shoreham harbour at the mouth of the river Adur and on the beach at Brighton. The Adur too was turned eastwards by a spit which was two and a half miles long by 1700. But only from about 1720 was shipping seriously impeded and only in 1760, when the spit was four miles long, was a harbour commission formed. The Commission's first scheme, opposite Kingston, was unsuccessful because the piles of the piers were driven only into the shingle and were quickly undermined. The entrance moved eastwards again, but the second attempt in 1816-21 succeeded. The beach trade was soon transferred from Brighton which, with the completion of the Chain Pier in 1823, could offer much better facilities for embarking and landing passengers. By that date Worthing, as a growing seaside resort (and like Bexhill and Bognor) had a small beach trade. In 1834 and 1837-9, Shoreham's piers were extended to counteract partial blocking by shingle.

The Port of Arundel stretched from Heene to Felpham sluice but its traffic was confined to the estuary of the Arun where it was divided between Littlehampton at the mouth and Arundel five miles upstream. The shingle spit was a modest half mile long in 1700, but though it did not get longer the depth of water diminished. The commission of 1733 made a new entrance protected by piers and by 1737 deepened the river up to Arundel. By 1782 the entrance was deteriorating again and from 1783 the piers were extended by jetty work to counteract the shingle.

The western limit of the Port of Chichester was the river Ems which is part of the boundary between West Sussex and Hampshire. Sidlesham and Bognor were both within the Port but the great majority of its traffic was handled within Chichester Harbour. The harbour escaped the attention of engineers except for a ship canal to the outskirts of Chichester opened in 1822. The main landing place was Dell Quay, two miles from Chichester, but at some dates ships unloaded into lighters at Itchenor; and there were other quays including several new ones built in the early 18th century.

The hinterlands of the harbours cannot be delineated with any precision and in any case must have varied over time and for different commodities. However, given the location of other harbours to the east, north and west of the county, it would seem a reasonable general assumption that the combined hinterlands of the five Ports lay fairly close to the county boundary on the west and north but extended into a thinly populated area of south Kent immediately north of Rye. Hence the traffic of the Ports was largely the seaborne trade with starting points or destinations in Sussex, with the passenger traffic across the Channel being the principal exception. But in relation to London, a major market for both the produce and the purchases of Sussex, there was evidently competition between land and water transport throughout the period.[1]

THE VOLUME OF TRAFFIC

The best available measure of the volume of traffic is the aggregate tonnage of all vessels entering or clearing a Port during one year with cargo. Such figures, nearly always produced by the custom houses, have several disadvantages. However small a proportion of a ship's capacity was filled by cargo, the ship was included at its full tonnage. Some cargoes were not recorded by the customs officers: those loaded or unshipped by representatives of the state or within the limits of the same Port, and a varying list of bulk commodities, particularly constructional materials (brick, gravel, slates, etc.), hay and straw. 'Tonnage' had different meanings at different dates. Furthermore, figures survive for all five Ports only in 1789-91, 1841 and 1843 onwards, though there are incomplete figures for other years.

To provide some comparison between these data and the beginning of our period, a summary analysis was made of the Port Books for 1701 which is the last peacetime year for which the Port Books are reasonably complete. Unfortunately, tonnages were recorded only in the Port of Chichester and the other total tonnages have been estimated from the average tonnages of vessels in the same trades at Chichester. These figures, averages for 1789-90 (1791 being omitted because the Irish trade was not differentiated), and the figures for 1841 (the last year before the railway made a marked impact on the Ports' traffic) and for 1851 are given in Table 1. The tonnages from the Port Books are 'burden', being owners' estimates of their ships' capacity in tons weight having regard to the usual cargo. The 1789-90 tonnages are as measured by the 'Old Rule,' and it can only be assumed that the general equivalence between burden and measured tonnages found in the merchant fleet as a whole applied to Sussex shipping. The 1841 and 1851 tonnages are 'New Measure,' and the estimated relationship with Old Rule tonnages is: Old=New (1.376-0.002 New).[2] This formula has been used to inflate the 1841 tonnages to Old Rule for the index at the end of Table 1.

[1] J. H. Andrews, 'Some statistical maps of Defoe's England,' *Geographical Studies*, vol. 3 (1956), p. 43.

[2] R. Davis, *The rise of the English shipping industry* (1962), pp. 74, 372, 405. W. Salisbury, 'Early tonnage measurement in England, pt. III,' *Mariner's Mirror*, vol. 52 (1966), pp. 334-40. The formula is based on British Parliamentary Papers (hereafter abbreviated to B.P.P.)., 1842 (68), xxxix.

TABLE 1. NUMBER AND TONNAGE OF VESSELS ENTERING AND CLEARING THE SUSSEX PORTS WITH CARGO

	Foreign in		Foreign out		Coast in*		Coast out*		Total	
	no.	ton	no.	ton	no.	ton	no.	ton	no.	ton
1701										
Rye	13	349	16	314	21	732	51	1384	101	2779
Newhaven	4	110	10	360	25	895	13	369	52	1734
Shoreham	6	298	6	189	31	1121	71	1776	114	3384
Arundel	—		—		15	358	58	1674	73	2032
Chichester	25	884	29	1075	48	1135	149	3140	251	6234
Total	48	1641	61	1938	140	4241	342	8343	591	16163
1789-90										
Rye	9	862	10	329	189	8426	127	4114	335	13731
Newhaven	12	1417	—		121	7367	94	3069	228	11854
Shoreham	64	5566	51	3727	135	9694	90	5747	341	24735
Arundel	3	437	2	121	101	6567	178	10220	285	17346
Chichester	13	811	9	401	161	14073	285	17017	469	32302
Total	103	9093	73	4578	704	46097	775	40167	1655	99968
1841										
Rye	96	2998	84	2430	648	39117	296	13930	1124	58475
Newhaven	89	5881	79	5817	263	29307	111	7885	542	48890
Shoreham	139	12018	47	6046	726	71517	117	6848	1029	96429
Arundel	11	1739	5	559	242	20318	116	8911	374	31527
Chichester	8	348	2	133	345	25196	331	10202	686	35879
Total	343	22984	217	14985	2224	185455	971	47776	3755	271200
1851										
Rye	51	2523	38	1526	644	43418	134	6282	867	53749
Newhaven	268	27064	250	25335	285	30256	49	6800	852	89455
Shoreham	359	22587	318	18173	648	78295	102	7773	1427	126828
Arundel	24	3419	—		209	21458	131	9096	364	33973
Chichester	8	248	3	92	275	17592	126	4040	412	21972
Total	710	55841	609	45126	2061	191019	542	33991	3922	325977

INDEX OF TONNAGES, 1789-90=100

	1701	1789	1841	1701	1789	1841	1701	1789	1841	1701	1789	1841	1701	1789	1841
Rye	3	6	29	2	2	27	5	61	358	10	30	130	20	100	540
Newhaven	1	12	62	3	0	60	8	62	285	3	26	82	15	100	489
Shoreham	1	23	58	1	15	27	5	39	341	7	23	35	14	100	461
Arundel	0	3	11	0	1	4	2	38	142	10	59	63	12	100	219
Chichester	3	3	1	3	1	1	4	44	96	10	53	42	19	100	139
Total	2	9	28	2	5	18	4	46	223	8	40	61	16	100	329

*Including traffic with Ireland

Sources 1701: Public Record Office (hereafter abbreviated to P.R.O.), E 190/796-798; to fill gaps in the series for 1701, Shoreham coastwise cargoes are for midsummer 1700 to midsummer 1701, Arundel coastwise cargoes for 1702 (inwards) and for midsummer 1701 to midsummer 1702 (outwards). 1789-90: P.R.O., Customs 17/11, 12. 1841: British Parliamentary Papers (abbreviated hereafter to B.P.P.), 1843 (216), lii. 1851: B.P.P., 1852 (218), xliv.

The average tonnages of cargo-carrying ships may be considered for the light they cast on the physical capacities of the harbours. The averages for 1701 are estimates except for Chichester but are not widely discrepant from other available figures. They conceal that the harbours admitted larger vessels. Ships of up to 70 tons regularly used Chichester harbour in 1701 and of 60 tons used Littlehampton harbour in 1734 before the new cut was opened. Shoreham's shipbuilders were able to launch vessels of around 400 tons in 1696 and 1741, though by waiting for favourable tides. If a loaded vessel of above 50 or 60 tons would not venture into Newhaven harbour in the late 1720s, vessels of that size and larger were beached at Hastings and probably Brighton. Hence the harbours in their unimproved states were able to take ships of twice the average tonnage and upwards.[1]

By the latter part of the century the average tonnage had doubled overall, even though Chichester had no artificial works, Rye's were not used, Shoreham's piers had been overrun with shingle, and Newhaven's were soon to be renovated. That there was spare capacity earlier is emphasised. Fifty years later, in 1841, the average tonnage (as inflated) was a further 50% greater. Vessels at Newhaven, Shoreham and Arundel averaged about 100 tons, but only 66 tons at both Rye and Hastings[2] and in the Port of Chichester—in the last case there being no change over 1789-90. There can be no doubt that the first three Ports, in which there was now little or no beach trade, were reliant on the harbour works in the estuaries for the size of vessel which they could admit. Rye was constrained both by the considerable beach trade and limited works. Chichester seems to have been paying the price of neglect.

The aggregate tonnages year by year of ships carrying cargoes probably reflected the cyclical fluctuations in the national economy, so any comparison between years on the basis of Table 1 should take into account the state of economic activity. The earliest year, 1701, was one of high activity which marked, for instance, the beginning of substantial foreign exports of wheat. The years 1789-90 were near the bottom of a cycle, though they did see some recovery from the depression of the late '80s. Comparison between 1701 and 1789-90 may therefore understate the extent of growth. Also in a period of depression was the year 1841 and in that respect reasonably comparable with 1789-90.[3]

Subject to all the provisos above, Table 1 suggests that over the 90 years from 1701 the volume of shipping through the Sussex Ports increased at least five fold and in the next period of 50 years about three fold—or at least fifteen fold over the whole period of 140 years. The annual rate of growth was at least 2%, possibly on average rather faster (near to 2½%) after 1790. But the rate of change varied between the four branches of traffic identified in the Customs statistics.

	1701	1789-90	1841
Foreign inwards	10%	9%	8%
Foreign outwards	12	5	6
Coastal inwards	26	46	68
Coastal outwards	52	40	18
Total	100	100	100

[1] Cp. Andrews, pp. 73, 79, 89; and 'The Port of Chichester and the grain trade, 1650-1750,' *Sussex Archaeological Collections* (hereafter abbreviated to *S.A.C.*), vol. 92 (1954), pp. 97-98. West Sussex Record Office (hereafter abbreviated to W.S.R.O.), MF 36, Littlehampton Harbour Dues book 1733-44. H. Cheal, *The ships and mariners of Shoreham* (?1910), pp. 57-58. T. Cox, *Magna Britannia et Hibernia, antiqua et nova*, vol. 5 (1730), p. 526. *The travels through England of Dr. Richard Pococke*, ed. by J. J. Cartwright, vol. 2 (1889), p. 101.

[2] B.P.P., 1835 (116), xxiv, pp. 404, 439.

[3] T. S. Ashton, *Economic fluctuations in England 1700-1800* (Oxford, 1959), pp. 140, 166.

The proportion of foreign trade seems to have dropped by the end of the first period and have shifted towards imports, though undoubtedly foreign exports were much higher in mid-century than before or after on account of corn shipments which brought foreign clearances to nearly 14,000 tons in 1751.[1] More striking is the change in the coastal traffic. The inwards traffic may have increased near to fifty times over the whole period, whereas the outwards traffic rose at most fivefold in the first period but only by 50% in the second.

The rate of growth also varied between Ports. Their shares of the total traffic were:

	1701	1789-90	1841
Rye	17%	14%	22%
Newhaven	11	12	18
Shoreham	21	25	36
Arundel	13	17	12
Chichester	38	32	13
Total	100	100	101

' Redistribution ' was clearly more significant after 1789-90 than before. The decline of Chichester is all the more striking in that the 1841 data include shipping at Emsworth while the 1701 data do not. Shoreham's share grew most of all.

The incomplete data for years other than those in Table 1 make it possible to elaborate a little this sketchy outline for individual Ports. First, in the Port of Rye, Hastings appears to have taken a growing share of the Port's traffic. In 1701, Hastings handled only a fifth of the number of cargoes handled at Rye; in 1810-12, it handled three-quarters by both number and tonnage, and by 1830 equal quantities. In the 1830s, Eastbourne's cargoes added 5 to 8% to Rye and Hastings's total. For the Port as a whole, the annual rate of growth appears to have been faster, around 5%, between 1789-90 and 1810-12, as against 2% in the next 30 years, with very little growth in the 1820s.[2] Newhaven also shows a concentration of growth in the decades around 1800: the annual growth rate was nearly 5% in 1789-90 to 1806-8, falling to 3.5, 3.1 and 1.1% in subsequent periods ending in 1815-17, 1823-5 and 1841, or 2.2% over 34 years.[3]

In the later 17th century, Brighton handled about 40 cargoes a year as against about 60 through Shoreham harbour. As Brighton grew in population from the 1760s, it is likely that a greater share of the Port's traffic came to the town. But the beach trade declined rapidly once the new turnpike road to Shoreham was completed around 1823-4, and almost to extinction by 1833. However the packet boats continued, weather permitting, to take passengers on at Brighton until 1849. As to the total traffic of the Port, the record of dues collected between 1760 and 1787 suggests that apart from cyclical fluctuations it was fairly stable until 1783 and then rose sharply in 1784-7, to coincide with the Prince of Wales's first visits to Brighton. Indeed the traffic reported in 1789-90 may well have been double that of only six years before, so the annual growth rate may have been 2% over the first 60 years of the century, negligible for the next two decades and rapid from 1784. Later income figures suggest a doubling of traffic between the mid 1820s and 1841 and therefore a lower rate of growth between 1790 and *c.* 1816 than in preceding and succeeding periods.[4]

[1] British Library (hereafter abbreviated to B.L.), Add. MS. 11256.

[2] B.P.P., 1835 (116), xxiv, pp. 404, 439. Library of H.M. Customs & Excise (hereafter abbreviated to C.L.), Customs 32/108, 112. I am grateful to the Commissioners for permission to consult and cite their archives. East Sussex Record Office (abbreviated hereafter to E.S.R.O.), Rye MS. 102/4, and S/RH/FAt, Rye Harbour Commission accounts 1798-1856.

[3] Based on three-year averages computed from T. W. Horsfield, *The history and antiquities of Lewes and its vicinity*, vol. 2 (Lewes, 1827), app. 4.

[4] Andrews, pp. 64, 67. C.L., Customs 32/108. B.P.P., 1830 (9), viii. W.S.R.O., SH 9/1/1, Shoreham Harbour Commission accounts 1760-88. *Minutes of proceedings taken before the Select Committee of the House of Lords on the New Shoreham Harbour Bill* (privately printed, 1873), pp. 100*-101*.

The wharves of Arundel seem to have received the great majority of that Port's traffic during the 18th century and Littlehampton probably began to compete only when inland navigation was extended from 1785, in that transfer between ship and barge was most advantageous nearest to the river mouth. In 1824, 80% by tonnage was handled at Littlehampton. Total traffic in 1701 was 73 cargoes and close to the average for the next 12 years, but in the next 20 years doubled, as the average for the peacetime years of 1734-9 was 158. Indirect evidence suggests that traffic was a little below that level until the end of war in 1748, moved ahead vigorously until the Seven Years' War, and by the end of the 1760s was perhaps 70% above levels 30 years before and continued to rise steadily to 1789. In the following decades growth was much less than in the Ports to the east, at 1.5 to 2% a year until 1820-22, zero in the next decade and 1% between 1830-32 and 1841.[1]

The figures in Table 1 for Chichester are less consistent than for the other Ports. Those for 1841 undoubtedly include cargoes handled at Emsworth which was strictly in the Port of Portsmouth; those for 1701 do not and for 1789-90 may do. On the assumption that Emsworth was included in 1789-90 and using numbers of cargoes rather than tonnages, the Port's traffic grew less than any of the other Ports', at 0.8% a year from 1790 until 1810-12, at 1.6% for the next ten years and, after a slight decline in the 1820s, at nearly 1% during the 1830s. If Emsworth was not included in 1789-90, with its cargoes comprising nearly 40% of the total in 1841, the traffic of the Port of Chichester may have declined over the intervening years. As to the distribution of traffic within the Port, there is firm information only for one year, 1836: of 795 coastal cargoes, 39% were handled at Emsworth, 28% at Dell Quay, 11% at the Canal Basin, 10% at Itchenor, 4% elsewhere in Chichester Harbour and 8% outside it.[2]

THE CORN TRADE

Sussex ' is a maritime and corn county ' and ' trade and particularly the corn trade is [its] chief concern', Henry Pelham reminded his electors at Lewes in 1753, so much so that abolition of the bounty on corn exported overseas would 'reduce the rent of lands a third in value, greatly lessening the estates of all landed gentlemen, impoverished gentlemen and yeomen of small fortunes, and farmers of long leases must be inevitably ruin'd '.[3] Exaggeration apart, Pelham was right that corn production was the major economic activity in large parts of Sussex (the coastal plain, the South Downs and the scarp foot), that production was geared to markets outside the county, including foreign markets, and that sea transport was important in carriage to those markets. But figures of shipments through the Ports are an uncertain measure of Sussex's contribution to the home market. Land carriage was used to meet local deficiencies, and the main external market, London, was close enough for land carriage as an alternative to coastal shipping. Defoe stated that corn went to Farnham market from forty miles away (and so from the Chichester area), thence to mills around Guildford and finally by river to London;[4] and mills around Croydon may have drawn corn from central Sussex.

But there was a shift in favour of shipping in the 18th century through the introduction of local processing of wheat into flour and its carriage by sea direct to the heart of the market.

[1] M. A. Tierney, *The history and antiquities of the castle and town of Arundel* (1834), p.721. W.S.R.O., MF 25, Commission's minutes; MF 36. B.P.P., 1835 (116), xxiv, p. 175.

[2] C. L. Customs 32/106, 108, 114. B.P.P., 1835 (116), xxiv, p. 129.

[3] D. G. Barnes, *A history of the English corn laws* (1930), p. 46.

[4] D. Defoe, *A tour thro' the whole island of Great Britain*, vol. 1 (1724), letter II, pp. 70-71; *The compleat English tradesman*, vol. 2 (1727), pt. 2, p. 32.

The merchants of Chichester, Emsworth and district who built granaries and mills on the harbour began the flour trade to London around the turn of the century. At Arundel the trade started between 1714 and 1727, and at Newhaven in the 1760s after three merchants from Chichester and Chilgrove built a tidemill on the old harbour superseded by the new cut of 1731-3.[1]

Table 2 covers all the years in our period up to 1823 for which there are export figures for all Ports in both coastal and foreign trades, and even then flour seems not to be included in 1782-6. Nevertheless it does illuminate several points. First, wheat increased its share of the trade. This is consistent with the expansion of wheat production at the expense of barley on the Downs and the decline of malting in Chichester.[2] Secondly, in the 18th century the further west a Port was, the greater the scale of its wheat and barley exports (with little doubt the inclusion of flour would put Chichester ahead of the other Ports in 1782-6). But in the early 19th century the distribution between Ports was more even, reflecting the concentration of processing at Newhaven (where the tidemill was enlarged in the Napoleonic wars) and the rapid progress of agricultural improvement in the Weald which went so far towards corn production that commentators thought too much was grown in preference to grazing. The exports of oats from Rye declined in sympathy.[3] Thirdly, foreign exports were predominantly of wheat but had ended by 1818. Fourthly (but without account for the relative quality of harvests in the different periods nor the incidence of war), corn exports more than doubled between the first and second periods with less growth up to 1818-23.

TABLE 2 AVERAGE ANNUAL SHIPMENTS OF CORN FROM AND TO THE SUSSEX PORTS

		EXPORTS					IMPORTS
Quarters		*c.* 1702-16		1782-6		1818-23	1818-23
		coastal	foreign	coastal	foreign	coastal	coastal
Rye	W	71	44	2718*	—	5694	200
	B	76	112	77	—	350	1813
	O	378	—	2672	—	—	1531
Newhaven	W	330	46	4272*	739*	10017	3380
	B	289	30	368	214	862	2327
	O	15	—	129	—	65	956
Shoreham	W	278	577	5586*	1371*	3923	482
	B	762	89	416	97	192	1970
	O	21	—	—	—	94	3267
Arundel	W	1555	595	8610*	661*	8501	324
	B	1145	30	3544	267	1281	592
	O	—	—	8	—	88	1662
Chichester	W	5078	1948	5703*	1255*	19335	2438
	B	6426	88	4534	299	628	543
	O	44	—	143	—	907	1783
Total	W	7312	3210	26889*	4026*	47470	6824
	B	8698	349	8939	877	3313	7245
	O	458	—	2952	—	1154	9199

W=wheat and flour, except (*) wheat only. B=barley and malt. O=oats. Foreign includes Ireland. There were no foreign exports in 1818-23, but the foreign imports are not known.

Sources *c.* 1702-16: Andrews, tables 22, 23, 25. 1782-6: B. L., Abbot Collection of Parliamentary Papers (hereafter cited as Abbot), accounts 567-9. 1818-23: B.P.P., 1824 (454), xvii; continuations for 1823-7 and 1836-8 are in B.P.P., 1828 (319), xviii and 1839 (27), xlvi, and give broadly similar pictures though volumes were lower in 1823-7.

[1] Defoe, *Tour; Tradesman*, p. 37. S. P. Farrant, 'Bishopstone tidemills,' *S.A.C.*, vol. 113 (1975), p. 200.

[2] Cp. J. C. K. Cornwall, 'Farming in Sussex' 1560-1640,' *S.A.C.*, vol. 92 (1954), p. 91, and H. C. K. Henderson, 'The 1801 Crop Returns for Sussex,' in *S.A.C.*, vol. 90 (1952), pp. 52-55. *The memoirs of James Spershott*, ed. by F. W. Steer (Chichester Papers no. 30 1962), p. 17.

[3] S. P. Farrant, p. 201. P. F. Brandon, *The Sussex landscape* (1974), pp. 184-9. E. W. H. Briault, 'Sussex (East and West),' in L. D. Stamp, ed., *The land of Britain*, vol. 8, pts. 85 & 86 (1942), p. 495.

Other information can fill out the picture, first of the coasting trade. At the end of the 17th century, London was the dominant English market for all the Ports, with Devon running second. The French war of 1702-13 saw much of Chichester and Arundel's exports diverted from London to Portsmouth. When war broke out with Spain in 1739, a large part of Arundel's exports were shifted from both London and Portsmouth to the west country. The proportional distributions in consecutive five-year periods were:

	1734-8	1739-43
London	46.2	33.6
Sussex Ports to the east	3.3	1.4
Port of Chichester & Emsworth	10.7	14.6
Portsmouth and the Solent	35.8	17.8
Poole and Weymouth	0.2	10.2
Lyme to Bristol Channel	3.7	21.9
Other ports	0.1	0.5
	100%	100%
Average coastal corn exports p.a. (*quarters*)	7904	6565

By comparison with 1702-14 the wartime period shows a 143% increase. Similar diversions of the Sussex Ports' trade probably occurred in the French wars of 1793-1814: in 1813 the total exports of the main corns to London from Rye and Newhaven were 10,511q. compared with only 2,652q. from the other Ports. But in peacetime London continued as the main market.[1]

In 1702-14 coastal imports of corn were negligible, the main instance being oats and wheat received at Chichester from Arundel. This traffic continued at least into the 1740s. Newhaven also imported, to supply the tidemill, receiving 1,500q. of wheat a year in 1794-1800 and shipping 2,480q.; and in the year beginning October 1820 3,886q. of wheat and 3½q. of flour, and exporting 4,926 and 8,165q. respectively. In the calendar year 1821, it received 15 cargoes of wheat, 10 of them from other Sussex Ports, and sent to London 16 cargoes of wheat and 13 of flour, to Rye one of each, to Portsmouth one and eight, to Southampton one of wheat, and to Plymouth and Falmouth nine and six of flour.[2] Hence the higher exports of the 19th century were not entirely greater marketable surpluses grown in Sussex.

Though the Ports were still net exporters of wheat and flour in the 1820s, they had become net importers of barley, malt and oats. In 1836-8, barley and malt imported coastwise reached over 13,600q. against exports of 1,600q. Half passed through Shoreham for the breweries of Brighton; most of it came from East Anglia (which, though, was not a supplier in 1780-86).[3] As to oats, imports went back at least to the 1750s: Exeter sent oats to Chichester in 1758 (407q.), 1765 (748q.) and 1774 (83q.) and to one or more of Rye, Newhaven and Shoreham in the same years. Newhaven imported French and Dutch oats, and Shoreham French oats in 1788; Irish oats were reported in 1790 and were landed in considerable quantities by 1806; and undifferentiated 'foreign' imports totalled 4,217q. at Chichester as early as 1777.[4] In Table 3, the quantities for the later years are in addition to the British imports of 6,000 to 9,000q. a year which were usual from at least 1818.

[1] Andrews, tables 22, 24. W.S.R.O., MF 36. B.P.P., 1814-15 (26), v. Rev. A. Young, *General view of the agriculture of the County of Sussex*, 2nd ed. (1808), p. 421.

[2] Andrews, p. 192. W.S.R.O., MF 36. B.L., Add. MS. 33059, f. 255. B.P.P., 1824 (454), xvii. Public Record Office (hereafter abbreviated to P.R.O.), RAIL 853/12, Newhaven harbourmaster's journal, 1821.

[3] B.P.P., 1839 (27), xlvi; 1845 (665), xvi, p. 344. B.L., Abbot collection of parliamentary papers (hereafter abbreviated to Abbot) accounts 438-41.

[4] E. A. G. Clark, *The ports of the Exe estuary 1660-1860* (Exeter, 1960), p. 211 (covers sample years only). *Sussex Weekly Advertiser* (hereafter abbreviated to *S.W.A.*), 7, 14 Jan., 11 Feb., 25 Aug., 8 Sept., 29 Dec. 1788. E.S.R.O., Langridge MS. 14. Abbot, account 31.

What is not revealed in Table 2 are the tremendous foreign exports of wheat, flour and malt in the middle of the 18th century. For some 30 years, foreign exports were six or seven times greater than at the beginning and end of the century. We can guess that they were equal in volume to the coastwise shipments and gave a strong impetus to the harbour improvements in the centre of the county. Although the boom in corn exports was a national phenomenon, the last column of Table 4(A) suggests that for Sussex the rise to the peak in the 1750s and the subsequent decline were greater than the average. Sussex in the late 17th century did not have an established foreign trade comparable to that of the east coast ports across the North Sea, its corn exports were particularly susceptible to wartime disruption, and its proximity to London ensured that as home demand rose it had a ready market. After 1792, national exports were never again to exceed imports and from then can be dated the end of regular foreign exports from Sussex.

TABLE 3. ANNUAL IMPORTS OF OATS AT THE SUSSEX PORTS FROM OVERSEAS *Quarters*

from	1782-6 foreign & Ireland	Oct. 1806-Jan. 1808 Ireland	Oct. 1824-Oct. 1827 Ireland	1826 foreign	1836-8 Ireland
Rye	—	—	1126	1366	2774
Newhaven	159	1916	7238	3189	6893
Shoreham	9	3981	5310	1406	12210
Arundel	—	—	3935	443	2754
Chichester	396	7261	3840	571	1846
Total	564	13158	21449	6975	26477

Sources Abbot, account 568. B.P.P. 1808 (67), xi; 1828 (319), xviii; 1826-7 (186), xvi; 1839 (27), xlvi.

TABLE 4. EXPORTS OF CORN FROM THE SUSSEX PORTS TO FOREIGN COUNTRIES (INCLUDING IRELAND)

(A) Annual averages, all Ports *Quarters*

	Wheat & flour	Barley	Malt	Wheat & flour as % of all G.B. exports
1705-14	3210	349		2.8
1735-9	29343	2255	5031	8.8
1744-8	24265	1468	12627	8.1
1749-53	49194	2780	24591	8.3
1754-8	20512	470	17192	14.3
1759-63	17504	41	9769	4.9

(B) Distribution between Ports, 1744-63 *Percentages*

Rye	1.4	0.1	0
Newhaven	9.8	6.8	1.0
Shoreham	21.3	32.8	16.5
Arundel	12.4	21.0	12.4
Chichester	55.1	39.3	70.1

Sources 1705-14: Andrews, table 25. 1735-9; P.R.O., T 64/277; *Gentleman's Magazine*, vol. 12 (1743), pp. 140, 472. 1744-63: B.L., Add. MS. 38387, ff. 32-51.

At the beginning of the century, when flour was starting to enter the coastal trade, wheat went overseas only as grain. But from Arundel in 1734-43 flour comprised 15% of corn exports (as against 21% in the coastal trade). From Chichester flour went overseas from 1719 and amounted to 32% of all wheat exports in 1731 and 95% in 1777-80.[1] As Table 4(A) shows,

[1] J. H. Andrews, *S.A.C.*, vol. 92 (1954), pp. 101-3. W.S.R.O., MF 36. Andrews, p. 199. Abbot, account 31.

barley was usually malted before export. Chichester's position as the leading Port for overseas exports was undoubted, though in the late 1730s Shoreham's share of the trade was greater than in the following decades and perhaps its relative decline was due to its harbour's deterioration.

As to the destination of these exports, Defoe enunciated the general principle:

> ' England and Scotland . . . do supply a great part of the trading countries . . . on the south and west shores of Europe with corn, whenever their crops fail, or that by scarcity, or war, or any other means, the price in those countries make it worth while to carry it to them. It is very seldom but in some parts or other the harvest fails . . . and in England lying open by sea to them all, it is very seldom but we have a good vend abroad.'

The trade of the Sussex Ports was with Holland, France, Spain and Portugal (the last two appearing in the first decade of the century), and to a lesser extent with Ireland.[1] For wheat, France was probably the main recipient in peacetime. In 1738 Arundel sent to Havre nine cargoes of 2,000q. of corn and flour and 4,200q. in 1739. In 1776, following a good harvest at home but a bad one in France, Chichester shipped to Havre some 480 tons of flour, more than any other English Port, and Arundel shipped 80 tons. In 1752 and 1753, more cargoes entered from Chichester than any other English Port (and likewise at Rouen in 1750), but there was no regular trade. Indeed up to 1814 corn seems to have been the sole item of legitimate trade between France and the west Sussex Ports. But following the bad harvest of 1789, the corn cargoes from East Anglia far exceeded those from Chichester.[2]

Foreign imports of oats have been mentioned above. No doubt cargoes of wheat and barley were imported from Ireland and the Continent at times of dearth, but when regular imports of foreign corn began is not clear. In 1789 and 1790 the Sussex Ports received ten and eight cargoes from Prussia which were probably of corn in those years of scarcity, and the records of Sound dues up to 1783 show that, after an intermission of some 40 years, vessels belonging to or departing from Sussex Ports again entered and cleared the Baltic, at an average of one a year from 1768. Wheat from the Baltic was certainly offered to and probably bought by Lewes merchants in 1820-21, and corn from there and from Rotterdam was regularly imported in the 1840s. In 1841-5, foreign (excluding Irish) imports averaged 4,720q., 60% of which was wheat, 24% oats and 14% barley; 52% passed through Newhaven and 24% through Shoreham.[3]

The growth of production ahead of home demand in the early and mid 18th century directed corn to overseas markets and, necessarily, through the Ports; when home demand caught up, the corn was not entirely redirected to coastwise shipping, but some travelled by road or inland navigation. The Wey and Arun Canal was opened in 1816 and though its traffic was never great it apparently conveyed wheat from the coastal plain to the mills at Guildford. In 1836, three mills to the north of Lewes were reported to send 2,620 tons of linseed oil and flour to London by land carriage which by then cost only about twice as much as sea transport and was safer and more reliable. But in the harbours, foreign imports to some extent replaced the lost exports.[4]

[1] Defoe, *Tradesman*, pp. 34-35. Andrews, p. 201. L. M. Cullen, *Anglo-Irish trade 1660-1800* (Manchester, 1968), p. 90.

[2] W.S.R.O., MF 36. P. Dardel, *Navires et merchandises dans les Ports de Rouen et du Havre au xviii^e siècle* (Paris, 1963), pp. 342, 576, 614-15.

[3] Abbot, accounts 31, 569. P.R.O., Customs, 17/11, 12. N. E. Bang & K. Korst, *Tabeller over skibsfart og varetransport gennem Øresund 1661-1783 og gennem storebælt 1701-1748*, vol. 1 (Copenhagen, 1930), tables A, E-E. B.P.P., 1821 (668), ix. p. 56; 1842 (167), xl, and subsequent annual returns.

[4] B.P.P. (Lords), 1836 (195), xxxiv, Brighton Railway Bill minutes of evidence, pp. 782, 882, 977, 986, 988, 996.

THE TRADE IN TIMBER AND UNDERWOOD

The trade in timber through the Sussex Ports had two distinct branches: the coastal export of oak and other local timber, and of underwood, and the import of Scandinavian (and later Canadian) softwoods, either direct or via larger English ports.

The exports of timber in 1694-1716 were almost entirely concentrated at the Ports of the coastal plain, where the annual averages were: Shoreham 279 loads, Arundel 739 and Chichester 130 (a load of oak weighs about 1¼ tons). That the Ports of the Weald, where the timber grew, did not dominate the trade was because much of the eastern Weald was more accessible to the Thameside dockyards by way of the River Medway than by coastal shipping, and because the search for shipbuilding timber was being pushed westwards and had reached Arundel's hinterland which was also supplying the new dockyard at Portsmouth. Much of the timber barged down the Adur must have been used in Shoreham's shipyards, so Arundel's leading position was further accentuated. The Navy was not the sole recipient: just over half of Shoreham's shipments went to London, 20% to Chatham and 14% to Portsmouth; Arundel sent 19% to London, 13% to Chatham, 42% to Portsmouth and 22% to Plymouth; Chichester's exports went half to London and 30% to Portsmouth.[1]

After restocking at the end of the war with France, the naval yards stopped buying, but Arundel's total shipments were higher in the 1730s: 1,485 loads a year in 1734-9, of which 1,148 went to London. With the outbreak of the Spanish war in 1739, the Navy re-entered the market, and in 1740-3 shipments rose to 1,803 loads a year, with 825 to London, and 650 to Sheerness, Rochester, Chatham, Portsmouth and Plymouth. In most of these ten years, Arundel also sent London ' shoultrees', or spade handles, and bark; the latter occasionally went to Ireland.[2]

It was the Seven Years' War which is said to have finally decimated England's stock of naval timber, but the evidence for Sussex is not clear cut. On the one hand, Marshall and Young in 1791 and 1793 saw little naval timber still standing, and Young hinted that much oak was being felled young to meet the great demand for bark. On the other hand, reports on the Ports' trade in 1754 and 1759-63 mentioned timber but placed no special emphasis on it, and answers to the questions of the Board of Inland Revenue in 1792 did not suggest the degree of attrition found in other counties within living memory. Possibly the last fellings of large timber were following on the improvement of river navigation which began in 1785 on the Arun. Coastwise exports of timber and bark from (probably) Arundel averaged 954 loads and 91 tons a year in 1763-7, rose with short-term fluctuations to around 1,500 loads and 200 tons in the early 1780s, and from 1786 shot up to 3,929 loads and 529 tons a year in 1788-92.[3]

Whatever the truth, both local shipbuilding and timber exports continued in the 19th century. In the vicinity of Hastings there were several large sales in the second decade. Exports of plank averaged 265 loads a year in 1779-89, and of timber including plank 284 loads in 1806-10. They then shot up to 15,522 in 1811, ran at 1,372 loads for the next six years and fell back to 529

[1] Andrews, table 38, pp. 245-54.

[2] W.S.R.O., MF 36.

[3] B.L., Add. MS. 9293, survey of trade of outports, 1759-63. *Travels . . . Pococke*, pp. 99, 101, 103. *Journals of the House of Commons*, vol. 47 (1792), pp. 314-47. Young, 1st ed. (1793), pp. 84-85; 2nd ed. (1808), p. 422 (the 1st ed. was based on a tour in Sussex started in Aug. 1793: B.L. Add. MS. 35127, f. 289, Lord Sheffield to A. Young, 18 Aug. 1793). In a reference I owe to my wife, the Rev. A. Young, ' A tour through Sussex 1793,' *Annals of Agriculture*, vol. 22 (1794), pp. 538, 565, gives the same quantities of timber exports for both Arundel and Chichester in 1770-92, with figures for 1763-9 only for the latter; the bark tonnages are different. In Young, 1st ed. (1793), p. 85, he follows the Chichester table but does not name the Port; that it was Arundel is more probable. W. Marshall, *The rural economy of the southern counties* (1798), vol. 1, p. 127.

loads in 1818-23. Newhaven shipped ten cargoes of timber in 1821 and 21 in 1826, about two thirds going to north east England, 19 cargoes a year in 1833-5 and 25 in 1841. Shoreham's oak exports amounted to 40 cargoes in 1835. All of Rye's exports in 1841 were return cargoes for colliers, and the 33 cargoes of timber went mainly to the north east and 22 cargoes of bark mainly to Leith.[1]

Underwood products no doubt entered into the coasting trade but are not much in evidence, perhaps because of high local consumption as fuel in the 18th century and because overland carriage was, by the 1830s relatively important. From the centre of the county, bark, hoops, faggots and charcoal went by waggon to London and, in the case of faggots, to the military bakeries at Deptford. But hop poles, in so far as they were not locally grown, remained in the coasting trade: Rye received 17 cargoes from Chichester in 1841.[2]

Imports of softwood direct from Norway were made on a small scale before the 1680s when about 90 hundreds of deals (equivalent to about 350 tons) were landed annually in Sussex. In 1714-31, the quantity was a little over 100, which may have represented about five cargoes. No Port was clearly more important than the others in both periods. Direct importation seems to have declined in the middle decades of the century: Arundel received all its deals (about 700 a year) in 1734-43 from London, while Newhaven, Shoreham and Arundel between them had only five cargoes from Norway in the five years 1759-63. Imports may then have grown again from the 1770s, especially to Shoreham for building in Brighton. Table 5(A) gives some indication of the trade's scale around 1800.[3]

TABLE 5(A) ESTIMATED TONNAGE OF SHIPPING SPACE OCCUPIED BY ANNUAL FOREIGN IMPORT OF DEALS, MASTS AND UN-CUT TIMBER

	1790-2	1799-1801	1802-4	1805-7
Rye	408	848	1346	1479
Newhaven	1255	627	1469	1415
Shoreham	1338	743	1681	2586
Arundel	284	37	517	269
Chichester	945	726	617	442
Total	4230	2981	5684	6191

5(B) NO. OF CARGOES OF TIMBER FROM FOREIGN AND COLONIAL COUNTRIES

1830	1835	1839	1845
0	10	1	7
3	14	7	8
17	23	14	22
5	3	3	5
2	1	2	1
27	51	27	43

Table 5(A): B.P.P., 1802-3 (138), viii; 1808 (333), xi, converted by the method in Davis, p. 182, except that no allowance is made for other classifications of timber, which may mean that the figures are close to the actual weight of timber landed; all masts are assumed to have been small.

Table 5(B): C.L., Customs 32/106, 109, 112, 114.

The numbers of cargoes from Norway and Denmark in 1790 were, respectively, 3, 6, 7, 1 and 3, in vessels averaging 114 tons. The Ports receiving the greatest quantities were those serving the growing towns. Some timber continued to come via London and, for the western Ports a little later, Southampton. The timber for the new County Hall at Lewes, for instance, was selected on Thameside by the Clerk of the Peace in 1808, shipped to Newhaven, made up into rafts and poled up the Ouse. Indeed around 1820 Lewes merchants were reverting to coastwise importation, and in 1821 Newhaven received 11 cargoes of timber from London, as against only one each from Memel, Christiana and Quebec (the last being a sign of the beginning of

[1] *The Hastings guide*, 1st ed. (1794), p. 64. W. G. Moss, *The history and antiquities of the town and port of Hastings* (1824), p. 145. P.R.O., RAIL 853/12, 13. C.L., Customs 32/109.

[2] *Sussex Advertiser* (hereafter abbreviated to *S.A.*), 1841. A. Young, 2nd ed. (1808), p. 432. B.P.P. (Lords), 1836 (195), xxxiv, pp. 793, 803, 927, 1056-7. *S.A.*, 1841.

[3] Andrews, table 55. W.S.R.O., MF 36. B.L., Add. MS. 9293.

North American imports). But Table 5(B) shows substantial, if variable, levels of imports in 1830-45. In 1835, Newhaven and Shoreham's imports occupied about 2,850 and 4,500 tons of shipping space.[1]

THE COAL TRADE

Even before 1700, coal was the largest single import of the Sussex Ports, a reflection, though, more of the low level of imports than of an extensive use of coal, for no English county was further by sea from the coalfields. For Sussex around 1700, it was not true that coal ' had become almost the universal fuel for the innumerable lime kilns which served the husbandman in the country and the builder in the towns.' Lime was extensively used as a manure in the Weald from at least the early 17th century, but agricultural writers at the end of the 18th century still found most kilns fired with wood or furze, even including some of the large commercial works. Similarly, it is improbable that by then ' most English brickmaking . . . . was undertaken with the help of a coal or cinder fire ': even up to 1968 a wood-fired kiln was operated commercially in the Weald, and brick was a popular building material in the region from the late 16th century. If coal was carried far inland to heat the houses of the great, woodland growth was the fuel of the common people in the Weald, so much so that a traveller across the Kent/Sussex border in 1788 remarked that ' in this part of the county, they use a wood kitchen fire, as most of the Kingdom did formerly when wood was plenty; and a common cook here wou'd not know how to manage a coal fire.'[2]

The marginal nature of coal consumption around 1700 is suggested by the marked effect of war and increased freight costs. The total imports (all from the north-east) on the Sussex coastline averaged rather over 4,000 tons a year in 1689-97 and 1,000 in the war years 1702-13, but recovered to 3,700 in the following five years. Later wars, however, did not see such large cut-backs in supplies. Imports rose to some 8,000 tons in the course of the 1720s, then levelled off in the next two decades, but seem to have risen to about 15,000 tons during the Seven Years' War.[3] In 1780-2, imports were over 22,000 tons a year, and after the end of the war with France rose rapidly to 40,000 tons in 1788.

Thus in the course of 70 years there was a ten fold increase, with the fastest growth in the last decade. Improvements in inland navigation lay in the future, and the only industrial application of coal which may have appeared in the period was in malting: smokeless anthracite from Pembrokeshire was first imported to Chichester in 1716 and was being received at Arundel in the 1730s. Domestic consumption was probably mainly responsible for the increase. More coal may have been carried further inland: Henry Campion used some 38 tons a year during the 1750s at his house, Danny Park, which was nine miles from navigable water at Bramber, and by 1766 the living rooms and kitchen at Sheffield Park (11 miles from Lewes) had been

[1] P.R.O., Customs 17/12. A. T. Patterson, *A history of Southampton*, vol. 1 (Southampton, 1966), p. 125. R. F. Dell, ' The building of the County Hall, Lewes, 1808-12,' *S.A.C.*, vol. 100 (1962), pp. 6, 8. Horsfield, vol. 1 (1824), p. 338. B.P.P. (Lords), 1836 (195), xxxiv, p. 831.

[2] J. U. Nef. *The rise of the British coal industry*, vol. 1 (1932), map facing p. 19; pp. 205, 218. A. Young, ' A tour in Sussex,' *Annals of Agriculture*, vol. 11 (1789), pp. 235, 247. Marshall, vol. 2, p. 143. K. C. Leslie, ' Ashburnham estate brickworks 1840-1968,' *Sussex Industrial History*, no. 1 (1970), p. 2. M. Holt, ' Early brickmaking in Sussex,' *S.N.Q.*, vol. 17 (1968-71), pp. 164-5, 207. J. L. M. Gulley, ' The great rebuilding in the Weald,' *Gwerin*, vol. 3 (1961), pp. 10-11. *The Torrington diaries*, ed. by C. B. Andrews, vol. 1 (1934), p. 352.

[3] Most tonnages are estimated from Customs dues collected. Andrews, tables 45, 46; p. 293. B.L., Add. MS. 9293, assuming the figures are of annual imports in Winchester chaldrons.

equipped with coal grates. In 1793 Young found some labouring families consuming around 10 bushels a year. So far as the distribution of the imports between the Ports indicate, no part of the county clearly increased its consumption faster than other parts: between 1714-18 and 1788 Rye increased its share, but mainly at the expense of its neighbour Newhaven.[1]

TABLE 6 ANNUAL IMPORTS OF COAL TO SUSSEX PORTS

Tons	1714-18	1750	1780	1788	1807	1820	1829
Rye	439	1489	4404	9407	22134	34521	32616
Newhaven	834	2059	4796	6592	16718	27567	27280
Shoreham	925	2457	3873	9512	22100	43341	59981
Arundel	490	1320	2579	3821	13425	20332	21826
Chichester	1037	2223	5632	9207	12141	*21537	*22872
Total	3725	9548	21284	40894	86518	147298	164575

*includes Emsworth

Sources *Calendar of Treasury Books* 1714, pt. 1, pp. ccclxxvi-xxxi; Andrews, table 46; Abbot, account 139; *Universal British Directory*, vol. 1 (1790), p. xxviii; B.P.P., 1808 (69), xi; 1830 (9), viii; (Lords), 1830 (118), cclxxvii, p. 262.

In the next 40 years, the rate of growth was nearly as great as that of the 1780s, with a four-fold increase to 165,000 tons in 1829 (Table 6). Shoreham saw the greatest increase, nearing 60,000 tons in 1829. The slowest growth was at Chichester, in part because the Portsmouth & Arundel Canal did not extend its hinterland for coal. Rye and Arundel expanded their imports roughly in line with each other, Newhaven rather more; the hinterlands of the last two were much extended by inland navigation. Of Rye's total a fairly consistent one-third was landed on the beach at Hastings; probably significant quantities were now landed at Eastbourne.[2]

The decades around 1800 saw the introduction of coal to industrial and commercial activities which were to be large consumers. Coal replaced furze in limeburning, and the navigations allowed not only coal to be carried to the chalkpits, but also the lime to be more widely distributed and so consumed in greater quantity. Referring to the Rother and Arun navigations, Young reported in 1808 ' that land which is at present used in cultivating furze, can in future be sown with grain, according to the distinction which nature has drawn, that the bowels of the earth should warm us, and the surface feed us.' The tripling of coal imports at Newhaven between 1794 and 1805 was attributed principally to the general use of lime as manure. But the substitution of coal in other trades was evident during a serious shortage of underwood in 1792. The brickmakers on the Dicker resolved to use coal in future, and those in the neighbourhood of Lewes who did likewise found a saving of one third in the expense of burning and had only half the trouble in controlling the kiln's heat. Mr. Figg, baker of Lewes, was induced to heat his oven with coal, ' by which he will experience a very considerable saving and perform his business equally well '; if other bakers followed him, faggots would be saved, their price reduced and the poor relieved. The infant gas industry began to make calls on coal supplies from 1818 (Brighton) and 1822 (Lewes). The steam engine made its appearance in Sussex (a brewery in Brighton had one installed in 1807), and steam boats were running across the Channel from Brighton from 1822.[3]

[1] Nef, vol. 1, p. 215. W.S.R.O., MF 36. E.S.R.O., Danny MS. 2201, ff. 69, 71-72. F. W. Steer, ' A Sussex mansion in the eighteenth century,' *S.A.C.*, vol. 94 (1956), pp. 19-31. Young, 1st ed. (1793), p. 92.

[2] Moss, pp. 144-5. C.L. Customs 32/106, 107.

[3] Young, 2nd ed. (1808), p. 423. *S.W.A.*, 3 Mar. 1806, 21 May 1792, 7 Jan. 1793, 23 Jan. 1792, 14 Mar. 1807.

Though there is much less statistical information for the period 1830-66 than for the preceding and succeeding years, a description of coal distribution immediately before the onset of railway competition can be attempted.[1]

The scale of imports at Eastbourne, Hastings and Rye is indicated by the numbers of cargoes received in 1830 (54, 116 and 121 respectively), when the total for the Port was about 33,000 tons. Coal from Rye went up the Rother to Bodiam Bridge and by land at least as far as Robertsbridge; a special local use was of Welsh coal for drying hops. Hastings' share of the Port's total in 1830 was 12,000 tons; seven years later it was up to 17,600, in 169 cargoes. Of that, though, 2,400 tons were landed just west of the town, perhaps to avoid the local dues, 2,200 tons in 17 cargoes at St. Leonards and 1,400 tons in 18 cargoes at Bexhill. Some coal also passed through the town to outlying areas: in 1852, when the railway brought little or no coal, about 19,000 tons came by sea and a third went outside the town. Eastbourne may have supplied inland to Hailsham. In 1836, Newhaven imported 36,000 tons; most was barged to Lewes. Places as far away as Cuckfield to the north and Hawkhurst to the north east were said to be supplied by road, but much coal must have passed onto the Upper Ouse Navigation for Lindfield and the intervening district, and (by road from the upper reaches) occasionally Reigate. Reigate lay at the limit of the London market and there coal was at its dearest; hence, a dealer said, wood was used in many instances. The occasional collier may have beached at Seaford (there are references for 1793 and 1848). The Cuckmere valley at least as far as Alfriston got coal by barge from Newhaven.

Brighton was said in 1824 to receive ' very considerable supplies ' from Lewes, but this traffic is unlikely to have survived the improvements to Shoreham harbour and to the coast road, and its demise may account for the temporary decline in Newhaven's imports in 1827-9. The Shoreham improvements ensured the transfer of the bulk of Brighton's beach trade to the harbour by 1830. Of a little over 60,000 tons landed in the Port each year in the mid 1830s, some 4,000 seem to have passed over the beach at Worthing, but the balance entered the harbour unless there was direct importation to the gasworks at Black Rock. From Shoreham, 45,000 or so tons went to Brighton, and some 10,000 tons up the Adur Valley, to Steyning, Bramber and Horsham (the last consuming 5-6,000 tons). Arundel's hinterland was wider still. Of, say, 30,000 tons entering Littlehampton (where at least 80% was discharged) in the early 1840s, at least half was transferred to barges: some 4,000 tons passed through the Wey & Arun Canal to the Wey Navigation, for Guildford and Godalming, perhaps a similar amount to places near the Wey & Arun, while Midhurst, Petworth and other settlements near the Rother Navigation took some 6,000 tons. The only colliers to pass up river were likely to be those with cargoes for Arundel itself or for land carriage from there.

The Port of Chichester's imports were probably landed at more points than in the other ports. For the supply of Chichester itself, the 5,000 tons landed annually at Dell Quay, and the same amount at the Canal Basin, in 1848-50 may represent a peak. Most of the Selsey peninsula was probably supplied through Itchenor and Sidlesham. Town dues were paid on some

[1] Particular use is made of: B.P.P., 1847-8 (728), li; 1851 (689), liii; 1854 (11), lxv; (Lords), 1836 (195), xxxiv; C.L., Customs 32. Also: Sussex Archaeological Trust, CO/c225, Rye & Robertsbridge canal prospectus; B.P.P., 1837 (238), xxviii; (Lords), 1854, xxxiii, p. 28; Hastings Museum (Muniments Room), H. 149; G. F. Chambers, *East Bourne memoirs* (Eastbourne, 1910), p. 51, plate 50; P.R.O., RAIL 853/12, 13; E.S.R.O., Langridge MS. 14; LH 4, 30 May 1848; LH 17, 5 June 1848; Horsfield, vol. 1, p. 338; W.S.R.O., IN/Arun/F4/1, 5; P. A. L. Vine, *London's lost route to the sea* (Dawlish, 1965), p. 152.

1,600 tons a year at Bognor in the later 1840s, which were landed on the beach. Half a dozen other places received the occasional cargo, but the most important single landing place was Emsworth (around 10,000 tons), with a relatively wide landward distribution.

OTHER EXPORTS

Corn and timber in their various forms comprised the great majority of the outward cargoes of the Sussex Ports. But there were exports in other commodities for which Sussex was as famed.

One of these was wool. By the 1720s, smuggling of it from the vicinity of Rye to France was in decline though it continued until the 1790s.[1] Probably more significant in volume was the legal coastwise trade. This was mainly from Rye and after considerable expansion in the previous 60 years averaged 108 tons a year in 1714-19 and 397 tons in 1735-43. Except for a small trade with Southampton built up in the 18th century, Rye's wool went about equally to London, probably for onward carriage to the north, and to Exeter for the serge industry. Exeter's share had increased since the prohibition of imports from Ireland in 1693 and reached 261 tons in 1743. But in the second half of the century less was going to Exeter which drew increasing quantities from Dover, and more, at least in 1758-64, was going to London. Though Exeter still received 128 tons in 1784, the traffic did not survive the collapse of the overseas serge trade from 1797. A cargo of 14 tons to Hull in 1775 does not seem to have been part of a regular trade.[2]

Information from the early 19th century is lacking though continuance of shipments can be assumed. A new branch of the trade developed by about 1832, to France and Belgium, usually with at least 30 cargoes a year. By 1840 it was concentrated at Nieuport. Newspaper reports of 1840-1 refer to no other shipments in those years, but wool may have continued to go to London under the guise of general cargo.[3]

The wool shipped through Rye was the longer clip grown on Romney Marsh and so mainly in the county of Kent. The wool more associated with Sussex was the highly esteemed short-staple fleece from the South Downs which made Sussex one of the leading wool producing counties by 1700. In 1792 some quarter of a million sheep and 80,000 lambs were kept on the Downs within ten miles of the coast. Although the fleeces were not processed locally, negligible quantities passed through the Ports until a trade developed at Chichester in the 1730s where exports averaged 37 tons in 1735-43. By the 1780s production in the Chichester area had fallen to 60% of the level 70 years before so probably the exports were not maintained. Although Lewes was the market centre for the area where the greatest results were achieved in improving the quality and quantity of wool produced and although it had ready access to Newhaven most of the clip was evidently carried overland. Eight or nine cargoes cleared Newhaven coastwise annually in 1833-5 and in 1841 Hull was sent four cargoes. The fine quality wool was one of those commodities which, with its fairly high value to bulk and liability to damage from damp, and the relative distances by land and sea from west of Beachy Head, could bear the higher transport costs. ' Large quantities ' went by road from Chichester in 1784 to London and onwards to

[1] P. J. Bowden, *The wool trade in Tudor and Stuart England* (1962), pp. 194-202, 212-13. Defoe, *Tour*, p. 51. Abbot, reports 82-85, 87, account 456.

[2] Andrews, pp. 209-10, table 28. Clark, pp. 139, 215. B.L., Add. MS. 9293. W. G. Hoskins, *Industry, trade and people in Exeter 1688-1800* (Manchester, 1935), pp. 35, 170-5. G. Jackson, *Hull in the eighteenth century* (1972), pp. 364-5.

[3] J. D. Parry, *An historical and descriptive account of the coast of Sussex* (1833), p. 297. C.L., Customs 32. *S.A.*, 1840-1.

Yorkshire, and in 1812 a Chichester carrier's business with three wagons was offered for sale with the recommendation that the considerable quantities of wool sent to London gave a good uploading.[1]

Hops were again mainly an export through the Port of Rye and production further west in the county may have relied more on land carriage. On an average in the second half of the 17th century Rye shipped 18 tons a year and the other Ports six tons. Two thirds of the former went to London and a third to Devon where most of the latter went. Later information on the trade in hops is very limited, but it was probably further concentrated at Rye and Hastings with large increases in volume by the 1830s. Hastings's exports averaged 24 tons in 1790-4 and 231 tons in 1833-7, and Rye in 1841 dispatched 36 cargoes, all to London and all in the seven weeks between 21 September and 6 November.[2]

Another export principally of the Port of Rye was cured herrings which were almost the only fish distributed by sea. The surviving Port Books show shipments from Rye and Hastings, mainly to London, up to 1714 (59 and 56 barrels of 1,000 fish a year on average for the previous 50 years), and from Hastings to western ports, particularly Portsmouth and Poole, at later dates up to 1750 (e.g., 250 barrels a year to Portsmouth in 1718-20, and 409 to Poole in 1726-32). Hastings and Rye also had foreign exports which averaged 68 and 11 barrels in 1668-1728 and, for the entire Port, nil in 1762-70 but 131 barrels a year (all red herrings) in 1771-96. The quantities in the Brighton and Shoreham Port Books are minute, and though it was said that the greater part of the catch was cured and mostly sent to foreign markets, exports from the Port of Shoreham were nil in 1762-70 and 1787-96 and averaged only seven barrels a year (all red) in the intervening period. Hastings's total production for market was given in 1794 as 1,500 barrels which may well have included fish caught by Brighton boats but landed at Hastings.[3] But in the war years that followed privateers in the eastern Channel and the contraction of foreign markets afflicted the fishery, and certainly there was decline in the decade following 1815. A Hastings shipment of 900 barrels to Venice in 1816 appears to have been an isolated attempt to revive foreign exports, and the trade in herrings at Brighton was reported ' very much declined ' in 1818. On the south coast in 1821 fishermen at only Dover and Portsmouth received the Government's herring bounty.[4]

The bulk of products of the Wealden ironworks ensured that carriage by water was preferred, but inland navigation to the Sussex harbours was improved too late to be used by them before the industry's final extinction in the early 19th century. Hence ironworks in west Sussex, such as Warren and Gravetye in 1761, used land carriage, and most seaborne iron passed through the east Sussex ports. In the last Port Books, 1702-13, Rye shipped 210 tons a year, Hastings 3 tons and Newhaven 88 tons: less than half the later 17th century levels. Almost all the iron went to London, the guns to the Tower for proving. The Ports of both Rye and Newhaven were still shipping ordnance in the years 1746-64. Hastings exported 278 tons a year in 1779-83 but only 84 tons in the next five years and almost none in 1788-9. Some small shipments

[1] Bowden, pp. 34-6, 40, 51. Young, 1st ed. (1793), p. 57; 2nd ed. (1808), pp. 301-2, 311, 351, 360, 375. Andrews, table 28. C.L., Customs 32/109. *The Chichester guide* (Chichester, ?1784), p. 57. *S.W.A.*, 6 Jan. 1812.

[2] Andrews, p. 215, table 29. J. M. Baines, *Historic Hastings*, 2nd ed. (Hastings, 1963), p. 245. *S.A.*, 1841.

[3] Andrews, pp. 232-4, table 35. Abbot, account 921(1). A. Relhan, *A short history of Brighthelmston* (1761), p. 17. *Hastings guide*, p. 61.

[4] *S.W.A.*, 8 Jan. 1816. C. Wright, *The Brighton ambulator* (1818), p. 97. B.P.P., 1822 (39), viii.

of guns and shot in 1809 and 1812-13 from Newhaven to Portsmouth may have been the end of the traffic.[1]

Finally we may note two items extracted from the beach and cliffs, neither of which was recorded in customs statistics but both of which were probably greater in volume than any other exports mentioned in this section. First, from at least 1768 chalk was brought from Beachy Head to lime kilns at Hastings. In 1794 the amount burnt was given as 120,000 bushels, which would have needed some 750 tons of coal. The kilns stopped working in 1816. Chalk was also supplied to kilns at Rye and Bexhill, and the total extracted was given in 1793 as about 350,000 bushels or 633 sloop-loads with 14 sloops of 30 to 40 tons employed for seven or eight months of the year. Lime from the Dallington kilns of the Earl of Ashburnham was at the same date stated to be exported to London via Hastings.[2]

Secondly, a large-scale trade in ' boulders,' or flints picked off the beach, dated from the early 19th century at Newhaven, whence the boulders were sent principally to Liverpool for use, after grinding, in the potteries of Staffordshire and the glassworks of Runcorn. The traffic was not evident in 1811, but in 1819 Newhaven shipped nearly 4,400 tons and a thousand more in 1823; cargoes averaged around 80 tons and often went in vessels which had entered in ballast from London where they had perhaps discharged outward cargoes of salt from Liverpool. In 1826, 13 out of 50 cargoes were for Newcastle or Sunderland in returning colliers, but that was an uncommonly high proportion. The trade was still at that level in 1841. From at least 1852 Rye shipped flints which in 1863 were named as a principal export.[3]

OTHER IMPORTS

Second to coal, the main import, came a variety of animal products. That the trade in these grew to any size only after about 1770 suggests that previously local demand was met by the predominantly pastoral economy of the Weald but that the extension of corn production (and rising demand) opened the way to imports.

First, there was dairy produce. At least as early as 1760, Lewes merchants offered Warwickshire and Cheshire cheese and York butter for sale. Derbyshire cheese appears in 1774. Some of these products may have been redistributed from London: London merchants in 1751 claimed to supply part of Sussex by land with cheese and butter from counties north of the Thames. But 60 tons of cheese did come to Newhaven by sea from Hull in 1775. Dutch cheese and butter were on offer in 1769 and were directly imported at least from 1790. The quantities received in 1820 were described as large, and in 1826 amounted to eight cargoes, a level apparently maintained up to 1841. Ireland was the third direction from which butter came, being on sale in Lewes in 1770, along with Irish bacon. Such imports would not have predated the suspension of the Cattle Acts in 1758. The existence of a local newspaper carrying advertisements allows

[1] Andrews, tables 39, 40. W. P. Breach, ' Extracts relative to Sussex ordnance from a carrier's account book, 1761,' *S.A.C.*, vol. 46 (1903), p. 53. *Travels . . . Pococke*, p. 99. B.L., Add. MS. 9293. M. C. L. Salt, ' The Fullers of Brightling Park, ii,' *S.A.C.*, vol. 106 (1968), pp. 80, 87. *Hastings guide*, p. 64. C.L., Customs 56/19.

[2] Baines, p. 246. *Hastings guide*, p. 65. [M. M. Howard], *Hastings past and present* (Hastings, 1855), p. 36. T. Pennant, *Journey from London to the Isle of Wight*, vol. 2 (1801), p. 35. Young, 1st ed. (1793), p. 31.

[3] B.P.P., 1824 (364), xviii. Horsfield, vol. 1, p. 338. P.R.O., RAIL 853/12, 13. *S.A.*, 1841. E.S.R.O., S/RH/SO4, 20 Jan. 1853. J. W. King, *The Channel pilot*, vol. 1, 2nd ed. (1863), p. 220. Jackson, pp. 372-3, records a cargo of 25 tons from Newhaven to Hull in 1775.

that much to be said in respect of Lewes. Unless Brighton was supplied through Newhaven, we can expect that Shoreham was building up a similar trade, and likewise Chichester.[1]

Nevertheless the volume of such Irish imports cannot have been large in that the total Irish traffic recorded in Table 7 included that in oats (see Table 3 above).

TABLE 7 VESSELS ENTERING SUSSEX PORTS WITH CARGOES FROM IRISH PORTS

	1790		1811		1823	
	number	tonnage	number	tonnage	number	tonnage
Rye	—	—	—	—	10	509
Newhaven	9	678	11	693	24	1437
Shoreham	4	308	12	537	27	1375
Arundel	7	328	—	—	6	379
Chichester	12	850	18	1217	8	403
Total	32	2144	41	2447	75	4103

Sources P.R.O., Customs 17/12. B.P.P., 1824 (364), xviii.

Thirty one and 56 of the cargoes in 1811 and 1823 came from Waterford.

At the end of our period the volume of cheese imports from across the Channel (probably in the main from Holland) is known. Possibly trade on the scale indicated in Table 8 dated back to about 1830 at Rye and Newhaven, but to later elsewhere. Thanks to the railway, it was short lived: imports to Chichester ended in 1845 and fell sharply at Rye (which had a twice monthly steamer service with Rotterdam in 1839 but no longer in 1841).[2]

TABLE 8 IMPORTS OF CHEESE AT THE SUSSEX PORTS FROM EUROPE

Tons	1835	1841	1846	1851
Rye	?	486	322	74
Newhaven	319	473	410	292
Shoreham	179	263	322	244
Arundel	?	—	—	—
Chichester	?	41	—	—
Total		1263	1054	610

Sources B.P.P. (Lords), 1836 (195), xxxiv, p. 829; 1842 (184), xxxix; 1847 (414), lix; 1852 (412), li.

Another source of fresh provisions was France, particularly from 1814 when small boats appeared at Hastings, Newhaven, Brighton and Shoreham with a great variety of produce: poultry, eggs, butter, fruit, walnuts, etc. As the trade became established, the main items emerged as eggs and fruit (particularly apples). Newhaven received 42 cargoes, all from Fécamp, in 1821, but none in 1826, probably having lost the trade to Shoreham where vessels of 20 to 39 tons brought 104 cargoes in 1835 including 6 million eggs (about 200 tons) and 15,667 packages of fruit (of which at least 80% went to London). Rye Harbour received around 18 similar cargoes a year in the 1830s.[3]

There was also some traffic in livestock. In 1821, several cargoes of sheep were brought from Totnes to Shoreham, for Brighton market, but more often the traffic was cross-Channel. Two Dutch vessels were at Rye selling cattle and hogs in 1814, while cows from the Channel Islands were on sale in Lewes in 1822 and 1840. Rye also imported animal feedstuffs besides oats; oil cake, either ready crushed or as seed for local processing, was a regular import from the South Baltic and France in the 1830s, along with woollen rags (particularly from Hamburg)

[1] *S.W.A.*, 24 Nov. 1760, 28 Nov. 1774, 29 Aug. 1806, 27 Mar. 1769, 29 Oct. 1770. *Journals of the House of Commons*, vol. 26 (1751-4), pp. 273-4. Jackson, pp. 376-7. E.S.R.O., Langridge MSS. 14, 42. *S.A.*, 1840-1.

[2] C.L., Customs 32/106. *Robson's commercial directory . . . for 1839*, Sussex section, p. 101.

[3] *S.W.A.*, 18 Apr.-28 Nov. 1814. P.R.O., RAIL 853/12, 13. B.P.P., (Lords), 1836 (195), xxxiv, 0pp. 811, 829-30. C.L., Customs, 32.

which manured the hopfields and also came from London as a return load in hop wagons. The volume of these two imports was given as 15,000 tons in 1834, perhaps in error for 1,500 tons, as the number of cargoes was 18 in 1833, rising to 38 in 1844. One or two cargoes of cake and seed came to Newhaven in the 1830s, five in 1844 and seven to Shoreham in the same year.[1]

The most important mineral import after coal was salt. Up to 1688 over half came from France, Spain and Portugal, but thereafter reliance was entirely on supplies from north-east England and Hampshire, with the latter meeting all Shoreham, Arundel and Chichester's needs in 1702-13 (with annual averages of 75, 71 and 118 tons). Newhaven drew its 18 tons from the north-east while Rye had no imports and presumably used salt from local evaporation pans. From the early 19th century all these sources of supply were being supplanted by Cheshire's brine and rock salt, shipped via Liverpool. At Newhaven the change began between 1821 and 1826: in the former year, Lymington sent ten cargoes in the *Happy Return*, 30 tons, and in the latter year five, but four further cargoes came from Liverpool.[2]

The absence of quarryable hard stone in coastal Sussex meant that there were steady imports of building stone. Littlehampton received stone from Portland and paving stones from Poole in the 1730s. Newhaven in the 1820s drew supplies also from the south-west—Paignton, Plymouth and Falmouth—and received slates from Bangor. In the decade 1811-20 annual imports of slates in the county were valued at about £1,700, with 38% going to Shoreham, 36% to Newhaven, 17% to Arundel, 6% to Chichester and 2% to Rye, a distribution reflecting both the demand of building in Brighton and the availability of clay for tiles in the Weald. In the year 1829-30, the numbers of slate cargoes landed in the Ports were, in the same order, 6, 3, 5, 1 and 2.[3]

Manufactured goods were imported throughout the period but they are difficult to identify as to type and quantity. Many items arriving in small parcels were concealed under the description ' general cargo ' and came from or via London (see below). But there is evidence of a small but regular trade at Newhaven in metal goods from Hull, from at least the late 1750s; in 1775 the rather larger than usual number of six cargoes carried not only re-exported Baltic goods, such as Russian and Swedish iron, pitch and tar, but also bundles and parcels of ironmongery, bags of nails, iron pots, bundles of scythes, shovels and spades, and boxes of tin plates. By 1821 Newhaven also obtained iron from south Wales. Bottles came from Newcastle and Sunderland to Littlehampton in the 1730s and '40s.[4]

Manufactured goods also came from the opposite side of the Channel, particularly in conjunction with the passenger traffic which will be the subject of a separate article and is therefore only briefly mentioned here. By 1700 the earlier regular service through Rye to France had probably ceased and none operated from the Sussex coast until 1763, and then between Brighton and Dieppe. That route was served during the summer months in peace time by a rising number of sailing boats, reaching 13 in 1820. Some were based at Newhaven, the majority at Shoreham. Two years later steamers started quickly to displace the sailing boats. In 1825 the General Steam Navigation Co. acquired an interest in the service and soon had a monopoly, at first with its two boats based at Newhaven (where in 1828 the Customs officers reported a new trade in

[1] *S.W.A.*, 26 Sept. 1814, 30 Aug., 17 Sept., 5 Oct. 1821, 11 Feb. 1822. *S.A.*, 1840, espec. 5 May. Sussex Archaeological Trust, CO/c225. B.P.P. (Lords), 1836 (195), xxxiv, p. 996. C.L., Customs 32.

[2] Andrews, tables 50-52. P.R.O., RAIL 853/12, 13.

[3] W.S.R.O., MF 36. P.R.O., RAIL 853/12, 13. B.P.P., 1822 (161), xxi; 1830-1 (354), x.

[4] Jackson, pp. 348, 376-99. P.R.O., RAIL 853/12, 13. W.S.R.O., MF 36.

' fancy goods ' from France) but after five years at Shoreham where a special landing stage was constructed. From 1823 passengers also landed and embarked at Brighton's Chain Pier.[1] Attempts to start services from Rye, usually to Boulogne, are evident in 1814, 1818, 1823 and 1838.[2]

The Newhaven Customs officers in 1820 were convinced that smuggling and not passengers were the main support of the cross-Channel boats. Indeed it was estimated that in (probably) 1780-2, 350,000 gallons of spirits and 1,000 tons of tea were annually smuggled from the Continent to the Sussex coast. The actual quantities may have been about double, giving a total of 5,000 tons when illicit trade was flourishing, perhaps greater than ever before but not as extensively as after 1793. Though the tonnage probably exceeded that of all goods legally imported from foreign countries, it was small by comparison with the coastal trade, the goods were not such as otherwise would have been imported through Sussex, the vessels operated on short routes with a rapid turnround, and generally avoided the landing places of legal trade. Probably smuggling was on the decline from 1817 when the Coastal Blockade was instituted.[3]

Apart from the trade with Scandinavia and the Baltic there was some overseas contact beyond the English Channel. A few cargoes of corn went to Portugal and the adjacent coast of Spain and less frequently still, into the Mediterranean. From the Peninsula came wine. Small importations around 1760 are recorded in all five ports and may well have begun in the previous thirty or so years, prior to which all wine had been received via London. The introduction of the bonding system in the second decade of the 19th century encouraged the traffic to provincial ports, and Shoreham became the main centre on the Sussex coast.[4]

Possibly more extensive overseas links lay behind the sparse references to cargoes of corn outwards and wine inwards: return cargoes may have been carried to London. Kept no doubt for its description of the Portuguese earthquakes of the previous month, a letter of December 1755 from Thomas Bean, on board the brig *Bean Blossome* at Faro, to Jarvis & Carden, its Lewes owners, shows that Bean had at some stage called at Madeira and hoped to leave Faro soon with a cargo of cork, oranges and lemons, and to find a market for a small quantity of Madeira wine on his way up the Channel. There is also evidence of trading ventures further afield: in the same year of 1755, subscriptions were invited for shares in a capital of £5,000 to fit out a vessel from Lewes. At least two cargoes were sent in the next two years to Barbados, in the *Lewes* and the *Warren*, which may have carried corn from England and wine from Madeira and returned with sugar, rum and, again, Madeira wine. An advertisement of 1772 offering Jamaica rum made by the seller's son suggests that Lewes then received West Indian cargoes direct. And Young noted a kiln constructed near Petworth, probably in the early 1790s, for making bricks for the West Indies.[5]

[1] Dardel, pp. 344-5, *S.W.A.*, 1764-92. B.L., Add. MS. 33658, journal of Rev. J. Skinner, 7, 19 Feb. 1821. *Brighton Gazette*, 23 May 1822. L. C. Cornford, *A century of sea-trading 1824-1924* (1924), pp. 7, 27. C.L., Customs 32/104. W.S.R.O., SH 7/7/195.

[2] *S.W.A.*, 18 Apr., 16 May 1814. H. W. Hart, ' Two early cross-channel passenger services,' *J. Railway & Canal Hist. Soc.*, vol. 11 (1965), pp. 3-4. Extracts from *Lloyd's List* kindly lent by David Robinson, Colchester.

[3] C.L., Customs 56/1, 23 Nov. 1820. A. L. Cross, *Eighteenth century documents relating to the royal forests, sheriffs and smuggling* (Ann Arbor, 1928), pp. 227, 241. W. A. Cole, ' Trends in eighteenth century smuggling,' *Econ. Hist. Rev.*, 2nd ser., vol. 10 (1957-8), p. 405.

[4] B.L., Add. MS. 9293. *Brighton Gazette*, 1 Mar., 27 Sept. 1821. H. E. S. Fisher, *The Portugal trade. A study of Anglo-Portuguese trade 1700-1770* (1971), p. 77.

[5] Sussex Archaeological Trust, DM 281. E.S.R.O., Shiffner MSS. 2721-6. *S.W.A.*, 24 Feb., 6 July 1772. Young, 2nd ed. (1808), p. 436.

THE COASTING TRADE WITH LONDON

Though it was part of many of the commodity trades described above, the traffic to and from London was so extensive and so regular that it deserves separate treatment. By early in the 18th century there was, in all probability, a couple of ships owned in each Port which were employed almost solely in sailing between one or two points on the Sussex coast, and London. Thus at Arundel in 1739, five Arundel vessels carried all the 20 cargoes received from London, the majority coming in the *Arundel* (24 tons, 6 cargoes) and the *Providence* (16 tons, 7 cargoes) which traded to no other ports, while the *Thomas and Elizabeth* (26 tons, 5 cargoes) made only one other voyage, to Newcastle. The outward cargoes were more numerous, 49, so more vessels were involved, but the same three carried 22 of them; a further 23 went in five other Arundel vessels, nine of them in the *Edward and Mary* (40 tons) which was presumably employed in bring ing coal to somewhere else locally, as it never entered Arundel with cargo. The imports were almost exclusively groceries (some 200 tons) and timber (say 20 tons), and so largely foreign produce being distributed from London: groceries included sugar, wine, raisins, tea, coffee, etc., and the timber was deals and spars from Scandinavia. Thus London's dominance in the foreign import trade was underlined, a dominance which was only slightly weakened as the century proceeded.

The main commodity sent from Arundel to London was timber (principally oak), followed by wheat and flour, and then by lesser quantities of bark, bran and a host of other things in small lots: some raw materials (for example, ochre, horsehair), others manufactured (soap, beer, and spade handles among them).[1]

The trade in the other Ports was broadly similar, though (as has been seen above) the relative importance of corn and timber as exports varied, and other commodities made an appearance such as wool, hops and iron from Rye. If the increase from about five inward cargoes a year at Arundel in the second half of the 17th century, to 20 in the 1730s, was typical, then the trade had grown substantially. As to exports, 210 cargoes from Sussex Ports were entered at London in 1728: from Rye 31, Newhaven 26, Shoreham 37, Arundel 43, Chichester 73. The excess of exports to, over imports from, London probably lasted until the last quarter of the century.[2]

The way in which the traffic was organised is reflected in an advertisement of 1772:

> Notice is hereby given that Benjamin Bossom and Thomas Massy, Masters of trading sloops from Newhaven to London, have mutually agreed to take in lading for the future at Hilditch's Wharf, Southwark, only; and it is particularly desired that all merchants, traders and others, will give directions to their correspondents, that their goods may be delivered at the said wharf, within such a number of days as will be notified from time to time, by the Common Cryer of Lewes, for that no goods, after the expiration thereof can be taken on board the said vessels; the said Thomas Massy and Benjamin Bossom having confined themselves to sail always agreeable to such notice as shall be so given by the said Cryer.

In 1790, three vessels were trading to Rye, three to Hastings, two each to Newhaven and Shoreham, and four in all to Arundel and Chichester. Not until after 1815 were the vessels announced as sailing at regular intervals, normally weekly (one vessel doing a round trip in a fortnight). The number of vessels increased, with, in 1839, eight trading to Rye, ten to Hastings, two to Lewes, five to Shoreham and four to Chichester. By then the coasting vessels to Arundel had been superseded by Seward & Co.'s barges down the Wey & Arun Canal, which carried an average of 2,662 tons from London to Arundel, and only 1,594 tons in return, in 1836-9. New-

[1] W.S.R.O., MF 36.

[2] Andrews, table 56. W. Maitland, *The history of London* (1739), p. 621.

haven received between 40 and 50 cargoes in 1821 and 1826, and also in 1840, and dispatched rather fewer. The steamboats which were operating to the west country in the 1830s called off Hastings and Brighton for passengers only.[1]

If any branch of seaborne trade was affected by competition from improved inland transport, it was that with London. The Wey & Arun Canal has been mentioned in respect of Arundel, but for the other Ports any effect is less easy to define. However, the substantially greater number of vessels regularly trading to Rye and Hastings reflects the relatively shorter route compared with land, to the eastern ports as against the western: Hastings was 70 miles by land and 125 by sea, while Shoreham was 60 by land and 170 by sea and the roads to Brighton were the best in Sussex. The rather cryptic figures for existing traffic presented by early railway promoters show, in 1835, 5,200 tons of general goods carried between London and Brighton by road (in 18 hours) and 3,380 tons between London and Shoreham by sea (in seven days). A leading Lewes merchant implied that about two-thirds of the town's traffic with London was by road, even though it cost twice as much as by sea.[2]

CONCLUSION

The Sussex Ports have few if any rivals among the Ports of England in the poverty of their official records surviving from the 18th and early 19th centuries, whether Port Books, Customs records or harbour commissions' papers. There is little likelihood of further records coming to light which can add substantially to the description of traffic presented above. The direction of further research should thus not be to elaborate the details of seaborne trade but rather to elucidate the changes in the local economy at which the evidence above hints. In particular, traffic through the Ports appears to have risen ahead of the county's population growth which seems to have started in the 1760s, and grew fastest in *c.* 1785-1815 which was not the period of fastest population expansion. Secondly, a major characteristic of the changes in the composition and volume of traffic was the demise of local self-sufficiency and the rise of dependency on imports. What is worthy of research is how Sussex farmers varied their outputs, both to produce the greater exportable surpluses in the earlier 18th century, and then to respond to expanding population and competing imports; and how the new urban centres were provisioned not only with foodstuffs but also fuel and building materials.

[1] *S.W.A.*, 30 Nov. 1772. *Universal British directory*, vol. 1 (1790). *Pigot & Co's London & provincial new commercial directory for 1823-4. Robson's . . . 1839*, pp. 958-69. W.S.R.O., IN/Arun/F5/1. P.R.O., RAIL 853/12, 13. *S.A.*, 1840. National Maritime Museum, L 60/11, sailing bill.

[2] B.P.P. (Lords), 1836 (195), xxxiv, pp. 882, 985-95.

CRICKET AND THE SUSSEX COUNTY BY-ELECTION OF 1741

by Timothy J. McCann

On Sunday night, 17 May, 1741, Andrew Stone, secretary to the Duke of Newcastle, wrote to Charles Lennox, 2nd Duke of Richmond:

> " My Lord Duke of Newcastle receiv'd this evening an account from Worminghurst, of the death of Mr. Butler, which happen'd this morning at eleven o'clock; and as My Lord Duke and Mr. Pelham think it absolutely neccessary that some resolution should be taken without loss of time, with regard to the county election I am order'd to dispatch this messanger to your Grace very early tommorrow morning, to beg that you would be so good as to put off your going to Sussex, for a day or two, that his Grace and Mr. Pelham (who will be in town tomorrow before noon) may have an opportunity of concerting with your Grace what may be most proper to be done upon this melancholy occassion ".[1]

James Butler, together with Henry Pelham, younger brother of the Duke of Newcastle, and shortly to be first Lord of the Treasury, were the sitting members for the county seat, having been elected on 6 May, 1741. In the previous election of 1734, a poll had been held for the county, with Sir Cecil Bisshopp of Parham, and John Fuller of Brightling standing in the opposition interest. The contest then was said to have cost the Duke of Newcastle £10,000, and this was more than the opposition leaders could afford in 1741. Butler was an unpopular candidate, but Bisshopp and Sir John Peachey of West Dean declined to stand, in spite of the promised support of the aged Duke of Somerset. Samuel Medley of Buxted canvassed in the opposition interest, but died of smallpox just before the election. Eventually Pelham and Butler were returned unopposed.[2] Only eleven days later, however, Butler's death caused a vacancy.

Sussex, which returned twenty-eight members of Parliament, was a very important county in electoral terms. The dominant interest in the county was that the of Duke of Newcastle, who had managed the elections with a combination of personal and family connections, and the liberal use of money. As a result of his influence, the county seats as well as the majority of the boroughs were overwhelmingly represented by Court Whigs. Newcastle suggested that Charles Sackville, Earl of Middlesex[3] and son of the Duke of Dorset, should succeed Butler in the county seat. Dorset and Newcastle had long been political associates, and Dorset who lived just outside the county in Kent, was Newcastle's political ally in the east of the county, as Richmond was in the west. However, Middlesex had certain defects as a candidate. He was indiscreet, and, more important, he did not live in the county.

[1] Andrew Stone to Richmond, 17 May, 1741. West Sussex Record Office (hereafter W.S.R.O.), Goodwood Ms. 1160, f.37. The Goodwood documents are quoted by courtesy of the Directors of the Goodwood Estate Company Limited, and with acknowledgments to the West Sussex Record Office, and to Mrs. P. Gill, the County Archivist.

[2] For details of the 1741 election, see L. P. Curtis, *Chichester Towers* (1966), and G. H. Nadel, " The Sussex election of 1741 ", *Sussex Archaeological Collections* (hereafter S.A.C.), vol. 91 (1953), pp. 84-124.

[3] For further details of Lord Middlesex's part in the 1741 by-election, see R. L. Hess, 'The Sackville family and Sussex politics:' The campaign for the by-election of 1741, *S.A.C.* vol. 99 (1961), pp. 20-37.

It was a tradition that one county member should come from the east of the county, and one from the west. The Duke of Somerset, in particular, was incensed that Butler was not to be succeeded by a " Western Gentleman ", and gave his support to Thomas Sergison of Cuckfield who had emerged as the leader of the opposition to the Newcastle interest. Sergison had contested the borough of Lewes in 1734 in opposition to the influence of Newcastle, and had frightened the Duke by receiving only thirteen votes less than his opponent. He was determined to make himself a considerable figure in the county, and to assert his independence of the Pelhams. He was declared a candidate for the county at a meeting at the Star in Lewes on the 23 May, and thus stole a march on Newcastle and his friends, who did not formally endorse Middlesex's candidacy until the 2 June.

The voting qualification for the county seat was the forty shilling freehold, and, since cricket was now enthusiastically followed by the " better " class of people, Sergison was determined to make his first move at a cricket match in the western half of the county. There would be gathered the people of influence in the county, who would not otherwise meet in such numbers except at the Assizes or Quarter Sessions; or at Lewes Races, which were very much dominated by Newcastle. Newcastle's chief political ally in the western half of the county was the Duke of Richmond, and the Duke was the most enthusiastic cricketer of his day.

The dukes of Richmond and their families have been closely associated with the game of cricket since the seventeenth century. The 2nd Duke was, perhaps, the most famous cricketer in the family, and his exploits on the cricket field have been chronicled in John Marshall's *The Duke Who Was Cricket*,[1] but almost all the dukes seem to have loved the game. The 1st Duke rewarded his team with brandy, after their defeat of Arundel in 1702.[2] In 1768, the 3rd Duke captained Sussex against the famous Hambledon Club on the 5 September, and is said to have won " near a thousand pounds " when Sussex won the return match at Broadhalfpenny Down on the 10 September.[3] The 4th Duke has an assured place in the history of the game, for, in 1786, together with the 9th Earl of Winchilsea, he offered Thomas Lord a guarantee against loss if he would start a new private cricket ground,[4] and the eventual result was Lords. The 4th Duke's cricket was described as " an exquisite display of grace, strength and skill ",[5] and he made himself popular with his regiment by playing cricket with the privates.[6] He was President of the Hambledon Club in 1791. As Colonel Lennox he captained an eleven against Lord Winchilsea's eleven in a match at Mousley Hurst on the 8 July, 1795, and in three matches at Lords in 1797.[7] His team also played an eleven of the Hon. Captain Capel at Lewes on the 15 May, 1804.[8] The family tradition was continued by Lord William and Lord George Lennox, sons of the 4th Duke, who were both keen cricketers. Lord William Lennox was also a chronicler of the game, and has left us a delightful picture of Lord Frederick Beauclerk's cricket prowess.[9]

The 2nd Duke, however, was the pioneer of organised cricket in Sussex. He challenged Sir William Gage of Firle to a match on the 20 July 1725, and Gage's reply, wishing the Duke " success in everything but ye Cricket match ", and accepting the Duke's challenge, has survived.[10]

[1] John Marshall, *The Duke who was cricket* (1961).
[2] W.S.R.O., Goodwood Ms. 23, f.51.
[3] H. F. and A. P. Squire, *Pre-victorian Sussex cricket* (1951), p. 13.
[4] Sir Pelham Warner, *Lords, 1787-1945* (1946), pp. 17, 18.
[5] G.E.C. (ockayne), *The complete peerage*, vol. 10 (1945), p. 844.
[6] *Dictionary of National Biography.*
[7] H. F. and A. P. Squire, *op. cit.*, p. 9.
[8] *ibid.*, p. 21.
[9] Lord William Lennox, *Celebrities I have known* (1876, 7),
[10] W.S.R.O. Goodwood Ms. 1883. The letter is transcribed in *Marshall*, p. 41, and in *Squires*, p. 34.

The Duke contested two further matches with Sir William Gage in 1727,[1] and in the same year, when organising two matches with Mr. Broderick of Pepper Harrow in Surrey, drew up, in conjunction with Broderick, the first formal laws of the game.[2] For the next twenty years the Duke's team had regular matches in London, Surrey and Kent,[3] and a few details of his expenditure on cricket equipment can be found among his personal accounts[4] while those of the Duchess show her expenditure in sponsoring matches.[5] The Duke by this time was acting as sponsor to the team representing Slindon,[6] and several members of the team found employment on the Duke's estate in Goodwood, and in his service in London.[7] Also among the Duke's papers can be found the two earliest known scoresheets of cricket matches. The Duke carefully preserved the scores for the matches between Slindon and London, played in London on the 2 June, 1744,[8] and between England (otherwise Slindon) and Kent, played at the Artillery Ground on the 18 June, 1744.[9] His correspondence includes a letter from Lord John Sackville dated 14 September, 1745, describing a cricket match in which the Duke's team evidently took part,[10] and one from John Fuller of Uckfield, dated 18 August, 1746, which is important for being the first reference to "capping," and which suggested the formation of clubs rather than just local teams.[11]

On 14 June, 1741, the 2nd Duke of Richmond wrote to the Duke of Newcastle, "Sergison was expected last night at Westdean, and 'tis believed he will go to a great cricket match in Stansted Parke tomorrow between Slyndon and Portsmouth ".[12] Richmond was already alive to the importance of cricket matches in the electoral campaign, and had written to the Duke of Dorset on the 10 June, 1741:

> "My Steward is now going about the parishes, he has been at a Crickett match today where he found the greatest part almost all hearty for us. two or three of S[r] John Peachys tenants were there & one Parson Powel sayd they must go with S[r] John, butt did not say that he had as yett apply'd to them. however a malster that I employ one Caleb Chitty assures me that S[r] John has ask'd him in London for Sergison, but he told him he was engaged to us . . . the discourse of the Crickett match today was that the Duke of Somersett would be neuter, with what foundation I can't tell ".[13]

Three letters have survived which give an account of the electioneering at the cricket match at Stansted, the seat of James Lumley, the sitting member for Arundel. Richmond wrote to Dorset on the 16 June, that Sergison,

> "has been these three dayes at S[r] John Peachys at Westdean, where he is very busy butt has mett with hardly any thing butt negatives except at Midhurst where to be sure he'l beat us five to one; butt there and Westdean are the only two places where he can do anything in this Rape . . . I was at a great Crickett match yesterday, where there were above 5000 people, Sergison just made his appearance; he was attended by Lisbon

[1] H. F. and A. P. Squire, *op. cit.*, p. 9.

[2] W.S.R.O., Goodwood Ms. 1884. This document, which sets out in sixteen clauses the earliest known rules of the game, is transcribed in *Marshall*, pp. 45, 46, and in *Squires*, pp. 35, 36. A photograph of the document lies between pp. 34 and 35 of the latter book.

[3] H. F. and A. P. Squire, *op. cit.*, pp. 10, 11.

[4] W.S.R.O., Goodwood Ms. 120, ff. 150, 154, 157, 167. The bills are mostly for the repair of cricket bats.

[5] W.S.R.O., Goodwood Ms. 127, f. 8. The accounts of the Duchess reveal that she paid £19 to the Duke for a cricket match on an unknown date in 1731; £21 for a match on 23 August, 1731, when the Duke's team played an eleven of Mr. Chambers at Richmond; and £10 on the 30 August.

[6] See Edmund Esdaile, "Their chivalry was cricket ", *Journal of the Cricket Society*, vol. 4, no. 2 (1969), pp. 25-29, and vol. 4, no. 4 (1970), pp. 45-49.

[7] The great Thomas Waymark, for example, was employed in London as a groom. See W.S.R.O., Goodwood Ms. 126, f. 86, etc.

[8] W.S.R.O., Goodwood Ms. 1885. The scoresheet is transcribed in *Marshall*, pp. 118, 119, and the match is described in the following pages. A photograph of the scoresheet lies between pp. 40 and 41 in *Squires*.

[9] W.S.R.O., Goodwood Ms. 1886. The scoresheet is described in some detail in *Marshall*, and transcribed on p. 123.

[10] W.S.R.O., Goodwood Ms. 112, f. 353.

[11] W.S.R.O., Goodwood Ms. 110, f. 154.

[12] Richmond to Newcastle, 14 June 1741. British Library (hereafter B.L.), Add. Ms. 32, 697, f. 190.

[13] Richmond to Dorset, 10 June, 1741. Kent Archives Office. Sackville Ms. U 269, c. 150/6. The Sackville Mss. are quoted by permisson of Lord Sackville.

Peckham, & four or five of the Chichester Torys, but did not aske one vote, & I don't believe he could have made one if he had ask'd. I got Tanky[1] to come in order to swell & look big at him, butt Sergison never appeared before us, butt went off as soon as wee came. Jemmy Bramstone saw the Duke of Somersetts chaplain this morning, who told him that he was sure the Duke would not medle at all ".[2]

Later the same evening, Richmond reported to Newcastle:

" Sergison was at the cricket match attended by Lisbon Peckham, old Eastgate the hatter, Ludgator and two or three more of the Chichester Torys. He did not venture to aske a vote, nor could he have got one I do really believe. Tanky was there ready to puff his cheeks at him, butt he never appeared before us, butt quietly stole away, as soon as we came. All our friends seemed mighty hearty, & were in great spirits espetially as Slyndon beat Portsmouth, & had nine men to go in ".[3]

Four days later, Sir John Miller wrote to Newcastle. He took a different view of the size of the crowd, but the basic message was the same. He wrote:

" If there were any particular news conerning Lord Middlesex's election I would certainly inform your Grace of it, all I know is that Mr. Sergison was att a crickett match att Stansted where there were near six hundred people, but on the greatest enquiry neither the Duke of Richmond nor I can hear he made one vote ".[4]

The Earl of Tankerville must have been too much for Sergison, for after an unsuccessful canvas in Chichester he returned to East Sussex. Richmond reported to Newcastle on the 26 June, that

" Sergison has been at every freeholders house in Chichester & entertained his freinds at the Dolphin, they say they had thirty, butt wee can make out butt 27, of which 23 only were Chichester freeholders. I am sure he wont poll 40 out of the 203 that are there, which will be the greatest majority we ever had there ".[5]

Richmond, having removed Sergison from the west, set about arranging the western tour of Lord Middlesex. The itinerary was detailed in a letter Richmond wrote to Dorset.[6] The tour seemed to go well, and Richmond wrote letters to Newcastle confident of victory. He organised a public dinner at Goodwood for the freeholders in the area, but made the mistake of choosing a date in July which clashed with a cricket match. Two days after the match, he told Newcastle, " the reasons for the thinness of the meeting were, a great cricket match at Green, the sessions at Horsham, and the assizes at Winchester, all happening upon that day, which was very unlucky for me ".[7] Even Newcastle attended the cricket in July, and, on the 25 he wrote to Richmond,

" I am sorry that I could not stay to attend you longer at ye cricket match, tho' I hear you were away immediately. My brother would go. I had fifteen long miles home & if I had once got in, I should perhaps have been more unwilling to go afterwards ".[8]

Sergison made his next move when Slindon played another cricket match, this time at Portslade, and then a fracas punctured the hitherto quiet and inevitable campaign. Richmond described the event to Newcastle:

" have you heard that Sergison treated his people the night of the cricket match at Portslade & that there was a bloody battle between them and Slyndoners? butt the last came off victorious tho with some broken heads ".[9]

[1] Charles Bennett, 2nd Earl of Tankerville.
[2] Richmond to Dorset, 16 June, 1741. Kent Archives Office. Sackville Ms. U 269, c. 150/8.
[3] Richmond to Newcastle, 16 June, 1741. B.L. Add. Ms. 32, 697, f. 202.
[4] Sir John Miller to Newcastle, 20 June, 1741. B.L. Add. Ms. 32, 697, f. 221.
[5] Richmond to Newcastle, 26 June, 1741. B.L. Add. Ms. 32, 697, f. 247.
[6] Richmond to Dorset, 4 July, 1741. Kent Archives Office. Sackville Ms. U 269, c. 150/10.
[7] Richmond to Newcastle, 15 July, 1741. B.L. Add. Ms. 32, 697, f. 316.
[8] Newcastle to Richmond, 25 July, 1741. W.S.R.O., Goodwood Ms. 104, f. 260.
[9] Richmond to Newcastle, 29 July, 1741. B.L. Add. Ms. 32, 697, f. 363.

The cause of the battle was a reference to the notorious night in 1735, when Middlesex and some friends gathered at the Golden Eagle in Suffolk Street in London, and, forgetting that it was the anniversary of the execution of King Charles I, lit a bonfire in the street, in their drunken stupor. The crowd who gathered, with memories of republican meetings, rioted, and the incident was not forgotten. Sir William Gage gave more details of the battle at Portslade in his letter to Newcastle of the 5 August. He wrote,

> " the county is at this time quieter and better humoured than for this seven years past. Tis true the night of the cricket match after yr Grace left the field, there was a bustle occassioned by the cry of Calves head being resented by some of yr Graces friends, and some hearty blows were given, and our friends had y^e^ worse the battell att first. But the western Cricketers that had left the hearing of it returned with their Crickett Batts and dealt some heavy blows wch carried the victory on our side. I am glad the cricket match was over before this happened ".[1]

Even Sergison's staunchest supporters such as the Peacheys at West Dean wondered why he persisted in his determination to continue the fight. It was clear that his support in the west was derisory, and Richmond was writing victorious letters to Newcastle promising the biggest vote yet for Newcastle's candidate. Richmond showed his confidence by watching cricket rather than attending a meeting with Newcastle. He wrote to the Duke, " I can't be with you till late, because I shall see a crickett match I have made of poor little Slyndon, against almost your whole county of Surrey, it is to be play'd at the basin upon merroe down ".[2] On the following day, he wrote again, " Wee have beat Surrey almost in one innings ".[3]

Sergison made one final effort to attract the voters. He made a cricket match for forty guineas to be played in his own park at Cuckfield. The match was advertised in all the neighbouring parishes, and attracted a large crowd, but once again Sergison surprised his guests. John Board of Paxhill, another of Newcastle's agents, described the match in a letter to his master.

> " Sergison . . . at his own house, made a cricket match for 40 guineas, to be played for in his Park on monday last was sevennight, and by crying it at all the neighbouring parishes, on the sunday next before, having drawn a great concourse of people to his door, I look'd upon it as a stratagem design'd to give him a fresh and better opportunity of applying to the people there the invitation to his own house had procured him; but that he might not have the whole field to himself, I took care to despatch severeal proper agents to the cricket match, w^th^ orders to be all times on the ground, to keep a strict watch on the motions of the enemy, and to use thier utmost art & diligence in the service of Lord Middlesex, whose interest your Grace has so much at heart. But I believe I wronged my neighbour by entertaining these injurious thoughts of him, for he was it seems so very careful of avoiding all imputations of being guilty of any indirect practices in carrying on his own interest, that he did not, as I can hear, sollicite anybody or so much as ask any of the gamesters who won his money for him (several of whom were from Lindfield) or of the company at the conclusion of the game, either to eat or drink with him, who all, judging as I did, his intention of calling them to him, in the manner aforesaid, to be for that very purpose, were, at that, and some other omissions he was then guilty of, I am inform'd, much disappointed & highly disobliged ".[4]

The campaign gradually petered out, and on the 23 December, Sergison wrote to Dorset and threw up the contest, much to Somerset's fury. Three weeks later Middlesex was returned unopposed for the county seat, and Newcastle gathered a large number of his political friends, such as Henry Pelham, Richmond, Dorset, Sir John Miller and others, to show the county the support Middlesex would have had, had it come to a contest. It has been suggested that the battle of Waterloo was won on the playing fields of Eton, it can certainly be argued now, that the county by-election of 1741 was won on the cricket fields of Sussex.

[1] Sir William Gage to Newcastle, 5 August, 1741. B.L. Add. Ms. 32, 697, f. 388.
[2] Richmond to Newcastle, 7 September, 1741. B.L. Add. Ms. 32, 698, f. 13.
[3] Richmond to Newcastle, 8 September, 1741. B.L. Add. Ms. 32, 698, f. 15.
[4] John Board to Newcastle, 29 October, 1741. B.L. Add. Ms. 32, 698, f. 229.

THE EXCAVATION OF FOUR ROUND BARROWS OF THE SECOND MILLENNIUM B.C. AT WEST HEATH, HARTING, 1973-75

by Peter Drewett

Four round barrows out of a cemetery of twelve were totally excavated prior to their destruction by sand quarrying. Two of the barrows were simple turf stacks encircled by a berm and ditch. The most complex barrow was constructed in two phases, the earliest phase being revetted with wickerwork, while the simplest barrow consisted of a small mound of turf. No burials were found, but considerable environmental evidence was obtained from the analysis of pollen and mites. A carbon 14 date range of 1680 b.c.-1160 b.c. was obtained.

INTRODUCTION

The remarkably well preserved round barrow cemetery on West Heath (SU 786 226) was first recorded by Leslie Grinsell in his 1940 additions[1] to his 1934 Sussex barrow list.[2] It is one of a series of cemeteries and isolated barrows on the Lower Greensand formation of West Sussex (Fig. 1). Unfortunately over the last few years many of these barrows have come under the threat of large scale commercial sand extraction.[3] As most of these barrows are scheduled under the Ancient Monuments Acts as of national importance, but preservation has not been considered feasible, the Department of the Environment requested the Sussex Archaeological Field Unit, as its agent in Sussex, to undertake the total excavation of the West Heath cemetery, together with sample excavations of other isolated barrows.[4] The cemetery at West Heath is being excavated in phases to keep well ahead of the sand extraction. The first phase consisted of the excavation of Barrows I-IV during 1973-75.[5] There will now be a gap of some four to five years before the next programme of excavation is required.

Geological background

The barrow cemetery is situated on a sandy ridge near the southern side of West Heath Common on and just below the 200ft. contour (Fig. 1). The surface outcrop at this point is the Folkestone Beds of the Lower Greensand. A general scatter of worn residual flints is found over most of the Heath. The soil is a well-developed humus-iron podzol, with a deep bleached layer and a thick accumulation horizon which extends into the undisturbed Folkstone Sands. The present vegetation consists of a typical heathland flora with bracken, heather and a light cover of birch trees. A large proportion of West Heath has now been removed by sand quarrying. (Plate 1a).

[1] L. V. Grinsell, ' Sussex Barrows: supplementary paper,' *Sussex Archaeological Collections* (hereafter S.A.C.), vol. 81 (1940), p. 214.

[2] L. V. Grinsell,' Sussex Barrows,' *S.A.C.*, vol. 75 (1934), pp. 216-275.

[3] P. L. Drewett, *Rescue Archaeology in Sussex: A pilot survey*. Institute of Archeaology, London (1974).

[4] P. L. Drewett, ' The excavation of a turf barrow at Minsted, West Sussex, 1973.' *S.A.C.*, vol. 113 (1975), p. 113.

[5] P. L. Drewett, ' The excavation of three Round Barrows of the second millennium B.C at West Heath. An interim report.' *Bulletin of the Institute of Archaeology*, No. 12 (1975), pp. 19-24.

FIG. 1. West Heath, 1973-75. Location Map. Contours in 100ft. intervals.

THE BARROW CEMETERY

The barrow cemetery consists of a nucleated group of nine round barrows grouped around barrow III (Fig. 2) with two outliers to the east and one to the west. (Fig. 1). Two other possible barrows await confirmation by excavation. Barrows I-IV are built on a broad, fairly level plateau, while the remainder are built on lower sandy ridges, radiating out from the central area.

The Structure of the Barrows

(a) Barrow I. (Figs. 3 and 4)

Barrow I was excavated in November 1973 as it had already been reached by the sand pit when the Department of the Environment invited the Institute to undertake this project. A small section of the ditch had been destroyed on the north east side of the barrow, while for safety reasons it was decided not to excavate the northern section of the ditch (Fig. 3). The barrow was excavated using the standard quadrant method to provide full north-south and west-east sections (Fig. 4). Due to the size of the mound and the speed with which it had to be excavated, much of the mound was removed using a Massey Fergusson tractor with back actor.

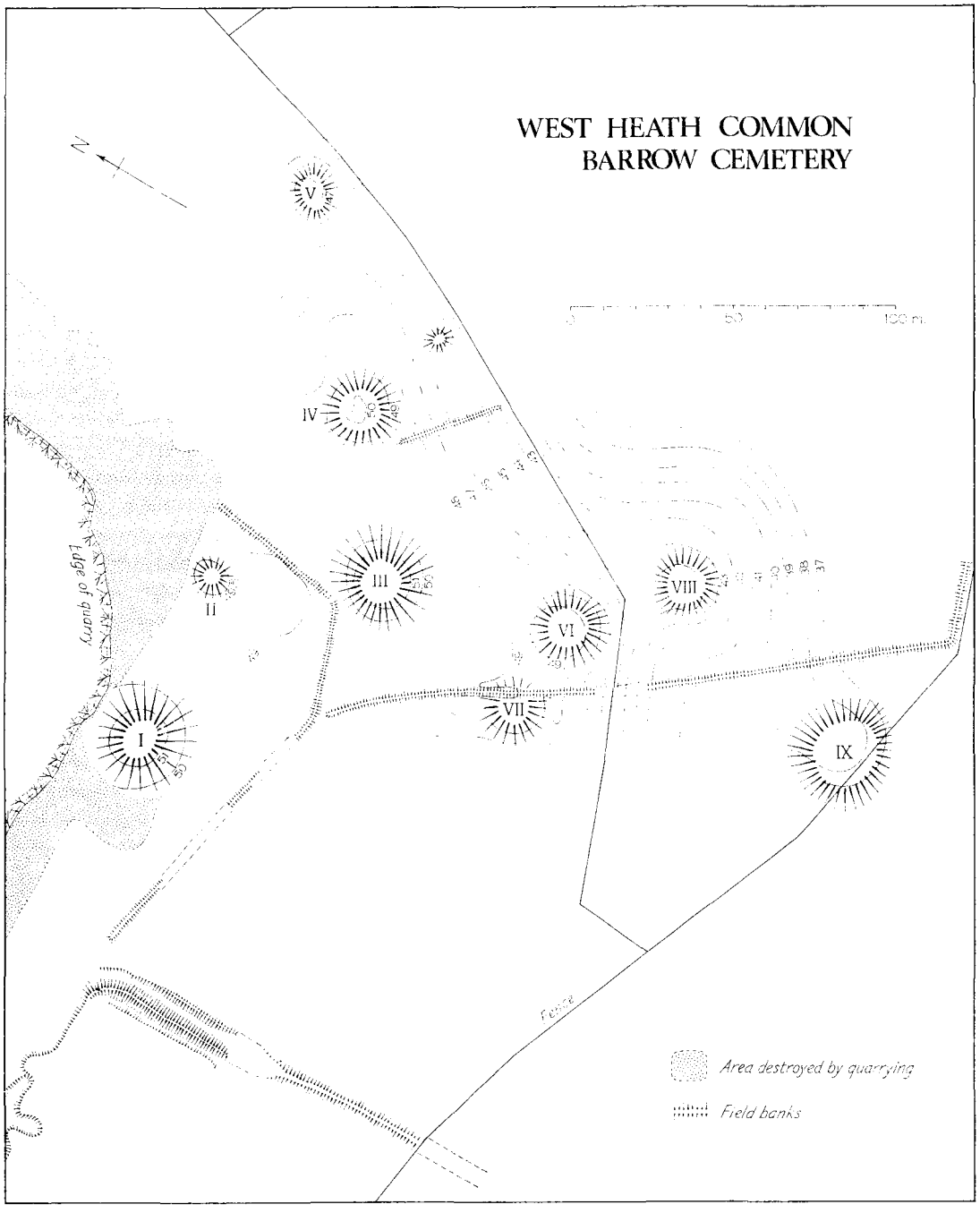


FIG. 2. West Heath, 1973. Plan of cemetery. Contours at 1 metre intervals.

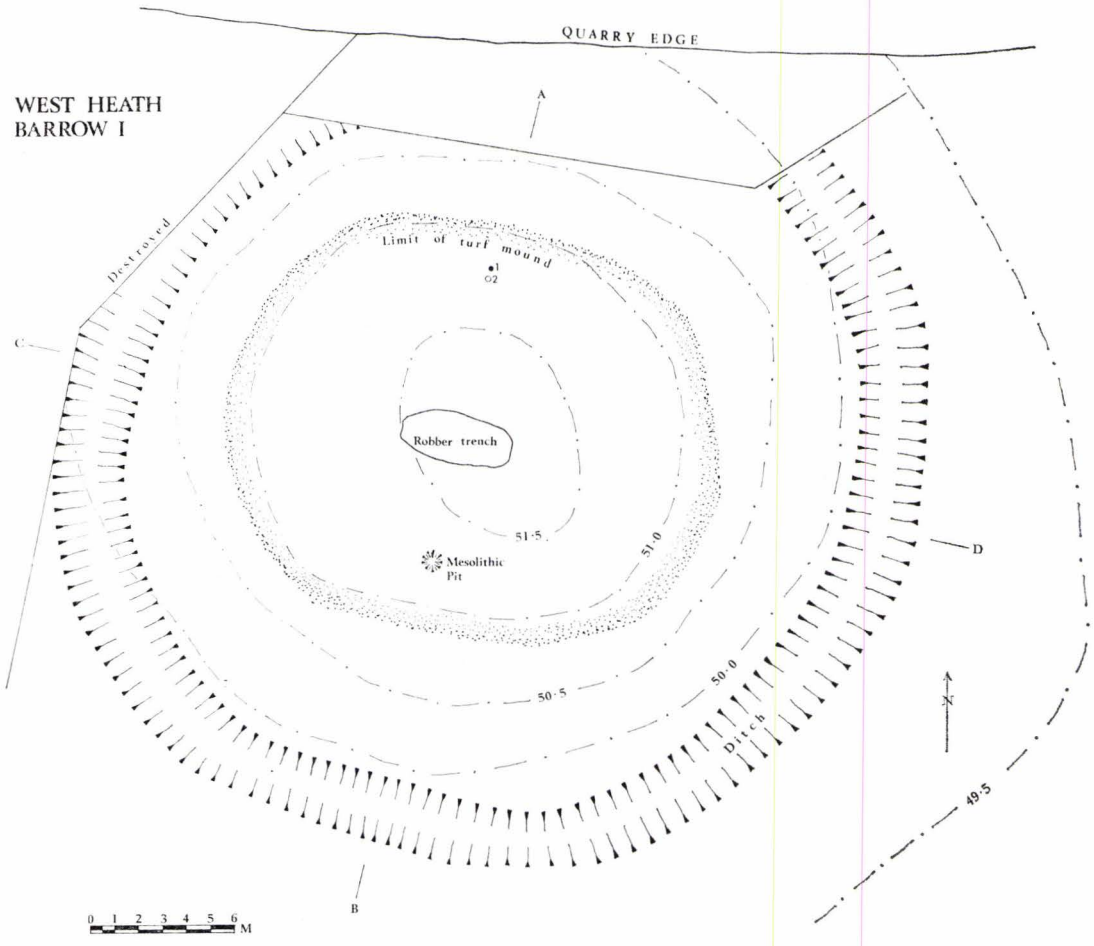


FIG. 3. West Heath, 1973. Plan of Barrow I. Contours at 0.5 metre intervals. Mites samples: old land surface (solid circle), turf stack (open circle).

The mound survived to a maximum of two metres at its centre. The top metre of the mound was dadly disturbed by rabbits and root action (Fig. 4, layer 1) together with a large robber trench (Fig. 4, layer 10), but in the centre a turf mound, some 18 metres in diameter, was located (Fig. 4, layer 3 and Plate Ib). This buried an undisturbed and well preserved old land surface (Fig. 4, layer 4). A berm varying from 3 to 6 metres in width separated the mound from a surrounding ditch (Plate IIa). The orange sand dug from the flat bottomed ditch had been piled around the turf mound and perhaps originally capped it (Fig. 4, layer 2). The only feature found buried beneath the barrow was a small pit to the south of the centre. It was filled with charcoal (Fig. 4, layer 13) and heavily burnt red sand (Fig. 4, layer 14) with minutely shattered flint fragments. Unfortunately, no artifacts were found in it but a sample of the charcoal was submitted to Harwell, where an uncorrected date of 6150 ±70 b.c. was obtained. (See Appendix III). This puts the pit clearly into the Mesolithic period, and as such, may be considered related to the Mesolithic type flintwork found in disturbed contexts, particularly in the ditch

around the barrow (see report on the Flint Industry below). As such, it may represent the transient occupation of the area by a small hunter-gatherer band. Drifting sand, leaching and the development of iron panning had effectively sealed the pit before the development of the Bronze Age soil horizon (Fig. 4, layer 4).

No primary burial was found under the mound and no trace of a burial pit was located. Unfortunately, insufficient charcoal was found in a primary context for a carbon 14 date. Pollen was, however, very well preserved and an analysis by Mrs. J. Baigent is described in detail in Appendix I. Further archaeological considerations of these data must await the total excavation of the cemetery.

An experimental examination of areas of the turf stack and old land surface for mites, undertaken by Mrs. S. Denford (Appendix II) revealed a few well preserved examples, but indicated that much larger samples should be taken. The existence of *Proctolaelaps levis* in the turf stack is, however, of considerable interest as it is characteristic of damp and possibly marshy conditions. Such conditions prevail today in the valley below West Heath to the north of the cemetery. This could therefore possibly offer some indication of where a settlement may be located, although the reasons for possibly bringing turf from the valley could be numerous.

Evidence from the experimental earthwork at Wareham, Dorset,[1] would suggest that the encirling ditch would have rapidly silted up soon after being dug. No evidence was found for

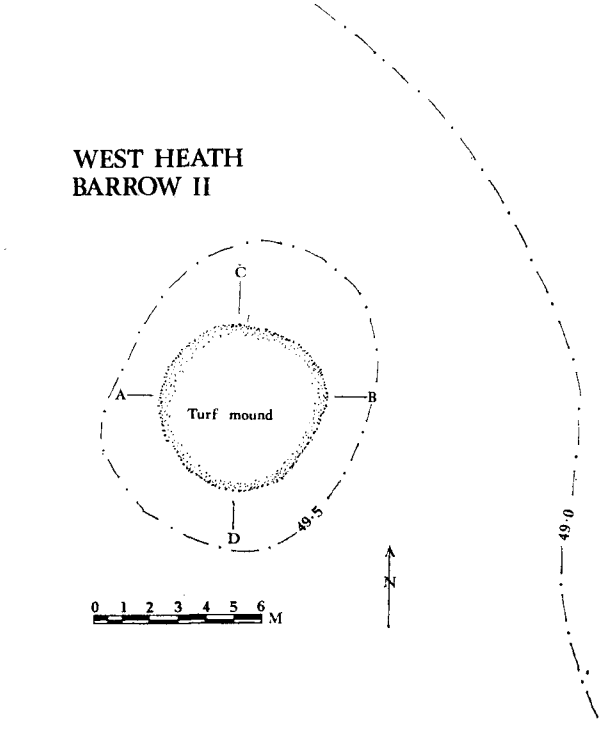


FIG. 5. West Heath, 1973. Plan of Barrow II. Contours at 0.5 metre intervals.

[1] J. G. Evans and S. Limbrey, 'The experimental earthwork on Marden, Bog Wareham, Dorset, England, 1963-1972.' *Proceedings of the Prehistoric Society* (hereafter P.P.S.), vol. 40 (1974), pp. 170-202.

any attempt to keep the ditch clean and no sign of re-cutting was observed. A small group of Romano-British sherds found in the top of the ditch (Fig. 4, layer 5) in the south west corner of the barrow (see Finds Report b below) perhaps suggests brief use of the sheltered southern side of the barrow in the Romano-British period. A similar small group of Romano-British pottery was found on the turf barrow at Minsted some 5 miles east of West Heath.[1]

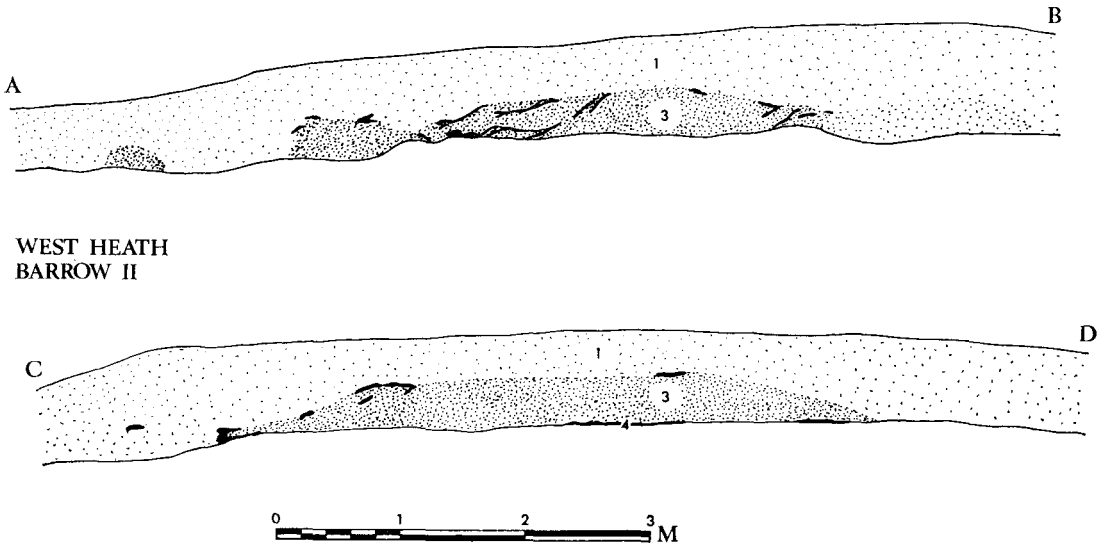


FIG. 6. West Heath, 1973. Barrow II. Sections A-B and C-D.

Key: 1. Grey, sandy soil. 3. Black, white and grey sand. (Turf stack). 4. Black sand. (Old land surface).

(b) Barrow II. (Fig. 4 and 5).

Barrow II (excavated in November 1973 and March 1974) consisted of a very slight mound surviving to a maximum of 40cms. in height. A central turf mound some 6 metres in diameter (Fig. 5), but only 20cm. high, was all that remained of the barrow. The top 20cm. of the mound was badly disturbed by roots and rabbits, which had also destroyed much of the turf stack (Fig. 4). Although there was no sign of robbing, no trace of a burial was found, although because of the high acidity of the sand, nothing more than a soil silhouette could be expected even under ideal conditions. No trace of an encircling ditch was found. A few worked flints were found, although these may well have been accidentally introduced with the turf and certainly do not indicate a regular industry.

Using flotation techniques, it was possible to obtain enough charcoal from the old land surface for a carbon 14 date. With this Harwell produced a date of 1160 ±160 b.c. (see Appendix III). A pollen analysis was undertaken by Mrs. J. Baigent, the results of which are described in Appendix I.

[1] See note 4 on p. 126.

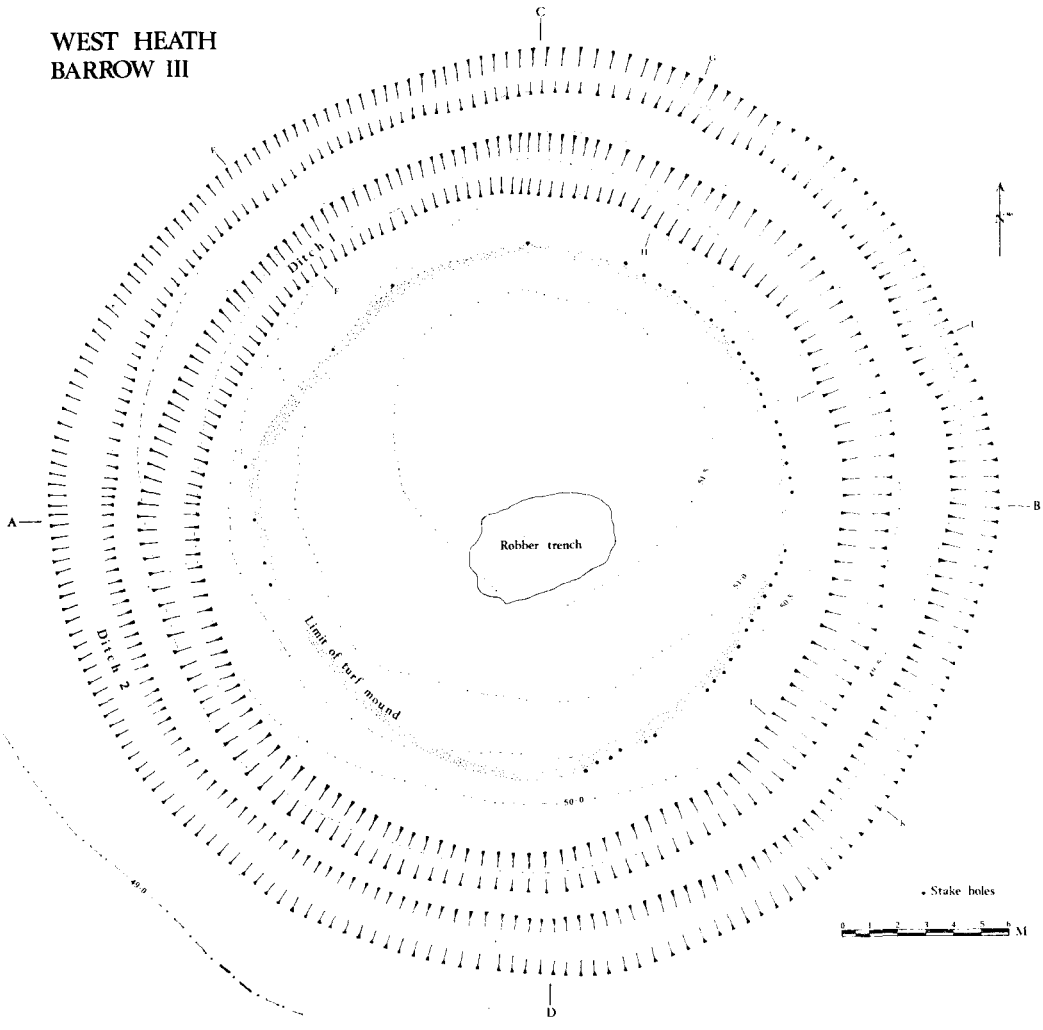


FIG. 7. West Heath, 1974. Plan of Barrow III. Contours at 0.5 metre intervals.

(c) Barrow III (Figs. 7 and 8)

Barrow II (excavated in March 1974) was the most complex of the four barrows excavated so far. It had clearly been built in two phases with possibly a fairly long gap between the building phases.

Phase I consisted of a large turf mound some 20 metres in diameter (Fig. 8, layers 3 and 3a) around the foot of which a circle of stake holes indicated the existence of hurdling. (Fig. 7). Some 2 metres out from the stake circle a ditch was dug and the material from the ditch piled in the triangle created by the slope of the turf mound and the vertical hurdling (Fig. 8, layer 16). The very fine sand soon washed through the hurdling (Fig. 8, layer 17), thus protecting the vertical face of the hurdling, which must have rotted within a few years of its erection.

The turf stack had a central core of dark grey turf (Plate IIIa and Fig. 8, layer 3a) while the remainder of the mound had black turf surfaces separated by clean white sand. Although this looked superficially like two phases of construction, the absence of a weathering horizon between the two types of turf would perhaps suggest that this difference in colour is the result of differential movement of ground water after the construction of the mound. This was confirmed by several turves apparently cutting across this area of colour change. The majority of the turves were laid inverted and their irregular nature would perhaps suggest that they were ripped up rather than carefully cut to specific sizes.

The turf stack was laid on a well preserved old land surface from which quantities of charcoal were obtained by on site flotation. This charcoal may perhaps suggest that the area was cleared by fire prior to the construction of the barrow. A lack of nucleation of the charcoal would probably indicate that it was not part of a cremation pyre. Harwell produced a carbon 14 date of 1680 ±100 b.c. for a sample of this charcoal (see Appendix III).

The stakes circle around the foot of the turf mound was unfortunately not complete, but survived best on its eastern side. Evidence from the eastern side would suggest regularly spaced small stakes 50cm. apart, hammered an average of 25cm. into the sand. The stakes were a minimum of 1 metre long (as indicated by the vertical face preserved around the barrow, e.g.

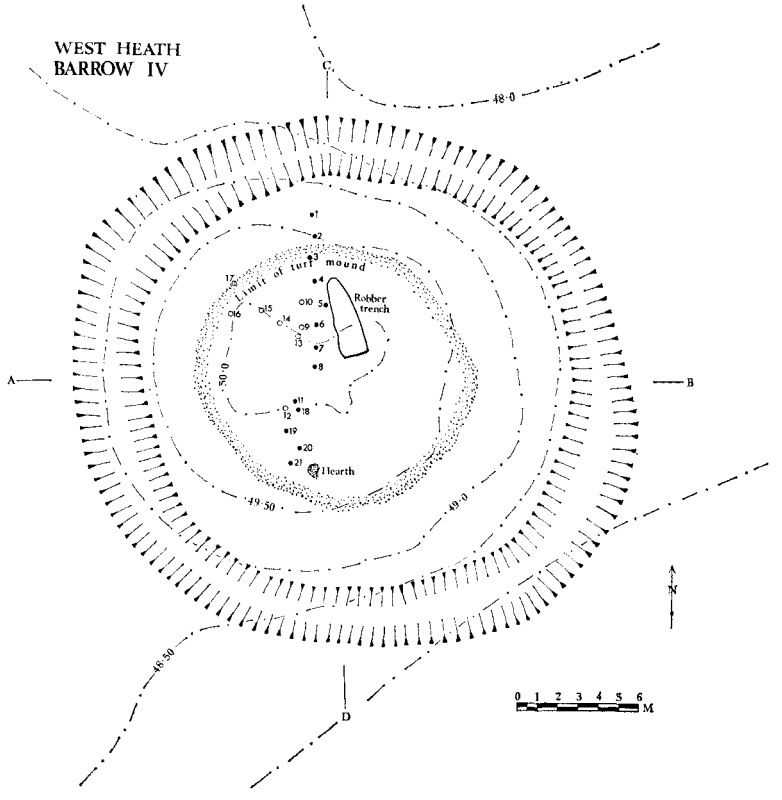


FIG. 9. West Heath, 1975. Plan of Barrow IV. Contours at 0.5 metre intervals. Mite samples: old land surface (solid circles), turf stack (open circles).

Plate IIIb) but were probably longer. To retain the sand dug out of the encircling ditch, wattle was probably woven between other vertical stakes. In an attempt to demonstrate the strength of this form of revetment, a reconstruction was made (under the supervision of Mr. Mark Redknap) on the site of Barrow IV after its excavation in 1975. (Plate Vb). This simple wickerwork was clearly strong enough to retain a mound of the size of the phase I barrow. During the filling of the wickerwork, sand fell through it to create a triangle of graded sand very similar to layer 17 (Fig. 8).

The ditch dug around the phase I barrow survived as a V-shaped ditch, but in places the bottom of the ditch had vertical sides (Plate IVb) indicating much steeper sides before erosion. In its original phase, therefore, the barrow probably had vertical wickerwork sides, a flattish top, a clear berm of yellow sand and a deep, steep sided ditch. (Plate Va).

At some stage after the silting of the phase I ditch, a second ditch was dug around the mound. The upcast from this ditch was simply dumped around the mound, and buried the phase I ditch (Fig. 8, layers 2 and 15). In the northern part of the ditch (at section G-H on Fig. 7) this upcast sealed a lens of charcoal in the top of the ditch silts (Plate IVa). A carbon 14 determination obtained for this sample gave a date of 1270 ±180 b.c. (see Appendix III). The phase II ditch was probably originally dug with near vertical sides (Plate IVb) although it had eroded to a V-shape along much of its length (Plate IIb).

No burials were found in this barrow, but this may be due to the highly acid nature of the soil. The centre of the barrow had a large, recent, machine dug hole in it (Fig. 8, layer 10). Five hundred and forty four worked flints were found during the excavation of the mound. The nature of the flintwork is somewhat rough and rudimentary indicating that it is not in the Mesolithic tradition suggested by the material from Barrow I. It may therefore be related to the construction of the mound, although much may have been brought in with turf from elsewhere. Once again, pollen was very well preserved and an analysis by Mrs. J. Baigent appears in Appendix I.

(d) Barrow IV. (Figs. 9 and 10)

Barrow IV (excavated in March and early April 1975) consisted of a turf mound 14 metres in diameter, surviving to a maximum of one metre in height. This was surrounded by a berm varying from 2.5 to 5 metres in width separating the mound from a substantial ditch. The upcast from the ditch had been piled on and around the turf mound (Fig. 10, layer 2). The mound had been very badly distrurbed by rabbits and tree roots and a large machine dug hole had been cut to the north of the centre (Fig. 9).

The only feature buried by the turf stack was a patch of charcoal, and fire cracked flints, found to the south west of the centre of the mound. This may be interpreted as a small hearth. The charcoal, identified by Miss C. R. Cartwright, consisted mainly of ivy (*Hedera helix*), ash (*Fraxinus sp.*) and birch (*Betula sp.*) with a few fragments of oak (*Quercus sp.*) and pine (*Pinus sp.*). Samples of the old land surface were examined for mites by Mrs. S. Denford, and the results appear in Appendix II.

The turf stack consisted of irregular turves, stacked both inverted and the right way up (Plate VIa and Fig. 10, layer 3). Individual turves were subjected to on-site flotation, but only a little charcoal was obtained. This was identified by Miss C. R. Cartwright as alder (*Alnus sp.*) and pine (*Pinus sp.*).

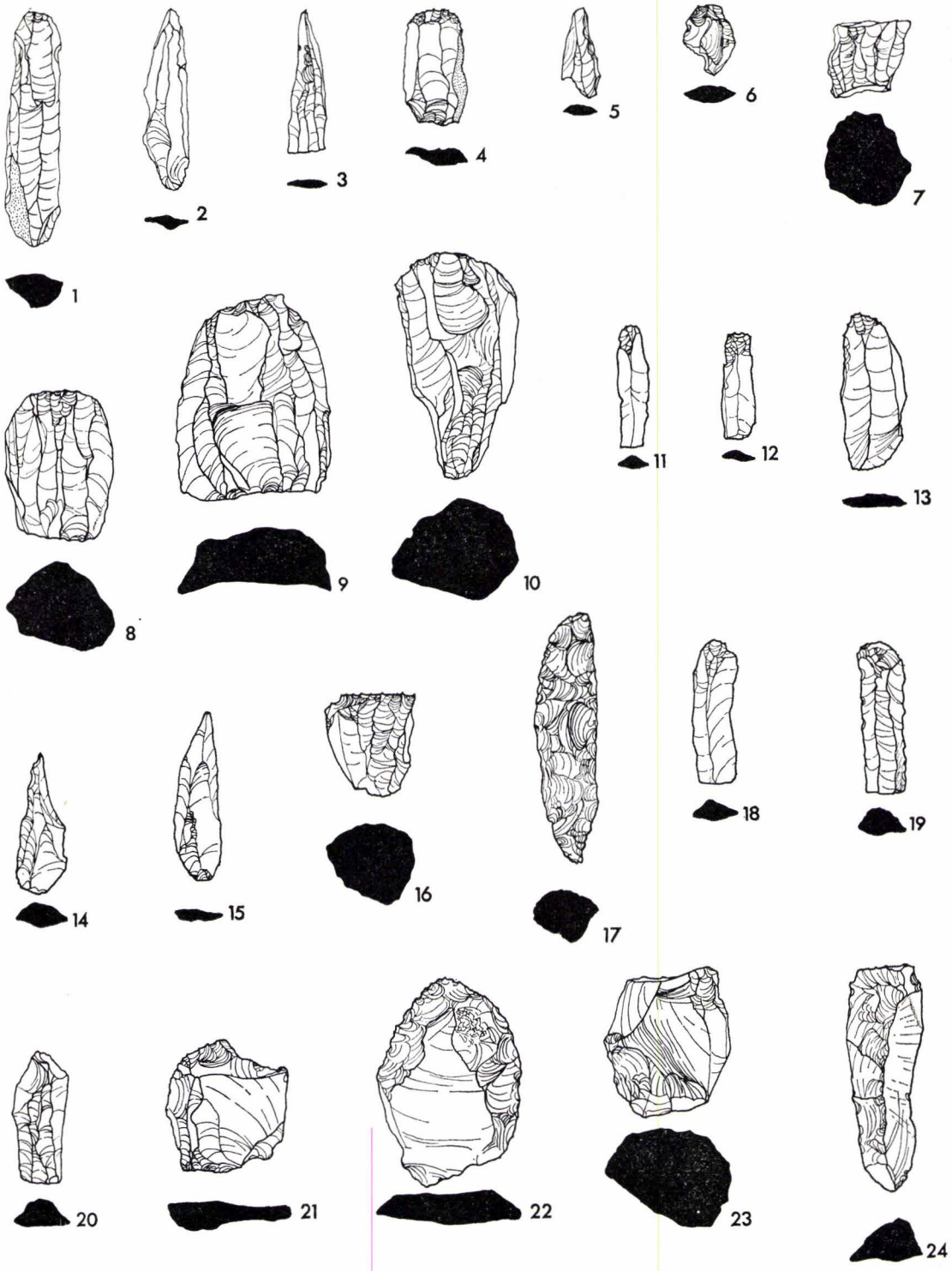


FIG. 11. West Heath, 1973-75. Flintwork from Barrows I-IV. ($\frac{1}{2}$ except 5 and 6 which are 1/1).

The ditch surrounding the barrow was disproportionately large for the size of the mound. It was probably fairly steep sided when originally dug (Plate VIb). The large numbers of rough flint nodules found in the ditch (Fig. 10, layer 21) probably derive from the irregular layer of residual flints in the top of the sand adjacent to the ditch. The results of pollen analysis undertaken by Mrs. J. Baigent appear in Appendix I.

(e) Areas between barrows.

It was intended to excavate the entire area of the cemetery as it appears on Fig. 2. However, the cost of such an excavation proved prohibitive so that instead of clearing the whole area under controlled conditions large sample areas between barrows are being excavated under the supervision of the author while areas not so excavated are being watched during stripping by the quarry machinery. It is hoped that this compromise method will still reveal any cremation areas or other structures relating to the construction of the barrows or ceremonies associated with their use. A large area between Barrows I and II was excavated in 1973 (Area A), and a second area was excavated between Barrows II and III in 1974 (Area B). No structures were located in either area although a cluster of 47 worked flints was found in Area A (see report on Flint Industry, Barrow I AF1) and 10 worked flints were found in Area B (Barrow III Area A, 1, 2 and 3). As the watching of these areas during quarry stripping is not yet complete, the excavation of the areas between barrows will be dealt with in greater detail in future reports.

(f) Field banks. (Fig. 2)

The barrow cemetery is cut by several field or enclosure banks. One such bank clearly cuts through Barrow VII and so post-dates it. A section cut through the bank between Barrows II and III revealed parallel ditches with a simple dump bank between. The disturbed nature of the top of the bank probably indicates that it was originally topped by a hedge. In the absence of any archaeological dating, it appears likely that these banks are enclosure banks perhaps dating to the enclosure award of 1632 in which West Heath, formerly used as common grazing, was divided among the cotlands and yardlands of Wenham and West Harting. The results of a pollen analysis through this field bank appear in Appendix I.

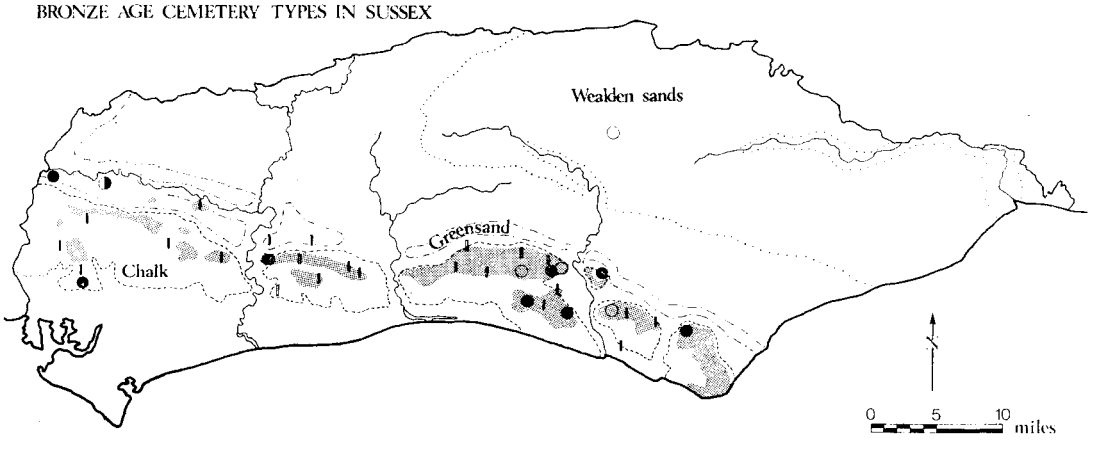


FIG. 12. Bronze Age Cemetery Types in Sussex. Key: (After Fleming).[1] Solid circles: Nucleated. Open circles: Dispersed. Half solid circles: Mixture of both. Solid bars: Linear. Open bars: Dispersed linear. Stippling: Area cemetery.

[1] A. Fleming, 'Territorial patterns in Bronze Age Wessex." *P.P.S.*, vol. 37, Part 1 (1971), pp. 138-166.

A

B

WEST HEATH BARROW IV

C

D

TREE STUMP

0 1 2 3 4 5 6M

FIG. 10. West Heath, 1975. Barrow IV. Sections AB- and C-D

Key: 1. Grey sandy soil. 2. Orange-brown sand with some iron pan above (upcast from ditch). 3. Black, white and grey sand. (Turf stack). 4. Black sand. (Old land surface). 5. Firm mid grey sand. 6. Very hard, dark brown sand. (Iron pan in ditch). 7. Light grey, friable sand. (Leached horizon). 8. Orange sand with black iron stained striations. 8a. Yellow sand. 9. Orange sand. (Primary silt). 20. Dark brown sand, mottled with yellow sand. 21. Dark yellow-brown sand with many flints. 22. Very dark brown sand. 23. Mixed grey and yellow sand. 24. Grey sand. R. Rabbit disturbance

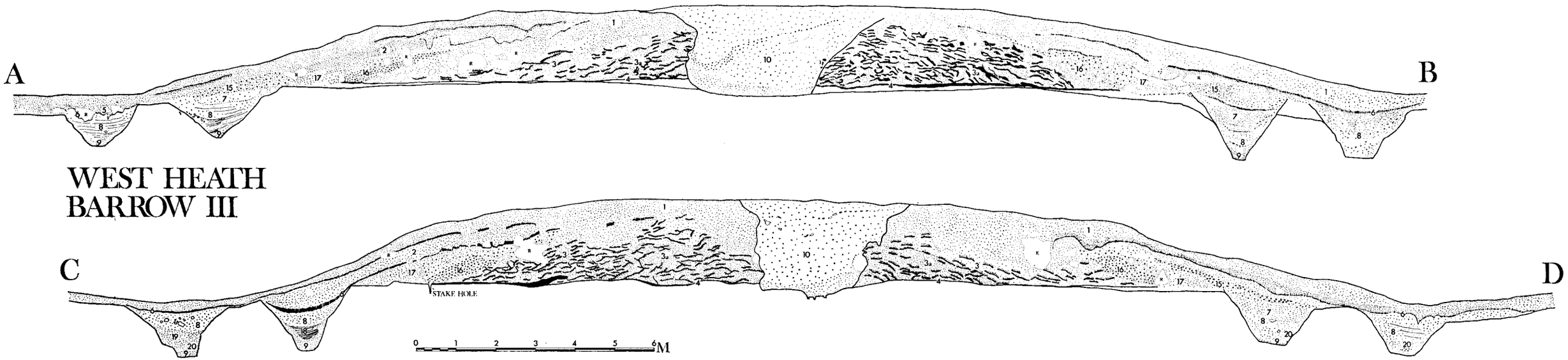
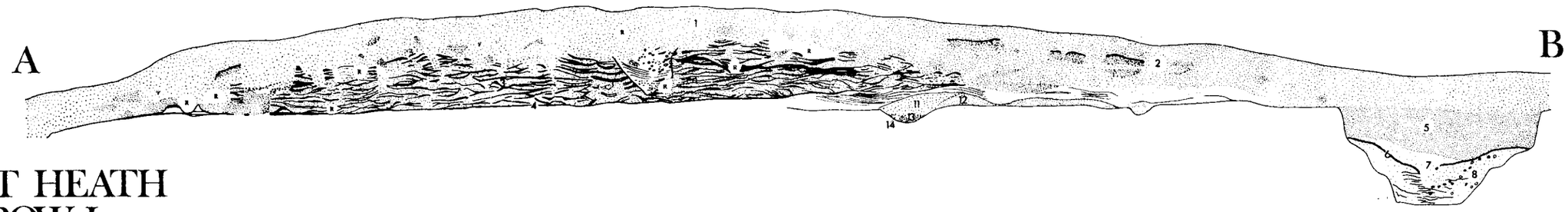


FIG. 8. West Heath, 1974. Barrow III. Sections A-B and C-D

Key: 1. Grey, sandy soil. 2. Orange-brown sand with iron pan above (upcast from Phase II ditch). 3. Black, white and grey sand. (Turf Stack). 3a. Black and grey sand. (Turf stack). 4. Black sand. (Old land surface). 5. Firm, mid grey sand. 6. Very hard, dark brown sand. (Iron pan in ditch). 7. Light grey friable sand. 8. Orange sand with black, iron stained striations. 9. Orange sand. (Primary silt). 10. Mixed orange, grey and white sands. (Robber trench). 15. Orange, sandy soil with flints (upcast from Phase II ditch). 16. Mottled grey brown and orange sand with flints (upcast from Phase I ditch). 17. Very fine graded light yellow sand. 18. Fine yellow sand with grey/brown striations. 19. Coarse, orange/brown sand. 20. Coarse, orange/brown sand mottled with coarse yellow sand. R. Rabbit disturbance



WEST HEATH
BARROW I

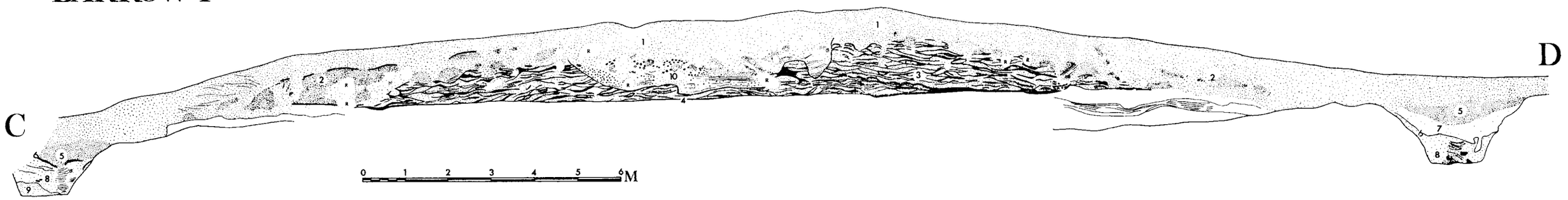


FIG. 4. West Heath, 1973. Barrow I. Sections A-B and C-D. (N.B. Layer numbers have been correlated between barrows, so not all numbers occur on each section)

Key: 1. Grey sandy soil. 2. Orange-brown sand with iron pan above (upcast from ditch). 3. Black, white and grey sand. (Turf stack). 4. Black sand. (Old land surface). 5. Firm, mid-grey sand. 6. Very hard, dark brown sand (Iron pan in ditch). 7. Light grey, friable sand (Leached horizon). 8. Orange sand with black iron stained striations. 9. Orange sand. (Primary silt). 10. Mixed orange, grey and white sands. (Robber trench). 11. Brick red sand. 12. Orange sand. 13. Charcoal (In Mesolithic pit). 14. Khaki sand. R. Rabbit disturbance

THE FINDS (Fig. 11)

(a) *The Flint industry*, by C. R. Cartwright.

Table 1: Flintwork from Barrow I and area between Barrows I and II by layer numbers.

	A FI	*1.*	*3.*	*5.*	*7.*	*8.*
4cm.+ blades	8	1		16	15	
2cm. blades	10			58	10	
points	4		1	17	1	
scrapers					1	
microliths	2			4	1	1
worked flakes	1		1			
cores	5	3		7	5	
waste flakes	14	3	4	120	28	4
rough workshop waste	2			32	6	
fire cracked flint	1			25		

Barrow I has a total of 364 worked flints (including 25 pieces of flint cracked by fire). A further 47 worked flints (including 1 fire cracked flint) were found 10 metres east of the barrow (A F1) but are included here because of their similarity with the material from Barrow I. The greatest percentage is formed by waste flakes and other waste material common to many flint knapping sites and assemblages. Discrete groupings according to layers are not apparent—the flints are generally of similar type and will be loosely treated as a whole. There are several 'mesolithic' elements in the assemblage, and tool types similar to those present in the microlithic flaking site described at West Heath by Clark[1] occur.

Blades: (Fig. 11, Nos. 1-3)

Layers 1, 5, 7 and A F1 produced a total of 118 blades; broadly divided into two categories—78 being around 2cm. long, and 40 being around 4cm. long (or longer). The greatest number of small blades (c. 2cm.) occur in layer 5, which as a whole, contains proportionately the most worked flints. These long, narrow parallel sided blades—often with cortex along one side—are generally made from yellow-brown or dark grey flint. Some are truncated and retouched and a few have had " burin " type flake removal from one side. Serrated edges, signs of utilization, oblique blunting and butt trimming are present, but most are irregular and not finely finished. Snapped blades and one cracked by fire occur.

Points:

Layers 2, 5, 7 and A F1 make up a total of 23 points, most of which fall into the obliquely blunted category. There are some flakes, oblique and pointed in form, but unretouched, which have been included in this tool type here—similar to those mentioned by Clark.[2] The points are typically 4 to 5cm. long and retouch is usually confined to the left hand side. A little cortex sometimes remains on the butts (occasionally trimmed).

Scraper: (Fig. 11, No. 4)

Only one scraper was found—from layer 7. Retouch is mainly confined to the end of the flake (3.5cm. long) and closely resembles Clark's number 51.[3] Cortex is present along one side.

Microliths: (Fig. 11, Nos. 5-6)

Layers 5, 7, 8 and A F1 make up a total of 8 microliths. Apart from the small blades classed with the blade category already mentioned, microlithic tools under 2cm. also include variations of simple oblique points, one broken serrated point and one micro-burin. Most are snapped, irregular fragments, partially retouched but undistinguished as microliths.

Worked flakes:

Two flakes from A F1 and layer 2 which do not fall into specific tool types exhibit small areas of retouch.

Cores: (Fig. 11, Nos. 7-9)

Layers 1, 5, 7 and A F1 yield a total of 20 cores. Their form is usually conical, and concave striking platforms are common. Some are very irregular, with much cortex remaining. The cores have mainly been used for the production of small, narrow blades, short flakes and points (not all of which were destined necessarily to remain on the site). " Rejuvenated " cores and those with two striking platforms occur. In some cases the blade and flake production is confined to one side of the flint only; the other being irregular cortex, unworkable flint or the flat surface of a large flake. Short step-flake removal is common, either by design or as a result of inferior flint.

[1] J. G. D. Clark, 'A microlithic flaking site at West Heath, West Harting,' *S.A.C.*, vol. 73 (1932), pp. 145-155.
[2] J. G. D. Clark, *op. cit.*, Nos. 63-66, Fig. 4.
[3] J. G. D. Clark, *op. cit.*, Fig. IV.

Rough workshop waste, waste flakes and fire-cracked flint:

Waste material consists of 213 pieces and there are 26 pieces of fire-cracked flint. One hundred and seventy three waste flakes represent the waste products associated with flint knapping and tool production, and 40 rough workshop waste pieces, usually rough, irregular chunks and chips with much cortex and a few flake scars, are connected with the same artifact production process. The fire-cracked flints are also irregular chips and chunks, variously broken and spoilt: not of the regular round " potboiler " type.

As Clark found on his " microlithic flaking site,"[1] the industry from Barrow I, West Heath, seems to have concentrated on narrow blade production from conical cores: production of oblique points and a few microliths and an end-scraper, although his petit tranchet arrowhead/transversely sharpened axe element is missing. Recent field walking and survey in the West Heath area has revealed similar artifacts from possibly short duration camps and similar elements may be seen in neighbouring sites, e.g. from Iping Common Mesolithic site.[2]

Table 2: Flintwork from Barrow II by layer numbers

	1.	*3.*	*4.*
blades	1	1	
' points '		1	
worked flakes	2		1
waste flakes	3		1
cores	5	1	
fire cracked flint			1

Barrow II has only 17 flints, mostly dark grey to brown, patinated, and with much cortex remaining. The majority of flints represents the source and waste products associated with an industry and there are only a few " tools "—none of which is finely finished. Retouch on the worked flakes is usually along one edge of a simple flake, or an end retouch. The blades are 5cm. and 6cm. long and show little evidence of secondary working and the " point " is also unretouched. The cores are generally conical in form (Fig. 11, No. 10), though often very irregular. Concave striking platforms are common and narrow blade and small flake scars are often confined to one area while the remaining area is cortex. The waste flakes are typical products of flint working and there is one small piece of fire cracked flint.

This small, unspectacular assemblage seems to represent the results of a temporary occupation, or flint knapping for essentials to supplement a specific need at a particular point in time rather than a well-founded regular industry.

Table 3: Flintwork from Barrow III and area between Barrows III and II by layer numbers

	Area B	*1.*	*10.*	*Phase II ditch*	*Phase I ditch*	*2.*	*9.*	*16.*	*3, 3a*	*4.*
4cm. + blades		8	3	3	1				1	4
3cm. blades		5			1	1	1	2	8	3
retouched blades						1				1
points	1	7		4	5			5	6	13
scrapers	1									
microliths		3								
worked flakes		4			1		1	1		1
cores	1	5		4	1			1	4	
core trimmings	1									
waste flakes	1	52	78	24	19	21	3	20	31	25
rough workshop waste		18	4	3	3	15		8	5	7
fire cracked flint	5	5	64		2	7		3	11	7

Barrow III has a total of 544 worked flints, while 10 were found in Area B between Barrows I and III. The greatest proportion of these was formed by waste material and waste flakes from flint knapping. The microlithic element is very small and the total percentage of finely finished tools makes the assemblage less easy to categorize than, for example, that from Barrow I with its microlithic and " mesolithic " character.

Blades: (Fig. 11, Nos. 11-13)

Layers 1, 2, 3, 4, 9 and 16 have a total of 43 blades (2 of which have fine retouch along the edges), roughly divided into those of around 3cm. length and those of 4cm. or longer. Most are of dark grey flint, but those from layer are of yellowish brown flint. They are generally long and narrow, although a few are broader than the rest, but are still parallel sided. Many are broken and chipped, possibly through utilization, but more likely damaged as a result of subsequent earth moving associated with phases of barrow construction. Cortex remains on a few, along one side, and one blade has a burin-type flake scar.

1 J. G. D. Clark. *op. cit.*

2 P. A. M. Keef, J. J. Wymer and G. Dimbleby, ' A Mesolithic site on Iping Common, Sussex, England,' *P.P.S.*, vol. 31 (1965), pp. 85-92.

Points: (Fig. 11, Nos. 14-15)

Almost all these points are of the type described by Clark as the results of primary flaking, with minimal secondary working[1] and form an " oblique point " type. Few have the actual blunting retouch associated with the " true " obliquely-blunted points, but both kinds have been included here in the broad category of points. Most of the points, usually 4cm. long, point obliquely rowards the left and cortex frequently occurs along one side. One mottled grey and white point has a slightly notched base.

Scraper, microliths, worked flakes:

Area B has a very heavily patinated, very rough side scraper. There are also 8 worked flakes with small areas of retouch along portions of the sides. The 3 microliths from layer 1 are of micropoint form.

Cores and core trimmings: (Fig. 11, Nos. 16-17)

The 16 cores from layers 1, 3, 16 and Area B are generally rougher in form than the typical conical core from Barrow I—only 4 could be termed " conical cores." Small, narrow blade and short step-flake production is typical from the cores; many which have much cortex and unworkable flint on their surfaces. Some have been retouched for fresh striking platforms (concave).

A core trimming (approx. 8cm. long) of the type described by Clark[2] with numerous flake scars, battered keel and triangular section, occurs in Area B. (Fig. 11, No. 17).

Rough workshop waste, waste flakes and fire cracked flint:

Two hundred and seventy four waste flakes, 63 pieces of rough workshop waste and 104 chips and chunks of fire-cracked flint make up the bulk of the assemblage.

A far less specialised assemblage than that of Barrow I is indicated here and no sub-divisions or groupings within layers or according to phases of barrow construction are evident, the nature of the flintwork being somewhat rough and rudimentary.

Table 4: Flintwork from Barrow IV by layer numbers

	1.	*3.*	*2.*	*4.*	*8.*	*Hearth*
blades	19	3	15	10	8	
points	7		1			
scrapers	2					
worked flakes	4	3	3	1	1	
cores	14	1	4		5	
core trimmings	2					
waste flakes	99	13	32	12	105	
rough workshop waste	14		3		10	
fire cracked flint	16		4	15	27	733
flint slightly altered by fire						189
sandstone fragments	3					

Barrow IV has a total of 394 worked flints (together with 984 flints altered and cracked by fire). The assemblage consists of rough flint work with large, irregular cores, flakes and waste material. There are very few finely-finished artifacts; the blades and points also fall into a heavy flint work category.

Blades: (Fig. 11, Nos. 18-19)

The 55 blades from Barrow IV are generally 4 to 6cm. long, often truncated or snapped, and with occasional retouch along one or both edges. Many are irregular however, chipped and worn, with cortex along the ridge or down one side. One 4.7cm. blade has secondary working along both edges, the base, and very fine retouch along the back: 2 others have similar limited retouch.

Points: (Fig. 11, No. 20)

Layers 1 and 3 have a total of 8 points—oblique and pointed in form rather than as a result of secondary working; 2 have rudimentary steep retouch.

Scrapers: (Fig. 11, Nos. 21-22)

Although many of the worked flakes have a scraper-type retouch, there are only 2 artifacts (from layer 1), which fall into the scraper category. One, of roughly 4cm. diameter, is a side scraper of grey flint with steep retouch along the left side. The other, of oval shape, has retouch extending three quarters of the way round the outer circumference, but more pronounced on the left side.

[1] J. G. D. Clark, *op. cit.*, 154.

[2] J. G. D. Clark, *op. cit.*, No. 80.

Worked flakes:

In addition to the worked flakes with scraper retouch mentioned above, three are 12 flakes with various areas of secondary work. Some are obviously core (and axe?) sharpening flakes, whereas others have less specific secondary working. Two of these are larger than average, about 8cm. long, very heavily patinated and obviously of a different tradition.

Cores: (Fig. 11, No. 23)

The 24 cores from layers 1, 2, 3 and 8 fall into 3 main categories:

i) a few conical cores for fairly small, narrow blades, points and flakes;
ii) rounded cores for larger, more irregular blades and flakes;
iii) very irregular and rough cores which have produced single, or a few, flakes only.

There is a single flat core made from a split pebble about 4cm. in diameter.

Core-trimmings: (Fig. 11, No. 24)

Two core trimmings, 7cm. long, of Clark's type 80[1] with battered keels, triangular section and retouched edges occur in layer 1.

Rough workshop waste, waste flakes, fire cracked and altered flint:

There are 288 pieces of rough workshop waste and waste flakes from the barrow of the usual workshop type associated with flint knapping.

The 733 fire cracked flints and 189 pieces slightly altered by fire are part of a hearth or fire, and 23 pieces of fire-cracked flint from layer 8 are a separate association within the ditch in the north west quadrant. There are also 39 other chips and chunks and rounded pieces of fire cracked flint from layers 1, 3, 4 and 8.

Sandstone fragments:

There are 3 dressed sandstone fragments, possibly from a quern, from layer 1.

Although there appear to be some " mesolithic " elements in this assemblage, the very rough and heavy nature of the flintwork indicates a rather unspecialized flint-knapping activity on Barrow IV.

Barrow I-IV. Conclusions:

The flint used for the artifacts from Barrows I-IV, West Heath, is usually of fairly good to good quality (for its somewhat limited uses), although smaller pieces often yield only restricted areas of workable flint. Surface collection or superficial retrieval from local chalk areas within the catchment area seems to have been likely. Only a few of the finer tools from Barrow I which show very fine secondary working may have been the result of more selective raw material collection. Yellow-brown, light grey to dark grey are the usual colours and patination is uncommon.

The evidence of the flint industries from Barrow I-IV suggests transient occupation and temporary camps with their associated limited range of artifacts—where essentials could be replaced but full-time industrial production was unnecessary. (There is too the consideration of flint-knapping associated with possible " ritual " activities during barrow construction).

Chronological evaluations and categorisation of such temporary occupation flint assemblages are therefore extremely difficult and probably meaningless; the terms " microlithic " and " mesolithic " have been used in functional rather than in chronological terms.

(*b*) *The Romano-British Pottery and Tiles.*

Twenty very small sherds and three tile fragments were found in layer 5 in the south east corner of the ditch around Barrow I. The sherds are all of the same fabric and may well have come from the same pot. The fabric is dark grey with sand tempering and is rather " soft " indicating poor firing. It is a local type, very similar to that found nearby on the turf barrow at Minsted. A date centred on the 3rd century A.D. was suggested for that group.[2]

1 J. G. D. Clark, *op. cit.*, 153.
2 M. Millett, ' Romano-British pottery,' in P. L. Drewett, ' The Excavations of a turf barrow at Minsted, West Sussex, 1973.'
See note 4 on p. 126.

DISCUSSION

In the absence of any artifacts directly related to the barrows, any discussion must rest with the structure of the barrows alone. The main aspects to consider are firstly the use of turf in the construction of the mounds, secondly the use of wickerwork in Barrow III, thirdly the wide difference between the structures of the barrows, fourthly the absence of burials and grave goods and finally the arrangement of the cemetery itself.

Most barrows constructed on sandy heathland are built largely out of turf. They are well known from the heathlands of Hampshire (e.g. Beaulieu[1]) and Dorset (e.g. Dudsbury[2]) as well as many examples on the Continent (e.g. the Eight Beatitudes[3]). The construction of barrows on fine, sandy soil required certain functional modifications which have possibly been seen as indicating cultural contact in the past. The construction of a mound out of very fine heathland sand is virtually impossible, as the fine sand is easily blown or washed away. The construction of barrows out of turf may therefore be simply a modification of the general barrow tradition to suit local environmental conditions. It must be remembered, of course, that although actual turf structures rarely survive on the chalklands due to worm action, many such barrows have substantial turf cores, for example, Barrow 9 on Ashey Down, Isle of Wight.[4]

The stake circle around Barrow III also has clear parallels elsewhere. It may be included in Glasbergen's Type 9[5] and Ashbee's category C2.[6] Sir Cyril Fox suggested that the driven stakes of the South Wales circles demonstrate a hurdle-maker's technique,[7] while Ashbee suggests that some of the peripheral circles could well have performed the dual functions of demarcating the limits of the barrow and its retention and support.[8] Glasbergen suggested that the stake circle probably surrounded the barrow at its foot as a low fence.[9] It would be tempting to suggest some relationship between Barrow III and Continental examples, but given the rarity of this type in Britain where they are principally found in Wales,[10] it appears possible that the use of wickerwork may have been attempted independently in many areas to retain locally unsuitable mound building soils. Although clearly within a pan-European barrow building tradition, the remarkable diversity of the barrows at West Heath would probably underline very localized methods of construction, probably even varying from building to building by one community. However, if future excavation at West Heath confirms that the Phase I of Barrow III is the "Founder's Barrow" as it appears at present, then the possibility remains that the idea of wickerwork revetment came from elsewhere. There are, however, as yet no parallels from elsewhere in Sussex. As early as 1933 Leslie Grinsell looked specifically for post circles in Sussex in an attempt to relate Sussex barrows to superficially similar barrows in Holland. Grinsell excavated a strip along the berm of Barrow 2 on Bow Hill, but he found no evidence for posts or stakes.[11] The only post circle found in Sussex was excavated by Eric Holden under the Itford Hill barrow in 1971.[12]

[1] C. M. Piggott, 'The Excavation of Fifteen Barrows in the New Forest.' *P.P.S.*, vol. 9 (1941), pp. 1-27.

[2] P. Ashbee, *The Bronze Age Round Barrow in Britain.* (1960), Plate VIa.

[3] W. Glasbergen, 'Barrow excavation in the Eight Beatitudes,' *Palaeohistoria*, vol. 2 (1954), pp. 1-134.

[4] P. L. Drewett, 'The Excavation of Two Round Barrows and other fieldwork on Ashey Down, Isle of Wight, 1969,' *Proceedings of the Hampshire Field Club*, vol. 28 (1972), pp. 33-56.

[5] W. Glasbergen, *op. cit.*, 69.

[6] P. Ashbee, *op. cit.*, 64.

[7] C. F. Fox and B. Dickens, *The early cultures of north-west Europe* (Chadwick Memorial Volume), (1950).

[8] P. Ashbee, *op. cit.*, 65.

[9] W. Glasbergen *op. cit.*, 69-70.

[10] C. F. Fox, 'Stake circles in Turf Barrows: A record of excavation in Glamorgan, 1939-40,' *Antiquaries Journal*, vol. 21 (1941), pp. 97-127.

[11] L. V. Grinsell, *op. cit.*, (note 2 on p. 126), pp. 115-123.

[12] E. Holden, 'A Bronze Age cemetery Barrow on Itford Hill, Beddingham, Sussex,' *S.A.C.*, vol. 110 (1971), pp. 70-117.

This circle, however, consisted of large, widely spaced stakes which could hardly be interpreted as holding wickerwork. It is also somewhat later, being associated with a settlement site having a Carbon 14 date of 2950 ±35 b.p. (c. 1000 B.C.).

The widely differing structures of the four barrows excavated so far at West Heath is fairly typical of Early Bronze Age barrow cemeteries, both in Britain and on the Continent. Although there have been a limited number of total barrow cemetery excavations in England, cemeteries like that on Snail Down[1] and Amesbury,[2] illustrate widely differing barrow structure and burial rites. Even more striking is the range of burial structures found in many cemeteries on the Continent. Indeed, virtually every one of the thirty four round barrows excavated between Toterfout and Halve Mijl in the Netherlands contained differing internal structures.[3] Ashbee points out that it seems extremely unlikely that barrows within a cemetery were all constructed simultaneously. A barrow must have been set up on a given site and its companions added over a period of time.[4] The current Carbon 14 date range for West Heath would suggest a minimum period of some 500 years for the development of the cemetery. This would indicate rather long periods between barrow construction and given that the methods of barrow construction were passed on by oral tradition, it is hardly surprising that each construction party may add or remove certain elements in the construction process.

The absence of burials and grave goods from the West Heath barrows remains the most outstanding problem of the excavation. It is generally assumed that a lack of burials on heathlands is the result of the high acidity of the soil, which at best may leave only a soil silhouette. This remains the most likely explanation in this case. However, the absence of burials from any of the four West Heath barrows, together with the absence of previous discoveries in many Sussex turf barrows (e.g. Minsted[5]) leaves us in the position that it is impossible to say at present with any degree of certainty that these mounds were burial structures at all. However, their resemblance to burial structures is so close that some function in relation to a funerary rite seems most likely. The possibility remains that some or all were cenotaphs, the construction of which is widely known ethnographically, for example in Dahomey,[6] and suggested archaeologically, for example at Crig-a-Mennis.[7] Empty barrows, e.g. Ashey Down Barrow 9[8] and indeed, entire empty cemeteries are becoming well known.[9] It is often possible to find some apparently convincing explanation for the absence of a burial in a barrow mound, but with increasing evidence of empty barrows, perhaps some alternative function should be sought for certain barrow mounds, a function which may in fact even be the primary function of many barrows containing burials. It must be remembered that probably only a very small percentage of the population were buried in or under barrows,[10] so that the construction of a mound was clearly not essential for the simple disposal of a body.

The arrangement of the barrows at West Heath appears to have been largely determined by the local topography. Barrow III was built on the highest spot on West Heath, while V—IX

[1] N. Thomas and C. Thomas, 'Excavations at Snail Down, Everleigh, 1953-1955, an interim report,' *Wiltshire Archaeological Magazine* (hereafter W.A.M.), vol. 56 (1955), pp. 127-148.

[2] R. S. Newall, 'Barrow 85, Amesbury.' *W.A.M.* vol. 45 (1931), pp. 432-458.

[3] W. Glasbergen, *op. cit.*

[4] P. Ashbee, *op. cit.*, 33.

[5] P. L. Drewett, See note 4 on p. 126.

[6] M. J. Herskovits, *Dahomey I.* New York (1938), p. 394.

[7] P. Christie, 'Crig-a-Mennis: A Bronze Age Barrow at Liskey, Perranahuloe, Cornwall,' *P.P.S.*, 22 (1960), pp. 88-89.

[8] P. L. Drewett, See note 4 on p. 142.

[9] P. Ashbee, 'Excavations on Kildale Moor, North Riding of Yorkshire, 1953.' *Yorkshire Archaeological Journal*, vol. 39 (1957), pp. 179-192.

[10] H. S. Green, 'Early Bronze Age burial, territory and population in Milton Keynes, Buckinghamshire and the Great Ouse valley.' *Archaeological Journal*, vol. 131 (1975), pp. 75-139.

were constructed on undulating, sandy ridges radiating out from the central plateau (Fig. 2). The cemetery may therefore be considered a nucleated cemetery. The majority of Sussex barrows do not appear to have been constructed in closed cemeteries, and those that do exist are largely linear cemeteries, perhaps predetermined by the many linear ridges between the dry valleys of the Chalk Downs. The majority of the surviving barrows are situated on the Chalk and Greensand (Fig. 10), but the existence of the Hove barrow on the coastal plain[1] and a recently discovered cemetery on the wealden sands[2] would suggest the existence of other barrows in these areas. The existence of barrows on the Wealden Clays, however, remains unlikely. The majority of surviving barrows on the Chalk Downs are in dispersed cemetery areas, particularly along the northern side of the Downs. (Fig. 12). It is possible that this distribution may be the result of differential destruction. The majority of surviving ' Celtic ' fields appear to be on the southern slopes of the Chalk Downs, so barrows could well have been destroyed during early agricultural operations on the Downs. Grinsell, however, did not favour such a view and suggested that " further finds of barrows are not likely to affect the distribution pattern."[3] If this is correct then the majority of barrows are situated on the northern side of the Downs. Grinsell observes that there is " a tendency for barrows to be grouped along the Ridgeway just above the northern escarpment." This area has minimal evidence of early agriculture in the form of ' Celtic ' fields, and so may be considered as of minimal agricultural potential. The siting of long barrows in areas of minimal agricultural potential in East Sussex has been suggested elsewhere,[4] so the possibility exists that the builders of the round barrows were continuing a local tradition. The idea that round barrows may have been constructed in homeland territories by migratory pastoralists, as has been suggested elsewhere in Britain,[5] would not be confirmed by the Sussex situation. It is more likely that they were built, perhaps by pastoralists, in well established and defined barrow construction areas.

ACKNOWLEDGEMENTS

For permission to excavate, I should particularly like to thank Mr. A. S. Borrow, the owner of West Heath. I should also like to thank Mr. Borrow and all the employees of S. E. Borrow Ltd., working at the sandpit, for considerable practical help during the excavations. My main assistants during the excavations were Owen Bedwin, Richard Williams, Richard Kelly, David Williams, Sioned Alban-Jones, Mark Redknap, Geoff Beech, Anthea Bunn, Nick Cary, Tom Miachi, John Boden and Ian Ferris. Barrows III and IV were excavated as Institute of Archaeology training excavations, so I should like to thank all the first year students who attended the courses. Mr. H. Stewart supervised the surveying of the site and prepared Fig. 2. Geoff Denford took all the photographs during 1974 and David Williams supervised the flotation.

For writing specialist contributions I am indebted to Miss C. R. Cartwright, M.A., Mrs. J. Baigent, B.Sc., and Mrs. S. Denford, B.Sc. For visiting the site and offering invaluable suggestions, I am indebted to Professor J. D. Evans, F.S.A., Dr. G. J. Wainwright, F.S.A., Professor G. W. Dimbleby, Miss J. Sheldon, Dr. K. D. Thomas, Mr. E. Holden, F.S.A., Mr. A. Down, F.S.A., Mr. F. Aldsworth and Mr. C. F. Tebbutt, F.S.A. Caroline Cartwright assisted throughout the preparation of the report and Lysbeth Drewett prepared all the illustrations except Fig. 2. Mrs. C. Page kindly typed the text.

[1] B. Philips, ' Discovery of a tumulus at Hove, near Brighton.' *S.A.C.* vol. 9 (1857), pp. 119-124.

[2] C. F. Tebbutt, ' The Prehistoric occupation of the Ashdown Forest area of the Weald,' *S.A.C.* vol. 112 (1975), pp. 34-43.

[3] L. V. Grinsell, *op. cit.*, (note 1), p. 210.

[4] P. L. Drewett, ' The Excavation of an Oval Burial Mound of the Third Millennium B.C. at Alfriston, East Sussex, 1974.' *P.P.S.*, vol. 41 (1975), p. 140.

[5] H. S. Green, *op. cit.*, 136.

Appendix I: Pollen Analysis

by Joan Baigent

Samples for pollen analysis were taken by the excavator at 2cm. intervals up through the supposed buried land surface of each barrow and into the turf mound above. Barrows I-IV were sampled and also a field bank which runs between the barrows and is thought to be of 17th century date. The samples were treated with acetolysis and hydrofluoric acid to isolate the pollen and then counted in the usual way. The results can be seen in Figures 13-17, which show the distribution of the important pollen types expressed as percentages (of pollen plus fern spores) and absolute frequencies (grains per g. soil).

Barrow I

Figure 13 shows the distribution of pollen types for Barrow I. Sample 26 (numbered from an arbitrary point in the mound) had a high absolute frequency of the major types of pollen. Below this frequencies fall off gradually until in Sample 32 very little pollen remains. This is the characteristic distribution of pollen under an intact soil surface. It is very likely, therefore, that Sample 26 represents the position of the buried land surface. Turves would show pollen sequences just like this and so from the pollen diagram the positions of several turves—both upright and inverted—can be seen.

The sequence leading up to Old Land surface represents the vegetation on the site before Barrow I was built. It can be seen that heather (*Calluna*) is becoming more important and this may show that the land is becoming progressively cleared, perhaps with fire, because heather is an important colonizer of poor soils after fire. Hazel (*Corylus*) decreases slightly in importance at the same time, though alder (*Alnus*), oak (*Quercus*) and lime (*Tilia*) increase slightly, showing that the clearance is only local. At the land surface itself the most important constituents of the flora were hazel and heather, with alder, oak and lime also significant. It should be remembered that heather, and in particular hazel, are prodigious pollen producers in contrast to the trees. However, throughout the Bronze Age hazel was one of England's most abundant species. It is a plant characteristic of the transition from forest to open country as it flourishes when the top storey of trees has gone.

The extent to which wooded land is being replaced by open country can be measured by the percentage of non-arboreal pollen/arboreal pollen (NAP/AP). According to Dimbleby,[1] a percentage of 40% represents high forest, 100% open woodland and higher values increasingly open country. For sample 26, NAP/AP is 123% representing fairly open woodland. This ratio has been used for the turves of the mound to determine their origin.

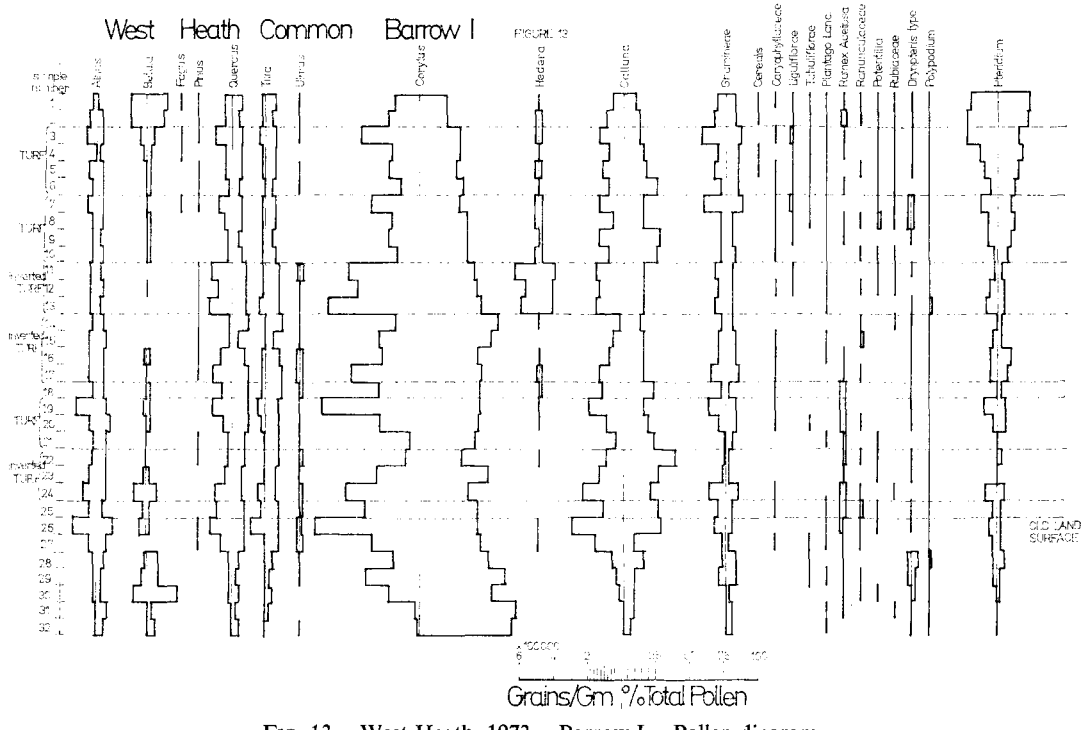


FIG. 13. West Heath, 1973. Barrow I. Pollen diagram.

[1] G. W. Dimbleby, 'Soil pollen analysis,' *Journal of Soil Science*, vol. 12 (1961), pp. 1-11.

PLATE I(a). West Heath, 1975. Aerial view of the cemetery from the north during the excavation of Barrow IV
(Photo: P. L. Drewett)

PLATE I(b). West Heath, 1973. Barrow I. West face of north-east quadrant showing turf stack and old land surface. Scale 2 metres

(Photo: R. Williams)

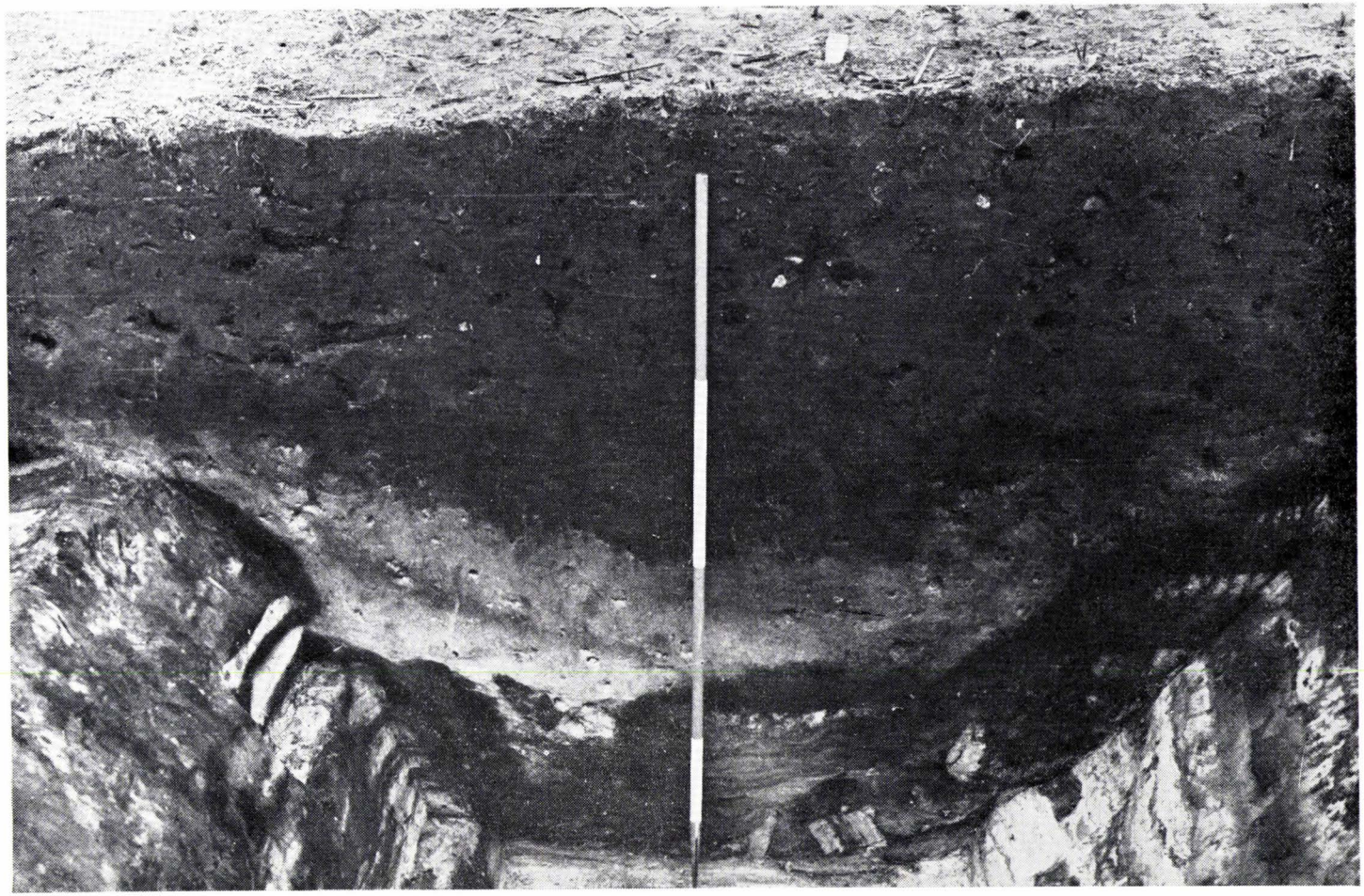


PLATE II(a). West Heath, 1973. Barrow I. Ditch section at D. Scale 2 metres (Photo: R. Williams)

PLATE II(b). West Heath, 1974. Barrow III from the south. Scale 2 metres (Photo: G. Denford)

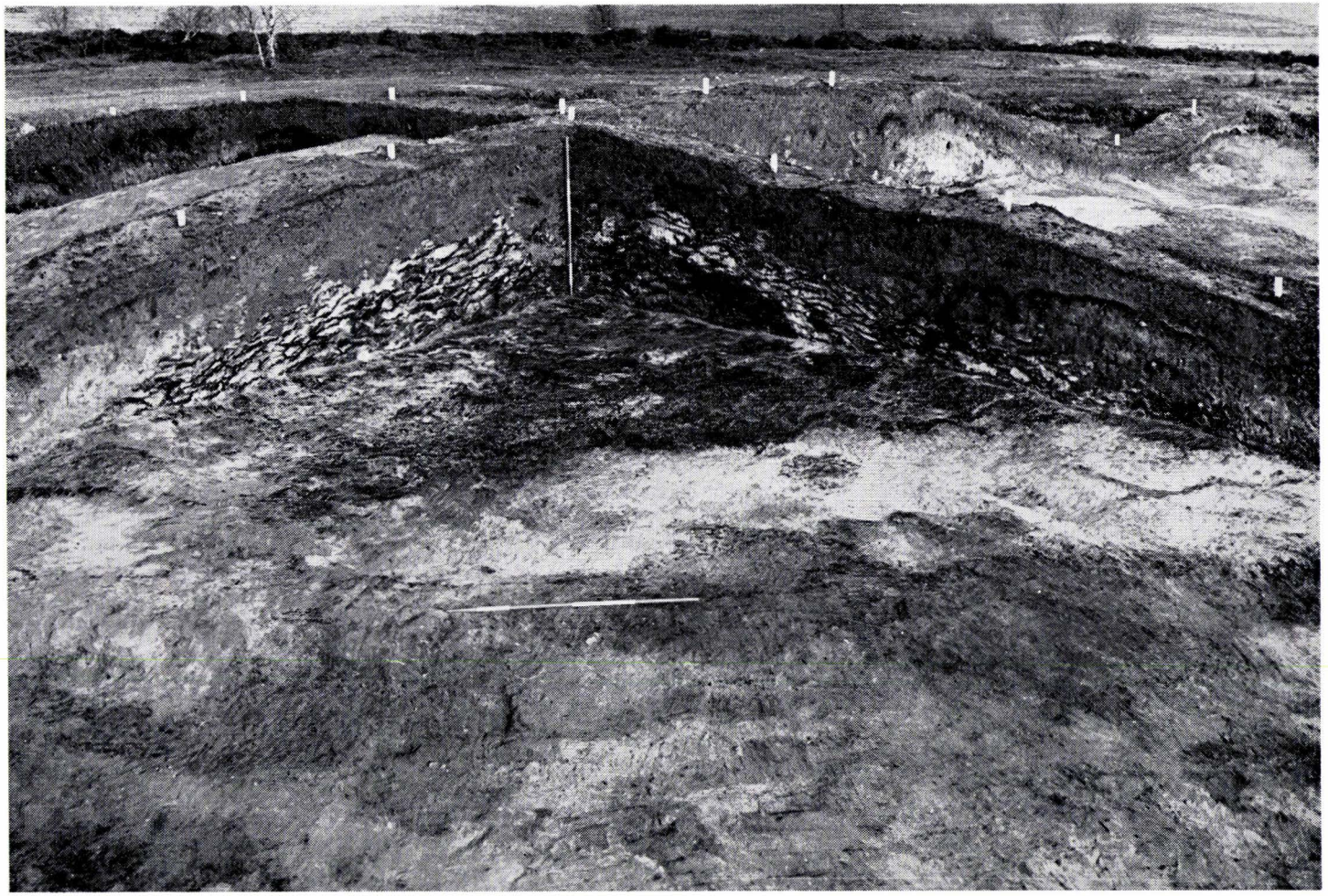


PLATE III(a). West Heath, 1974. Barrow III. Turf stack in north-east quadrant. Scales 2 metres (Photo: G. Denford)

PLATE III(b). West Heath, 1974. Barrow III. Detail of vertical face left by wickerwork revetting. West face of north-east quadrant.
Scale 2 metres (Photo: G. Denford)

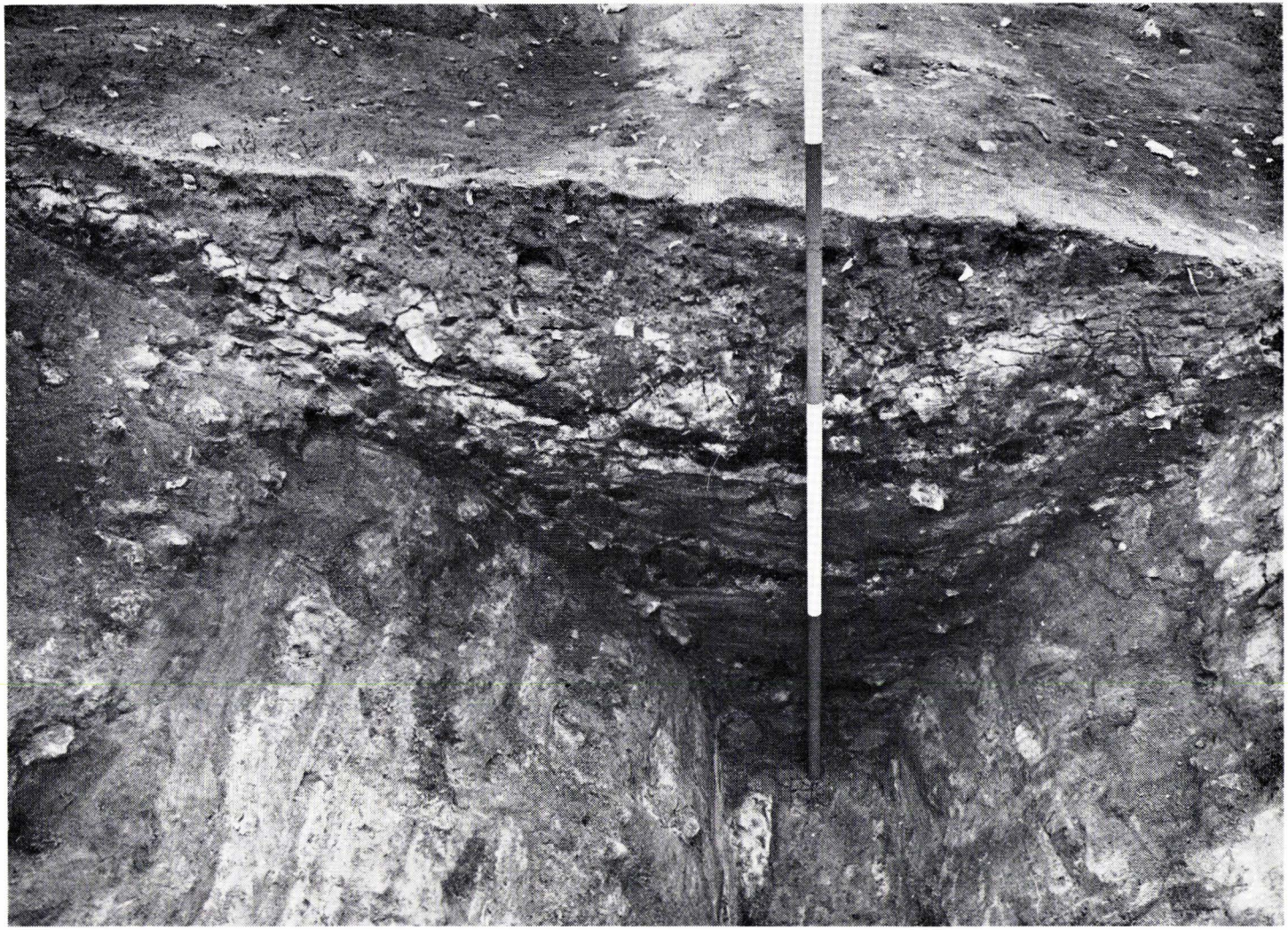


PLATE IV(a). West Heath, 1974. Barrow III. Phase I ditch in section G-H. Scale in 50 cm. intervals (Photo: G. Denford)

PLATE IV(b). West Heath, 1974. Barrow III. Phase II ditch in section E-F. (Over cut into surrounding sand). Scale in 50 cm. intervals
(Photo: G. Denford)

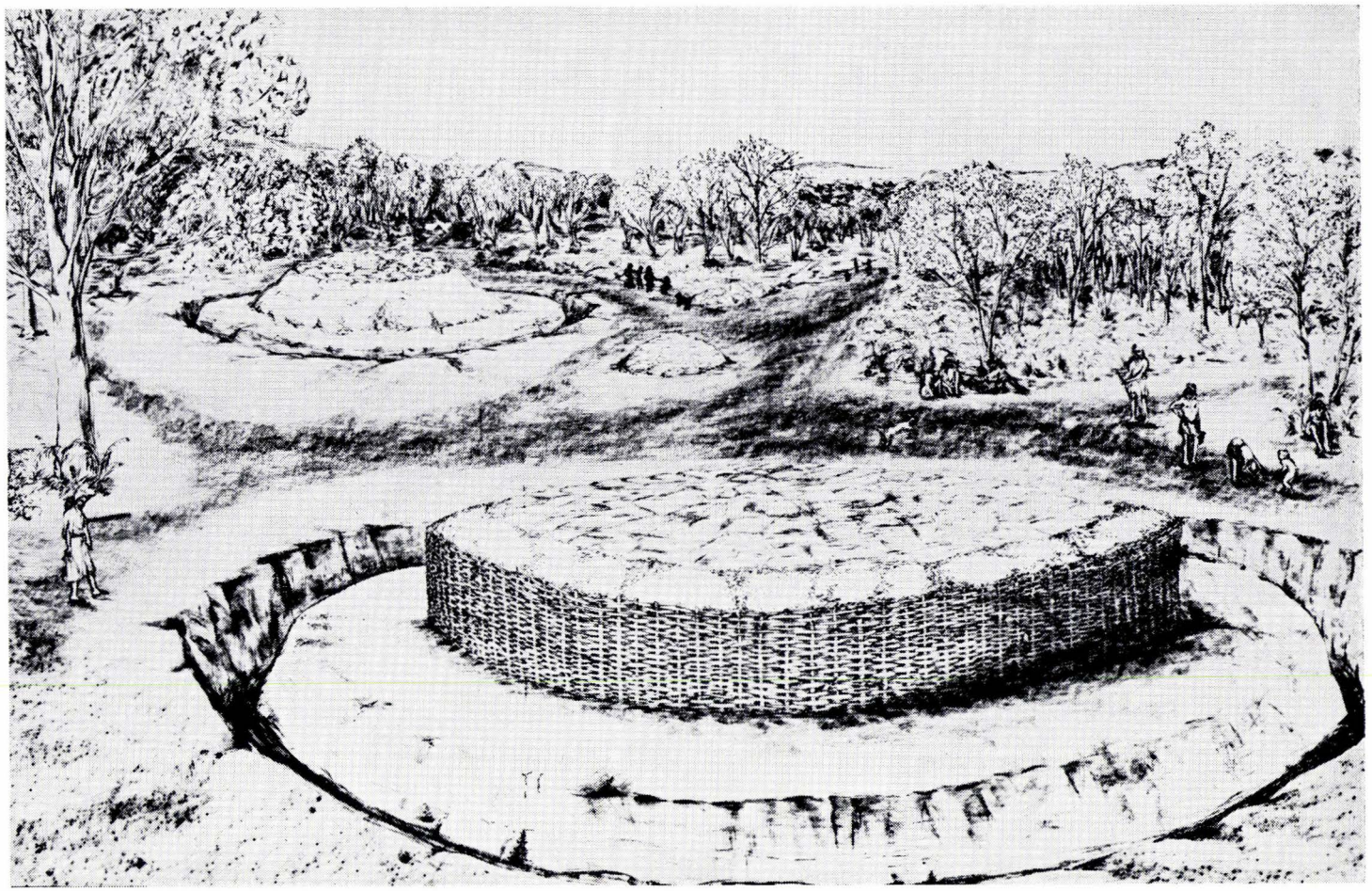


PLATE V(a). West Heath. Barrow III. Reconstruction of Phase I barrow (Drawn by Lysbeth Drewett)

PLATE V(b). West Heath. Barrow III. Reconstruction of wickerwork revetment around Phase I barrow. Built on site of Barrow IV
(Photo: P. L. Drewett)

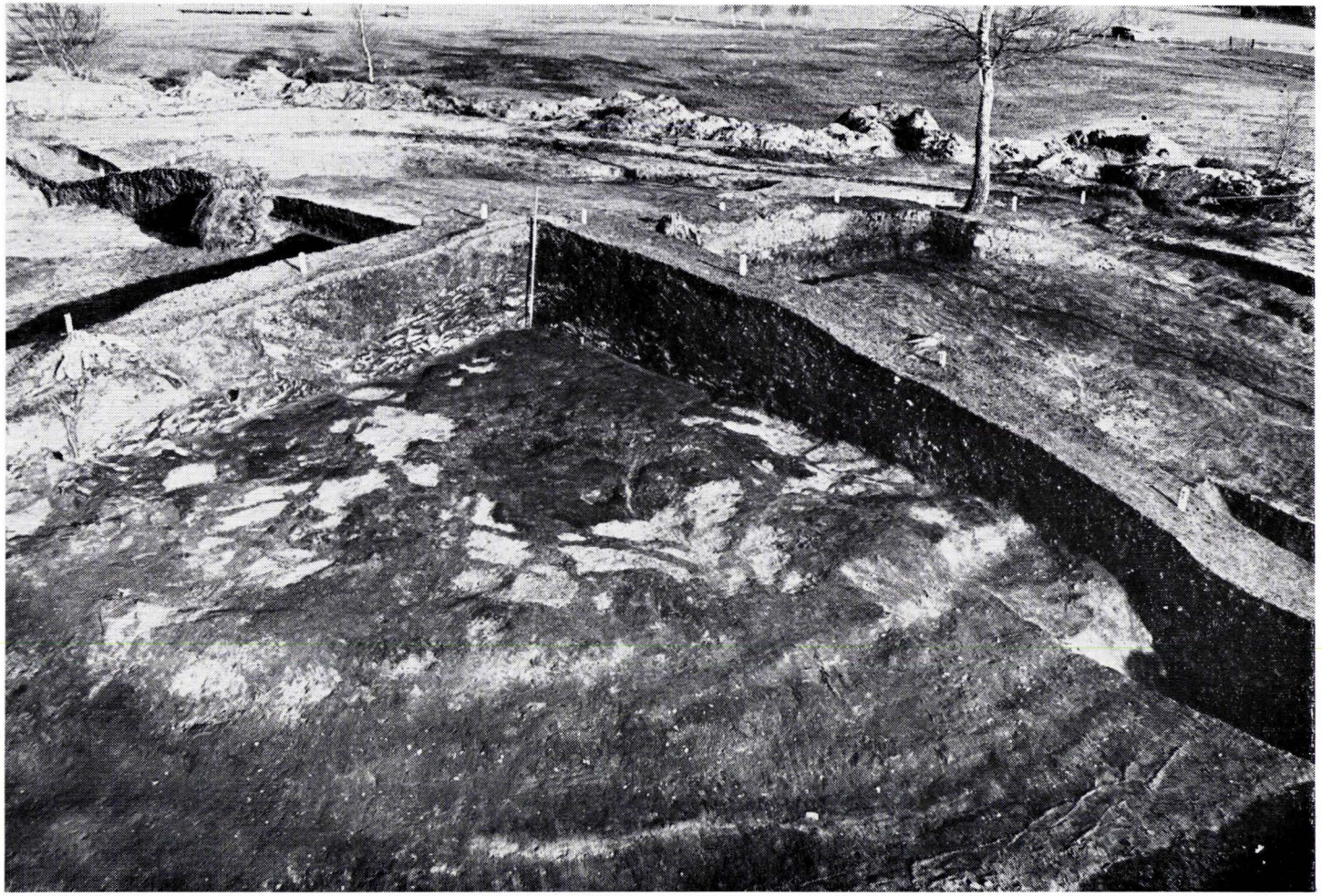


PLATE VI(a). West Heath, 1975. Barrow IV from the north-west. Scale 2 metres (Photo: P. L. Drewett)

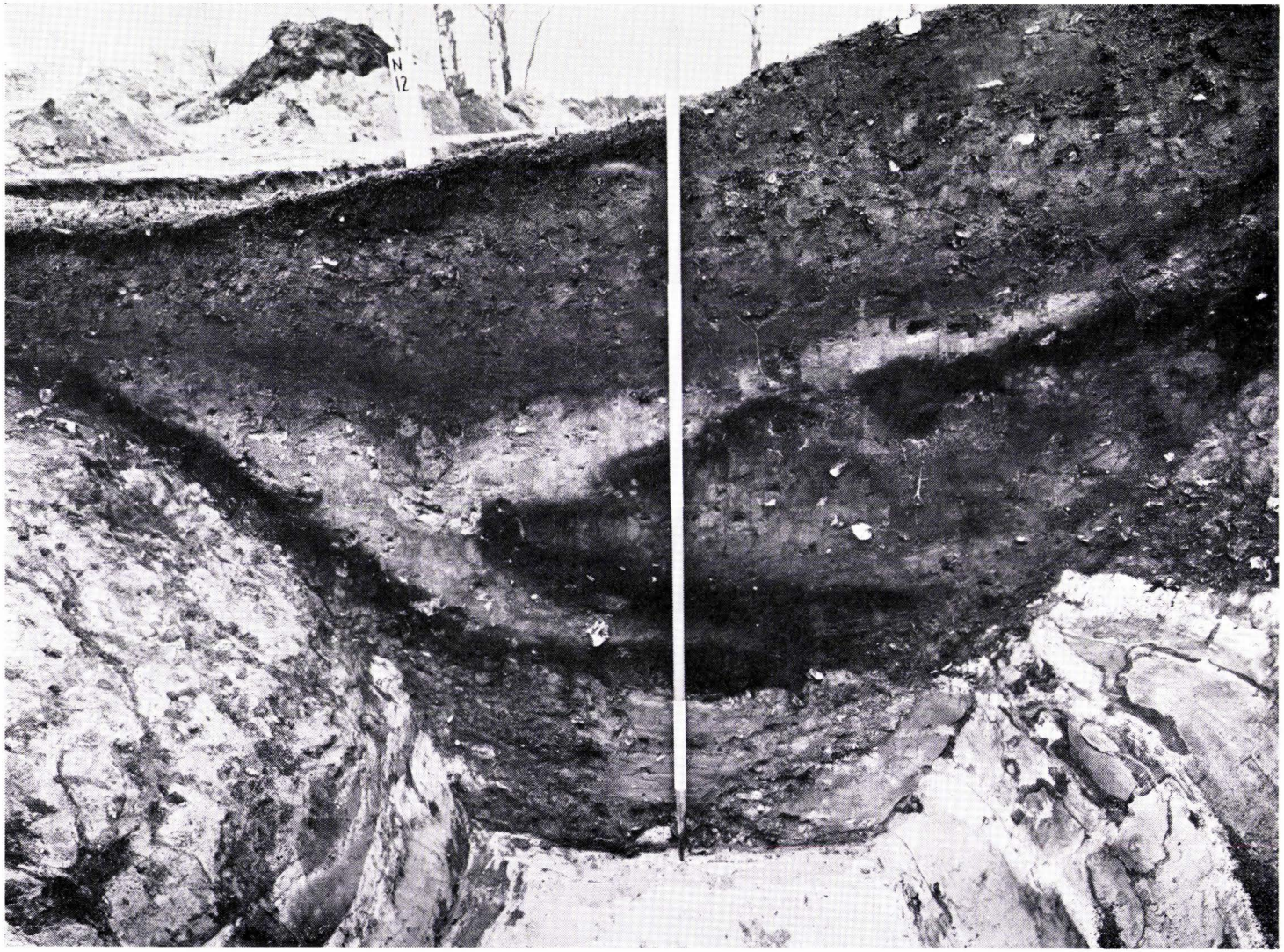


PLATE VI(b). West Heath, 1975. Barrow IV. Ditch section at C. Scale 2 metres (Photo: P. L. Drewett)

The turf at Sample no. 24 shows 117%—close to that of the buried soil surface, whereas the turves represented by nos. 19, 17, and 13 all indicate less open conditions with results of 100%, 106% and 92% respectively. It is interesting to see the relatively high proportion of ivy (*Hedera*) pollen in Sample 13. The turf could have come from a wooded situation where ivy was growing, or perhaps ivy had been brought onto the site. Quite significant amounts of ivy charcoal have been reported from the site and it was possibly used as fodder.[1] The turves at Samples 7 and 3 both indicate much more open conditions with NAP/AP results of 165% and 130%. These are interesting because bracken (*Pteridium*) and birch (*Betula*) become more important and hazel (*Corylus*) less. Cereals also make their only appearance, evidence for agriculture somewhere in the area.

From the above it seems that the area held a mixture of wooded and cleared land. The sandy ridge where the barrows were built was cleared and was surrounded by open heath and hazel thickets. In the valleys was a more dense primary woodland which included alder (*Alnus*), oak (*Quercus*) and lime (*Tilia*). Light demanding species like grasses (Gramineae) and their associated herbs are poorly represented, as is bracken. Heather may have taken the place of grasses in the clearings which would explain the scarcity of weeds of pasture like *Rumex acetosella* and *Plantago Lanceolata*. Frequent firings (perhaps deliberate) would discourage regeneration of trees like oak, alder and lime whereas hazel would flourish in the open. Hazel thicket is better for browsing animals than closed forest and this may have been an aim in firing, but heather would not have been preferred to grass by sheep. There is little evidence for agriculture near the site—perhaps the soil was too poor by this time, though judging from the cereal pollen grains found there was probably some agriculture in the area at this time.

Barrow II See figure 14 for the pollen diagram

The general picture of the vegetation is much like that of Barrow I. The old land surface can clearly be seen in Sample 29, and below this pollen frequenies fall off progressively with depth. Again, heather (*Calluna*) builds up from being very poorly represented at no. 20 until it is an important part of the vegetation by Sample no. 27. Birch (*Betula*) decreases from no 20 upwards as it would if it were being replaced by heather after its early colonisation of a clearing. It is interesting to see *Armeria maritima* (sea thrift) in the lowest sample as it is an indicator of Boreal conditions in the South of England, but its presence is probably due to mixing with lower layers. The NAP/AP ratio for the land surface is 127%—almost identical to that of Barrow I. It is possible then that the two barrows were built at more or less the same time. Another ratio, that of NAP/C measures the replacement of hazel (*Corylus*) by open land, and the values of this ratio for Barrows I and II are identical (at 61%). Barrow II has a C-14 date for the buried land surface of c. 1160 b.c., so probably these first two barrows were built around that time.

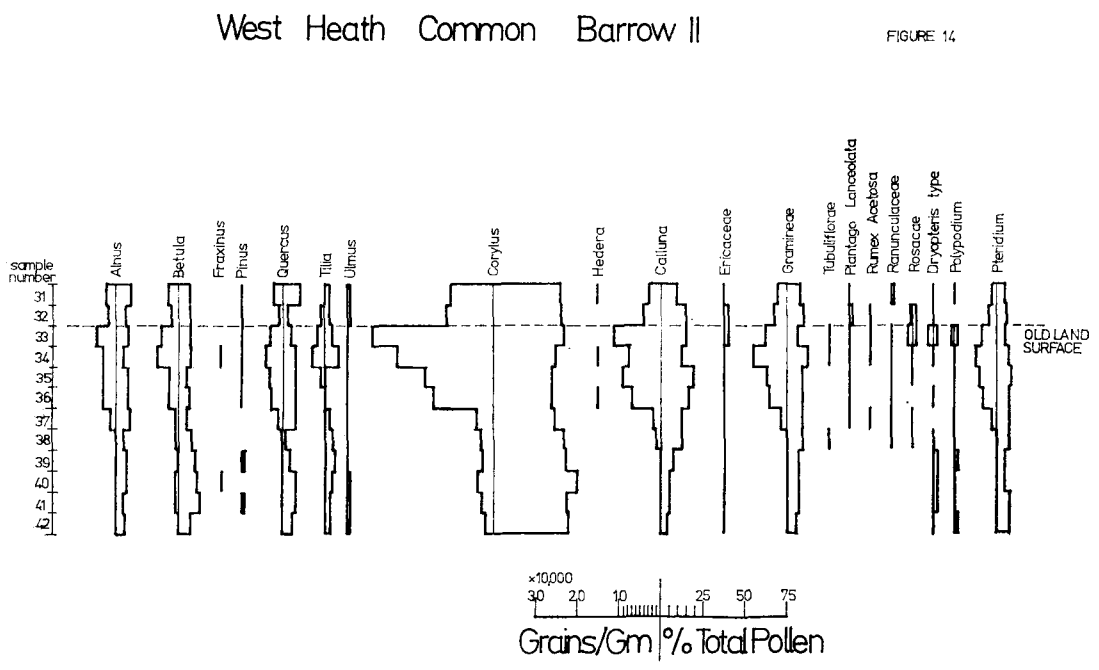


FIG. 14. West Heath, 1973. Barrow II. Pollen diagram.

[1] I. G. Simmons and G. W. Dimbleby, 'The probable role of ivy (*Hedera helix L.*) in the Mesolithic economy of Western Europe,' *Journal of Archaeological Science*, vol. 1 (1973), p. 291-296.

Barrow III

The diagram illustrating the distribution of major pollen types for Barrow III is shown in Figure 15. The old land surface can be seen at the position of Sample no. 27. Again the general picture of the vegetation remains much the same. The difference between this Barrow and Barrows I and II is mainly that the grasses (*Gramineae*) are more important than heather (*Calluna*) in the vegetation. Hazel (*Corylus*) is also slightly scarcer. It is thought that Barrow III is the Founder's Barrow—the oldest one. It is after it was built that heather took over from grasses in the clearings. Hazel became more dominant at the same time. When we see the NAP/AP percentage for Barrow III it is 181. This shows plainly a more open landscape of larger clearings than is seen with either Barrow I or II (which had results of about 125%). After the building of Barrow III then, the area round the site became more wooded than it was. The NAP/C ratio comes to 115% which shows that the area was less covered by hazel and more open than for Barrows I and II.

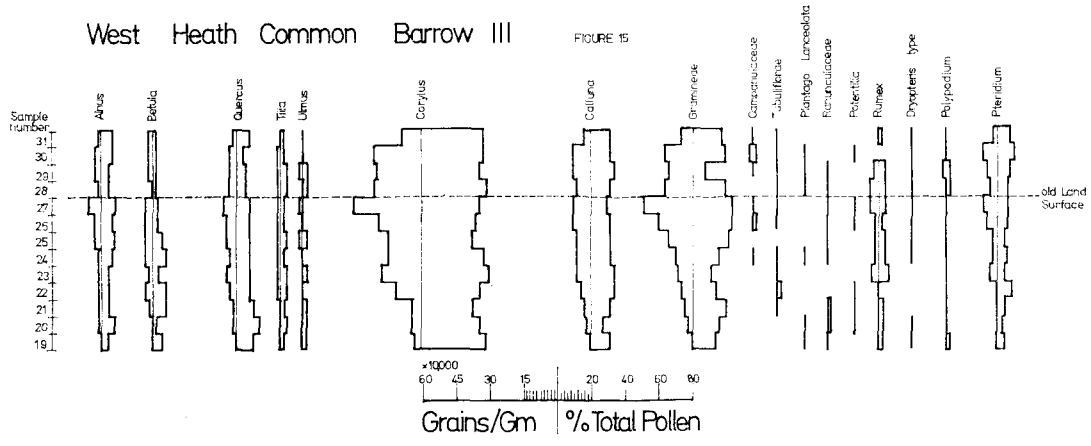


FIG. 15. West Heath, 1974. Barrow III. Pollen diagram.

Barrow IV Figure 16 shows the pollen diagram for Barrow IV

Here, the position of the buried soil surface is in question. According to the barrow section, its position should be at Sample 143. It can be seen from fig. 16 that the sample 2cm. above this (no. 144) has much higher values for absolute frequency for all the important species. After this there is a sharp drop in the amount of pollen to no. 143 and then the usual gradual decrease below this to the base of the diagram. This could be the result of the truncation of the soil under the barrow (turves may have been taken off in the building of another barrow) when there would be such a drop in frequency at no. 143. Sample 144 would then be an inverted turf. Otherwise, the high values for no. 144 could be the result of an inverted turf (nos. 146-144) lying straight on the ground—practically doubling the amount of pollen from no. 144. This seems more likely.

The general picture of the vegetation is very similar to Barrow III. Before the barrow was built heather (*Calluna*) becomes more important—as with all the barrows—leading to a general picture of the opening up of the site. The NAP/AP percentage for the old land surface is 193—similar to that of Barrow III. The NAP/C ratio comes to 131%. Both figures suggest slightly more open country than for Barrow III with less predominance by hazel. At the land surface itself there is an unusually high percentage of heather for the barrow with clusters of grains together. This suggests that heather was growing at the place upon which the barrow was built.

The four barrows together give an impression of slowly changing vegetation. It seems likely that Barrows I and II were built more or less at the same time, and that Barrows III and IV were also built around the same time. The area seems to have been opened up, and first colonized by grass and heather, with later heather becoming the dominant ground vegetation. Hazel is always the dominant species and becomes more so during the lifetime of the use of the barrow cemetery The area on the whole, though, is becoming more rather than less wooded, and the scarcity of agricultural and pastoral weeds may indicate a decrease in its use by man for these purposes. The increase in heather may be due to man's use of fire to prevent regeneration of the forest and the subsequent worsening of the soil. When the other barrows in the cemetery have been sampled fuller details of any vegetation changes should be available. It is interesting to compare these barrows with the early Bronze Age turf mound at Minsted, where conditions were comparable to this.[1]

[1] P. L. Drewett, See note 4 on p. 126.

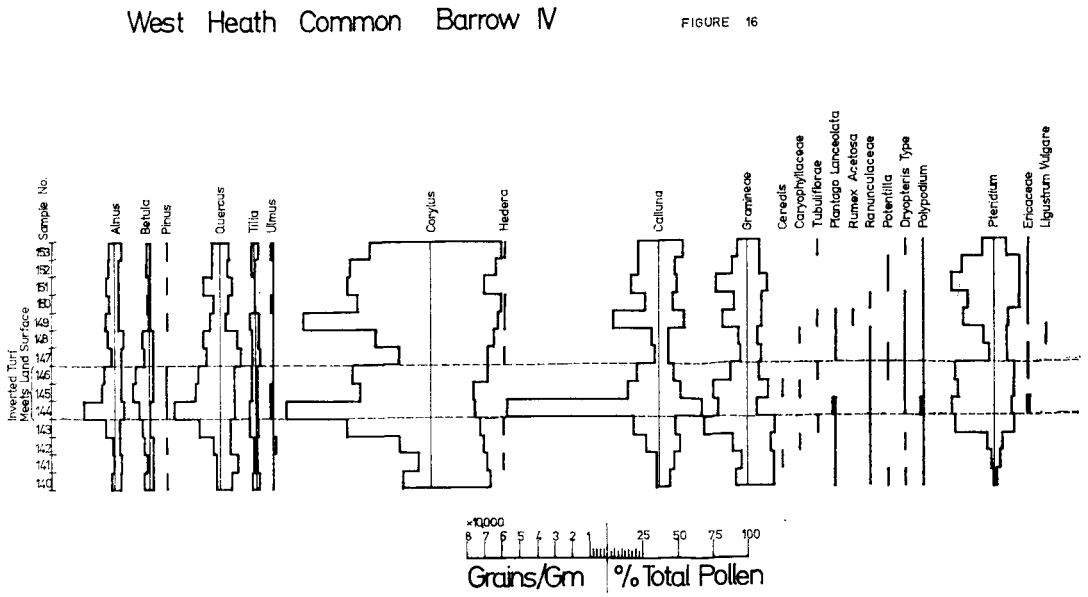


FIG. 16. West Heath, 1975. Barrow IV. Pollen diagram.

Field Bank See Fig. 17 for the pollen diagram

The buried land surface can probably be seen at Sample no. 25. The results of the vegetational changes above can perhaps be seen in this 17th century field bank. The country around the site of the barrows has become much more open, with NAP/AP ratio of 290%. The increasing importance of heather in the area has ended in it coming to occupy much more of the open land. Hazel occupies proportionately less. The mixed woodland of the damper valleys still continues, though there is less of it. Oak and alder still dominate the woods with lime playing a smaller part. Cereals and weeds of agriculture and pasture are slightly less scarce and more of the area was probably in use.

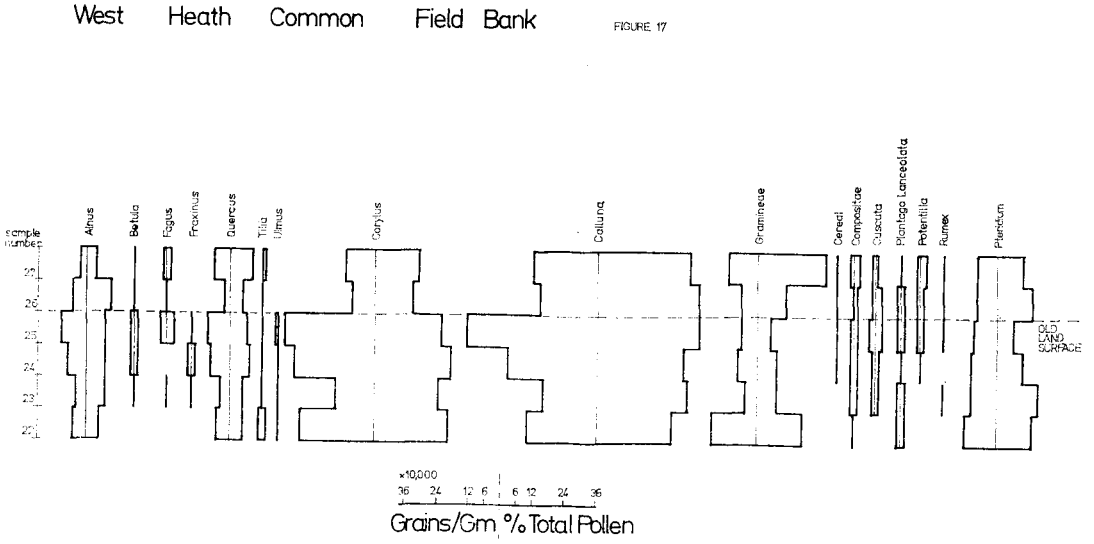


FIG. 17. West Heath, 1974. Field Bank. Pollen diagram.

TABLE V. BARROW IV: LIST OF MITE SPECIES AND THEIR HABITATS

ACARINA Species Present	NO. OF SPECIMENS PER SAMPLE (Identified nymphs are shown in brackets) Old land surface and turf stack																			Present-day surface												RECORDED HABITATS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	17	18	19	20	21	23	24	25	26	27	28	29	30	31	32	33	
CRYPTOSTIGMATA																																
Ameronothrus maculatus (Mich.)	4																															Lichens, usually coastal
Carabodes Minusculus Berl.																														35	1	Pine and larch litter, pioneer heath, moorlands—especially with mosses and lichens
Ceratoppia bipilis (Herm.)																							1						6	3	18	Tree litter, *Molinia* fen, pioneer heath, moorland
Ceratozetes ? mediocris Berl.			1																													Woodland, *Molinia* fen, grassland
Chamobates schützi (Oudms.)					2	1			1		3										1								2	6		Litter of larch and spruce, moorland, especially with moss and lichens
Ctenobelba obsoleta (Koch)			2																													Moss and humus, moss-covered wood
Euzetes globulus (Nic.)			1																													Woodland litter and moss, *Molinia* fen, grassland
Micreremus brevipes (Mich.)			1																													Arboricolous—favouring oak, pine, ash, elm; also on mosses and lichens associated with trees
Microtritia minima (Berl.)		101	2					3	1	1	8	6							1					2	2			2	1		1	Woodland litter
Odontocepheus elongatus (Mich.)		2																														Woodland litter, decaying wood, pioneer heath
Oppia ?falcata (Paoli)																					3	1	5		1							Moorland, moss associated with oak and birch
Oppia ornata (Oudms.)		11	1																					1					13	40	8	Woodland litter and moss, pioneer heath, tree litter in sand dunes, moss and moorland
Oppia sp.								1				1	1																			
Oribatula tibialis (Nic.)											1																			1		Woodland, *Molinia* fen, heath, moorland, moss and lichen
Pelops sp.			1																									1				
Phthiracarus sp.		5																												3		Usually woodland litter, wood fragments
Platynothrus peltifer C. L. Koch		(2)	(1)																		1(1)		2(4)		1			(1)	1(2)		(1)	Woodland, sphagnum bog, heathland, moorland, salt marsh, mosses
Rhysotritia duplicata Grandj.		187	11	2					7			2		1	1								1									Woodland litter, moorland
Scutovertex minutus (C. L. Koch)				1							2																					Mosses, lichens, decaying leaves, moorland, heather
Tectocepheus velatus (Mich.)											1										6				2		1		4			Most habitats—little preference
Thyreosoma lanceolata (Mich.)																								1						14	4	Woodland, *Molinia* fen, pioneer heath, moorland, heather, grassland
Zygoribatula frisiae (Oudms.)	1																															Sitka spruce, woodland, moss, moss in sand dunes
Nymphs (Unidentified)																									2				13	11	1	
MESOSTIGMATA																																
Hypoaspis aculeifer (Can.)																														1		Grassland, salt marsh
Pachylaelaps sp.		1	5	1																												
Pergamasus sp.																														1		
Rhodacarus sp.		1																														
Uropolyaspis sp.		2																			2		7		5		1		2			
Uropodidae	1	3	1					1																								
Nymphs (unidentified)																					2	3			8	1		1			2	
ASTIGMATA																																
Rhizoglyphus sp. (Claparede)																									5							

Appendix II: Mites
by Sue Denford

Samples of soil from the turf stack and the old land surface of Barrow I were collected by the excavator and submitted for examination. Further samples were collected from the old land surface under Barrow IV by the author and T. P. O'Connor.

Barrow I (Fig. 3).

Turf Stack (Fig. 4, layer 4).

Sample size: 800 ccs.
Fauna Class Arachnida
Sub-class Acari
Order Mesostigmata
Family Ascidae
Proctolaelaps levis ♀ (Oudemans and Voigts)
1 specimen

Proctolaelaps levis is a fairly common species, characteristic of damp and possibly marshy conditions.

Old Land Surface (Fig. 4, layer 4).

Sample size: 1,200 ccs.
Fauna Class Arachnida
Sub-class Acari
Order Cryptostigmata
Family Oppiidae
Oppia sp. 5 specimens
Family Pelopidae
Pelops sp. 1 specimen

Identification was only possible to generic level, and the genus *Oppia* contains a large number of species occuring in a variety of environments.

The genus *Pelops* is more restricted, and is found commonly in grassland or more "intermediate" habitats—such as fen and moorland. However, as only one specimen of this genus was present, this cannot be conclusive.

All the specimens were well preserved, and as they were not heavily chitinised mites, this would suggest that the lack of faunal remains was due more to inadequate sampling than to bad preservation.

Barrow IV (Fig. 11)

Sampling and Extraction Procedure

The buried soil and turf stack of Barrow IV were sampled in April 1975 (by T. P. O'Connor and the author). The position of the samples is indicated on the main site plan. Samples 1-8 and 18-21 were taken from the buried soil at one metre intervals across the mound from the outer edges of the buried surface, through the centre. Some were "staggered" to avoid areas of loose sand, presumably caused by rabbits burrowing. Each sample was 20 x 20cm² in area, and the depth varied from 3-5cm. with the depth of the buried soil. The turf stack samples, numbered 9-10 and 13-17, were also 20 x 20cm² with a depth of 5cm. They were taken from 15-20cm. above the buried soil. All the samples were removed using a trowel.

The faunal remains were extracted by wet-sieving and flotation in magnesium sulphate solution, on the "Salt and Hollick" pattern. All the samples consisted of humus-stained sand with a stone content of approximately 1%. All contained modern roots 1-2mm. in diameter, and sample 2 contained fresh wood fragments, 1-2cm. in length (sample 16 was retained for soil analysis).

After a quick examination of the mite fauna, it became apparent that many specimens had a fresh appearance and that although the samples were taken from areas which were not obviously disturbed, there was a possibility that they contained a mixture of mites from periods up to the present day. The modern surface and immediate area of the barrow were sampled to check this in November, 1975. Samples 23-33 were collected using a core sampling tool with a diameter of 5.5cm. (area 1/50m²), and a depth of 12.5cm. Samples 23-30 were taken from the west baulk of Barrow IV, which was still intact apart from the central part, and was supporting a vegetation of dead bracken. Sample 31 was taken beneath a silver birch tree on the edge of the south baulk, and samples 32-3 were taken from an area of heather within 10 metres of the barrow ditch on the north side. Bracken, heather and scattered silver birch trees formed the main components of the vegetation in this area. A Tullgren Funnel extraction technique was used for these samples. (It is intended to wet-sieve and flotate these samples to check the results at a later date).

Results

The species list for both sets of samples is shown in Table V, together with a summary of their recorded habitats. From the species represented, and the condition of the old land surface and turf stack specimens, several points can be made.

1. All the species, with the possible exception of *Ameronothrus maculatus*, have been found in heathland or light woodland conditions corresponding with the nature of the West Heath site.

2. Of the 29 species present, ten occur in both the archaeological layers and the present day surface. (Twelve are found only in the buried soil and turf stack, and seven in the modern soil.). One of the species common to both *Chamobates schützi*, is fairly rare in this country.

3. Some of the old land surface and turf stack specimens were in excellent condition, suggesting that they had been alive at the time of sampling. They were, in sample 1, *Ameronothrus maculatus;* in 2, *Phthiracarus* sp. (3 specimens), *Microtritia minima* (3) and *Uropolyaspis* sp.; in samples 5, 6 and 9, *Chamobates schützi;* and in 14, *Rhysotritia duplicata* (1 specimen). In samples 2 and 3 there were also soft-bodied nymphs of *Platynothrus peltifer*, a species which occurred in both adult and immature forms in the present day soil.

4. *Microremus brevipes, Microtritia minima, Odontocepheus elongatus, Phthiracarus* sp., *Rhysotritia duplicata* and *Scutovertex minutus*, all found in the archaeological layers, are frequently associated with wood fragments and litter. (*Microremus brevipes* is mainly an arboricolous species). *Microtritia minima* and *Rhysotritia duplicata* reach their highest numbers in sample 2, where large amounts of fresh wood fragments were observed.

5. There are none of the expected differences between the fauna of the old land surface, and that of the turf stack.

6. The least well protected samples on the edge of the mound, (N.W. Quadrant), contain larger numbers of mites than the samples in the centre, which were protected by the greater height of the mound.

Conclusions

From these points, I can only conclude that the fauna extracted from the old land surface and turf stack represents an accumulation of material, which was brought down into the archaeological layers in recent years by burrowing animals. The majority of the mites within the buried soil and turf stack are those associated with wood fragments and litter, and could have been transported into these layers with plant material. The low numbers of mites in the central samples, and the high numbers in the outer ones suggest that the entire fauna is probably recent and that there is little chance of specimens surviving from the Bronze Age in such a disturbed and aerobic environment.

Appendix III: The Radio Carbon dates

Based on a report by R. L. Otlet

Six samples were submitted to Harwell for Carbon 14 dating

Sample 1:
Barrow I. Charcoal from pit (Fig. 4, layer 13)
Har-645: 8100$\pm$70 b.p.: 6150 b.c.

Sample 2:
Barrow II. Charcoal from surface of old land surface. (Fig. 6, layer 4)
Har-646: 3110$\pm$160 b.p.; 1160 b.c.

Sample 3:
Barrow III. Charcoal from old land surface (Fig. 8, layer 4)
Har-647: 3630$\pm$100 b.p.: 1680 b.c.

Sample 4:
Barrow III. Charcoal from lens in top of Phase I ditch, sealed by upcast from Phase II ditch.
Har-648: 3220$\pm$180 b.p.: 1270 b.c.

Sample 5:
Barrow IV. Charcoal from hearth beneath barrow (Fig. 9.)
Retained at Harwell for low level counting.

Sample 6:
Barrow IV. Charcoal from old land surface (Fig. 10, layer 4)
Retained at Harwell for low level counting.

The Society is greatly indebted to the Department of the Environment for a generous grant towards the cost of publishing this paper.

THE EXCAVATION OF A ROUND BARROW AND CROSS-RIDGE DYKE AT ALFRISTON, EAST SUSSEX, 1975

by T. P. O'Connor.

In 1974, the decision was taken to excavate a round barrow on Winton Hill, Alfriston (TQ 508 038), and to investigate a nearby cross-ridge dyke. The excavation took place immediately after harvesting in summer 1975 as part of the programme of the Sussex Archaeological Field Unit. An average of eight volunteers were engaged in the work from August 23rd to September 12th, under the direction of the author.

LOCATION AND TOPOGRAPHY (Fig. 1)

The site lies about one mile west of the village of Alfriston, just above the 450 foot contour, and overlooks both the Weald and the Cuckmere valley. The barrow lies approximately 150

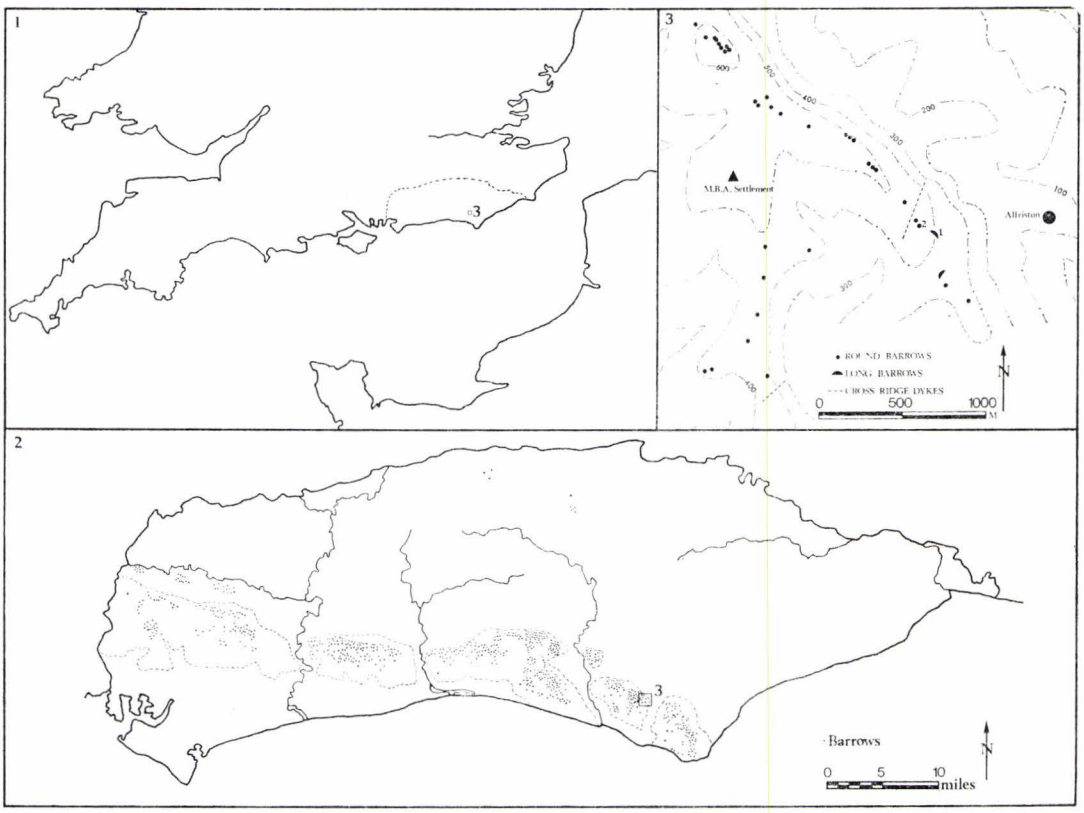


FIG. 1. Alfriston, 1975. Location maps showing position of round barrow. (Map 3, no. 2)

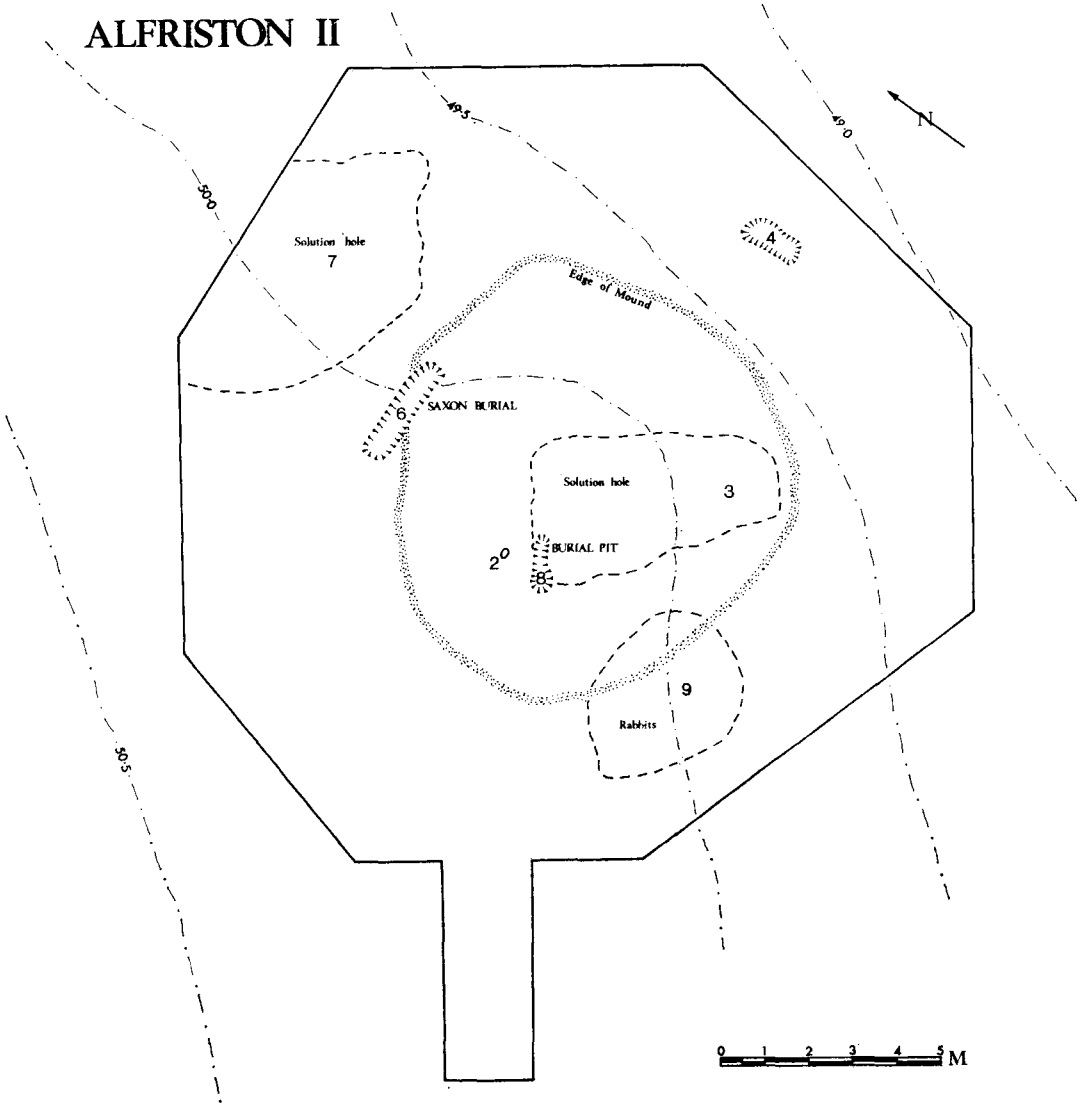


FIG. 2. Alfriston, 1975. Round barrow—site plan

metres west of the Alfriston Oval Barrow,[1] and some 400 metres west of Long Burgh.[2] To the west lies a long chain of round barrows extending over a mile to the top of Firle Beacon. Also to the west lie the Bronze Age settlements of Blackpatch (1 mile)[3] and Itford Hill (4 miles).[4]

[1] P. L. Drewett, 'The excavation of an Oval burial mound of the third millennium B.C. at Alfriston, East Sussex, 1974', *Proc. Prehist. Soc.* vol. 41 (1975), p. 119 ff.

[2] L. V. Grinsell, 'Round barrows of Sussex', *Sussex Archaeological Collections*, vol. 75 (1934), p. 216 ff.

[3] R. F. Jessup, *South East England* (1970), p. 126.

[4] G. P. Burstow and G. A. Holleyman, 'A Late Bronze Age settlement on Itford Hill, Sussex', *Proc. Prehist. Soc.* vol. 23 (1958), p. 167 ff.

Proving or disproving an association between Blackpatch and either the barrow or the cross-ridge dyke was one of the aspirations of the excavation. The local geology is Upper Chalk, with a small capping of Clay-with-Flints about 600 metres to the west of the site. The modern soil is a degraded plough Rendsina. It was hoped to obtain information about the prehistoric soil conditions and general ecology by molluscan analyses of any remaining old land surface, and deposits in the cross-ridge dyke.

EXCAVATION

The area of the barrow was stripped entirely by hand. Staggered one metre trenches were dug so as to establish the N-S main section, and to locate the presumed encircling ditch. No ditch was found. The south east and north west quadrants were stripped down to the Chalk, and the main sections were drawn. The rest of the barrow was then stripped off, no baulks being left, and the underlying features were investigated. Simultaneously, three trenches were excavated across the cross-ridge dyke, so as to obtain ditch profiles on both the north and south facing slopes of the downland crest. These profiles were found to be broadly similar.

Features excavated (Fig. 2).

(*a*) *The mound* (Fig. 3)

The barrow mound was found to have been almost entirely ploughed away. A small area of apparently protected chalk was found. In places, this was overlain by a veneer of chalk rubble with interstitial brown soil, which in turn gave way to a rather sandy, chestnut-brown soil.

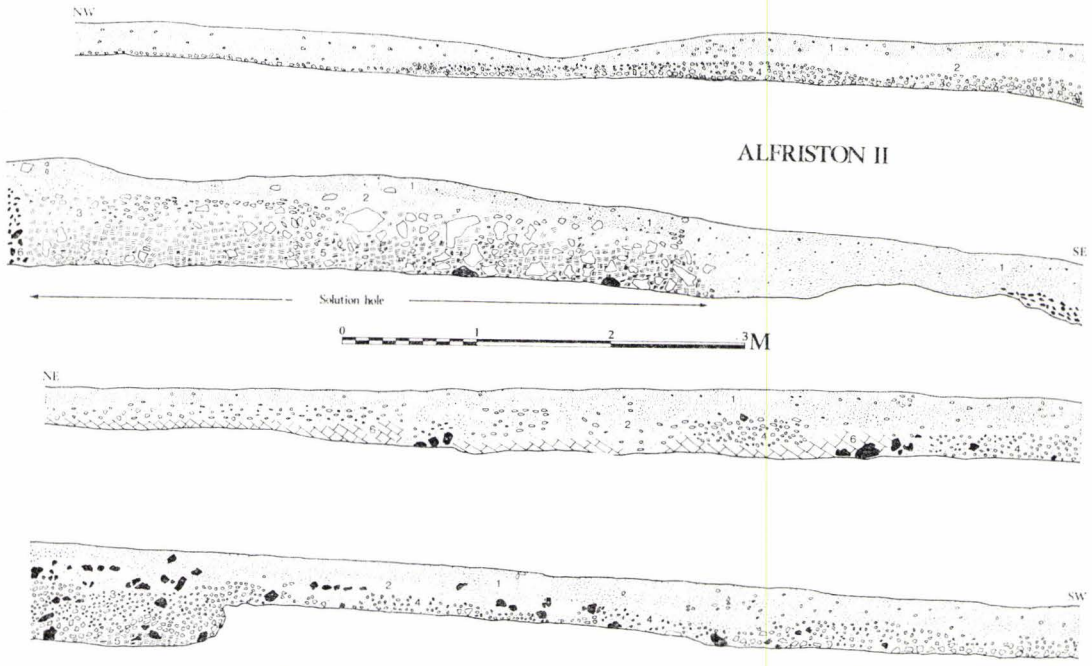


FIG. 3. Alfriston, 1975. Round barrow—main sections. Open symbol chalk, dark flint. Key reversed for clarity on section centre—S.E.

This was unconformably overlain by the modern plough soil. This stratigraphy was interpreted as representing a stony B-horizon of a palaeosol overlain by a stonefree, worm sorted A-horizon. The depth of the latter deposit seemed rather great for worm sorting alone, and it seems likely that some of the material was derived from the banking up of topsoil to provide the core, if not the whole, of the original barrow mound. The status of these deposits was further confused by the fact that a large solution hole underlay the centre of the barrow. Above this, the B-horizon changed to a brown clay containing numerous lumps of flint, and some of chalk. This was interpreted as a response to the change in ' natural '. The area of the barrow was extensively disturbed by periglacial cryoturbations. These made the question of determining where palaeosol ended, and natural began, somewhat difficult.

(*b*) *Natural features*

Three solution holes were found. All were filled with a hard, mid-brown clay. Periglacial features were numerous. In the main, these comprised local upheavals of the chalk surface over a roughly circular area. Off the south-east corner of the barrow lay a parallel pair of frost-stripes, both filled with a fine chalk rubble in an ochreous clay.

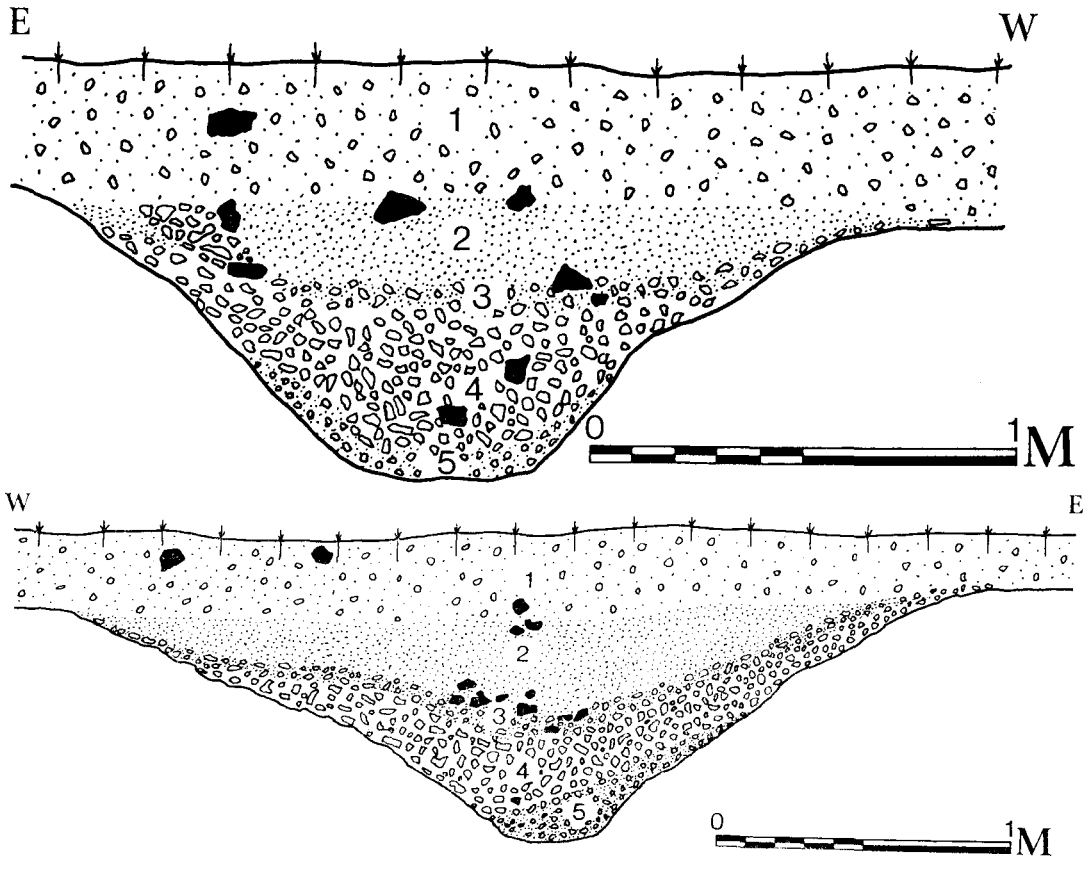


FIG. 4. Alfriston, 1975. Cross-ridge dyke—representative sections

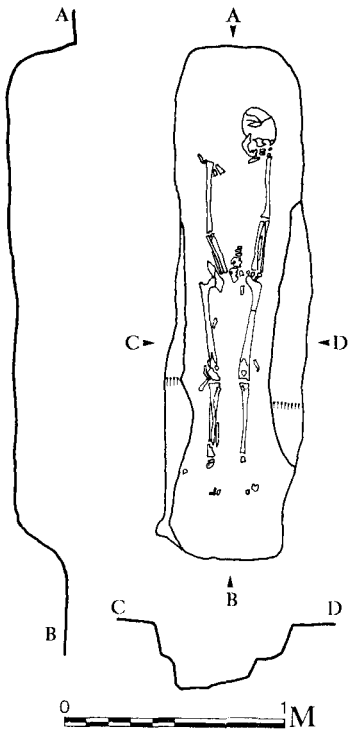


FIG. 5. Alfriston 1975. Anglo-Saxon secondary internment

(*c*) *Feature 4* (Fig. 2)

A rectilinear feature dug into the chalk on the north east margin of the barrow. Being about 1.5 x 0.5 x 0.5 metres, this feature gave every semblance of being a small grave. The contents comprised a large tin, a glass bottle with lid, a small horseshoe, two rolled brass curtain rings, several scraps of rotting paper, and a number of studs of uncertain function. The fill of the feature, a mixture of brown soil and chalk rubble, was clearly disturbed. However, the floor of the feature was covered with a thin veneer of compact, chalky soil, and it seems likely that the feature was of some antiquity, but was subsequently robbed, but whether by accident or design is not known. It is known that the Alfriston area was a popular hunting-ground for nineetenth century antiquaries, few of whom saw fit to publish their findings.

(*d*) *Saxon burial* (Fig. 5)

Long and narrow in shape, the grave was also rather shallow (0.5m.). The body lay supine with the head oriented west-north-west, and was that of a lightly built male aged about 40-45 years, and standing about 5ft. 9in. in height. Health was apparently good, with the exception of the dentition. Interproximal caries was rampant throughout the anterior teeth, the molars all having been lost some years before death. The only grave good was a small iron knife found beneath the left forearm. The grave was flanked internally by two narrow ledges, and can almost certainly be dated to the seventh or eighth century A.D.[1]

[1] A. C. Hogarth, 'Structural features in Anglo-Saxon graves', *Archaeological Journal*, vol. 130 (1973), p. 104 ff.

(*e*) *Central pit*

This feature comprised a neatly dug, circular interment cut by a later, rectilinear disturbance. The circular pit, to the south west end, was partly sealed by mound material. The disturbance cut through the mound, and was aligned roughly parallel to the Saxon grave. The fill of loose brown soil with scattered flint nodules was continuous throughout. The later disturbance contained a ' bundle ' of human long bones, comprising roughly one leg and two arms of a tall adult; probably male. These bones have been submitted to A.E.R.E. Harwell for a Carbon 14 determination. (see Appendix 2)

(*f*) *Cross-ridge dyke* (Fig. 4)

This feature traversed the crest of the Downs, about 50 metres west of the round barrow, petering out in the head of a dry-valley to the south, and on the north facing scarp of the Downs. Crop marks, and an unploughed stretch of dyke, reveal a low bank on the east side, with a narrow, or non-existent, berm. The ditch averaged about two metres wide at the top, and was roughly V-shaped with a narrow, flat bottom. The sides were well cut, and, with a neighbouring bank, would have served as a good barrier to the passage of animals. The ditch averaged about one metre in depth. The bottom of the ditch was covered patchily by a thin layer of fine, angular chalk rubble. Above this came the bulk of the ditch-fill, a coarse chalk rubble with interstitial brown soil. Towards the top of the ditch, this was truncated by a thin layer of brown soil, with small chalk lumps. This layer contained numerous pieces of 3rd to 4th century Roman pottery, and was interpreted as a ploughsoil of this date. Above this came a thick deposit of brown homogeneous silt. This was almost stone-free, and had the appearance of a pasture soil of Brown Earth type. This layer was unconformably overlaid by the modern ploughsoil.

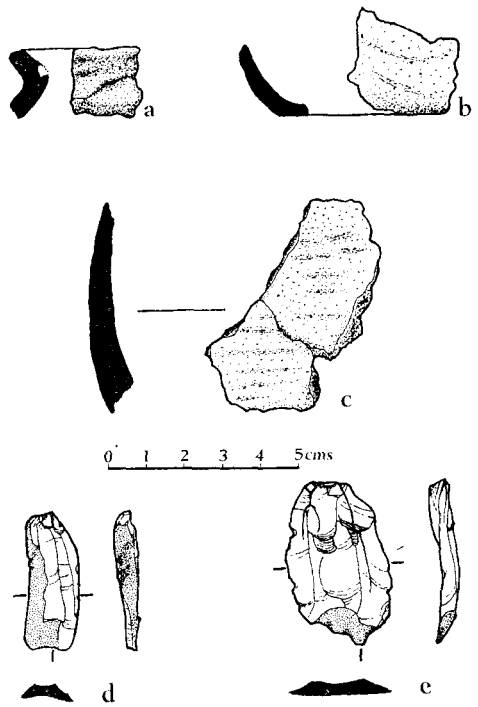


FIG. 6. Alfriston, 1975. Flintwork and pottery from the cross-ridge dyke

TABLE 1: Distribution of flint artifacts by layers.

		Waste Flakes	Scrapers	Retouched Flakes	Blades	Core Waster	Total
DYKE	Ploughsoil	31	1	1	—	—	33
	2	47	1	—	—	—	48
	3	20	—	—	1	—	21
	4	28	—	1	1	1	31
	5	20	—	—	1	—	21
BARROW	Topsoil	63	—	—	—	—	63
	Subsoil	32	—	—	—	—	32

TABLE 2: Average dimensions of waste flakes.

	DYKE		BARROW	
	4	5	Top Soil	Sub Soil
Sample size	28	20	63	32
Average length (mm)	42.5	29.1	31.5	33.7
Average breadth (mm)	27.9	17.4	25.7	27.9
$\frac{\text{Length}}{\text{Breadth}}$	1.523	1.670	1.225	1.205

TABLE 3: Molluscs extracted by wet sieving

	DYKE			BARROW
	2	3	4	Top Soil
Pupilla muscorum (Linn)	—	—	4	—
Vallonia excentrica (Sterki)	—	1	2	—
Caecilioides acicula (Muller)	—	—	—	1
Hygromia hispida (Linn)	—	—	2	—
Helicella itala (Linn)	—	—	1	—
Retinella sp.	1	—	—	—
Total	1	1	9	1

THE FINDS

The Prehistoric pottery (Fig. 6)

Pottery ascribed to the pre-Roman period was recovered from both the cross-ridge dyke, and the old land surface beneath the barrow. Amounts were small, totalling some nineteen sherds. Notable were five sherds of a ware coarsely gritted with both flint and crushed shell, and having a grey-brown body, with reddish-brown outer surface. Sherds of this ware were recovered from the central interment and a rabbit disturbance, and from both in, and beneath the barrow mound. The ware closely resembles material found during excavation of the settlement on Itford Hill.[1] Since both occurrences probably represent manufacture of pots by local craftsmen, it may be dangerous to equate them chronologically. However, the Middle/Late Bronze Age date ascribed to Itford Hill would not be out of place for the Alfriston Barrow. From the secondary infill of the cross-ridge dyke came four sherds of some interest. The layer in question can safely be said to be pre-Roman in date. The sherds are of a rather corky ware, although quite finely gritted. The body is chocolate-brown to black in colour, and the sherds are quite thick. The exterior surface is coloured a rich brownish-red. This colouring extends to a depth of 2 -3 millimetres in places, and there is evidence of burnishing, in the form of surface rimpling. This ware strongly calls to mind the ' Haematite Ware ' of earlier workers, and it is proposed to regard the ware as belonging to a date fairly early in the Iron Age. The considerable thickness of the sherds, and poor texture of the ware make a date much later in the Iron Age seem rather improbable. Probable later wares are represented by a fine, black base sherd, recovered from high in the secondary fill of the cross-ridge dyke, and a simple recurved rimsherd of similar ware from the post-Roman infill. Somewhat enigmatic is a sherd from the old land surface beneath the barrow of a rather laminated buff-brown ware of fairly coarse flint gritting. The nearby presence of a Neolithic oval mound should, perhaps, be borne in mind when considering both this sherd, and a darker, more corky sherd from the backfill of the secondary interment. The presence of Neolithic pottery on the old land surface seems not at all unlikely.

Flintwork (Table 1)

A total of 249 flint objects of possible anthropogenic origin were recovered from the barrow and cross-ridge dyke. Of these, 241 were waste flakes, showing no sign of deliberate retouch. The remainder comprised two rough end scrapers, two flakes showing edge retouch, three blades, and a possible rejuvenation flake off a small prismatic core. The barrow area produced ony waste flakes—a total of 95. As Drewett has pointed out[2] the majority of this material is probably of little significance to the cultural or chronological attribution of either the barrow, or the cross-ridge dyke. The only well-sealed layers on the site were the primary and secondary fill of the cross-ridge dyke, and the lower part of the old land surface under the barrow. The latter location yielded only 32 waste flakes, none of them at all diagnostic. The secondary fill of the dyke yielded a tiny bladelet, and a probable rejuvenation flake from a core such as that which produced the bladelet. One of the retouched flakes comes from this level. This appears to be a waster from the manufacture of a substantial core tool. The shallow working over the dorsal surface of this flake implies either soft hammer, or pressure flaking. The discovery of finished and unfinished polished axes in the area should be borne in mind.[3] The two end scrapers are steep backed, and of clumsy manufacture. One came from the modern ploughsoil, and the other from the post-Roman infill of the cross-ridge dyke. Neither provenance is significant.

All waste flakes were measured to obtain figures for length and breadth distributions for different layers. However, in no case were samples sufficiently large to warrant graphical analysis. Figures have been calculated for the average length and breadth of flakes from layers 4 and 5 of the dyke, and from the barrow. (Table 2). The figures show a tendency for flakes from the barrow to be more squat in outline, almost approaching a square shape. Due to lack of material of a suitable date, the significance of this, if any, is not clear.

The Human Remains—a pathological summary

(a) The Secondary interment

Sex—Male. Age—40-45 years. Stature—app. 5ft. 9in.

Dentition

	E	
	X C C C	C C C C X X X X
8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
8 7 6 5 4 3 2 1		1 2 3 4 5 6 7 8
X X X	C C	C C C X X X

No obvious disease pathology

Wormian bones present in lambdoidal suture

Measurements.

Max. length femur (est.)	47 cms.
Minimum frontal breadth	97 mm.
Dacryonic chord	22 mm.
Mandibular height at M2	21 mm.
Incisura height	44 mm.
Coronoid height	56 mm.
Symphyseal height	23 mm.

(b) Central interment.

The distal articulation of the left femur shows traces of degenerative joint disease. All other bones apparently healthy and rather robust. Apparently male, on grounds of size. This being so, a stature of about 6ft. 0in. is indicated.

[1] G. P. Burstow and G. A. Holleyman, op. cit.
[2] P. L. Drewett, op. cit.
[3] ibid.

Measurements.

Max. length femur (est.)	50 cms.	Rt. Tibia diam. ii	25 mm.
Femur diam. i	30 mm.	L. Tibia diam. i	39 mm.
Femur diam. ii	32 mm.	L. Tibia diam. ii	25 mm.
Rt. Tibia diam. i	36.7 mm.		

Molluscan analysis.

In the first instance, it was proposed to conduct an examination of past environmental conditions on the site by counting and identifying the molluscs obtained by wet-sieving 2kg. samples of soil after the method of Evans.[1] However, the numbers of identifiable shell apices obtained by this process were remarkably low (See Table 3). For this reason, it was found to be necessary to base the analysis on molluscs obtained from flotation separation of large masses of material. This separation was effected by David E. Williams. It is likely that flotation tends to bias a sample towards more buoyant species. However, no species identified in the sieved material was found to be absent from the appropriate flotation-separated sample. It was not possible to obtain sufficient quantities of clearly segregated material from the primary silt of the dyke to render flotation possible. The mass of material submitted was variable, and in two samples (B and C) the product had to be reduced in order to obtain a number of molluscs sufficient to be statistically representative, whilst not being excessively numerous. This reduction was accomplished by means of thoroughly mixing the material, mounding it on a flat surface, and then halving the mound by means of a ruler. One half was discarded, and the remainder was mounded and halved again. The remaining one-quarter was sorted and counted.

Sample D, from the brown soil of the barrow mound, shows a fauna similar to that present on many parts of the Downs today. The high proportion of *Caeciloides acicula* should be disregarded, as this species is a habitual burrower, and is probably a Medieval introduction into this country.[2] Of the remainder, the preponderant species are *Pupilla muscorum* and *Hygromia hispida*. *P. muscorum* is a species generally distributed throughout grassland and open ground of almost any kind. In some areas, it is found in open woodland. The species seems to show a preference for ground bare of any vegetation, and is generally less abundant on agricultural land. *Hygromia hispida* is a species of more widespread occurrence. The species probably encompasses numerous sub-species, all with slightly differing preferences. Distinction of these sub-species is difficult, even with fresh, adult shells. At Badbury and Fyfield, *H. hispida* showed a greater abundance during grassland and arable phases, increasing in parallel with *P. muscorum*, and *Vallonia excentrica* and *Helicella itala*, respectively. At Durrington Walls, however, the species was somewhat more plentiful during an apparent woodland phase.[3] It seems that the species is of catholic tastes, and is not a good environmental indicator. Of the remainder, *Helicella itala* is a calcicole xerophile, often very abundant on dry chalky hillsides, and coastal sand-dunes. It is frequently associated with arable conditions. *Vertigo pygmaea* is another open-country species, but appears to favour more stable conditions than *H. itala*. *Carychium tridentatum*, once thought to be a species characteristic of woodland leaf litter, has been found to be quite common on long, stable grassland.[4] The overall picture points to open grassland, probably pasture, with little shrub cover. One shell of *Vitrea sp.* is not significant. This genus is normally abundant in shady, moist conditions, but, as a carnivore, has the facility to roam well out of its normal habitat. This genus has been found to be numerous in limestone rubbles.[5]

From the cross-ridge dyke, samples were taken from the secondary fill of chalk rubble, an apparent Roman ploughsoil, and the fine brown soil which filled the top of the ditch, and was truncated by the modern ploughsoil, (Samples C, B, and A, respectively). Sample A showed *Hygromia hispida* to predominate, with large proportions of *Pupilla muscorum* and *Helicella itala*. This indicates grassland conditions, much as discussed for sample D. *Helicella caperata* is a xerophile of similar preferences to *H. itala* and is thought to be a post-Roman introduction to this country, although its precise status is not clear. Also indicative of a fairly open grassy habitat are *Vallonia excentrica* and *V. costata*. The preferred habitat of the latter is a subject of some debate, but it is generally more plentiful in fairly lush grassland than in closed vegetation. A small shade component is represented by *Vitrea* and *Retinella spp.*, and possibly by *Cochlicopa lubrica*. The latter species seems almost ubiquitous in its distribution, but tends to be scarcest in dry conditions where no shade obtains. *Vitrea* and *Retinella spp.* are snails of moist, shady habitats, and their presence in significant numbers infers some cover to have existed in the area. As the ditch was, by this time, too thoroughly silted up to have provided any cover, this must almost certainly mean bushes of some kind. The post-Roman environment of the area seems to have been one of fairly open grassland, with occasional clumps of bushes. Similar conditions are known to have prevailed on the hillside until ploughing began, within living memory. Sample B contains much the same species, with *Carychium*, *Vertigo*, and *Vallonia* species again suggesting rather lush, grassy conditions. However, *Pupilla muscorum* predominates over *Hygromia hispida*, and the deposit in question was a rather mixed, stony material, far more suggestive of ploughsoil than of a stable grassland. The possibility that the dyke stood at the junction of two habitats is not at all unlikely. The corresponding deposit in the flanking ditches of the nearby oval barrow appeared to have filled the ditch, and to have been sealed in very quickly, before a molluscan fauna had time to develop.[6] This strongly

[1] J. G. Evans, *Land snails in archaeology* (1972).

[2] ibid.

[3] J. G. Evans, ' Durrington Walls excavations, 1966-68 ', in *Reports Res. Comm. Soc. Ants.* Lond. vol. 29 (1971).

[4] Cameron and Morgan Huws, ' Snail faunas in the early stages of a Chalk grassland succession ', *Bio. J. Linn. Soc.* vol. 17, no. 3 (1975), p. 215 ff.

[5] J. G. Evans and H. Jones, ' Subfossil and modern landsnail faunas from rock rubble habitats ', *J. Conch.*, vol. 28 (1973), p. 103 ff.

[6] P. L. Drewett, op. cit.

implies ploughing. As elements of the fauna are not altogether compatible with ploughed land, it is possible that the dyke was located between an area of cultivated, possibly arable, land, and an area of permanent grassland, receiving mollusc shells from both habitats. Sample C represents the fauna which pertained between the original excavation of the dyke, and the period of Roman agriculture postulated above. *Hygromia hispida* predominates over *Pupilla muscorum*, and a large open-country component is represented by *Vallonia excentrica*, *Helicella itala*, and *Vertigo pygmaea*. Some shade is implied by the presence of *Punctum pygmaeum*, *Retinella sp.*, and *Cochlicopa lubrica*. The moist, alkaline conditions provided by a steep-sided ditch slowly filling up with chalk lumps and some soil were probably an ideal habitat for these species, and there is no good evidence on which to propose the existence of any bush cover. The single shell of *Columella columella* is almost certainly derived from one of several nearby periglacial involutions, as this species has been extinct in this country since the beginning of the Post-Glacial. The evidence suggests an immediate environment of open grassland, with the ditch filling fairly slowly under normal weathering processes. This is a very similar environment to that implied by the molluscs from the barrow soil. However, this can hardly be taken as evidence for the contemporaneity of dyke and barrow. One can merely say that this is not an impossibility.

To summarise the molluscan evidence, the cross-ridge dyke filled slowly at first, developing a fauna containing a shade element probably attracted by the rubble in the ditch. The majority of the fauna reflects open grassland conditions, probably with little shade. This fill is interrupted by a soil of Roman date, with a mollusc fauna probably reflecting a mosaic of conditions around the ditch, apparently arable and grassland. This, in turn is replaced by a fine soil with a fauna reflecting grassland conditions with some scrub providing a favourable habitat for a few shade-loving species. The soil of which the barrow was composed yielded a grassland fauna. The low density of snails in this deposit implies, perhaps, de-turfing of the area at some time prior to the construction of the barrow.[1] No dark turf line was visible in sections of the barrow mound. If de-turfing occurred, then the fauna may pre-date the barrow by some time, as snails show age stratification in soils.[2] A grassland environment at the time of the barrow construction would not, however, be out of place, bearing in mind the evidence for the existence of a worm-sorted horizon.

DISCUSSION

Very limited evidence can be drawn from this excavation. The paucity of flintwork precludes this from having any chronological significance. The pottery lacks any truly diagnostic wares or forms—the vast panoply of pre-Roman coarse wares does not lend itself easily to interpretation. A few tentative conclusions can, however, be drawn. There is no evidence that the barrow and cross-ridge dyke were constructed at widely different dates. Neither is the contrary altogether evident. One can fairly safely say that both the barrow and the dyke are pre-Roman. The pottery from the secondary fill of the cross-ridge dyke suggests a date somewhere around the late Bronze Age—early Iron Age period. A similar date is implied by pottery from the barrow. Quite what this means in terms of calendar years is a matter for personal estimation (and calibration). What it means in terms of the local archaeology is a chronological association between the features at Alfriston, and the Blackpatch and Itford Hill settlements. In this respect, the barrow can be seen as lying just outside the area bounded by the dyke, assuming the latter to be part of the outfield system of Blackpatch. The dyke cuts off a spur on the end of the main downland block, east of Blackpatch. That this area was demarcated for rough pasture seems not unreasonable. The environmental evidence from the barrow soil certainly does not suggest arable conditions, neither does the soil itself seem indicative of cultivation.

The implications of the barrow structure are quite clear. An unditched barrow composed of soil could very quickly be ploughed into non-existence. Hence, perhaps, the folly of equating ring-ditch distributions with barrow distributions. This form of barrow, if it is at all common in southern England, may well represent an element of the local field archaeology which has been almost entirely missed. This absence could be due not only to lack of preservation, but also due to the predilection of past antiquarians (and some quite recent antiquarians), to excavate the largest barrow in an area with scant regard for lesser monuments. A similar comment could be made about cross-ridge dykes. Though well-known as standing monuments and cropmarks,

[1] ibid.

[2] J. G. Evans, op. cit. (note 9).

these features have received little attention from the excavator. Opinions regarding their antiquity range over virtually the whole of the prehistoric period, often based on negligible evidence. Occasions where dykes are over- or under-lain by other monuments are rare enough, and in many cases the age of the associated monument is not known. The evidence from the Alfriston dyke is far from solving the chronological problem. The dyke is clearly pre-Roman, on stratigraphic grounds. On environmental grounds, the dyke is post-Neolithic. The molluscan fauna from the lower levels of the flanking ditches of the nearby Neolithic oval mound strongly suggested a scrubby environment for the surrounding area, even allowing for a rubble element in the fauna.[1] The secondary fill of the dyke had a quite different fauna, more indicative of pasture conditions. Thus the dyke can be placed securely somewhere in the first two millennia B.C. The pottery evidence narrows this bracket to the earlier part of the first millennium B.C. This is neither a very precise date, nor a totally reliable one. It is, however, as full an interpretation as the evidence will support, and is better than nothing. As to the function of the dyke, in the absence of any evidence for palisading in the ditch, either in transverse or longitudinal sections, or in plan, one must fall back onto the explanation of a ditch and bank forming a simple barrier to animals. The presence of a hedge of some kind along the bank has been suggested. The faunal evidence from the dyke does not support the presence of any hedge. The species *Pomatias elegans* (*Muller*) has been suggested as a hedgerow indicator,[2] and was totally absent from the dyke, as were any of the other large scrub species such as *Cepea* or *Arianta* species (Table 4).

TABLE 4: Molluscs extracted by flotation.

	A	B	C	D
Pomatias elegans (Muller)	—	—	—	—
Carychium tridentatum (Risso)	—	5	—	2
Cochlicopa lubrica (Muller)	12	7	7	—
Cochlicopa lubricella (Porro)	1	—	1	—
Columella columella (Benz)	—	—	1	—
Vertigo pygmaea (Drap)	2	9	11	3
Pupilla muscorum (Linn)	24	209	140	15
Abida secale (Drap)	—	6	4	1
Vallonia costata (Muller)	10	3	1	1
Vallonia excentrica (Sterki)	13	9	36	—
Caecilioides acicula (Muller)	2	4	8	24
Arianta, Cepea spp.	—	—	—	—
Hygromia hispida (Linn)	37	163	202	11
Helicella itala (Linn)	24	24	18	5
Helicella caperata (Montagu)	12	—	—	—
Punctum pygmaeum (Drap)	—	—	2	—
Vitrea spp.	5	1	—	1
Retinella spp.	7	—	2	—
Total	149	440	433	63

[1] P. L. Drewett, op. cit.

[2] J. G. Evans, op. cit. (note 9).

The excavation at Alfriston produced evidence for a small round barrow, composed of mounded-up soil and lacking a quarry ditch, with a disturbed central burial, and a Saxon secondary burial. The nearby cross-ridge dyke appears to have been roughly contemporary with the barrow, and to have comprised a steep-sided, V-shaped ditch, with a low bank to the eastern side. There is no evidence for a fence or hedge structure associated with the dyke. Contemporaneity with the Blackpatch and Itford Hill settlements is not inconceivable. The area was grassland at the time of construction, probably pasture with no evidence for scrub or arable. In the late third century A.D. came a period of cultivation probably with rather more mixed land use. Subsequently, the area was allowed to become overgrown, passing to a phase of grassland with scattered scrub cover, which persisted until quite recent times.

ACKNOWLEDGEMENTS

I would like to thank Mr. John Lewis, of Berwick Court Farm, for permission to excavate this site, and for his help and co-operation throughout. Thanks are also due to Mike and Sheila Hume of Alfriston Youth Hostel for their kindness and forbearance.

My supervisors were Simon Mercer and Nicholas Cary. Others who helped included Barbara and Audrey Akhurst, Frank Child, Bruce Levitan, Brenda James, Isabelle Ruben, Don and Peter Brown, Mrs. Jan Holland, Edward Mount, Al Brook and Sonia Abbink-Spaink, who coped admirably with the finds and our thirst.

I am very grateful to P. L. Drewett, B.Sc. and Mr. Martin Bell, B.Sc. for their advice and helpful comments regarding this site. Thanks are also due to Nicholas Cary for information regarding the Roman pottery, to Sonia Abbink-Spaink for drawings of flintwork and pottery, and to Mrs. Lysbeth Drewett for all the other illustrations.

APPENDIX 1

A note on the Roman pottery recovered from the ditch of the cross-ridge dyke. By N. R. H. Cary.

Sherds from a minimum of two vessels were recovered from layers 2 and 3 of the ditch.

1 Description (Fig. 7):
2 rim sherds, 3 base sherds, 1 body/handle sherd, and 53 body sherds of ring-necked flagon; pale pink/buff grey fabric with mid grey core, fine sand temper with larger white (quartz?) and red (haematite?) inclusions and very fine flakes of Muscovite. Matt surface, traces of pale grey/brown slip on interior; can be scratched with fingernail.

Occurrence:
Scattered in layers 2 and 3.

Minimum number of vessels:
Body sherds too worn to be reassembled, but similarity of sherds and match of, *in* particular, rim and base sherds makes the presence of more than one vessel unlikely.

Attribution:
In conjunction with C. J. Young Esq., who has examined the sherds, it has been agreed that they are most likely to be Oxfordshire ware, specific kiln source impossible to trace at present.

Date:
Work has yet to be published on Oxfordshire ware flagons that is sufficiently comprehensive for a close date to be given. Neck form reminiscent of first and second century flagons of other fabrics, therefore date range, within period 250 A.D. to 400 A.D. (date range of this Oxfordshire ware fabric) is probably 250-300 A.D.

2 Description:
18 x 10 x 4 mm. body sherd; black/brown fabric with grey (quartz?) and red inclusions 0.5 to 1.0 mm across (amongst those visible to naked eye). Exterior burnished; cannot be scratched with fingernail, but can with mild steel.

Occurence:
Layer 3.

Attribution:
Black-Burnished Ware imitation, or late Iron Age ware.

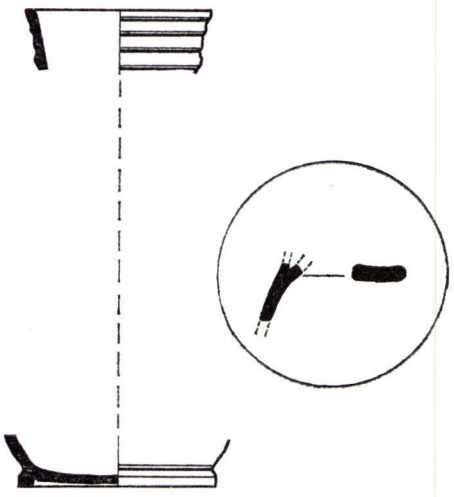


FIG. 7. Alfriston, 1975. Roman pottery from the cross-ridge dyke. Inset—sections of handle-base sherd

APPENDIX 2

Radiocarbon estimation.

Based on information from R. L. Otlet.

A sample of human limb bones from the disturbed central burial were submitted to A.E.R.E. Harwell for a radiocarbon date estimation. Despite the outward appearance of a large mass of well-preserved bone, the sample provided insufficient collagen for a reliable date to be obtained. Due to the importance of this material to the chronology of the barrow, it has been retained at Harwell for a low-level estimation. The results of the work were not available at the time of going to press.

I am grateful to Dr. Helen Keeley for transmitting this information.

The Society is greatly indebted to the Department of the Environment for a generous grant towards the cost of publishing this paper.

EXCAVATIONS IN WINDING STREET, HASTINGS, 1975

by David R. Rudling

The excavation was undertaken to obtain further information about the medieval occupation of the site prior to redevelopment and to try to establish a medieval pottery sequence for the Hastings area.

Similar groups of pottery of types centred on the fourteenth century were found in four pits cut into the natural clay. Other features discovered included two post holes, the possible north-west corner of a late medieval/early post-medieval building, and eighteenth and nineteenth century pits and cottage foundations.

INTRODUCTION

During August 1975 the Sussex Archaeological Field Unit in conjunction with the Hastings Area Archaeological Research Group conducted a small excavation on the north side of Winding Street, Hastings (TQ825 095), on part of the area formerly occupied by the public bathhouse. The excavation was undertaken to follow up the information obtained from the site during 1974 when H.A.A.R.G., under the directorship of Mr. David Devenish, B.A., A.M.A., excavated an exploratory trench[1] and to obtain further information about the medieval occupation prior to redevelopment.

The earliest phase found in 1974 consisted of a medieval layer lying directly on the natural yellow clay into which an oval pit had been dug (Pit D). At a later phase a house platform with a line of six flat stones and a stone lined post hole along its western side was constructed (for position of stones and post hole see Fig. 2). To the east of the line of stones was a succession of floor levels. Later phases belonged to the eighteenth and nineteenth centuries.

During 1975 two trenches were excavated parallel to Trench I of 1974 but only Trench II was taken down to the natural underlying clay. (Fig. 2). The finds and records of the 1975 excavation are deposited in the Hastings Museum.

The people of Hastings are mentioned in Saxon times, but the first evidence of a town is in the tenth-century when it is mentioned in the Burghal Hidage, assessed at five hundred hides. It has no proper entry in the Domesday Book, but the town was given to the Count of Eu, and the stone castle was built soon after the conquest. The Norman town may have been in the Priory Valley, but in the twelfth century there is mention of a "new town" which may refer to settlement in the Bourne Valley, a move which may have been caused by the silting of the Priory Haven. This new site also suffered from the depredations of the sea. The fourteenth century wall may mark the boundary of a truncated town, with the original course of Winding Street cut off first by the sea and then by the wall. The last attempt to restore harbour facilities prior to the nineteenth century failed in 1598.[2]

[1] D. Devenish, 'Excavations in Winding Street, Hastings, 1974.' (Forthcoming).

[2] Abstract from F. Aldsworth, and D. J. Freke, *Historic Towns in Sussex* (1976), Institute of Archaeology, London.

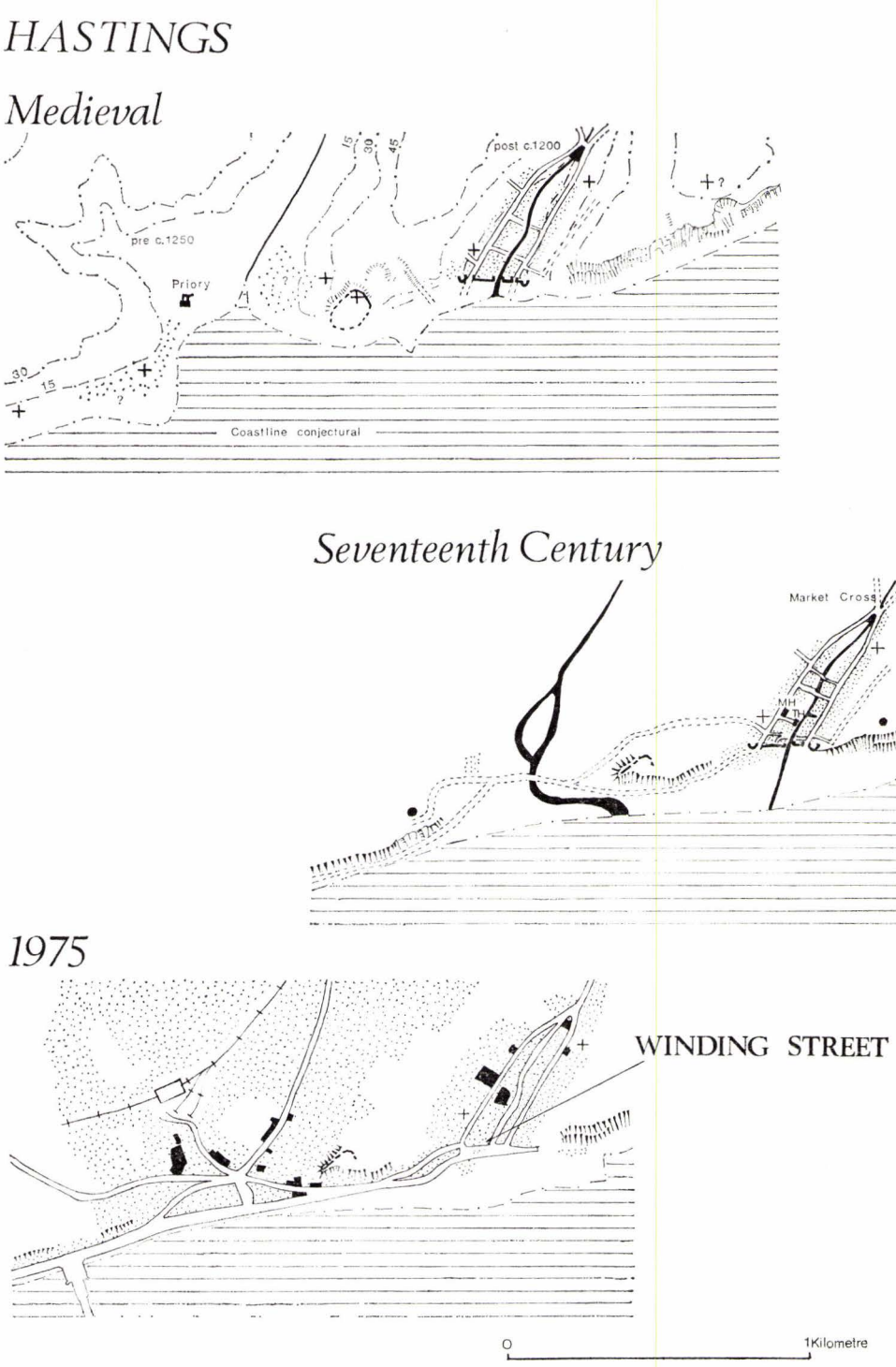


FIG. 1. The origin and development of Hastings. Stippling indicates occupied areas. *After* Aldsworth and Freke (1976).

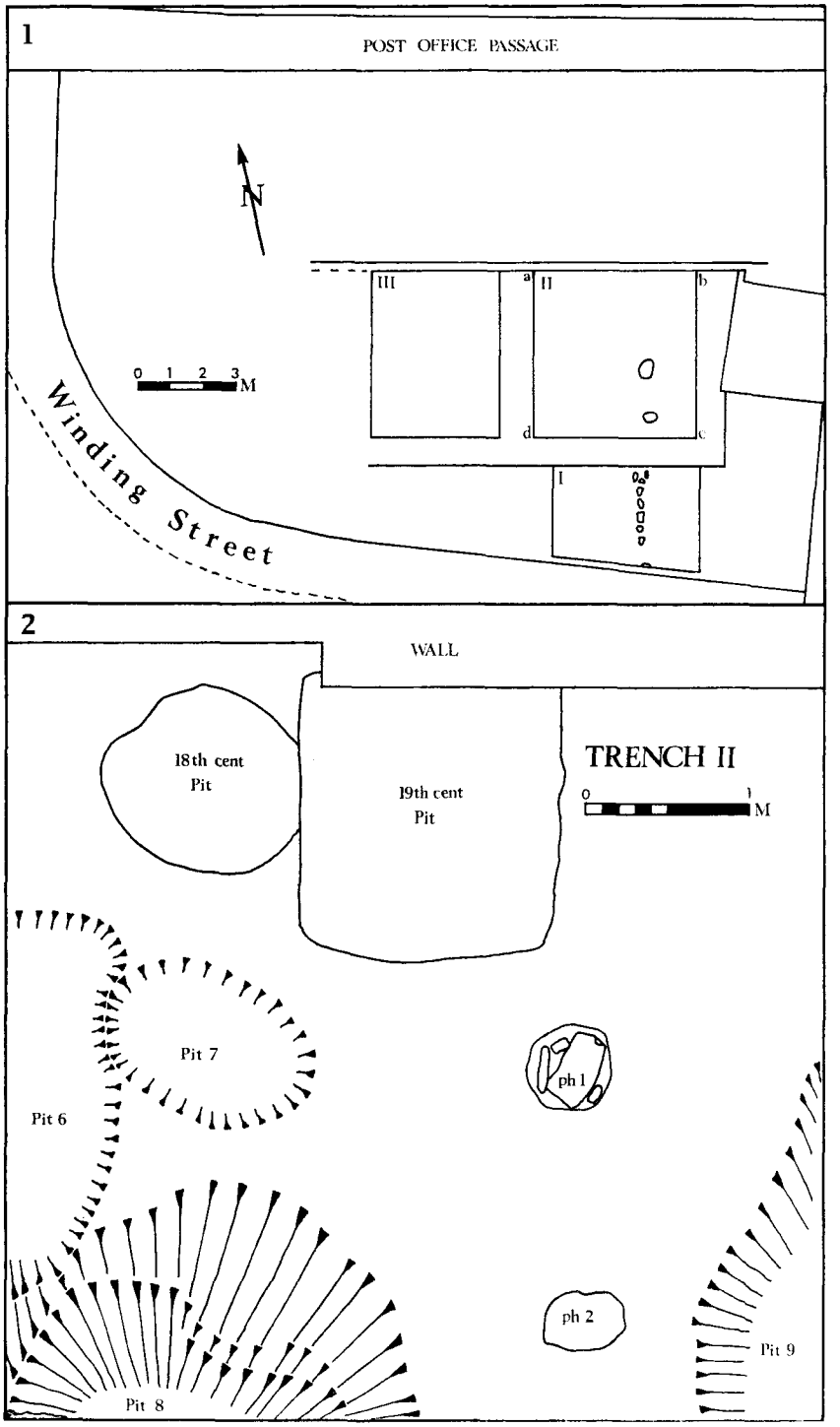


FIG. 2. Winding Street, 1975. 1. Trench plan. 2. Plan of features cut into the natural clay in Trench II.

THE EXCAVATION

Trench II

Sequence of occupation:

1. Four pits and a post hole were found cut into the natural yellow clay (Fig. 2. Pits 6, 7, 8 and 9 and Post hole 2). It has been suggested by David Devenish that these four pits and the one found in Trench I during 1974 (pit D) may have been dug to obtain clay. The fills of the pits found in Trench II contained pot sherds, bone, oyster shells, and a few metal objects, indicating their ultimate function as rubbish pits. These pits all contained pottery groups of similar types centred on the fourteenth century and therefore would appear to be contemporary with each other. Post hole 2 was found cut into the natural clay but was not observed at a higher level and its structural function is uncertain.
2. Lying above the natural clay over most of the trench were layers of grey-brown clay (Fig. 3. Layers 21 and 17). These contained a variety of finds including pot sherds, bone, shell and metal objects, representing a gradual accumulation of rubbish on the site during the late medieval and early post-medieval periods. Above layers 21 and 17 were a number of layers also containing late medieval and later material (Fig. 3. Layers 20, 15, 14 and 10). The objects found in the most extensive of these layers, layer 10, range in date from the fourteenth to the eighteenth century.
3. Post hole 1 (Fig. 2) was stone lined and had a large flat base stone resting on the natural. (The base stone and some of the packing stones are shown in Fig. 2). Post holes 1 and 2 are roughly aligned with the stones found in 1974 (Fig. 2), and it is thought possible that they may be connected with the same building. Other possible traces of the building were limited to a few clay and charcoal layers (Fig. 3. Layers 13a, b and c) which roughly correspond to the floor levels found in 1974. The extent of the layers found in Trench II suggest that post hole 1 could mark the north-west corner of the building. All other traces of the building appear to have been robbed out.
4. During the late eighteenth century a rubbish pit (Fig. 2) was cut through the medieval layers and into the natural clay.
5. During the late eighteenth or early nineteenth century cottages were built on the site and it is possible that the area was levelled at that stage. The back of a cottage found during 1974 was discovered in Trench II and this was connected to a stone lined cess pit (Fig. 2 for limits of foundation trench). The last fill from this cess pit appears to belong to the mid nineteenth century, after which period the pit was used as a soakaway.

A cobbled area (Fig. 3. Layer 5) was found in the western part of Trench II and this seems to have acted as a passage-way between the building found in Trenches I and II and that found in Trench III.

Trench III

The cottage found in Trench III had a brick cross-wall and to the south of this a structure with a brick barrel vault roof pierced by a circular hole; this is presumably a cellar but was not excavated. To the north of the cross-wall were found two large rendered pits of unknown function. The destruction in this trench due to the cellar and the two pits made further investigation unprofitable.

Finally the area covering both Trenches II and III was levelled and covered with concrete to form part of the public bathhouse complex.

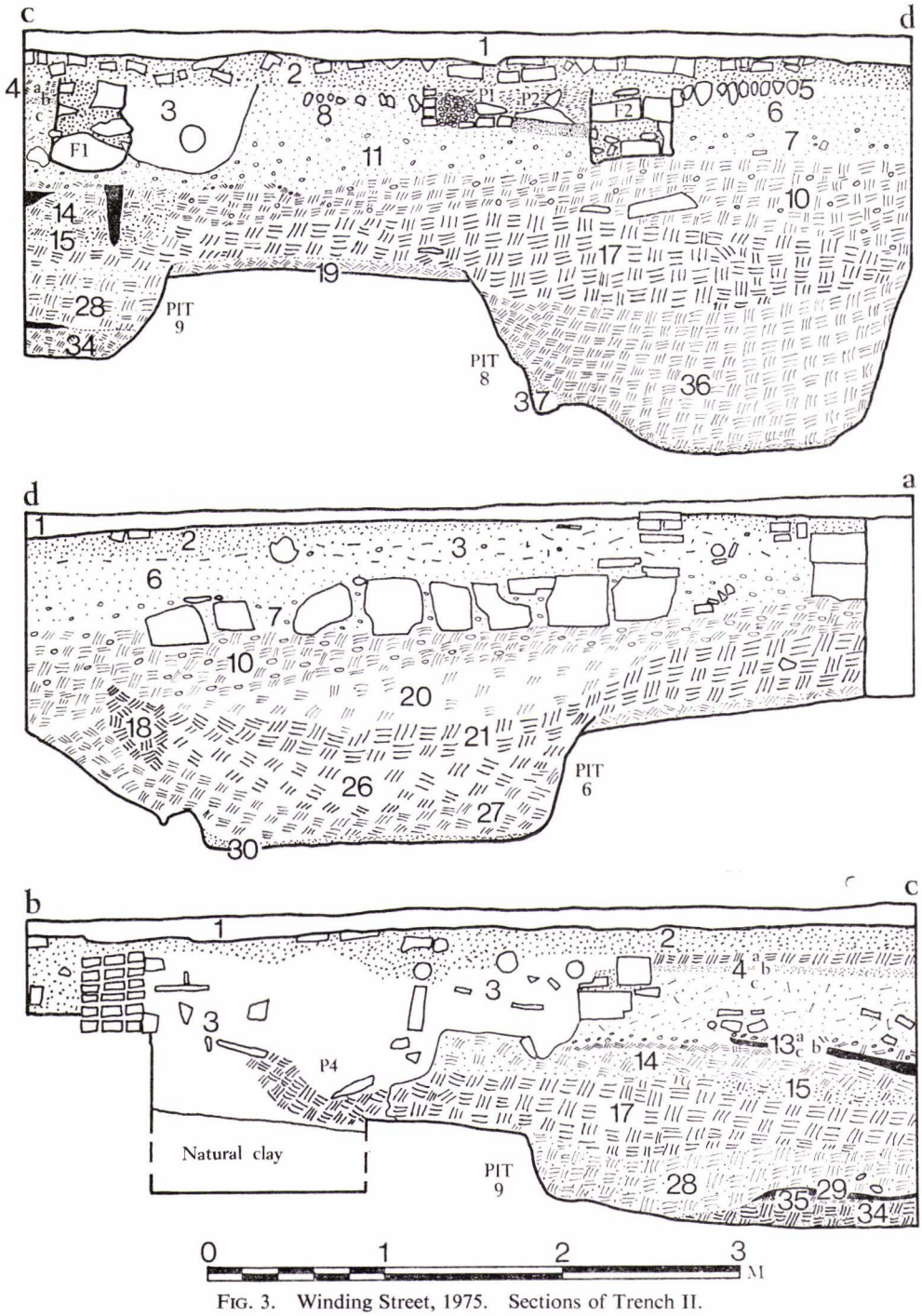


FIG. 3. Winding Street, 1975. Sections of Trench II.

Key to sections: 1. Concrete. 2. Hardcore: bricks, pebbles, mortar and soil. 3. Modern disturbance: grey soil, pebbles, bricks and tile. 4a. Yellow-grey clay. 4b. Mortar. 4c. Grey soil and some tile. 5. Cobbles. 6. Light grey soil with a few small pebbles. 7. Medium grey soil with pebbles. 8. Light grey soil with a few small pebbles. 10. Grey-brown clay with some small pebbles. 11. Medium grey soil with pebbles. 13a. Yellow-brown clay with pebbles. 13b. Charcoal. 13c. Orange-yellow clay. 14. Grey-brown clay with charcoal flecks. 15. Yellow-brown clay with charcoal flecks. 17. Grey-brown clay. 18. Wedge of yellow clay. 19. Greenish-yellow clay with charcoal flecks. 20. Yellow-brown clay. 21. Grey-brown clay. 26. Grey-brown clay. 27. Greeny-brown clay. 28. Grey-brown clay with charcoal flecks. 29. Charcoal. 30. Brown silt. 34. Dark grey-brown clay with charcoal flecks. 35. Brown clay. 36. Grey-brown clay. 37. Brown silt. P.1. 19th cent. pit with small pebble fill. P.2. 19th cent. pit with charcoal bottom. P.4. 19th cent. rubbish pit. F.1. Sandstone wall. F.2. Sandstone wall.

NOTE: Detailed plans of all the eighteenth and nineteenth century features found in Trenches II and III have been deposited with the associated finds in the Hastings Museum.

The earliest occupation of the site would appear to belong to the fourteenth century at which time four pits were dug into the natural clay. The finding of sherds dated to the twelfth and thirteenth centuries (Pottery Report Nos. 59 and 60) indicates, however, that there was occupation in the vicinity at an earlier period.

The possible north-west corner of the building found in Trench I of 1974 was discovered in Trench II but it is impossible on the basis of the 1975 finds to date this accurately, although a late medieval/early post-medieval date would seem likely.

THE FINDS

* indicates illustrated material.

(*a*) *Pottery* (*Fig. 4*)

For the purpose of this report it was necessary to describe just a selection of the pottery found. This selection was made on the basis of form and fabric and was restricted to the period before the eighteenth century. A wide range of pottery types represented the eighteenth and nineteenth centuries and these have been deposited in the Hastings Museum.

As yet relatively little is really known about the medieval and early post-medieval pottery of East Sussex and the dating of much of the local wares described below must await the discovery and publication of pottery groups from datable sealed contexts.

Layer 10

1. Rim sherd of white tin glazed earthenware bowl with two parallel lines in blue as decoration on the top of the rim. Delftware, probably made at Lambeth. Early eighteenth century.
2. Body sherd of mottled brown salt-glazed ware (Bellarmine). Seventeenth/eighteenth century.
*3. Rim sherd of off-white ware with external flange below simple rim. Internal light-green glazing. Farnborough ware. Seventeenth century.
4. Nine body sherds of blue decorated grey Westerwald or Raeren stoneware. Late sixteenth century.
5. Two body sherds of Raeren stoneware. Early sixteenth century.
*6. Body sherd from a drinking jug of white stoneware with external green glazing and floral decoration in relief. Beauvais ware. Early sixteenth century.
7. Foot of red ware. Internal orange glazing.
*8. Rim and part of handle of fine red sandy ware. Stabbed at top of handle. Patches of external green glazing and internal white slip.
9. Rim and part of handle of hard red ware with black slip. Simple bead rim.
*10. Stabbed strap handle of red ware with brown glazing. Rectangular in section with central groove.
11. Wide strap handle of fine red ware with reduced core. Stabbed.
12. Rod handle of fine red ware with green glazing.
13. Rim sherd from a jug of white ware with external dark green glazing. Flat-topped rim.
14. Rim sherd of grey ware oxidized to off-white on surface. Flat-topped rim.
*15. Rim sherd of cooking pot of fine grey chalk tempered ware. Flat-topped rim.
16. Thumbed base sherd of red ware with reduced core.
17. Body sherd of fine grey ware decorated with vertical incised lines.
18. Body sherd of fine grey ware with thumb-impressed applied vertical cordon.
19. Rod handle of fine pink ware with light green glazing. The body of the vessel has a white internal slip. Rye ware. Fourteenth century.
*20. Two small body sherds of white polychrome ware. Decoration in the form of a green painted band bordered by black lines. Saintonge ware. c. 1275-1300.

Layer 14

21. Rim sherd of off-white sandy ware with reduced core. Everted rim.
22. Rim sherd of red ware with flanged concave topped rim.
*23. Rim sherd of hard sand tempered grey ware. Flanged flat-topped rim.
24. Base sherd of fine red ware with internal orange glazing.

Layer 15

*25. Rim sherd of cooking pot of red ware with reduced core. Flat-topped rim.

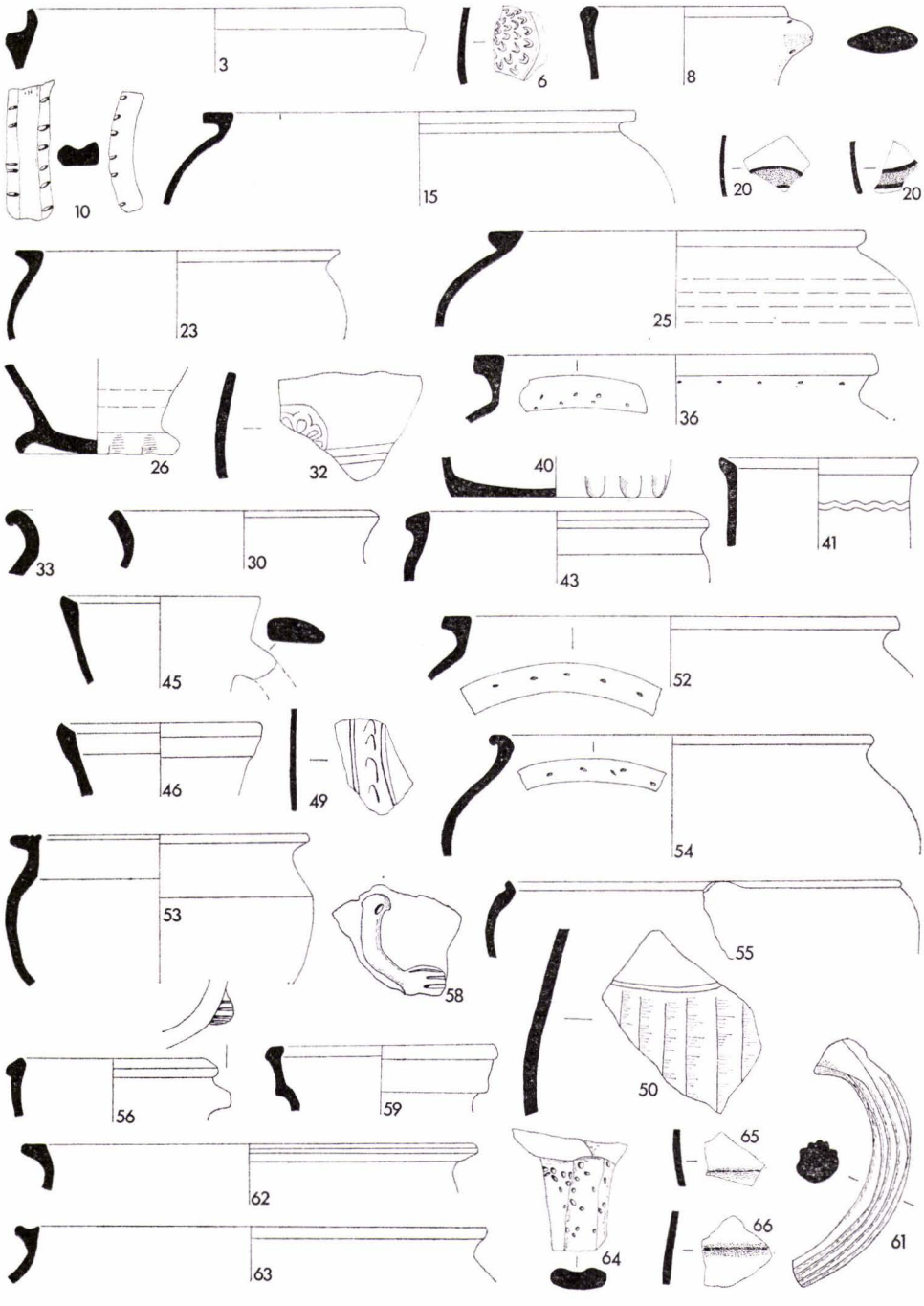


FIG. 4. Winding Street, 1975. Pottery (¼)

Layer 17

*26. Frilled base of a grey stoneware Raeren jug. Late sixteenth century.
27. Rim sherd of jug of white ware with external yellow glazing. Simple rim.
28. Rim sherd of bowl of red ware. Flanged flat-topped rim with stabbed decoration under rim.
29. Rim sherd from a skillet of red ware with reduced core. Shows part of spout. Traces of external green glazing.
*30. Rim sherd of ground flint tempered grey ware.
31. Stabbed rod handle of red ware with dark brown slip.
*32. Body sherd of fine pink ware with external greenish brown glazing. Shows part of a stamped floral motif. Rye. Fourteenth century.

Layer 20

*33. Rim sherd of off-white ware with reduced core. Everted rim with patches of external light green glazing.
34. Wide strap handle of fine red ware with reduced core. Slashed.

Layer 21

35. Body sherd of white ware with external brown glazing. Probably from Beauvais or Surrey.
*36. Rim sherd of flint tempered red ware with reduced core. Piercing on flat-topped rim and at neck of rim.
37. Body sherd of fine pink ware with external yellow glazing and incised lines.
38. Body sherd of fine white ware with external yellow glazing and two raised ridges covered in brown glazing. Rouen ware. c. 1250-1350.

Pit 6; Layer 26

39. Rod handle of fine grey ware. Surface oxidized to an off-white colour. Patchy green glazing. Slashed. Rye.
*40. Thumbed base sherd of fine pink ware. Traces of external green glazing. Rye.

Pit 6; Layers 27 and 30

*41. Rim sherd from a jug of fine grey ware with white oxidized interior surface. External dark green glazing with incised wavy line decoration on shoulder. Rye.
42. Rim sherd of jug of fine grey ware with surfaces oxidized to a red-buff colour. Banding on external surface which has traces of green glazing. Bead rim.
*43. Rim sherd of cooking pot of fine grey ware with oxidized surfaces.
44. Rim sherd of cooking pot of fine grey ware. Soot incrustation on external surface.

Pit 7; Layer 33

Very little pottery was found in this layer. The types discovered are similar to those described from Pits 6, 8 and 9.

Pit 8; Layers 36 and 37

*45. Rim and part of handle of a jug of fine pink ware with a reduced core. External green and red glazing. Internal white slip. Rye.
*46. Rim sherd of fine pink ware with external orange glazing.
47. Rod handle of fine grey ware with external dark green glazing. Anterior ridging. Rye.
48. Base sherd of fine pink ware with external green glazing and internal white slip. Rye.
*49. Body sherd of fine pink ware with external dark green glazing. Decorated with applied blobs in between two ridges. Rye.
*50. Body sherd of fine pink ware with external dark green to clear glazing. Vertical ridging. Rye.
51. Body sherd of fine grey ware with internal surface oxidized to a buff colour. External dark green glazing and incised line decoration. Rye.
*52. Rim sherd of cooking pot of fine grey ware with oxidized surface. Pierced flanged rim. Rye.
*53. Rim sherd of fine grey ware with oxidized internal surface. Soot incrustation on exterior.
*54. Rim sherd of cooking pot of ground flint and chalk tempered ware oxidized to a reddish-pink colour on the interior. Pierced flanged rim.
*55. Rim sherd of skillet of ground flint and chalk tempered ware oxidized at surface. Shows part of pouring spout.
*56. Rim sherd of fine grey ware oxidized at surface. Shows start of slashed handle. Traces of external orange glazing.
57. Thumbed base sherd of fine grey ware oxidized to a buff colour on exterior.
*58. Body sherd of jug of fine pink ware with external dark green glazing. Raised anthropomorphic decoration in the form of a hand and arm. Scarborough ware. Late thirteenth or early fourteenth century. Similar in fabric and decoration to the Seaford knight jug and the Lewes Aquamanile.
*59. High collared rim sherd of fine white Andenne ware. Twelfth/thirteenth century.
60 Body sherd of fine white Andenne ware. External yellow glazing with iron specks. Twelfth century.

Pit 9; Layers 28, 29 and 34

*61. Rod handle of fine grey ware with external dark green glazing. Anterior ridging. Rye.
*62. Rim sherd of cooking pot of fine grey ware oxidized to a buff colour at surface.
*63. Rim sherd of cooking pot of chalk and ground flint tempered grey ware oxidized to a buff colour at surface. Flanged concave topped rim.
*64. Rim and strap handle of cooking pot tempered with medium sized flint granules and chalk. Rough surface oxidized to a dark buff colour. Much random stabbing at junction of handle and body. Traces of internal dark green glazing. Abbotswood ware?
*65 Body sherd of fine white ware with external yellow glazing and raised ridge covered in brown glazing. Rouen ware. c. 1250-1350.
*66. Body sherd of fine pink ware with external orange glazing and raised ridge covered in green glazing. From Yorkshire. c. 1250-1350.

(*b*) *Clay Pipes*

A fairly large number of eighteenth and nineteenth century clay pipe bowls and stems were found in the most recent layers. These have been deposited in the Hastings Museum. An earlier example is described below.

Milled bowl of clay pipe with spur. c. 1610-1640. Layer 10.

(*c*) *Stone Objects—by D. Rudling and C. Cartwright*

1. Broken whetstone. Quartzite. 55 x 33 x 16mm. Layer 10.
2. Broken whetstone. Siltstone. 46 x 13 x 8mm. Layer 10.
3. Fishing net weight. Sandstone. Roughly circular with central piercing. Maximum diameter 85mm. Height 45mm. Layer 11.

Geologically these three objects probably derive from beds in the Wealden Series in the vicinity of Hastings.

(*d*) *Coins*

1. George III. Copper halfpenny. 1770-1775.
Condition: Very corroded. Layer 3.
2. Spanish Netherlands, Philip IV. AE Double-liard. 1643.
Condition: Very corroded/worn. Layer 6.
3. George III. AR. Shilling. 1816.
Condition: Worn. Layer 9 (Fill of nineteenth century cess pit).
4. George III. Copper halfpenny. 1770-1775.
Condition: Extremely corroded. Layer 10.

(*e*) *Metalwork—by Ian H. Goodall (Fig. 5)*

Iron Objects

*1-12. Fishhooks. Nos. 8 and 9 are complete, and they reflect the range from the site. No. 8 has a barbed hook, like nos. 2, 7, 8, 10 and 11, but no. 9 has a plain hook similar to no. 6. Both have thin, expanded heads, as had nos. 1, 2 and 10. Nos. 3, 5 and 12 are shank fragments, like the others of circular-sectioned iron wire. X-radiographs reveal that all fishhooks except nos. 1, 3 and 6 have non-ferrous plating, no doubt to counter the corrosive effect of sea water.
Contexts 1: layer 37; 2-5: layer 10; 6-7: layer 17; 8-12: layer 8.
*13. Wire loop, probably from a dress fastening eye. Layer 8.

Copper Alloy Objects

*14. Incomplete buckle plate, simple decoration on face. Layer 28.
*15. Shaped, elaborately decorated and incomplete buckle plate. Rust around the end hole indicates a former iron rivet. Layer 17.
*16. Strap-end buckle, frame and incomplete riveted plate cast in one. Compare with an early medieval example from Southoe Manor, Cambs. (Hunts.), and another medieval example from Upton, Glos.[1] Layer 20.
*17 "Spectacle" buckle, shaped frame, projecting central bar, pin lost. Medieval "spectacle" buckles were generally a plain figure-eight shape,[2] but in the sixteenth to eighteenth centuries the frames were more frequently shaped and moulded, and the central bar made to project beyond the loops. Such buckles come from a sixteenth century context at The Manor of the More, Rickmansworth, Herts., from a seventeenth century context at Basing House, Hants., and one of the eighteenth century in North America.[3] Layer 10.
*18. Hook with pierced, star-shaped plate and suspension loop attached by a rectangular link to another fragment. Probably a costume fitting. Layer 17.

1 T. C. Lethbridge and C. F. Tebbutt, 'Southoe Manor: preliminary investigations of an early medieval moated site at Manor farm, Southoe, Hunts.,' *Proc. Cambs. Antiq. Soc.*, vol, 38 (1939), 163, pl. Ib; Philip Rahtz, 'Upton, Gloucestershire, 1964-1968,' *Tr. Bristol and Gloucs. Archaeol. Soc.* 88 (1969), vol. 108, fig. 11. CA25.

2 London Museum Medieval Catalogue (1967 edition), 278-9.

3 M. Biddle, L. Barfield and A. Millard, 'The excavation of the Manor of the More, Rickmansworth, Hertfordshire,' *Archaeol. J.*, vol. 116 (1959), 184, fig. 19.17; Stephen Moorhouse, 'Finds from Basing House, Hampshire (c. 1540-1645): Part Two,' *Post-Medieval Archaeol.*, vol. 5 (1971), 60, fig. 25, 169-70; Ivor Noel Hume, *A Guide to Artifacts of Colonial America* (New York, 1970), 86-7, fig. 20.4.

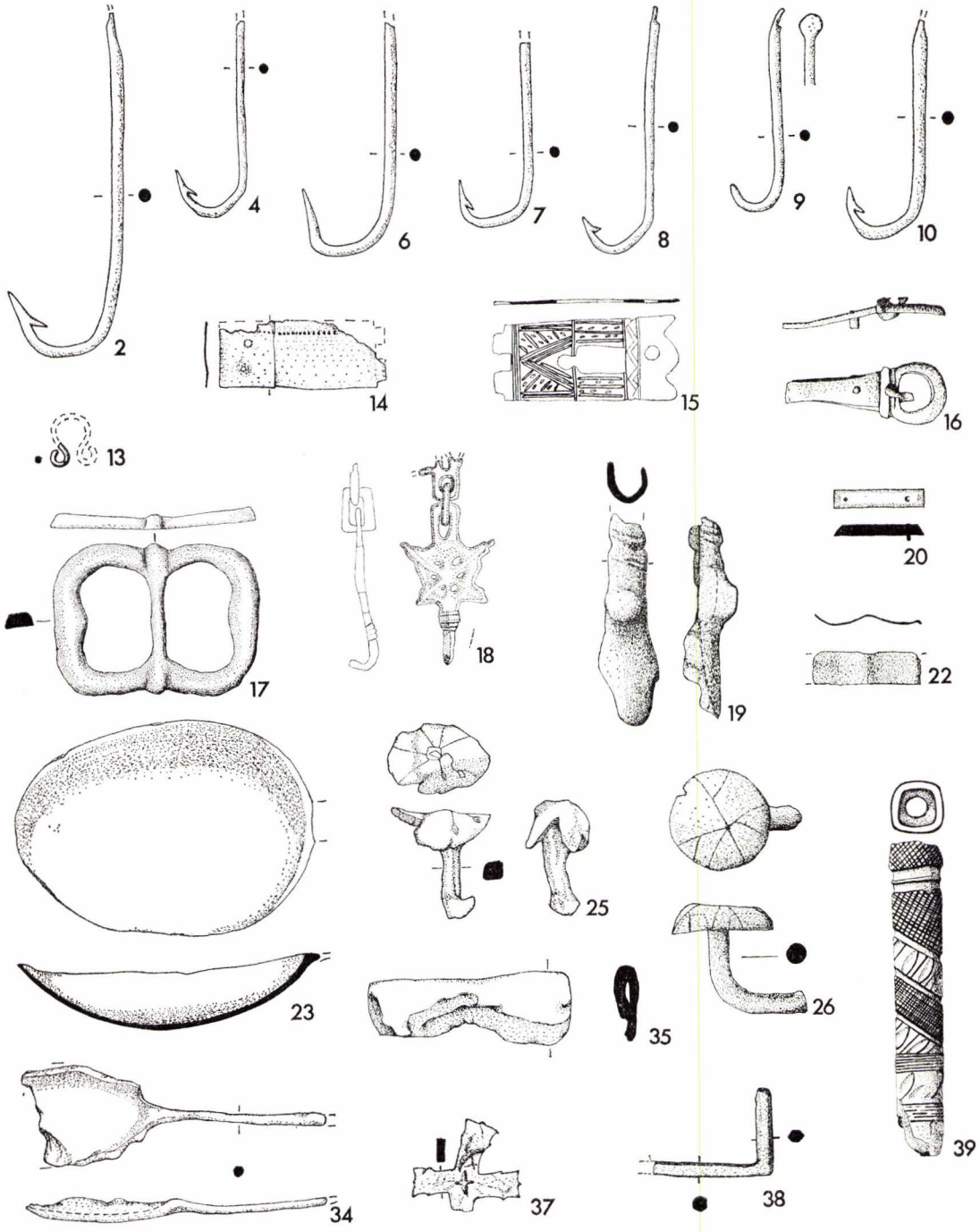


FIG. 5. Winding Street, 1975. Metalwork (¾)

*19. Terminal of U-sectioned mount. Layer 17.
*20. Strengthening plate with end rivets. Layer 17.
*21-2. Strip fragments from layers 14 and 20.
*23. Spoon bowl, stem lost. Layer 7.
24. Roughly circular ? lid. Layer 7.
*25-6. Studs, shanks incomplete, both with hollow domed heads with incised decorative patterns. Layers 17 and 26.
27. Pair of interlocked rings. Layer 10.
28-30. Cylindrical lace ends. All layer 10.
31. Possible needle. Layer 10.
32-3. Pin shanks. Layers 10 and 13.

Lead Objects

*34. Pewter spoon, bowl and stem incomplete. Layer 9.
*35-6. Lengths of binding. Layers 17 and 36.
*37. Cross, perhaps a mortuary cross like the plain ones from the Grey Friars, London.[1] Layer 17.

White Metal

*38 Fragment of buckle frame. Layer 13.

Bone

*39. Handle for knife or fork with whittle tang, with spiral and concentric grooves separating bands of lattice and other decoration. Layer 8.

(*f*) *Animal Bones—by O. Bedwin*

All the bones examined came from the following domestic animals; pig, cattle, sheep (or goat), and chicken. There were in addition a few oyster shells. A total of 71 identifiable animal bones, complete or fragmentary, were recovered from four pits. In view of these small numbers, comparisons between the material from the separate pits has little significance. However, it is worth drawing attention to the fact that all eight caprine mandibles were either deciduous or those of a young adult. The absence of fish bones is surprising from a site so close to the sea and it may be that the soil conditions were unfavourable for the preservation of very small bones.

Pit 6; Layer 26

Caprine	Cattle	Chicken
1 mandible (young adult)	1 radius fragment	1 tibiotarsus
1 metatarsal	1 metatarsal (unfused)	
1 incisor	1 pelvis fragment	
1 humerus	2 rib fragments	
1 radius		
5	5	

Pit 6; Layer 27

Caprine	Cattle	Chicken
2 mandibles (L + R; young adult)	1 skull fragment	1 tibiotarsus
	1 rib fragment	

Pit 7; Layer 33

Caprine	Cattle	Pig
4 mandibles (2L + 2R; all deciduous)	1 tibia fragment	1 canine
	1 radius	
	(plus some oyster shells)	

Pit 8; Layers 36 and 37

Caprine	Cattle	Pig	Chicken
1 humerus fragment	2 tibia fragments	1 tibia	1 tarsometatarsus
1 metacarpal (unfused)	1 radius fragment	1 radius	
1 mandible (deciduous)	1 scapula fragment	1 rib fragment	
2 calcanei	2 pelvis fragments		
1 rib fragment	1 skull fragment		
	4 rib fragments		
6	11	3	
	(plus some oyster shells)		

[1] London Museum Medieval Catalogue (1967 edition), 290.

Pit 9; Layers 28 and 34

Caprine	Cattle	Pig
2 radii	1 tibia fragment	1 tibia shaft fragment
1 ulna fragment	1 metatarsal fragment	1 rib fragment
1 tibia fragment	1 metacarpal	
3 metatarsals	1 1st phalange	
1 metacarpal	1 pelvis fragment	
1 skull fragment	1 scapula fragment	
2 rib fragments	1 mandible fragment	
1 humerus fragment	1 vertebra fragment	
	3 rib fragments	
12	13	2

(plus some oyster shells)

ACKNOWLEDGMENTS

I should like to thank the Borough Architect for permission to excavate on the site; all my hard-working volunteers, especially Miss Christina Unwin (finds assistant), Mrs. Fay de Jimenez, and Mr. John Bell (surveying); Mr. David Devenish, the Hastings Museum Curator, for all his assistance; Mrs. Lysbeth Drewett for drawing Figs. 2 and 3; Mr. Richard Brewer for drawing Fig. 4; and Miss Caroline Cartwright, M.A., Mr. Ian Goodall and Dr. Owen Bedwin for the specialist reports. I am grateful to Mr. John Hurst, F.S.A., Mr. Ken Barton, M. Phil, Mr. David Martin, Mr. David Freke, M.A., and Mr. Peter Drewett, B.Sc., for discussions on the pottery. Finally I would like to thank Mr. David Freke for his help in the preparation of this report.

FURTHER EXCAVATIONS IN LEWES, 1975

by D. J. Freke

Following the excavations in Brook Street and Lancaster Street in 1974,[1] *the opportunity was taken to check the northern extent of the medieval town on a site in North Street. Permission to excavate was kindly granted by Lewes District Council in advance of an extensive building scheme. The work was carried out by the Sussex Archaeological Field Unit, with a grant from the Department of the Environment, under the direction of the author. The finds are deposited at Barbican House, Lewes, and the detailed plans and notes are in the files of the Sussex Archaeological Field Unit.*

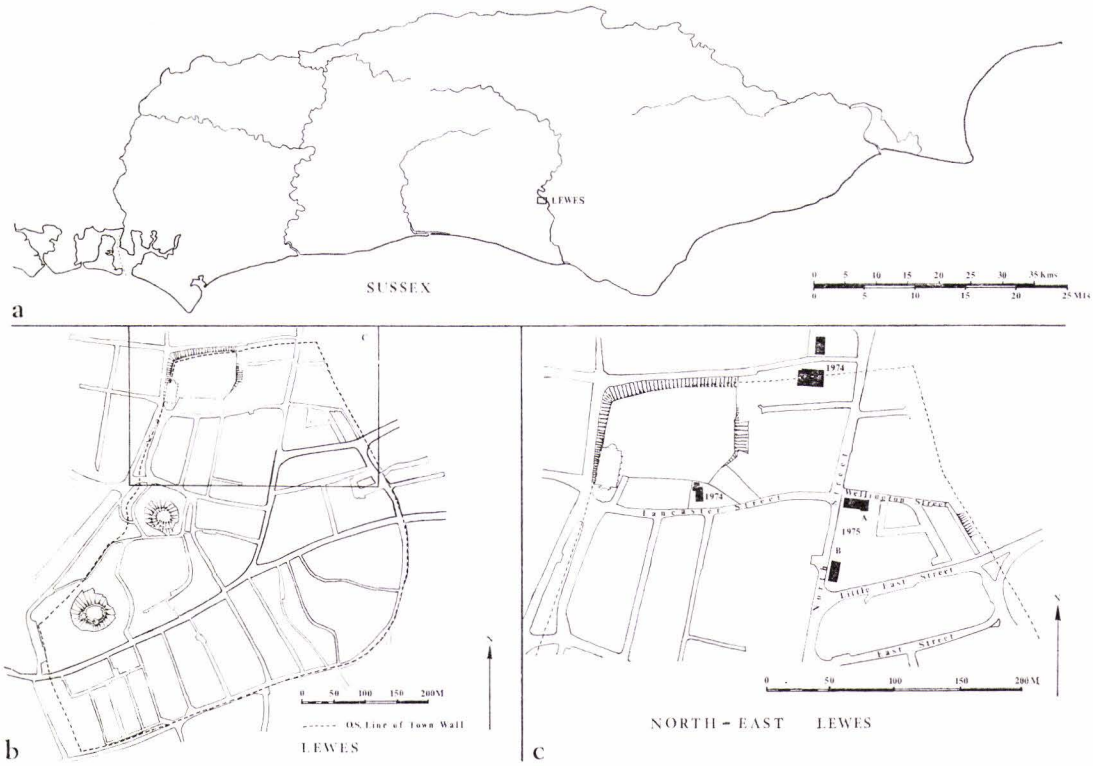


FIG. 1. Lewes, 1975. Location map

[1] D. J. Freke, ' Excavations in Lewes, 1974.' *Sussex Archaeological Collections* (hereafter S.A.C.), vol. 113 (1975), pp. 66-84.

INTRODUCTION

Two areas along the east side of North Street were excavated; the northern Trench A was 18m. by 8m. and Trench B was 16m. by 6m. The terrace of ninteenth century houses previously on the site all had cellars except for those in the area of Trench B, so it was not considered worthwhile excavating any more of the present street frontage, especially as there was no evidence that North Street is on the same alignment as it was in the medieval period. It was hoped that the two trenches over 60m. apart would produce evidence to indicate the directional growth of the medieval town.

Trench A.

A nineteenth century cellar at the western end of this area had removed approximately half a metre of natural earth, and various nineteenth century sewage arrangements and wells had created further disturbances. This made it most unlikely that any signs of structures pre-dating

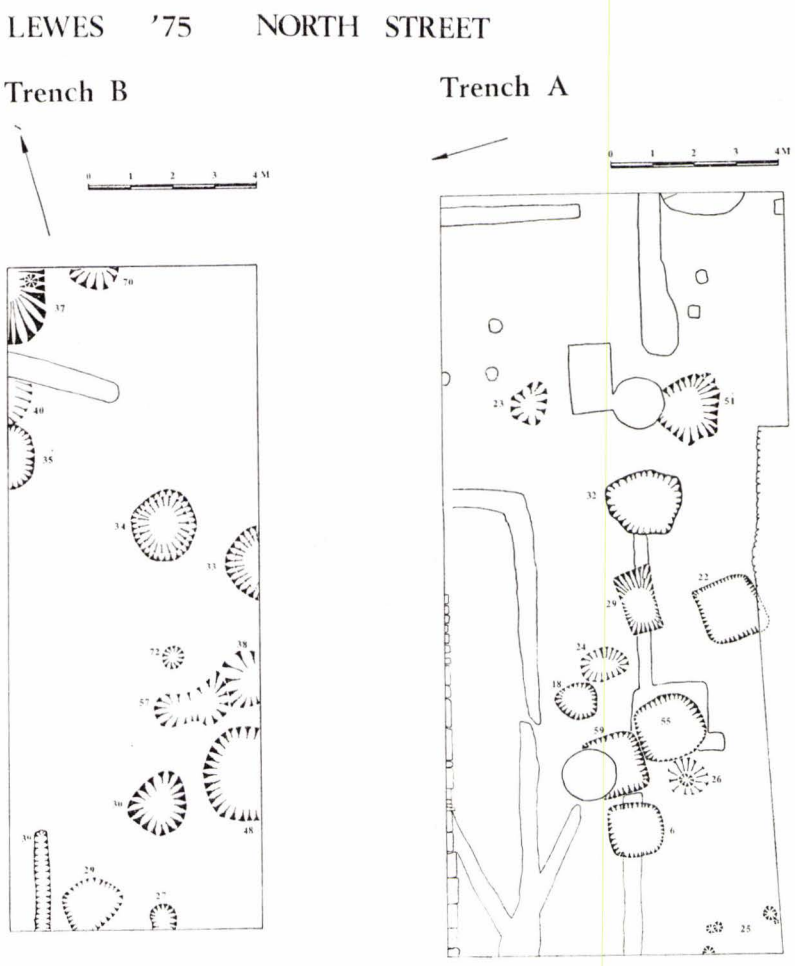


FIG. 2. Lewes, 1975. Trenches A and B, medieval features

the nineteenth century would remain, but a single positive post hole (no. 26) and row of slight disturbances (nos. 25a, b, c, d,) in the south-west corner de-limited an area of charcoal speckled silt and gravel. Both features produced fourteenth century pottery.

The other features in the trench, apart from the Pleistocene geological disturbances (see report below by M. Bell), were all medieval pits. Except for pits nos. 8, 22, 29, 55, and 59, their functions were unidentifiable and their forms very variable. However, they all produced fragments of medieval pottery, none large enough or significant enough to illustrate. Pits nos. 18, 24, and 51 contained 13th century material and nos. 23 and 32 produced fourteenth century sherds.

Pits nos. 8, 22, 29, 55 and 59 shared similarities both in their contents and their shapes. They all contained many animal bones (see report below by O. Bedwin) and much pottery, and were square in plan with near vertical sides with flat bottoms, except for no. 29 which changed from rectangular to circular with depth. No. 59 had been cut into by the construction pit of a 19th century well, but it was still possible to determine most of its plan and depth. The uniformity amongst these pits as regards size (in plan) shape and contents suggests that they were originally dug for a similar function. The three deepest and least disturbed appear to have been waterlogged when originally filled and contained characteristic cess-pit material in the lowest layers, so it is suggested that they were cess-pits. After ceasing to be used as cess-pits they were filled in one operation with domestic refuse.

No distinction in date could be discerned in the pottery assemblages from the different cess-pits, but as the material was mainly cooking pots and storage jars it was not the best diagnostic material. Pits 8, 22 and 29 produced small fragments of at least six different vessels of Andenne type ware dated to the twelfth or early thirteenth century (figure 3 no. 14 and figure 4 nos. 25, 31) as well as two small sherds of tenth or eleventh century Pingsdorf type ware (not illustrated, pottery report no. 31a). Pit 22 also contained an almost complete twelfth or thirteenth century storage jar decorated with stamped concentric circles on the shoulder and slashed straps (figure 4 no. 29).

Several fragments of querns and whetstones made of both local and foreign stone were found in pits 8, 22 and 29 (see report below by C. R. Cartwright and A. J. Woods). Pit 8 also produced some fragments of carved bone (figure 6 nos. 78, 81), and pit 22 contained a baked clay " bun type " loomweight (figure 6 no. 74), a mudstone spindle whorl (figure 6 no. 77) and a rough chalk oil lamp (figure 6 no. 76). Half of the material from pits 8 and 22 was dry sieved and samples were taken from all the pits for flotation and analysis by D. Williams (Results forthcoming in London University M.Phil. dissertation).

Trench B.

Underneath the foundations of the recently demolished nineteenth century buildings there was a complete sequence of clay tobacco pipes and pottery which indicated that the area of our trench had been agricultural land, probably pasture or gardens, from the Norman period until the nineteenth century. A layer containing fourteenth century material (figure V nos. 60-69). including a coin of Edward I (see report below by D. Rudling) sealed most of the site. The latest medieval feature in the trench was a beam slot in the south west corner (feature 39) which contained fourteenth century pottery.

The remainder of the medieval features consisted of pits containing Saxo-Norman material with some iron slag and ashes. The weaving industry was represented by two bone needles (figure 6 nos. 79, 80) and many fragments of loomweights of the " bun type." The pits were of

several forms: 29, 30, 35 and 48 were approximately 2m. to 2½m. deep below modern ground level, irregularly circular in plan, steep sided and flat bottomed; 27, 38, 40 and 57 and 72 were irregular and shallow; 33 and 34 were circular in plan, 4m. to 4½m. deep below modern ground level, very steep sided and with fills very similar to those in the cess-pits in Trench A. Half of pit 34 was dry sieved and samples were taken from all the pits for flotation.

DISCUSSION

Both trenches produced evidence for occupation in the Saxo-Norman period, with Trench B being abandoned just before or at the same time as occupation began in the area of Trench A, which was itself abandoned by the fourteenth century. It is not possible on the evidence of the pottery from Trench B to determine whether its settlement dates from before or after the Norman Conquest. The results of this year's work are in accordance, generally, with the evidence from the Naval Prison site investigation of 1962-5[1] when similar deep vertical sided pits containing Saxo-Norman pottery were found. The twelfth century pit excavated in Lancaster Street in 1974[2] must be re-interpreted, in the light of this year's work, as belonging to the same type. The imported pottery found in Trench A is the first recorded instance in Lewes of a type which would be expected in view of the town's geographical and economic position in the medieval period.

It may be concluded that there was a fairly short-lived and shifting Saxo-Norman " suburb " in north-east Lewes which was abandoned by the fourteenth century and which reverted to open ground until the coming of the Phoenix Ironworks in the early nineteenth century. It is not possible on the evidence produced by this season's work to say whether this medieval settlement was inside or outside the town walls.

THE FINDS

Flint Artifacts.

Fifty four prehistoric flints were found in disturbed medieval layers. These were examined by P. L. Drewett, B.Sc., who reports that the group consists of:

three end scrapers,
thirteen retouched flakes,
thirty-two waste flakes,
four lumps of rough workshop waste,
two fire-cracked flints.

One scraper and a parallel-sided flake could well be Mesolithic while the rest are indeterminate. None are illustrated.

Coins and Tokens
by D. Rudling.

1. Edward I. Count of Bar. (Modern Bar le Duc, north-east France). 1302-1337. Silver sterling denier.
Obverse: crowned bust. EDWAR CUENS DE BAR.
Reverse: cross with three pellets in each angle. MON ETS MIC AEL.
Condition: fine.
Trench B, layer 26.
2. Miniature Token. Brass. Diameter: 9mm.
Obverse: Princess Alice bust. PRINCESS ALICE.
Reverse: PRINCESS/ALICE/BORN/APRIL 25 1843.
Trench A, layer 3.
3. Advertising Token. Brass. Diameter 26mm. Pierced.
Obverse: Laureate bust right. GEORGIVS II DEI GRATIA.
Reverse: Advertisement for Macniven and Cameron's pens.
Trench B, surface clearance.

[1] D. M. Thomson, ' Note on excavations at the naval prison, Lewes.' *Sussex Notes and Queries*, vol. 16 (1963) p. 35.

[2] D. J. Freke, op. cit. p. 70.

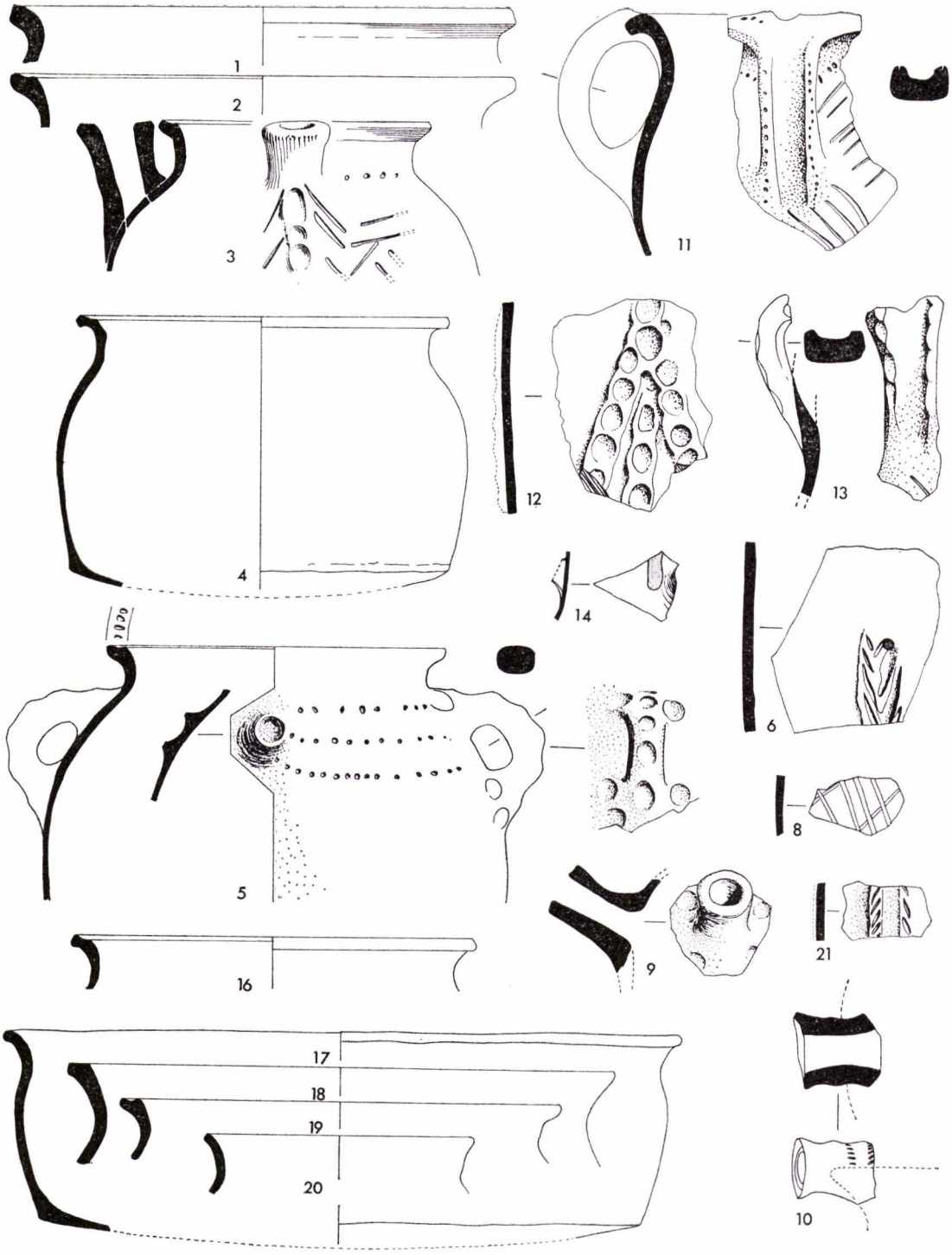


FIG. 3. Lewes, 1975. Pottery from Trench A, pit 8 ($\frac{1}{4}$)

Pottery

by D. J. Freke, M.A.

The author is grateful for the advice of Mr. K. J. Barton, M.Phil. and Mr. J. G. Hurst, M.A., F.S.A., who examined samples of the pottery. They are of course not responsible for any errors I have made in drawing conclusions from their help.

Only the basic forms and the decorated fragments have been illustrated. Numbers refer to Figures 3, 4, and 5.

TRENCH A, Pit 8 (Fig. 3).

Layer 54.

1. Rim of cooking pot, light orange-brown surfaces, grey core, medium flint tempering.
2. Rim of cooking pot, grey-buff surfaces, grey core, medium-light flint tempering.
3. Spout and rim, orange-brown outer surface, grey internal surface, grey core, medium flint tempering. Incised and thumbed decoration.
4. Almost complete cooking pot, soot blackened outer surface, light orange-brown internal surface, grey core, medium flint tempering.
5. Rim and handle, light orange-brown surface, grey core, medium flint tempering. Decorated with two opposed bosses (one incomplete). Heavy thumbing round handle and three rows of dotted decoration.
6. Body sherd, orange-brown surface, inner surface very crumbly, dark grey core, medium flint tempering. Incised decoration in the form of a wheat-ear.
8. Body sherd, brown surfaces, dark grey core, medium to light flint tempering. Decorated by scoring and then impressing blades of grass in the wet clay.
9. Spout, grey-brown surface, grey core, medium flint tempering. Lightly thumbed.
10. Spout attached to pot by lower edge only, orange-brown surface, grey core, medium flint tempering. Two lines of incised decoration around top.
11. Handle, light brown surface, dark grey core, medium to heavy flint tempering. Incised and stabbed decoration.
12. Body sherd, orange-brown surfaces, grey core, irregular medium to heavy flint tempering. Robust thumbed strapping.
13. Handle, orange-brown surfaces, grey core, medium to light flint tempering. Thumbed decoration.
14. Body sherd with extrusion (broken handle socket ?), pale salmon pink hard fabric, very fine with few inclusions. Dribble of transparent glaze. Andenne ware, late twelfth to early thirteenth century.
15. Not illustrated. Thin body sherd, pale grey-pink surfaces, pale grey core, very fine with few inclusions. Pingsdorf type ware, late twelfth to early thirteenth century.

Layer 60.

16. Rim, light brown surfaces, soot blackened exterior, grey core, regular medium flint tempering.
17. Most of a large bowl, unevenly made, fire blackened external surface, interior orange-brown to grey, dark grey core, medium to light flint tempering.
18. Rim, soot blackened exterior, buff-grey interior, dark grey core, regular medium flint tempering.
19. Rim, black surfaces, dark grey core, medium flint tempering.
20. Rim, light brown interior surfaces soot blackened exterior, grey core, medium flint tempering.
21. Body sherd, buff-grey exterior, interior surface missing, grey core, medium flint tempering. Decorated with slashed raised cordons.

TRENCH A. Pit 22 (Fig. 4).

Layer 22.

22. Rim, orange-brown surfaces, grey core, medium to light flint tempering.
23. Rim, buff-grey surfaces, grey core, medium to light flint tempering.
24. Rim, dark grey to black surfaces, grey core, medium to light flint tempering.
25. Base of pale pinkish grey fabric with flakey very pale amber glaze on exterior surface, internal surface flaked off, very fine with small pink inclusions. Andenne ware ? Eleventh to twelfth century.
26. Not illustrated. Body sherd of very pale grey fabric with spotty very pale green glaze on exterior, few inclusions. Andenne ware ?. Eleventh or twelfth century
27 Not illustrated. Body sherd of pale grey fine fabric with thick pale amber glaze externally and pinkish-white slip on interior surface, few inclusions. Andenne ware ?. Eleventh to twelfth century.
28. Body sherd, orange-brown exterior surface, interior surface flaked off, grey core, medium flint tempering. Thumbed strap decoration.

Layer 70.

29. Almost complete storage jar, stamped concentric circles on raised band on shoulder, four cordons with diagonal incised decoration. Fired inverted. Brown surfaces, grey core, medium to heavy flint tempering.
30. Rim with thumbed decoration, orange-brown surfaces, grey core, medium flint tempering.
31. Body sherd, very pale grey-pink fabric, pale amber flakey glaze externally. Few inclusions. Rouletted decoration. Andenne ware ?. Twelfth century. (Four similar sherds were recovered from this layer).
31a. Not illustrated. Small body sherd of creamy coloured fine sandy fabric, red painted. Pingsdorf type ware. Tenth to eleventh century.

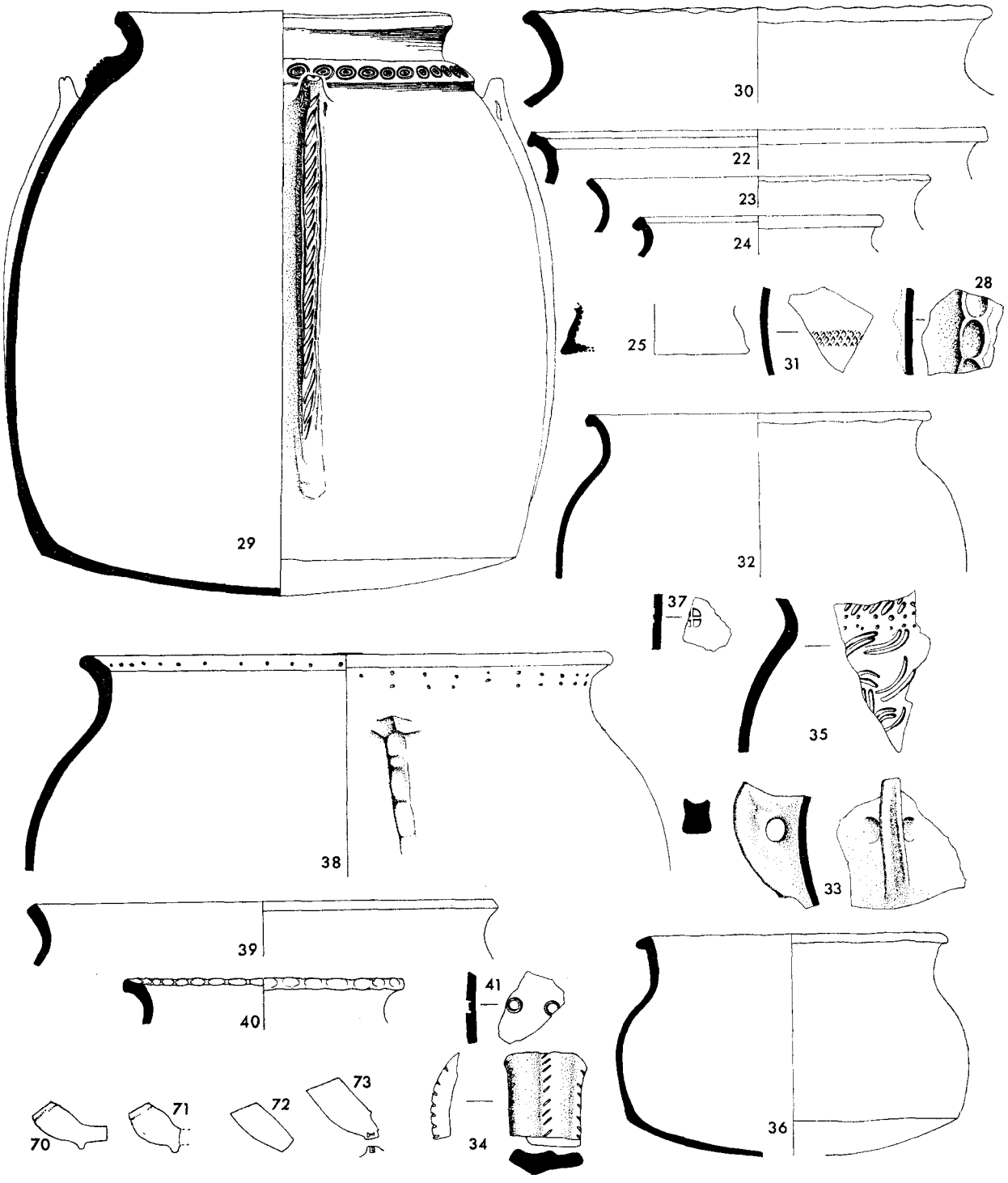


FIG. 4. Lewes, 1975. Pottery from Trench A, pits 22, 29, 59 and post-hole 26; clay tobacco pipes from Trench B ($\frac{1}{4}$)

TRENCH A. Pit 59. (Fig. 4).
Layer 59.
32. Rim, light brown surfaces, grey core, medium to light flint tempering. Thumbed rim.
33. Lug, light brown surfaces, grey core, medium to light flint tempering.
34. Fragment of handle, orange surfaces, grey core, medium to light flint tempering. Three rows of slashed decoration.

Layer 66.
35. Body sherd, orange-brown surfaces, very crumbly interior, grey core, medium flint tempering Exuberant incised decoration.
36. Cooking pot, light to dark brown surfaces, exterior soot blackened, grey core, medium to light flint tempering.

Layer 68.
37. Body sherd, brown surfaces, grey core, light flint tempering. Decorated with stamped cross.

POST-HOLE 26. (Fig. 4).
Layer 12.
38. Rim of storage jar, light orange, grey core, light flint tempering.

TRENCH A. Pit 29. (Fig. 4).
Layer 29.
39. Rim, buff to grey surfaces, grey core, medium flint tempering.
40. Rim with thumbed decoration, dark grey fabric, medium flint tempering.

Layer 49.
41. Body sherd, light brown surfaces, grey core, coarse flint tempering. Stamped circular decoration.

Layer 34.
42. Not illustrated. Body sherd of pale pink-grey fabric, with external pale amber glaze. Rouletted decoration. Andenne ware ? Eleventh to twelfth century.

TRENCH B. Pit 29. (Fig. 5).
Layer 53.
43. Rim and lug/handle, dark grey patchy fabric, decayed interior surface, medium flint tempering.

Layer 62.
44. Rim, dark grey to black fabric, medium flint tempering.

TRENCH B. Pit 35. (Fig. 5)
Layer 35.
45. Rim, dark brown surfaces, grey core, medium flint tempering. Rough incised decoration.

TRENCH B. Pit 33. (Fig. 5).
Layer 33.
46. Rim with thumbed decoration, dark grey fabric, medium flint tempering.

Layer 58.
47. Rim, brown surfaces, grey core, medium flint tempering.

Layer 60.
48. Rim with rebate on outer edge, dark grey fabric, medium flint tempering.

Layer 67.
49. Cooking pot, dark grey to black fabric, medium flint tempering.
50. Rim, dark grey fabric, medium flint tempering.

TRENCH B. Pit 37. (Fig. 5)
Layer 37.
51. Rim, black fabric, patchy surface, medium flint tempering.
52. Rim, black fabric, medium flint tempering.

Layer 65.
53. Cooking pot, dark grey-brown to black fabric, medium flint tempering.
54. Bowl, patchy light grey-brown surfaces, grey core, medium flint tempering.

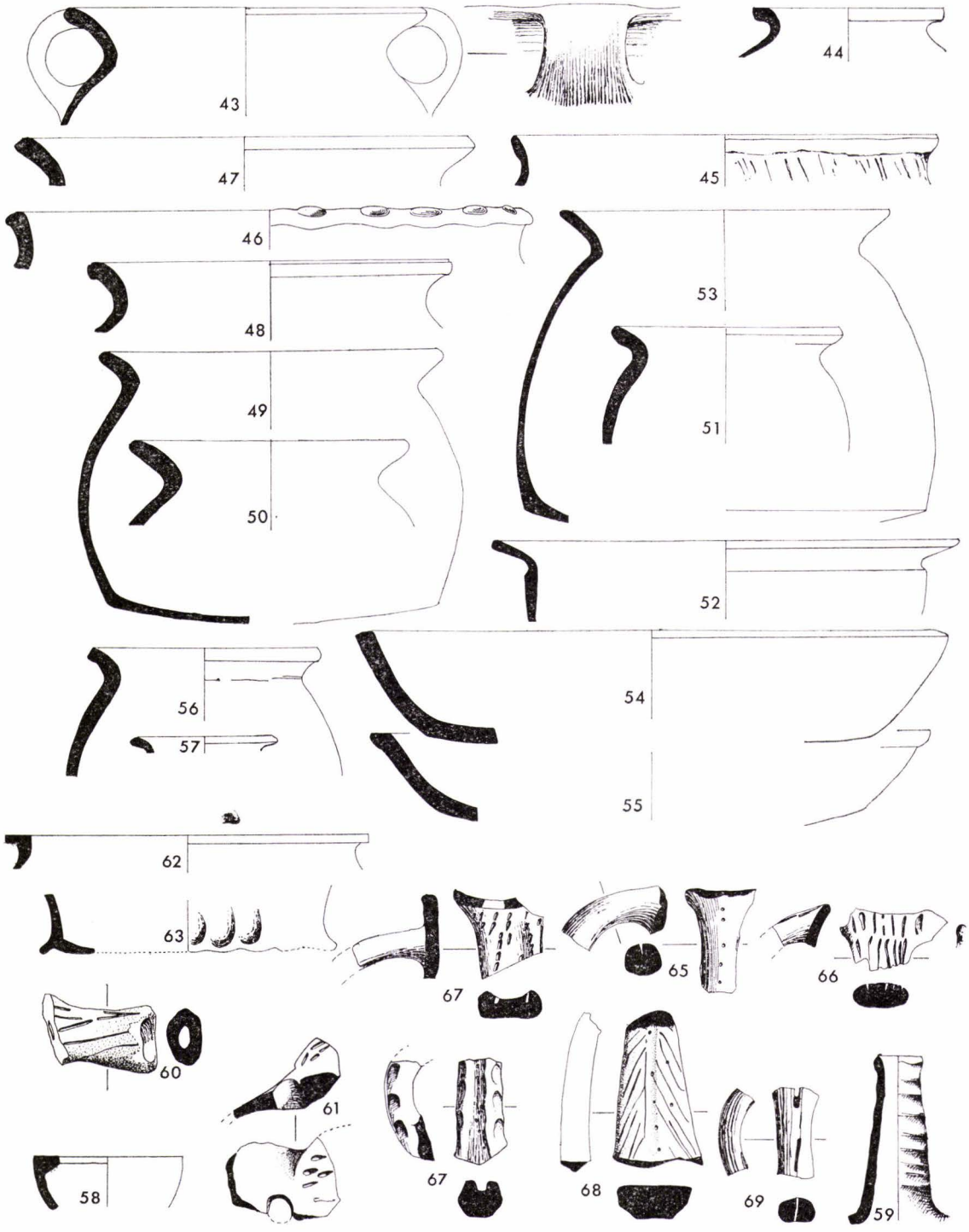


FIG. 5. Lewes, 1975. Pottery from Trench B, pits 29, 30, 33, 34, 35, 37, and Layers 12 and 26 ($\frac{1}{4}$)

TRENCH B. Pit 30. (Fig. 5).
Layer 47.
55. Bowl, grey-brown surfaces, grey core, medium flint tempering.

TRENCH B. Pit 34. (Fig. 5).
Layer 34.
56. Rim, dark grey to black fabric, medium flint tempering.
57. Rim, black fabric, medium flint tempering.

TRENCH B. (Fig. 5).
Layer 12.
58. Inturned rim of Rye ware.
59. Flask neck, from near Rouen. Type 3.

TRENCH B. (Fig. 5).
Layer 26.
60. Spout, light orange-brown surface, light grey core, sandy fabric. Incised decoration
61. Fragment of curfew cover, light orange-brown surface, light grey core, sandy fabric.
62. Rim, buff-brown surface, light grey core, fine sandy fabric.
63. Base, orange fabric, sandy, with spotty light green glaze. Thumbed base.
64. Fragment of handle, light grey fabric, fine sandy tempering. Stabbed decoration.
65. Fragment of handle, light orange-brown surfaces with green-grey glaze, fine fabric. Stabbed decoration.
66. Fragment of handle, light orange-brown surfaces light grey core fine fabric. Slashed decoration.
67. Fragment of handle, light orange-brown surfaces, light grey core, fine sandy fabric. Thumbed sides.
68. Skillet handle, light brown surfaces, light brown core, fine sandy fabric. Incised decoration.
69. Fragment of handle, light orange-brown surfaces with grey-green glaze sandy fabric. Stabbed decoration.

Clay Tobacco Pipes
by D. J. Freke, M.A.

The numbers refer to figure 4.
70. Bowl with spur, circa 1650. Trench B, layer 12.
71. Bowl with spur, circa 1650. Trench B, layer 11.
72. Bowl, circa 1760. Trench B, layer 18.
73. Bowl, circa 1780-1800, spur with initials ' I. E. ' Trench B, layer 18.

Miscellaneous Objects. (Fig. 6).
74. Baked clay loom weight, bun type. Trench A, Pit 22, layer 76.
75. Baked clay loom weight, bun type. Trench B, Pit 70, layer 70.
Fragments of similar loom weights were found in Trench B, Pit. 37.
76. Chalk oil lamp. Trench A, Pit 22, layer 76.
77. Mudstone spindle whorl. Trench A Pit 22 layer 76.
78. Decorated bone handle (?). Trench A, Pit 8, layer 8.
79. Bone needle. Trench B, Pit 29, layer 63.
80. Bone needle. Trench B, Pit 35, layer 35.
81. Decorated bone ornament. Trench A, Pit 8, layer 8.

Stone Artifacts (Fig. 6. Illustrated stone marked with *).
by C. R. Cartwright, M.A., and A. J. Woods.

Petrological analysis

Non-Local Stone (i.e. not found in Sussex).
1. Trench B, layer 30. Granite quern fragment.
*2. No. 85, Trench A, layer 8. Granite quern fragment.
3. Trench B, layer 35. Granite quern fragment.
Quartz and much feldspar occurs—a little orthoclase is present but mainly plagioclase is represented (some altered) and mica (biotite and a little muscovite is present).
4. Trench B, layer 40 ? Mayen lava quern fragment.
*5. No. 83, Trench B, layer 40 Mayen lava quern fragment.

Local Stone:
6. Trench A, layer 75. Quartzite-sandstone quern fragment.
Mainly sub rounded quartz and round goetnite/limonite but occasional feldspar (small microline) occurs in a chalcedonic cement.
7. Trench A, layer 24. Fine-grained quartzite quern fragment.
A fine grained quartzite composed of small, compact sub-angular quartz, minute limonite/goetnite fragments, occasional muscovite and haematite flecks.

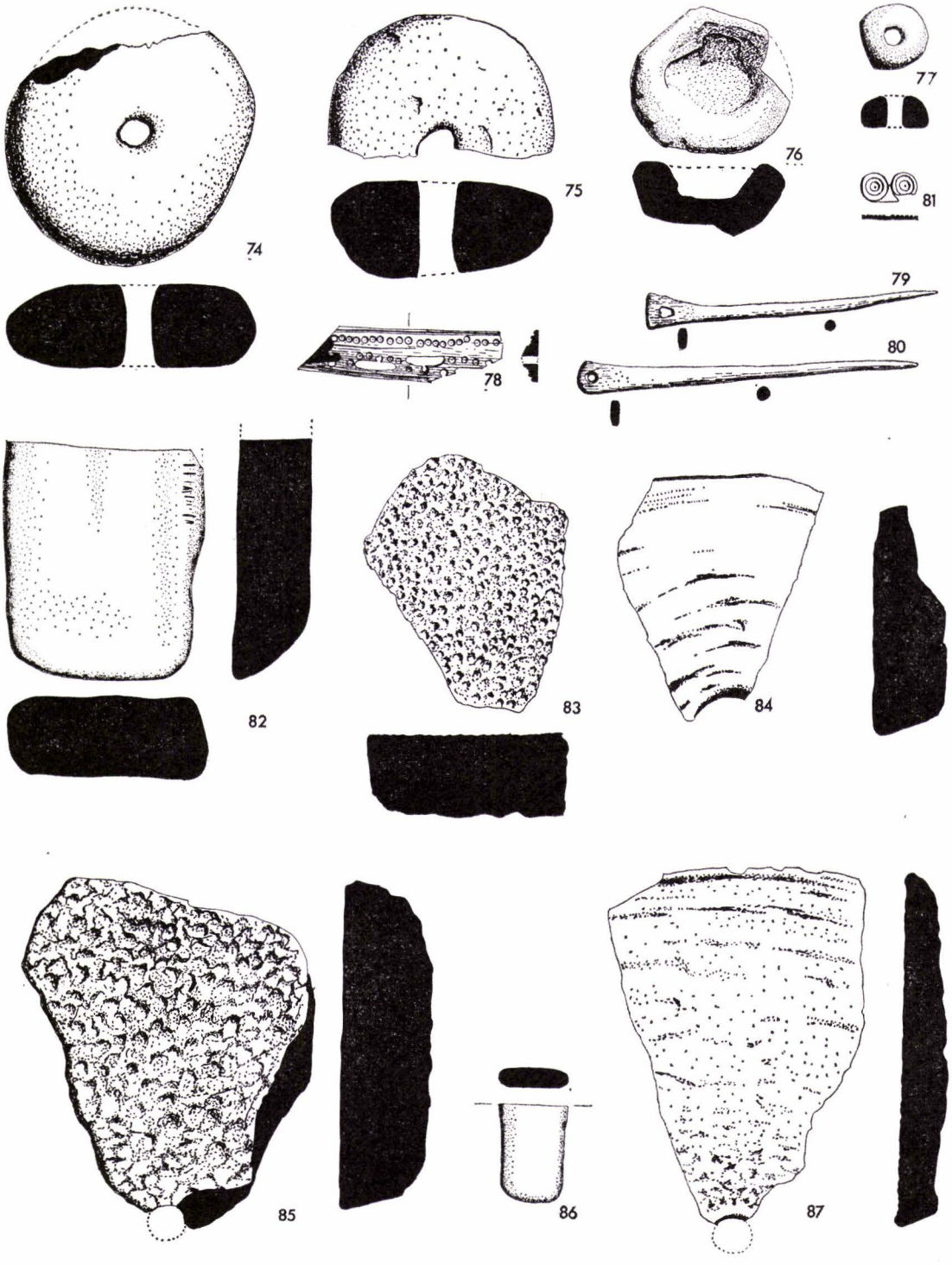


FIG. 6. Lewes, 1975. Stone and miscellaneous objects ($\frac{1}{4}$) except nos. 78, 79, 80, 81 ($\frac{1}{2}$)

8. Trench B, layer 33. Fine-grained calcareous sandstone composed of very small sub-angular quartz cemented with calcite. Quern fragment.
9. Trench A, layer 29. Arkose quern fragment.
An arkose composed of varying sizes of quartz: sub-rounded to angular, weathered and rounded (a little microline but predominantly plagioclase) in a ferriugnous cement.
10. Trench B, layer 65, sample b. Slightly fossiliferous calcareous sandstone. Quern fragment.
A slightly fossiliferous calcareous sandstone composed of rounded quartz, a little quartzite, much goetnite/limonite with occasional microline in acalcitic cement. Fossil radiolaria skeletons occur sporadically.
Trench B, layer 65, sample a. Fine-grained quartzite composed of very small subangular quartz. Quern fragment.
*11. No. 82, Trench A, layer 76. Mudstone. Whetstone
Mudstone composed of minute rounded and lath-like quartz fragments, scattered and infrequent mica (muscovite) fragments in a dense matrix.
*12. No. 87, Trench A, layer 54. Quartzite sandstone (similar to 6). Quern fragment.
A quartzite-sandstone composed of subrounded quartz, rounded goetnite/limonite and rear feldspar (usually small microline).
13. Trench B, layer 33. Mudstone. Whetstone.
*14. No. 86, Trench B, layer 38. Quartzite sandstone. Quern fragment.
*15. No. 84, Trench B, layer 35. Ferruginous sandstone. Quern fragment.
16. Trench A, layer 8. Mudstone. Whetstone.
17. Trench A, layer 8. Fine-grained quartzite. Quern fragment.
18. Trench A, layer 8. Quartzite-sandstone. Quern fragment. Slightly calcareous.
19. Trench A, layer 54. Quartzite. Quern fragment.
20. Trench A, layer 54. Fossiliferous calcareous sandstone. Quern fragment.

Miscellaneous:
21. Trench B, layer 33. Mortar ?
Analysis of this material reveals many quartz fragments (very rounded and presumably windblown sand), some quartzite, occasional feldspar (one microline), iron lumps and iron encasing and penetrating some of the quartz fragments. Optically, it has an isotropic matrix. A large proportion of the body (i.e. the lime component) is affected by acid dissolution.

The Pleistocene Landforms (Fig. 7)
by M. Bell, B.Sc.

Archaeological features at North Street, Lewes, were cut into a series of periglacial landforms which had developed on top of a river cliff of the Ouse. The landforms are morphologically similar to those uncovered on a continuation of the same river cliff at Newhaven.[1] The basic stratigraphic sequence at Lewes is Lower Chalk overlain by Clay-with-Flints on which are patches of silt, and above which the post-glacial soil has developed. The Pleistocene part of this stratigraphic sequence has been folded and contorted into brodel pockets by ice action during a period of extreme cold. The various layers would have expanded differently according to their lithology and water-holding capacity. The result was the development of a series of unsorted stone stripes formed by alternating ridges and troughs running from S.W. to N.E. at right angles to the contours. In the centre of the ridges there is chalk flanked by Clay-with-Flints at its margins. Generally speaking the flints were orientated in the same direction as the stripes. The troughs had a silt fill below which is the folded cover of Clay-with-Flints. In Trench B much of the silt was removed by post-medieval terracing, leaving only stripes of chalk projecting through Clay-with-Flints. A few small remaining patches of silt were not planned, but are marked by a paucity of flints.

Small sections across these features were visible in the sides of archaeological features. They had the appearance of simple involutions, such as are visible in many of the cliff sections between Black Rock and Eastbourne. It is generally assumed that on flat surfaces involutions have a polygonal plan, and that on more sloping ground they grade into stripes,[2] of which this is one of the few examples to have been recorded in plan.

In order to assess more accurately the character and possible origin of these sediments, two samples were taken for laboratory analysis. The particle size distribution of each was obtained by mechanical analysis, and the mineralogical compostion of particles larger than 0.2mm. was examined under the binocular microscope. Sample 2 was from a Clay-with-Flints stripe surrounded on both sides by troughs of silt. The cumulative graph shows that it is not well sorted into any predominant grade, and consists of 29.5% clay; 22.5% silt; 27% sand; and 21% gravel. Mineralogically its chief constituents larger than 600μm. are grains of iron oxide; silicified sandstone; silicified siltstone; flint and quartz, with the later predominating over the others below 212μm. The mineralogy of the sand and gravel fractions of the Clay-with-Flints here and elsewhere are consistent with their being residual deposits from the weathering of Reading Beds, and the solution of chalk.

Sample I was from a silt stripe. Mechanical analysis showed it to be well sorted, 53% was silt and a further 17% was fine sand smaller than 0.1mm; both of which are likely to be a wind deposited loess. Some 20% is clay, 8.5% sand larger than 0.1mm. and 1.5% gravel. The mineralogy of material larger than 212μm. was very similar to that of the underlying Clay-with-Flints. This indicates that material larger than 0.1mm. in this sample was derived from the underlying deposit by cryoturbation. Thus the loess may be *in situ* except for the local folding and contortion which accompanied development of the stripes.

1 M. Bell, ' The excavation of an early Romano-British site and pleistocene landforms at Newhaven, Sussex.' *S.A.C.* vol. 114 (1976) pp. 218-305.

2 R. B. G. Williams, ' Frost and the works of man.' *Antiquity*, vol. 57 (1973), p. 26.

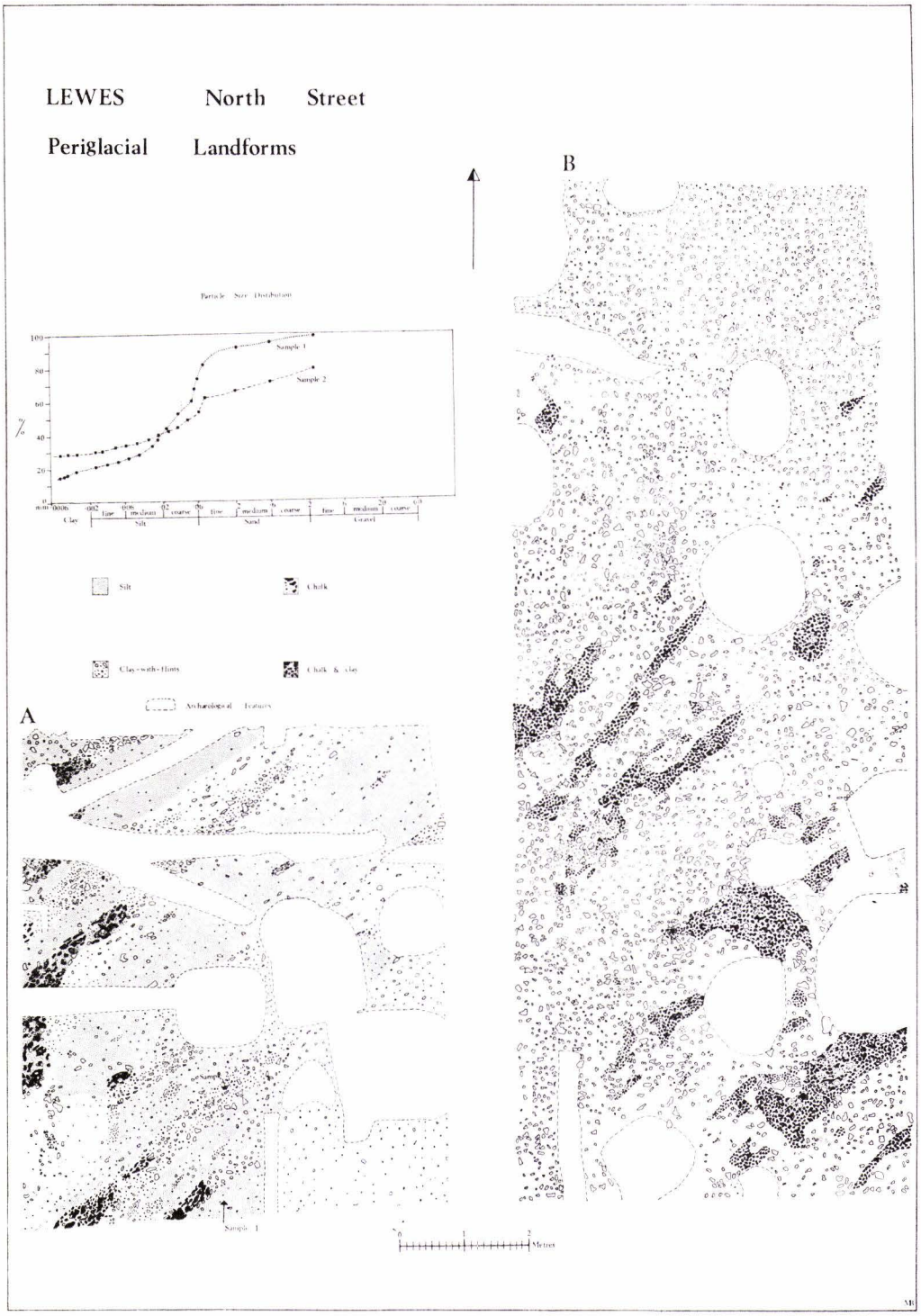


FIG. 7. Lewes, 1975. Pleistocene Landforms. Two areas are shown: (A) the western end of Trench A; (B) Trench B, where a few small areas of silt were not plotted, but are indicated by a paucity of flints. The cumulative graph compares the particle size distribution of samples 1 and 2

Recent work has shown that in the latter part of the Pleistocene many of the soils of Southern England, including those of the Chalk downs, were augmented by deposits of wind-blown loess.[1] The stratigraphic position of the Lewes silt deposits is consistent with deposition in the cold dry Pleniglacial Stadial B, from which the majority of English loess deposits date. Comparison with Newhaven suggests that during subsequent excavations in Lewes the silt horizons should continue to be carefully watched and recorded, for they are potential sources of *in situ* Palaeolithic artifacts.

Bone Report

by O. Bedwin, Ph.D.

Human remains.

8 fragments of the skull of a human adult were recovered from Trench B, Pit 34, layer 67. Age at death was 35 ± 5 years; the robustness of the fragments suggests a male.

Animal remains.

Large amounts of animal bones were found, particularly where sieving was carried out. A total of about 5,000 bones, complete and fragmentary, were identified. (No attempt has been made to differentiate between sheep and goat; where the word sheep occurs in this report, it should be taken to mean sheep or goat).

The common domestic food animals, sheep, pig, and cattle, were all well represented. For the purposes of quantitative comparison, only the material from well-characterised archaeological features, such as the cess-pits, has been used. The histograms show the relative amounts of the four main food animals, sheep, pig, cattle and chicken, which occurred in four of the seven pits, based on a count of the minimum number of individuals, but excluding those of animals too immature to have been of use as food. Pits 22, 29 and 34 are very similar; chicken forms a small, but constant part of the diet throughout.

Apart from differences in quantity, there are also considerable differences in the age at death among the food animals. 60 out of 190 sheep mandibles from the 7 pits were deciduous, whereas only 4 out of 91 cattle mandibles, and 8 out of 52 pig mandibles were deciduous.

Perhaps the most striking feature, however, was the presence of every part of the skeletons of sheep and cattle, from the skull, (with or without horns), down to the phalanges and caudal vertebrae. Assuming that the site was a domestic one, it would seem that much fuller use was made of the bodies of food animals, especially the skulls, than is the case to-day. Moreover, there is little evidence to indicate which joints of meat, if any, were preferred. Table 1 shows the numbers of the larger long bones of cattle, sheep, and pig from Trench A, Pit 8. None of these is strikingly conspicuous either by its absence or presence in excess. Butchering marks were disappointingly few also, though there were several examples of the horns of either sheep or cattle having been neatly cut off at the base. In the material from the seven pits, twelve cases of butchering marks on sheep pelvises were seen, and a similar number on cattle pelvises. In addition to these, there were a few marks on cattle tibiae and humeri, but the great majority of the bones were unmarked, thus giving no information about how the carcasses were jointed.

Table 1.

	Femur	Tibia	Humerus	Radius
Sheep	8	12	5	7
Cattle	4	6	3	5
Pig	3	4	5	3

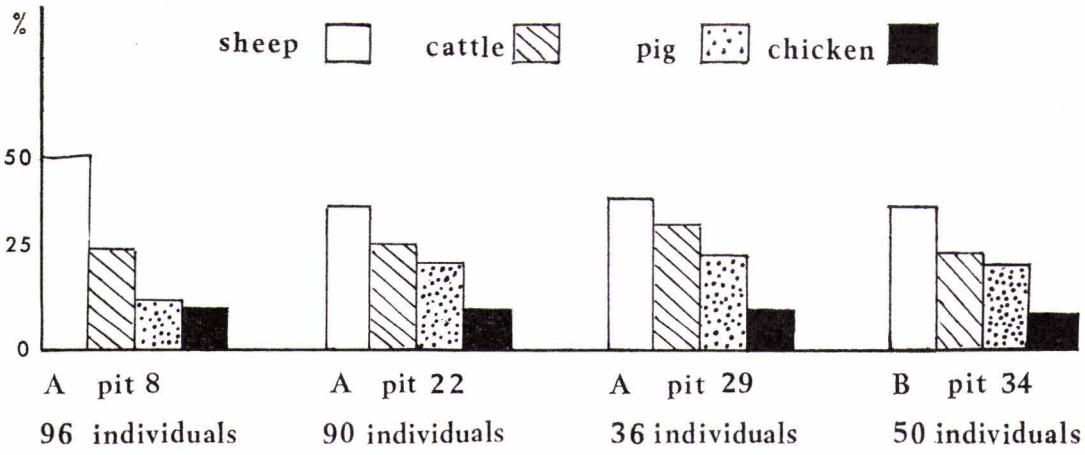
Details for Trench A, pit 55 and Trench B, pits 29 and 33 are not presented as percentage histograms were too few specimens: the figures for these pits are as follows:

Table 2.

	Sheep	*Cattle*	*Pig*	*Chicken*
Trench A, pit 55	4	5	6	0
Trench B, pit 29	6	5	6	6
Trench B, pit 33	6	6	5	3

Other domestic animals present were horse (a total of 17 bones), dog (16 bones, mostly of terrier size, though one skull from Trench A, pit 8 was about the size of a labrador), and cat (6 bones.) A few bones of roe deer were found in Trench A, pit 8. The other mammals represented in the bone record were the badger (*Meles meles*), the mole (*Talpa europaea*), and the rat (*Rattus* sp.). Finally, from Trench A, pit 8 came some vertebrae of frog, (*Xenopus* sp.).

[1] M. Bell, 'Sediment analysis and periglacial landforms as evidence of the environment of southern England during the last glaciation.' (unpub. B.Sc. dissertation, Univ. of London, 1975).



A considerable variety of bird bones, apart from chicken, were found. These were as follows:

Mute swan	Cygnus olor	A, Pit 55, layer 55
Goose — ? Greylag or possibly early domesticated variety	Anser sp.	A, Pit 22, layer 76 A, Pit 22, layer 22
Pheasant	Phasanius colchicus	A, Pit 22, layer-76 B, Pit 70, layer 70
Curlew	Numenius sp.	A, Pit 22, layer 76
Raven or crow	Corvus sp.	B, Pit 35, layer 35
Jackdaw	Corvus monedula	A, Pit 29, layer 75
Starling	Sternus vulgaris	B, Pit 29, layer 62
Coot	Fulica atra	B, Pit 29, layer 53
Meadow pipit	Anthus pratensis	B, Pit 29, layer 53
Kestrel	Falco tinnunculus	B, Pit 29, layer 53
Woodpigeon	Columba palumbus	B, Pit 29, layer 53
Dove—? Collared	Streptotelia sp.	A, Pit 22, layer 70
Partridge	Perdix perdix	B, Pit 70, layer 70

Only in the case of the goose (Anser sp.) and pheasant was there any indication of more than one individual. Some of these birds no doubt were sources of food, while others such as the jackdaw, may have been pets. Only the raven is not found in the area to-day.

A number of fish bones were also found, mainly by sieving. Unfortunately, all the bones were either vertebrae or spines, which are notoriously difficult to distinguish, especially among the flatfish. The following species were identified, however; all are marine fish.

Cod	Gadus callarius	A, Pit 29, layer 49 A, Pit 22, layer 76
Cod family	Gadus sp.	A, Pit 8, layer 54 A, Pit 8, layer 60
Plaice	Pleuronectes platessa	A, Pit 8, layer 54
Flatfish, i.e. plaice, flounder etc.		A, Pit 22, layer 76 A, Pit 22, layer 62 B, Pit 29, layer 62
Black sea-bream	Cantharus griseus	A, Pit 8, layer 54
Mackerel	Scomber scomber	A, Pit 8, layer 54
Conger eel	Conger conger	A, Pit 22, layer 76

In spite of sieving, no skull bones of fish were found; this strongly suggests that fish-heads were removed at the fishmongers and thus never reached domestic sites. (It is frustrating for the archaeologist as fish are far more easily characterised by the bones of the skull, particularly the jaw).

Many oyster shells were found in both trenches as well as mussel, winkle and whelk shells. A small sample of each was kept.

I should like to thank Mr. G. Cowles of Tring Museum and Mr. A. Wheeler of the Natural History Museum, London, for their help and advice on the bird bones and fish bones, respectively.

Wood and Charcoal Samples

by C. R. Cartwright, M.A.

Identifications: Wood.

TRENCH A. Pit 22.
layer 22. Wood, Fragment of wood 7.51cms. long, maximum width 1.40cm. On the flat undersurface there is a shallow narrow groove. *Juglans regia.* Walnut.

Identifications: Charcoal.

TRENCH A. Pit 8.
layer 8: *Crataegus; Cornus; Fagus.*
layer 54: *Quercus.*
layer 60: *Crataegus.*

TRENCH A. Pit 22.
layer 22: *Crataegus; Cornus; Fagus.*
layer 62: *Quercus; Fagus.*
layer 70: *Crataegus; Quercus; Fagus; Salix.*
layer 72: *Quercus.*
layer 76: *Crataegus; Quercus; Cornus; Alnus.*

TRENCH A. Pit 29.
layer 29: *Crataegus.*
layer 34: *Crataegus.*
layer 49: *Crataegus; Fagus; Hedera helix.*
layer 58: *Crataegus.*
layer 64: *Pyrus; Fraxinus.*
layer 75: *Quercus.*

TRENCH A. Pit 55.
layer 55: *Quercus.*

TRENCH A. Pit 59.
layer 66: *Crataegus.*

TRENCH A. Pit 18.
layer 19: *Quercus.*

TRENCH A. Pit 23.
layer 23: *Hedera helix.*

TRENCH A. Pit 32.
layer 32: *Quercus.*

Trench B. Pit 27.
layer 27: *Betula.*

TRENCH B. Pit 29.
layer 29: *Fagus.*
layer 53: *Fagus; Ilex; Quercus; Crataegus.*
layer 53: Possibly *Crataegus.*
layer 62: *Quercus; Fagus.*

TRENCH B. Pit 30.
layer 30: *Crataegus.*
layer 47: *Crataegus.*

TRENCH B. Pit 33.
layer 33: *Ilex; Fagus; Quercus; Alnus; Castanea sativa.*
layer 49: *Crataegus; Fagus; Fraxinus.*
layer 50: *Crataegus.*
layer 58: *Ilex.*
layer 69: *Fraxinus.*

TRENCH B. Pit 34.
layer 34: *Crataegus.*
layer 45: *Ilex.*
layer 67: *Quercus.*

TRENCH B. Pit 35.
layer 35: *Crataegus.*

TRENCH B. Pit 37.
layer 37: *Quercus.*
layer 41: *Fagus; Alnus.*
layer 42: *Fagus.*

TRENCH B. Pit 48.
layer 48: *Fagus.*

TRENCH B. Pit 70.
layer 70: *Quercus; Fagus.*

Descriptions of layers.

TRENCH A.
layer 1: garden soil.
layer 2: dark brown soft sandy earth.
layer 3: mixed fine silt, chalk, clay and flints.

Pit 8.
layer 6 and 7: black soil with 19th century material.
layer 8: dark grey-brown clay, yellowish and greenish in places, with occasional chalk lumps and flint nodules.
layer 54: dark grey-brown clay, with chalk and flint lumps.
layer 57: alternate bands of yellow sand and chalky clay.
layer 60: grey-brown crumbly earth.

Pit 18.
layer 19: brownish sandy clay, with streaks of yellow clay, occasional flint and chalk fragments.

Pit 22.
layer 22: brown earthy clay, many small chalk fragments, charcoal flecks and small flint nodules.
layer 62: brown crumbly earth with chalk lumps.
layer 70: brown earth with chalk lumps and much bone.
layer 72: yellow-brown clay with flint nodules and little chalk.
layer 73: green-grey crumbly earth with chalk and flint.
layer 76: brown crumbly earth with chalk and flint.

Pit 23.
layer 23: dark brown earth with small chalk lumps.

Pit 24.
layer 24: brown clayey earth with small chalk lumps and charcoal flecks.

Post-hole 26.
layer 26: grey-brown earth with chalk and flint packing.

Pit 29.
layer 29: dark brown earth with flint and small chalk lumps.
layer 33: dark brown clay with many chalk lumps.
layer 34: black ashy layer.
layer 49: grey-brown clay with many chalk lumps.
layer 58: brown clayey earth with small chalk lumps.
layer 63: yellow-grey clay with flint and chalk lumps.
layer 64: green-grey clay.
layer 74: dark grey ashy earth.
layer 75: yellow-green clay.

Pit 32.
layer 32: red-brown clay with small chalk and flint lumps and charcoal.

Pit 51.
layer 51: brown earth with reddish clay and sandy patches.

Pit 55.
layer 55: mixed patches of yellow-brown clay, dark brown clay and green-grey earth.
layer 56: yellow to dark brown clay with small flints and chalk lumps.
layer 71: clean yellow-brown sandy earth.

Pit 59.
layer 59: grey clayey earth with chalk fragments.
layer 65: yellow clay with some sand.
layer 66: grey soft earth.
layer 67: reddish sand.
layer 68: dark patchy grey earth.
layer 69: thick reddish brown clay.

LEWES NORTH STREET 1975

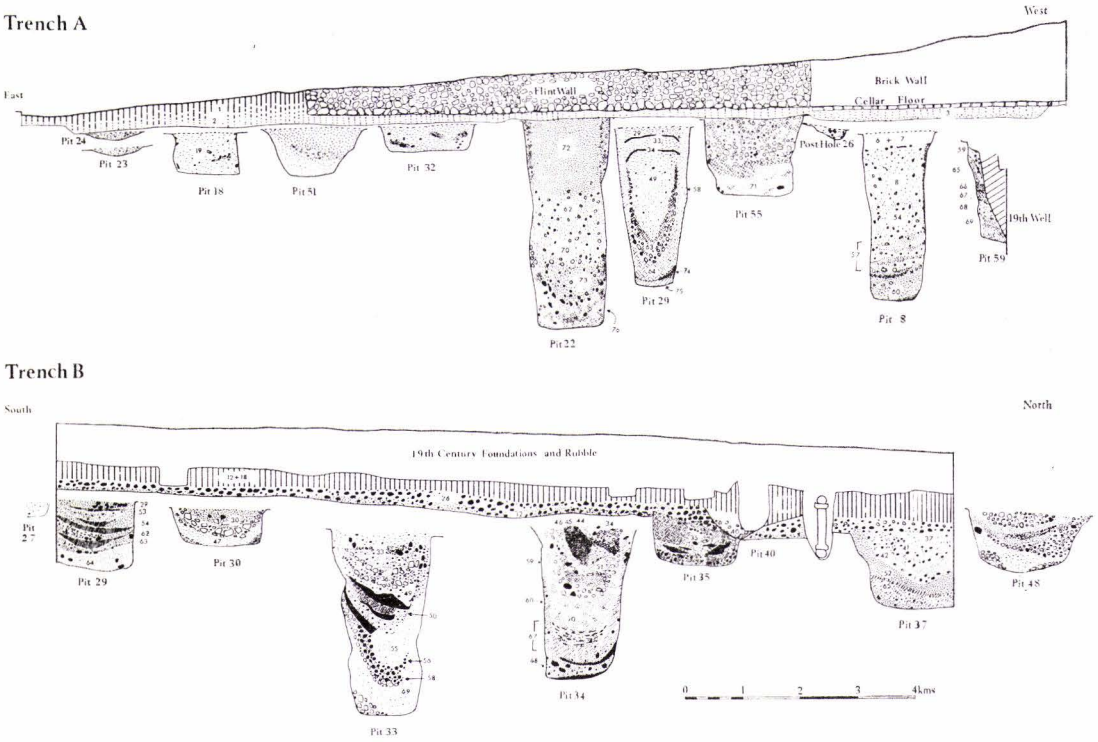


FIG. 8. Lewes, 1975. Trench A, north facing section; the features projected onto the section are all shown at their correct relative height above Ordnance datum and in their correct position east-west except pits 24, 29 and 59, which have been moved east or west so as not to overlap other features (see Fig. 2). Trench B, east facing section; the features projected onto the section are all shown at their correct height above Ordnance Datum and in their correct positions north-south except for pits 27, 33, 48, which have been moved north or south so as not to overlap other features (see Fig. 2)

TRENCH B.
layer 12 and 18: fine dark brown crumbly earth with flints.
layer 26: black flinty earth.
layer 32: dark red-brown sandy, flinty earth.

Pit 27.
layer 27: dark brown loose earth with small flint and chalk lumps.

Pit 29.
layer 29: dark brown soil with flints.
layer 53: charcoal and clay with flints.
layer 54: brown sandy earth with charcoal flecks
layer 62: charcoal bands with clay and flints.
layer 63: dark brown clayey earth with clay and flints.
layer 64: fine textured greenish earth with few flint lumps.

Pit 30.
layer 30: flint and chalk with sandy clay.
layer 47: sandy earth with chalk flecks.

Pit 33.
layer 33: mixed bands of dark brown earth with burnt clay and flints.
layer 36: chalk blocks and rubble.
layer 49: soft chalk rubble.
layer 50: charcoal bands and grey clay with some chalk.
layer 55: light brown earth with charcoal flecks.
layer 56: orange-brown Clay with Flints.
layer 58: sandy earth with charcoal.
layer 69: brown clay with charcoal.

Pit 34.
layer 34: mixed dark brown clay with charcoal.
layer 44: light yellow sand.
layer 45: dark brown clay.
layer 46: orange sandy clay.
layer 51: light brown clay.
layer 59: sandy earth with burnt clay and charcoal.
layer 60: dark brown clay with charcoal.
layer 67: dark brown fine textured earth with charcoal.
layer 68: brown sandy earth with charcoal and flints.
layer 71: chalky and sandy clay with small flints.

Pit 35.
layer 35: mixed bands of dark brown clay, some charcoal, flint and chalk patches.

Pit 37.
layer 37: dark brown earth with charcoal flecks.
layer 41: chalk rubble
layer 42: dark brown earth with charcoal and flints.
layer 52: dark sandy earth.
layer 65: dark sandy and flinty clay with much charcoal.

Pit 40.
layer 40: light brown earth with small flints.

Pit 48.
layer 48: light brown sandy earth with chalk and flints.
layer 61: sandy brown mixed earth with some clay flints and chalk.

ACKNOWLEDGEMENTS

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BURPHAM: A SETTLEMENT SITE WITHIN THE SAXON DEFENCES

by H. Sutermeister

A limited excavation of this Saxon burh has revealed traces of settlement and industrial activity within the walls. The suggestion is made that a considerable village existed on the site up to and beyond the Norman conquest.

The village of Burpham lies about two miles upstream from Arundel and five miles from the south coast. It takes its name from the enormous defensive enclosure which still dominates the village and constitutes one of the most impressive of that great series of fortified camps which King Alfred established along the boundaries of the Kingdom of Wessex to protect his people from the invading Danes (Fig. 1.).

Our knowledge of the *Burghal* system is derived largely from a set of seven documents derived from an original, now lost, of the reign of Alfred's son, Edward and known collectively as the Burghal Hidage. The seven lists, taken together, include thirty sites in Wessex and another three in the neighbouring kingdom of Mercia. Most *burghs* were on the coast or on the rivers Thames and Avon, which could have been used by the invaders to reach the interior. The system was so designed that no part of Wessex was more than twenty miles from a *burgh* and the defended areas were sufficiently large to offer shelter in emergencies to their local population and, perhaps, their cattle.[1]

The defensive system allocated to each *burgh* a certain acreage of land, which was related to the length of its walls and was supposed to support enough men to garrison the fort in times of trouble:

> For the maintenance and defence of an acre's breadth of wall sixteen hides are required. If every hide is represented by one man then every pole of wall can be manned by four men. Then for the maintenance of twenty poles of wall eighty hides are required.[2]

Burpham is in the middle rank of size, neither amongst the very largest *burghs*, which might require as many as 2,400 hides for their defence, nor amongst the smallest, with as little as 24 hides.[3] The allocation at Burpham was 720 hides, which accords well with the length of the existing defences.

About half the *burghs* listed in the Burghal Hidage were, or became, substantial towns: these include Wallingford, Oxford, Southampton, Winchester and Southwark. Others remained as villages and a few, such as Burpham, retained no settlement at all: the modern village lies outside the defences on the north. It is, indeed, uncertain whether there was any Saxon settlement on the site or whether it was intended solely as a refuge for short periods of emergency. One of the aims of excavation was to explore this question.

[1] F. M. Stenton, *Anglo-Saxon England*, (1947), p. 262.

[2] D. Hill, 'The Burghal Hidage: the establishment of a text', *Medieval Archaeology*, vol. 13 (1969), p. 90.

[3] Ibid, pp. 87, 91.

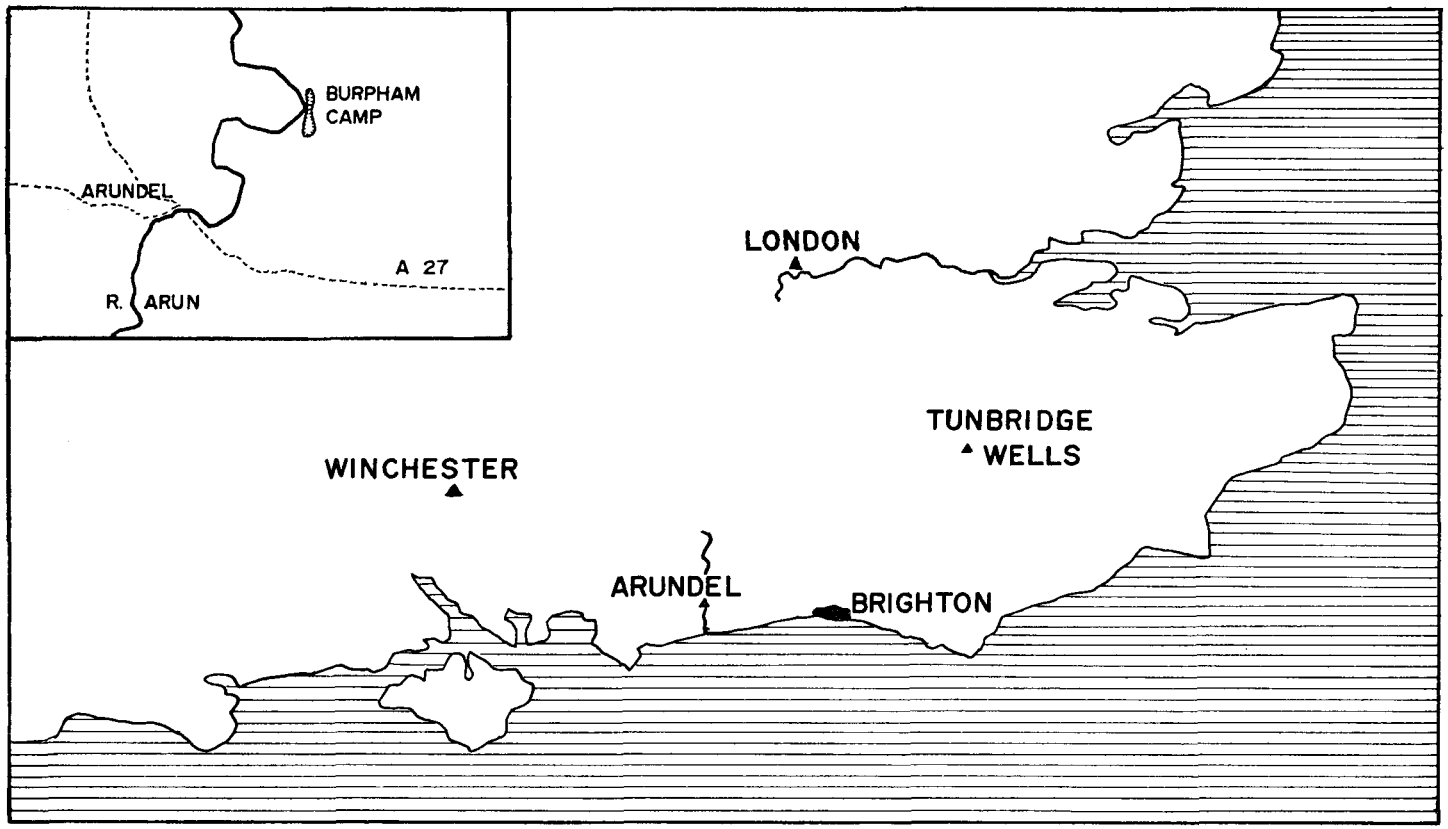

FIG. 1. Position of Burpham

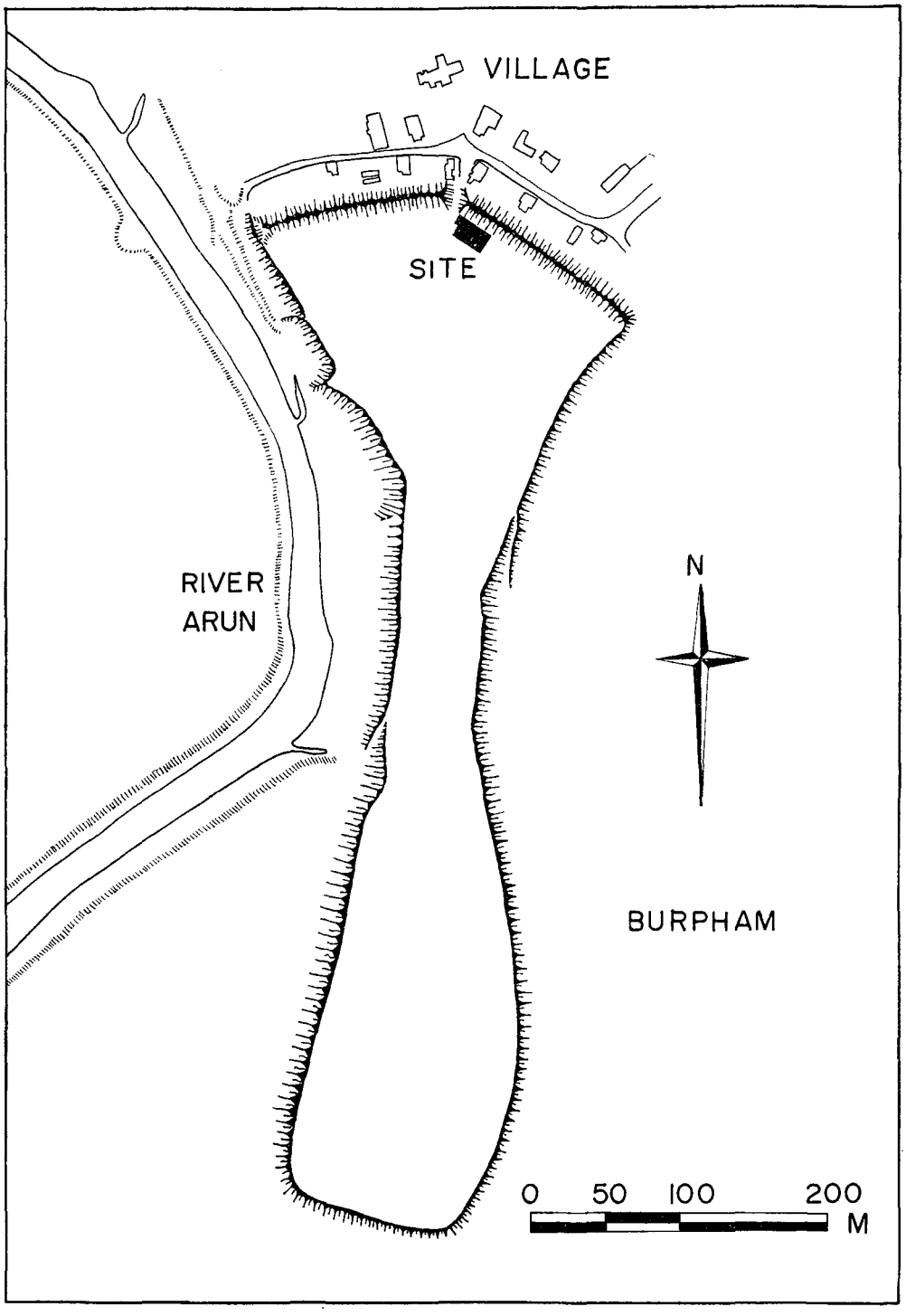

FIG. 2. Plan of the defences and position of the excavation site

The earthworks at Burpham comprise a large embanked enclosure in the shape of a figure 8 running directly north-south with the river Arun flowing past the western side. The site is a natural Chalk hill rising above the flood plain of the river and fortified with a bank on all sides to emphasise the contours of the land. The defences are most formidable on the north at the neck of the promontory, because there is no natural rise in the ground at this point. The bank here is at least seven metres high and there is a deep ditch on the north, now occupied by the gardens of the cottages along the main street. The main entrance gateway is a narrow opening through the centre of this northern bank. The whole fort measured 681m. from north to south, 56m. across the waist and 244m. across the broadest part of the northern half. It is very probable that in Saxon times the river Arun carried more water than it does today and the plain would frequently have been flooded, offering additional protection from attack on the south and eastern sides.

The nature of the defences and the site suggests that Burpham might well have originated as an Iron Age promontory fort. No scientific excavation of the bank has ever been undertaken to check this possibility, but it is quite consistent with the use of the site as a Saxon *burgh*. Alfred was not too proud to employ the defences of his predecessors when they were suitably placed. At Porchester, for example, he refortified the Roman shore fort, and Pilton, Halwell and Chisbury are also of the Iron Age in origin.[1]

Excavations inside the fortifications at Burpham were brought about by plans to erect a new village hall just inside the gateway and took place at two different stages: In July of 1972 the area expected to be occupied by the new building was excavated under the auspices of the Department of the Environment. The investigation took two weeks and was confined to stripping an area of 25m. north-south by .15m. east-west. A small digging machine was employed to strip off the topsoil and the area was then cleaned down by a group of six volunteers augmented by local archaeologists.[2]

The second stage of the investigation took place in February, 1973 while the builders were engaged in laying drainage pipes from the new hall to the main street of the village, passing through the eastern side of the gateway. It was only possible to make brief observations of the features encountered in this narrow trench and there was no opportunity for detailed excavation or measurement. The position of these features is shown only approximately in Figure 6.

The excavations are described in the two stages in which they took place.

The House Site (Fig. 3)

After stripping off the topsoil in the area of the proposed building, Chalk bedrock was exposed at a depth of .25 to .40m. The land was currently used for grazing, but had at some point been ploughed, for the furrows had scored into the Chalk. A modern drainage trench also ran across the whole of the excavated area parallel to the bank. With these exceptions, all features revealed in the Chalk were of Saxon date.

Cut into the surface of the rock was a complex of post holes, small gullies and pits arranged in two main lines running east-west and parallel to the edge of the bank, the nearer line being only about 1.5 to 2m. away from the foot of the slope. Other, shorter lines ran at right angles to these

[1] N. Brooks, 'The unidentified forts of the Burghal Hidage', *Medieval Archaeology*, vol. 8 (1964), pp. 75, 78.

[2] I should like to record my thanks to Con Ainsworth and his assistants for their great help during the later stages of excavation.

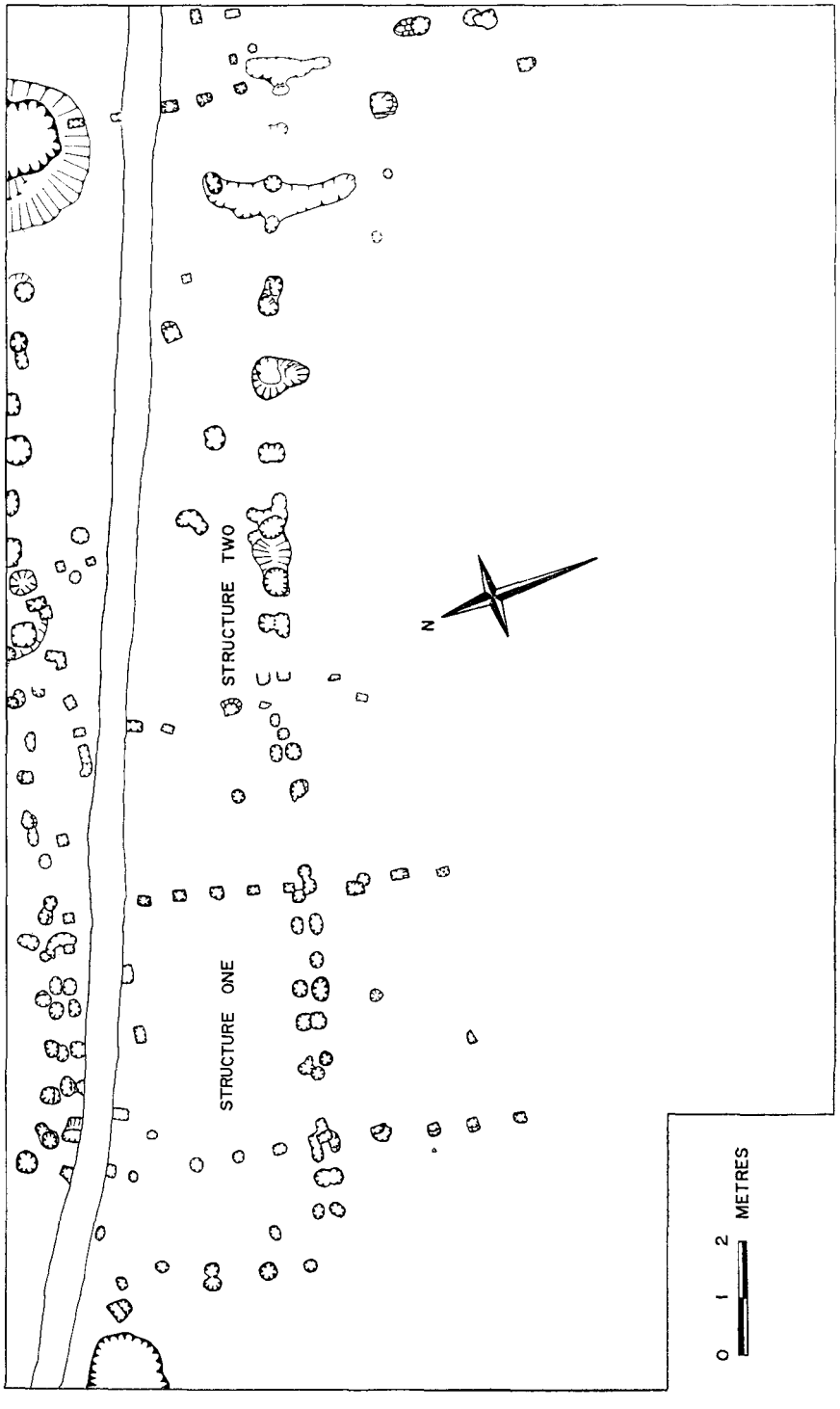

FIG. 3. General plan of the site

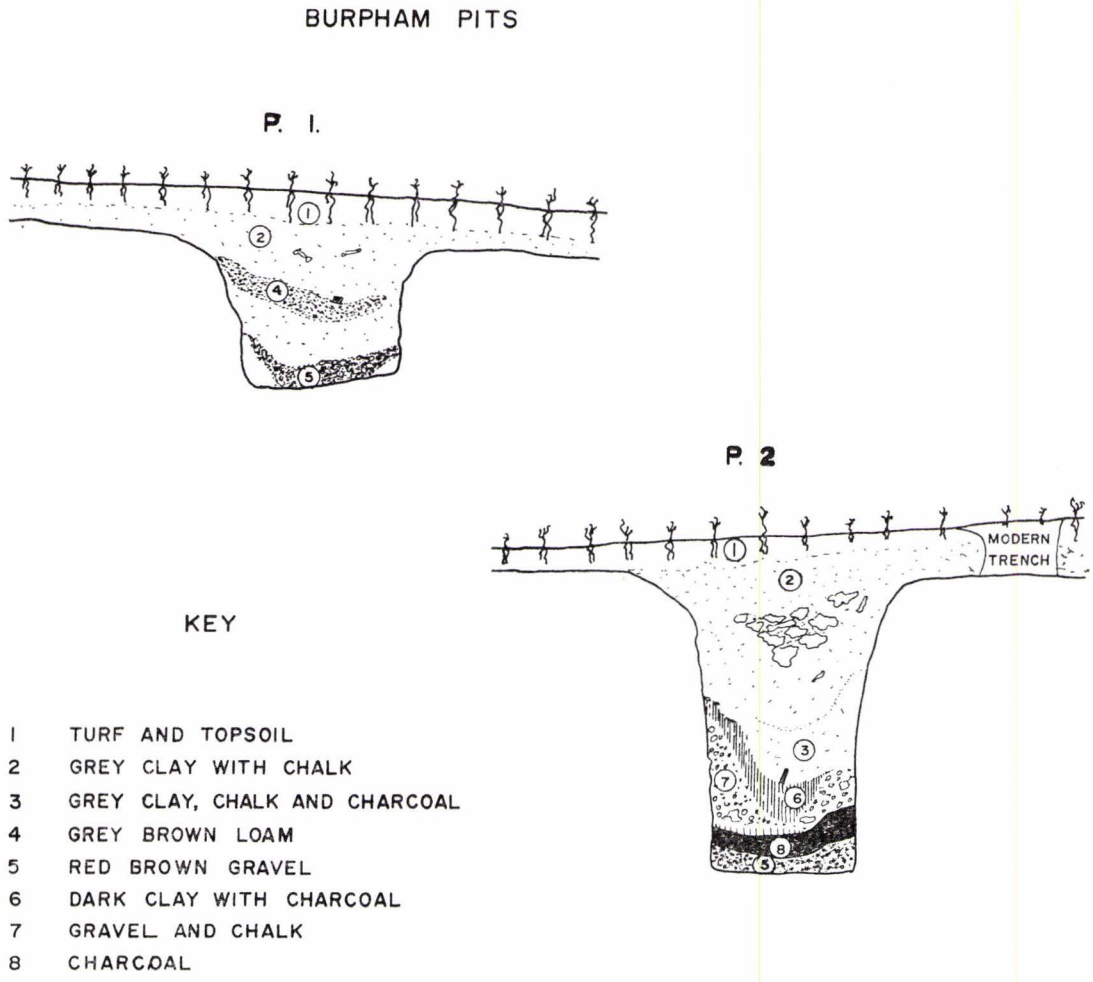

FIG. 4. Sections through the two pits

and suggest that there were two separate buildings in this area. Although the Chalk was cleared for a distance of 15m. north-south there were no traces of structures in the southern part of the site.

The smaller of the two buildings, termed structure one, measured only 7m. along the long sides east-west. It differed from structure two on the east in that the post holes were rather smaller and shallower (on average .12m.). Those on the long side walls were double, or in some cases, triple post holes and pose a problem of interpretation. Such double sets of posts have sometimes been taken to indicate a cruck construction: J. T. Smith has argued this interpretation for the German sites of Westick, near Kamen and Haldern, near Wesel.[1] A cruck, however, requires double posts once in each bay, not at every upright, and the holes dug to accommodate

[1] J. T. Smith, 'Cruck construction: a survey of the problems', *Medieval Archaeology*, vol. 8 (1964), pp. 134-6.

the crucks show an inward lean. At Burpham every hole on the long sides is double and there is no indication of slanting. It seems more likely that the duplication at Burpham should be attributed to an extensive reconstruction on the same site.

Structure one was divided into three units. The largest unit, which might be described as the hall, was unusually square in shape, measuring nearly 5m. east-west and 4m. north-south. A smaller room to the west was partitioned off the main sturcture by a line of single, small post holes. It measured only two metres in breadth: barely enough to accommodate a small sleeping chamber or withdrawing room. The probable position of the doorway was at the north end of the partition wall with the main room. Thus the whole building was probably built in three bays, of which two formed the hall and two the private room. A third unit in this complex was represented by two walls projecting southwards from the southern lateral wall on either side of the main doorway, as though to act as an open porch. The doorway itself was marked by the grouping of six post holes, three on each side, which is now accepted as the distinctive feature of a door hung on the interior of the building.[2] In most Saxon buildings of any size doorways are usually found counterposed on either side of the long walls, but on this site there is no sign of any break in the line of post holes forming the opposite wall.

Structure two lay to the east of the building just described and was characterised by rather larger and deeper post holes (average .16m.). In some cases these, too, were double holes, but they did not occur in sufficient numbers to suggest such a complete rebuild as in structure one. This second building was set on a slightly different axis, varying by about 5 or 10 degrees from the line set by structure one. It seems to have been built gable to gable with the first house with a light partition cutting off a small room at the eastern end, but this might also be interpreted as a separate gable wall leaving a fenced-off, open area between the two buildings. The total length between the gable of structure one and the most easterly line of posts excavated was 14.2m., but it is not impossible that this line was also an internal partition and the house actually extended beyond the excavated area.

Neither structure showed any sign of a hearth, either by burning on the Chalk bedrock or through traces of a clay hearth. Nor was there any trace of wattle and daub make-up for the walls, so it seems probable that the walls were constructed of wooden planking slotted into the uprights in the style of a palisade. The posts were generally set about 5m. apart in structure one and rather wider, .8 or 1m., in structure two. There was no sign of corner posts any heavier than the others, indeed the corners are missing in the north-west and south-west of structure one. This weakness at corners was a feature of one of the smaller halls at West Stow in Suffolk and at Charlton, Hampshire.[3] It may suggest a wall of quite heavy, spliced logs in which each side braces the next.

Two other features were discovered in the vicinity of these buildings: two large pits filled with humus and rubbish, one of which was dug into the Chalk beside the west gable wall of structure one and very close to the main entrance, the other was cut through the north east corner of structure two, removing traces of the post holes in that area and clearly post dating the building. It seems likely that pit one was also a late feature as it was awkwardly placed to hinder traffic

[1] P. V. Addyman, 'A dark age settlement at Maxey, Northants', *Medieval Archaeology*, vol. 8 (1964), pp. 23-25.
'Anglo Saxon houses at Chalton, Hampshire', *Medieval Archaeology*, vol. 16 (1972), p. 23.

[2] S. E. West, 'The Anglo Saxon village of West Stow', *Medieval Archaeology*, vol. 13 (1969), Fig VI. e.g. Building A 11, P. V. Addyman and D. Leigh, 'The Anglo Saxon village at Chalton, Hampshire', *Medieval Archaeology*, vol. 17 (1973), pp. 2-25.

through the gate into the defended area and might date from a time when settlement had moved from the interior of the fort to the present village site. Sections of the pits are shown in Figure 4. That nearest the gate was the deeper of the two, measuring 2.4m. from surface level and the filling material included considerable quantities of bone, charcoal and pottery discussed below.

A scatter of post holes in a restricted area may be interpreted in a wide variety of different ways and readers may well come to different conclusions to the author, but Figure 5 is offered as a likely explanation of the sequence of building periods. It is based on two assumptions: that structure one is older than structure two, because it shows more signs of rebuilding, and that both structures were standing together in the later phase, because the second is clearly designed to link up with the first.

In phase one the westernmost building (structure one) stood alone as a small hall with the private room at one end and was probably a single family dwelling. In Phase two it was rebuilt, either as a hall enlarged by the addition of the porch (which shows no sign of rebuilding) or else re-orientated so that the porch actually acted as a new private room, of which one wall is now missing. In phase three the second and longer hall was added on the east; this could, however, have been done at the same time as phase two. In the final phase both buildings were demolished and the two pits dug at either end of the site.

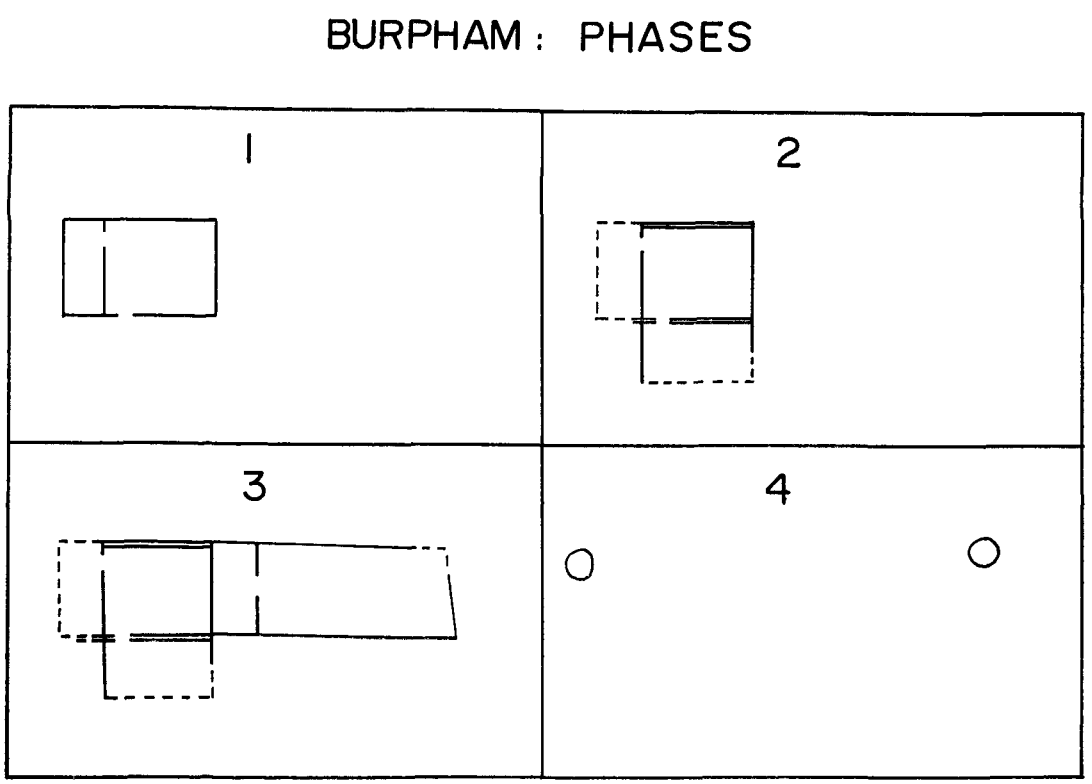

FIG 5. Phases of development

THE GATEWAY (FIG. 6)

During drainage works a trench was dug by an excavation machine between the south east corner of the gateway and the village street, thus crossing the trackway of the entrance and the ditch outside it. Observations suggested that nothing remained of a medieval or Saxon roadway. The stratification showed irregular metalling on the surface above 0.10m. of dark soil, which, in turn overlay another metalled surface, which contained brick and must have been of fairly recent date. Below was another layer of dark soil above natural Chalk. Probably the entrance had been cleared in post medieval times and the original surface lost.

Outside the entrance the trench crossed a strip of dark earth 12.90m. wide, which must represent the northern ditch. It was excavated only to a depth of 1.40m. and the sides sloped at about 45 or 50 degrees. This would suggest that the ditch measured some 6m. in depth, if it were V shaped and rather less if it were U shaped. This corresponds well with the height of the bank (about 7m.), which was doubtless built up of the material taken from the ditch. The position of this ditch suggests that there was a berm of about two or three metres between ditch and bank. The upper filling was probably medieval in date, for the finds included coarse medieval cooking pot fragments and a sherd of green-glazed ware.

Although the drainage trench was only 0.6m. wide it also encountered a number of pits and post holes, which might have been associated with the gate itself. A group of three large post holes was located about 3m. from the edge of the ditch on the line of the rampart front. They were

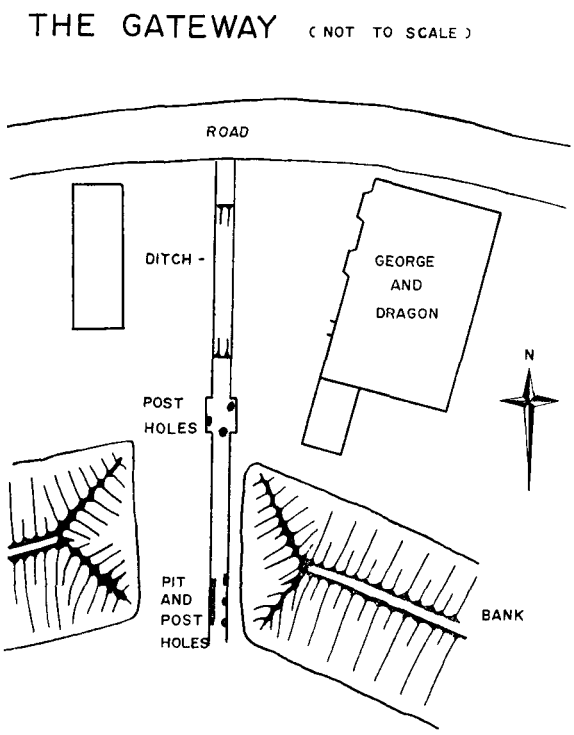

FIG. 6. Sketch plan of the Gateway

set back too far to be connected with any possible bridge across the ditch, but might have been connected with the supports for a gate on the eastern side. They measured 0.65m. in diameter and showed traces of posts some 0.30m. across. A fragment of brick found in one may, however, suggest that they were actually modern features.

A second group of three post holes and a very large pit was encountered on the inner, eastern edge of the gateway and these were sealed by the earlier (but post medieval) metalling of the road surface. The largest of these might have been connected with the gate, the pit is more puzzling as it measured 2.90m. in width north-south and 0.5m. in depth. This is large for a rubbish pit; moreover if the feature extended as far west as it did northwards it would have blocked almost the whole gateway. Presumably, therefore, it relates to some period after the settlement inside the fortifications was abandoned.

The Finds

The finds can be divided into two groups: those from the two pits which post-dated the buildings and those from the fillings of post holes which had housed the timbers of those buildings. Neither need necessarily contain any material dating from the time the buildings were in use.

Pit One, that nearest the gateway, produced large quantities of animal bone, including portions of at least three pigs, two calves, four chickens, sheep, fish and many fresh water oysters. There were two sherds of Roman Samian ware, which suggests that the filling included some material which had been lying about the ground surface for a very long time. In spite of this there was no early or middle Saxon pottery amongst the finds. The pottery (illustrated in Figure 7) was very rough, gritty and hand made; the vessels generally had narrow necks, flared out below the rim and sagged at the base, and the walls were generally thin. It can be dated to the tenth or early eleventh century, indeed a post-conquest date is not impossible. Pit Two, at the opposite end of the excavated area, was found to contain part of the skeleton of a rabbit; since it is generally thought that this animal was introduced by the Normans it may indicate that the pits are a very late feature.[1] Two other finds in Pit One are of interest: lumps of iron slag and of baked but mis-shapen clay vessels suggest that pottery making and iron work (probably in a smithy) was carried on nearby.

The pottery recovered from the rest of the site is illustrated in Figure 8. It is generally of rather finer, less gritty ware than that from the two pits, but showed the same rim types.

Figure 7: Pottery from Pit One

1 Large cooking pot of very crude, thick, grey shelly ware.
2 Smaller cooking pot of black, shelly ware with everted rim.
3 Similar, everted rim of a small cooking pot of very coarse, buff, gritty ware.
4 Similar, everted rim of a small cooking pot of brown, gritty ware showing very uneven firing.
5 Sagging base of a small pot of thin, coarse, grey-brown, gritty ware.
6 Similar base of coarse, grey-black, gritty ware.
7 Straight rim of a pot of coarse, black, gritty ware.
8 Similar rim of coarse, grey-brown, gritty ware.
9 Similar rim of coarse, black, gritty ware.
10 Similar rim of coarse, black, gritty ware.
11 Everted rim of a small pot of very coarse, dark grey, gritty ware.
12 Everted rim of a small, thin walled pot of coarse, red-black, shelly ware.
13 Rim of a bowl of smooth, buff-grey, gritty ware.
14 Body fragment decorated with incised lines, of coarse, black-brown gritty ware.

Figure 8: Finds from the House Site

1 Everted rim of a large cooking pot of buff coloured, chalky ware with grey core.
2 Similar rim of dark, grey, gritty ware decorated with thumb impressions.
3 Everted rim of thin, black, gritty ware.
4 Straight rim of buff coloured, gritty ware.
5 Rim of a small bowl of pink, shelly ware.
6 Straight rim of a pot of pink and grey, shelly ware.
7 Everted rim of a small cooking pot of buff coloured, gritty ware.

[1] R. & M. Fitter, *The Penguin Dictionary of British Natural History*, (1968), p. 213.

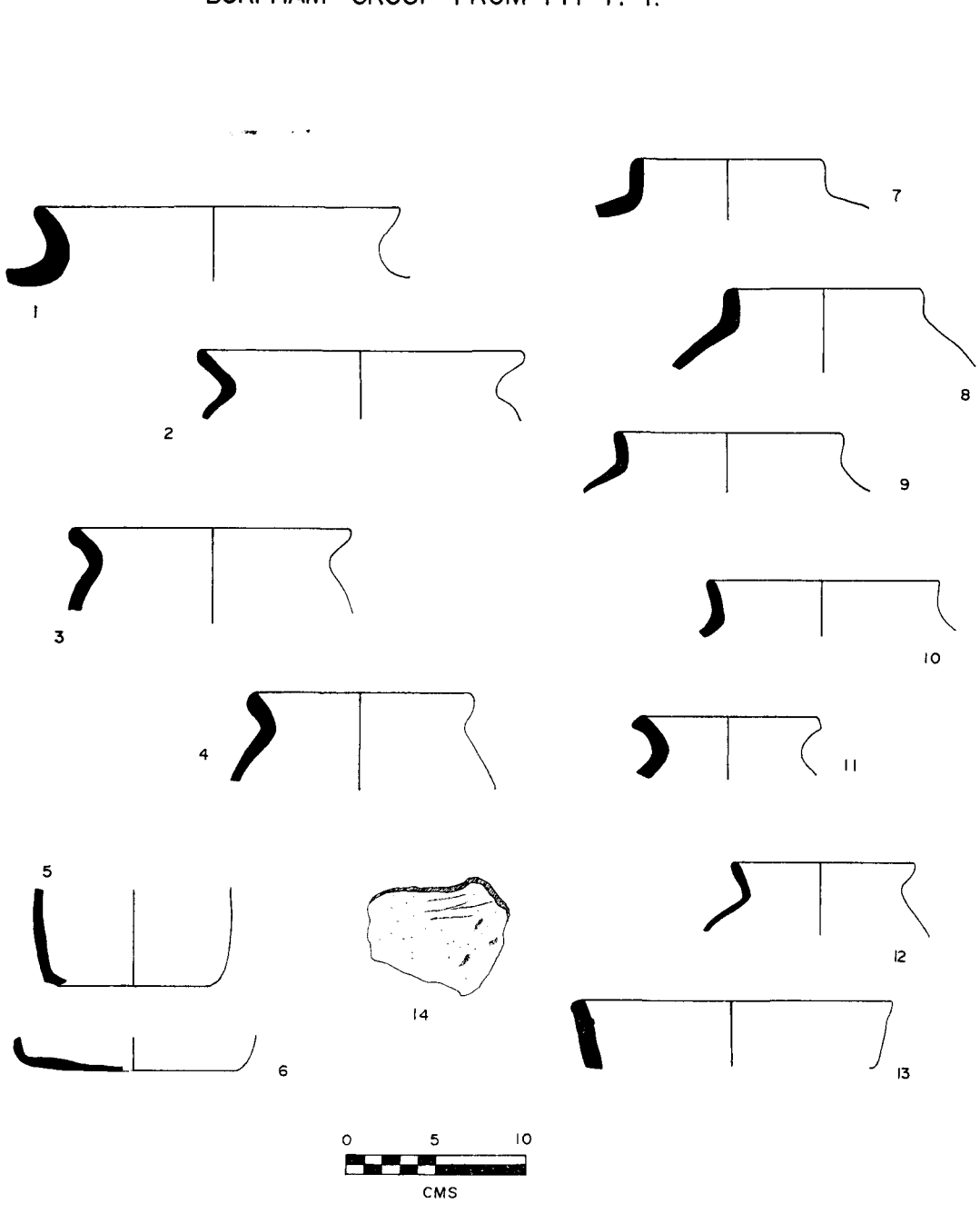

FIG. 7. The finds from pit 1

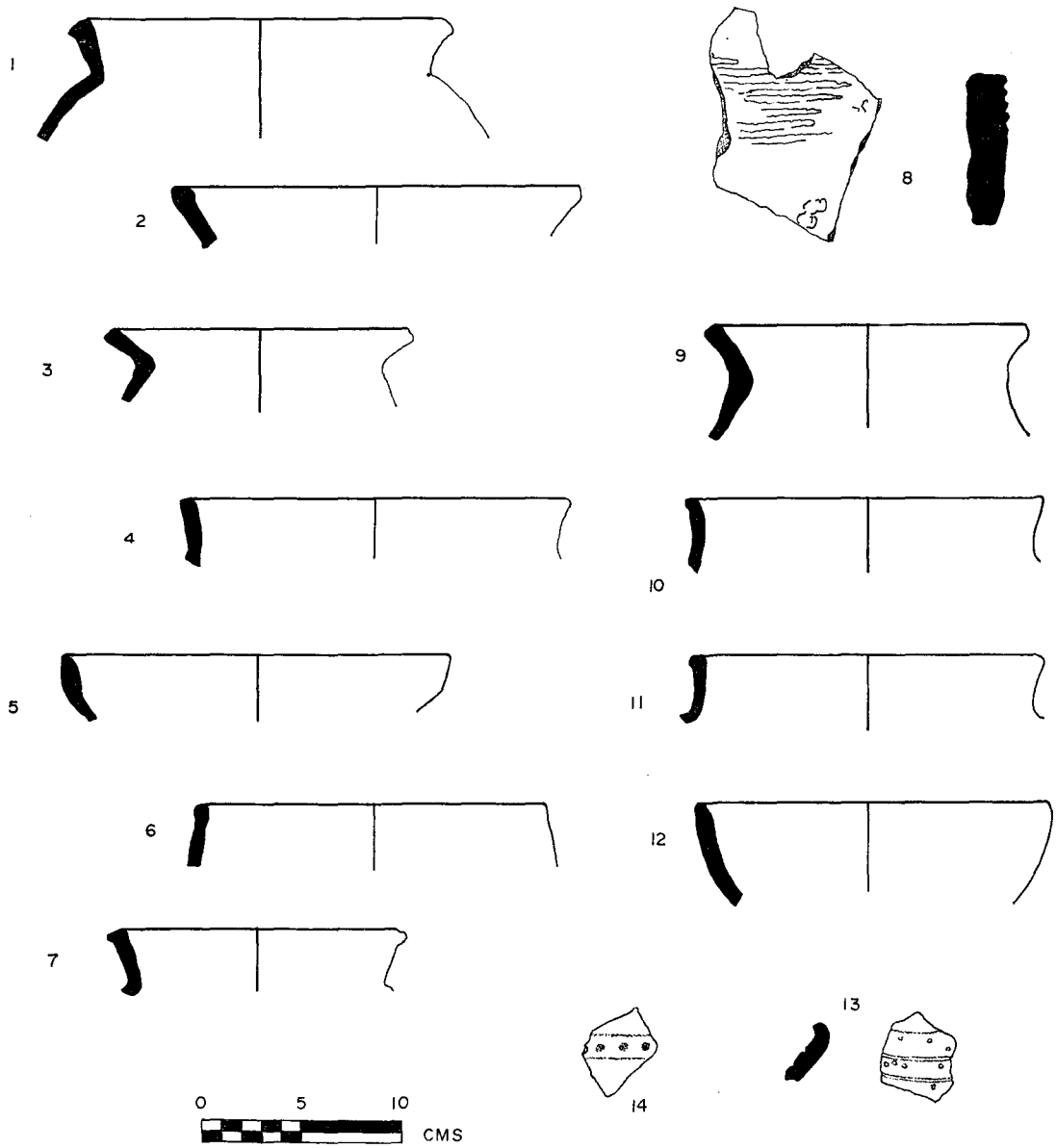

FIG. 8. The finds from the house site

8 Fragment of a tile of fine red ware, probably Roman.
9 Everted rim of a cooking pot of smooth, buff coloured, shelly ware.
10 Rim of a pot of fairly coarse, grey-pink, shelly ware.
11 Rim of fine, soft, pink, shelly ware.
12 Rim of a small bowl of coarse, grey-pink, gritty ware with smooth surface.
13 Sherd of bright pink, gritty ware decorated with grooves and impressed dots.
14 Similar sherd of grey-pink gritty ware.

INTERPRETATION

Recent excavations in Sussex and elsewhere have led archaeologists to abandon the old view that Saxons lived exclusively in small, half subterranean hovels. It is now well known that they were perfectly capable of constructing large open buildings in both town and village.

The nearest parallel to Burpham in the plan of its buildings is to be found in the current excavations on the sixth and seventh century site at Chalton, Hampshire.[1] In buildings A1 and A2 we find a very similar arrangement to the gable-to-gable construction of the two buildings at Burpham. Several of the smaller Chalton buildings have small rooms partitioned off one end, of very similar size to those at Burpham (e.g. AZ1 and A20). Building A2 even shows a structure similar to the ' porch ' at Burpham, although it does have a fourth side. The main differences between the two sites are in the lack of opposing doorways, which are almost universal at Chalton, even in the smaller buildings, and in the comparatively small size of structures at Burpham. In particular, structure one is substantially smaller than any two-celled building at Chalton, where the smaller buildings were only one cell. A parallel may be found in a possible two-celled building at Maxey, Northants (structure D) from the middle Saxon period.[2]

The chief curiosity of the Burpham site is that a building which has such close parallels with pagan and mid Saxon sites should be excavated within the confines of a fortress of the reign of Alfred and associated with pottery of late Saxon type. This pottery does indeed come from features post-dating the occupation of the buildings but it is curious that no early Saxon wares should have been found, if Burpham were occupied at the same period as Chalton. It seems more probable that the structure excavated here was actually of late Saxon date and that the tradition of timber building in Sussex remained unchanged for several centuries.

The discovery of a Saxon habitation site within the banks of the *burgh* does nothing to indicate the date of the fortifications; these may still prove to be of the Iron Age period. It does, however, tell us something about the use to which the fort was put in Saxon times. We can no longer suppose that it was used only as a retreat for the local population in times of trouble; there was clearly some settlement within the walls and the traces of industrial activity, such as pottery making and iron work, suggest that the portion excavated was only a fragment of some quite sizeable village and that occupation continued through the late Saxon period up to and beyond the Norman conquest. The presence of fine, early Norman work in the present village church indicates that the Normans may have taken over a well established late Saxon community.

[1] P. V. Addyman et alia, *op cit*, *Medieval Archaeology*, vols. 16 and 17 (1972 and 1973).

[2] P. V. Addyman, ' A dark age settlement at Maxey, Northants ', *Medieval Archaeology*, vol. 8 (1964), pp. 20-73.

EXCAVATIONS AT BECKET'S BARN, PAGHAM, WEST SUSSEX, 1974

By V. L. Gregory

Rescue excavations were undertaken at Becket's Barn, Pagham, prior to its conversion into a restaurant. The Medieval building was found to overlie a Middle Saxon midden and cobbled path which were constructed over a series of Romano-British drainage ditches.

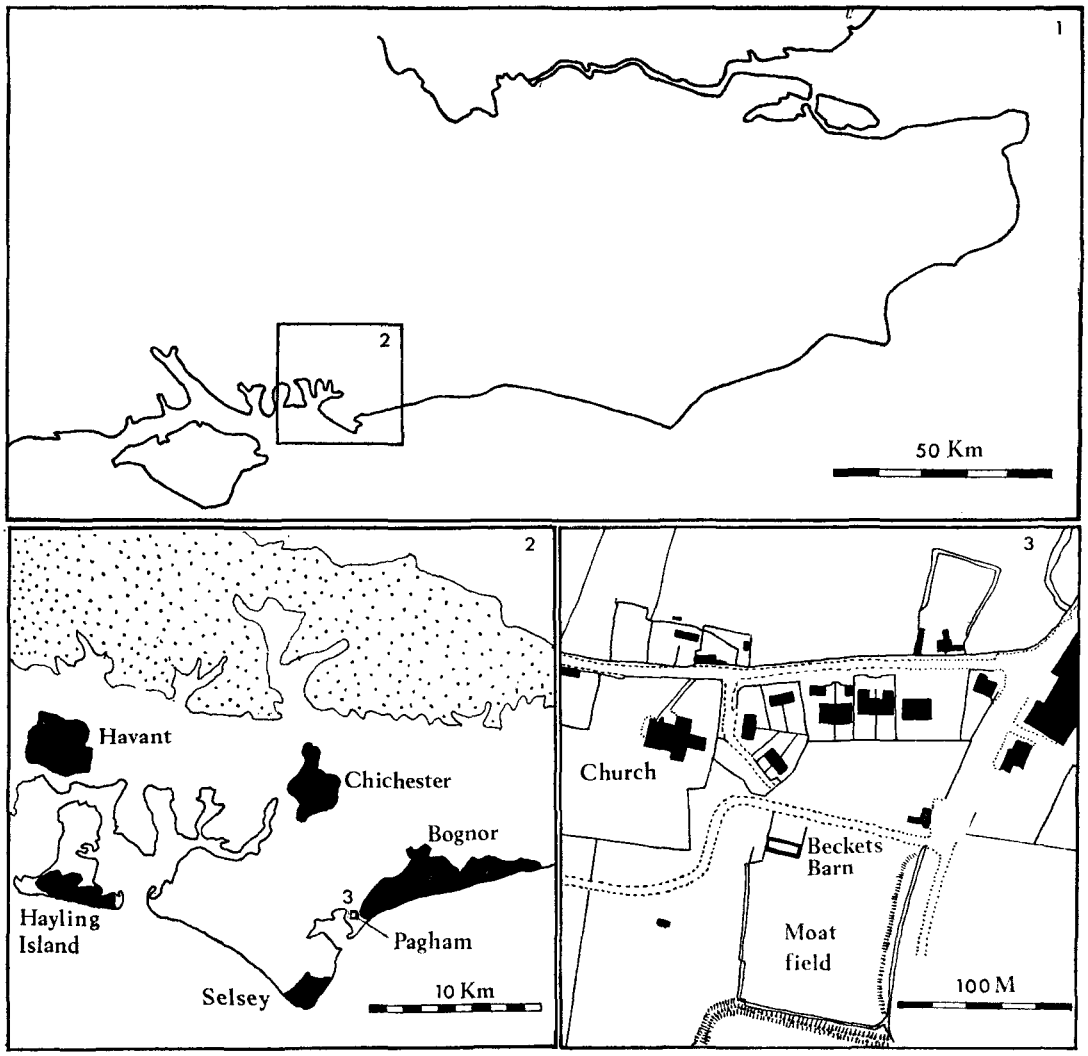

FIG. 1. Becket's Barn, 1974. Location Map.

In May 1974, the Department of the Environment requested the Sussex Archaeological Field Unit to undertake a rescue excavation on the site of the Scheduled Ancient Monument known as Becket's Barn at Pagham. With the full co-operation of the owner, the excavation was supervised by Mr. V. L. Gregory who was, for a short time, a Field Officer with the Unit. Mr. Gregory produced no more than an interim report.[1] The preparation of this report has fallen to Mr. P. L. Drewett, who did not have access to all Mr. Gregory's records or finds. This report is offered, in the words of Mr. Alec Down, " In the belief that any report is better than none."[2]

Historical summary

The historical background to Becket's Barn was published in 1958 by Mr. A. H. Collins, F.S.A., and Mr. L. Fleming, F.S.A., and so need only be summarised here.[3] Architectural features still visible in the barn[4] would suggest a date in the first half of the thirteenth century for the original structure. This structure was certainly not built as a barn, but was probably a house within the Pagham Rectory complex. The earliest reference to the houses of the rectory of Pagham records an attack on the rectory in October 1299.[5] Pagham belonged to the See of Canterbury until the Reformation, and so fairly detailed accounts survive, particularly during the period 1380-1444. A stone wall was built in 1380 from the granary to the door of the court and another was built from the granary to the end of the barn.[6] Repairs were made to the great hall and rooms together with some fencing in 1382.[7] The Warden's Accounts for 1443-1444 show repairs to the granary, the dovecote, and the barns.

A survey of the rectory of Pagham undertaken in 1650 refers to a parsonage house, barns, a little stone house for fodder and a large yard.[8] However, by 1671 " A Survey of the Sussex Estates of the Dean and Chapter of Canterbury " stated that there was no sign of the house, but near the churchyard were two barns. One was recorded as being boarded and thatched while the other was stone-walled and tiled.[9] This last is the earliest certain reference to the existing barn. At some stage prior to the seventeenth century, the structure was converted from a dwelling into a barn and without the date of this conversion, it is impossible to establish which of the earlier references refer to Becket's Barn. The building appears to have remained in use as a barn until recently. The surviving structure was described in detail by Mr. Collins and Mr. Fleming,[10] and so need not be described again here.

Previous archaeological history

In 1954, a Saxon cinerary urn was found in St. Thomas à Becket's churchyard to the north west of the barn. The urn was elaborately decorated with crossed lines and stamps in diamond shaped panels. Mr. J. N. L. Myres suggested a date in the late sixth or seventh century.[11]

[1] V. L. Gregory, ' The Excavation of A Romano-British, Saxon and Medieval Occupation Site at Becket's Barn, Pagham, West Sussex.' Interim report in " Rescue Archaeology in Sussex, 1974," *Bulletin of the Institute of Archaeology*, No. 12 (1975), pp. 42-46

[2] A. Down, *Chichester Excavation 2* (1974), p. 101.

[3] A. H. Collins and Lindsay Fleming, ' Becket's Barn, Pagham ', *Sussex Archaeological Collections*, vol. 96 (1958), pp. 135-148.

[4] A. H. Collins and Lindsay Fleming, op. cit., p. 140.

[5] L. Fleming, *History of Pagham* (undated, Privately published). p. 74.

[6] W. A. Pantin, *Canterbury College, Oxford*, vol. 2, Oxford Historical Society (Undated) p. 127.

[7] W. A. Pantin, op. cit., p. 131.

[8] L. Fleming, op. cit., pp. 259-260.

[9] A. H. Collins and Lindsay Fleming, op. cit., p. 139.

[10] A. H. Collins and Lindsay Fleming, op. cit., pp. 139-141.

[11] A. H. Collins, ' Saxon cinerary urn from Pagham churchyard ', *Sussex Notes and Queries*, vol. 14 (1955), pp. 123-125.

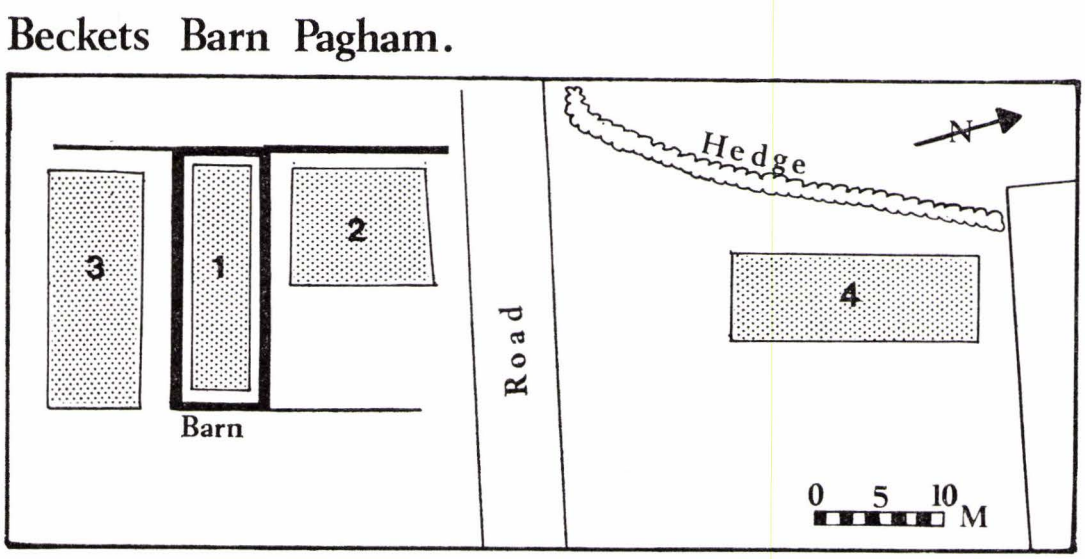

FIG. 2. Becket's Barn, 1974. Trenches excavated (1-4) within and near the Barn.

In 1958, Mr. A. H. Collins and Mr. L. Fleming published an account of a series of excavations undertaken during 1956-1957.[1] Inside the barn excavations revealed a succession of packed floors, while to the south, a wall re-located in 1974 (Fig. 5, Feature 67) was excavated. To the north of the barn a narrow trench located the cobbled path re-excavated in 1974 (Fig. 4). None of the excavations appeared to go very deep, apparently because conditions were too wet. It was the superficial nature of these excavations, and the likelihood of finding waterlogged deposits below that led to the rescue excavations in 1974. The 1974 excavations did, however, reveal little more than had previously been discovered about the Medieval and later aspects of the site.

The excavations in 1974

Four areas in and around Becket's Barn were excavated prior to the conversion of the Barn into a restaurant, and the area around into a car park. The four areas (Fig. 2, 1-4) were excavated by machine down to the top of the Medieval layer. This included up to one metre of hardcore laid down in this marshy site prior to its use as a caravan park. Almost half of the machined areas were then excavated by hand down to the natural underlying sand. The remaining areas are unlikely to be destroyed by the development.

The occupation of the site appears to fall into three main phases with long gaps between, perhaps indicating marine incursions over the lowlying, marshy land. The earliest occupation is centred on the second century A.D. There was then a gap until a re-occupation centred on the eighth century A.D. Finally, the site was re-occupied in the thirteenth century A.D. and has remained in occupation ever since.

[1] A. H. Collins and Lindsay Fleming, op. cit., pp. 135-148.

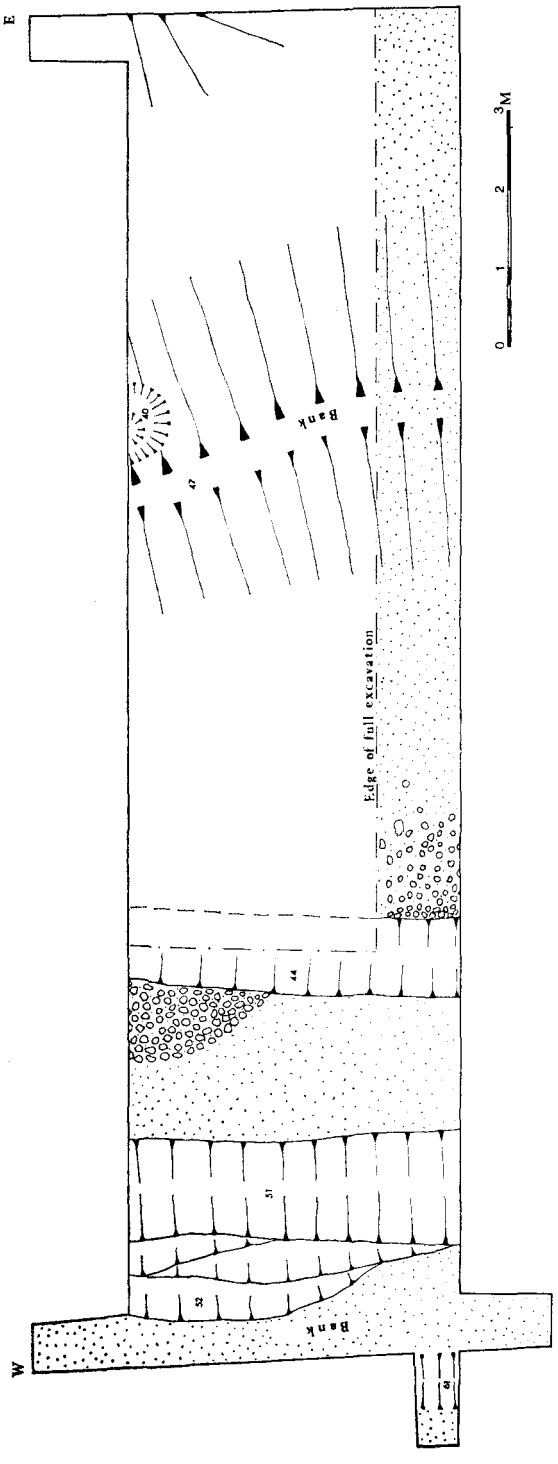

FIG. 3, Becket's Barn, 1974. Trench 1 within the Barn. Romano-British drainage ditches. (51-52), Middle Saxon cobbled surface and ditch (44).

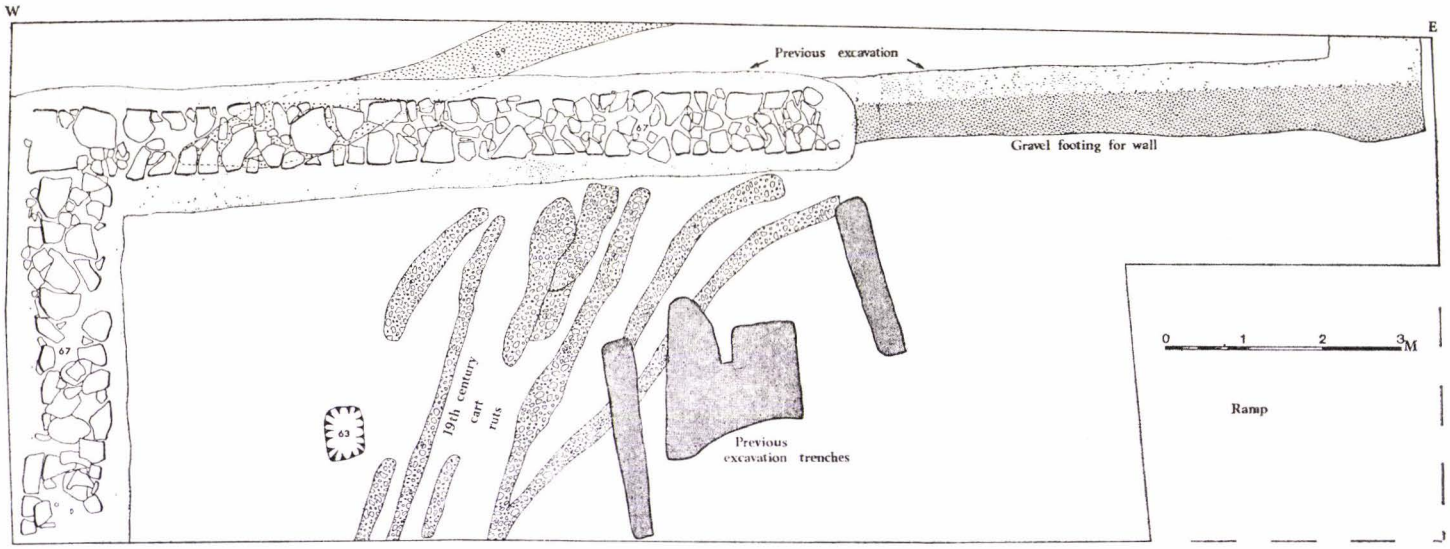

FIG. 5. Becket's Barn, 1974. Trench 3. Medieval wall overlying Saxon ditch (89) and nineteenth century cart ruts.

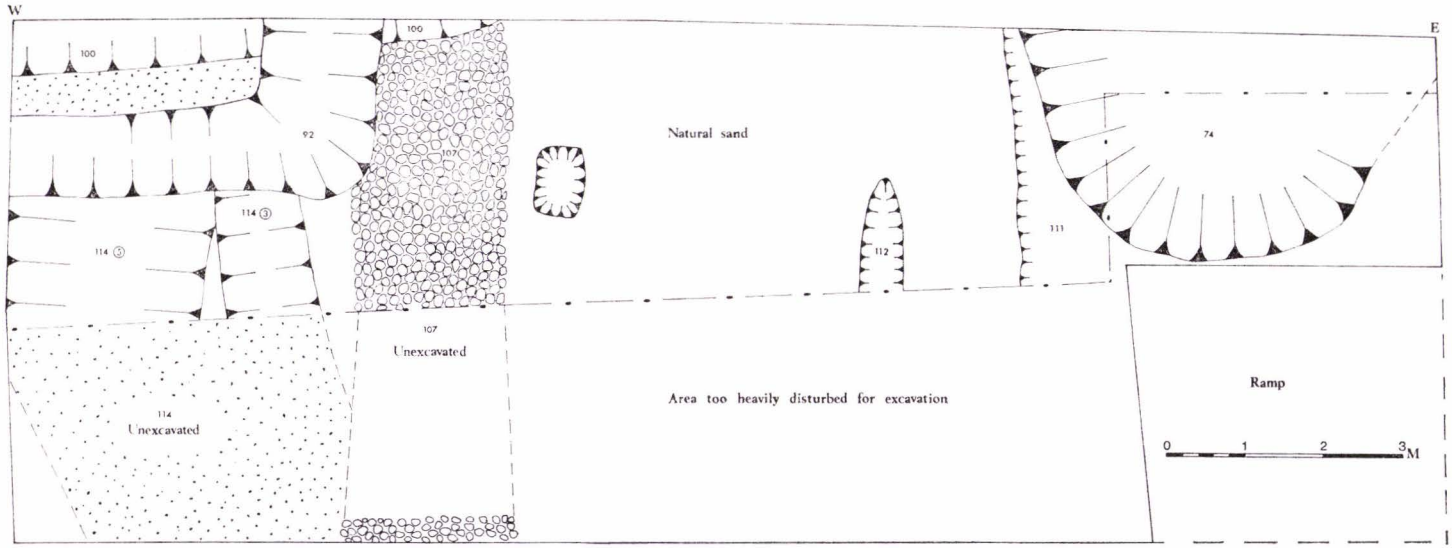

FIG. 6. Becket's Barn, 1974. Trench 3. Middle Saxon cobbled path and Romano-British drainage gullies.

To the west of the path and partly overlying it was a dark layer containing a considerable amount of Saxon pottery. This may be interpreted as a midden, probably associated with an as yet unlocated building to the west or north. The pottery, discussed in more detail below (Fig. 8), appears to have a date centred on the eighth century A.D.

The midden and cobbled path were both cut by a ditch which was dug from Area 1 (Fig. 4, Fe. 93), ran under the Barn (Fig. 3, Fe. 44) and turned a right angle in Area 3 (Fig. 6, Fe. 92). This ditch cut across an earlier ditch which also cut the cobbled path (Fig. 6, Fe. 100). A small gulley was cut into the top of both of these ditches (Fig. 5, Fe. 89). This contained a considerable quantity of charcoal and carbonised grain. The charcoal, which consisted of oak, birch and alder (see report below), was submitted to Harwell for a Carbon 14 determination. This established a date of 820 ± 60 a.d.

Phase III: The Medieval period

At the west end of Area 1 the Barn proved to have several superimposed mortar floors which covered about a third of the interior. The floor was separated from the rest of the area by a gravel filled robber trench. Two of the floors were relatively undamaged and still had a few glazed floor tiles *in situ*. Contemporary with the upper floor level was a rectangular pit 1 metre by 1.5 metres and 1 metre deep. This was filled with five layers of large laid stones separated by mortar and gravel. This pit lay in the centre of the upper mortar floor. It exhibited no evidence of burning and so possibly represents some form of support for an upper storey. The floor levels are dated by pottery to the later part of the thirteenth or the beginning of the fourteenth century. The remainder of the Barn had no surviving floor levels and the floor was made up of 50 cm. of homogeneous, heavy brown clayey soil with a thin layer of charcoal and grain.

In Area 2 a robbed wall ran north-south at right angles to the Barn 2 metres east of the previous excavation trench marked on Fig. 4. Although no dating evidence was found for this feature, its fill was identical to that of the robbed wall within the Barn. Several small post and stake holes were noted in Area 2 (Fig. 4), but they form no coherent plan. They appear to be Medieval or later in date.

In Area 3 the footings excavated by Mr. Collins and Mr. Fleming in 1956[1] were re-excavated (Fig. 5) but no further dating evidence was obtained. The footings appear to be for a corridor or pentice against the south wall of the Barn and the 1974 excavation in no way alters the conclusions of the previous excavators. A series of cart ruts running in the direction of the entrance in the south wall of the Barn had badly disturbed much of Area 3 (Fig. 5).

In Area 4 a packed clay and gravel floor, possibly of a small building (Fig. 7, Fe. 122), overlay two Medieval ditches (Fig. 7, Fe. 123 and Fe. 125). The top of a well was located although not fully excavated (Fig. 7, Fe. 124) together with a small rubbish pit (Fig. 7, Fe. 120). The final fill in the well and the rubbish pits were dated to the 14th century.

The Finds

Unfortunately, the finds were not available to the author while preparing this report, due to the excavator's hasty departure to America. All the finds were, however, examined on the site by the author, while Mr. K. Barton, F.S.A., examined the post-Roman material. Fortunately, the author held photocopies of drawings of the most complete Saxon pottery. These are published

[1] A. H. Collins and Lindsay Fleming, op. cit., p. 142.

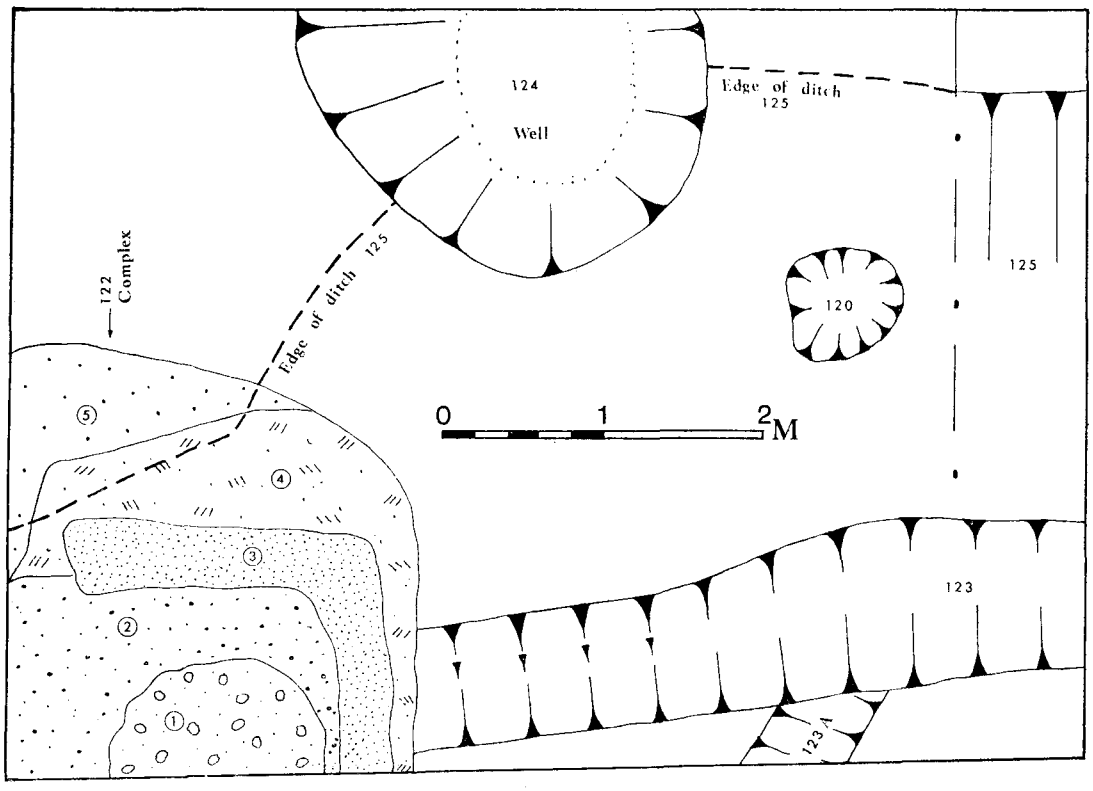

FIG. 7. Becket's Barn, 1974. Trench 4. Medieval well, pit and drainage ditches.

here (Fig. 8). The comments on the Romano-British and Medieval pottery below are derived directly from the excavator's interim report, while the section on the Saxon pottery has been expanded by the author.

Romano-British Pottery

Several second century Samian forms were found in the drainage ditches, e.g. forms 31R, 27 and 33. There is some coarse ware from the ditch which does not contradict this date. Colour-coats were present, but only in a very poor state of preservation. One eroded piece of mortarium was found under the cobbled track.

Saxon Pottery (Fig. 8)

The midden in Areas 1, 2 and 3 produced many forms of Saxon pottery. All the pottery is flint-tempered, but the size of the flint-temper varies from very large to medium. The fabric is often pitted with small holes which, in many cases, seems to be the remains of vegetable matter, perhaps grass, and seeds. None of the pots is very large and most are round bottomed. The surface finish is quite smooth in many cases, but shows no evidence of burnishing. The temperature of firing cannot have been high and must have been variable.

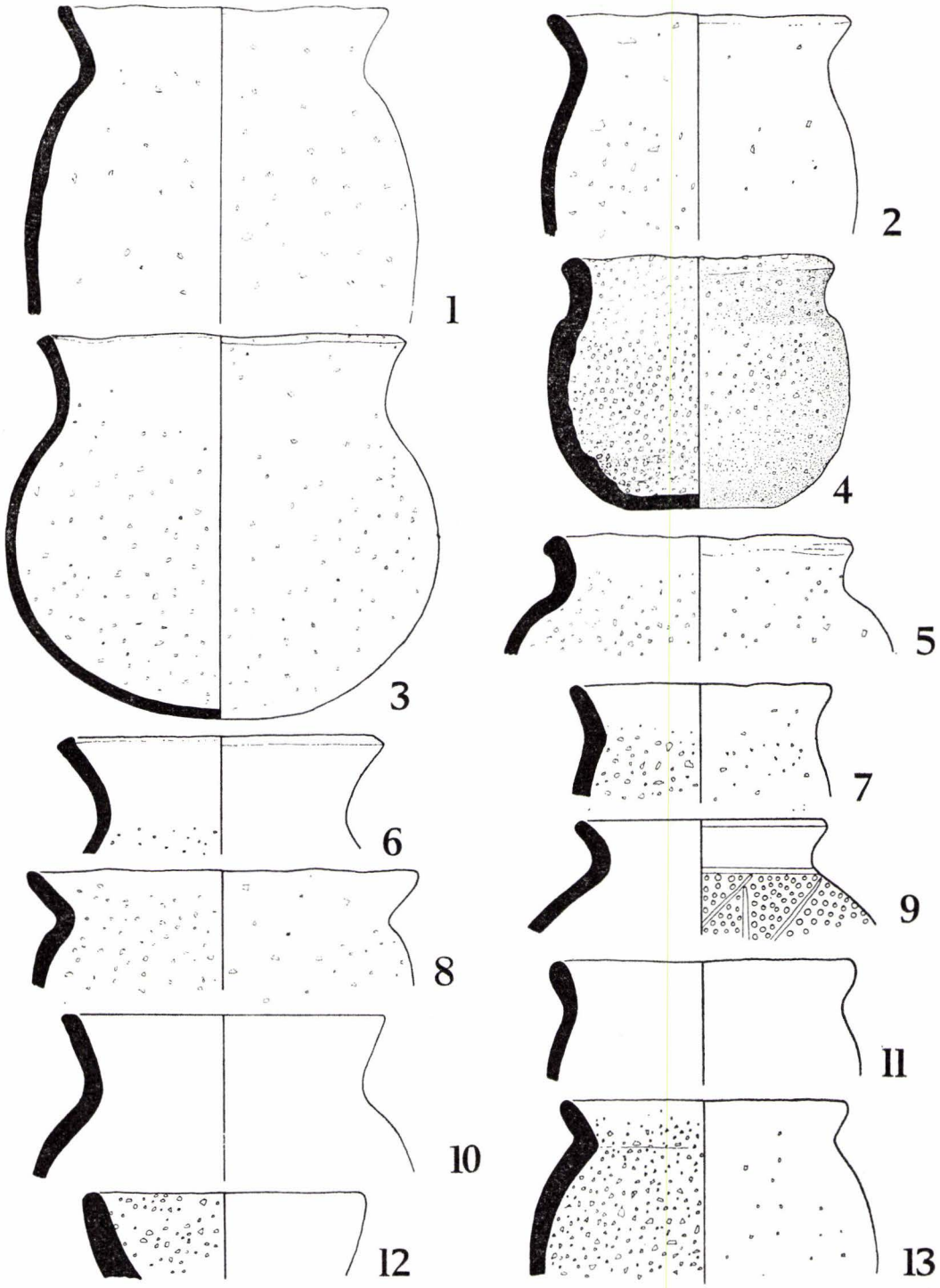

FIG. 8. Becket's Barn, 1974. Middle Saxon Pottery. 1-8 from midden in Trench 2. 9-13 from midden in Trench 3. (1/3).

1-2. Rims and upper body of coarse hand-made flint-tempered pots. From midden deposit in Area 2.
3. Reconstructed round based pot made in a coarse, flint-tempered ware. From midden deposit in Area 2.
4. Reconstructed flat based pot. Very coarse fabric containing many large pieces of flint tempering. From midden deposit in Area 2.
5-8. Rims of coarse hand-made flint-tempered pots. From midden deposit in Area 2.
9. Rim of fine grey fabric with very small pieces of flint as temper. Slightly micaceous. Hand-made. The shoulder of the pot is covered with a grooved and punched decoration. From midden deposit in Area 3.
10-11. Rims of fine grey fabric with very small pieces of flint as temper. From midden deposit in Area 3.
12-13. Rim of coarse, flint-tempered pots. From midden deposit in Area 3.

Stratigraphically, the Saxon pottery from Pagham may be considered as an associated group. As such it clearly post-dates the Pagan Saxon pottery known from the cemeteries of Sussex and Hampshire and so may be seen as post mid seventh century. Likewise, it would appear to pre-date the Saxo-Norman pottery known from towns like Chichester. It therefore falls into a date bracket of c. 650-950 A.D. The dating of pottery within this period in Sussex is, at present, virtually impossible due to a lack of well-dated sequences. The closest parallels come from Medmerry Farm at Selsey.[1] Rim forms from Medmerry are similar to the Pagham Group, as is the fabric, although more use is made at Medmerry of shell and sand tempering. Unfortunately the dating at Medmerry was also somewhat problematical although a Middle Saxon date was suggested. The ditch which cut through the midden at Pagham (Fig. 5, Fe. 89) contained charcoal for which a Carbon 14 date of 820 $\pm$ 60 a.d. was obtained. On its face value (and ignoring problems of correction, ' old ' wood and the standard deviation inherent to the measurement process) this would suggest that the group may pre-date the ninth century. This would be consistent with the earlier looking features of pot 9. A date range of c. 650-800 A.D. is therefore proposed for this group.

Medieval Pottery

There were few finds of Medieval pottery from in or around the Barn. Area 4 produced most of the Medieval material from the complex of pits and gulleys. The pottery is locally manufactured and much is similar to the Orchard Street kiln types,[2] and the Binsted kiln types excavated by C. J. Ainsworth and K. Barton. This puts the bulk of the Medieval pottery into a late thirteenth-mid fourteenth century date range.

Conclusions

The village of Pagham is situated at the head of Pagham Lagoon in a lowlying area with marsh to the south. Pagham Lagoon was probably open to the sea until the development of the shingle bank to the south of it. As such, the southern part of Pagham would have been subjected to periodic marine incursions. The evidence from the excavations would confirm this. In the Romano-British period attempts were made to drain the area by the digging of a series of ditches. This would suggest the proximity of a settlement, perhaps to the north between the church and Church Farm. A possible marine incursion in the late Roman period would have prevented the use of the Barn area for settlement in the Pagan Saxon period. Some evidence for settlement in this period is suggested by the late sixth century cinerary urn from the churchyard. Resettlement in the Middle Saxon period is indicated by the midden deposit, although this may have simply been rubbish thrown into the edge of the marsh from a settlement to the north or west. The construction of a well-laid cobbled path indicates a need for good access to the Lagoon. This

[1] G. M. White, 'A settlement of the South Saxons', *Antiquaries Journal*, vol. 14 (1934), pp. 393-400.

[2] A. Down and M. Rule, *Chichester Excavations 1* (1971), p. 153.

path could have been used for drawing up fishing boats as it is somewhat wide for ordinary pedestrian traffic. The digging of further drainage ditches in the Middle/Late Saxon period perhaps indicates another marine incursion, resulting in the area being deserted again until the twelfth century. From the twelfth century onwards the Barn was probably part of the Rectory of Pagham. It was converted into a barn, a function it retained until the recent conversion of the area into a caravan park.

Appendix I. Charcoal from the Saxon Ditch (Feature 89) by Caroline Cartwright

An examination of the charcoal from the Saxon ditch (Fe. 89) revealed three species: *Quercus* sp. (Oak), *Betula* sp. (Birch) and *Alnus* probably *glutinosa* (Alder). Some species of oak favour heavy, basic clay and loam soils, while birch is quite tolerant of soil conditions. Birches are often colonists of disafforested ground. Alder requires high soil moisture and may exist as a component of mixed oak forest. All three species could therefore have been growing locally in the Saxon period. These woods could be used for fuel, construction purposes, bark (*Betula*) and domestic articles (*Alnus*) among other purposes.

A sample of the charcoal was submitted to the Carbon 14 Measurements Laboratory at Harwell with the following result:

Har. Ref. 1085: 1130 $\pm$ 60 b.p.: 820 a.d.

THE EXCAVATION OF AN EARLY ROMANO-BRITISH SITE AND PLEISTOCENE LANDFORMS AT NEWHAVEN, SUSSEX

by Martin Bell with a paper on

ROMANO-BRITISH COARSE POTTERY

by C. M. Green

Rescue excavations carried out on three adjoining sites in the town centre of Newhaven are described. Natural was a Clay-with-Flints surface, upon which Pleistocene landforms had developed. These included ice wedge polygons, unsorted stone stripes and cryoturbations. Many such features had a fill of loess, which contained flint flakes as evidence of Palaeolithic occupation.

The Romano-British settlement was bounded by a ditch. Parts of five wooden and stone buildings have been excavated. First occupied in the second half of the first century, the whole site was systematically levelled in the Antonine period. Demolition horizons contained painted wall plaster, opus signinum, box flue tiles, window glass and abundant building stone. A small early villa evidently stood nearby and the structures examined are presumably its outbuildings. Pottery and artifacts are an interesting combination of local ultimate Iron Age and Roman types. Plough-marks were found outside the ditch and the floral and faunal remains suggest a mixed farming strategy. The Medieval and Post-Medieval archaeology and history of the site are discussed.

INTRODUCTION

Excavations in Newhaven were precipitated in 1971 by the construction of the southern section of the town's ring-road and by building development of adjoining land. No archaeological excavations had previously been undertaken in the town. Interest was stimulated in 1962 when an intact grey-ware pot and part of another pot were found when the playground wall of the Meeching County Primary School collapsed.[1] The vessels were in earth behind a retaining wall which abutted South Lane. A. S. Payne and John Norris of Newhaven reported the find to the writer and excavations were started when the site became available in September 1971. After a few days work it became clear that an interesting early Roman site lay largely in the area which was by that time being prepared for the new road and buildings. Thirty four weeks of excavation ensued between September 1971 and September 1974, by which time most of the undisturbed areas available had been excavated. The work was under the aegis of the Brighton and Hove Archaeological Society and financed in 1972-4 by the Department of the Environment (Ancient Monuments Inspectorate).

TOPOGRAPHY (Figures 1 and 2)

Three adjoining areas were excavated centred on TQ446013 near the town centre of Newhaven. They are 180m. S.W. of the new bridge over the Ouse (opened 1974) and 1.3km. upstream from the present mouth of the river. At this point the Chalk downs project slightly into the Ouse

[1] Vessels B.H. 1 and 2 in the pottery report (Fig. 37). These two vessels are housed in Barbican House Museum, Lewes.

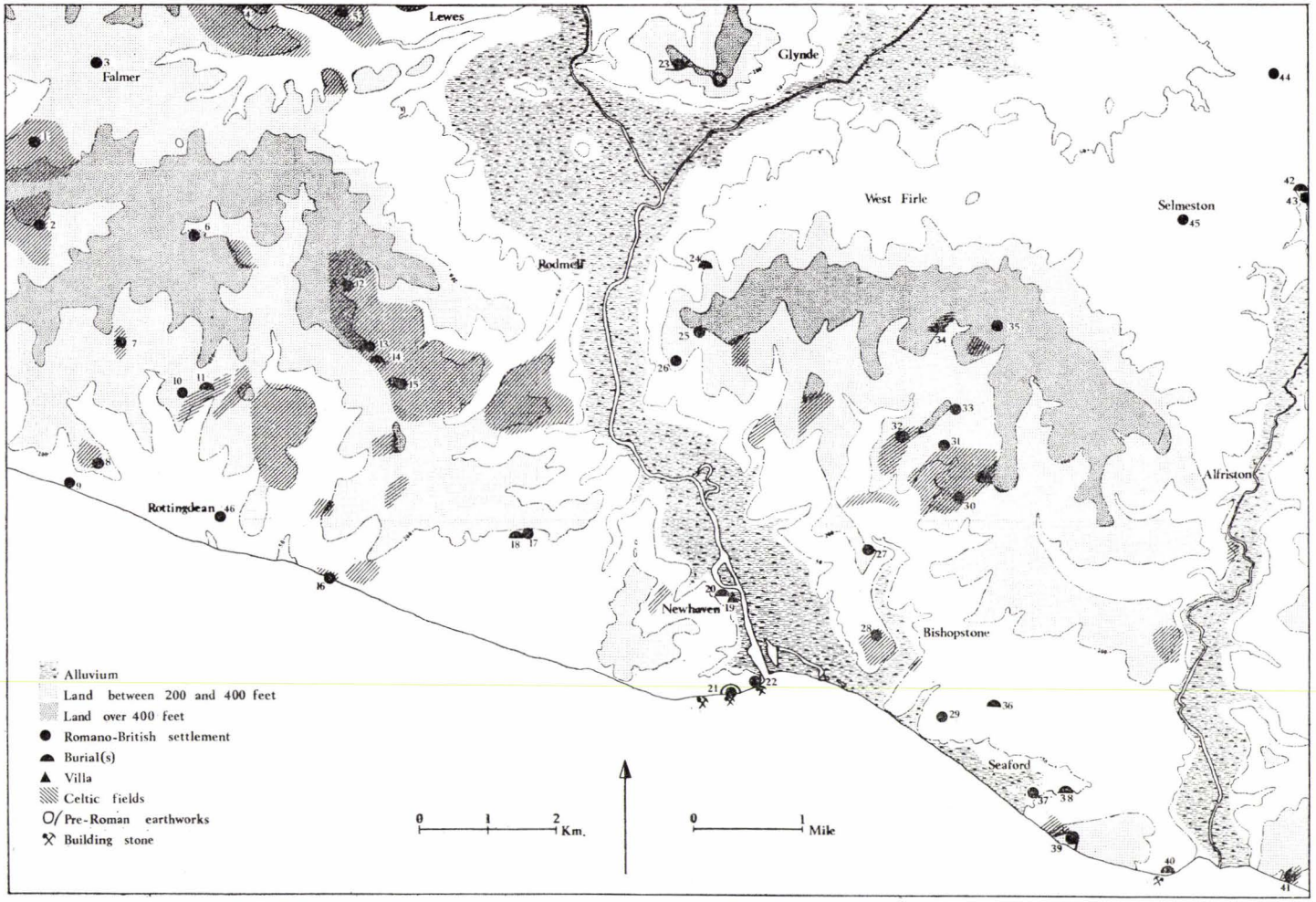

FIG. 1. The Lower Ouse Valley and its environs showing the situation of Newhaven and the Romano-British settlement pattern, contour heights in feet above O.D.

valley, making this a convenient crossing point exploited by a ferry, first recorded in 1332,[1] thence by the construction of a drawbridge in 1784.[2] According to Margary a Romano-British communication route from Newhaven to the Dicker crossed here.[3] The sites are between 3.5m. and 4.6m. O.D. on a Clay-with-Flints deposit overlying Chalk. Approximately 20m. east of the excavations Clay-with-Flints and Chalk give way to alluvium. This change seems to correspond to a break of slope along the west side of Chapel Street, with flood plain alluvium to the east and Clay-with-Flints rising to the downs on the west. A map of Newhaven made *c.* 1810-20 shows what appears to be a bush-covered bank on this line.[4] The bushes mark the edge of a dotted area representing the Ouse meadows. Probably this is the line of a river cliff which is visible elsewhere in the valley, but which has been totally obliterated in this vicinity by the modern town.

The alluvial flats of the Ouse (Fig. 1) mark what was once a flooded estuary. Boreholes 480m. N.E. of the site show that the alluvium is in a Pleistocene buried channel.[5] It was incised to a maximum depth of 25.87m below O.D., presumably during the last (Devensian) glaciation when the sea level is considered to have fallen by as much as 100m.[6] At the base of this channel are gravels of Pleistocene date, above them grey muds with a variable proportion of black organic matter laid down during the Flandrian rise in sea level. Where the valley widens out into the Vale of Brooks south of Lewes, peat was deposited in Atlantic times, only to be buried under accumulations of alluvium when the valley was again covered by open water about 1000 B.C.[7] Lower down the valley at Newhaven boreholes show no sign of Atlantic peat and the area was probably open water throughout prehistoric and early historic times. Alluvium was steadily accumulating until in the sixteenth century A.D. it reached a point when flooding was only periodic and drainage for agriculture became possible.[8] If this is accepted then the site excavated lay on a slight terrace beside open water of the former Ouse estuary.

THE EXCAVATIONS

(Figures 2 and 3, and Plate 2)

Trenches were opened on three sites: No. 1 formerly occupied by the Meeching County Primary Infants School, No. 5 the site of the Meeching County Junior School and No. 6 formerly occupied by Christchurch. These sites produced a Pleistocene surface and parts of an early Romano-British settlement. In addition contractors' trenches were observed on Sites 2, 3, 4 and 7 which were on the Ouse alluvium and did not produce any trace of Romano-British occupation. A good section of the alluvial deposits was observed on Site 7 where they contained inclusions of small pieces of daub, suggesting human activity in the vicinity while the alluvium was being deposited. Site 3 had two shallow Medieval pits cut into the alluvium. At the time of writing (July 1975) the south half of Site 1 and Sites 2-4 have been covered by the ring road, Southway. A Health Centre has been constructed on Site 7 and a Police Station on Site 6. The northern

[1] G. D. Johnston 'Ferries in Sussex' *Sussex Notes & Queries* (abbreviated hereafter to *S.N.Q.*) vol. 16 (1963-7), p. 278.
[2] T. W. Horsfield, *The history; antiquities and topography of the county of Sussex* (Lewes 1835), vol. 1, p. 194.
[3] I. D. Margary, *Roman ways in the Weald*, 3rd ed. (1956) pp. 185-6.
[4] East Sussex Record Office, Langridge M.S. 310.
[5] Details of boreholes kindly provided by East Sussex County Council.
[6] F. W. Shotton, 'The physical background of Britain in the Pleistocene' *Advancement of Science* vol. 19 (1962), p. 193.
[7] D. K. C. Jones, 'The Vale of Brooks' in R. Williams ed. '*A Guide to Sussex Excursions*,' *Instit. of Brit. Geographers Conference* 1971 (Falmer), p. 43.
[8] P. Brandon, 'The origin of Newhaven and the draining of the Lewes and Laughton Levels,' *Sussex Archaeological Collections* (abbreviated hereafter to *S.A.C.*), vol. 109 (1971), pp. 94-106.

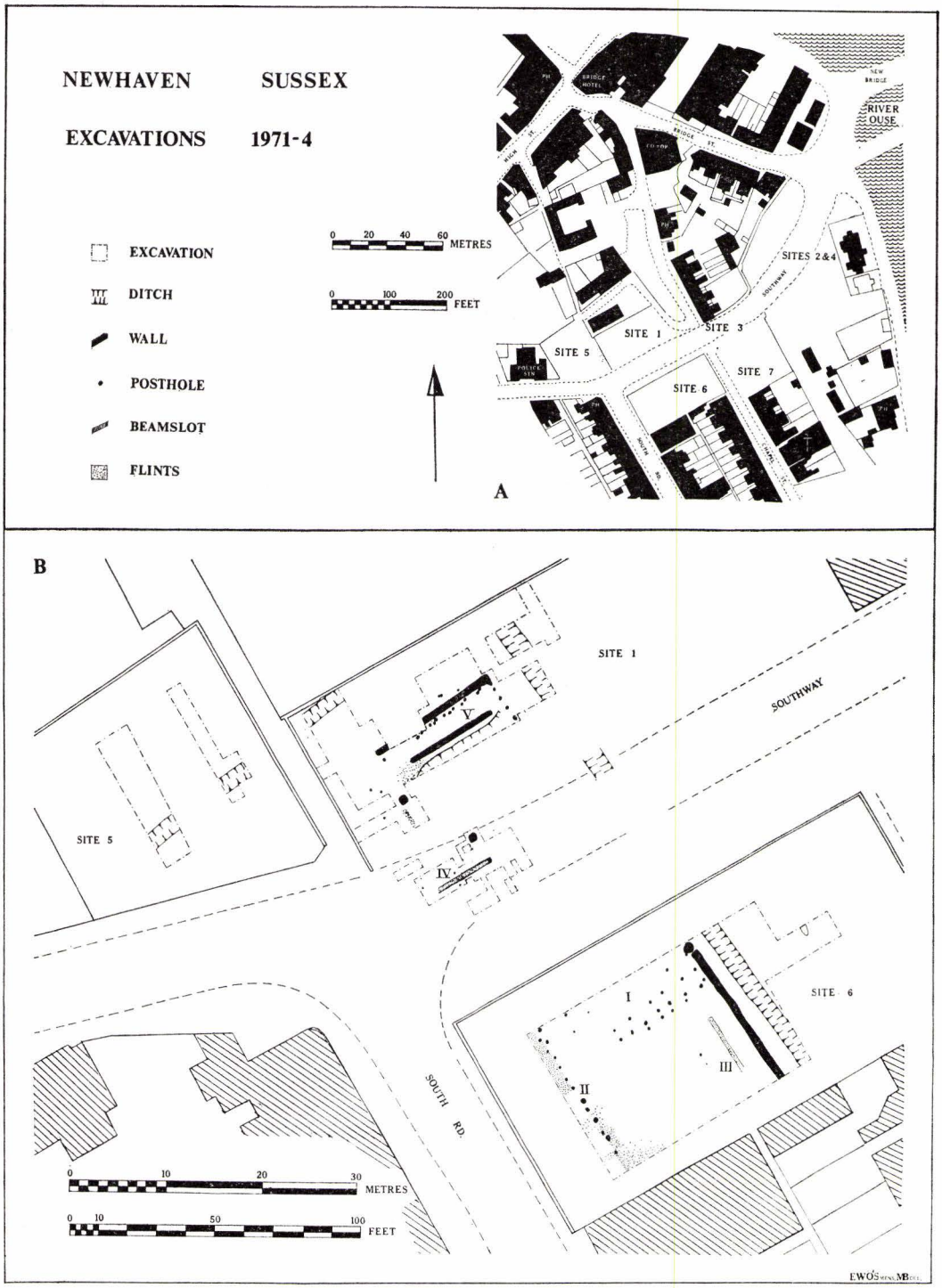

FIG. 2. Newhaven town centre showing (A) location of sites and (B) site plan

part of Site 1 is a carpark and Site 5 is open ground. The two last named areas will presumably be developed when the Newhaven town centre plan is settled.

This valley site has primarily been an environment of deposition. Sites 1, 5 and 6 had an essentially uniform stratigraphy which will be described with reference to a typical section (v-v). The underlying solid geology is Upper Chalk; its surface has been intensely frost shattered and involuted with overlying deposits of Clay-with-Flints. These are a metre thick with flints clearly zoned on the periphery of brodel pockets.[1] The Geological Survey sheet 334 shows this deposit as valley gravel. Particle size and mineralogical analyses (see below) show that it is a derivative of Eocene strata and the solution of chalk which would probably be equated with Clay-with-Flints *sensu stricto* as defined by Loveday.[2] It seems to have soliflucted down from an Eocene outcrop near the 150ft. contour. The next layer, an orange clay, was very localised and probably represents deposition in a small pool.

Then ensued a complete change in lithology, a yellow silt deposit largely preserved as the fills of periglacial landforms. Analytical work, reported below, leaves no doubt that this is a loess. It was on this thin disrupted cover of loess overlying Clay-with-Flints that the Holocene soil developed. Earthworms had been active and locally a stoneline was preserved at its base. This contained a few flint blades of Mesolithic type and three sherds of poorly fired pottery with calcined flint filler, probably Bronze Age. In certain areas the soil had been disturbed by Romano-British ploughing which had left grooves in the underlying loess. Romano-British occupation of the site was contemporary with this soil. Features such as postholes, ditches, etc., were cut from its surface into the underlying Pleistocene strata. The soil itself contained quantities of Romano-British pottery, tiles and artifacts. During the Medieval period the Romano-British soil horizon was buried below an accumulation of up to 1.30m. of ploughwash. Then the area reverted to pasture with intermittent occupation in the eighteenth and nineteenth centuries. Finally in the latter half of the nineteenth century the schools and church were constructed.

Once preliminary excavations had established this stratigraphic sequence it was possible to uncover large areas like Site 6 using mechanical excavators. They removed the Post-Medieval layers and Medieval ploughwash down to its bottom 20cm. Then the whole site was cleared down with a trowel. Romano-British features were detected in the buried soil. Following their excavation the soil was removed exposing the Pleistocene land surface.

THE PLEISTOCENE LAYERS[3]

Pleistocene archaeology has attracted surprisingly little attention in Sussex considering the large areas mantled by superficial deposits of that period. Sites are few, indeed the present paper deals with the only *in situ* Last Glacial (Devensian) assemblage known to the writer. The severe climatic regimes which obtained during the Ice Age produced specific types of landforms. They may be used as a guide to the environment of contemporary Palaeolithic man. Where the se-

[1] For explanation of this and other terms used in connection with Periglacial deposits see I. W. Cornwall, *The Ice Ages; their nature and effects* (1970), F. E. Zeuner, *The Pleistocene Period* (1959).

[2] J. Loveday, 'Plateau deposits of the south Chiltern Hills' in *Proc. Geologists Assoc.* vol. 73 (1962), p. 85.

[3] For a fuller discussion see M. Bell, 'Sediment analysis and Periglacial landforms as evidence of the environment of Southern England during the last Glaciation,' unpub. B.Sc. dissertation, Univ. of London (1975). Copies at Institute of Archaeology, London, and Barbican House, Lewes.

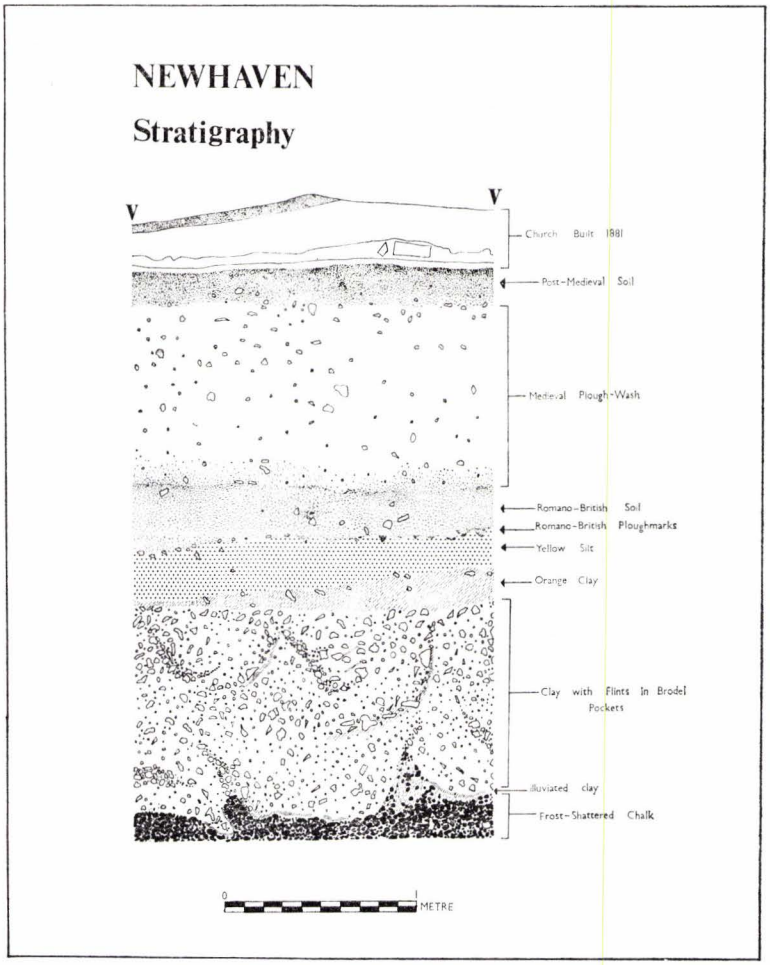

FIG. 3. A typical section of the sequence of sediments on Sites 1, 5 and 6. The lower 1.5m. are Upper Pleistocene periglacial deposits

quence of deposits is reasonably well established, as on the Sussex coast from Selsey to Eastbourne during the latter half of the Devensian, they are a useful guide in the dating of Palaeolithic remains. The configurations which Pleistocene landforms make in superficial deposits must also be well understood to avoid confusing them with man-made features, as has sometimes happened.

During the Newhaven excavations the Romano-British levels were totally removed and it was noticed that the underlying layers of Clay-with-Flints had a pattern of features, often no less distinct than the Roman features. They are however entirely natural in origin despite the fact that they contain Palaeolithic flakes.

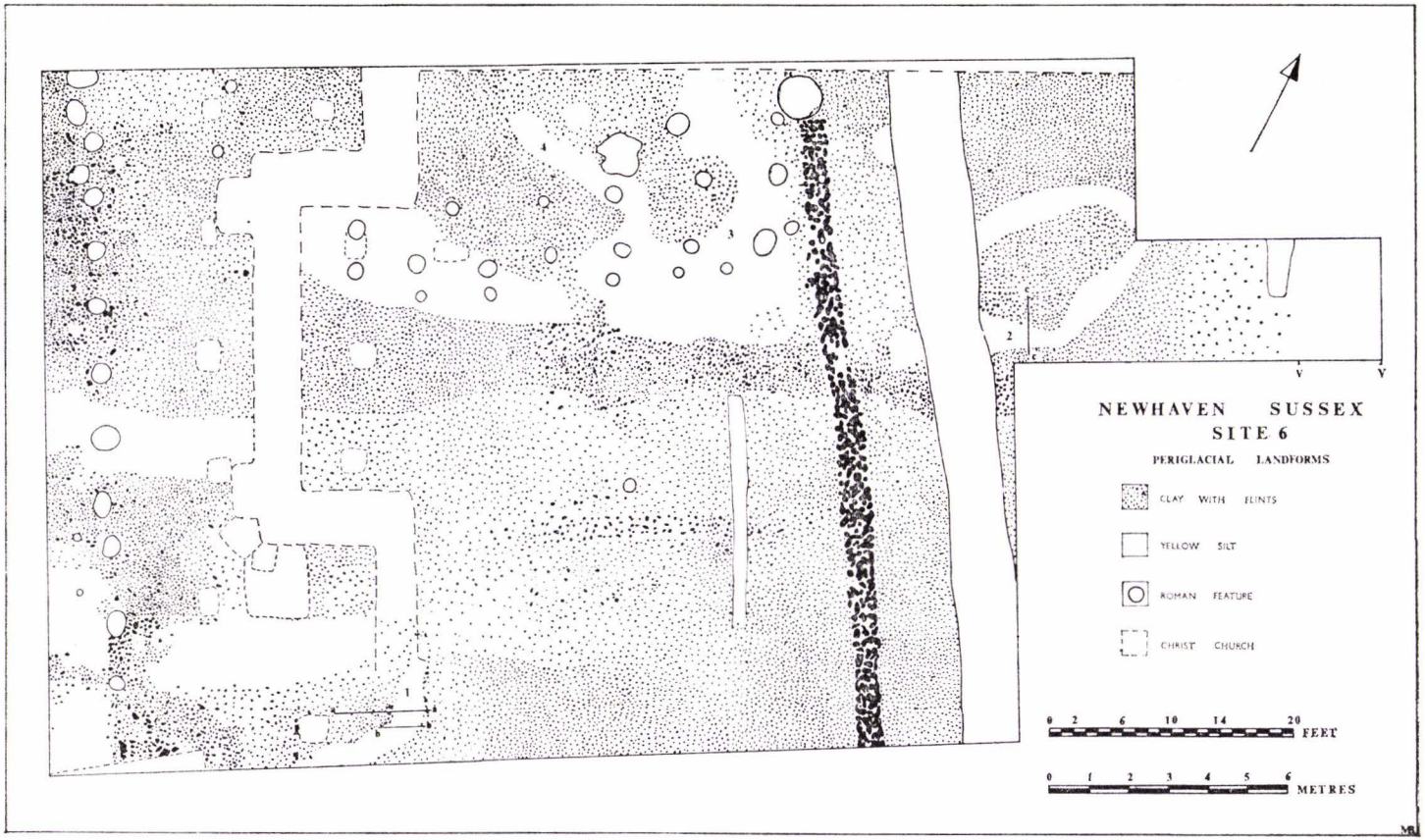

FIG. 4. Plan of the surface of the Clay-with-Flints on Site 6, showing polygonal and stone stripe features infilled with yellow silt. The thin line of large flints running from SSE. to NNW. is a Roman wall

PLATE I(a). Site 6, polygon 1, showing flint flakes nos. 13-16 to the right of the vertical scale. Horizontal scale 2ft.
(Photo: B. Westley)

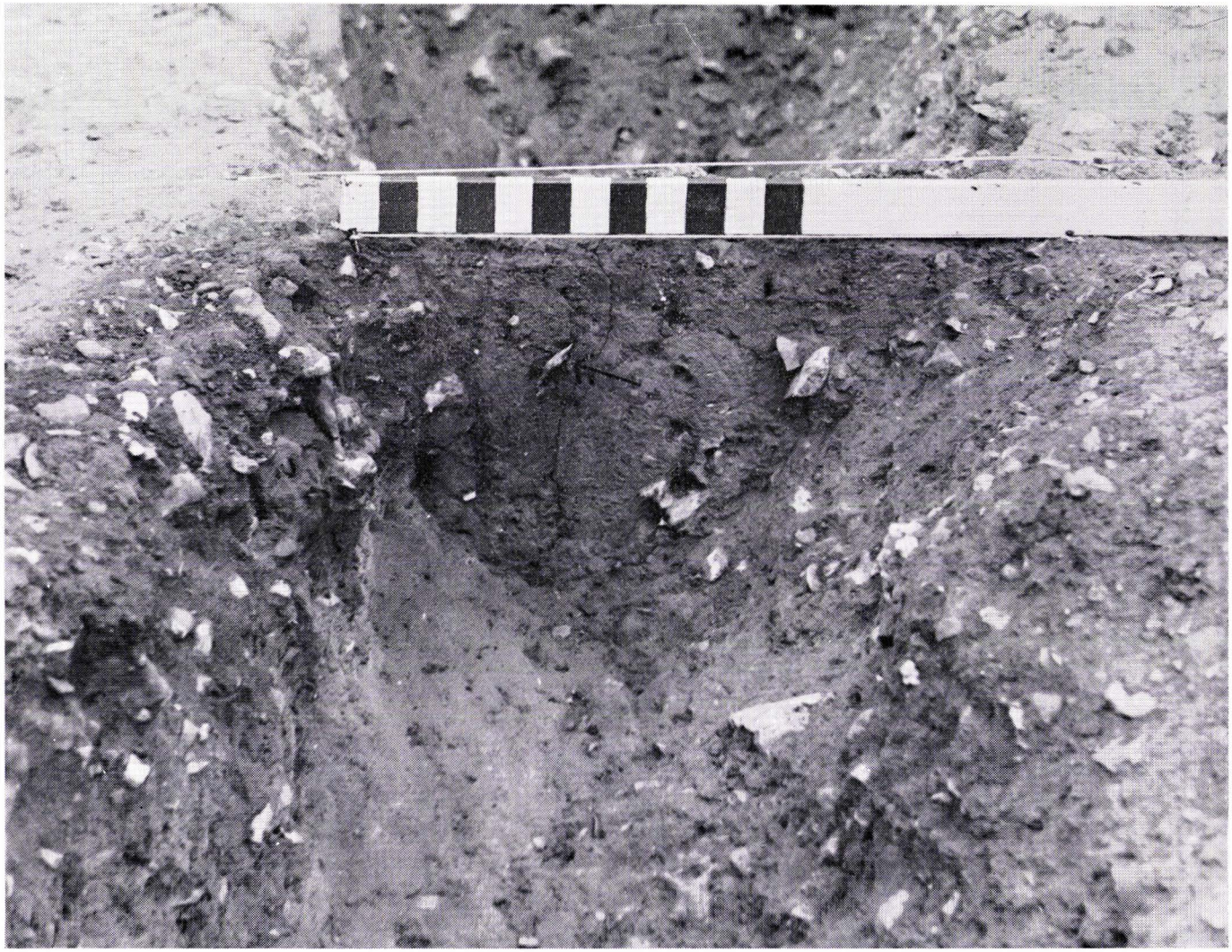

PLATE I(b). Site 6, polygon II showing silt fill within which flint flake no. 12 is arrowed. Scale inches. (Photo: B. Westley)

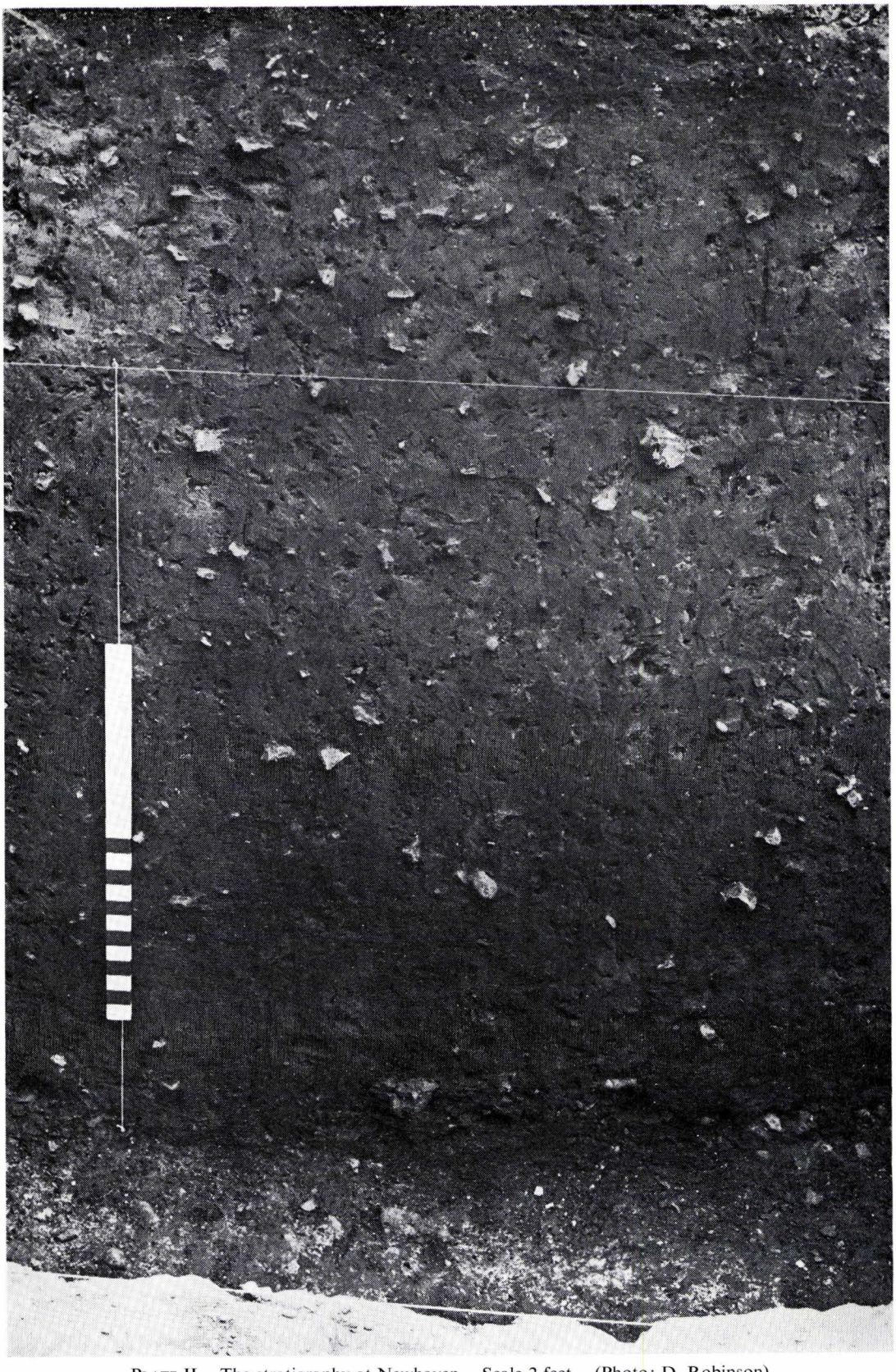

PLATE II. The stratigraphy at Newhaven. Scale 2 feet. (Photo: D. Robinson)

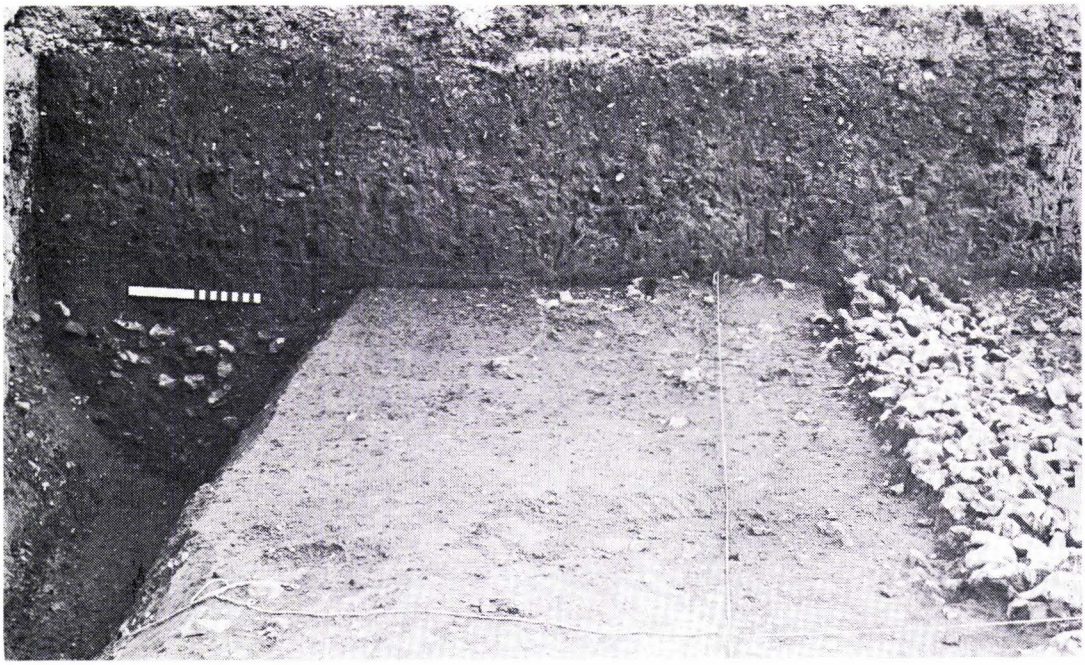

PLATE III(a). Section of the Romano-British ditch above which is Medieval hillwash and the Post-Medieval levels. Scale 2 feet. (Photo: B. Westley)

PLATE III(b). Pleistocene polygonal features (centre) and stone strips (left), overlain by Romano-British enclosure wall and Structure I (post holes not shown on Fig. 10 are dubious). Scale feet. (Photo: D. Robinson)

PLATE IV. Site 6, enclosure ditch and wall. Scale feet. (Photo: B. Westley)

PLATE V(a). Site 1, Structure V from the south, part of the north wall was removed during a previous season's excavations. Scale 2 metres. (Photo: B. Westley)

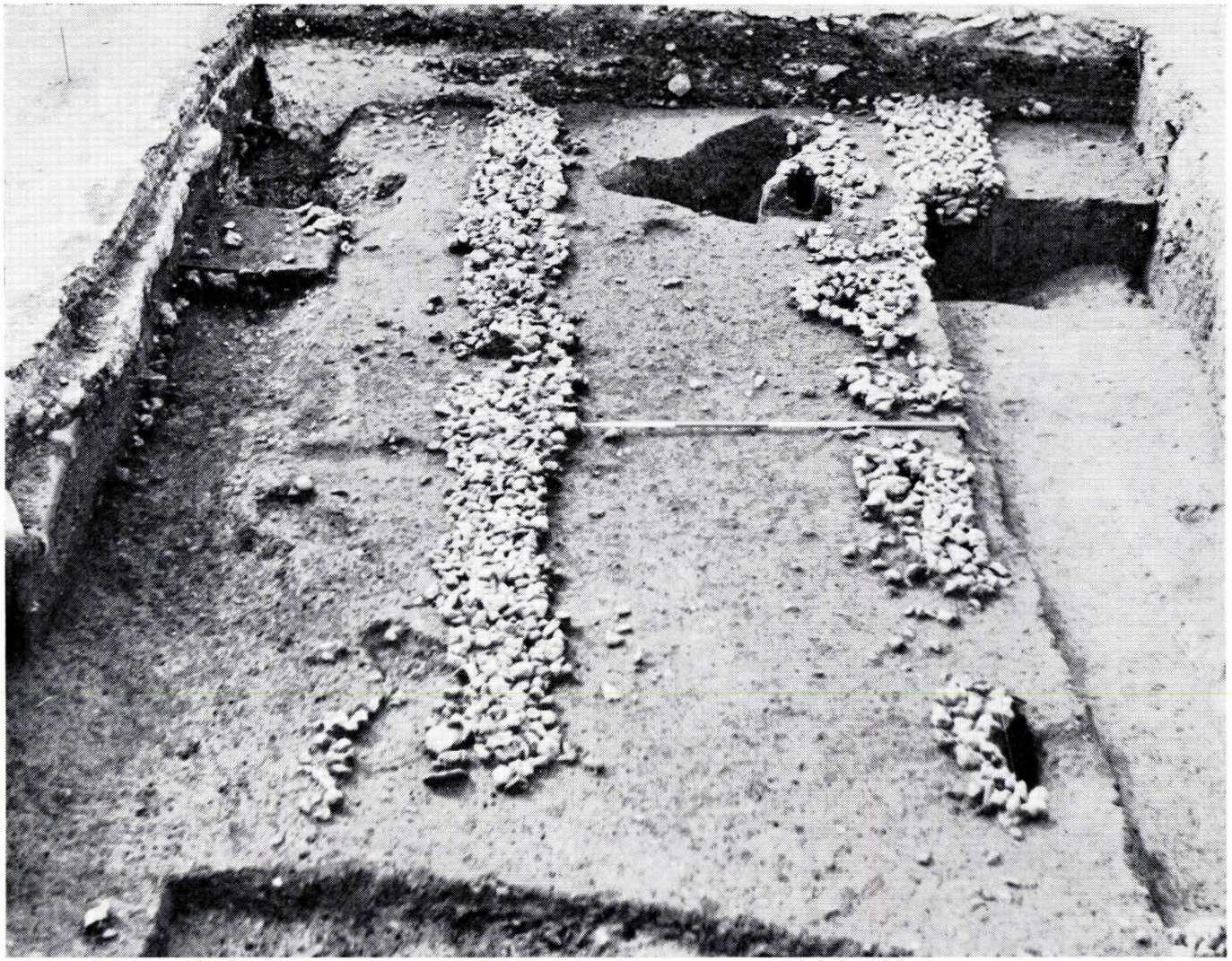

PLATE V(b). Site 1, Structure V from the east. Scale 2 metres. (Photo: B. Westley)

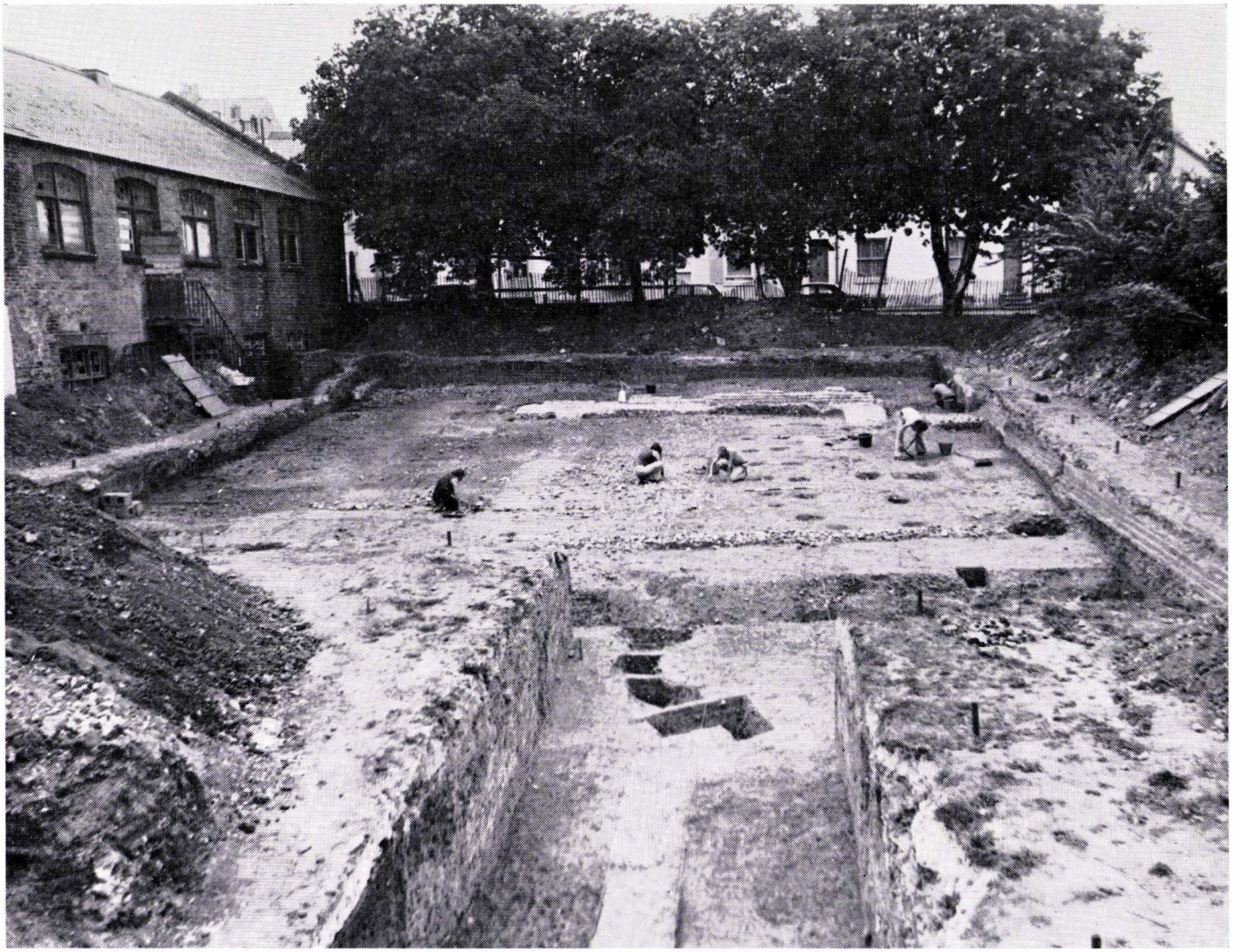

PLATE VI. Site 6 from the east. (Photo: B. Westley)

Polygonal Features (Figures 4 and 5, Plates 1a, 1b, 3b)

On Site 6 gullies filled with yellow silt were observed. These ran wholly or partly round areas of Clay-with-Flints. Their plan was polygonal with an overall diameter of between 3.5 and 6.5m. Nos. 1 and 2 were excavated. In plan polygon I was a silt filled gully 75cm. in diameter. In section (b-b) it was a 'V' shaped feature with one side practically vertical and the other side sloping at 30°. Its depth was 40cm. The near vertical edge was marked by flints thrust on end by ice action. Throughout the silt fill were groups of flint flakes in mint condition.

Polygon II was about 5½m. by 8m., the silt filled gully was 30cm. wide and completely surrounded by an 'island' of Clay-with-Flints. In common with the other polygonal features this was elongated in the direction of hill slope, that is E.-W. The average angle of slope is 4°. In some places the section was very similar to that of polygon I, in others (c-c and Plate 1b) the silt appeared to run under the Clay-with-Flints centre, but much more work would have been

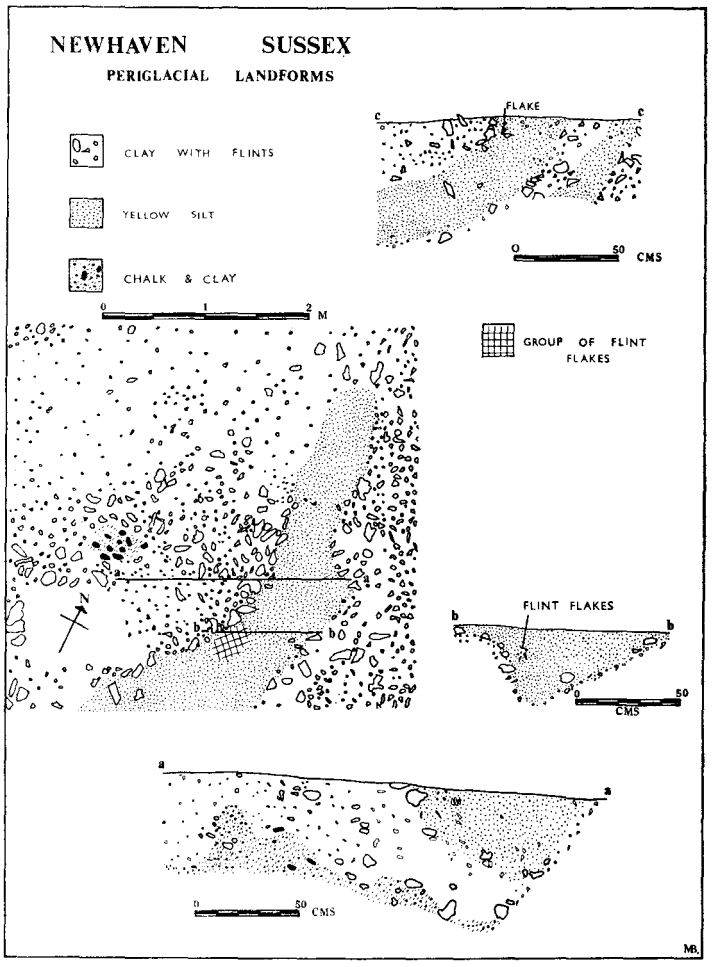

FIG. 5. Detailed plan of polygon 1 on Site 6 and sections of polygons 1 and 2

necessary to establish this with certainty. The inner edge of the silt gully was marked by large flints standing vertically. In the fill was a large bifacially flaked core and twenty two flakes which had been removed from it. Dr. M. Newcomer was able to join a number of the flakes. The fact that very thin edges and arêtes between flake surfaces remained perfectly intact makes it certain that the assemblage is *in situ*. The impression from distinct nuclei of conjoinable flakes is that they were found on the spot where the knapper had dropped his waste.

In polygon I flint flakes were found at all levels in the silt which must have accumulated in a very short time. The number of conjoinable flakes in mint condition show that at one time the features were open gullies. The most probable explanation is that they are fossil ice wedge polygons. Severe cold causes the development of ground surface cracks which, like those on drying mud, form a polygonal pattern. The cracks retain moisture, fill with ice and continue to grow. Compared to published fossil ice wedge polygons the Newhaven features are remarkably small and shallow.[1] Smaller polygons could reflect differences in climate or be polygonal infrastructures which are known to exist within much larger polygons. There can be no doubt that originally the ' wedges ' were deeper. Flint flakes were abundant in the silt fills of Pleistocene landforms but virtually absent from the Holocene soil. The Palaeolithic ground surface must have been totally removed by erosion. At the time of occupation ice must have disappeared leaving a thermokarst environment. When the ice melted the fissures would have served as passages for running water which may have modified their shape.[2] Settlement took place on the thermo--karst surface and waste flakes dropped into open wedges to be covered by yellow silt which was probably being laid down at the time. A second possibility is that the silt was deposited on Clay-with-Flints, then subjected to ice wedging. On thaw the artifacts were deposited and buried by silt weathered from the sides of the wedges. The first hypothesis is more plausible since in the silt stripes flakes seem to have been dropped whilst the silt was being deposited. Subsequently the Palaeolithic living floor was eroded and the polygons truncated.

Stone and silt stripes (Figures 4, 6, Plate 3b)

The pattern of polygonal features seems to have been superimposed on an underlying pattern of stripes of very flinty material. These run from ESE to WNW, which is the direction of hill slope. A prominent stripe 1.5m. wide runs across the centre of Site 6. Three metres to its south was a stripe of very large flints, most of which stood vertically. One stripe on Site 1 was planned and sectioned (Fig. 6). Here the basic Pleistocene stratigraphy described in connection with section v-v had been the subject of intense active layer phenomena.[3] In the south part of the section Clay-with-Flints and Chalk were involuted. At one point the Chalk and clay appeared to have overfolded a layer of Clay-with-Flints in the fashion of a nappe structure. To one side of this a layer of Clay-with-Flints dipped down for 80cm. at an angle of 60°, it then levelled out and rose gently. The trough so formed was a linear feature with a width of about 6m. It was filled with yellow silt containing individual flint flakes some of which were certainly

[1] G. W. Dimbleby, ' Pleistocene ice wedges in North East Yorkshire,' in *Journal of Soil Science*, vol. 3 (1952), pp. 1-19. J. G. Evans ' Ice wedge casts at Broome Heath, Norfolk,' in G. J. Wainwright, ' The Excavation of a Neolithic settlement on Broome Heath, Ditchingham, Norfolk, England,' *Proc. Prehistoric Society*, vol. 38 (1972), pp. 77-86.

[2] J. Dylik, ' Problems of ice wedge structure and frost fissure polygons,' *Biuletyn Peryglacjalny*, vol. 15 (1966), p. 241.

[3] Found under Periglacial conditions—the area subjected to repeated seasonal freeze/thaw.

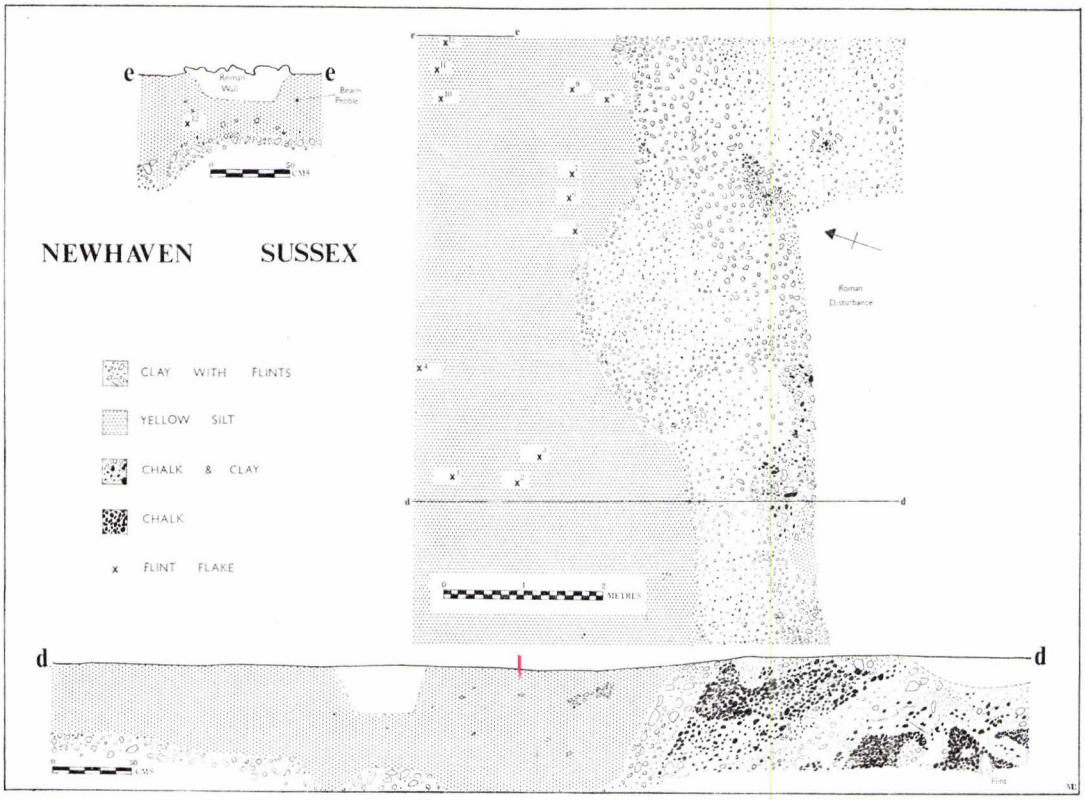

FIG. 6. Plan and section of stone stripe on Site 1

in mint condition, and some of which showed very clear signs of wear. The positions of flakes are shown in Fig. 6 by crosses beside which are numbers.

Section d-d shows that the origin of the stripe feature is intimately connected with large scale involution prominent in the stony areas. As a result of active layer phenomena the superimposed layers would expand differentially, according to the lithology and water-holding capacity of their sediments. In this way the lobes of Chalk could have been forced up through Clay-with-Flints. On a large scale this could have the effect of forcing the ground surface into a series of ridges and troughs running down the slope. Whilst this process was going on the troughs were filled with yellow silt. Unsorted stripes on the Breckland are thought to have formed in a similar way.[1] The formation of ice wedge features appears to have been contemporary with the formation of the stripes, as is shown by the narrow silt filled wedge at the base of section e, but such a feature could also be the product of involution.[2]

The sediments from Pleistocene landforms (Fig. 7)

A detailed study of the particle size and mineralogy of the sediments was made and is only briefly reported here. Particle size analyses were carried out and the results are expressed

[1] R. B. G. Williams, 'Fossil patterned ground in eastern England,' in *Biuletyn Peryglacjalny*, vol. 14, (1964), pp. 337-49.

[2] An hypothesis rejected for the 'wedges' on Site 6 because of their *in situ* nucleations of flakes.

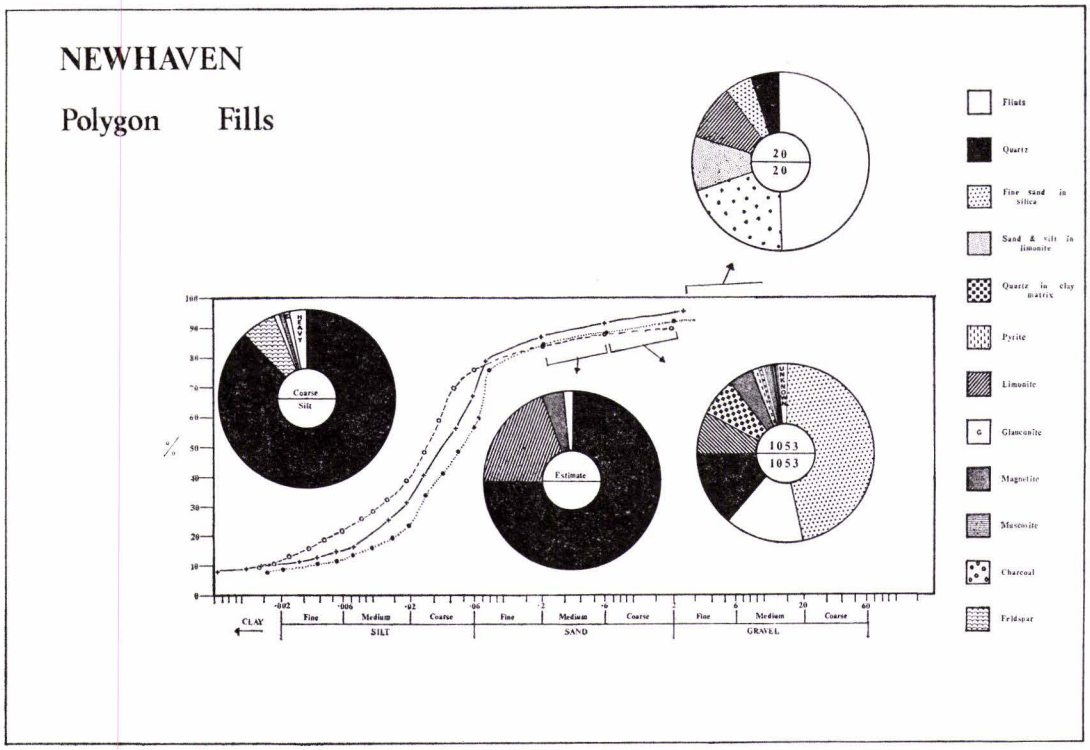

FIG. 7. The particle size distribution and mineralogy of the fill of polygon II from Site 6. Pie graphs represent the mineralogy of the sample represented by the dotted line, they are arrowed to the portion of the cumulative graph which they represent.

logarithmically in a cumulative graph.[1] In the course of making this and other graphs four sand and gravel fractions were separated by sieving. Each was examined under the binocular microscope. Minerals and aggregates were separated into 33 categories and these were then identified. A visual summary of identifications is provided by pie graphs arrowed to the pro-tions of the cumulative graph which they represent.[2]

The ice wedge pseudomorphs and troughs that separated stone stripes were filled with a fine yellow silt which occurred elsewhere as a discontinuous cover over Clay-with-Flints. The fill of polygon II consisted of 11% clay, 56% silt, 28% sand and 5% gravel. The mineralogy of material above 0.2mm. compares well with samples taken from Clay-with-Flints. It contains abundant silt grade quartz in a siliceous matrix, flint, limonite and magnetite. There are smaller quantities of pyrite, lignite, epidote and sand in limonite. Material in the medium sand grade and above is evidently locally derived from the underlying Clay-with-Flints.

[1] Archaeological applications and basic method discussed by I. W. Cornwall, *Soils for the archaeologist* (1958), pp. 123-132.

[2] Based on figures in M. G. Bell, 1975, op. cit., Table III, p. 57.

Mineralogy of the coarse silt by Dr. John Catt (Table 1)

Particle size analysis showed silt to be an important component of the sediments and suggested that they have been deposited largely by wind. Loess deposits throughout England have a reasonably uniform mineralogy suggesting that they are derived from a common source,[1] and the Newhaven samples are broadly comparable with the average composition of loess from various sites in Berkshire and Sussex. There are some significant differences indicating that even the silt fractions are contaminated with sediment other than loess. The sample from polygon II

	Berkshire Average of three samples	*Sussex* Average of four samples	*Newhaven* Polygon Fill	*Newhaven* Silt Stripe	*Saltdean* Silt Stripe
Light Fraction					
Quartz %	84	83	88	85	85
Alkali Felspar %	13	14	9	12	13
Muscovite %	1	1	1	1	1
Flint %	1	1	1	2	1
Glauconite %	1	1	1	<1	<1
Heavy Fraction			3.1%	1.6%	1.8%
Epidote % o	360	376	300	237	336
Zoisite % o	23	18	20	20	18
Zircon % o	140	155	213	232	134
Tourmaline % o	46	38	38	29	35
Chlorite % o	182	150	131	248	169
Biotite % o	7	13	3	10	4
Green Hornblende	76	82	130	67	140
Tremolite/Actinoilite	23	27	21	21	34
Brown Hornblende	5	7	4	3	5
Garnet	44	36	26	31	47
Yellow Rutile	37	35	64	46	34
Brown Rutile	16	14	12	9	5
Red Rutile	2	5	—	—	—
Anatase	20	28	27	32	25
Brookite	5	4	4	6	1
Staivolite	9	6	7	8	7
Kyanite	5	4	1	2	6
Augite	—	1	—	—	—
Apatite	—	1	—	—	—

TABLE I. Mineralogical composition of coarse silt, excluding opaque iron ore minerals, comparing samples from Newhaven polygon and silt stripe fills with the mean averages of samples from Berkshire and Sussex, and with a sample from similar stripes at Saltdean. Table drawn up by Dr. J. Catt.

[1] J. A. Catt, ' Loess deposits in southern England,' *Discussion group in Archaeology and related subjects* held at Inst. of Archaeology, 10 December, 1974.

contained less felspar, epidote, and perhaps garnet and chlorite, than would have been expected, but more zircon, green hornblende and yellow rutile. This sample probably includes 20-25% of a non-loessic sediment, which is quartz rich, has little or no felspar and contains some zircon and rutile, but probably little or no epidote. It is likely that this contaminating sediment is also represented in the graph (Fig. 7) by the very fine sand grade smaller than 0.08mm., and from its mineralogical composition probably originates from the Reading Beds. The sample from the silt trough is more like the mean of Sussex loess samples, and probably contains only a few per cent of other components, which again are probably derived ultimately from the Reading Beds. However, the non-loessic component in these samples could equally well be Clay-with-Flints, which in this area is derived largely from Reading Beds.[1] The fact that more loess is present in this sample should not necessarily be taken to mean that the loess in polygon II is redeposited; the most likely origin of this extraneous material is mixing from the underlying Clay-with-Flints layer by cryoturbation.

The dating and correlation of deposits

The Newhaven stratigraphy shows a sequence of sediments with soliflucted Clay-with-Flints overlain by loess. Field surveys were conducted to see whether that sequence could be related to other sites in Sussex. Sixteen sites with a Late Pleistocene stratigraphy have been examined between Selsey and Eastbourne. Generally speaking they show the same overall stratigraphic sequence of periglacial deposits.[2] This sequence corresponds fairly closely to sequences already advanced for Kent and Wiltshire.[3] The Sussex sequence is based partly on ten dry valleys studied in cliff sections between Black Rock and Eastbourne. In each case the basal deposit is Coombe Rock soliflucted into the valleys in a moist period of intense frost weathering. The last major phase of Coombe Rock deposition and solifluction was in Pleniglacial Stadial A which ended about 28,000 B.P. It was probably at this time that the Clay-with-Flints deposits at Newhaven soliflucted into the valley and were subject to cryoturbation. This eventually led to a ridge and trough formation of unsorted stone stripes. Whilst they were forming a series of polygonal features developed, probably as a result of ice wedging.

It has been established that the silt fills of Pleistocene landforms at Newhaven are a loess broadly comparable in mineralogy to other English loess deposits. The mineralogical uniformity of English loesses indicates that they were deposited at roughly the same time. Dr. Catt suggests that most English loess dates from between 26,000 and 18,000 B.P.[4] That is during Pleniglacial Stadial B, a period of intense cold and dry conditions. Such conditions are necessary for the formation of ice wedge polygons, as they only form under permafrost and require a temperature under –6°C for their formation.[5] Flint flakes were dropped after the ice in these wedges had melted, but the distribution of mint condition flakes at all levels in the silt stripes makes it difficult to escape the conclusion that human groups visited the site at a time when, for part of the year at least, loess was being deposited. Certainly occupation seems to have been in Pleniglacial Stadial B between the dates 28,000 and 14,000 B.P.

[1] J. M. Hodgson, J. A. Catt and A. H. Weir, 'The origin and development of Clay-with-Flints and associated soil horizons on the South Downs,' *Journal of Soil Science* vol. 18 (1967), pp. 85-102.

[2] M. G. Bell, 1975, op. cit., Table I.

[3] M. P. Kerney, 'Weichselian deposits on the Isle of Thanet, East Kent,' *Proc. Geologists' Association* vol. 76 (1965), pp. 269-74; J. G. Evans, 'Periglacial deposits on the Chalk of Wiltshire,' *Wiltshire Archaeological and Natural History Magazine*, vol. 63 (1968), pp. 12-26.

[4] J. A. Catt, 1974, op. cit., p. 4.

[5] C. Embleton and A. M. C. King, *Glacial and Periglacial Geomorphology* (1968), pp. 458-481.

Flint artifacts from the Pleistocene levels[1] (Figure 8)

A total of 157 flint flakes found in the loessic fills of polygons and stripes had clear positive or negative bulbs of percussion. They showed no sign of crushing or rolling and were definitely products of débitage. The thinnest and most fragile edges were perfectly preserved, and in the case of Polygons one and two the flints lay in distinct concentrations. One such group can be seen projecting from the section to the right of the vertical scale in Plate Ia. Groups with similar coloured flint or cortex were clearly struck from the same block of raw material. In several instances Dr. M. H. Newcomer and the writer were able to join flakes so proving this point, and showing that débitage took place on the spot or at least very nearby.

Where cortex was present on the waste it invariably showed the raw material to be large boulders, the protruding angles of which were heavily battered in the fashion of river rolled boulders. Boreholes show a layer of medium dense coarse gravel at between -15 and -22m. in the buried Ouse channel. This deposit obviously dates from a cold phase of the Devensian and was probably the raw material source. A few flakes had a deep orange stained cortex, and are derived from the Clay-with-Flints.

Polygon II. A large bifacially flaked core weighing 890 grams, with removals all round the perimeter and no cortex remaining (1), nearly circular in plan with an almond-shaped longitudinal section. At the thicker end removals had been less regular, and several flakes have ended in hinge fractures, possibly leading to the core's abandonment. Twenty five flakes were found grouped with the core in an area of diameter about 30cm. They are of an identical light grey flint with white speckles. Nine of the flakes could be joined in groups of three (3-11). One flake (2) joined the core as did one of the groups of three (3-5). Groups 3-5 and 9-11 had cortex on their dorsal surface showing that the core had been worked down from a river boulder. There are negative bulbs on the core left by the removal of some twenty six flakes. Judging by the conjoinable flakes and proportion of those with traces of cortex (9/25), it probably took the removal of about fifty flakes to reduce the core to its present state. Flake 12 is the only possible tool from the stratified assemblage. It is shown *in situ* in Plate Ib just below the scale. The flint is similar in colour and appearance to the above core, but the surface is more shiny and the ridges between flake surfaces are more rounded. The slight polish could have been acquired by the movement of loess or fine sand across the artifact at a time when it was lying on the Pleistocene land surface; polish formed by utilisation would not be so uniform over the surface. Round the margins of this flake are small areas of retouch which are alternating on the right edge in keeping with a possible natural origin for this retouch; polishing followed retouch.

A flint nodule had been slightly worked on one face. Four flakes were removed to make a platform, and from this at least seven small flakes or blades had been struck before it was abandoned. Débitage from a third presumed core is fifteen flakes in a dark black flint with occasional whitish flakes. The flint is poor quality permeated in places by a deep orange brown cortex found on twelve of the flakes. There were four other flakes and seven fire-cracked flints. A small fragment of charcoal, insufficiently large for a C^{14} date, has been tentatively identified by Miss C. R. Cartwright as *Quercus* sp. (oak). It could however have been introduced into the feature down an earthworm burrow.

[1] I am grateful to Dr. M. H. Newcomer, who gave helpful advice on this section.

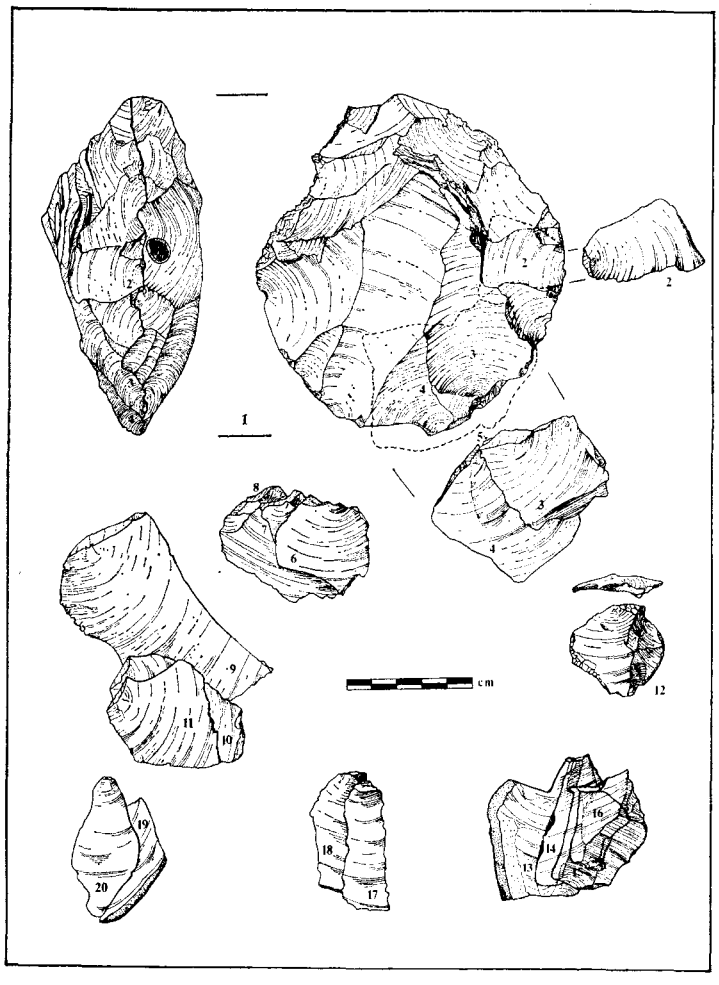

FIG. 8. Flint artifacts from Pleistocene layers

Polygon I. A group of forty four flint flakes were found in a small area shown hatched in Fig. 5. They are in a grey/white flint with brown cortex speckled with pin-prick sized dots of black. Eight of the flakes were joined in one group of four (13-16), and two groups of two (17 and 18, 19 and 20). Débitage from a fifth block of raw material is represented by twenty seven flakes of which twenty three had areas of a light orange cortex on the dorsal surface; the flint itself was a dark black. Eleven flakes had been removed from a sixth piece of raw material, characterised by a dark black flint with brown/yellow cortex on which were areas of black staining.

Silt Stripe. Flakes were noted at all levels in the silt stripe on Site 1, only part of which was excavated. The flakes were evenly distributed as shown by the crosses on Fig. 6; no concentrations were noticed and none of the eleven humanly-struck flakes joined. They were in mint condition, similar in appearance to those from the polygons.

Discussion

From the 156 pieces of waste and one possible tool identified, six groups of material were recognised on the basis of concentrations in the features and the appearance of the original raw material. 80% of the flakes belonged to these six groups, indicating perhaps that only a few blocks of flint were worked down during a short term occupation of the site. No definite tool types have been recognised, and it is not possible to assign this waste material to any specific industry or cultural group.

Most, but not all, of the flakes have very small bulbs consistent with the use of a soft hammer. The technology seems to have involved working down boulders by the bifacial removal of flakes. This could equally have been aimed at obtaining flakes or producing core tools. The core (1) showed no signs of utilisation. The other, poorly worked, core from Polygon II was presumably worked to obtain blades or flakes, then abandoned. Such an assemblage is important because its conjoinable groups of flakes demonstrate débitage on site, apparently in the Upper Palaeolithic. Other Sussex river valley locations may equally contain *in situ* assemblages and would repay fieldwork.

THE EARLY ROMANO-BRITISH SITE

The Romano-British Settlement pattern and previous discoveries (Figure 1)

The Newhaven excavations, and those conducted simultaneously at Bishopstone, have been accompanied by field surveys designed to relate the sites to their contemporary pattern of settlement. Figure 1 provides a summary of results for the Romano-British period. The area west of the Ouse was covered by G. A. Holleyman's pioneering field survey of 1935-8.[1] He found nine sites and ten have been found since. The whole area mapped as Figure 1 contains 46 Romano-British sites (36 settlements and 10 burial sites) in an area of 76 square miles, giving a density of one settlement site every 2.17 square miles (518 hectares). Some areas, notably beside the Cuckmere Valley, have not been surveyed in sufficient detail and some sites must await discovery.

Over three-quarters of these sites are on spurs of downland, generally facing south and between 100 and 400 feet O.D. Three such settlements, Highdole, Telscombe—Site 15: Charleston Brow—Site 35: and Rookery Hill, Bishopstone—Site 28, have been partly excavated.[2] No stone buildings were found and tiles were little used, huts were apparently of wood or turf. The pattern of spur-top farmsteads surrounded by Celtic fields was established at Bishopstone in the Early Iron Age. The Newhaven site—No. 19, is distinguished in this settlement pattern by its low-lying position in the river valley. We may anticipate the conclusions of this paper by noting that it is also distinguished by stone buildings, probably those of a villa. Other buildings which are not of the basic downland type are Nos. 42-5 on the clays and sandstones of the Weald, and 29 and 37 on low ground beside the Ouse valley at Seaford. Of these: No. 43 appears to have been a stone building, possibly a small villa, and No. 29 has produced quantities of roof tiles. Number 37 is a fairly large settlement associated with the nearby Seaford Golf Course

[1] G. A. Holleyman, 'The Celtic field-system in south Britain: a survey of the Brighton District,' *Antiquity* vol. 9 (1935), pp. 443-54.

[2] G. A. Holleyman, 'An early British agricultural village site on Highdole Hill near Telscombe,' *S.A.C.* vol. 77 (1936), pp. 202-21. W. J. Parsons and E. C. Curwen 'An agricultural settlement on Charleston Brow near Firle Beacon,' *S.A.C.* vol. 74 (1933), pp. 164-180.
M. G. Bell, '*Bishopstone excavations 1968-1971—An interim report*,' University of Sussex Archaeological Society (Falmer 1972).

Roman cemetery—Site 38.[1] This is the only major Romano-British cemetery in the area. The distribution of the nine other burials or small groups of burials shows quite clearly that they were associated with specific settlements.

Newhaven parish has produced a number of finds of Romano-British material, most of them from the vicinity of the Iron Age hillfort on Castle Hill.[2] In 1852 the remains of a Roman stone building were found ' whilst cutting a drain across an upland meadow on the estate of W. Elphick, Esq., of Newhaven.'[3] No more precise location is given, and the Tithe Award for Newhaven dated 1841 shows that William Elphick owned several fields.[4] They included part of the site of the recent excavations. However, with an average elevation above O.D. of 5m. this can hardly be considered an upland meadow. Furthermore of the three coins found in 1852 two are outside the date range of our site. Apart from this the small number of finds discussed in the 1852 report are consistent with those from the present excavation. Drain diggers in the nineteenth century may have hit on part of the same site if it extends further uphill, or alternatively their find may represent a second Roman stone building in the parish.

THE EXCAVATIONS

On the Romano-British ground surface all features and flints forming structures were planned in detail. Each feature was sectioned and the sections are illustrated. Over most of Site 6 and the undisturbed parts of Site 1 finds such as nails, tiles, slag and window glass were individually planned (Fig. 13), in the hope that their distribution would provide additional data for the interpretation of activity areas or buildings. The finds were not plotted in the part of Fig. 13 shaded; here excavations took place before the period allowed for our work was extended. Despite this gap the distribution of nails on Site 6 does show an interesting correspondence with the other structural elements planned in Fig. 10. The distribution of artifacts on Site 1 is not figured here, it reflects a pattern of systematic clearance during the Antonine period, and is discussed below under Structure V.

The late nineteenth century buildings on Sites 1, 5 and 6 were on flat terraces made by cutting back into the hillside, with the result that on the west side of Sites 1 and 5 the Medieval ploughwash and Romano-British soil was totally removed, leaving only the bases of deep truncated features. Less terracing had been necessary on Site 6 where the Medieval ploughwash and Roman soil was preserved.

The enclosure ditch and wall

The Romano-British features appeared to be bounded to the north and east by a ditch, two straight lengths of which were found at right angles. They had the same basic stratigraphy and pottery sequence, and it is likely that they formed adjacent sides of a rectangular enclosure. The ditch had a V-shaped profile, splayed towards the top and with a gently rounded base. Its average width was 1.60m. and depth 1m. cut through the cover of Clay-with-Flints, and

[1] Site 37—V. G. Smith, 'An Iron Age and Romano-British site at Seaford,' in *S.A.C.* vol. 80 (1939), pp. 293-305.
Site 38—J. E. Price, ' On excavations in the camp, the tumulus and the Romano-British cemetery, Seaford, Sussex,' *S.A.C.* vol. 32 (1882), pp. 167-200.

[2] L. Field and C. F. C. Hawkes, ' Castle Hill' Newhaven,' *S.A.C.* vol. 80 (1939), p. 292; *V.C.H., Sussex*, vol. 3 (1935), p. 61; *S.A.C.*, vol. 112 (1974), p. 154.

[3] F. Spurrell, ' Roman remains discovered at Newhaven in 1852,' *S.A.C.* vol. 5 (1852), pp. 263-66.

[4] In East Sussex Record Office.

an average of 30cm. into the underlying Chalk. A dual function as boundary and drainage ditch is implied. Description is under site headings as stratigraphy and artifact content showed interesting variations on the three sites.

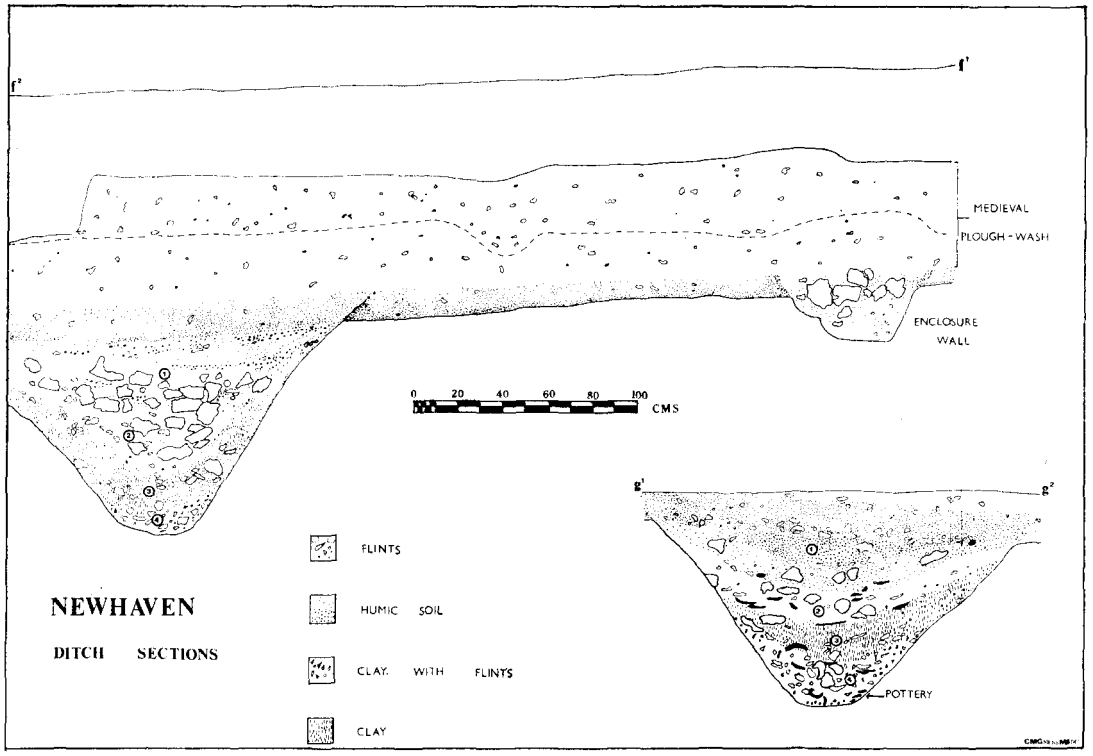

FIG. 9. Sections of the Romano-British enclosure ditch on Site 6. Pottery sherds are shown in solid black

The East Ditch on Site 6 (Figures 2, 9 and Plates IIIa and IV).

The primary fill, layer 4, was of Clay-with-Flints which had weathered from the ditch sides, most probably in the first few winters after it was originally dug. Generally speaking the primary silt contained few finds, but the northern 6 metres were exceptionally rich in large fragments of pot from which several vessels could be wholly or partly reconstructed. Overlying this was Layer 3, a brown clay soil containing flints and chalk. Probably this material was originally dug from the ditch and scattered back in from an adjoining bank of which no trace remained.

Layers 3 and 4 do not appear to be separated by any great period of time, sherds from both layers join and are considered as Pottery group i, for which Mr. Green suggests a Neronian-early Flavian date (60-80 A.D.). Associated samian ware suggests that the latest vessels in the group are of Trajanic or Hadrianic date. Layer 3 contained several sherds of a fluted glass bowl with rolled rim (Fig. 39.1); a triangular clay loom weight (Fig. 44.1), and several lumps of unfired Reading Beds clay.

Layer 3 was truncated by a recut of the ditch, the primary fill of which was Layer 2, a light brown soil with some flints. Near the north-west baulk this contained a high proportion of fired and unfired clay. The pottery is in Group iii (vessels 85-97). Mr. Green suggests that the recut is not substantially later than the initial fill and probably dates from the last quarter of the first century. The only small finds were two fragments of worked stone (Fig. 41.5 and 6).

The final ditch fill, Layer 1, accumulated in a depression of depth 20cm. in the top of Layer 2. Deposition had taken place at a time when the ditch was largely silted up, thus the rate of natural silting would, by this time, have been very slow, and material in Layer 1 may be somewhat later than that in Layer 2. Layer 1 is a dark black humic soil with a high content of charcoal and daub. This soil filled the interstices between lumps of flint and limonite concretions which had traces of mortar adhering to them, and were derived from the demolition of a building. In the northern 6m. of the ditch was a particular concentration of mortar, *opus signinum*, and painted plaster of Group 2 (Fig. 43). It is argued below that these were derived from the demolition of a bath house. The layer was particularly rich in tiles, 293 fragments (including all the pieces of roller stamped box tile), compared with 1 fragment from Layer 2 and 12 fragments from Layer 3. The pottery is discussed under Group viii for which Mr. Green suggests an Antonine date, which is supported by the samian evidence. This Antonine destruction horizon is also found in the ditch on Site 1, and in Structure V. It appears to represent demolition and levelling of the site prior to its abandonment.

The Enclosure Wall on Site 6 (Figs. 10 and 9, Plates IIIb, IV and VI).

Parallel with the enclosure ditch and 2m. to its south west was the foundation of a flint wall. It ran almost the length of the ditch but stopped 1.2m. from the north baulk. At its end was a large post hole, Feature 44. The wall was of carefully picked flints, average size 13 by 8cm. Beach shingle representing decayed mortar occurred in small quantities between the flints but the foundation was primarily of dry stone. Its foundation trench cut through post holes 18 and 38 of Structure I, which had evidently been levelled before the wall was built. Feature 44 was 1.05m. in diameter and 80cm. deep, it had taken a massive timber 53cm. in diameter packed with flints and broken tile. When the site was abandoned this valuable timber was removed and several more pieces of tile were deposited in the post cast.

The 16m. length of wall, with no directly associated structural remains except for Feature 44, seems certain to be an enclosure or courtyard wall. The massive timber at its terminus is likely to represent an entrance. A similar plan is seen, for instance, in the courtyard wall and entrance to the villa of Hambledon, Buckinghamshire.[1] An entrance in this position would explain the fact that in each of the four layers of the enclosure ditch by far the greatest quantity of finds came from the northernmost six metres. Tipping of rubbish is likely to have taken place on either side of an entrance. If this reasoning is correct, then the entrance was in this vicinity before the making of the enclosure wall, which appears to have been built when the ditch had silted to the top of Layer 3, and had ceased to serve as a boundary. Such a combination of enclosure ditch and wall is known surrounding the early villa at Ditchley, Oxfordshire.[2]

[1] A. H. Cocks, 'A Romano-British homestead in the Hambledon valley, Bucks,' *Archaeologia*, vol. 71 (1921), p. 141, plate XIII.

[2] C. A. Raleigh Radford, 'The Roman villa at Ditchley, Oxon.,' *Oxoniensia*, vol. 1 (1936), p. 24.

The East Ditch on Site 1 (Figs. 2 and 14).

The basic stratigraphy was similar to that on Site 6. The primary silt, Layer 4, contained pottery of Group ii (vessels Nos. 79-83) dated to the second half of the 1st century A.D. The primary fill of the recut ditch (Layer 2) was distinguished by quantities of white floor cement. The final fill was identical to the destruction level on Site 6. A short length of the ditch was uncovered by a contractor's trench for the north retaining wall of Southway. In this was found painted wall plaster of Group I. It was a plain cream plaster upon which three fragments had red lines and two other fragments had a black line and green dots respectively (Fig. 43). This group is perhaps from domestic living rooms in contrast to the possible bath house group from Layer 1 on Site 6. The coarse pottery, which is Antonine in date, is discussed under Group viii. Small finds included a bone spatula (Fig. 40.4), a fragment of bone pin, two pieces of lead waste, pieces of furnace lining, iron forging slag, and fragments of Mayen lava quern. Cut into the final fill of this ditch was a post hole, No. 72.

The North Ditch on Sites 1 and 5 (Figs. 2 and 14).

The ditch was truncated by terraces made for Victorian buildings, but where the profile was fairly complete it was similar to the east ditch. The primary fill of Clay-with-Flints contained only one illustrated sherd, No. 84. Overlying this layer was orange Clay-with-Flints and Chalk which evidently corresponds to Layer 3 of the east ditch; it contained pottery in Group iv (vessels 98-104). It could not be established with certainty whether the north ditch had been recut. The impression was that a thicker and homogeneous Layer 3 was directly overlain by a final fill very similar to that of the east ditch. The top layer did however contain rather less building stone. All layers became progressively less rich in finds towards the west, suggesting that in this direction we were moving away from the main area of dumping, and perhaps occupation. Pottery in the final fill is in Group viii. Finds included a coin of Antoninus Pius; an iron bucket handle (Fig. 40.7), and hobnails in the outline of a boot (Fig. 41.4).

THE BUILDINGS

SITE 6

Structure I (Figs. 10, 11, 13 and Plate IIIb)

A nucleation of 22 post holes (Nos. 17-38), of roughly comparable dimensions, covering an area of 4.3m. by 12m. and in four roughly straight and parallel lines, called one to four from south to north. Line one consisted of only four posts placed symmetrically with respect to the central four posts of the longer line two. The outer holes, 27 and 21, in line one were less massive than posts 25 and 23. Lines two and three converged slightly to the west. They consisted of roughly paired posts, except that posts 26 and 28 in line two were paired by post 31 in line three, post 17 had no pair. The fourth so-called line consists of only two posts forming a line parallel to lines one, two and three. Many of the post holes had casts of the original circular timbers of average diameter 15cm. The sections show that the post holes became shallower to the west. One cannot be certain that the original extent of Structure I has been found, any continuation to the west would have been removed by the foundations of Christchurch. Elsewhere holes may not have penetrated the Clay-with-Flints or have been obscured by an under-lying complex of Pleistocene landforms.

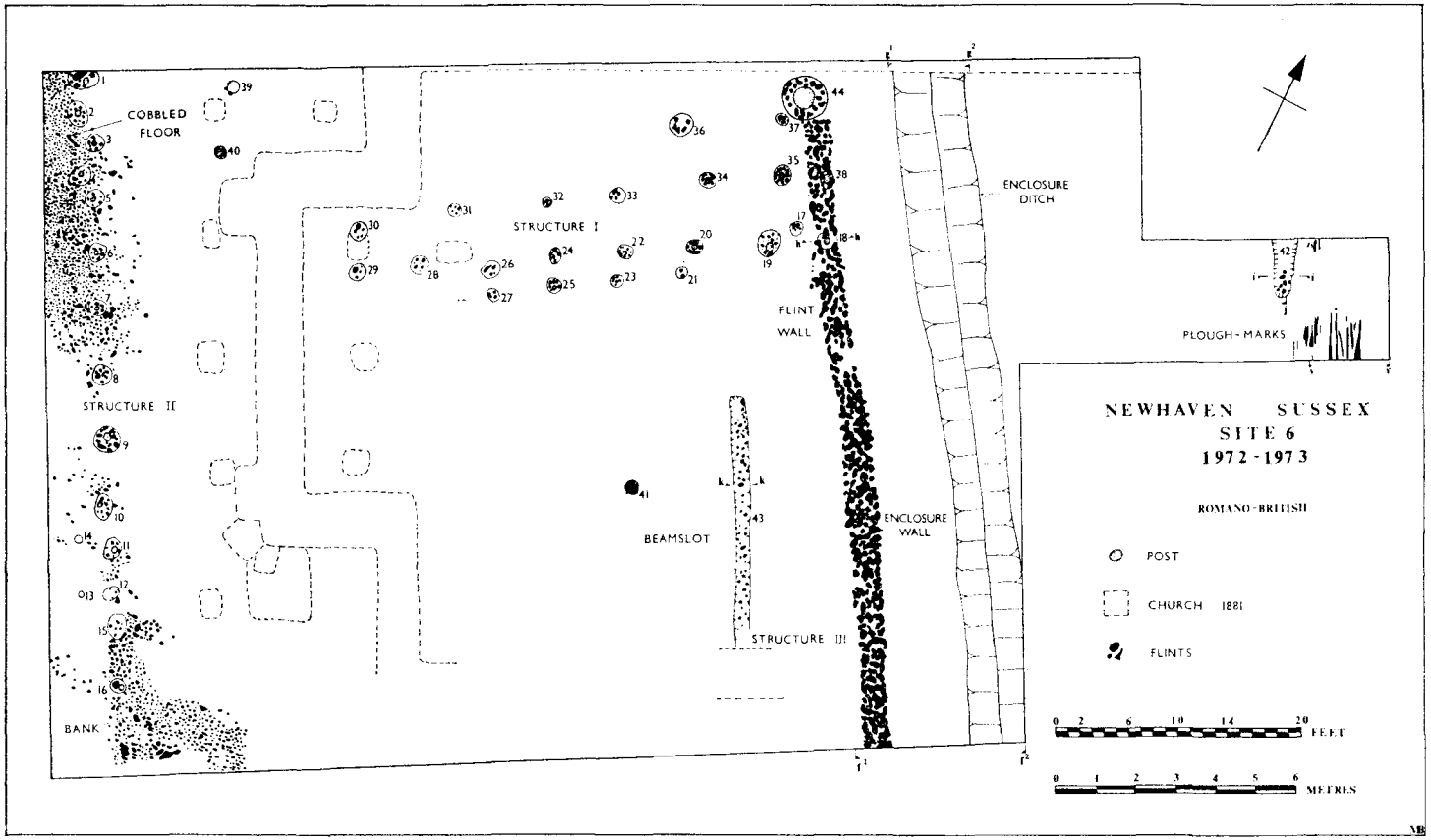

FIG. 10. Plan of Romano-British features on Site 6. Modern disturbances are shown by a broken line

Dating evidence rests on post holes 18 and 38 which were cut through by the shallow foundation trench of the enclosure wall (Section h). It was assumed above that the primary digging of the enclosure ditch was as a boundary which pre-dated the wall. Construction of the wall was after the ditch ceased as an effective boundary, but before the deposition of Layer 1. If this dating is accepted then Structure I belongs to the first phase of occupation on this site contemporary with the primary digging of the enclosure ditch, and dated to the Flavian and Neronian periods by coarse pottery from the ditch. The post holes themselves contained little to aid dating, sherds in Cooking Jar Fabric were found in holes 19, 24, 25, 30 and 34. A bronze plate, most probably a fitting from a box, was in the top fill of post hole 34 (Fig. 39.6). The west half of Structure I shows a clear nucleation of nails corresponding to that of post holes. No such nucleation was seen in the distribution of pottery, charcoal or daub, indicating Structure I did not have a domestic function.

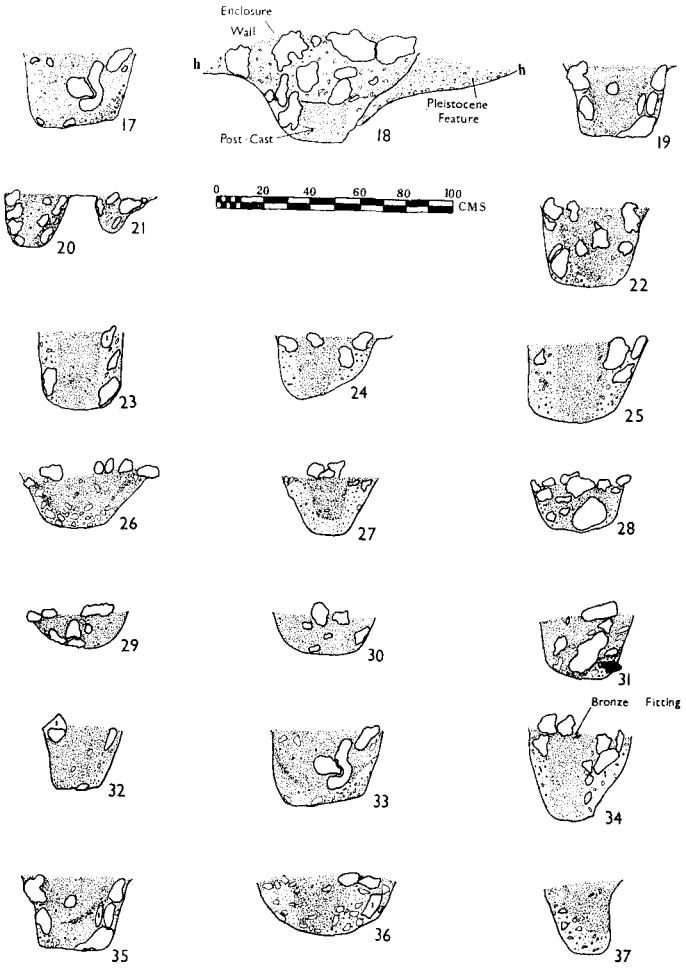

FIG. 11. Sections of post holes 17-37, all are members of Structure 1
See Fig. 12 for a key to feature fills

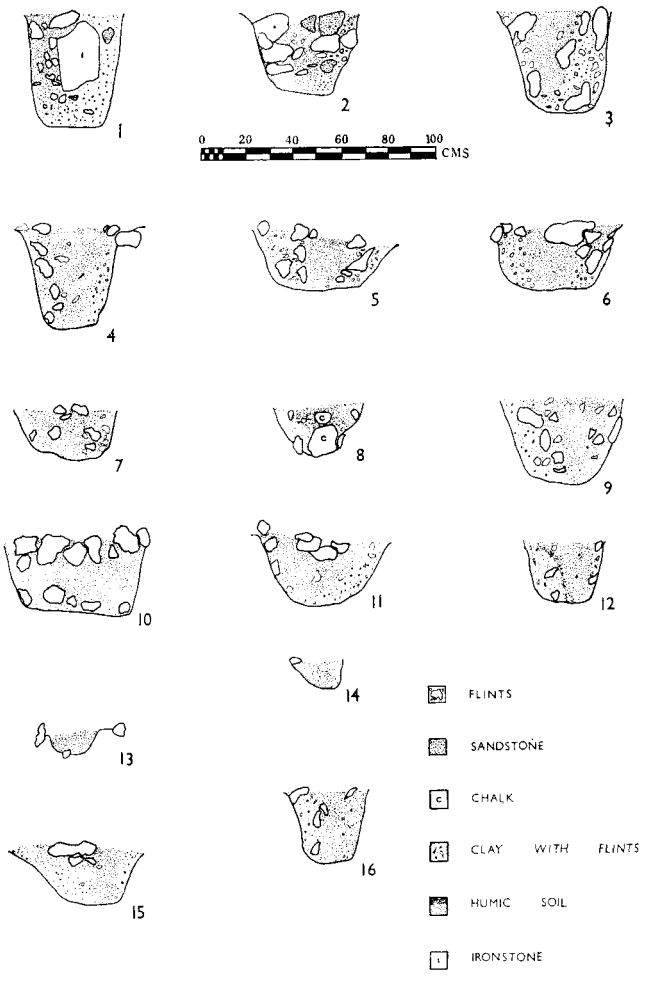

FIG. 12. Sections of post holes 1-16 which are all members of Structure II. The key is applicable to all other sections

Interpretation of Structure I must depend on whether the post holes planned represent the whole of the original building. If they do then it is perhaps a small wooden shed with the principles taken by the two central rows of paired posts. An alternative explanation assumes that some post holes have been lost or missed, and the structure could be a raised granary. That would account for the close spacing of sizeable timbers. Raised granaries with post holes rather than trench or stone wall foundations are known at Fishbourne[1] from the presumed military supply base of Claudian date, and at Hod Hill in the Claudian fort.[2] The Newhaven example is smaller than both and the post holes are less regularly arranged. If Structure I is a raised granary it must surely be a native copy.

[1] B. W. Cunliffe, *Excavations at Fishbourne*, vol. 1 (1971), p. 41.

[2] I. A. Richmond, *Hod Hill*, vol. 2 (1968), p.84, Fig. 46A.

Structure II (Figures 10, 12 and 13)

A line of fourteen post holes on the south west edge of Site 6 was exactly parallel to the enclosure wall and ditch. The line was 17.80m. long with no end or corner within the excavation. In most cases clear post casts showed the positions of timbers between 13 and 18cm. in diameter. The post casts are in a zig-zag line so placed that an intervening wall, perhaps of planks, could be inserted between alternate posts. Post 6 had a D-shaped section of diameter 13cm. and radius 9cm. The timber, presumably a split trunk, had its flat side inwards against the postulated plank wall. Further evidence for the wall supported by this line of post holes is the distribution of flints and artifacts. The northern 7.20m. of the line forms the edge of an area of laid flints interpreted as a cobbled floor. On the southern part of the wall line, flints are absent to the west but abundant to the east where they form a clear edge along the line of the wall. These flints were certainly not laid and are best explained as a low bank of soil and rubble which had been built up against the southern 7m. of the wall. The distribution of finds (Fig. 13) shows a nucleation of 71 nails in the area of the supposed bank, indicating that it may have been associated with some wooden structure of which no other trace remains. The virtual absence of nails over the northern area and west of the wall indicates that they were not used in the construction of the wall, which seems reasonable in view of the proposed method of construction. The two small post holes 13 and 14 west of the wall may be supports inserted where it had become unstable. Most of Structure II obviously lies outside the area excavated. The cobbled area in the northern part might be the interior floor of a large building, but the method of construction and the bank against its southern end are perhaps more in keeping with a fence or stockade.

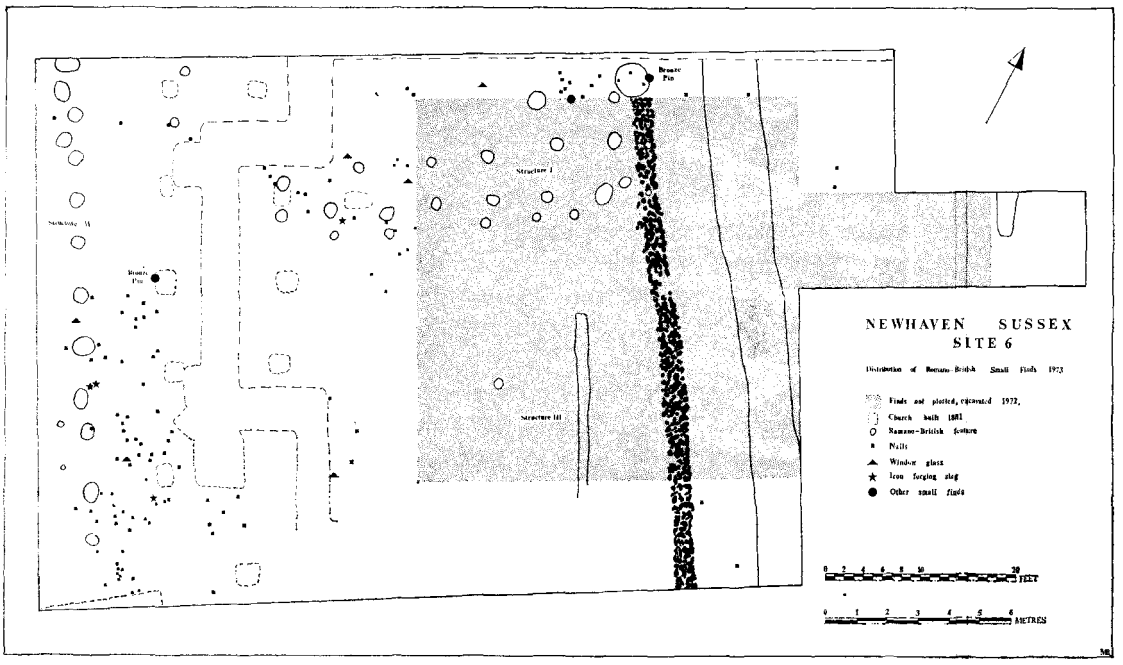

FIG. 13. The distribution of iron nails, tiles, window glass and other small finds on the Romano-British ground surface on Site 6. Positions were not recorded in the shaded area

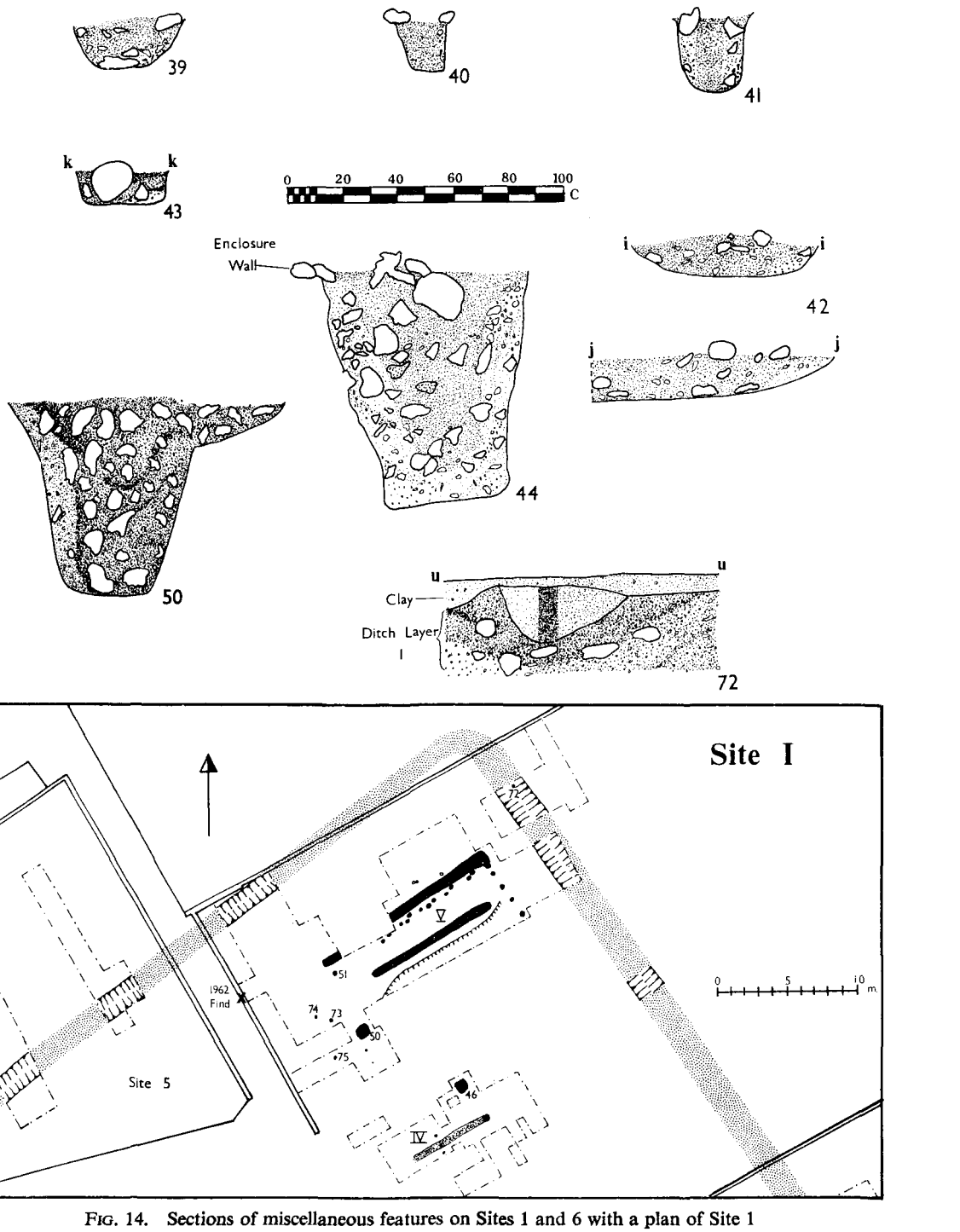

FIG. 14. Sections of miscellaneous features on Sites 1 and 6 with a plan of Site 1

Structure III and miscellaneous features on Site 6 (Fig. 10, 14 and Plate IV)

Structure III is represented by a beamslot, Feature 43; this had a rectangular cross section (k), and contained several flints. It was preserved for a length of 6.20m., but was obliterated at its southern end by Christchurch. The only finds were two pieces of tile and three body sherds in Cooking Jar Fabric. We can only assume that it represents part of a beamslot building which has left no other recognisable trace in natural. 2.40m. from the beamslot was post hole 41, which took a timber 10.5cm. in diameter, it had no clear associations. Similarly unassociated were post holes 39 and 40 in the north west corner of the site.

One feature, No. 42, has been found east of the enclosure ditch. This was a shallow gully 68cm. wide and 15cm. deep (Sections i and j). It contained some fragments of coarse pottery and a number of flints. One such flint projected well into the Romano-British soil and showed by heavy abrasion on its upper surface that the feature pre-dated the phase of ploughing represented by grooves in the surrounding loess (Fig. 18).

SITE 1

Structure IV (Figure 15)

This was in part of the site which had been considerably disturbed by Victorian terracing and school foundations. All that remained between two areas of disturbance was 11.07m. of wall trench (of which 3.68m. were badly disturbed) and some associated post holes. The trench was roughly rectangular in cross section (1-1), 56cm. wide by 15cm. deep. In plan the well preserved part of the trench is divisible into two distinct lengths. Post holes 45 and 47 were sunk respectively 30cm. and 20cm. below the base of the trench. Between them it had flints along its edges and had presumably taken a horizontal sleeper beam some 50cm. wide. West of post 47 the flints were more randomly arranged, and along one side of the trench was a series

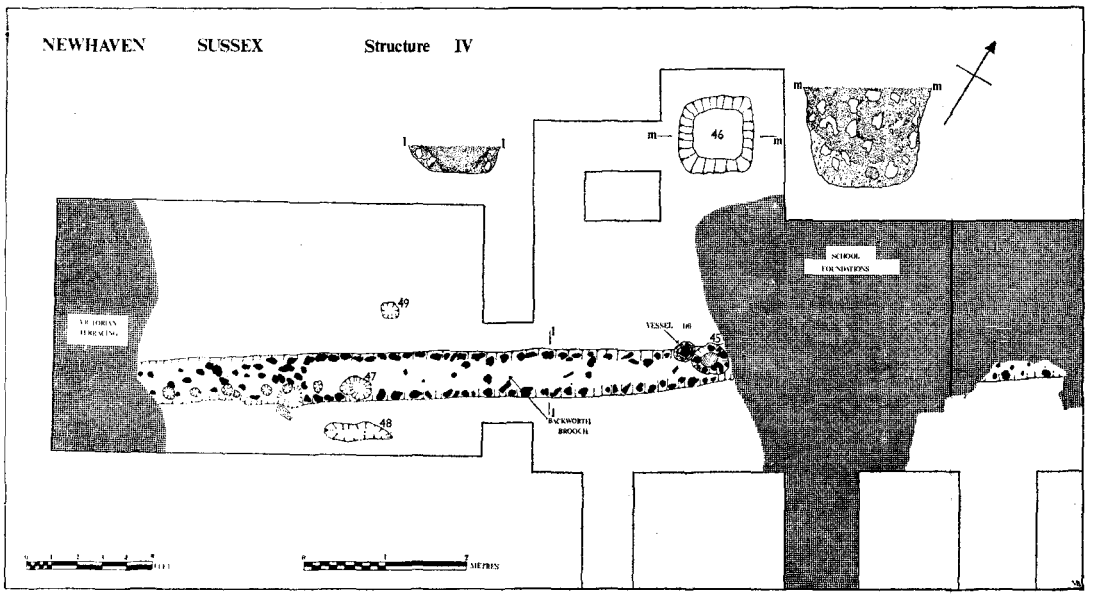

FIG. 15. Plan and sections of Structure IV and feature 46. Modern disturbances are shown by heavy shading

of stakeholes cut in its base. They were 15cm. in diameter, between 3 and 10cm. deep, and spaced at 30cm. intervals. Presumably they represent the vertical elements of a wattle and daub framework. The fact that these stakeholes were displaced to one side of the trench may imply that room was left for a horizontal sleeper beam of width 20cm. on the north side. Post holes 49 and 48 were respectively 9 and 15cm. deep, and are probably associated with the building.

Two different constructional techniques are used in Structure IV, wattling set in a trench and sleeper beams; both are common in early Romano-British wooden buildings.[1] That two techniques were used may perhaps be simply explained by the fact that an entrance lay between post 45 and 47 where there was a sole plate below a door. In any case the main structural elements of the building were vertical posts which supported the roof, and between which was an infilling of wattle and daub. A similar method of construction is seen at Fishbourne in the period 1B, buildings 4 and 5.[2]

Despite the fact that little of the Romano-British ground surface remained in this area a surprising amount of domestic debris was associated with Structure IV. Pottery Group v came from the trench, and included vessel 110 found crushed beside post hole 45. The coarse ware is of Late Flavian or Trajanic date and a blue enamelled brooch of Backworth type (Fig. 39.3) is dated by Hull to the late 1st or early 2nd centuries A.D. The samian is of mid-second century date and indicates that the building may have been demolished at the end of the first phase.

Structure V (Figs. 16 and 17 and Plates Va and Vb)

This was the most substantial of the structures excavated, even so all that was preserved was the north east corner of a building which may have been much larger. Features on the west side of the site had been truncated or obliterated by terracing to make a school playground, and the southern part of the structure was removed by contractors before it was possible to excavate.

Sealed by tread on the floor of Structure V was an irregular shaped hole 2.5m. by 1.7m. and 18cm. deep. It is probably a hole left by the removal of a tree or shrub when the site was being cleared. Postdating this are ploughmarks of Area I discussed below.

The building erected on this site was a curious marriage of stone and wooden architecture. The north wall had a row of vertical posts that would have supported the roof but outside this was a stone wall. The east wall is entirely of timber, and an internal wall has a foundation of flint. The line of post holes inside the north wall took vertical timbers of diameter 15-20cm., buried an average of 40cm., and well packed with flints. Two phases are represented by the line, the post casts of the earlier timbers are often somewhat obscured by the packing of the later post holes (e.g. 60 and 61). The earlier line was of posts 52, 54, 56, 58, 60, 61 and 63. They were replaced by a line consisting of posts 53, 55, 57, 59, 62 and 63, the latter occurring in both series. As this was the corner post a replacement may have been in the same hole. In addition No. 55 was of two phases, suggesting the replacement of an individual timber at some time.

[1] I. A. Richmond, ' Roman timber buildings ' in E. M. Jope ed., *Studies in building history*, (1961), p. 21, Fig. 1.3.

[2] B. W. Cunliffe (1971), op. cit., p. 47, Fig. 12.

Twenty centimetres outside this line of posts was a well-built stone foundation, 80cm. wide (Sections r and q). The foundation consisted of three courses each one flint thick, separated by a thin band of soil. Geological materials used in the construction of this wall and in the post packings are discussed in a separate section below. All the indications were that the wall was contemporary with the later line of posts. Post hole 63 was in an L-shaped continuation of the wall (Section p^1-p^2), but this relationship was somewhat obscured by a Post-Medieval feature which had removed its east side. Post 62 was connected with the wall by a shallow trench which indicated that the wall trench and post pits had been cut as part of a single scheme.

The west wall consisted only of holes for timber verticals. It showed no sign of the reconstruction noted in the north wall, unless the two smaller timbers, 64 and 66, were replaced by the larger timbers 65 and 67. 2.2m. from the north wall was an interior wall 50cm. wide (Section s). In places only a single course of flints was preserved and this wall was less well constructed than the exterior wall. It petered out to the west where it was obliterated by recent terracing. The internal wall terminated 1.2m. from the east wall, presumably for a doorway. Beside this was Feature 70, a shallow post seating, one side of which was formed by a body sherd of an amphora lying at 45°. A narrow, poorly founded, wall such as this can scarcely have been carried up to any great height. Probably it was a dwarf wall upon which was a timber framed partition. The verticals in this framework were carried down to post emplacements like 69.

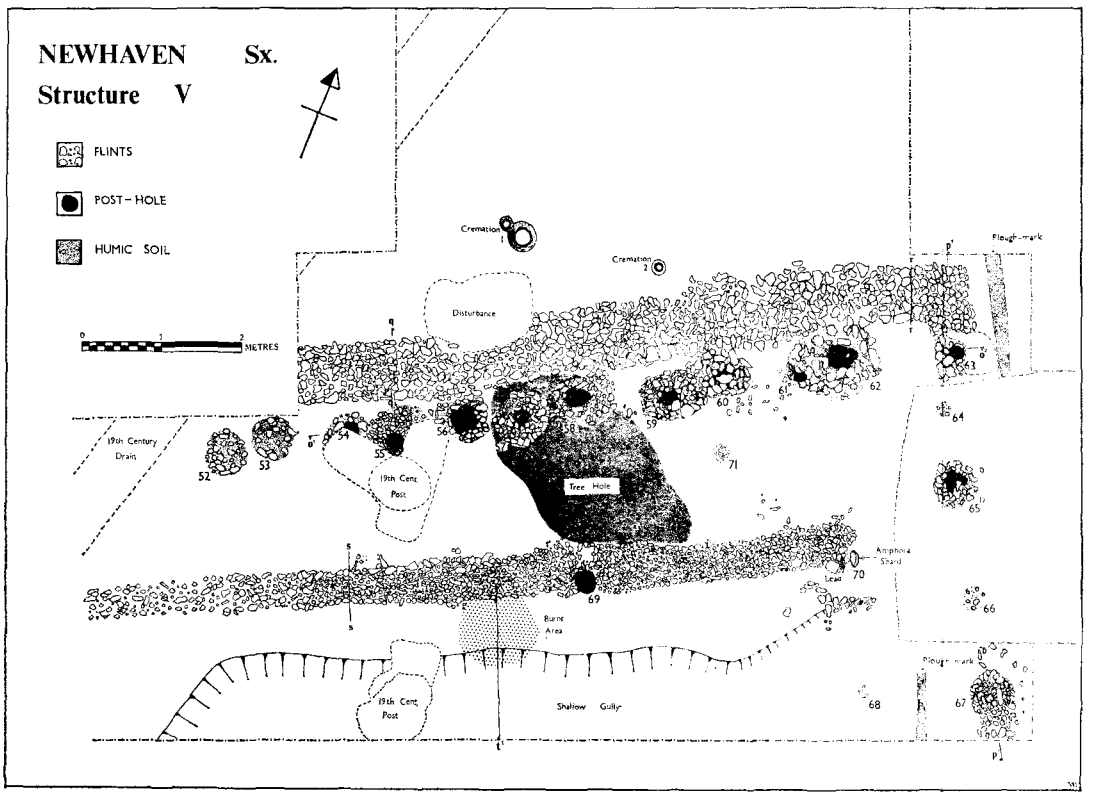

FIG. 16. Plan of Structure V

Inside Structure V was a gully 30cm. deep which appears to have been in use during the life of the building. It was filled with dark earth, flints, limonite concretions, cement, tiles, daub, charcoal and domestic debris probably from the demolition of this and adjoining buildings. A red enamelled flat brooch and a bronze ring (Fig. 39.4 and 8) lay among the demolition debris. Overlying the gully fill and the interior wall was an area of burnt clay and charcoal (Section t). It coincided with a circular nucleation of 24 nails and fragments of iron forging slag. The area probably represents the site of a bonfire made during the systematic clearance of the site. Alternatively it may represent a period of activity, perhaps iron forging which post dated Structure V.

All the features which can positively be assigned to the Structure V complex are shown in Fig. 16. In the badly disturbed area to the west (Fig. 14) there were two features, post hole 51 and a short adjoining length of wall; these are probably a continuation of the north wall of Structure V. If so the wall was at least 14.6m. long.

Interpretation of the structural remains hinges on the character of the north wall. It has been suggested that the line of posts is contemporary with the wall, but it is difficult to see why both should have been required, or what form the external wall would have taken. Two hypotheses may be considered. The first assumes that despite observations to the contrary

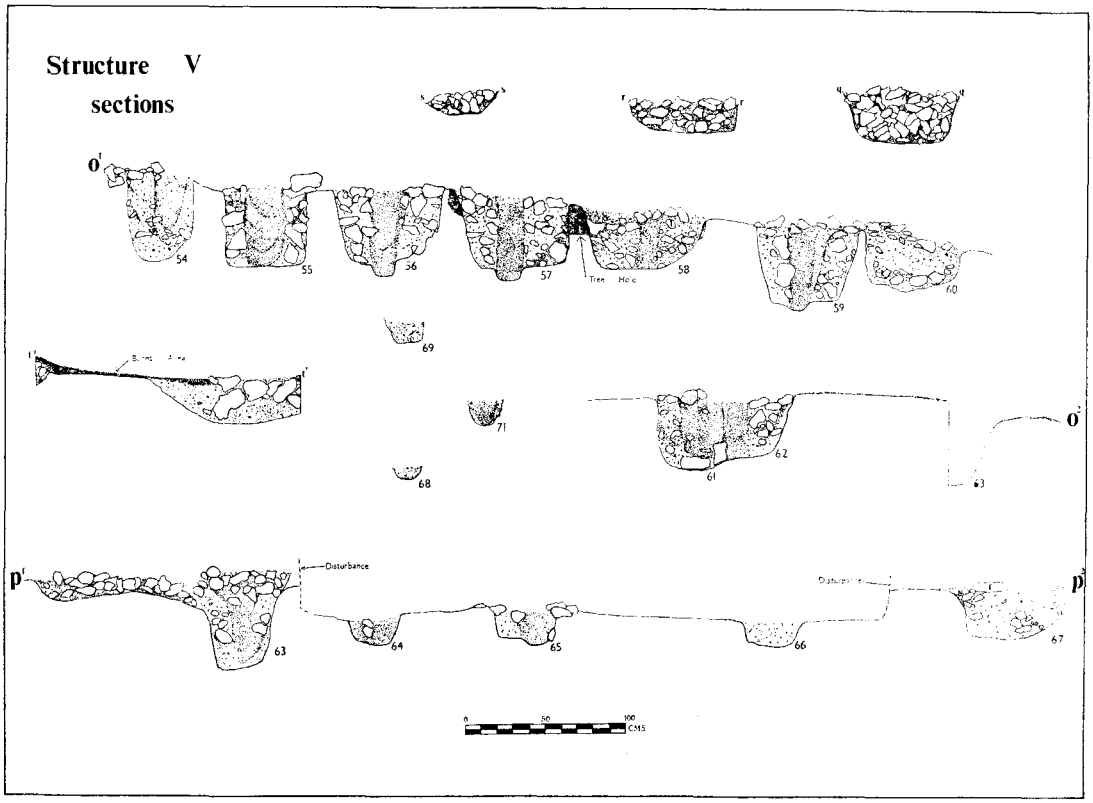

FIG. 17. Sections of post holes and walls from Structure V

the two phases of post holes and the wall represent successive phases of a building on an almost identical plan. The second possibility, which takes best account of observations made on site, is that a first phase, entirely timber building, is represented by the earlier line of posts. In a second phase the same basic structure was rebuilt, using the later line of post holes, and the stone wall was added to the north side. The relationship of the north wall to the enclosure ditch suggests that the former may be a continuation of the courtyard wall found on Site 6, in which case it may have been added in a rebuilding of Structure V which coincided with the making of the enclosure wall. It is quite usual to find that auxiliary buildings in villa courtyards are constructed against the courtyard wall, which often forms one of the walls of the building.[1] The internal wall made the north part of Structure V into an unusually long narrow room, somewhat reminiscent of the ' corridor ' made on building C at Gadebridge Park.[2]

Functionally Structure V is presumably an auxiliary agricultural building. It had a dirt floor and the shallow gully is probably an internal drain such as would be expected in a cattle byre. The floor of the gully slopes downhill to the east and fans out to discharge through an opening in the east end of the building into the enclosure ditch beyond. The building in its various phases seems likely to have stood for the duration of occupation on the site. Thus the primary, entirely wooden phase, is contemporary with Layers 2-4 of the enclosure ditch. The second phase was associated with the making of the enclosure wall. Fortunately the wall trench contained a small quantity of pottery (Group vi) which included a large fragment of stamped mortarium, parallels for which are in the date range 110-150 A.D. The destruction level in the gully is dated by coarse pottery (Group vii) and samian ware to the late Antonine period contemporary with Layer 1 of the enclosure ditch.

The Cremations (Fig. 37)

Just north of the outer wall of Structure V were two inurned cremations. Both were in shallow holes just large enough to take the urns. The Structure V destruction level appeared to postdate Cremation 1. This was in a hole cut through the Romano-British soil and 15cm. into Clay-with-Flints. It consisted of two vessels (Fig. 37, 1a and b). In both cases they were broken and only the bases remained, the rim and part of the body had been removed earlier this century by a water pipe trench. The cremated bones were in a larger vessel, with it was a subsidiary vessel, a small grey ware jar, which did not contain any bones.

Cremation 2 was 1.4m. from the first in a single intact pot. This was a spherical poppy-head beaker (Fig. 37, 2a). In addition to the cremated bones it contained a melon bead in blue glass and an annular dark green bead (Fig. 37, 2b and c). The two vessels found in 1962, which led to the discovery of this site, are also likely to have come from a cremation. Their findspot is approximately 14m. west-south-west of the above cremations (Fig. 14). The five cremation vessels are discussed at the end of the pottery report below.

The dating and stratigraphic position of these cremations suggests that they are part of a small cremation area associated with the settlement. It has already been noted that the distribution of Romano-British burials on the downland shows them to be related to specific nearby downland farmsteads (Fig. 1).

[1] R. Hanworth, ' The Roman villa at Rapsley, Ewhurst,' in *Surrey Archaeological Collections* vol. 65 (1968), Building II, p. 23, Fig. 3.
D. S. Neal, ' *The excavation of the Roman villa, Gadebridge Park, Hemel Hempstead 1963-8* (1974), Buildings B and C, Figs. 20 and 22.

[2] D. S. Neal, 1974, op. cit., Fig. 22, p. 35.

The Cremated Individuals by H. B. A. Ratcliffe Densham, M.B., B.S., B.Sc., M.R.C.S., L.R.C.P., F.S.A.

Cremation 1. The cremation had been moderately efficient but the fragments of bone had been badly broken when they were packed into the urn. Forty pieces were identifiable, but were mostly too small and disturbed to convey much information. A single individual was represented, a young adult, very probably male.[1] No surviving fragment of joint surfaces showed any wear or pathology. The individual was not very big boned.

Cremation 2. Tiny fragments of cremated bone belonging to a human infant. Only a few pieces of skull, rib and unspecified shaft of long bone could be identified. An almost complete milk molar tooth, apparently on the point of eruption was probably a ' d ' two year old one. In this case the child was probably eighteen months to two years old at death. It is possible that the large beads might have been swallowed by a teething child and contributed to its demise by choking it.

Miscellaneous Features on Site 1 (Fig. 14).

The features discussed in this section are individual post holes which cannot be related with certainty to any specific structure. With the exception of Feature 72 they were all truncated by recent terracing, and in areas badly disturbed by Post-Medieval buildings.

Feature 46. A large square post pit of sides 76cm. and depth 58cm. It contained vessels 125 and 126 and a lead offcut (Fig. 40.1).

Feature 50. A large square post hole of sides 60cm. and depth 83cm., carefully packed with large flints round the post cast.

Features 46 and 50 are similar and may belong to the same building, however so little remains that it would be unwise to say more about its nature.

Feature 73. A small post hole packed with flints which had taken a timber of diameter 14cm.

Feature 74. A small post hole with a post cast of diameter 10cm.

Feature 75. A post hole with a post cast of diameter 15cm. After removal of the post seven fragments of coarse ware had fallen into the hole.

Feature 72. The only feature from the excavations which can be dated as later than the Antonine destruction level. This post hole was cut into the top layer of the enclosure ditch. The post pit was a neat rectangle, and in its centre was the hollow cast of a timber 13 by 9cm. The hole was sealed by 10cm. of stiff orange clay above which was Medieval hill wash (Section u).

THE PLOUGHMARKS

(Figure 18)

In two areas of the site plough grooves were visible on the surface of natural. In both cases they ran in one direction only. The two areas originated separately and their marks are of different dimensions.

Area I: This was outside the enclosure ditch on Site 6. The grooves were visible at the base of the Romano-British soil where they cut into underlying Pleistocene loess (Fig. 3). Groove width varied from 2.5cm. to 15cm., but it was often impossible to distinguish a single wide groove from an agglomeration of smaller grooves. The majority were about 5cm. wide. In section they appeared to be U-shaped with a flat bottom. Assuming that the marks were cut from the top of the Romano-British soil, the plough reached a total depth of about 25cm. The visible marks, which are illustrated, only represent points at which the plough cut deep enough to penetrate the loess, their plan suggests that they are part of a palimpsest produced by numerous ploughings. At least one groove had a sharply pointed V-shaped end, presumably the point at which the share was raised from, or pressed down into, the subsoil.[2]

The ploughmarks are considered to be contemporary with the latter part of the Romano-British occupation on the site for the following reasons:—

(i) The groove fill contained specks of daub, charcoal and shingle, suggesting a date contemporary with or later than the Romano-British site.

1 Calvaria 5.7-7.5mm. thick, all surviving sutures open. One tooth root broken off in life. Two with canals closed at tips. Femoral shaft 5.5-7mm. thick and not pilastered. Humeral shaft 4mm. thick. Tibial shaft 5-7mm. thick, strongly platymetric and not much bowed.

2 V. Nielsen, ' Iron Age ploughmarks in Store Vildmose, North Jutland,' *Tools and Tillage*, vol. 1 (1970), p. 153.

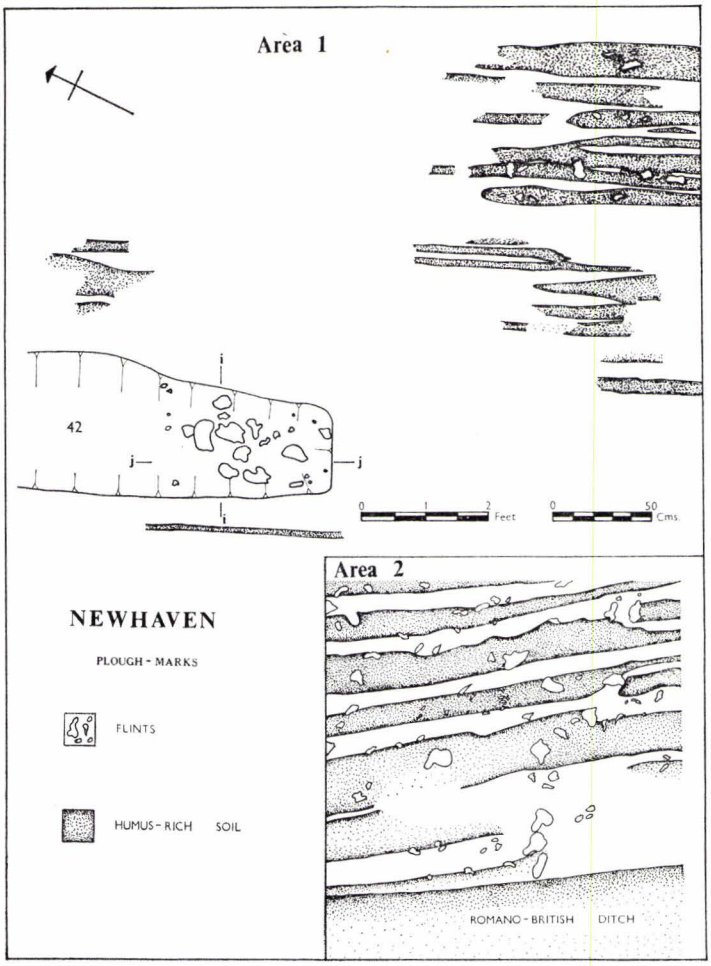

FIG. 18. Plough-marks. Area 1 is on Site 6 and of Romano-British date. Area 2 is on Site 1 in a Pre-Roman or Early Romano-British context

(ii) They were not found west of the enclosure ditch, suggesting that the ditch was the boundary of cultivated land around the settlement.

(iii) A flint projecting from feature 42 showed, on its upper surface, signs of intense wear as a result of the repeated passage of the plough.

(iv) Medieval ploughing, responsible for the burial of much of the site below 1m. of plough-wash, did not penetrate to the base of the Romano-British soil. Walls in that soil showed no signs of dragging or disturbance.

Accordingly the conclusion must be that the marks are contemporary with the enclosure, and that the area ploughed was a narrow strip between the enclosure and the Ouse river cliff. Observed sections and nineteenth century cartographic evidence (see above) have fixed the position of that cliff on the west side of Chapel Street, giving a field width of between 20 and 25m.

Area II: This was on Site 1 in the north east corner of the Romano-British enclosure. A small area 2m. square was well preserved, but slight traces of other marks were noted during the excavation of nearby Structure V (Fig. 16). These demonstrated that the marks pre-dated the building of Structure V probably in the first century A.D. These marks had an average width of 15cm. They were incised an average of 4cm. into the loess apparently with a U profile and flat bottom. Some of the marks planned may have been composed of several separate grooves which had run together.

Discussion. Both areas of ploughmarks run in only one direction, which is approximately along the contours. Similar small areas of single directional grooves are known from Romano-British contexts at Latimer[1] and Gadebridge Park,[2] both villa sites. Such marks are in contrast to areas of cross-ploughmarks known in contexts ranging from Neolithic to Romano-British.[3]

GENERAL DISCUSSION OF THE ROMANO-BRITISH SITE

(Figure 2)

Dating evidence from pottery and artifacts is in general agreement that the site was occupied throughout the second century A.D. The extensive coarseware assemblage suggests a beginning in the Neronian/Early Flavian period. Only a small number of samian vessels reached the site in the first century and, as Mr. Detsicas points out, the presence of only two South Gaulish sherds would tend to indicate a beginning during the closing years of the first century. Until we have detailed studies of other contemporary coarse and samian ware assemblages from the area, all that can safely be concluded is that occupation began some time during the second half of the first century.

The primary phase of occupation is represented by material in Layers 3 and 4 of the ditch. The latter is likely to have surrounded a rectangular enclosure within which there were buildings. Structure I, a possible granary, Structure IV, and the first phase of Structure V, are of this period; so also may be Structures II and III, which lack clear dating evidence or stratigraphic associations. A nucleation of pottery in the ditch on the north edge of Site 6 is taken as indicating an entrance hereabouts. The first century pottery assemblage is an interesting combination of manufactured Romano-British wares, developed Belgic forms, and local ultimate Iron Age types. There is no evidence that the latter two are any earlier than the Romano-British material with which they were found, they are certainly no more abraded. Numerous joining fragments of " South Eastern B " type vessels leave no doubt that these were in use at this period.

A second phase is tentatively dated to the first half of the second century A.D. It is marked by the demolition of Structures I and IV, and the building of an enclosure wall over the east end of Structure I. This wall was parallel to the ditch, and 2m. from it. By this time the ditch was silted to the top of Layer 3, and the wall replaced it as an enclosure round the site. A large post-hole at the east end of the enclosure wall marks the entrance already noted in the primary phase. Probably contemporary with the building of the enclosure wall was the second phase of Structure V. Information about other structures of the second phase comes in the

[1] K. Branigan, *Latimer*, Chess Valley Archaeological and Historical Society (1971), p. 60.
[2] D. S. Neal, 1974, op. cit. p. 42.
[3] P. J. Fowler and J. G. Evans, ' Plough marks, lynchets and early fields,' *Antiquity*, vol. 41 (1967), pp. 289-301.

form of building rubble from a later destruction horizon. A bath-house is indicated by waterproof plaster of Group II, four fragments of which are from an apsidal plunge bath. Box flue tiles, presumably from this building, include roller-stamped examples, known elsewhere from early second century contexts (see Tiles below). It is likely therefore that the building of the bathhouse coincided with that of the enclosure wall and the second phase of Structure V. Demolition debris probably derived from a main dwelling house includes painted wall plaster of Group I. Either the bathhouse or the dwelling house could have produced the roof and floor tiles, window glass, floor and ceiling cement. Quantities of building stone, bearing traces of mortar, show that parts at least of these buildings were of stone.

It is on the basis of this demolition debris, the buildings excavated and the evidence of economic activities discussed below that the site is identified as a small early villa. The finding of an entrance does enable us to speculate about the overall plan of the site and the location of the main dwelling. The entrance is likely to have been in the centre of one side of the rectangular enclosure, and the main dwelling house probably stood opposite. If this is the case then it lies in the backyards of The Volunteer Inn and other premises on the west side of South Road. Elsewhere around the periphery of the enclosure were located auxiliary buildings of which Structures I-V appear to be examples.

Throughout the period of occupation the same basic plan was adhered to. There is no evidence of dramatic changes in the economy or status of the site, despite the fact that the stone buildings, and most of the samian ware, are of second century date. The conclusion must be that the small villa, for which we have clear evidence in the second century, began life during the second half of the first century. This is not surprising in view of the fact that Sussex is an area unusually rich in first century villas, presumably as a result of the favourable political and economic climate in the client kingdom of the Regni.[1]

In the late second century A.D. all the buildings were systematically demolished and their rubble was used to in-fill features such as the enclosure ditch, and the gully in Structure V. After this the site was abandoned, and only a few sherds of pottery found their way on to the site during the third century. It may be that occupation shifted to the 'upland meadow' where traces of a villa were found in 1881.

THE SITE'S ECONOMY

General Discussion (Figure 19)

Economic activities are evidenced by the remains of crops grown, and animals raised; the interpretation of the structures and artifacts and an appraisal of the agricultural potential of the site's environs. On the analogy of Medieval farms and villages in the locality it is reasonable to assume that the site had an immediate catchment area of radius some 2km.[2]

Arable agriculture took place prior to the laying out of the enclosure in the Neronian/Flavian period, as shown by ploughmarks of Group 2 pre-dating Structure V. The ploughmarks of Group 1 appear to represent a field outside the enclosure, suggesting that it may have

[1] B. W. Cunliffe, *The Regni* (1973), p. 74.

[2] A. Ellison and J. Harriss, *Settlement and land use in the prehistory and early history of southern England—A Study Based on Locational Models*, in D. L. Clarke, ed., *Models in Archaeology* (1972), pp. 911-962.

been surrounded by arable land. Carbonised seeds show that the crops grown were bread wheat, spelt, barley and perhaps rye. Structure I has been tentatively interpreted as a raised granary, indicating that considerable quantities of grain may have been stored on site. The most fertile arable lands are the chalk downland soils which occur on the periphery of the site's likely catchment. The ploughmarks show that Clay-with-Flints soils in the immediate vicinity were also tilled, but this probably does not apply to the much heavier and poorly drained Eocene clay soils.

Pastoral activities are indicated by Structure V, interpreted as a byre for cattle, and by the fence, Structure II, which is probably part of a stock compound. The animals represented were, in order of decreasing importance, cattle, sheep, pig, dog, horse, domestic hen, deer and cat. The minimum number of animals is 76, and the percentage of that number represented by each species is shown graphically in Figure 19. It is compared with results from downland farm sites at Bishopstone and Slonk Hill, Shoreham.[1] The predominance of cattle at Newhaven is in contrast to the downland sites where sheep were more numerous. The waterless downs were better suited to sheep, whereas a villa situated in a river valley, and provided with byre accommodation, was capable of supporting a larger head of cattle. It is likely that the Eocene clays were exploited as a source of rather poor quality pasture.

Agricultural produce was supplemented by molluscs collected on the seashore and in the estuary. Some at least of the sheep were presumably kept for wool, and the loomweight shows that weaving was practised. A smithy produced iron objects worked from blooms that are likely to have been smelted in the vicinity from a local outcrop of ironstone. Vessels in ' Cooking Jar Fabric ' were probably made locally, but their bonfire firing need have left no recoverable trace. Basic productive activities like smithing, weaving and potting were undertaken on a small scale at Newhaven and on the downland farms. They probably met a demand generated within the sites themselves rather than providing a tradeable surplus. The chief commodities for the external market appear to have been grain and perhaps meat.

It is an enigma that the villa is situated in one of the least potentially fertile parts of the area mapped in Figure 1. To the east is the flooded and marshy Ouse valley, and the hill to the west is capped by an outcrop of tenaceous Eocene Clay. So infertile and poorly drained is the latter that even today large areas are covered with gorse and scrub. Though the settlement was first and foremost a farm, proximity to the Ouse estuary and mouth seems to have been the major factor governing the choice of site. This offered the potential for communication both within the Ouse basin (see geological resources below) and with external markets. We may speculate that such a site served as something of a centre for the numerous small downland farms located in its more fertile hinterland.

The economic and environmental evidence

During excavation a specific attempt was made to obtain a range of floral and faunal samples which could be used as a guide to economy and environment. Samples of carbonised grain, charcoal, molluscs and small bones were extracted from soil samples with a water sieving device.[2]

[1] I am grateful to Mr. R. Hartridge for permission to quote the Slonk Hill data; the animal bone report was by Mrs. P. Sheppard.

[2] This was built by W. H. C. Bell, to whom I am grateful. For a similar sieve see: D. H. French, ' An experiment in water sieving,' *Anatolian Studies*, vol. 21 (1971), p. 59.

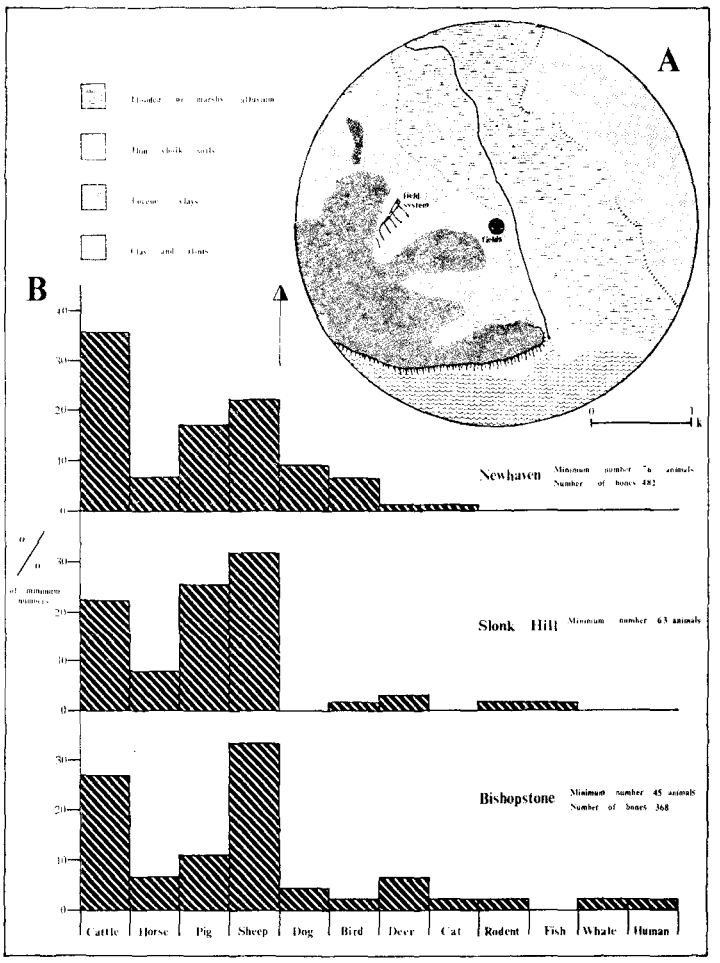

FIG. 19. The site's economy and environment. (A), Soils within a radius of 2km. (B), Histograms of animals present expressed as a percentage of minimum numbers. Newhaven is compared to Slonk Hill and Bishopstone

The mesh size used was 1mm. The sieve enabled large samples of soil to be run during the excavations. The material was sorted, packed and dispatched to specialists whilst digging was in progress. Plant remains from soil samples are seeds, preserved by carbonisation, which were lying on the ground surface at the time when the layer which contained them was deposited. Plant remains were also encountered in tiles and pottery; in the former they were deliberate inclusions as a temper, in the latter case they seem generally to have been accidental. Impressions and remains in tiles and in some pots, not made on the site, should not be regarded as evidence of this site's economy. All the animal bones (482) were saved and analysed; larger scale sieving for small bones would perhaps have produced greater numbers of birds, fish and small mammals.

The animal bones.[1] (Figure 19 and Table II) by Alison Gebbels, B.Sc.

Table II. Frequency chart of animal bones, prepared by Alison Gebbels.

Newhaven	Cattle	Horse	Pig	Sheep	Dog	Bird	Deer	Cat	Total
skull	—	1	1	2	6	—	—	—	10
mandible	28	—	13	22	3	—	—	1	67
vertebrae	13	1	1	11	11	1 coracoid	—	2	40
pelvis	3	2	—	4	5	—	—	1	15
humerus	10	—	1	1	2	—	—	1	15
radius	3	—	—	5	3	3	—	—	14
ulna	3	—	—	2	5	4	—	2	16
scapula	12	6	4	2	3	1	—	—	28
metacarpal	6	1	1	3	—	2	—	—	13
carpals	—	—	—	—	—	—	—	—	—
femur	4	1	—	—	7	1	—	1	14
fibula	—	—	—	—	1	—	—	—	1
tibia	6	3	1	11	3	6	—	1	31
patella	—	—	—	1	—	—	—	—	1
metatarsal	20	4	—	4	1	6	—	—	35
talus	1	1	—	—	—	—	—	—	2
calcaneum	1	—	—	—	1	—	4	—	6
phalanges	20	5	—	12	11	—	1	10	59
ribs	16	1	8	1	—	—	—	3	29
U. incisors	6	1	—	4	—	—	—	—	11
canines	—	—	—	2	2	—	—	—	4
premolars	8	—	1	5	—	—	—	—	14
molars	15	—	1	10	—	—	—	—	26
L. incisors	1	3	1	—	—	—	—	—	5
canines	—	—	—	—	2	—	—	—	2
premolars	—	—	1	5	—	—	—	—	6
molars	2	—	1	12	—	—	—	—	15
astragalus	1	—	—	—	—	—	—	—	1
horn core	2	—	—	—	—	—	—	—	2
	181	30	35	119	66	24	5	22	482
% excluding ribs	36.42	6.40	5.96	26.04	14.56	5.29	1.10	4.19	99.96
Min. no.	27	5	13	17	7	5	1	1	76
% based on min. no.	35.52	6.57	17.10	22.36	9.21	6.57	1.31	1.31	99.95

GROUP I—From layers two to four of the enclosure ditch and the postholes of Structure I:—

Minimum numbers	Cattle	Sheep	Pig	Horse	Dog	Bird	Deer	Cat
	20	15	11	4	3	3	1	1

CATTLE—The age structure was calculated from the mandibles and showed a predominance of young adults approximately two years old. Two individuals showed considerable tooth wear and were at least four years old. One individual was 1-2 years and there was a calf. The major long bones were mostly represented, astragali were absent and there were few loose teeth despite the fact that the latter were well represented in sheep. No particular selection of joints seems to have been operative. Some metatarsals showed signs of cutting, just leaving the distal or less often, the proximal ends. This appears to indicate both butchering and consumption of the carcases on site.

SHEEP—The age structure indicates animals of about two years, young adults at their most productive meat value. Long bones were not fully represented in this group; however a proportion of lambs killed were represented by long bones indicating their home consumption. Where long bones are present they are mainly shafts left after the removal of marrow.

PIG—The age structure included an adult of two to three years, a juvenile under two years, and five individuals showing full dentition but with little tooth wear, therefore about two years old. Also present was an aged individual over five years, another about one year and a piglet of a few months. Few parts of the post-cranial skeleton were present in comparison with mandibles and teeth, suggesting that some meat was exported from the site.

[1] For a fuller discussion see: A. Gebbels '*Analysis of animal bones from Bishopstone and Newhaven in relation to the economy of Iron Age and Roman Sussex*,' (unpub. B.Sc. dissertation, Univ. of London, 1974. Copy at Institute of Archaeology, London).

HORSE—Was mainly represented by scapulae in this phase, only one major long bone was present. This may suggest that horse was being used for purposes of traction only.
DOG—One adult individual is well represented, also two young animals including a puppy of four to five months.
BIRD—Only represented by long bones, due either to selection or preservation conditions. One individual was identified as domestic hen.
DEER—One individual, represented by a single phalanx, was tentatively recognised.
CAT—A young adult found in a posthole was represented by a good proportion of the skeleton including mandible, pelvis, ulna, tibia; the humerus and femur were unfused at the distal end.

A number of rodent bones were ignored as they are likely to be intrusive.

GROUP II. From layer one of the enclosure ditch and Structure V demolition levels:—

Minimum numbers—	Cattle	Dog	Sheep	Pig	Bird	Horse
	7	5	2	2	2	1

CATTLE—The age structure was varied but none of the individuals were over about four years, three were aged three to four years, two individuals were one to two years, one was a year and a calf was aged a few months. Metatarsals were well represented and frequently cut as at Bishopstone,[1] some fragments had been burnt.
DOG—The minimum number was based on differing femur sizes. Two individuals were adult. The distal end of a femur was bent.
SHEEP—Two young adults, one with full permanent dentition showing little wear, therefore about two years old. Long bones except the femur and humerus were represented. These were also absent in Group I suggesting some selection of joints. Some bones, including a horn core, were burnt. Others were broken as a result of butchering.
PIG—One mandible of an individual approximately one year, some loose teeth and a humerus.
BIRD—Domestic chicken was present, one other individual could not be identified down to species.
HORSE—One individual represented by a fragment of acetabulum, a metacarpal and two phalanges.

Minimum numbers of two groups combined:—

Cattle	Sheep	Pig	Dog	Horse	Bird	Deer	Cat
27	17	13	7	5	5	1	1

Cattle predominate over sheep in both the number of bones and the minimum number of animals represented. The importance of cattle suggests the site may have been of commercial importance, cattle being more specialised in their requirements than sheep. The frequency chart (Table 2) shows selection operative in cattle, with mandibles, humeri, scapulae and metapodials being the most numerous. Sheep are mostly represented by mandibles and tibiae whilst pig was largely represented by mandibles with very little of the post-cranial skeleton. Horse was largely absent except for scapulae. The age structure of sheep, pig, cattle and horse indicates that overwintering was no problem. The measurements of the cattle bones suggests a size diversity in the Roman period,[2] with a Celtic ox and a larger more slender breed like the present day Chillingham type.[3]

The plant remains by J. R. B. Arthur, F.L.S.

(a) From soil samples.

Enclosure Ditch Layer 4:
Triticum spelta (Spelt wheat)—3 grains, 3 grain pieces and glume fragments.
Atriplex patula L. (Orache)—1 seed, a common weed of arable land.
Deschampsia cespitosa (L) (Tussock Grass)—2 seeds, weed of upland pasture, wet meadow and arable land.

Enclosure Ditch Layer 1:
Triticum spelta L. (Spelt wheat)—11 grains.
Triticum aestivum L. (Common or bread wheat)—8 grains.
Hordeum vulgare L. (Barley)—1 grain.
Cuscuta sp. (Dodder)—2 seeds, heaths and grassy places.
Euphorbia amygdaloides L. (Wood Spurge)—1 seed, found in woods and scrub.
Anthemis cotula L. (Stinking Mayweed)—2 achenes, common weed of arable land formerly more common than now, especially in the stiff sods of Southern England.
Galeopsis tetrahit Mill. (Common Hemp-Nettle)—1 nutlet, weed of cornfield and arable land.

(b) Inclusion in ceramic—In the Roman period these are not necessarily evidence of plants present on site.
Tritcum sp.—abundant in tiles from the enclosure ditch layer I.
Tritcum spelta (Spelt wheat)—1 grain in a crude everted, possibly Anglo-Saxon rim sherd, from the Romano-British ground surface.
Secale cereale (Rye)—abundant in tiles from the enclosure ditch layer 1, very abundant in tiles from posthole 44.
Pteridium aquilinum (L.) (Bracken) Fragment of the pinnule in daub from Site 6 Enclosure Ditch layer 3—Weed of rough pasture and moderately acid grassland.

Bread wheat, spelt, barley and possibly rye represent crops grown and accidently carbonised. Some weed seeds, i.e., Orache, Stinking Mayweed and Common Hemp-Nettle are common weeds of the cornfield and are likely to have been brought to the site in crops. Others may represent weeds that grew in the enclosure.

1 A. Gebbels, 1974, op. cit., p. 30.
2 For figures see A. Gebbels 1974, op. cit., Appendix C—measurements.
3 P. A. Jewell, 'Changes in size and type of cattle from Prehistoric to Medieval times in Britain,' in *Zeitschrift fur Tierzuchtung und Zuchtungsbiologie*, vol. 77, .2 (1962), pp. 159-167.

The charcoals by C. R. Cartwright, M.A.

A large number of samples were collected but only ten have been identified. These were all macroscopic fragments from postholes and other features. The samples were taken to ascertain what timbers were used in specific buildings rather than to obtain random samples as evidence of local ecology. In view of the distance travelled by some specimens of the other building materials (e.g. stone—see below) these timbers cannot necessarily be used as a guide to the contemporary flora of the lower Ouse valley.

Samples 1-3 *Quercus sp.* (Oak) Just outside the north wall of Structure V was an area of burnt clay and charcoal fragments. It appeared to represent part of a wooden frame with daub filled panels of a half-timbered building.
Samples 4-5 *Quercus sp.* (Oak) Charcoal amongst demolition debris in the ditch layer 1.
Sample 6. *Fraxinus sp.* (Ash) From layer 4 of the enclosure ditch.
Sample 7. *Quercus sp.* (Oak) Carbonised timber in posthole 51 which is probably part of Structure V.
Sample 8. Probably *Quercus sp.* (Oak). Carbonised timber in posthole 6, Structure II.
Sample 9. *Quercus sp.* (Oak) Carbonised timber in posthole 4, Structure II.
Sample 10 *Fagus sp.* (Beech) Carbonised timber in posthole 19, Structure I.
Oak was evidently used for most structural purposes.

The mollusca

No attempt was made to obtain random or total samples of molluscs. Those identified are simply those collected by excavators, certainly a small proportion of the total present. After the species identifications are the numbers of shells (gastropods) or valves (lamellibranchs) identified, these may give some idea of the relative importance of each species. The edible mussel is likely to be somewhat underrepresented; its shells were less well preserved.

Dr. K. D. Thomas kindly advised on some identifications.

Marine

Ostrea edulis L. (Edible oyster) 58 valves of a wide variety of sizes; estuarine and coastal.
Family *Anomidea* 1 valve, non estuarine.
Patella vulgata L. (Common limpet) 34 shells; abundant between tidemarks on rocky shores.
Mytilus edulis L. (Edible mussel) 10 valves, marine and estuarine.
Venerupis pullastria (Mont.) (Pullet Carpet shell) 6 valves; non-estuarine, between tidemarks.
Cardium edule L. (Common Cockle) 2 valves; low water mark to a few fathoms.
Littorina littorea L. (Common Periwinkle) 36 shells; common between tidemarks.
Buccinum undatum L. (Common Whelk) 1 shell; coastal low water mark to 1,200 fathoms.

Land

Helix aspersa Müller. (Garden Snail) 1 shell.

Most of the above are still common articles of diet. *Venerupis pullastria* (Mont.) is not generally eaten but E. Step noted that it was ' eaten in Sussex and probably in other parts of the country.'[1] The member of the family *Anomidea* was probably not eaten. *Helix aspersa*, which was eaten by the Romans, is believed by J. G. Evans to have been introduced in the 1st century A.D.[2] This example came from layer 1 of the Enclosure Ditch, it is therefore of Antonine date. Marine mollusca appear to have been collected from both the rocky coast and the tidal estuarine flats of the Ouse.

THE ROMANO-BRITISH FINDS

An attempt was made to recover and save all macrosopically visible artifactual remains. Sieving was only used extensively for the recovery of environmental or economic data. All the finds have been marked with a code recording their original context. The various landowners listed under ' Acknowledgements ' have kindly donated the material to Brighton Museum, where it is accessible for further study. Housed with the material are site notebooks, plans and full specialist reports.

The coarse pottery by C. M. Green.

Introduction

The excavated area of the Romano-British villa enclosure at Newhaven seems to have been occupied for a relatively short period spanning, very roughly, the second half of the first and much of the second century A.D. All the R-B material found *in situ* comes either from the main enclosure ditch, features representing buildings or other structures, or from the generally rather thin contemporary ground surface (layer 3) which immediately overlies Clay-with-Flints.

1 E. Step, *Shell Life* (1945), p. 137.

2 J. G. Evans, ' *Land snails in archaeology*,' (1972), pp. 175-6.

No pits of R-B date were discovered, and the well developed stratigraphy characteristic of urban settlements is lacking. Hence the nature of the site has not, in general, allowed the isolation of a securely stratified ceramic series. The major exception to this statement is Group i, from the initial fill of the enclosure ditch on Site 6, but in all subsequent recuttings of the ditch, and in post-hole and wall features, the risk of contamination by redeposited sherds is of course much greater. Even so, the other major assemblage, from the final fill of the enclosure ditch (Group viii) should as a whole, reliably represent a single ceramic group. Material associated with the buildings within the enclosure is published as Groups v-vii, but the association can only be treated as reasonably certain where sherds have been found in wall footings themselves. Sherds from the R-B ground surface (Group ix) include a few sherds dating to the third and probably the fourth centuries A.D.—outside the presumed settlement period for the excavated area. They are generally fragmentary and/or abraded, and are published here together with sherds from post-Roman layers, and significant but insecurely sealed post-hole material. Sherds from these poorly associated sources have not usually been reported where similar types are better represented from Groups i-viii.

With these *caveats*, the aim has been to describe, and illustrate where possible, all the ceramic types, including the bonfire-made burnished black ' native ' vessels which form such a large proportion of local first and second century assemblages. It is hoped that further publication of such vessels from other sites will give a more comprehensive picture of the extent (and perhaps the limitations) of the resources of regions and individual sites, and eventually supplement the evidence for kiln production of 'Roman' wheel thrown fabrics (See below, 'Cooking Jar Fabric').

Dating evidence for the Newhaven pottery rests on assumptions about the date range of vessels found on other local sites, and on Samian associations. With the exception of the Backworth fibula for Group v, dateable metal objects were disappointingly rare at Newhaven, and did not occur in close association with pottery groups. Dating parallels from other sites have only been used where the evidence of stratigraphy or associated objects seems reliable; it is now generally recognised that many early reports were too optimistic about the possibility of closely dating coarse pottery. Reference to sites followed by numerals, unless otherwise stated, refer to the vessel or form number (e.g. *Chichester St. Pancras* 23c; *Crayford* p.161, 7). Sussex sites to which reference is made are shown on Fig. 20.

Where possible, vessels have been grouped on the basis of similarity in fabric rather than form or function, although no Sussex R-B kiln sites have been adequately published to date, and positive identification of production centres is rarely possible. Only one definite waster sherd was found at Newhaven (135) and this doubtless from a usable vessel.

Unless otherwise stated, vessels are thrown and finished on the wheel, undecorated, of medium hardness, and self-coloured (i.e. all surfaces are the colour of the fabric in fracture). Sometimes a colour description has been supplemented by a reading from the Colour Chart prepared by the Study Group for R-B Coarse Pottery (1974)—e.g. ' cf. Yellow/Brown 7A '; these descriptions do not coincide with everyday terminology or other colour charts. All the vessels are illustrated at a $\frac{1}{4}$ scale, with the exception of 60 and 61 ($\frac{1}{2}$). The pottery has been deposited with all the other finds in Brighton Museum. Two vessels (BH1 and BH2) found before the 1971-4 excavations are in Barbican House Museum, Lewes (Box 63/47). Pottery most usefully studied in the Society's collection at Barbican House is suffixed (BH).[1]

[1] I am grateful to Simon Garrett for his help with the Barbican House collections.

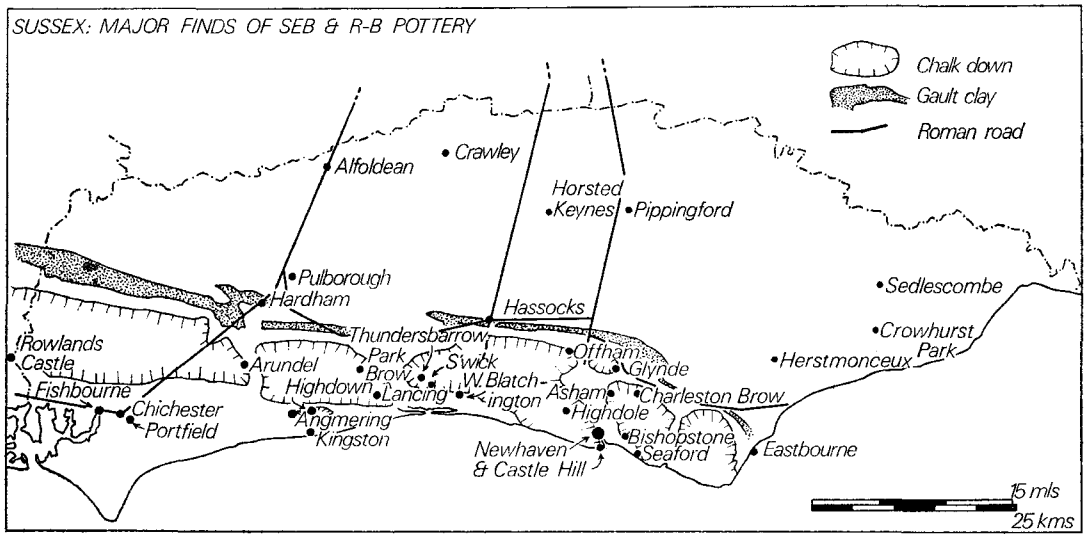

FIG. 20. Major finds of 'South Eastern B' and Romano-British pottery in Sussex.

'Cooking Jar Fabric' (CJF).[1]

Many of the Newhaven vessels are 'native' wares in fundamentally similar fabrics, although individual pots can differ quite noticeably in hardness, colour, and the proportions and grain size of the filler. Since first and second century types do not obviously differ in these respects, all have been designated as varieties of 'Cooking Jar Fabric' (CJF) for brevity. No identity of source is implied, although the technique of clay preparation is obviously similar. CJF vessels were invariably hand built and normally hand finished before bonfire-firing; surface colour is generally dark grey or soot black. They are not to be confused with Black-burnished ware[2] (Vessels 187, 188 and 257) which is a mass-produced sandy fabric. CJF pots could conceivably have been made in the near vicinity; bonfire-firing might leave little trace at Newhaven and the process need produce only a few waste pieces.[3]

CJF is a coarse fabric, usually rather liberally filled with rounded grains of discoloured chalk, crushed oyster shell, ironstone and natural flint grits in a grey to black matrix. Small cavities result from the combustion of organic particles, and, perhaps, the slaking of burnt chalk on the surfaces. Crushed calcined flint filler often occurs, though grog is less frequently recognisable. Any one of these ingredients may predominate, and large inclusions are frequent. A 'soapy' feel is characteristic of CJF, unless it has been highly fired; fracture is rough/corky. Highly fired CJF vessels are light grey, more open-bodied, hard, brittle, and have crackled exteriors; all these features may occur on unevenly fired black vessels (e.g. 132), and SEB vessels are often highly fired (1-10 etc.). CJF pots usually have part of their surface horizontally burnished—around the foot and from the girth or shoulder over the rim for jars. The burnished zones are indicated in the drawings.

[1] In the forthcoming Bishopstone report this fabric has been renamed 'East Sussex Ware'.

[2] R. A. H. Farrar, 'The techniques and sources of Romano-British black-burnished ware' in A. P. Detsicas, ed., 'Current Research in R-B Coarse Pottery,' *CBA Research Report 10* (1973), pp. 67-103.

[3] R. A. H. Farrar (1973), op. cit.

The distribution and affinities of CJF are uncertain and will remain so until the publication of further coarse vessels from Sussex sites. However CJF vessels appear to be common throughout Sussex, although the published evidence would suggest a concentration in East Sussex. To the west the fourth century ' Hampshire Grog-tempered ware ' is the closest visually similar type, and elsewhere in Southern England black soapy cooking pot fabrics are well known, if little understood. Possibly most are essentially local products, confirmation must await thin sectioning and heavy mineral analysis.

Major Place References. (See Fig. 20 for location of Sussex sites).

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Herstmonceux. N. E. S. Norris, ' Miscellaneous researches 1949-56 ,' *S.A.C.* vol. 94 (1956), pp. 4-5.
London, Aldgate. H. Chapman and T. Johnson, ' Excavations at Aldgate and Bush Lane House, London,' *Transactions of London and Middlesex Archaeological Society*, vol. 24 (1973) pp. 1-73.
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Sedlescombe. E. Chown, ' Painted Iron Age pottery at Sedlescombe ' *S.N.Q.* XI (1947), pp. 148-51.
West Blatchington. N. E. S. Norris and G. P. Burstow, ' A prehistoric and Romano-British site at West Blatchington, Hove,' *S.A.C.* vol. 90 (1952), pp. 221-240.

The Pottery

Group i (1-78) Pottery from the initial fill of the enclosure ditch on Site 6. Neronian-Flavian.

This assemblage was found in layers 3 and 4 of the ditch, and largely in the northernmost 6m. to be excavated. The generally fresh nature of the sherds (which were often large) suggests accumulation over a short period.

1-10 are recognisably in the locally common ' South Eastern B ' (SEB) tradition of the ultimate pre-Roman Iron Age. ' SEB,' although a category of the now largely obsolete ' ABC ' terminology, has been retained for the present report, since it does seem to be more of a local cultural reality than the permutations of the A and B groupings formerly applied to the earlier Sussex Iron Age. However, acceptance of the term for the present purposes does not imply, as the ABC scheme originally did, invasions, hostile relations with 'AB' or Belgic 'C' cultures, as a definition of racial type. Cunliffe[1] has proposed the term ' Eastern Atrebatic '; ultimately this may prove more satisfactory.

SEB pottery is known from first century B.C.–1st century A.D. contexts from the Hampshire border, Sussex, Kent, Surrey, London and Essex. (Sussex sites not listed by Wilson and Burstow[2] or in the Crayford report[3] include Bishopstone, Crawley, Crowhurst Park, Fishbourne, Glynde, Herstmonceux, Offham, Pippingford, Seaford and Sedlescombe). The Newhaven vessels, with their generally narrow necks, spreading bodies, and flat or footring bases, are typical of first century A.D. ' Asham ' types (see 241). They form one of the most closely dated SEB groups, and one of the relatively few Asham groups to have been recorded from a non-cemetery context.

11-32 are contemporary vessels in generally similar fabrics. Some (11, 15, 26) are paralleled from other sites producing SEB pottery; others may simply be a rather undiagnostic products of the SEB ' culture ' (the characteristic eyebrow design generally occurs on large storage vessels rather than smaller cooking jars of this period). Crowhurst Park illustrates a generally similar group.

1 B. W. Cunliffe, *Iron Age communities in Britain* (1974).
2 A. E. Wilson and G. P. Burstow, ' The Evolution of Sussex Iron Age pottery,' *S.A.C.* vol. 87 (1948), pp. 77-111.
3 J. B. Ward-Perkins, ' An early Iron Age site at Crayford, Kent,' *Proc. Prehistoric Society*, vol. 4 (1938), pp. 151-168.

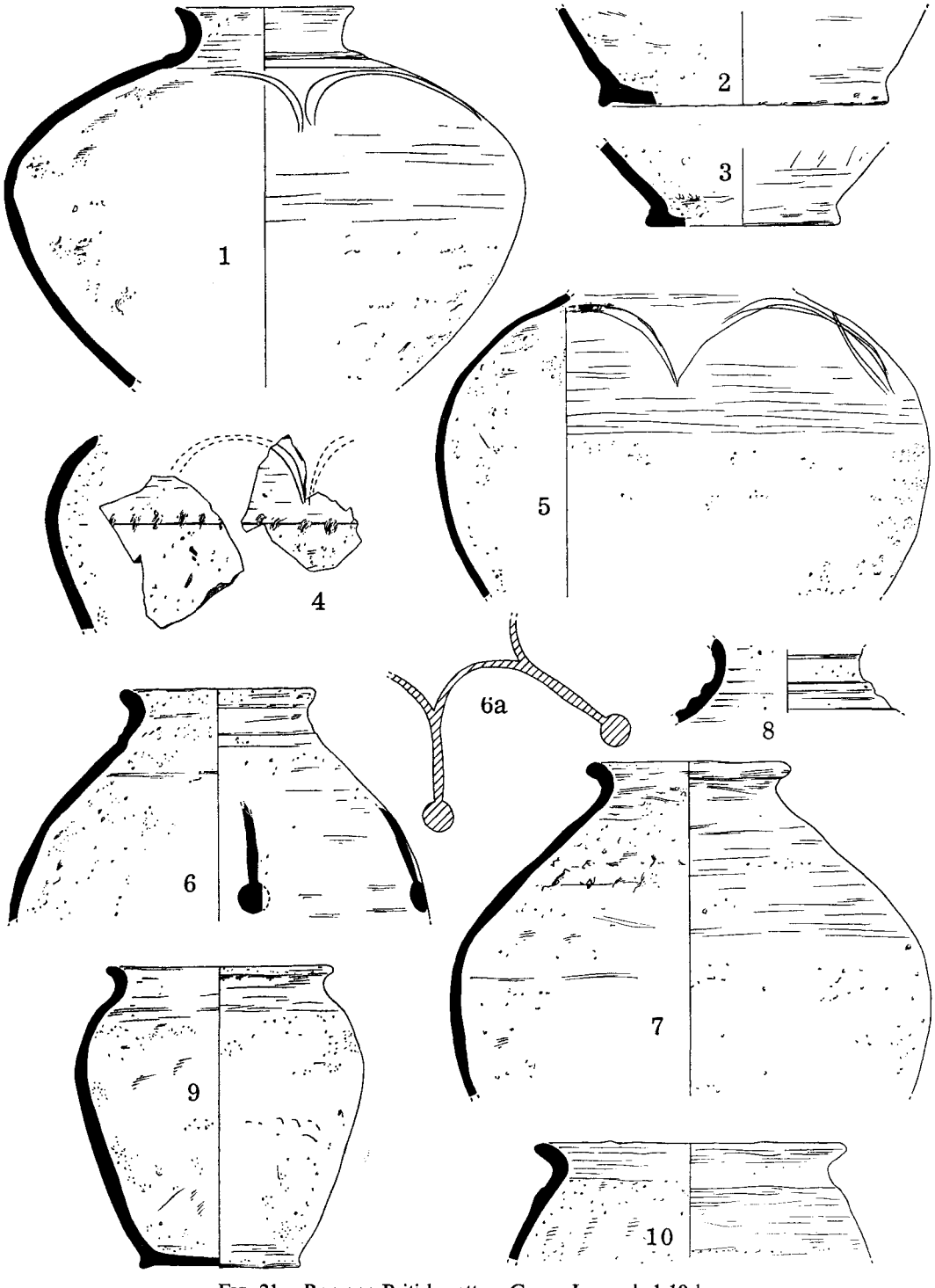

FIG. 21. Romano-British pottery Group I, vessels 1-10.$\frac{1}{4}$.

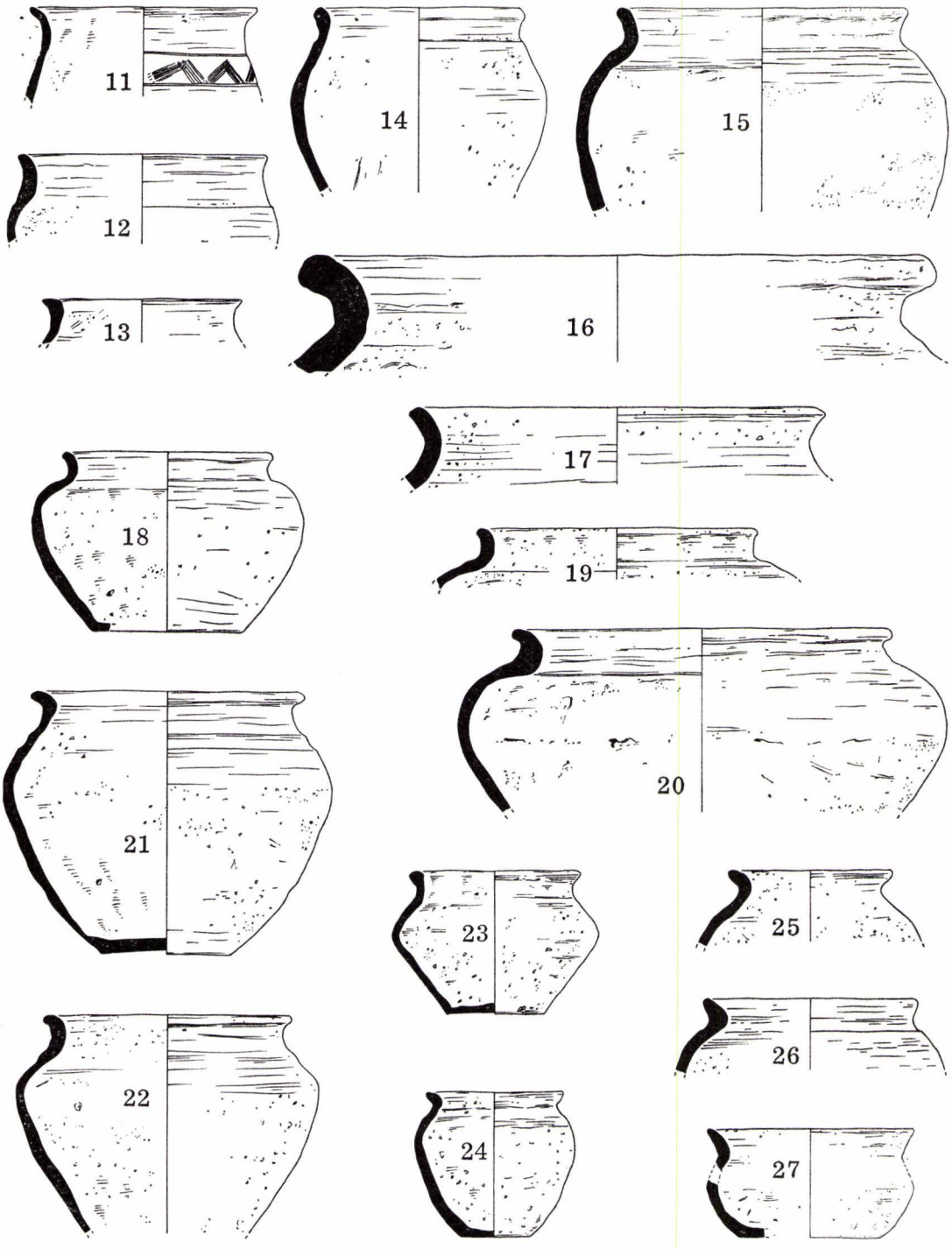

FIG. 22. Romano-British pottery Group I, vessels 11-27. ¼.

1 Narrow-mouthed wide bodied storage jar; cordon and lightly tooled groove on upper shoulder, 5 tooled eyebrow swags below. Light grey medium/hard CJF; ext. black, carefully burnished above girth, int. dark grey. Hand built but rim/shoulder wheel finished. A good example of an ' Asham ' jar (cf.241); the form is similar to Asham 2 (*S.A.C.* vol. 71 p. 254) and the stepped shoulder is a common feature (cf. Seaford (BH marked 88) and Offham, near Lewes (BH); all these examples contained cremations. The rim is closely paralleled by a plain form from Horndean *Proc. Hants. Field Club.* Vol. 22 p. 25.

Not illustrated. A similar rim, diam. 18cms. handmade in hard grey CJF.

2, 3 Variants of the SEB ' footring ' base, handmade hard CJF. Grey-black surfaces, ext. burnished above foot, and showing the distinctive ' tarmac ' finish inside. Tarmac surfaces are a drying property of the coarsely filled paste when not deliberately smoothed or burnished. Two examples of the wide-footed type 2 were found, representing vessels similar to 6 and 7. Cf. Glynde (*S.A.C.* vol. 93, p. 64, Fig. 9, 5); Chichester St. Pancras 179.

4 Large vessel with pronounced or stepped shoulder, incised eyebrow decoration and girth groove with slight superimposed fingernail impressions. Rather roughly handmade and finished in dark grey CJF with ironstone and shell inclusions; surfaces black, int. tarmac, ext. burnished above girth. Finger decorated girths are common on SEB vessels; cf. Charleston Brow (Figs. 18-24); Bishopstone (forthcoming); Newhaven Castle Hill (Fig. 6); Seaford (9-16) and Horsted Keynes (*S.A.C.* vol. 78 p. 252). Raised band decoration on plain forms (see 79-80, 109 etc.) is very common in the Newhaven area. (Wilson and Burstow 1948 op. cit. Table VIII).

5 Globular storage jar, decorated with inconspicuously and rather freely tooled eyebrows, with traces of paint, now brown, surviving on one swag. Hard dark grey close fabric filled with calcined flint; clean fracture. Handmade with thin walls; ext. grey, int. dark grey. Painting may well have augmented the rather faintly incised eyebrows of many SEB jars. Cf. Sedlescombe (and sherds at BH) and parallels for 6 below.

6 Jar with slightly everted rim and spreading body. Handmade and finished in light grey fabric much as 5, but with coarser filler and blue-grey core. One sherd displays a painted bar and dot, now brown, representing an eyebrow terminal. Significantly there is no trace of incised decoration, and excavated SEB material should always be very carefully cleaned so as to preserve possible paintwork. 6a possible restoration after Horsted Keynes (*S.A.C.* vol. 78 p. 256.1) cf. Sedlescombe.

7 Storage jar with everted round rim, constricted neck and spreading body. Coarse red-brown CJF, flame marked grey, with large ironstone inclusions. Int. red/brown/black tarmac. Coil-built hand finished. This form, with a wide footring base (cf. 2) is well paralleled from 1st century Romano-British contexts at Chichester, where it sometimes occurs in sandy grey fabrics. (*S.A.C.* vol. 94 p. 128 Nos. 164-5).

8 Everted-rimmed jar with constricted neck and stepped shoulder, wheelmade and finished in smooth orange-buff fabric with small flint, ironstone and organic inclusions. Probably a form in the SEB tradition, in an unusual fabric. Cf. Herstmonceux (BH).

9 Plain cooking jar displaying the classic SEB S-profile, wide footring and plain rim. Soft/medium CJF; ext. soot black tarmac where unburnished; int. grey-brown hand-smoothed. Handmade. cf. Bishopstone (forthcoming).

10 Jar with everted thickened rim. Coil-built, hand-finished soft rather smooth dull red CJF slight grey core. Black surfaces, tarmac int.

For further obviously SEB forms see 85-6, 127, 130, 241-2.

11 Bowl or large beaker with outcurved rim, hand-decorated with an incised chevron between grooves. Brown CJF, light grey core, burnished black surfaces; handmade and finished. This vessel is reminiscent of Belgic cordoned or carinated beakers; cf. Crowhurst Park (1, 4, 13); Lancing Terraceway and Temple site (*S.A.C.* vol. 81 fig. 10.4 and fig. 14.29); Hassocks Cemetery (BH marked 47 2/3).

12 Bowl with thickened plain upright neck. Light grey CJF black surfaces, ext. sooted. Handmade, ? wheel finished.

13 Jar with outcurved flat-topped rim. Dark grey CJF, burnished black surfaces. Handmade,? wheel finished.

14 Jar with upright thickened rim. Rather brittle grey-black CJF, larger ironstone inclusions. Ext. black-brown, int. dull red. Handmade, wheel finished.

15 Round-bodied jar with plain rim. Rather brittle grey-black CJF with much ironstone filler and some large inclusions; black surfaces. Handmade, ? wheel finished; cf. Crowhurst Park, 7; Kingston Buci (*S.A.C.* vol. 72. p. 202); Chichester Tower Street (A. Down *Chichester Excavations II* (1974) p. 54.2) 1st century, with lattice.

16 Very large storage jar with everted rim. Grey CJF with much rounded flint filler. Black where burnished ext. and over the rim; int. body buff, suggesting that the black colour has been deliberately applied. Handmade.

17 Everted plain-rimmed jar. Grey CJF, black/grey surfaces. Handmade, ? wheel finished.

18 Wide-bodied jar with pronounced shoulder. CJF burnt red since breakage.

19 Upright-rimmed jar with slight cordon on wide shoulder. Highly fired grey CJF, handmade.

20 Robust squat jar with heavily thickened neck. Unusually hard grey CJF with much calcined flint filler. Surfaces black, int. tarmac and probably intentionally blackened. Coil-built, hand finished.

21, 22 Jars with rather angular profile and stepped shoulder (cf. 36 below in sandy grey fabric). 21 grey black rather friable CJF; heavily sooted black surfaces. 22 hard highly fired grey CJF. Both handmade, possibly wheel finished.

23 Small jar with angular profile. Grey CJF with large rolled ironstone inclusions; surfaces oxidised red-brown, ext. flame-marked and completely burnished. Coil-built.

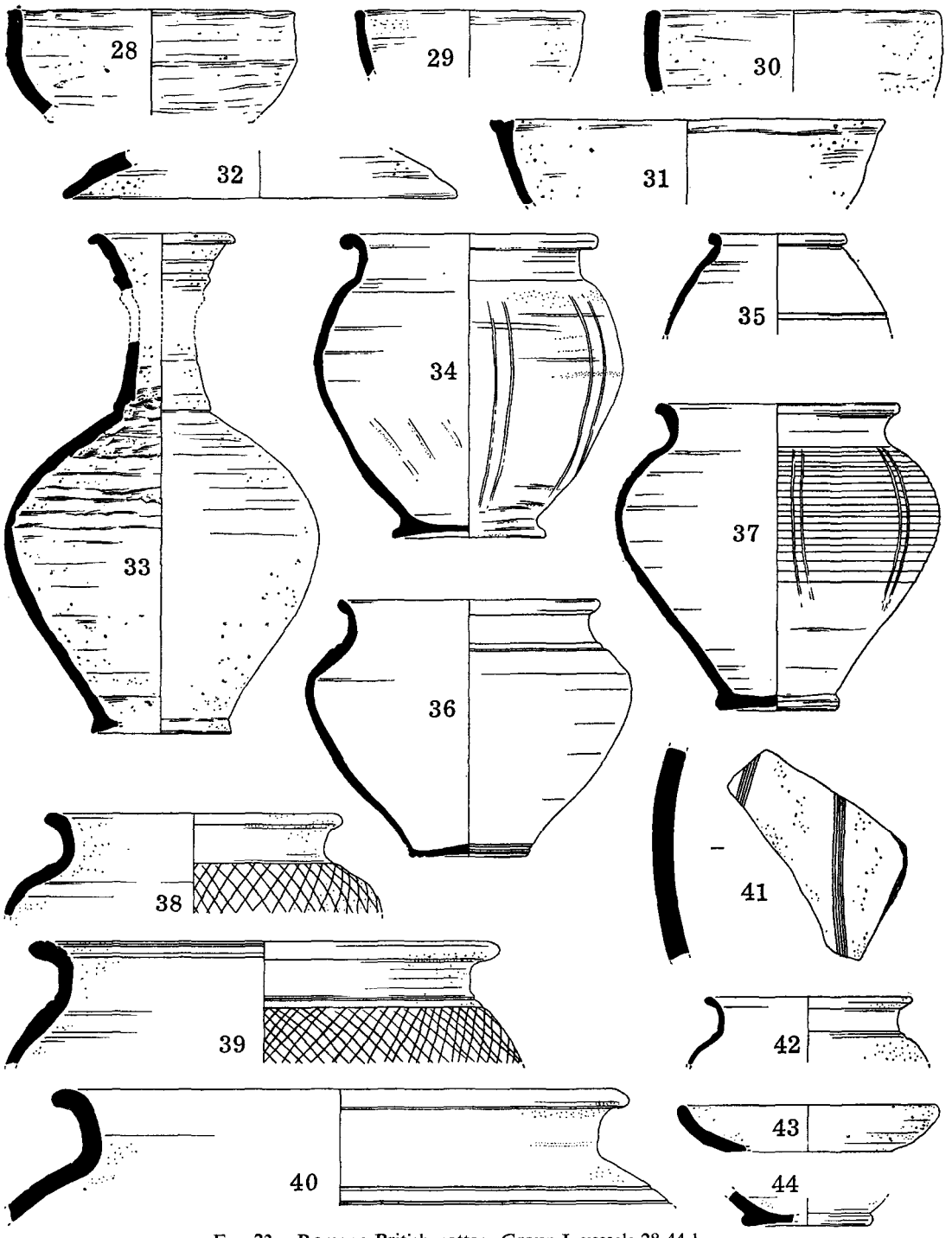

FIG. 23. Romano-British pottery Group I, vessels 28-44.¼.

24 Small jar with everted rim. Grey highly fired CJF with grey/grey-brown ' porridgy ' surfaces. Coil-built.
25 Round-shouldered jar with everted rim. Light grey hard highly fired CJF with a large wood inclusion. Handmade.
26 Heavily made round-shouldered jar. Dark rather hard CJF, surfaces densely black. Handmade, ? wheel finished. Cf. Kingston Buci (*S.A.C.* Vol. 72 p. 202, an eyebrow pot).
27 Small bowl with everted rim. Soft very soapy CJF, burnt red since breakage; ext. completely burnished. Handmade.
28 Carinated bowl with plain rim—an unusual form. CJF burnt red since breakage; burnished surfaces. Handmade.
29, 30 ' Dog-dish ' bowls. Black CJF. 29 burnished on all surfaces; 30 ext. left rough. Both handmade. Bowls of this type are common in the 2nd century at Newhaven, but relatively scarce in Group i; the forms remain practically unchanged.
31 Bowl with a flat-topped furrowed rim, perhaps a lid seating. Hard grey highly fired CJF, ext. grey. int. buff. Handmade, ? unburnished rough surfaces.
32 Lid. Black CJF, ext. burnished, int. tarmac. Handmade. Not illustrated: Sherds from at least 9 other CJF vessels.

33-54 Vessels in sandy fabrics.
33 Multiple ring-necked flagon; hard light grey with rather coarse sand filler—an unusual fabric for this form, which is not otherwise known at Newhaven. Ext. reduced to a slightly darker grey (cf. Neutral 5-6). The method of construction is interesting; the vessel is coil-built and the coils are unsmoothed over much of the interior, but the ext. is wheel finished and the neck and mouth are wheel thrown. Possibly some knife-trimming on body. No trace of handle. At Fishbourne, multiple ring-necked flagons (type 109) were generally from the pre-Palace phase, and in more normal flagon fabrics.
34 Jar with overturned round rim, decorated with pairs of slightly curved vertical lines. Hard dull red-brown sandy with grey core; surfaces reduced grey; some organic cavities. Hand-built but wheel-formed upper body and mouth. The form suggests the work of a potter in the SEB tradition—note the wide footring, round body and rim (cf. 9 and 7 above). SEB derivates in grey sandy fabrics occur at Chichester (see 7). A misfired vessel with a drooping lip and cracked body, in a reasonably similar fabric and similar decoration, was used as a cremation urn at Hassocks (BH, marked 7).
35 Ovoid jar with rolled rim and grooved body. Grey sandy with lighter core and possibly a darker slip. Angmering 1938, 3, also in grey sandy fabric, is apparently identical in form. The type is widespread in the Neronian-Flavian period.
36 Subcarinated jar with everted rim, cordon and groove below neck, and grooves and slight bead at foot. Medium/hard grey sand (cf. Neutral 6-7), flecks of black filler conspicuous on the surfaces. High shouldered jars were found at Angmering 1938, 4; The form is widespread in the Flavian period, e.g. at London, Aldgate 231, 227.
37 Jar with bead foot and lightly rilled body, decorated with tooled double vertical lines. Hard grey sandy fabric, rather similar to 36.
38 Shouldered jar with tooled lattice decoration. Hard grey coarsely sandy, with some red grog and ironstone filler.
39 Everted rim storage jar; lattice body with low cordon and grooves below neck, and three grooves inside rim. Fabric reminiscent of 34, with calcined flint and organic inclusions. Ext. brownish-grey; int. darker grey.
40 Large storage jar with grooves on shoulder. Hard dark blue-grey sandy; grey-brown surfaces, ext. originally well-smoothed.
41 Body sherd of large storage vessel, vertically decorated with a 4-toothed comb. Hard blue-grey sandy, brownish grey surfaces.
42 Jar in light grey sandy fabric with slight bluish core; grey-black ? slipped surfaces.
43 Platter. Grey finely sandy, lighter core. A plain variant of the Gallo-Belgic platter style, widely imitated in the 1st century. Cf. 96 below.
44 Beaded foot typical of greyware vessels from this assemblage. Rather friable grey sandy.
45, 46 Jars in a similar finely sandy grey fabric (cf. Neutral 6-7); well smoothed surfaces.
47 Wide-bodied jar or bowl. Hard finely sandy grey with red core; well smoothed grey-black slipped surfaces.
48 Thinly made beaker with two cordons on the neck. Soft finely sandy grey-buff with a slight buff core; some fine red grog. Dark grey shiny slipped surfaces.
Not illustrated. ? Poppyhead jar or beaker decorated with panel of barbotine dots. Smooth grey with a little sand filler. One small sherd, representing the only vessel of this type from the initial ditch fill, although such vessels are common in later contexts at Newhaven (cf. 90, 206, Cremation 2). Similar negative evidence from the pre-Palace phase at Fishbourne (267) suggests a terminal date of *c.* 75-80 A.D. for Group i, if the same sources of supply can be assumed.
49 Reeded-rimmed bowl; oxidised orange-brown fairly coarsely sandy with grey core; some organic cavities. A common later 1st to early 2nd century form.
50 Reeded-rimmed carinated bowl with two grooves on the body and flared foot. Hard grey sandy, grey-black surfaces; A thin white sandwich layer beneath the surfaces. Form close to Footlands (BH 61/1, marked III/?/2 dark grey/black finely sandy fabric).
51 Imitation samian f27 bowl; light sandy with black surfaces. Found embedded in the bottom of the ditch. See 62.
52 Lid decorated with 3 grooves. White finely sandy, dark grey slip.

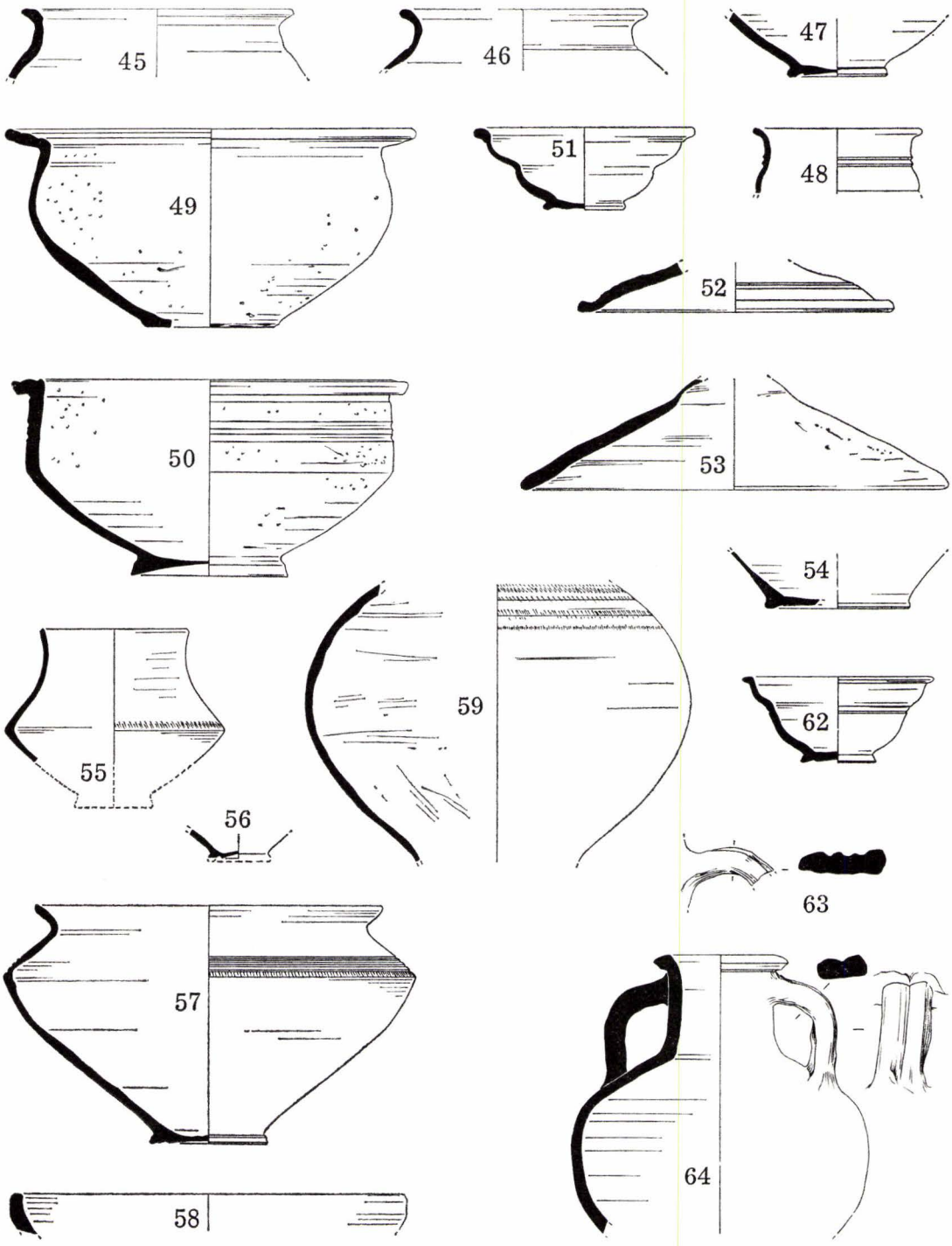

FIG. 24. Romano-British pottery Group I, vessels 45-64.$\frac{1}{4}$.

53 Conical lid; hard dark sandy with some organic cavities. Possibly handmade, but wheel finished.

Not illustrated. Body sherd of a thinly made jar in finely sandy light grey fabric with shiny black surfaces displaying fast rotation marks. Acute lattice.

54 Base of jar in micaceous fabric and finish similar to 55-9, 62 and 276 below, but with sand filler.

Not illustrated. Jar in similar but rather coarser fabric, decorated with groups of 3 vertical lines burnished on body.

55-61 Vessels in a distinctive dull red fine smooth micaceous fabric, developing a grey core and black or dark grey surfaces on reduced pieces (55-9, ? 62). Oxidised vessels are orange-red (? 60, 61). Firing temperature and hardness has been variable in the Newhaven examples. All the finer vessels in this fabric have well smoothed or burnished exteriors and are reminiscent of micaceous Terra Nigra. Similar fabrics from Fishbourne (p. 256) were not susceptible to heavy mineral analysis, but a Gault clay source seems probable, and B. W. Cunliffe, (*The Regni* (1973) p. 70) has suggested Hardham or the vicinity as the kiln site. Hardham produced a quantity of rouletted imitation samian bowls (f27, 29, 30, 37), but the excavator does not mention them as definitely local productions—although one (p. 108, 30) could have been a waster. The types illustrated here are commonest at Chichester, Fishbourne, Alfoldean, Hassocks and Angmering; their chief trade route was Stane Street.

With the exception of the imitation samian bowls, the forms are markedly Belgic in style.

55 Carinated beaker with line of rouletting above girth. Friable reduced with a very little fine red grog. A common form in various fine fabrics in southern 1st century Romano-British contexts, developed, apparently from continental Claudian types (C. F. C. Hawkes and M. R. Hull, *Camulodunum* (1947), 120a). Examples in the fabric under discussion occurred at Angmering 1938, 13; Chichester St. Pancras (1a) and Hassocks (*S.A.C.* vol. 66, p. 46 Plate 4, 103—described as ' Upchurch ware '); other fabrics (mainly fine grey micaceous with darker surfaces) from Hardham (Brighton Museum); Eastwood (B. J. Philp, *Excavations in West Kent*, Fig. 34, 285); London Aldgate (102); Richborough III (291-2).

56 An identical vessel, save the lack of rouletting, poorly fired and now extremely soft. Base only illustrated.

57 Carinated jar with flaring rim; rouletting and four grooves above girth. Well fired, black reduced surfaces. Common in West Sussex; Hardham pl. III, 4, 8, 12 (' typical '); Chichester St. Pancras 12a; Angmering 1947 Fig. 5, 8; Alfoldean (*S.A.C.* vol. 65 p. 131, 13-4, abundant and variable—some examples have a cordoned carination). Hassocks cemetery (BH) produced a number of examples, in fine or sandy light grey fabrics.

58 Bowl or dish. Soft black reduced surfaces. An unusual form, but cf. London Aldgate 162 (early 2nd century); Terra Nigra is also known in similar forms.

59 Globular jar, rouletted on the shoulder. Rather finely sandy with reduced black surfaces. Perhaps hand built, wheel finished. The vessel was perhaps a butt-beaker form, cf. Hassocks (*S.A.C.* vol. LXVI p. 46) which may have been similar.

60 (Sc. ½) Imitation samian form 37 bowl with compass-scribed ovolo. Surfaces oxidised orange-red to buff (cf. Yellow/Brown 5A-6B); fabric similar to 55-9 but with some fine black inclusions. Decorated with a rouletted zone above cordon and a band of c.16 ovolos scribed with a comb-like compass consisting of a centre point and three teeth (radius 11mm.). Vertical combing below ovolo applied with a 10mm. 4-toothed comb; further rouletted zone below. Compass scribed form 37 imitations are widespread in southern and eastern England and the Midlands in the later 1st and early 2nd centuries; some are recorded from Antonine deposits. Local examples in micaceous fabrics occurred at Chichester (*S.A.C.* vol. 94 p. 132, No. 275); Fishbourne (230), and possibly Hardham (p. 109); bowls in other fabrics (though usually fine and micaceous) or with slightly different decorations are reported from London Aldgate; Richborough III; Verulamium; Roman Colchester; Brixworth; Kent (Upchurch district); West Stow, Suffolk; Brough-on-Humber, etc.

61 (Sc. ½) Imitation samian form 30 bowl with hand-combed ovolo. Surfaces oxidised orange-red (cf. Red/Brown 4-5B). Fabric soft and friable, with a warm grey core. Central zone of 19 or 20 ovolos rather irregularly scribed with a 12-toothed comb 10cm. wide, between grooves and two rouletted areas. The ' samian ' colour is convincing. The decoration and fabric are distinctive, and sherds imitating form 30 or form 29 occur on many West Sussex sites: Chichester North Street, (*S.A.C.* vol. 100 p. 103, No. 23); Chichester Chapel Street (*S.A.C.* vol. 106, p. 123, No. 1); Fishbourne (229. 1-229, 2); Hardham (Plate IV, No. 6); Hassocks cemetery (BH). Allied types (forms 29/30 with incised ' fronds ') are recorded from Angmering 1938 (20) and 1947 (Fig. 62) and Park Brow (*Archaeologia* vol. 76 p. 26, fig. 36).

62 Imitation samian form 27 bowl, fabric rather close to 55-9, but has sand and brown grog inclusions and grey-brown surfaces with dark grey/black slipped int. Imitations of form 27 are common in the later 1st century, and are found in many fabrics (cf. 51 above). At Fishbourne they did not outlive the samian prototype (which was represented in Group i at Newhaven) and were largely confined to the pre-Palace phase (Fishbourne 50; see Group i summary below); cf. Angmering 1938 (21); Chichester St. Pancras (24c.); Park Brow (*Archaeologia* vol. 76 p. 26 fig 35).

Not illustrated. Grooved shoulder sherds from two carinated or sub-carinated jars in fine grey and buff micaceous fabrics. cf. Fishbourne (66. 1-66. 12).

63-73 Flagons. All without pouring lips; *appliqué* handles (except 67).

63 Large flagon/pitcher handle. Pink finely sandy, some red grog filler.

64 Two handled flagon; rather soft cream smooth 'chalky,' sparsely filled with red and buff grog, quartz sand and organic particles.

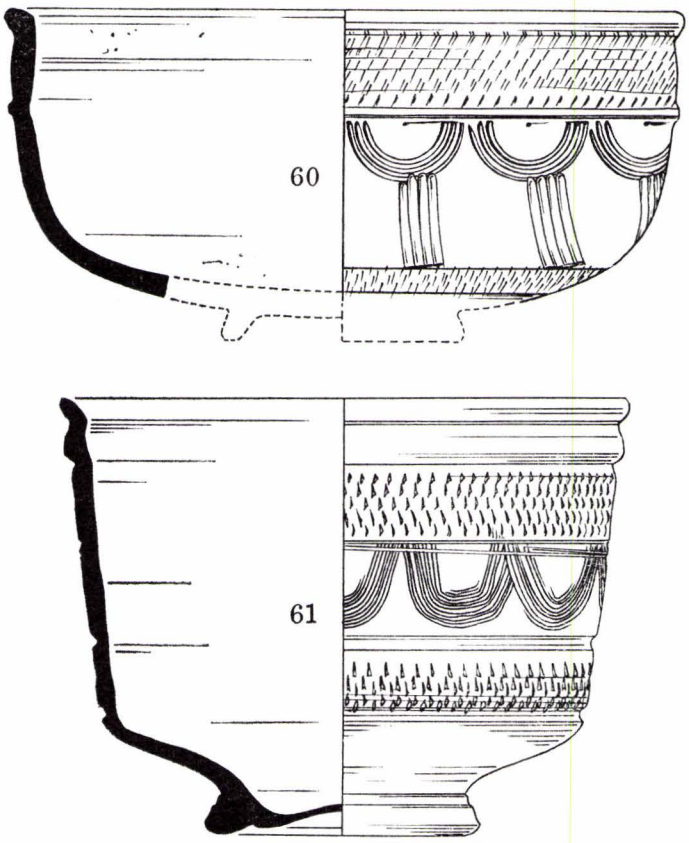

FIG. 25. Romano-British pottery Group 1, vessels 60 and 61.½

65 Pulley-necked flagon. Soft friable pink sandy; cream slip ext. and inside neck. Large calcined flint and organic inclusions. Pulley-neck flagons are characteristic of late 1st and early 2nd century contexts at Fishbourne (114); All the Richborough examples were ascribed to the 1st century (Richborough II, vessels 197-200); Chichester St. Pancras (60c—with a coin of Titus, 79-81 A.D.); Hardham (Plate VIII, 8).
66 Sharply defined pulley-necked flagon. Hard smooth blue-grey, fired cream/flesh on ext. Inclusions as 65.
67 Pulley-necked flagon with tanged handle. Finely sandy flesh coloured, reduced to dull mauve in places on the body; some red inclusions. Handle in fine cream-white clay, which has also been slipped over the upper body and inside the neck to give a two-tone effect.
68 Form as 65; medium/hard white-cream sandy.
Not illustrated. Similar vessel, friable white sandy.
69 Flagon base. Pinkish 'chalky,' some sand filler; white ext.
70 Coil-built, wheel finished flagon with footring. Rather coarse soft white-cream with multi-coloured sand filler and ironstone, red grog, chalk and organic inclusions. ? cf. Angmering 1947 (fig. 6, 4).
71 Flagon body. Soft/medium very sandy pink, lighter ext.
72 Flagon body. Pink finely sandy with red grog inclusions: cream slip int. and ext. around traces of a handle scar—probably a two-tone colouration. Knife-trimmed above base.
73 Flagon body. Hard finely sandy orange (cf. Brown/Red 6B) with a rough feel; detachment whorls on base.
74 7-lobed folded beaker finely thrown in a slightly micaceous soft orange fabric (cf. Yellow/Brown 6B) with a little red grog and rounded quartz grit filler. The folds have been formed by running a tool from top to bottom of the body. Parallels for this fine vessel are difficult to find, but cf. Angmering 1947 (fig. 1, 1 and 5).
Not illustrated. Rough cast thumb-pressed beaker. Smooth cream-pink with red-black slipped surfaces.
75 Conical bowl. Cream finely sandy with fairly coarse quartz sand filler and some red grog; slight grey core at base.

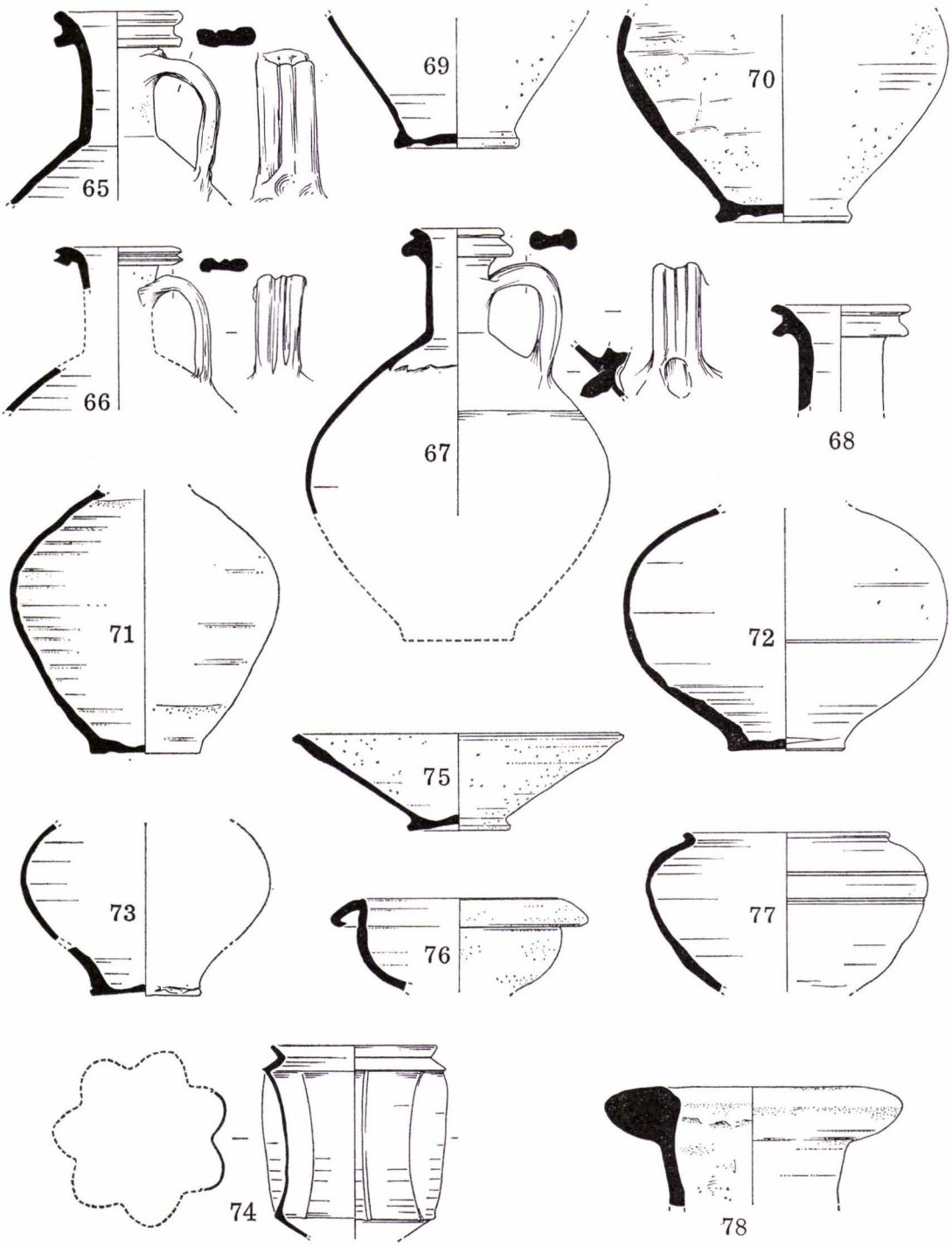

FIG. 26. Romano-British pottery Group I, vessels 65-78.¼.

76 Bowl with strongly inturned hook-rim. Very soft pinkish-white ' chalky ' fabric.
77 Bead-rimmed jar with grooves and very slight hollow cordon at girth. Soft flesh-coloured ' chalky,' with quartz sand filler. Reminiscent of a flagon fabric; the style is Belgic. Closely similar forms, in a variety of fabrics, occur widely in West Sussex (Fishbourne 167, all pre-*c.* 75-80 A.D., Arundel (*S.A.C.* vol. 77 p. 230 fig. 5, 9); Portfield (*S.A.C.* vol. 86 p. 139, 10) and London Aldgate.
Not illustrated. The following was contributed by K. Hartley.
Mortarium. Fragment with internal bead on rim; soft fine cream fabric with pinkish core. This is fairly certainly from either a form Gillam 238 or a mortarium of the type made by Q. Valerius Se———, and other potters (*Archaeological Journal* CXXII 46 Fig. 8 Nos. 22-25); and if so it was made in the second half of the first century.
78 Amphora. See specialist report by Dr. Peacock below.

Group i Summary:

Group i dates fairly certainly to the Neronian-early Flavian period—say 60-80 A.D. Earlier dates seem unlikely, since the most distinctive Claudian-Neronian imports known from nearby sites (and British copies) are conspicuously absent here. Only one presumably residual sherd of Terra Nigra (94) was found in a later ditch recut, but Gallo-Belgic fine wares and imported butt-beakers are known from Newhaven Castle Hill and Seaford. A terminal date for the group is suggested by certain similarities with Fishbourne, where the building of the Palace has been closely dated to *c.* 75-80 A.D. The pre-Palace phase, like Newhaven Group i, was very poor in poppyhead beakers (Fishbourne 267: cf. 90 below) they were however common in subsequent deposits on both sites. These vessels are widely distributed in late 1st and early 2nd century south eastern contexts, and their scarcity here is unlikely to be due to localised distribution. Other, positive, similarities with Fishbourne are single examples of forms (33, 62, 77) generally, or only, known there from pre-Palace contexts.

The general character of Group i is interesting. Although a number of the forms are widely distributed in the Flavian period, the Newhaven assemblage as a whole is most strikingly paralleled from sites in West Sussex, notably Angmering, another of the early Sussex coastal plain villas (see esp. Angmering 1947, illustrating material for which a similar Neronian-Flavian date was suggested); unfortunately no systematic excavation has taken place at the nearest sizeable settlement, Hassocks. Micaceous vessels (55-62) apparently made near Hardham, and known from a number of West Sussex sites, make a strong appearance here, no doubt as the most readily available substitute for samian, which was rather poorly represented in this early period. To reach Newhaven they would have to have been carried well away from their major axis of Stane Street (Hardham-Chichester; Hardham-Alfoldean-London), perhaps via Hassocks into the Ouse Valley.[1] Our knowledge of early R-B pottery production in Sussex is otherwise extremely poor, but many of the greyware vessels are unlikely to have travelled very far, since large zones of the Weald would have formed suitable production areas, given the existence of nearby market centres. The Hassocks area is again a likely candidate for the source of many greyware vessels (cf. 34).

Perhaps the most significant aspect of the group is the high proportion (45-50%) of vessels in native fabrics, probably of local manufacture, and some clearly in the local ultimate Iron Age SEB tradition (see Fig. 34). These types were used for most of the cooking and storage, and their prevalence suggests that the villa at this date exploited local Iron Age agriculture while producing little cultural change in the surrounding rural settlements (cf. Charleston Brow and Highdole).[2] However, the use of the wheel and R-B potting materials by a potter working in the SEB tradition (perhaps near Hassocks—see 34), does suggest that the process of assimilation was beginning, as does the frequent occurrence of SEB-type jars in local R-B cemeteries. Nor can the SEB ' culture ' be so clearly demarcated from the Belgic (' Iron Age C ') culture as the ABC scheme suggested; not only do many East Sussex sites produce Gallo-Belgic fine wares as well as SEB material (see above), but some local native vessels have marked Belgic affinities (cf. 11, perhaps a local copy of a cordoned or carinated beaker). Belgic style is, of course, much more obvious in the relatively standardised Flavian grey wares and table wares (see 35, 36, 43, 48, 55-7, 77).

Group ii, 79-84. Pottery from the initial fill of the enclosure ditch Site 1.

Pottery was scarce in the early ditch fill on Site 1 and none was found in the Site 5 sections. It cannot be assumed that 79-84 are exactly contemporary with 1-78, although a date in the second half of the 1st century seems likely. Groups ii and iv are sealed by Group viii. With the exception of 84, Group ii is from the ENE ditch.
79, 80 Handmade ' native ' jars with raised-band decoration applied and thumbed around the girth, both in CJF. Such decoration often occurs on SEB eyebrow pots (cf. 4), but continues into the 2nd century and probably later on plain forms (e.g. 109 below). Locally it is very common; a distribution map is given in *S.A.C.* vol. 81, Table VIII.
81 Square-shouldered ? bottle. Brownish grey finely sandy with small flint grit inclusions; fracture rather granular, surfaces reduced darker. ? Handmade and wheel finished. Decorated with lightly burnished oblique strokes on shoulder and body.
82 Everted-rimmed jar. Brownish slightly vesicular sandy fabric, with some dark flint filler. The surfaces retain traces of a distinctive light sky blue wash.
83 Everted-rimmed jar. Soft, finely sandy pink-buff with red burnt flint inclusions.
84 Rilled bowl, probably carinated. Hard bluish grey slightly micaceous sandy; grey surfaces. NNW ditch. Rilled bowls of this general type occur at Angmering (1947) Fig. 9, 32, and Hardham (pl. VIII, 18).
Not illustrated. Base of ? poppyhead beaker. Soft fine smooth bluish grey; dark slipped surfaces.

1 See Fig. 20 above and B. W. Cunliffe, *The Regni*, (1973), p. 115.
2 G. A. Holleyman (1936), op. cit.

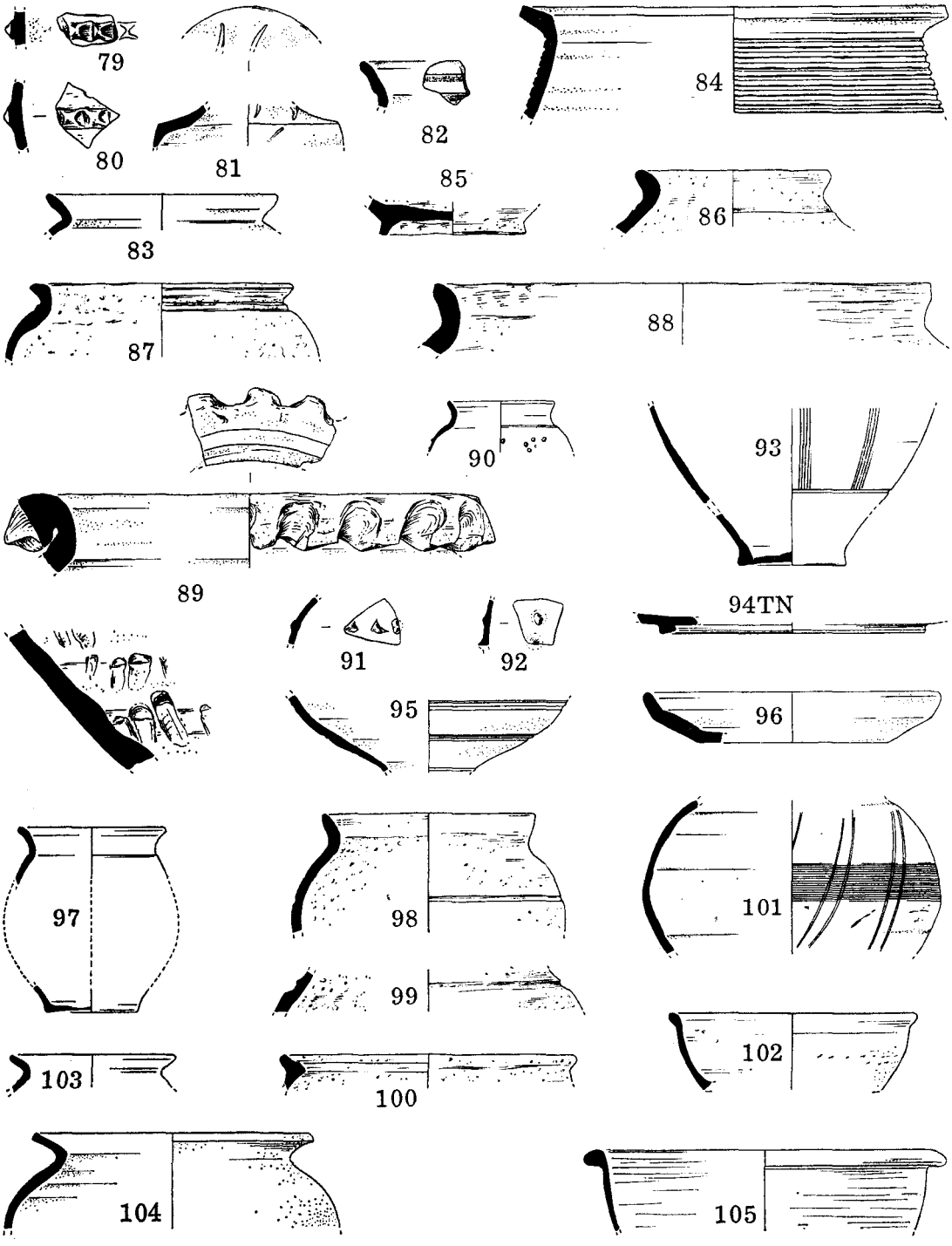

FIG. 27. Romano-British pottery Group II, vessels 79-84; Group III, vessels 85-97 and Group IV, vessels 98-105. $\frac{1}{4}$.

Group iii 85-97 Pottery from Layer 2 of the enclosure ditch on Site 6.

This material was from a recut of the ditch and included a number of sherds clearly redeposited from the initial fill (1-79); only vessels 89, 90, 93, 97 and an imitation f37 bowl (all represented by several sherds) are confidently ascribed to the period of the recut. The general character of Group iii suggests that the recut was not substantially later than the initial fill—say, the last quarter of the 1st century.

85 Footring of a handmade SEB jar, possibly belonging to 86 below. Hard flint-filled CJF; ext. grey-brown burnished; int. rough, grey.

86 Rim of a handmade SEB storage jar. Highly fired hard CJF; flame-marked grey-black surfaces, tarmac int.

Not illustrated. Coil-built native jar, form as 21 and 22; corky grey-brown CJF.

87 Round-shouldered jar with cordoned neck. Grey corky vesicular CJF; handmade.

88 Large storage jar with upright rim; handmade in hard grey CJF, grey-black burnished surfaces.

89 Storage jar of Thundersbarrow ware. Wheelmade in hard bluish grey slightly micaceous sandy fabric, with some larger brown grog and ironstone inclusions; surfaces browner grey. The overturned rim has been skilfully ' roped ' and the int. shows the characteristic finger roughening. This is an early example of a type with an apparently agricultural use and common on rural settlements in the 2nd to 4th centuries: cf. Fishbourne, 391; Highdown (*S.A.C.* vol. 80 p. 75 fig ix., 7, Bishopstone Fig. 8A).

Not illustrated. Body sherd of a large handmade jar of Thundersbarrow ware in a coarse and liberally filled CJF. Surfaces grey/buff/brown tarmac. Wall thickness 14.0-18.5mm. Cf. the chalk filled 4th century type specimens from Thundersbarrow (*Antiquaries Journal* vol. 13 pp. 149-151).

90 Small poppyhead beaker decorated with panels of dots *en barbotine*. Hard brittle fine smooth slightly micaceous light grey with some quartz sand grains. Traces of black ? paint on ext. cf. Fishbourne (267).

91, 92 Body sherds from rusticated beakers. 91 smooth grey fine micaceous with some rather coarse sand inclusions; 92 similar but brown-grey with blue-grey core. cf. Fishbourne (74—second half of 1st century).

93 Jar decorated with vertical combed lines (5-toothed comb) above a groove. Smooth very finely sandy brownish grey with black flint and red-brown grog inclusions; black ext. slip.

94 Valery Rigby has contributed the following:—
Base sherd from a large platter with a functional footring, in terra nigra. Pale blue fine-grained sandy paste; blue-grey surfaces; traces of a highly polished finish confined to the upper surface. Definitely an import, the fabric, finish and form are typical of large Gallo-Belgic platters (e.g. C. F. Hawkes & M. R. Hull *Camulodunum* (1947) forms 2, 3 and 5). Could be a pre-conquest import, it was manufactured in the Claudian period at the latest.
Imported terra rubra platters have already been found at Castle Hill, Newhaven. Terra nigra similar to this has been found at Fishbourne, Chichester, Lancing and Littlehampton. Newhaven is rather isolated from this distribution but is probably to be included in a secondary concentration in the south within the general distribution of terra nigra and terra rubra in southern Britain. The concentration of finds is along the South Coast, from Poole, Dorset to Newhaven, with a northerly projection reaching the Winchester area (V. Rigby, ' Potters Stamps on Terra Nigra and Terra Rubra found in Britain,' in A. P. Detsicas ed. *Current Research in Romano-British Coarse Pottery, C.B.A. Research Report 10* (1973), pp. 7-24).

95 Wide-bodied jar decorated with pairs of grooves and a slight cordon near base. Hard light grey finely sandy with coarser sand filler; surfaces reduced darker.

96 ' Belgic ' type platter. Hard blue-grey smooth micaceous with quartz sand filler and lighter surfaces. Traces of a darker slip. Two examples of this general form were found. Cf. 43 above—a widely distributed type, usually produced in grey sandy fabrics: Fishbourne 14.4—14.6; Angmering 1947 fig. 10, 42; Arundel (*S.A.C.* vol. 77 p. 230) fig. 5, 5.

97 Jar in dirty light grey slightly micaceous finely sandy fabric with red-brown grog; surfaces reduced soot black.

Not illustrated. ? Tazza. Small worn sherd from the body/pedestal junction in fine smooth micaceous brown-grey fabric with quartz sand and black and red grog inclusions (much sparser in the body component). ? cf. 54-9 above.

Not illustrated. Imitation samian f. ?37 rouletted bowl closely resembling 61, but with thicker wall and duller surface colour. Perhaps contemporary with the recut of the ditch.

Group iv 98-105 Pottery from Layer 2 of the enclosure ditch on Sites 1 and 5.

From the NNW ditch on Site 1 except 98 and 105.

98-100 Native jars. 98 (Site 5) and 99 rather hard coarse CJF; dark grey/soot black surfaces, burnished ext. and over rim; 100 with ? lid seating in light grey highly fired CJF. All handmade and finished.

101 Jar in rather soft grey sandy fabric with darker reduced surfaces; organic material plucked and burnt out. Lightly rilled zone on girth and pairs of tooled oblique lines. cf. 265.

102 Bowl with out-turned lip. Rather vesicular light finely sandy grey, with sparse quartz sand and organic filler. Dark grey/black surfaces, possibly slipped.

103, 104 Jars with everted rims; 103 micaceous black sandy; 104 grey sandy.

105 Pie dish. Finely sandy dark grey micaceous; reduced black surfaces, burnished ext. (Site 1 ENE ditch).

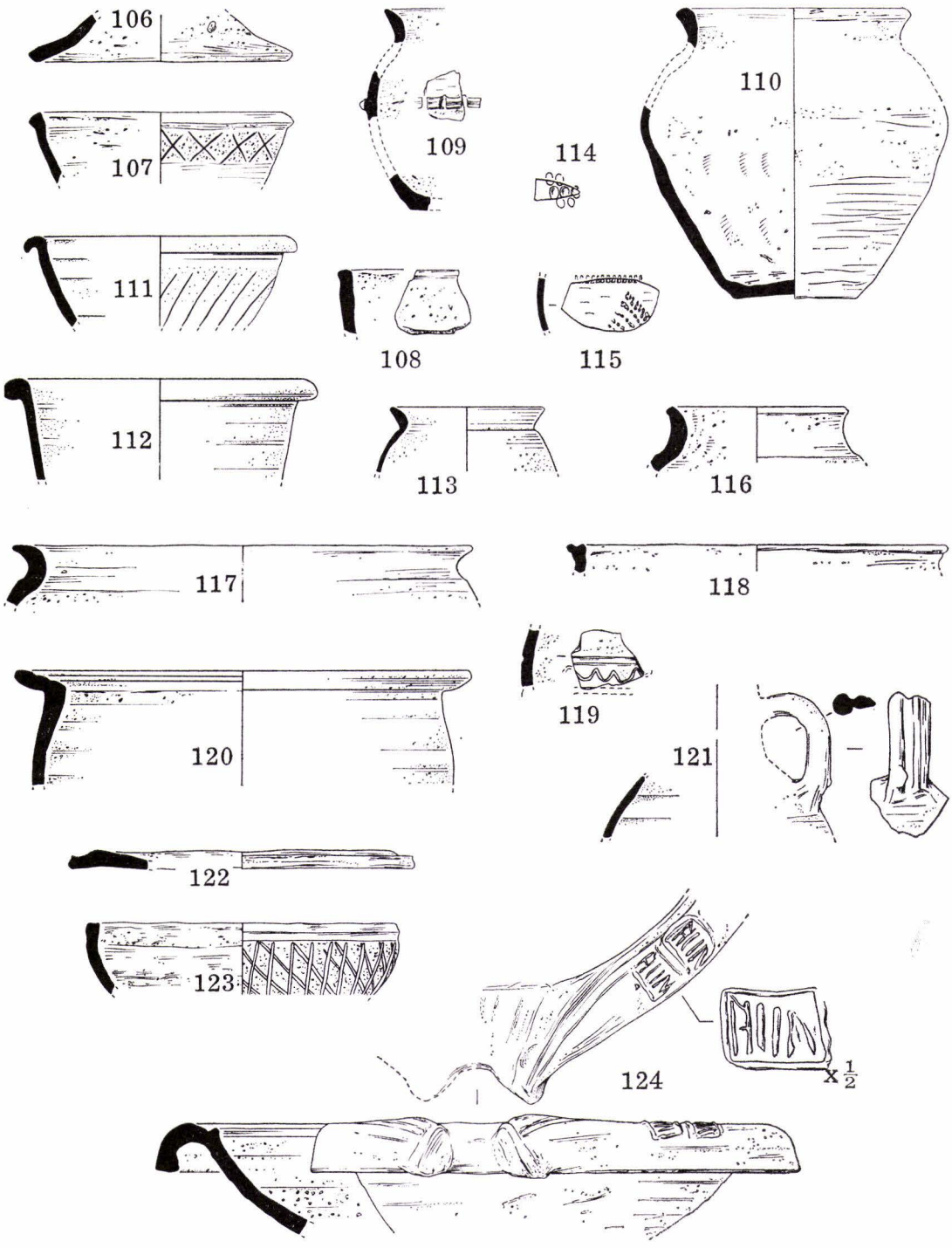

FIG. 28. Romano-British pottery Group V, vessels 106-121 and Group VI, vessels 122-24. Vessel 124, stamp ½; rest ¼.

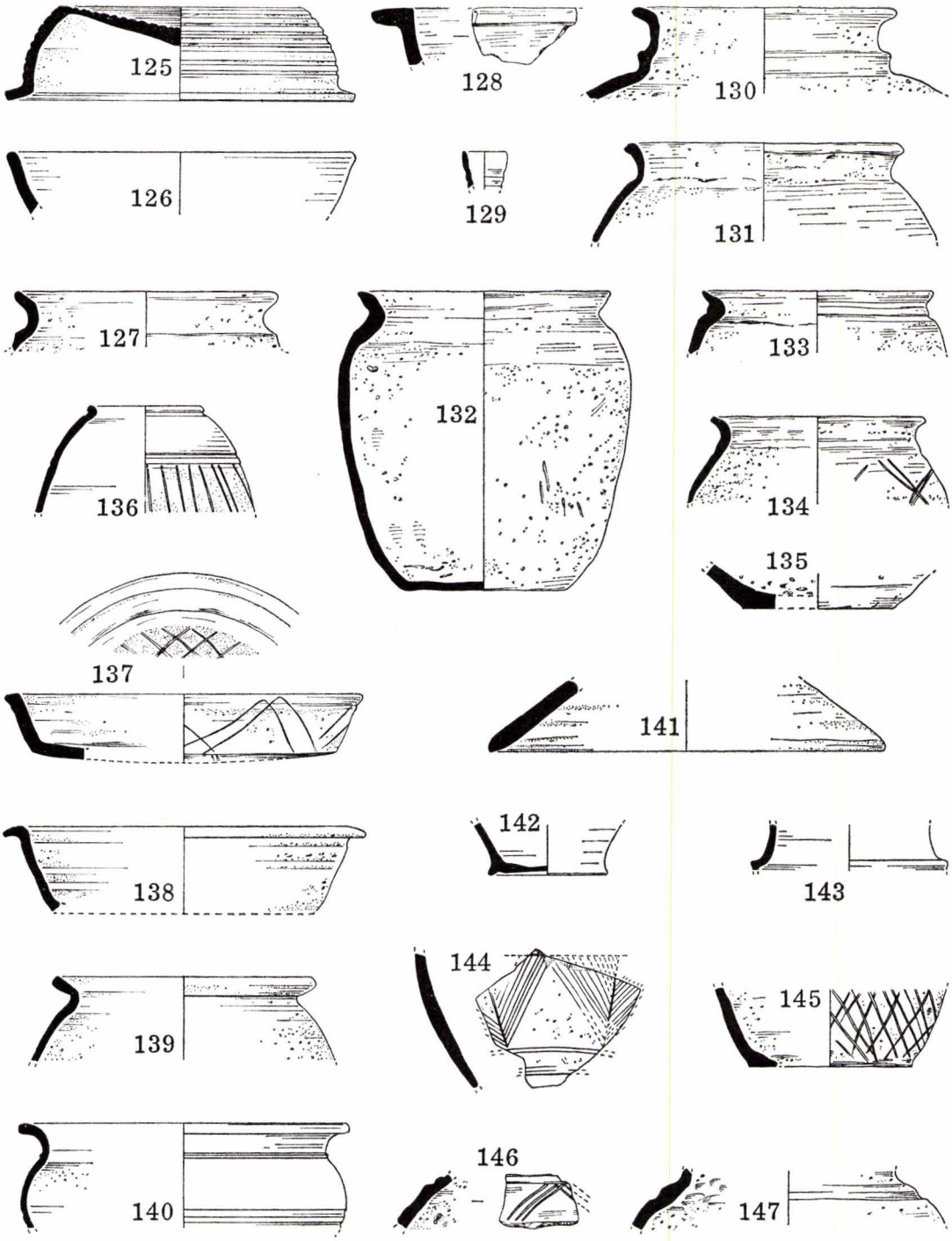

FIG. 29. Romano-British pottery Group VI, vessels 125-7; Group VII, vessels 128-143 and Group VIII, vessels 144-147. $\frac{1}{4}$.

Groups v-vii Pottery associated with the Site 1 buildings.

Group v 106-121 Pottery from the beamslot of Structure IV.

106 Handmade lid in grey CJF with large rolled ironstone inclusions; burnished black surfaces.
107 Handmade bowl in grey CJF with black surfaces, burnished above and below a rougher zone with burnished lattice.
108 Sherd of typical handmade CJF bowl; soft, busnished black surfaces. Two other examples were found.
109 Jar with raised-band decoration. Handmade in grey CJF; surfaces reddish brown. The band is trimmed and interrupted with a knife or similar tool. Cf. comments on 79-80 above.
110 Plain jar in light grey CJF, burnished above girth and possibly knife-trimmed below; coil built. The base was found crushed *in situ*.
Not illustrated. Sherds from at least 18 other CJF jars were found.
111 Hook-rimmed bowl faintly decorated with diagonal tooled lines. Hard bluish grey with quartz sand filler.
112 Pie dish. Rather friable black very sandy; int. surface redder.
113 Small everted-rimmed jar. Finely sandy reddish grey, blue-grey core. Surfaces grey; black slipped ext.
114 Sherd from a vase with carved oval facets, perhaps in imitation of glass vessels. Fine blue-grey with some black inclusions; darker slip on exterior.
115 Sherd from a poppyhead beaker decorated with rouletted girth band/s and a diamond zone of barbotine decoration. Hard fine almost metallic grey-blue with darker ? grog filler apparent on surface.
Not illustrated. Body of poppyhead beaker. Hard fine smooth blue/grey micaceous; whitish brown ext. with black slip, decorated with panels of barbotine dots. Poppyhead beakers in grey fabrics were frequent in and around the beamslot.
Not illustrated. Rough-cast beaker. Soft light red very finely sandy fabric, black slipped surface.
116 Jar with thickened neck in hard grey highly fired CJF. Handmade, perhaps wheel finished.
117 Large jar with everted rim in hard grey CJF; grey-black burnished surfaces. Handmade, perhaps wheel finished.
118 ? Bowl with divided rim—perhaps a lid seating. Irregularly handmade black friable CJF.
119 Large jar in well-fired hard grey CJF, decorated with a wavy line between two girth grooves; handmade.
120 Reeded-rimmed bowl. Oxidised orange-buff coarsely sandy with grey core. A typical late 1st to early 2nd century form.
121 Flagon with applied reeded handle. Orange-red sandy, white slipped exterior.

Group vi 122-124 pottery from the Structure V wall footings.

122 Flat lid/cover in hard grey/black CJF; burnished black surfaces, roughly handmade and finished. From a contemporary wall exposed in a contractor's trench.
123 Bowl in grey CJF, black surfaces burnished int., and ext. above a rougher zone with burnished lattice; groove beneath rim. Handmade, location as 122. cf. Fishbourne (235, from a late 3rd century context).
124 The following was contributed by K. Hartley. Five joining fragments from a mortarium in granular brownish orange fabric with buff surface and slip, and a grey core; white and grey (flint?), quartz and brown trituration grit. The fabric is tempered with tiny grit of similar type. Diameter *c.* 38cm. Two incomplete stamps are impressed close together, but no other example of them is known. Unfortunately it is not certain whether the stamps are retrograde or not, and only more complete examples will establish the potter's name or literacy. The rim-profile is clearly in the tradition of the potters who worked at Brockley Hill, Radlett and Verulamium, and can be closely paralleled in the mortaria of Driccius, whose activity can be dated to the period 110-150 A.D. The grey core is unusual in such mortaria but is also matched in the work of Driccius, who had kilns at Brockley Hill and Radlett.

Also:

125-6 From a large post hole to the SW of, and perhaps associated with, Structure V (1 F46).
125 Rilled lid (possibly bowl) with depressed centre. Hard brownish grey micaceous sandy with coarser quartz sand filler; dark grey/black reduced exterior.
126 Bowl in hard grey rather fine sandy fabric with a conspicuously rough fracture; reddish wash or oxidation ext. cf. 198.
127 Jar with stepped shoulder and constricted neck in hard light grey highly fired CJF with calcined flint filler. Probably a SEB vessel. (From an insecurely stratified context near Structure V).

Group vii 128-143 Pottery from the gully in Structure V. Antonine.

The fill of this feature was apparently homogeneous and probably represents the destruction of Structure V; it is thought to be contemporary with the final fill of the enclosure ditch on Sites 1 and 6 (Group viii below), and the forms of the majority of the cooking pots bear this out. The other vessels are consistent with an Antonine date, and one greyware jar is in a fabric also found in the destruction layer in the ditch.

128 Bowl of very large diameter in a completely oxidised hard, dull red sand ? micaceous fabric with burnished surfaces. Possibly handmade.
129 Mouth of a small flagon. Fine smooth orange-pink (cf. Brown/Yellow 7A) ' chalky ' with very fine filler and smoothly finished surfaces.
130 Large storage jar with prominently stepped constricted neck. Hard grey CJF. Presumably a SEB vessel, burnt after breakage and possibly residual. ? Coil built and burnished by hand.

131 Thinly made jar with overturned rim in dark grey CJF with chalk inclusions. Int. grey, ext. black and finely burnished—the finish is reminiscent of Black-Burnished Ware 1, which is also represented from this feature. Coil built. 4 jars of this form were found, one of them very large. Lattice decoration on the body may have been typical. Cf. also 181 from the Antonine ditch fill.

132-133 Handmade jars in CJF. 132 found smashed but practically complete, is in an unevenly fired organic-vesicular CJF with typical filler, red and brown grog, and a number of very large ironstone inclusions. Surfaces generally grey-black, highly burnished from the shoulder over the rim, rough below. The body form and finish is strongly reminiscent of contemporary Black-Burnished Ware 1 jars, although there is no lattice. 132 was heavily sooted within.

134 Lattice-decorated black handmade CJF jar.

Not illustrated. Cross-marked base of a handmade CJF jar, burnt red after breakage and perhaps residual. The cross is simple and burnished before firing. Cf. Charleston Brow (fig 26).

Not illustrated. Shoulder/neck of a Black-Burnished Ware 1 jar. Cf. below, 187, 188 (see R. Farrer (1973) op. cit., p. 103, 1).

135 The following was contributed by K. Hartley: A body sherd of mortaria fired to dark grey with dark red core and white (flint) grits. The exceptional hardness of this fragment, together with the extreme discolouration suggests that it could be a waster, though not necessarily unsaleable.

136 Ovoid jar with bead rim and two grooves above a girth zone decorated with diagonal lines. Grey sandy with reddish core; burnished above rougher decorated zone. Cf. Chichester (*S.A.C.* vol. 94, p. 126 No. 98—? an earlier vessel).

137 Decorated bowl with sagging base, rather roughly wheel made and ? knife trimmed. Hard grey white micaceous finely sandy with grey surfaces. Double wave motif on ext., lattice on rougher zone on int. base; probably also decorated underneath. A common type in the Chichester area: cf. Fishbourne (204), Chichester (A. Down *Chichester Excavations 2*, Tower Street, fig. 5.8, No. 10 and Central Car Park, fig. 8.24, No. 66).

138 Bowl with slight hook rim. Light grey rather micaceous sandy with surfaces reduced darker.

139 Jar with everted rim. Grey sandy, darker reduced surfaces. Fast rotation marks.

140 S-profile jar with cordon on neck and grooves beneath girth; hard light bluish-grey sandy with some large calcined flint inclusions; well smoothed ext.

Not illustrated. Base of jar in a distinctive blue-grey very hard highly fired fabric with rough fracture and pimply surfaces. This fabric also occurred in the final fill of the NNW enclosure ditch (Site 1). No form could be determined, but a pear-shaped jar with an everted plain rim, in this fabric, was used in the cemetery at Hassocks (BH, marked 68). The Hassocks example had distorted in firing, and seems likely to have been a local product.

141 Conical lid. Hard grey sandy with sparse large flint and ironstone inclusions; dark grey reduced surfaces.

142 Typical greyware jar base. Light grey sandy, bluer flecked surfaces.

143 Beaker with stepped profile. Fine smooth salmon pink with slight blue core; bluish white int., grey washed ext.; fast rotation marks.

Not illustrated. Sherds from about 8 poppyhead beakers in various fine grey fabrics, some micaceous.

Group viii 144-240 Pottery from the final fill of the enclosure ditch. Antonine.

Locations refer to the Site (1/5/6), and, for Site 1, sections on the NNW or ENE sides (1N, 1E). On sites 1 and 6 the final fill of the ditch was clearly a destruction layer, containing much burnt building debris as well as quantities of pottery (see main report, above), but Site 5 was relatively sterile, and may have filled over a longer period (see 188). It should be borne in mind that it is in the nature of destruction layers such as the Site 1 and 6 fills to contain residual materials; sherds of 223, for instance, were found scattered across the Site 6 R-B ground surface.

144-165 'Native' vessels in CJF and allied fabrics from Site 1, N section. These examples, excavated from a section less than 6m. in length, are illustrated as a group since many of them are fresh and clearly contemporary sherds. Many of them differ in form or fabric from those found elsewhere in the destruction layer. Vessels 149-160, 164 and 165 are in dark grey or black corky CJF with organic cavities, chalk, shell, ironstone and occasionally red grog inclusions. Soot black highly burnished finishes are typical, frequently above a single or double girth groove; the ext. is not normally burnished below the girth, rather globular jars with everted rims are a conspicuous type (153, 156, 158, 159, 161), as are jars with high shoulders (157, 160,163), and sub-biconical vessels (152, 155). All except 152 (wheel finished) are handmade (probably coil built) and hand finished. The following deserve special comment:

144 Body sherd with zone of chevron decoration lightly tooled between burnished grooves. Rather sandy grey CJF, black surfaces over brown sandwich layer; handmade.

145 Lattice-decorated handmade jar. Unusual in this group, though 154 may be latticed. Illustrated sherd found redeposited in a modern feature.

146, 147 Handmade jars with stepped profiles. 146 fabric as 149-160; decorated with chevron; 147 hard highly fired CJF. Either sherd might be residual.

148 Bag-shaped bowl very robustly handmade in hard light grey CJF with crushed calcined flint filler, black inclusions and some organic cavities. All surfaces burnished and originally black, but largely oxidised orange-brown in use. The form of this vessel is most unusual and it is unlikely to have served a domestic function. It would be suitable for an industrial process as a large crucible, but despite obvious use it shows no sign of high temperature scaling or metallic deposits. More likely is a process involving long periods of relatively low temperature heating, such as the final stages of salt evaporation.

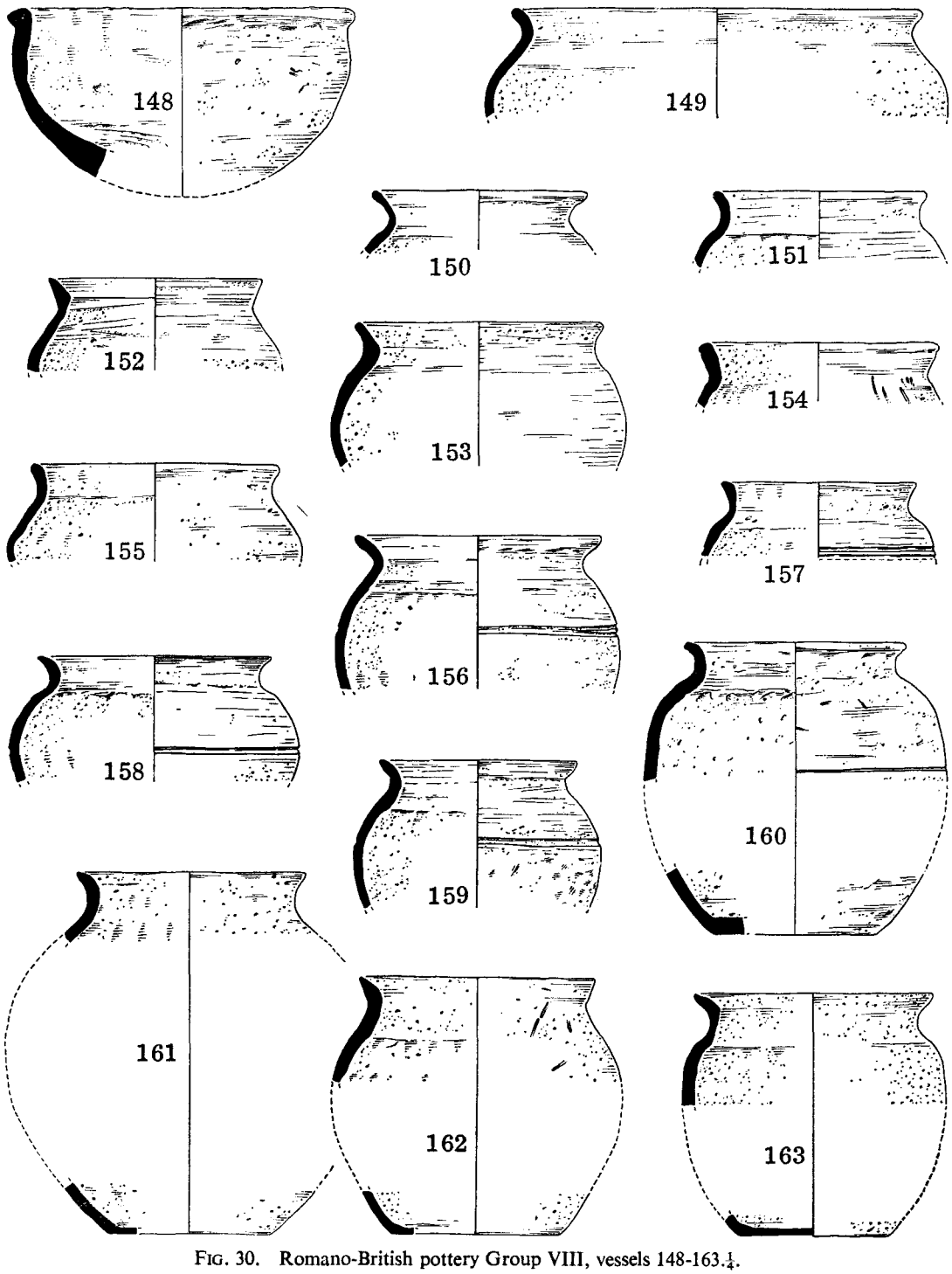

FIG. 30. Romano-British pottery Group VIII, vessels 148-163. $\frac{1}{4}$.

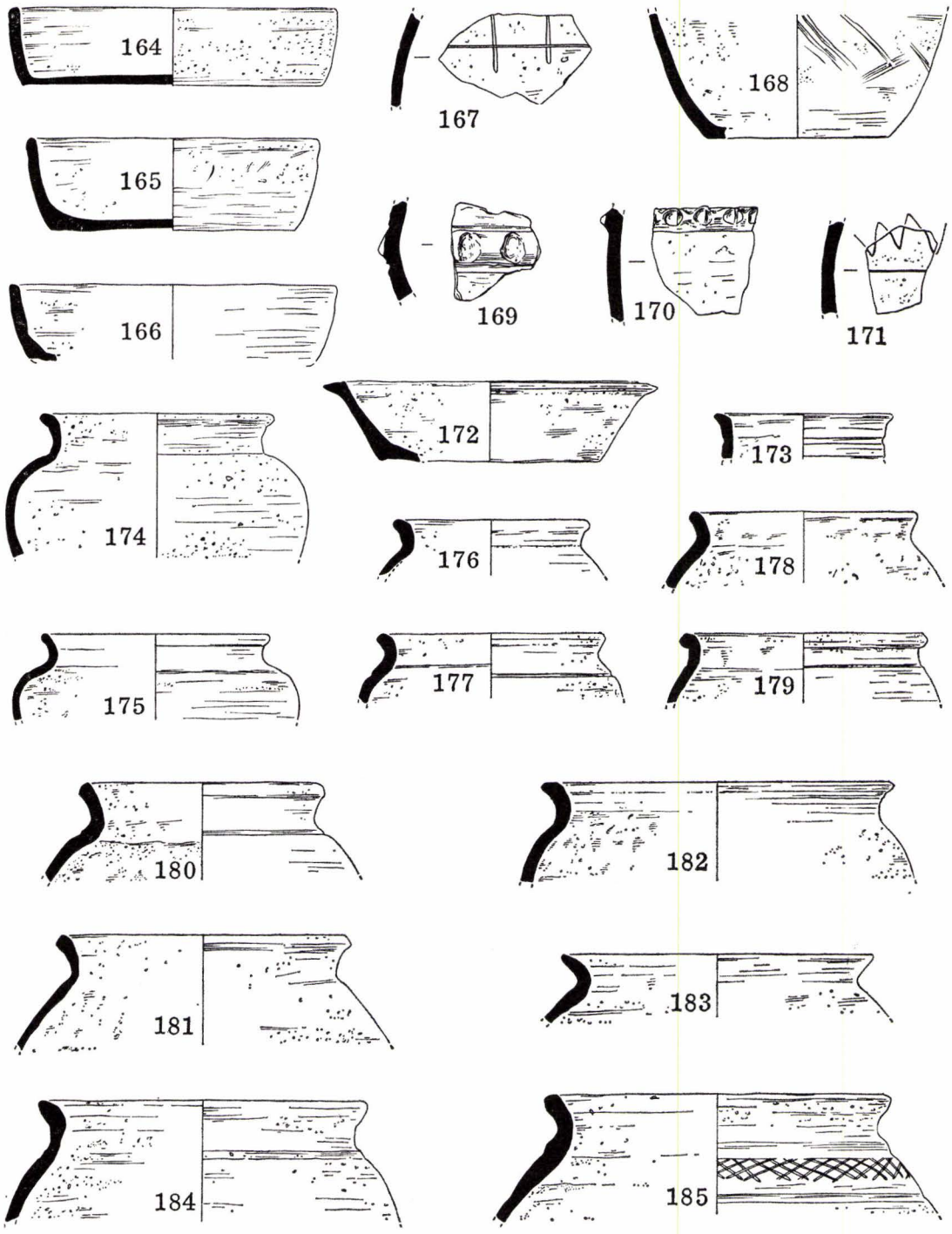

FIG. 31. Romano-British pottery Group VIII, vessels 164-185.$\frac{1}{4}$.

160 The form of this jar is obviously in imitation of Black-Burnished Ware 1 vessels of this period. Cf. 187.
161, 162 Round-bodied everted-rimmed jars in a closely similar rather smooth grey version of CJF with a little mineral filler and a fair amount of lost organic material, especially in 162. Both coil built.
163 High shouldered jar with flaring rim in an unusual organic-tempered orange-pink CJF, light in weight, with a grey-white core. Coil built.
164, 165 Typical ' dog dish ' black CJF bowls. Handmade.
Not illustrated. Body of large storage jar with raised-band girth decoration, fingernail impressed, much as 170. Light grey rather smooth CJF with intentionally blackened surfaces. Handmade. (1N).
Not illustrated. 3 further bowls and at least 11 jars in CJF were found in 1N.
166-185 CJF bowls and jars from sections 1E (166, 170, 172, 175-8, 180, 182-3, 185) and 6 (167-9, 171, 173-4, 179, 181, 184). All handmade and finished, except 182 (wheel finished). Generally rather plain rims, in contrast to 149-163. Many of the sherds have been burnt and/or abraded after breakage.
167-171 Decorated body sherds. 169, 170 examples of thumbed raised-bands. The Antonine ditch fill provided the majority of the Newhaven raised-band material.
173 Grooved cup or beaker; burnished black surfaces.
181 (3 examples) cf. 131 above.
185 ? Storage vessel with close lattice between grooves on shoulder. Decoration of this type is locally common and may derive from the late SEB ' Asham jars ' (241 below; cf. also 213).
A variety of similar rim forms comparable with 149-185 are illustrated from West Blatchington (p. 221).
186-228 Grey and sandy fabrics.
186 Plain-rimmed jar. Dull red-grey sandy with CJF-type filler, including oyster shell and organic particles. Perhaps handmade, wheel finished. (1N).
187 Black-Burnished Ware 1 jar; reddish brown sandy, black burnished shoulder and over rim; latticed body. Handmade. A typical 2nd century example (R. Farrar (1973) op. cit. p. 103, 1) (6).
188 Black-Burnished Ware 1 jar: black sand, burnished on shoulder and over rim; handmade. The flaring rim, though not so pronounced as in 4th century examples, probably indicates a later 2nd or 3rd century date. Site 5, from the uppermost silting of the enclosure ditch, where it may represent casual loss. Cf. R. Farrar (1973) op. cit. p. 103-4; Fishbourne (328. 1); West Blatchington (Plate VI—? end of 2nd century); Chichester St. Pancras (175a); the type is common in Sussex, though not always found in Black-Burnished ware proper. 187 and 188 were mass-produced near Poole, Dorset.
189 Neck of coil built flagon. Soft friable micaceous with sand filler and ironstone and red grog inclusions. Wheel finished, cf. 33 above. Burnt and probably residual. (6)
190 Everted-rimmed jar. Medium/hard grey micaceous sand-filled fabric; black inclusions. Black reduced surfaces, roughly knife-trimmed on the wheel. (6).
191-4 Storage jar with grooves on neck and inside rim (1N), carinated rilled bowl (6), everted-rimmed jar (1N), and lattice-decorated hook-rimmed bowl (1N); all light grey sandy rather micaceous with black inclusions; surfaces occasionally reduced a little darker.
195-7 Hook-rimmed bowl and two jars in similar hard grey/dark grey slightly micaceous sand fabrics with rough fractures and pimply black-flecked surfaces. 195-6 (6), 197 (1e).
198 Jar; solid but rather friable blue-grey sandy with a rough fracture; surfaces a little darker and covered with an orange-red wash. One small sherd (1E). Probably a pear-shaped jar of a type very common at Fishbourne (313) and Chichester, but local in distribution (see *S.A.C.* vol. 112 pp. 86-96). Some at least were made at the Rowlands Castle kilns, near the Sussex-Hants. border. Complete jars may have ' batch marks ' inscribed on the shoulder.
Not illustrated. Plain bowl in similar fabric and wash to 198. The form is similar to that of 126 from 1 F46. (1E).
199 Flanged bowl; hard fine smooth brownish grey with red-brown grog; surfaces dark grey, wheel burnished. (1E).
200 Bowl with hooked flange; fine smooth grey with red-brown grog and black inclusions; red-brown core. Finely smoothed silver-grey surfaces. (6) A hook-rimmed bowl in this fabric was found at Hassocks (BH Box 60/5).
201 Miniature jar; fine light grey with well smoothed surfaces; ext. burnished. (1E).
202 Hook-rimmed bowl; friable dark grey finely sandy; black reduced micaceous surfaces. (1E). An identical vessel from Hassocks (BH Box 60/5).
203-5 Bowl (6) and two plain jars (1N, 6 respectively); brittle fine light grey with small black inclusions. Surfaces silver-grey, finely smoothed, smeared with flecks of filler. 5 other vessels, including a poppyhead vase, were found in this fabric, which is common at Newhaven.
206 Plain poppyhead beaker; soft greyish white ' chalky ' with sparse quartz sand filler; dark grey slip ext. (6).
Not illustrated. A large number of poppyhead beakers in various fine grey wares were represented by single sherds. All but one (decorated with panels of barbotine dots) showed no signs of decoration.
207 Jar with flaring rim, round body and girth grooves. Hard fine grey with sand filler; ext. well smoothed, int. pimply. (1E).
208 Large robust bowl; hard light grey/buff sandy with rough fracture; dark grey reduced surfaces. Roughly wheel made. (1N).
209 Corrugated bowl with incised wavy line decoration. Soft grey-buff rather coarsely sandy with grey-brown grog inclusions; buff ext. (1N).
210 Everted-rimmed jar. Smooth slightly micaceous with sand and brown grog fillers; burnt red—? residual. (1N).

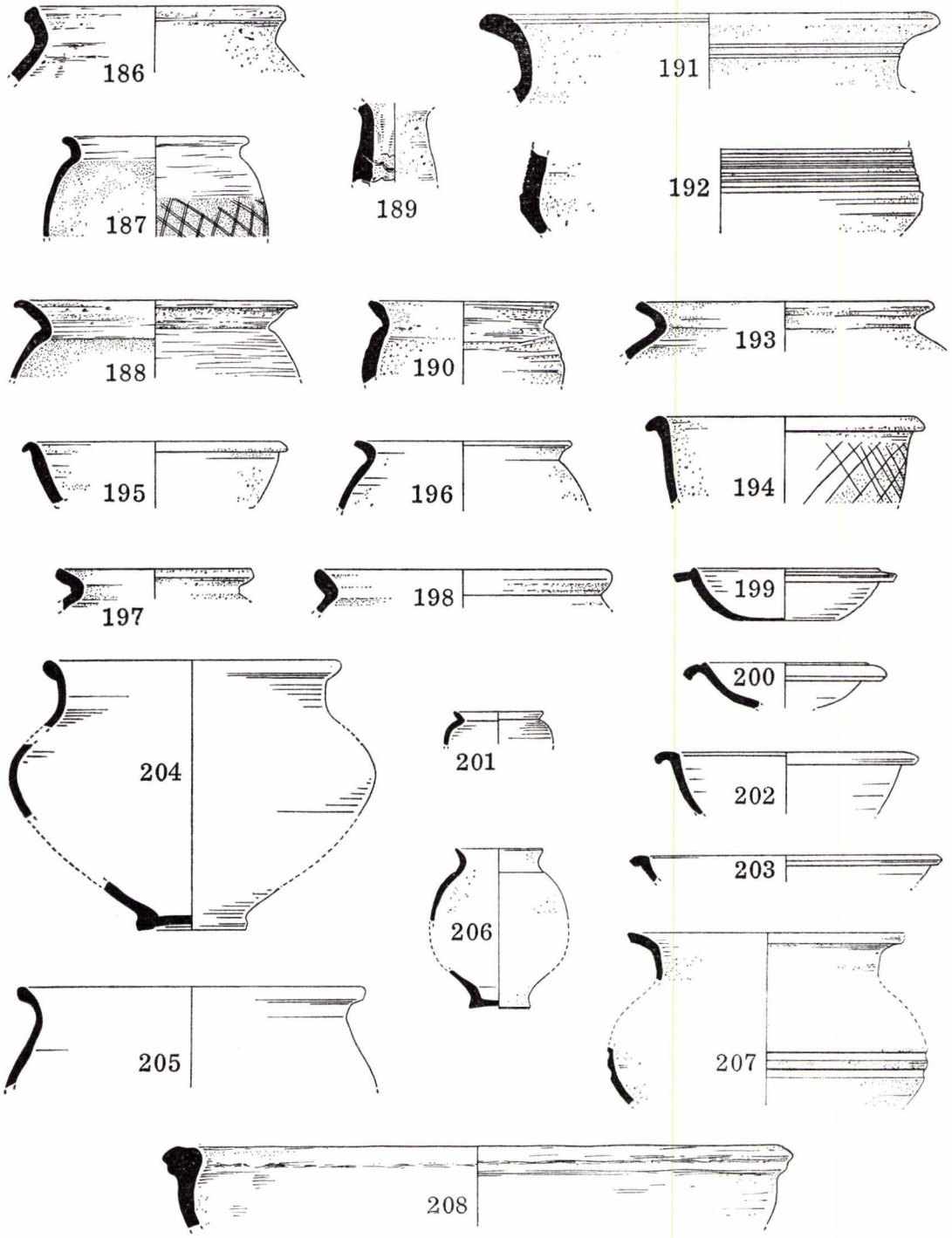

FIG. 32. Romano-British pottery Group VIII, vessels 186-208.¼.

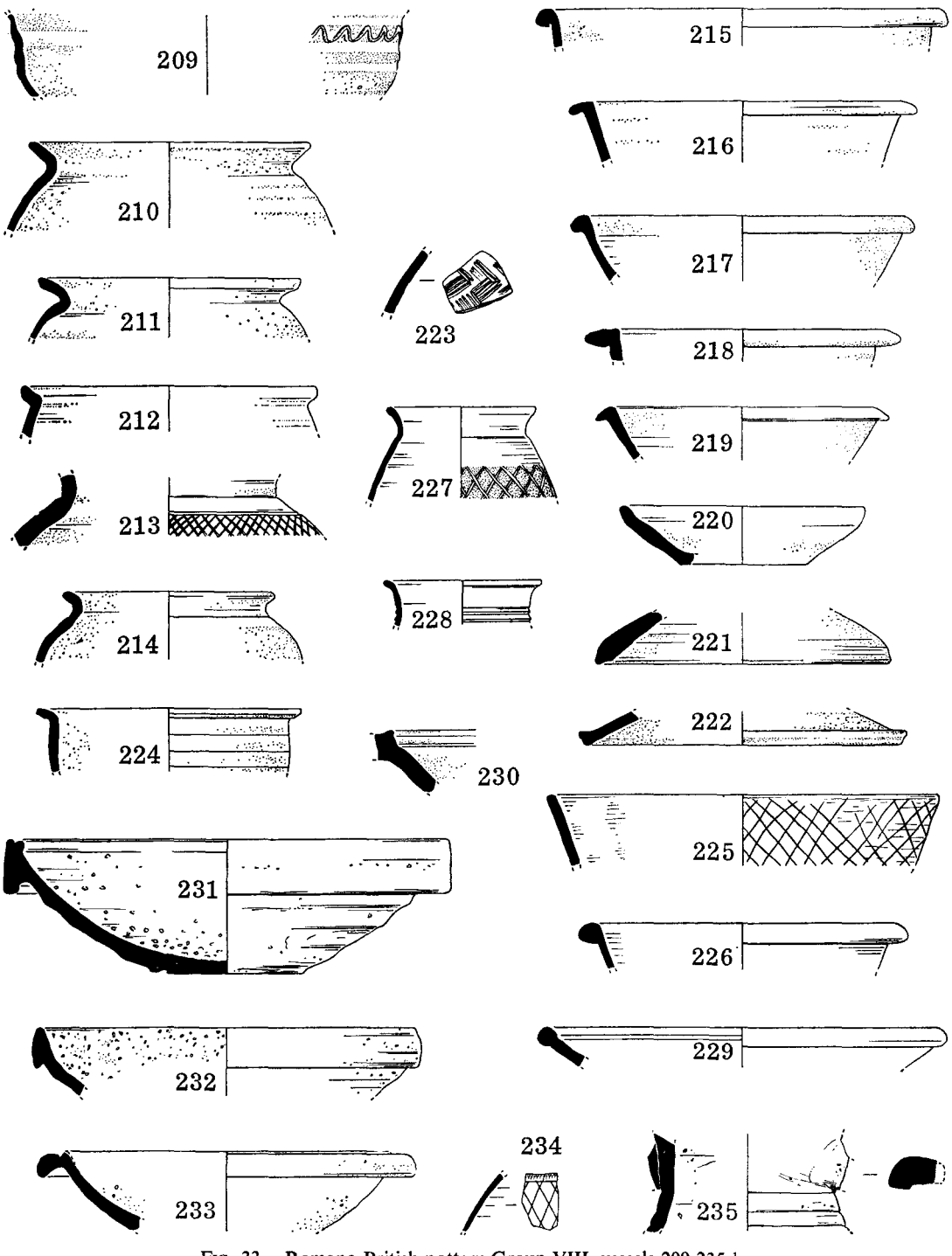

FIG. 33. Romano-British pottery Group VIII, vessels 209-235. $\frac{1}{4}$.

211 Everted-rimmed jar. Grey-brown finely sandy with red-brown and blue-grey sandwich cores; coarser sand filler. (6).
212 Jar or bowl with lid seating. Hard grey sandy. (6).
213 Jar with groove and fine lattice incised on shoulder. Dark grey, a common type in this period; cf. Hardham, (pl. VI, 52, 58, where similar grey ware forms were fired).
214 Jar; dark grey slightly micaceous sandy with organic cavities: surfaces oxidised dull orange. (1E).
215 Bowl with overturned rim; hard reddish grey sandy with blue-grey core; sizeable organic cavities. (1E).
216 Flange-rimmed bowl; grey sandy fabric. (1E).
217 Bowl; micaceous grey sandy with calcined flint filler. (6).
218 Flange-rimmed bowl; grey-brown finely sandy; surfaces burnt. (1E).
219 Bowl; brownish grey finely sandy with rather coarse sand fillers; dark grey reduced surfaces. (6).
220 ' Belgic ' type platter; hard dark grey slightly micaceous sandy. (6).
221 Heavily made lid; hard light grey micaceous sandy with calcined flint inclusions; reduced darker grey ext. (6).
222 Lid; light grey micaceous finely sandy with sand filler; surfaces reduced a little darker. (1E).
223 Large jar with herringbone decoration combed on body; white finely sandy, grey slipped surfaces. (6 and 6 R-B ground surface).
224 Bowl with very slight body grooves; friable smooth grey with sand filler; surfaces reduced black. (6).
225 Latticed bowl; friable dark brown slightly micaceous sandy; surfaces burnished, int. black, ext. brown with burnished lattice. (1E).
226 Typical round-rimmed pie dish; friable dark brown micaceous finely sandy; black wheel burnished surfaces. (1E).
227 Jar with spreading body and lattice decoration; friable dirty grey-buff micaceous sandy, surfaces reduced black; fast rotation marks. Lattice burnished over rougher zone. (6).
228 Vase with grooved neck; very finely sandy grey, since burnt pink. (6).
229 Dish perhaps imitating samian f. 31; rather brittle finely sandy flesh-coloured with grog inclusions, surfaces lighter with a bluish tinge. (6).
Not illustrated. Thundersbarrow storage jar. Body sherd with finger dab on interior. ? Originally grey coarsely sandy with brown grog; ? burnt reddish/brown/buff. (6).
230-3 Mortaria.
230 Flange or bead missing; hard dirty white sandy. No grits present. (1E).
231 The following was contributed by K. Hartley. Three large fragments from a mortarium in fine-textured hard white fabric with white quartz tempering and trituration grit. Similar mortaria have a wide, but thin distribution throughout Britain but are much more common in the extreme south. Rapsley (*Surrey Arch Collections* vol. LXV (1968) p. 30-56) had at least eight examples. Distribution suggests manufacture in Surrey area, and parallels show that they were being made in the 2nd century as well as later. A date of *c.* A.D. 140-250 would probably cover the period of production.
232 The following was contributed by K. Hartley. Diameter about 24cm. A mortarium in orangy brown fabric with thick grey core and abundant grey and white (flint) and brown trituration grit rising to the very rim of the vessel. The rim form would fit a date within the period A.D. 140-250. See 291 for further comments.
233 The following was contributed by K. Hartley. A small flanged mortarium in fine-textured orangy fabric with one grey flint grit. Slightly burnt. This vessel could well have been made in the same region as 291, 290, 232. The bead is broken off but the mortarium is likely to be second century.
234 Jar with rouletted and lattice decoration. Fabric and finish as 55-59 above. Single sherd. (6).
235-8 Amphorae—See also specialist report by Dr. Peacock.
235 Amphora with corrugated body. Hard dirty cream sandy with slight greyish core; shell, black and red grog inclusions and organic cavities. Handle scar. (6).
236 ? Globular Spanish amphora. Pink-buff sandy, slight greyish core; organic cavities. (1E).
237 Amphora handle; grey/salmon pink sandy with ? limonite filler. (1E).
238 Large amphora or pitcher; very finely sandy reddish brown with organic inclusions burnt out; ext. pink-buff. Decorated with combed wavy line at girth. (6).
239 Flagon. Fine smooth micaceous, grey in fresh fracture; pinkish white surfaces and weathered fracture; grey int. body. Some organic cavities. (1N).
240 Rough cast beaker with cornice rim and low girth. Hard fine smooth, int. reduced grey, ext. oxidized red-brown; black colour-washed surfaces. (5). The low girth on this type usually denotes a date towards the mid-, rather than the early 2nd century, and the fabric is typical of what is perhaps to be regarded as a copy of Nene Valley pipeclay examples; see Chichester (*S.A.C.* vol. 95, p. 137, 8); Fishbourne (266); Brixworth (P. J. Woods, *Brixworth Excavations Vol. I*, fig. 23) and J. P. Gillam ' *Types of Roman Coarse Pottery in North Britain* ' (1968), 72-5.

Group viii Summary:

The general character of the pottery suggests an Antonine date (mid second century A.D.). The form of the rough-cast beaker (240), for which a typology has been put forward, would confirm this, but the vessel was found in a section to the west of the bulk of the group. Samian evidence suggests that some of Group viii must belong to the latter part of the Antonine period.

A few comments can be made about the assemblage. As in Group i local ' cooking jar fabric ' pots are strongly in evidence, but formal resemblances to the local late Iron Age SEB jars are tenuous. At least one of the Newhaven jars is in imitation of Dorset Black-Burnished Ware 1 types, and a number of them (see 156-160) may well belong to a single batch with a BB1-type finish. The grey sandy wares are more abundant, but in the absence of known East Sussex kiln sites few of them can readily be ascribed to a particular area. Relatively local production (i.e. within East Sussex) seems likely for the majority of these vessels, though, since grey wares from known West Sussex production centres—for example the Rowlands Castle area (see 198) and Hardham (BH)—form only a very small proportion of this assemblage (the same is true of BB1 jars). Hassocks is again suspected to be a major source, almost certainly producing a hard blue-grey ware (not illustrated) found in Groups vii and viii, and perhaps also 203-5. More generally, the material from various unpublished excavations and collections made at Hassocks (BH) is strongly reminiscent of the present group. Non-samian table wares, though, are very poorly represented here (see fig. 34). Taken alone, in comparison with the majority of villa sites that are later in date and better served by communications, particularly roads, the pottery does not reflect the status of a villa using painted plaster and glass windows.

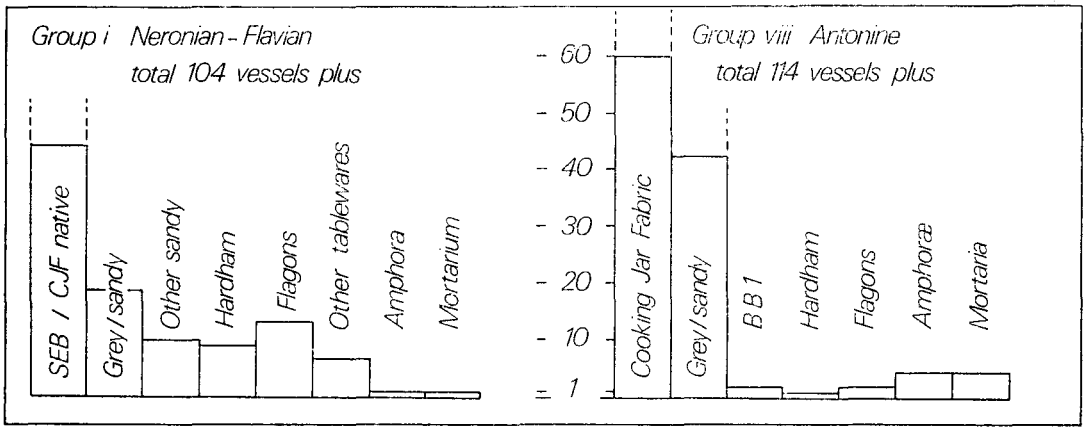

FIG. 34. Newhaven, Romano-British pottery, comparison of the main groups.

Group ix (241-293) Pottery from the Romano-British ground surfaces, minor R-B features, and post-Roman contexts:

Locations give the site number (1, 5, 6) and the layer (R-B ground surface as RB, Medieval hillwash as M, unstratified as US) or feature (F); e.g. 6 F3 or 1RB.

241 Asham jar in dark grey/black CJF liberally filled with chalk, flint, ironstone and perhaps shell. Coil built; pronounced black ' tarmac ' int., black burnished ext. and over rim. Cordon, close obtuse lattice on an unburnished zone, and groove below neck. These vessels belong to the later stages of the SEB tradition (cf. 1-10), in which the eyebrow swag is often replaced by a girth or shoulder lattice; the constricted neck and wide body are typical. Later 1st century. (1 US). The type site of Asham Coombe (*S.A.C.* vol. 71, p. 254) is only 5km. (3 miles) to the N; there 4 jars of this type containing cremations were discovered, apparently in a lynchet boundary (see Asham (and BH); Crayford). Although it seems likely that they were post-conquest burials, Iron Age cultural tradition is indicated. Elsewhere Asham jars have generally been recorded from Romano-British cemeteries—at Bormer, Plaxtol (Kent) (see Crayford), Seaford (BH, marked 88), Herstmonceux (? pre-conquest) and Hassocks (BH, marked 100, apparently found with a samian f33 bowl in the mouth).

242 Pedestal base in hard coarse flint filled CJF with organic cavities. Handmade; black surfaces, burnished ext ? a SEB vessel of unusual form. (1 US). Cf. *Newhaven Castle Hill* (fig. 5, 2).

243-256 Handmade bowls, jars and lids in CJF. (243-5, 248-250, 253, 255-6 from 6 RB; 246-7, 252, 254 from 1 RB; 251 from 1 US).

243 Raised band.

244 Haphazardly combed body sherd, angle uncertain. Hard grey highly fired CJF with calcined flint filler.

246 Jar with lid seating; cf. Chichester (A. Down, *Chichester Excavations 2*, Central Car Park 117, apparently from a very late context).

249, 255 Plain bowls with groove on top of rim—a common form on Site 6 RB.

257 Flanged rim bowl in Black-Burnished Ware 1. Handmade, black fabric burnished int. and on top of rim. Cf. 187-8 above and R. Farrar 1973 op cit. (6 RB).

258 Body sherd of jar decorated with panel of barbotine dots. Light grey sandy, darker ? slipped ext. (1 US).

259, 260 Body sherds of jars decorated with diagonal ? rouletted pricked lines around the shoulder. 259 blue-grey rather finely sandy; almost metallic finely finished light grey slip above decorated zone (6 RB). 260 decoration between grooves; hard light grey finely sandy with a little coarser sand filler (1 RB).

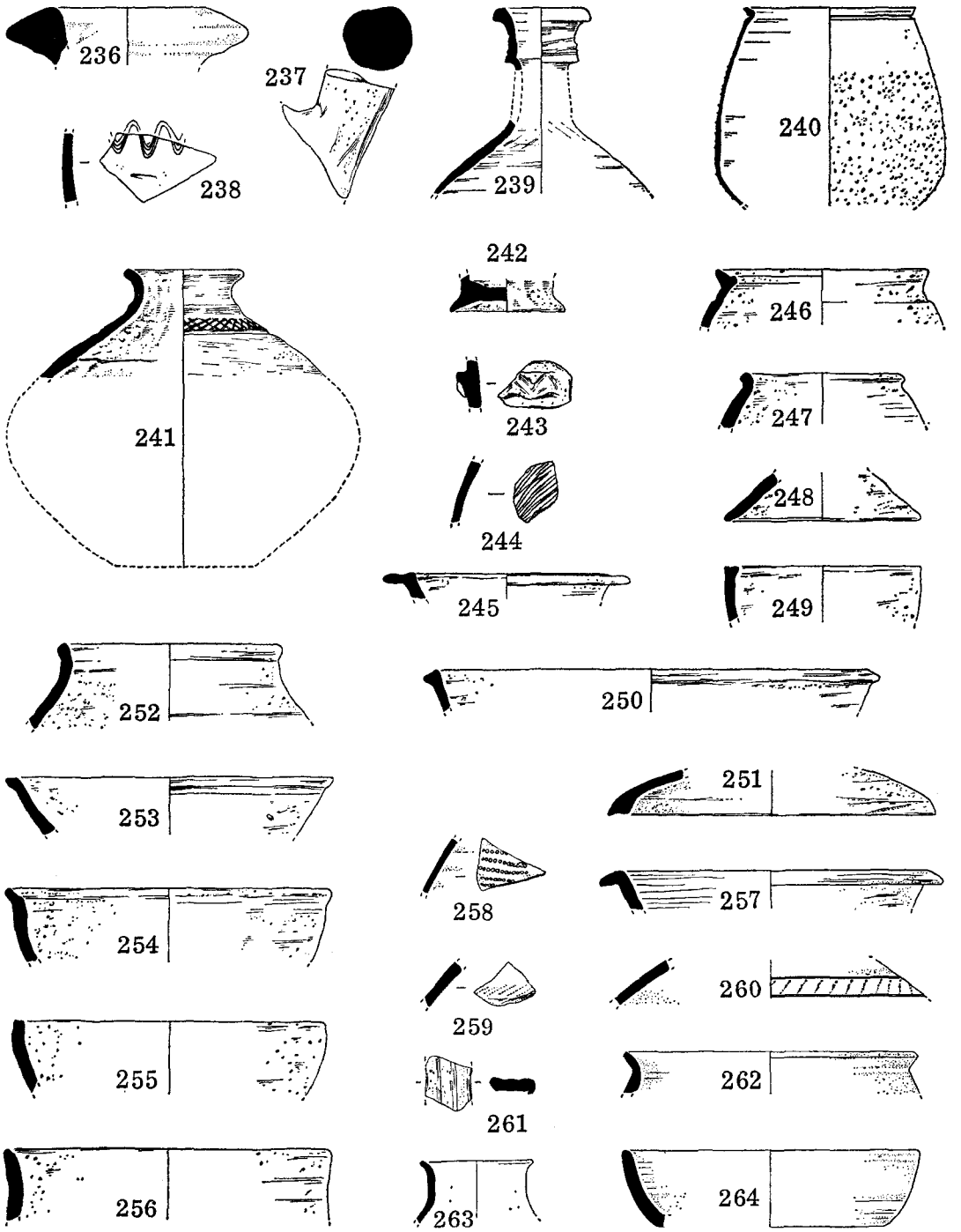

FIG. 35. Romano-British pottery Group VIII, vessels 236-240; Group IX, vessels 241-264.¼.

261 ? Flagon handle with 3 reeds. Hard light blue-grey coarsely sandy. (6 RB).

262 Jar; light brownish grey sandy with blue-grey core. (1 RB).

263 Beaker mouth; hard fine smooth blue-grey with some coarse sand filler; brownish grey surfaces. (6 RB).

264 Bowl; grey-brown sandy with dark grey core; black reduced or slipped surfaces. (1 RB).

265 Jar with lightly combed girth decorated with paired diagonal lines (cf. 101 above). Hard light grey micaceous sandy; darker grey/sooty reduced surfaces. (1 RB).

266 Platter with stepped int. profile; hard fine blue-grey, some coarse sand filler. (1 US).

267 Bowl with groove/bead rim; light grey sandy. (6 RB).

268 Narrow-necked jar; hard buff micaceous sandy with blue/grey core; grey slipped surface. (1 RB).

269 Bowl; hard grey-white sandy with coarse sand filler; grey surfaces. (1 RB).

270 Handled lid; hard dark grey rather coarsely sandy with larger calcined flint and organic inclusions; surfaces reduced brownish dark grey. (1 US).

271 Jar with grooved neck, latticed shoulder and incised wavy line on girth. Hard smooth blue-grey micaceous with dull red sandwich layer beneath int. surface; sandy filler and black inclusions. Burnished lattice between burnished lines around shoulder. (1 US), cf. Angmering 1938 (17)—ascribing a long mid 1st to mid 2nd range for the form.

272 Everted-rimmed jar with groove inside rim and below neck; latticed shoulder. Light brownish grey micaceous finely sandy; surfaces reduced dark grey, wheel burnished ext. (1 US).

273 Neck of flask or bottle; brittle greyish white very finely sandy; grey reduced surfaces. (6 RB).

274 Dish in grey sandy fabric. (6 RB).

275 Wide-shouldered jar; brownish grey slightly micaceous sandy; dull red core and black surfaces. (6 RB? 1st century).

276 Everted-rimmed jar with grooves on shoulder; perhaps a carinated form. Fabric as 54 above, with rather coarse sand filler firing to a ' pimply ' black reduced surface. ? 1st century (1 RB).

Not illustrated. Rilled base/body of jar; fabric and finish as 276. (1 US).

277 Jar with 3 reeds on outside of out-turned rim. Hard dark grey sandy, light brownish grey beneath the black reduced surfaces. (1 US).

278 ? Bowl with inturned rim; full reddish brown micaceous sandy; black reduced surfaces. (6 US).

279, 280 Flanged bowls with shallow grooves above and underneath flanges; probably deep forms with narrow bases. 279 (5 RB) tough black sandy with large ironstone inclusions; 280 (6 RB) grey sandy micaceous, with black reduced surfaces. ? late 2nd or 3rd centuries; cf. Fishbourne (356); West Blatchington (Plate v, 13).

281 Pie dish with faintly burnished diagonal decoration; friable black sandy, reddish brown core; well smoothed black surfaces. (1 US).

282 Pitcher neck; very hard light grey sandy, smoothed surfaces. (6 RB).

283 Pitcher with overturned rim; handle flush to mouth. Friable pink sandy, white core. (6 RB).

284 Flagon with divided rim; hard fine buff with rough fracture. (1 US). Generally late 1st to early 2nd century at Fishbourne (114.1 297).

285 Flagon with scar of ? two-reeded handle; friable ' chalky ' white sandy with an ironstone inclusion. Residual in the cremation urn of Cremation 1 (Site 1).

286 Colour-coated vessel with ? applied circular decoration; smooth 'chalky' cream, with black slipped surfaces. (6 RB). Possibly a post-Antonine sherd from a New Forest or Nene Valley source.

287 Rough cast beaker with cornice rim; brittle fine smooth cream wih thin reddish black slip (1 US). A Nene Valley product? Such colour-coated wares were not very common at Newhaven; their relative scarcity has also been noticed in the surface finds from *Newhaven Castle Hill* (p. 292).

288 Rim of a 3rd-4th century colour-coated bulbous beaker; soft fine orange ' chalky ' with some sandy filler; very slightly micaceous, surfaces lost. (6 US.) Probably Oxford ware (see C. Young, ' The Pottery Industry in the Oxford Region ' in A. P. Detsicas ed. *Current Research in Romano-British Coarse Pottery* (1973) fig. 325).

289 The following was contributed by K. Hartley. A badly weathered fragment of mortarium in pinkish brown fabric with paler surfaces; the fabric contains much red-brown and possibly quartz grits. Perhaps from the same workshop and of the same date as 291 etc.

290 The following was contributed by K. Hartley. Two fragments from a mortarium in slightly brownish buff fabric with thick grey core and grey and white (flint ?), and red brown trituration grit. Slightly burnt. The form points to manufacture within the period A.D. 140-250. See 291 for other comments (6 RB).

291 The following was contributed by K. Hartley. Two fragments from a mortarium in orange-brown fabric with thick grey core. The fabric is heavily tempered with tiny white and grey (flint ?) and red-brown grit. The abundant trituration grit is composed of uniformly small grits of the same type. The form and fabric of this, almost miniature mortarium (diameter *c.* 20cm.) are entirely new to me, and as there are at least two others in similar fabric in this small group (232, 290) I would certainly expect them to be of fairly local manufacture, probably from the same workshop. They could certainly not be earlier than A.D. 140 and are probably later than A.D. 150, indeed they would not be out of place in the first half of the third century. (6 M).

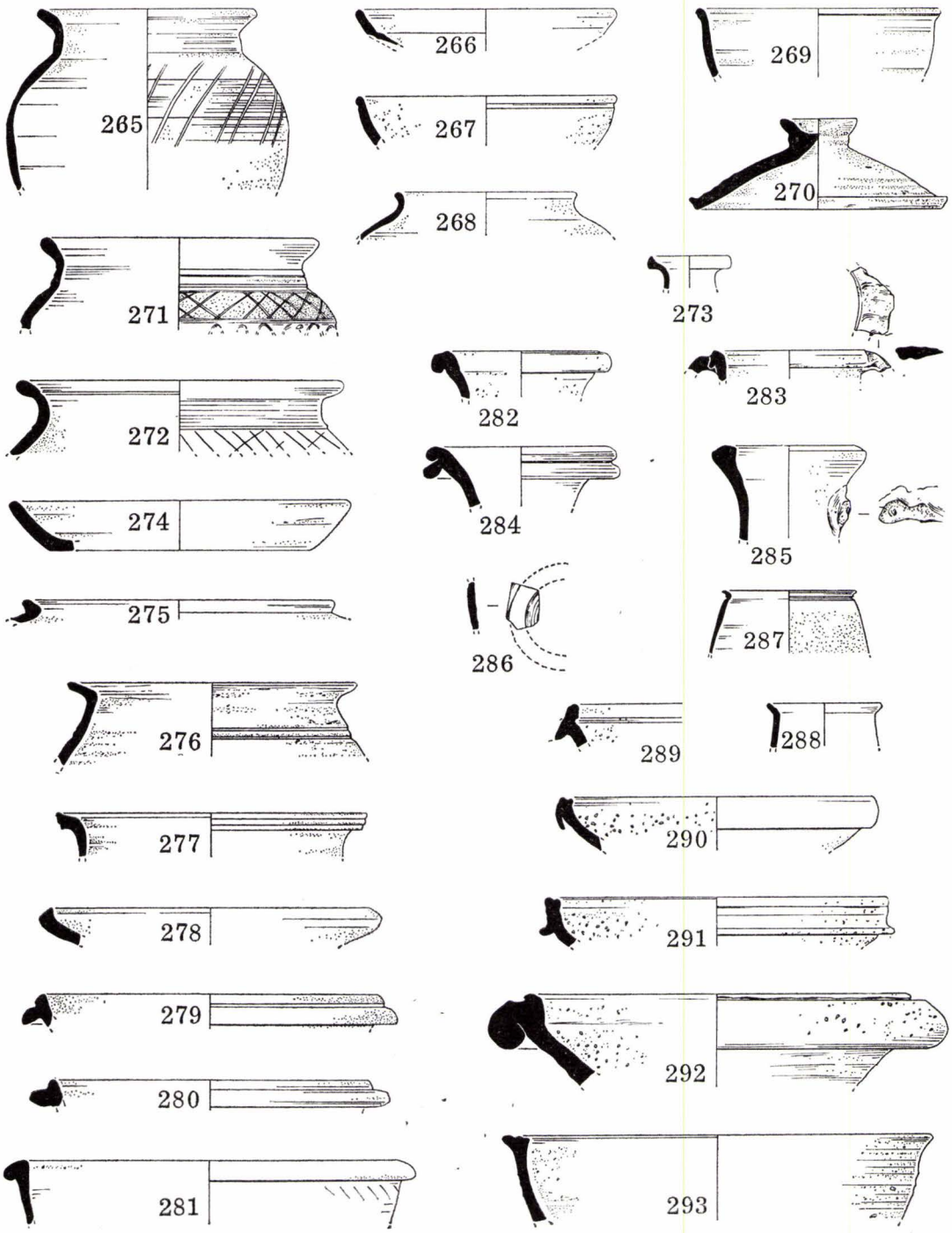

FIG. 36. Romano-British pottery Group IX, vessels 265-293.$\frac{1}{4}$.

292 The following was contributed by K. Hartley. A mortarium fragment in fine-textured yellowish cream fabric tempered with fine grit and with small grey flint grits on the flange, which shows slight superficial burning. A generally similar mortarium was found in a pit at Richborough (J. P. Bushe-Fox, Richborough IV, Pl. XCV, No. 500), dated to A.D. 90-125. This fabric could have been produced in southern England or Gallia Belgica but the almost concave ledge behind the bead is reminiscent of mortaria made in Gallia Belgica, and on balance this origin is the more likely. I would expect this mortarium to be early 2nd rather than 1st century in date.

293 Bowl with reeding on top of rim. Rather soft ' chalky ' flesh-coloured with grey core; sand filler. (1 US).

Not illustrated. Body sherds of a thinly made amphora; soft fine dull red with bright red core. (6 F3 post packing).

Group ix, Summary:

The bulk of the material does not appear to differ very greatly from Groups i-viii. Although no features of this date were recognised, some *post-Antonine* sherds do occur (e.g. 279-80), 288, ? mortaria), but only in very small quantity. Particularly striking is the near absence of third-fourth century colour coated wares, whether from Oxford, New Forest, or Sussex sources, although they are common nearby at Bishopstone. A lack of late R-B pottery was also noted at Newhaven Castle Hill.

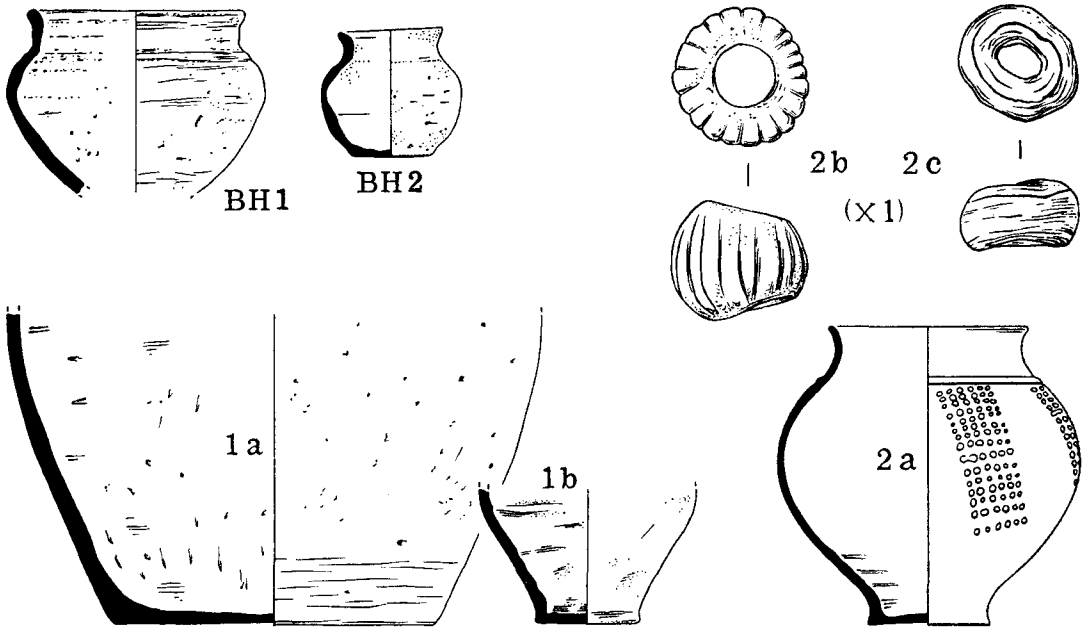

FIG. 37. Romano-British pottery vessels B.H. 1 and 2, found in 1962 on Site 1 and Cremations 1 and 2 also from Site 1. 2b and 2c are beads from vessel 2a, vessels $\frac{1}{4}$; beads $^1/_1$

The Cremation vessels (Figure 37)

Cremation 1. Just north of the outside wall of Structure V (see fig. 16), a large cremation urn and a small subsidiary vessel of which only the bases survived the Post-Medieval disturbance.

Fig. 37 1a. Large CJF jar with plain base, truncated at girth. Handmade and unusually soft and friable, liberally filled with chalk grog, flint and organic particles. Grey interior dull red brown to black exterior.
Fig. 37 1b. Truncated plain subsidiary jar; blue-grey rather micaceous, buff interior and dark grey reduced exterior. Roughly ? wheelmade vertically smoothed exterior.
Cremation 2. 1.4m. from the above outside Structure V (see fig. 16).
Fig. 37 2a. A single vessel containing cremation and beads. Poppyhead jar with cordon below neck in blue grey sand fabric. Decorated with panels of barbotine dots. Much abraded round its girth and holed in one place in antiquity. Probably a Highgate product.

1962 Find. Two vessels found on Site 1 in 1962 are also likely to have contained cremations originally. These finds were sent to Barbican House Museum, Lewes, where they are accessed as BH.63/47.

BH 1. Small grey black handmade CJF jar with sooted burnished exterior. Low cordon below an upright neck and rim. Approximately half the vessel is represented as freshly broken joining sherds. The presumption must be that it was intact before discovery.

BH 2. Small globular subsidiary vessel, complete. Burnished grey sandy with blue-grey surfaces, originally black slipped exterior. Rather micaceous with larger black flint and organic inclusions, some plucked out on the wheel. Rather roughly thrown, being lopsided and heavy for its size.

None of the cremation vessels can be closely dated, but all are consistent with the first or second century A.D. suggested for the rest of the site. It was noted above that Cremation 1 appeared to predate the Antonine destruction of Structure V.

The Samian ware (Figure 38). By A. P. Detsicas, M.A., F.S.A.

The large majority of the material submitted for reporting was of Central Gaulish origin, with sherds representing most of the standard forms; there were also a few sherds of East Gaulish provenance as well as some manufactured in South Gaulish factories, though in the case of the latter none of the early diagnostic forms were represented, except for no. 1 which survived in association with Central and East Gaulish sherds.

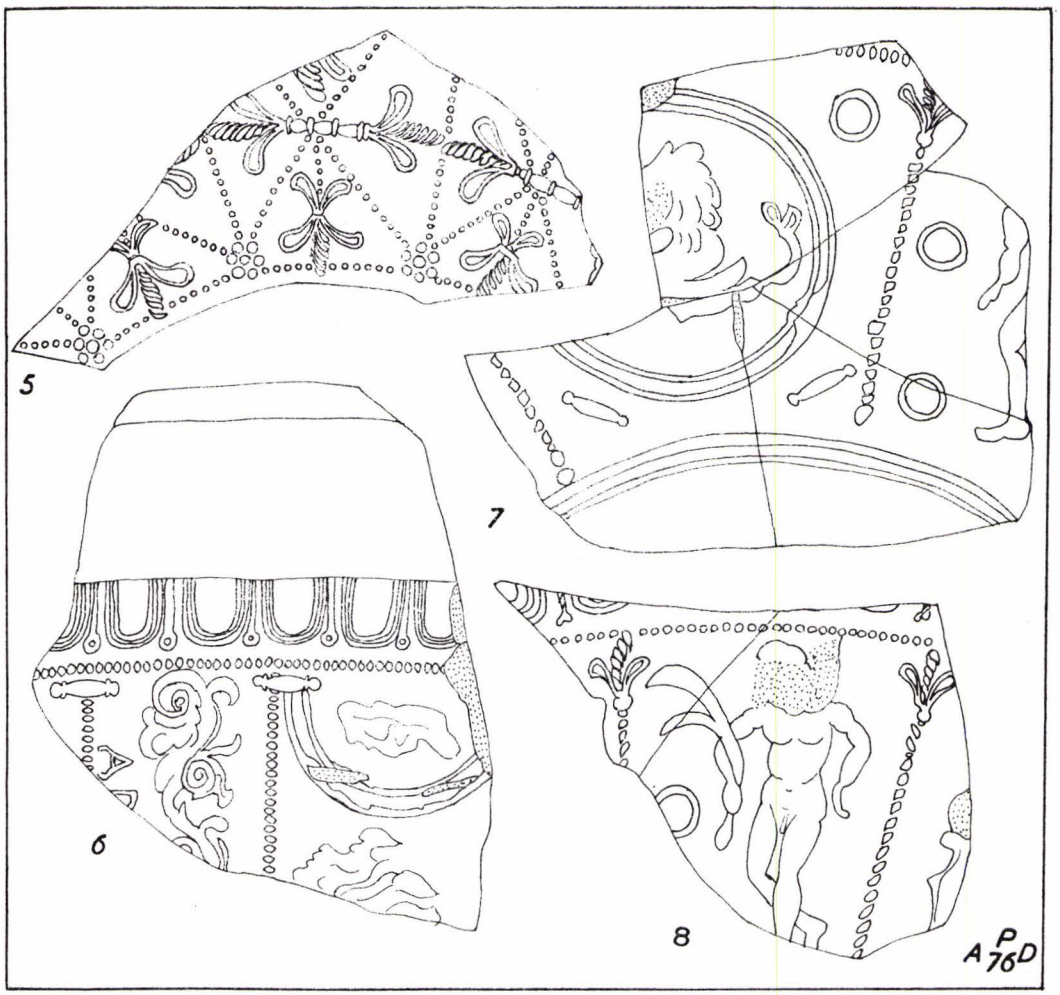

FIG. 38. Samian Ware 1/1

On the basis of this material, it is clear that, although samian was reaching the site in very small quantities in late-Flavian times, most samian imports took place in the course of the second century A.D.

1. Form 27, South Gaulish, stamped MMOR( )M, almost certainly MEMORISM. Date: *c.* A.D. 70-100. (Site 6; ditch layer 3).
2. Form 31, Central Gaulish, stamped ADVOCISIO. Date: *c.* A.D. 160-190. (Site 6; ditch layer 1).
3. Form 31, Central Gaulish, stamped RITOGE(NI), very worn. Date: *c.* A.D. 155-175. (Site 1; north ditch layer 1).
4. Form 33, Central Gaulish, stamped REG( ), probably REGINI·M. Date: *c.* A.D. 100-140. (Site 1; Roman ground surface).

The large majority of decorated sherds were very fragmentary and badly worn, and only a few sherds are here illustrated.

5. Form 37, Central Gaulish, in the style of DRVSVS I (Potter X-3),[1] with a characteristic panel design of St. Andrew's Crosses composed of bead-rows, astragali,[2] cordate leaves[3] and small double leaves;[4] the junctions of the bead-row borders are masked by this potter's seven-beaded rosette.[5] Date: *c.* A.D. 100-130. (Site 6; ditch layer 3).
6. Form 37, Central Gaulish, by ADVOCISVS, with a remnant, AD( ), of his stamp and his ovolo no. 2[6] over a bead-row border. The decoration, in panels demarcated by bead-row borders terminating in astragali, contains a floral scroll[7] and, in the panel to its right, a double-ringed half-medallion and two figure-types which are too squashed for positive identification. Date: *c.* A.D. 160-190. (Site 6; unstratified).

7 and 8. Form 37, Central Gaulish, in the style of LAXTVCISSA. Several sherds from this bowl were recovered, but the remainder do not add anything more to the scheme of decoration than the two pieces illustrated. The decoration, below this potter's ovolo no. 1[8] is divided by bead-row borders ending in cordate leaves[9] and shows, within one panel, a double-ringed medallion with Sea-horse (D.33=0.33),[10] astragali[11] and plain-rings;[12] on another sherd, within a narrow panel, Apollo (D.55=0.92), as on a stamped sherd from Leicester.[13] Date: *c.* A.D. 150-180. (Site 6: ditch layer 1).

The Amphorae by D. P. S. Peacock, BSc., Ph.D.

Twelve sherds were examined; they represent globular oil amphorae made in Southern Spain between Cordoba and Seville. There was one rim sherd from a globular, Dressel 20, amphora of an unusually heavy type. All the fragments were from the enclosure ditch on Site 6; Layer 1 produced one body sherd, Layer 2, five sherds including the rim, Layer 3, two sherds, and Layer 4, four sherds. A number of other fragments noted in the pottery report above, as, for example, the body sherds in the post seating in Structure V (fig. 16), appeared to the excavator identical to the above, but were not examined by the writer.

The glass vessels by D. Charlesworth, M.A., F.S.A.

Vessel I Fig. 39.1. Fragments of a hollow tubular rimmed bowl in yellowish green glass. The metal is quite unweathered. The vessel is a long-lived type, illustrated in wall painting at Pompeii and the Boscoseale villa, and found at Verulamium, for instance, in contexts ranging from 75-410 A.D., but mainly second century A.D.[14] Site 6, ditch, Layer 3.

Vessel II Ribbed fragment in greenish glass. The shape of the vessel cannot be determined. First to second century A.D. Site 6, Roman ground surface.

Vessel III Small fragment of a square-bodied bottle or flask. First to third century A.D. It could be a ' Mercury ' flask rather than the more common square bottle. Site 6, Roman ground surface.

Vessel IV Fragment of a large square-bodied bottle *c.* 60-130 A.D. Site 6, Roman ground surface.

Vessel V Fragment of a large square-bodied bottle *c.* 60-130 A.D. Site 6, ditch, Layer 1.

Vessel VI Fragment of a large square-bodied bottle *c.* 60-130 A.D. Corner of the moulded base marking with a circle remains. Site 6, ditch, Layer 1.

Vessel VII As VI above. Site 1, Roman ground surface.

Vessel VIII As IV above. Site 1, gully in Structure V.

Window Glass. (Figure 39.2).

Thirteen fragments of window glass had an average thickness of 3mm. They were found on the Romano-British ground surface and in the ditch, Layer 1. All were green or bluish green of the matt/glossy type consistent with a first or second century date.[15] Several fused lumps of window glass suggest the destruction of a building by fire, either accidentally or, as can be shown in the case of Structure V, during systematic demolition.

1 J. A. Stanfield and Grace Simpson, *Central Gaulish potters*, London, (1958), Fig. 4, p. 13 (hereafter abbreviated to *C.G.P.*); A. P. Detsicas, *The anonymous Central Gaulish potter known as X-3 and his connections*, Brussels, 1963.
2 Detsicas, *op. cit.*, Fig. 2, p. 26, no. 15.
3 *C.G.P.*, Fig. 4, p. 13, no. 8; *Detsicas, op. cit.*, Fig. 2, p. 26. no. 8.
4 Detsicas, *op. cit.*, Fig. 2, p. 26, no. 12.
5 *Ibid.*, no. 15.
6 *C.G.P.*, Fig. 33, p. 205.
7 This floral scroll occurs on stamped sherds from Corbridge (unpublished), Caerwent (*C.G.P.*, Pl. 112/12) and other sites.
8 *C.G.P.*, Fig. 27, p. 184.
9 *Ibid.*, no. 5.
10 J. Déchelette, *Les vases céramiques ornés de la Gaule romaine*, Paris, 1904 (abbreviated to D.); F. Oswald, *Index of Figure-types on terra sigillata*, Liverpool, 1936-7 (abbreviated to O).
11 *C.G.P.*, Fig. 27, p. 184, no. 3.
12 *Ibid.*, no. 7.
13 *C.G.P.*, Pl. 10 0/24.
14 S. S. Frere, *Verulamium Excavations*, vol. 1 (1972), p. 199.
15 D. B. Harden, ' Domestic window glass, Roman, Saxon and Medieval,' in E. M. Jope ed. *Studies in Building History* (1961), pp. 39-63.

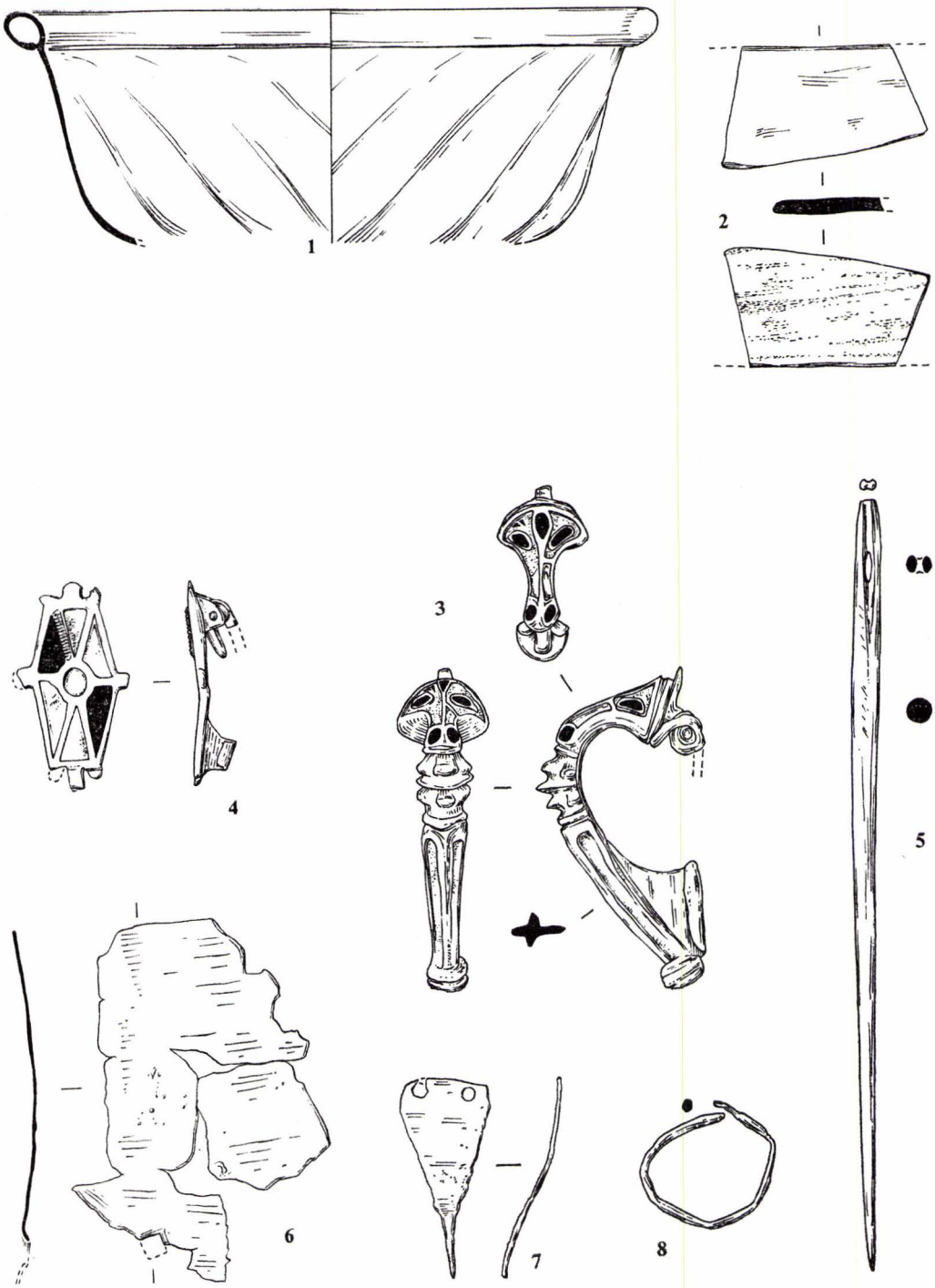

FIG. 39. The glass, 1-2 and small bronze objects, 3-8. Glass, ½; bronze 1/1

THE SMALL OBJECTS

Coins: 1. Three-fifths of a broken bronze of Gallienus (252-268 A.D.) obv. (G)allienus PF A (ug); bust radiate facing right. rev. badly corroded. Unstratified in Post-Medieval soil Site 6.
2. Bronze of Antoninus Pius (138-161 A.D.) obv. Antoninus Aug-; head laureate. rev. AS Aug. draped female figure standing left with winged caduceus and cornucopiae Sc. Site 5, ditch, Layer 1.
3. Roman bronze coin, very worn and illegible. Site 6, ditch, Layer 1.

Bronze

Fig. 39.3. Mr. M. R. Hull has contributed, the following:
" A Backworth brooch of Collingwood's type RIV, the foot is missing. The spring had four turns and there is a spike on the head to hold a loose loop and shackle which are now missing. The head is enamelled with the pattern of three pointed oval leaves on a red ground, and there are two round blue spots immediately above the button. The leg was probably enamelled. The trefoil pattern is paralled by one from London which also has the two round spots.[1] The pattern also occurs at Charterhouse on Mendip; Tibberton, Glos.; Traprain Law;[2] Charlton Camp in Greenwich;[3] Brough; Mildenhall; Pakenham and Scawly, Lincs. None of the parallels have any dating evidence, but the brooch is probably late first or early second century A.D. Found on Site 1, in a beamslot of Structure IV, thus it belongs to the destruction level of that building."
Fig. 39.4. A six-sided flat brooch divided into seven compartments, a central one is circular, the others are in segments of the hexagon. Two compartments contain dark blue/green enamel, two others have traces of a red paste. One of the margins between segments of enamel is overlain by a thin moulded bronze strip. At the corners and end were flat circular lugs or trefoil terminals, now broken. The back is flat with a catchplate and spring held between two lugs. No exact parallels have been found, the nearest are lozenge shaped brooches at Nor'Nour[4] etc. From top fill of gully in Structure V, contemporary with the destruction of that building.
Fig. 39.5. A large needle with broken point, possibly a netting needle. Site, 1, Layer 1 of the enclosure ditch.
Fig. 39.6. Thin bronze sheet with two sides at right-angles. Encrustations on surface appear to represent bronze nails which probably secured the sheet to a wooden box. Metallic salts of bronze from the artifact have preserved a small area of fiberous material which has been identified by Miss C. R. Cartwright as wood. From Site 6 post hole 34.
Fig. 39.7. Isosceles triangle-shaped bronze object with two slightly concave sides meeting at a sharp point. The base is perforated by two holes. A somewhat similar object from North Street, Chichester, is described as ' possibly a fitting for leather work.'[5] Site 5, Roman ground surface.
Fig. 39.8. Thin bronze wire bent in a circle like a crude ring. Site 1. Gully in Structure V.
Not illustrated.
(a) A 2cm. length of lead wire, thickness 2mm. Site 1, ditch, Layer 1.
(b) A piece of folded lead sheeting. Site 6, ditch, Layer 1.
(c) A fused lump of lead 6.5 x 5cm. Site 1, ditch Layer 1.
(d) Two blobs of lead from Site 1, ditch, Layer 1.
(e) An offcut of lead, probably a piece of piping, weight 43.86 grams. Site 1, post hole 70.

Bone

Fig. 40.2. A well polished, plain bone pin with rounded end broken near the point. Site 6, ditch, Layer 1.
Fig. 40.3. The undecorated shaft of a bone pin, length 2.8cm. Site 1, ditch, Layer 1.
Fig. 40.4. A neatly worked and polished oval of long bone which has broken where it became constricted as a ? handle, probably a spatula.[6]

Clay

Fig. 44.1. The greater part of a triangular clay loomweight with equilateral sides of *c.* 15cm. and thickness 5cm. One corner has broken across a perforation from which the weight would have been suspended. The other preserved corner is without perforation. This type of loomweight is generally found in Iron Age contexts.[7] This find from a first century level is more likely to be an instance[8] of pre-Roman traditions surviving on this rural site, rather than a rubbish survival from Iron Age occupation of which we have no definite traces. Site 6, ditch, Layer 3.

Beads

Fig. 40.5. Small clear glass annular bead. Site 1, Roman ground surface.
Fig. 40.6. Segment of a blue melon bead. Site 6, Roman ground surface.
Fig. 37.2b. Melon bead with slighly glassy finish, rather eroded on girth. Site 1, Cremation II.
Fig. 37.2c. Annular dark green bead with streaks of white. Site 1, Cremation II.

1 R. E. M. Wheeler, *London in Roman times* (1930), London Museum Catalogues, No. 3, Fig. 28, 30.
2 J. Curle, ' An inventory of objects of Roman origin in Scotland,' *Proc. Society Antiquaries Scotland*, vol. 66 (1931-2), Fig. 31, No. 5.
3 F. C. Elliston Erwood, ' The Earthworks at Charlton, London, S.E.,' *Journal of the Archaeological Association*, vol. 72 (1916), Fig. 17.1.
4 D. Dudley, ' Excavations on Nor'Nour in the Isles of Scilly 1962-6,' *Archaeological Journal*, vol. 124 (1967), pp. 1-64.
5 K. M. E. Murray and B. W. Cunliffe, ' Excavations at a site in North Street, Chichester 1958-9,' *S.A.C.*, vol. 100 (1962), p. 109, No. 8.
6 See A. C. Brodribb, A. R. Hands and D. R. Walker, *Excavations at Shakenoak Farm, near Wilcote, Oxfordshire: Part III* (1972), Fig. 59.71 and 72.
7 D. W. Harding, *The Iron Age in Lowland Britain* (1974), p. 85, Fig. 21.
8 See the pottery report above.

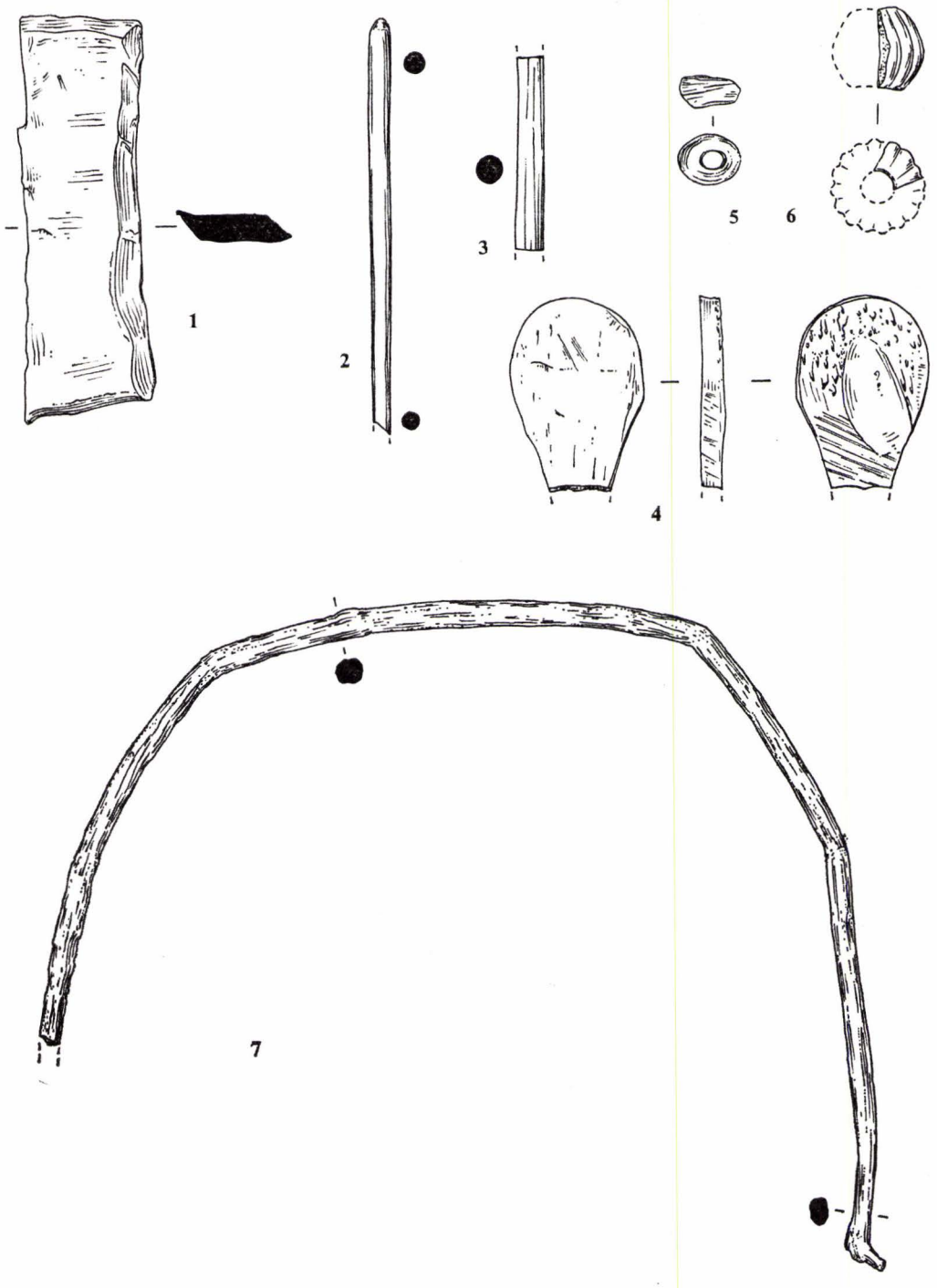

FIG. 40. The small objects; lead, 1; bone, 2-4; beads, 5-6 and iron 7. 1-6, 1/1; 7, 1/2

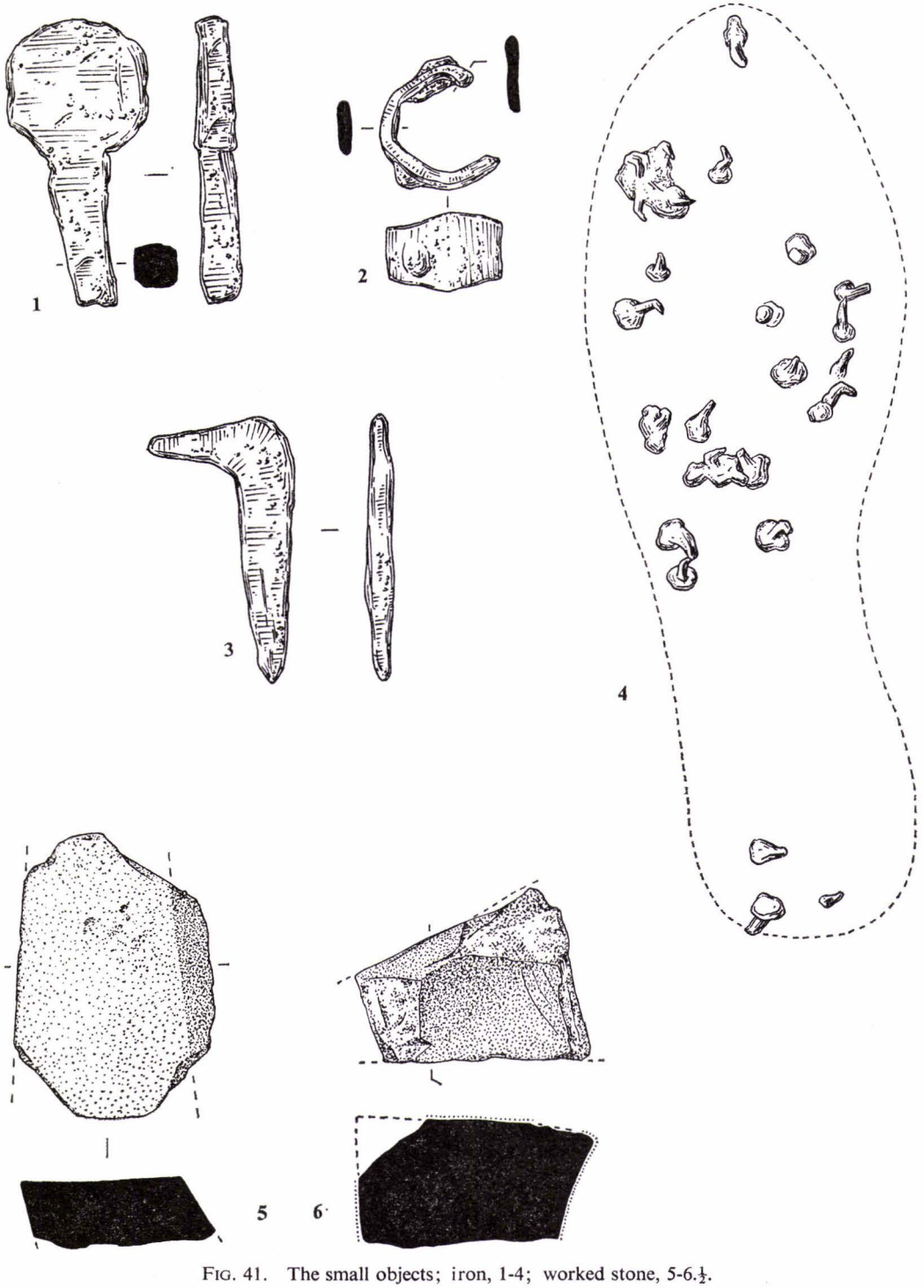

FIG. 41. The small objects; iron, 1-4; worked stone, 5-6.½.

Iron (Figs. 40 and 41)

The excavations produced several hundred pieces of iron, most of which were in very bad condition. The vast majority were iron nails and of the remainder only a few were sufficiently well preserved to permit identification.

Fig. 40.7. Bucket handle made from a bar of iron, 6mm. square, bent in a semi-circle, diameter of bucket 25cm. Terminals bent outwards to attach to body of bucket. Site 5, ditch, Layer 1.

Fig. 41.1. Square bar of iron diameter 1cm. flattened at one end into a rough circle, possibly a lynch pin. Site 1, ditch, Layer 1.

Fig. 41.2. Strip of iron diameter 2cm. and length 8.5cm., folded into two-thirds of a ring radius 1.5cm. Possibly a haft binding from an implement. Site 6, Roman ground surface.

Fig. 41.3. L-shaped hinge staple, ends pointed. Site 5, Roman ground surface.

Fig. 41.4. Thirty hob nails in the rough shape of a heavy boot, lifted in a block of plaster of Paris. Site 5, ditch, Layer 1.

Nails (Fig. 42)

A total of 333 nails were recovered from Romano-British levels, of these 132 were unbroken. On the accompanying histogram the nails are divided into length categories at 5cm. intervals, whole nails, broken nails with heads and shaft fragments are distinguished, as are round and rectangular heads. Above each size category is a drawn sample from that range. Generally the shank is of square cross section, but several nails shorter than 2cm. appear to have a round shank. Four major types were distinguished.

Type 1. Length 0-1.5cm. with a large domed circular head. Thirty of these nails were found in the shape of a shoe, and the use of this type was obviously as hob nails.

Type 2. Length 1-2cm. Slightly smaller heads and longer shank than Type 1, in some cases with a flatter head. Those with domed heads are likely to have been used in furniture or upholstery.

Type 3. Length 2.5-8cm., includes the majority of nails. Generally these have round flat heads with occasional rectangular heads at the larger end of the size range. Such nails would be used for hanging tiles, joining small timbers and the fixing of fittings.

Type 4. Length 8-11cm., large round or rectangular heads, used presumably for the joining of main constructional timbers; only three were found suggesting that the type was little used at Newhaven.

Iron forging took place on the site and nails are likely to have been made for home use.

Ironworking Refuse. (Table 3) by Henry Cleere, B.A., F.S.A.

The following materials were identified:

A Tap-slag: a dense blue-black material with contraction ripple marks on one surface (the upper).
B Furnace lining: hard-baked clay, with adherent vesicular slag.
C Furnace bottom: vesicular slag with inclusions of charcoal.
D Furnace clay: hard-baked clay with green vitrified surface (probably part of stopping of arch of bloomery furnace).
E Forging slag: Highly vesicular slag, light in colour.

The occurrence of these materials in the seven examples examined is shown below:

Sample		Material				
		A	B	C	D	E
1	Site 6, ditch, Layer 1	x	x	x	x	x
2	Site 1, ditch, Layer 2	x				x
3	Site 6, R-B ground surface					x
4	Site 1, ditch, Layer 1		x			
5	Site 1, ditch, Layer 1		x			x
6	Site 1, R-B ploughmark	x				
7	Site 1, Beamslot of Structure IV			x		

Discussion

The presence of all these materials on one site would suggest that iron smelting and working were both carried out there. However, the amount of tap slag, which results from the smelting operation in a bloomery furnace, was small—only six pieces in total. All the other materials (with the possible exception of D) could result from normal smithing operations on iron smelted elsewhere. This very small scatter of tap slag cannot be taken as evidence of iron smelting having been carried out on the site. The amount produced by the process is considerable, and it is found in profusion on Wealden sites of the period (e.g. Bardown;[1] Minepit Wood;[2] Pippingford Park;[3] Broadfields, Crawley[4]).

1 H. F. Cleere, *The Romano-British Industrial site at Bardown, Wadhurst*, Sussex Archaeological Society Occasional Paper 1 (1970).

2 J. H. Money, 'Iron Age and Romano-British iron-working site in Minepit Wood, Rotherfield, Sussex,' *Historical Metallurgy*, vol. 8, No. 1 (1974), pp. 1-20.

3 C. F. Tebbutt and H. Cleere, 'A Romano-British bloomery at Pippingford, Hartfield,' *S.A.C.* vol. 111 (1973), pp. 27-40.

4 J. Gibson-Hill, personal communication.

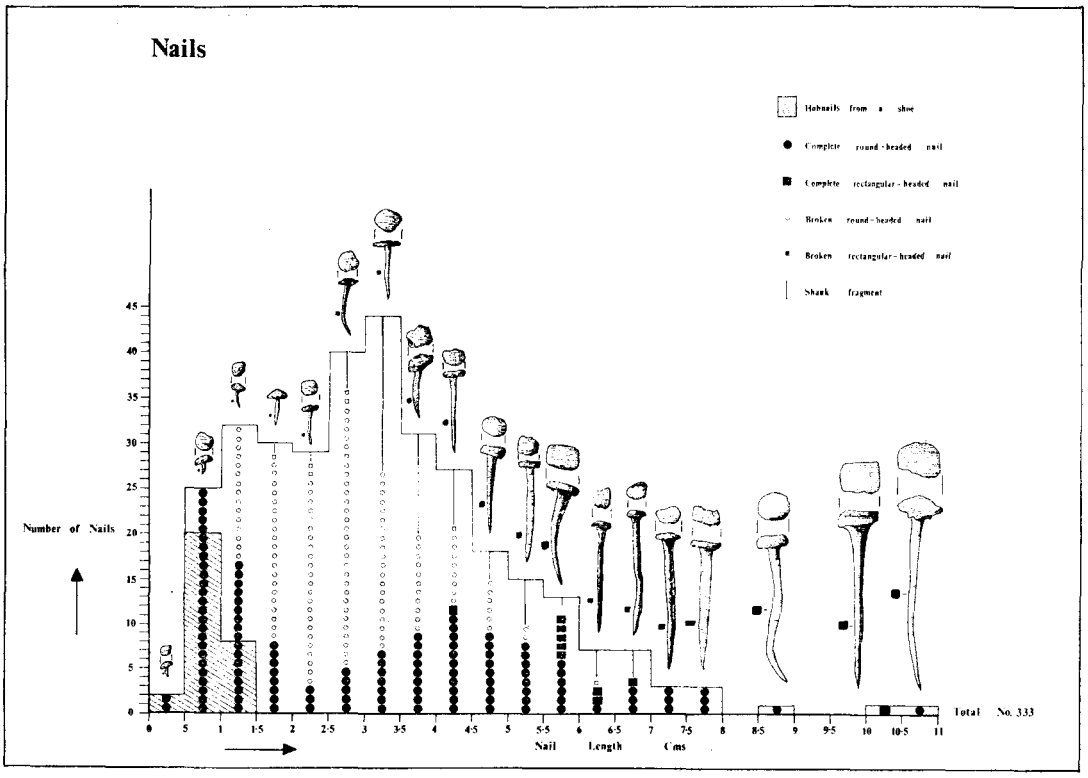

FIG. 42. The length and shape of iron nails expressed as a histogram at length intervals of 0.5 cm. An example from each size category is illustrated

It would seem necessary to seek another explanation for the presence of this material. This may be found in seeking the origin of the iron ore, the smelting of which would have produced this slag. Most of the iron produced in the Weald during the Roman period was smelted from the ores of the Wadhurst Clay, and to a lesser extent from the Weald Clay; unfortunately, there is no deposit of either of these formations in the vicinity of Newhaven. However, there is an outlier of the Woolwich Beds at Castle Hill, only 1km. from the site. Ironstone occurs in this formation as bands of nodules or thin beds,[1] which are still visible on Castle Hill. It would not be unreasonable therefore to postulate that this ore was smelted by the occupants of the Newhaven site and transported a relatively short distance in the form of raw or worked blooms for further working up into artefacts. It would seem almost inevitable that a little of the omnipresent tap slag from the smelting site would have been brought to the habitation site.

Conclusion

On the basis of the specimens examined, it seems likely that iron working from raw or worked blooms was carried out at Newhaven. It is not impossible that the iron ore from the Woolwich Beds in the Castle Hill area was smelted at Newhaven, but analogies with other ironmaking sites in the Weald make it more probable that the ore was smelted *in situ*.

1 Institute of Geological Sciences, *Geology of the country around Chatham* (1954), p. 81.

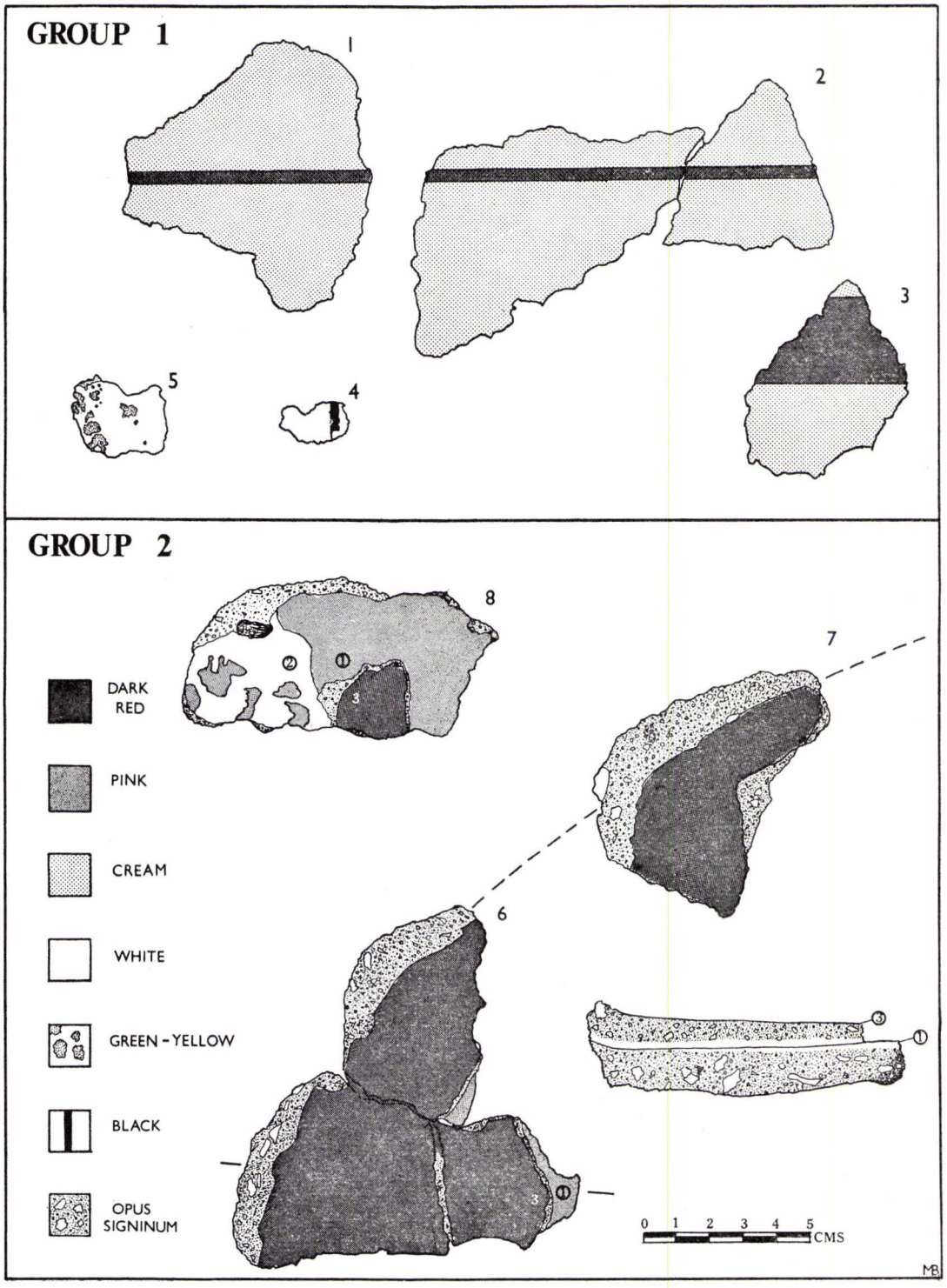

FIG. 43. Painted wall plaster of Groups 1 and 2.¼.

THE BUILDING MATERIALS

Wall plaster and cement (Figure 43)

This was dumped in the top layer of the enclosure ditch and confined to two areas which produced distinct groups derived from different parts of the building.

Group I was found at a point where the contractors' trenches for Southway exposed a section of the ditch (Fig. 2). Twenty-two fragments of wall plaster formed a total surface area of 324sq. cm. Fifteen fragments had a plain cream/white plaster surface.

Fig. 43.1 and 2. Two fragments from the same scheme—a ground of cream on which was a dark red line of thickness 4mm.

Fig. 43.3. A cream ground against which is a dark red line 2.6cm. thick. Fragments 1-3 have signs of an earlier layer of plaster, covered by 5mm. of plaster upon which the decoration was made. No paint was found on the earlier surface.

Fig. 43.4. A small fragment of plaster with a white ground on which is a black line.

Fig. 43.5. A white ground with splashes of green/yellow paint. Probably a crude imitation of marble, such as was frequently used for the decoration of dados.[1]

One fragment (not illustrated) of diameter 2cm. covered with a dark red paint.

Associated with plaster of Group I were about 100 fragments of white cement up to 15cm. in diameter. One fragment with an irregular flat surface probably came from a floor. Many fragments of wall plaster and cement had impressions of a wooden superstructure. Flat surfaces showed where plaster had lain against squared timbers. Impressions of thin laths of wood had a clear twist, and some fragments had impressions of laths crossing at right angles. Others had impressions of round poles of diameter 3cm. at 45° to flat surfaces of a timber frame. Group I was from the wall or ceiling of a timber framed building in which the frames were infilled with wattles and laths, strengthened with diagonal poles of round timber. The wooden framework was covered first with cement and then plaster.[2] Decoration consisted of a cream ground with panels outlined by red. Fragments 4 and 5 are distinguished by their white ground and hint at a slightly more elaborate design elsewhere.

Group II. From the northern 5m. of ditch on Site 6. It is distinguished from Group I by quantities of crushed tile included in the mortar. There were 42 painted pieces with a dark red surface coat, which formed a total surface area of 1,600sq. cm.

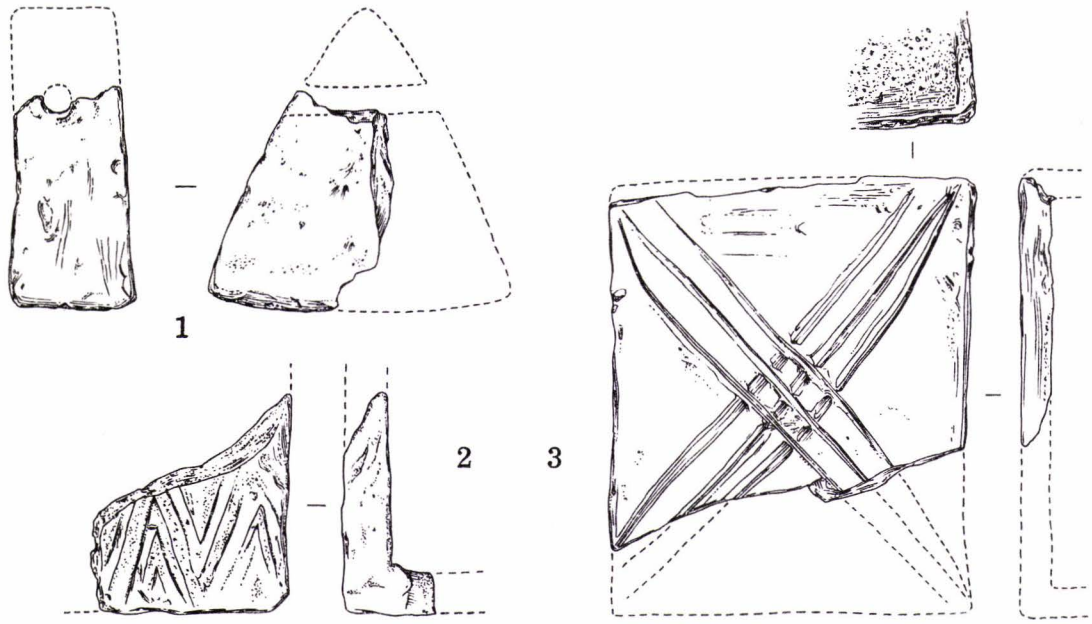

FIG. 44. Objects of clay; triangular loomweight, 1; roller-stamped box tile, 2; incised box tile, 3. ¼.

1 J. Liversidge, *Britain in the Roman Empire* (1968), p. 87.
2 Compare S. S. Frere, *Verulamium Excavations Vol. I*, Fig. 4. Newhaven however has a cement covering to the wattles rather than the more usual clay covering.

Fig. 43.6 and 7. Two fragments with a dark red surface coat (3) covering an earlier surface (1) which was painted pink. A slight raised lip on one side shows where a break has occurred at the angle between horizontal and vertical surfaces. The lip on fragment 6 has a slight curve and the fragments are reconstructed as from a semi-circular area.

Fig. 43.8. A surface layer of dark red paint (3) was removed to reveal an underlying area of white (2) and below that a pink wash. (1) The white may be a deliberate wash or the result of calcium carbonate deposition at the junction between two layers of plaster.

Group 2 included fifteen fragments of cement with a high content of crushed tile and daub, and forty fragments of plain cement with beach shingle. One fragment had impressions of three wooden laths between which plaster had seeped, possibly from a ceiling. Most of Group 2 is *opus signinum* probably from a bath house. Fragments 6 and 7 may come from a small apsidal plunge bath.[1]

Tiles (Fig. 44.2 and 3 and Table 4).

Every fragment of Roman tile, amounting to 652 pieces, was saved and is analysed in Table 4 according to tile type and the context in which it was found. The greatest number (44.9%) are from Layer 1 of the ditch. Layers 2 and 3 only produced 1.9%. The deposition of Layer 1 evidently coincided with demolition of a tiled building. In this layer were 13 incised and 3 roller stamped box tiles, and 64 tiles 4-6.5cm. thick generally used for flooring or pilae.

TABLE 4. Classification and Context of the Roman Tiles

	Medieval Hill Wash	R-B Soil	Ditch 1	Ditch 2	Ditch 3	Str. IV. Beamslot	Posthole 44 Layer 1	Posthole 44 Layer 2	Enclosure Wall	Str. II Cobbled Floor	Posthole 34	Posthole 1	Posthole 12	Beamslot 43	Feature 42	Posthole 6	Posthole 31	Total of Types
Incised Box Tiles	4	123	13	–	–	–	1	–	1	1	–	–	–	–	–	–	–	143
Roller Stamped Box Tiles	–	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3
Tegulae	1	32	92	–	1	–	–	1	–	1	1	–	–	–	–	–	–	129
Imbrices	–	13	19	–	2	–	1	–	–	–	–	–	–	–	–	–	–	35
Floor Tiles (4cms. thick) ..	–	4	64	–	–	–	10	4	–	–	–	–	–	–	–	–	1	83
Fragments too small for classification	45	62	102	1	9	3	–	2	1	6	–	10	9	2	3	2	2	259
Total from each context	50	234	293	1	12	3	12	7	2	8	1	10	9	2	3	2	3	652
%	7.67 %	35.9 %	44.93 %	1.99%			9.50%											

1 See G. P. Burstow and A. E. Wilson, ' A Roman bath, Highdown, Sussex,' *S.A.C.* vol. 80 (1939), p. 66, Fig. 3.

Box tiles. Most of the 143 pieces had an incised or combed design, and three were roller stamped; those illustrated are from Layer 1 of the ditch Site 6.
Fig. 44.3. Most of one side of a box tile height 18cm., projected width 20cm.; incised arc design, heavy sooting on interior.
Fig. 44.2. One of three fragments of a roller stamped box tile. The diamond and lattice design is probably of Lowthers' Group 5,[1] but the fragments are too small to assign to a specific die.

Roller stamped flue tiles are generally dated to the first half of the second century A.D. They were in use in the third period bath building at Fishbourne constructed between A.D.130 and 160,[2] and in late first or early second century contexts in the villas at Eastbourne[3] and Angmering.[4] Many of the floor tiles and tegulae had abundant impressions of straw and cereal grains noted in Mr. Arthur's report above.

Geological materials

During excavation all structural stones were planned and where possible provisionally identified. Specimens of these were taken, and where they are of Sussex origin have been identified by comparison with hand specimens collected during field surveys. In this way it was sometimes possible to trace samples to exposures, such exposures are marked on Figure 1. The Newhaven outlier of the Woolwich and Reading Beds was an important source of stone.[5] In the first 3km. of cliff west of the Ouse the beds overlie chalk. Regular cliff falls provide a constant supply of building blocks, which was certainly used in the Roman period since many of the excavated stones from this source are slightly rounded by the sea. Constant erosion means that exposures plotted in Figure 1 would have been somewhat further out in the Romano-British period.

Building stone

Limonite concretions. Nodules of relatively hard clay/marl stone on which a crust of limonite has formed, from Eocene beds that outcrop in the cliff at TQ443000.
Yellow sandstone. A poorly cemented yellow sandstone of Eocene date, 4 samples; outcrops in the cliff between TQ447000 and TQ435999.
Ferruginous sandstone containing Ostrea. The oyster bed of the Woolwich and Reading series; outcrop as above.
Ferruginous Flint Breccia. The basal bed of the Eocene strata where it rests on chalk. In the cliff between TQ449001 and TQ433000.
Chalk. Chalk rock as hard as that from some of the foundations does not appear to outcrop in the immediate vicinity of the site. A hard band of chalk, Melbourne Rock, occurs at the base of the Middle Chalk. One fragment of a conglomerate of chalk pebbles in a ? siliceous matrix is of a type which occurs at the junction between chalk and Eocene strata. A search has not yet revealed exposures in the cliff at Newhaven, but it is abundant east of Seaford Head at TV512975.
Flints. The most abundant building material, generally large and without ferruginous stain. They were probably collected from arable fields on the chalk downs, certainly not from areas capped by Clay-with-Flints or Eocene strata. A small percentage were water rolled flint boulders from the beach.
Upper Greensand. Only one or two fragments.
Lower Greensand. Several rough fragments were used in buildings, but the bulk of specimens were fashioned as rubbers and querns (see below), All 12 specimens appeared to be from the Folkestone Beds.
High Wealden Sandstone. Five specimens probably from the Hastings Beds which outcrop around Isfield and Framfield on the Ouse.
Silicified Sandstone. Several round boulders of ' sarsen ': these are found scattered on the downs.
Quartz in Limonite. Probably an Eocene residual deposit, similar to sarsens: found on the downs and in Clay-with-Flints outcrops.
Silicified Sandstone with Lamellibranchs. Probably from the Hastings Beds.
Tufa. One fragment, a light calcareous evaporite commonly used on Roman sites for voussoir blocks in bath houses. Site 1, ditch, layer 2.
Quartz. A large lump of quartz showing crystals which had grown radially into a cavity. This formation is commonly found in Carboniferous limestones of the Mendips and doubtless elsewhere. It was presumably collected because of its attractive appearance. (Site 6, Romano-British ground surface).
Fine Sandstone with Mica. Unknown origin.
Clay. From the Woolwich and Reading Beds: several lumps in the primary fill of the ditch.

Stone artifacts

Querns. Three segments of rotary querns were all of Lower Greensand. In Layer 1 of the enclosure ditch and in the Romano-British soil on Site 1 were 330 grams of lava. These are clearly comparable to outcrops on the Rhine near Mayen, which were a source of Romano-British querns.[6]
Rubbers. Five pieces of stone had signs of rubbing on one or two faces. One was of Lower Greensand, one of sarsen and three of Hastings Beds sandstone.

1 A. W. G. Lowther, *Roman relief-patterned flue tiles found in Surrey and others of the type found in Southern England*. Research Paper I of Surrey Archaeological Society (not dated).
2 B. W. Cunliffe, *Excavations at Fishbourne Vol. I* (1971), p. 179.
3 T. Sutton, ' The Eastbourne Roman villa,' *S.A.C.* vol. 90 (1951), p. 12.
4 L. Scott, ' The Roman Villa at Angmering,' *S.A.C.* vol. 79 (1938), p. 18, Fig. 10.
5 H. J. O. White, *The geology of the country near Lewes*, Memoirs of the Geological Survey (1926).
6 A. L. F. Rivet, *Town and Country in Roman Britain* (1964), p. 119. Specimens from Newhaven were compared to those from Mayen in the collections of the Institute of Archaeology, London.

Whetstones. No manufactured or traded whetstones were found in Romano-British levels, but six metamorphic pebbles collected from the beach had mica inclusions, and one showed clear signs of use as a sharpener.

Fig. 41.5. Quartz grains loosely cemented in a matrix which includes iron oxide and flecks of mica, possibly from the Hastings Beds. In section the piece is shaped like a parallelogram. Three sides are at angles of 100° and 80°, they are cut and smoothed perhaps for use as a rubber or for some architectural purpose (Site 6, ditch, layer 2).

Fig. 41.6. A fragment of Lower Greensand smoothed on three faces (Site 6, Roman ground surface).

Not illustrated—a highly ferruginous Wealden sandstone from the Hastings Beds with a marked groove where it had been used as a sharpener. (Site 6, ditch, layer 2)

Discussion

Considering that this site was a small rural farm with a short life, it has produced a surprising range of geological materials. Flint was by far the most widely used, accounting for 98.52% of the foundations of Structure V, and 72.29% of demolition debris in the ditch layer 1 on Site 6. Limonite concretions accounted for 26% of the building debris in the top of the enclosure ditch, but only 0.2% in the foundations of Structure V. This implies that limonite concretions were more widely used in the postulated bath house than in Structure V. It may also imply that they were used more above ground level than in the foundations. About 98% of the geological materials used in buildings were probably obtained within a 2km. radius of the site (Fig. 19). Rocks from further afield were irregular, unworked lumps, used randomly in the foundations or as post hole packing in just the same way as flints. Relatively small quantities of stone from several different exposures seem to have arrived at this site. often without any apparent intention to use them in a way different from flints that were available locally. Nearly all of the rocks outcrop within the Ouse basin, some of the material may be ballast discharged at the Ouse mouth by boats whose trade was largely riverine and coastal. Equally, the rocks may reflect journeys to various parts of the Ouse basin by the inhabitants of the site.

THE MEDIEVAL PERIOD

In the Medieval and Early Post-Medieval periods the settlement now called Newhaven went under the name Meeching, an early place-name suggestive of a Saxon origin.[1] The settlement is not recorded in the Domesday Book, but a church, mill and four acres of land at ' Mecinges ' were among the properties granted by William de Warenne c. 1095 as endowment to the Priory of St. Pancras at Lewes.[2] Archaeological evidence of Saxon occupation in the parish is restricted to four sherds of pottery from Castle Hill,[3] and a few rather doubtful small sherds from the present excavation. The Medieval settlement and its possible Saxon predecessor was presumably in the vicinity of the parish church of St. Michael, the earliest parts of which are of twelfth century date.[4] The church is on the hillside at 37m. O.D., 500m. west of the site of the present excavation. The stratigraphy left no doubt that the excavations were within one of the intensely cultivated fields of Meeching.

Site 3

The only two Medieval features found were pits cut into the alluvium of the Ouse flood plain on Site 3. They were noted in a contractor's foundation trench 10m. west of the Chapel Street subway under Southway (Fig. 2); both had been truncated by Victorian buildings.

Medieval Feature I

A shallow scoop in the alluvium 20cm. deep and 1.80m. in diameter filled with humus rich, clayey soil, charcoal, daub, oyster shells, a sheep's molar and a residual sherd of Roman pottery. Fifty-nine fragments of Medieval pottery included: 46 body sherds from coarse ware cooking pots; one fragment of a coarse sandy ware jug with green glaze both outside and inside, and three sherds of fine flesh-coloured wares without glaze, as well as the following illustrated sherds:—

297 Rim in red/orange ware with beach sand and some shell as temper; rather triangular rim with flat top and slight internal bevel.

298 Bowl with everted rim in brown/black ware, reduced on inside, sand filler. Rim formed by drawing up body and folding back to make a hollow on the interior. Rim well rounded outside, slightly concave top.

299 Everted rim bowl in orange oxidized ware; sand grits, concave top; well rounded outside. (Sherd from similar vessel not illustrated).

300 Everted rim bowl in orange/red oxidized ware; sooting on outside; some flint grits; rim has concave top with rather squarish outer profile.

301 Sagging base from cooking jar. Inside oxidized; outside sooted; sand temper. (3 other sagging bases are not illustrated).

No firm date should be assigned to such a small and fragmentary assemblage, the 13th and 14th centuries A.D. provide a likely time bracket.

1 J. McN. Dodgson, 'The significance of the distribution of the English place-names in-*ingas*, -*inga*—in south east England,' *Medieval Archaeology*, vol. 10 (1966), p. 23.

2 L. F. Salzman, ed. *The chartulary of the priory of St. Pancras of Lewes* (Sussex Record Society, vol. 38, 1932), p. 21.

3 M. G. Bell, ' Castle Hill, Newhaven ' *S.A.C.* vol. 112 (1974), pp. 154-5.

4 *V.C.H., Sussex.* Vol. 7, p. 64.

Medieval Feature 2

A shallow pit 60cm. in diameter and depth 26cm. was exposed 1.25m. east of Feature 1. The fill of brown clay contained numerous fragments of charcoal and daub, a fragment of Lower Greensand, a residual piece of Roman tile and ten Medieval sherds. Of these eight were coarse body shards in orange/red ware with quartz, flint and shell filler, one fragment was from an everted rimmed jar and another from a jug with a thumbed base (all too fragmentary for illustration). A date range as for Feature 1 seems likely.

Sites 1, 5 and 6

The main areas of excavation were above the supposed river cliff which marks the edge of the Ouse alluvium. Here the Roman levels were buried below plough-wash which accumulated in the Medieval period to a maximum thickness of 1.5m (Fig. 3 and Plate II). This was a layer of yellow clay/loam containing scattered flints, pottery, charcoal and daub fragments. This must be the product of erosion higher up the hill and downslope movement under the dual processes of ploughing and slope-wash. These processes took place on a fairly modest slope of 5° to the horizontal. Erosion on such an apparently large scale is interesting in this Medieval context, particularly in view of the fact that the material eroded and deposited on the present site was Pleistocene strata from further up the hill and contained a proportion of loess. Its removal to the valley bottom would have resulted in a reduction of soil profile depth on the downland and perhaps in some consequent loss of fertility.

The Medieval plough-wash contained quantities of residual Roman material (discussed in pottery Group IX and Table 4 above) and Medieval pottery. Two hundred sherds were collected but these only represent a sample since much of the hill-wash was removed with a machine. Presumably this pottery represents a spread of occupation debris from the settlement of Meeching; it was perhaps distributed on the fields with manure. Certainly it is not a closely dateable stratified group, it ranges from Saxo-Norman times onwards, and suggests that this field is likely to have been part of the intensively cultivated infield of Meeching throughout the Medieval period. The following are some of the most distinctive sherds from the Medieval hill-wash.

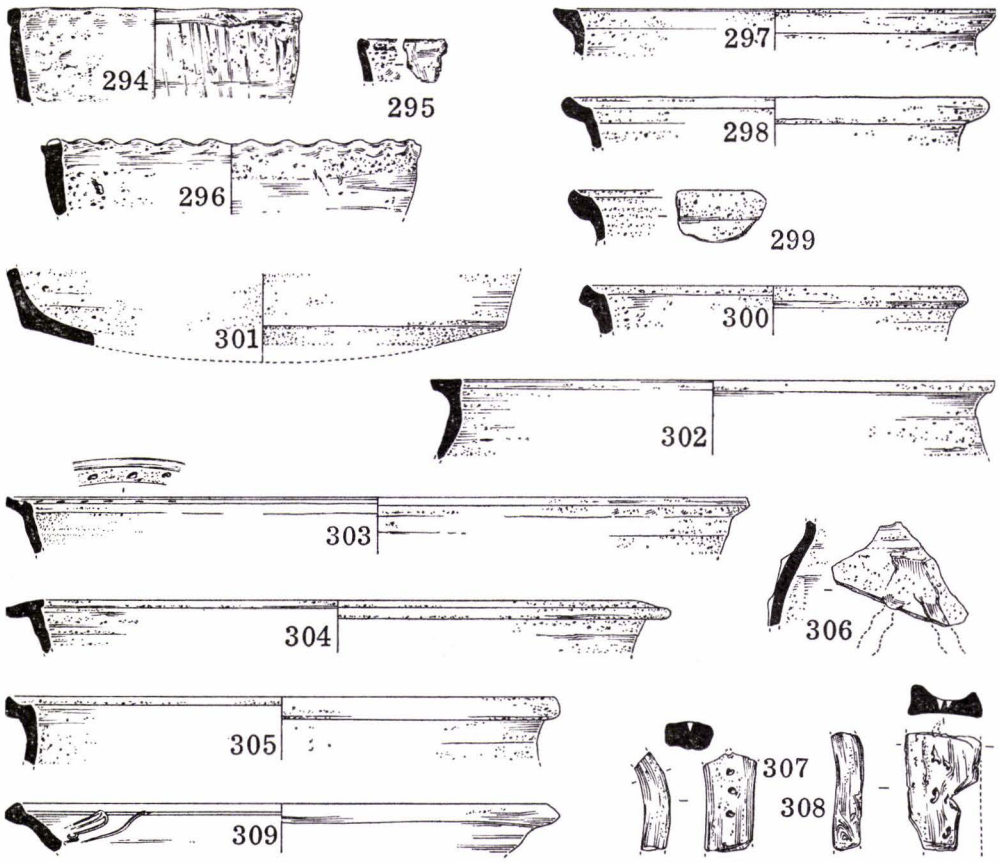

FIG. 45. Medieval pottery vessels 294-308 and Post-Medieval pottery, vessel 309.¼.

The Pottery[1]

294 A crude bag-shaped pot, hand made, reduced, slight external bead for rim made partly by pinching. Temper—small fragments of calcined flint and traces of some fired out vegetable material. Prehistoric or Saxon.
295 Rim of a crudely made vessel with internal bead, calcined flint filler, traces of vegetable temper. Possibly Saxon.
296 Handmade dish with finger impressed rim, calcined flint grits, porous surface as a result of fired-out vegetation and chalk. Prehistoric or Saxo-Norman.
302 A wheel made flat-topped cooking jar, reduced, sand filler, *c.* thirteenth century A.D.
303 Rim of cooking pot, pink sand filler, sooting on outside, pricked, flat top with beaded outer edge. (A similar rather thicker rim is not illustrated).
304 Rim of cooking pot; filler—sand and calcined flint; flat rim internal bead. (10 similar vessels with plain flat rims are not illustrated).
305 Rim of bowl; red/orange; and filler; rounded outer edge to rim, concave inner surface (5 similar vessels not illustrated).
306 Body sherd of large cooking pot in grey fabric with quartz filler, decorated with horizontal and vertical strapping (3 similar sherds not illustrated).
307 Jug handle nearly rectangular section, regular and deep pricks, pinkish buff with sand grits and an olive green glaze.
308 Crude strap handle from jug, with deep central groove and irregular stabbing with a forked stick; oxidized surface, reduced core, sand filler.

Medieval Small Finds

Fig. 47.1. Section of mica-schist whetstone, neatly fashioned rectangular cross section, ancient breaks at either end.
Fig. 47.2. A whetstone of mica-schist, triangular in section, well worn by use, ancient breaks at either end.
Fig. 47.3. Miss D. Charlesworth contributes the following. Fragment from the foot of a stemmed vessel in green glass, flaking black iridescent weathering; *c.* fifteenth century A.D.

THE POST-MEDIEVAL PERIOD

The period around 1539 saw a dramatic change in the fortunes of Meeching. The mouth of the Ouse at Seaford had become blocked by a shingle bar, and the once prosperous Cinque port declined. To remedy this situation, and provide drainage for the Ouse Valley, the Commissioners for Sewers cut a ' new haven ' at the base of Castle Hill.[2] So significant were these events that Meeching changed its name to Newhaven, and replaced Seaford as the port for this area. One might have expected that the cutting of the ' new haven ' would have resulted in a shift of the settlement towards sites near the river. It is thus surprising that early Post-Medieval structures were entirely absent in the area excavated. The period from the sixteenth to the eighteenth centuries is represented only by pottery sherds and clay pipes (seventeenth and eighteenth centuries) discussed below.

The area was still open ground when the Tithe map was made in 1841, with Site 6 and the area to its south Glebe land; Site 1 a drying ground owned by the vicar; and Site 5 and the area to its west owned by William Elphick and used as arable. In 1843 Elphick sold a piece of land (Site 5) to the parish for the construction of a National School. Part of this building was uncovered during the excavations. It included a cesspit which contained an inscribed writing slate and pencil, and a small pottery group; this was sealed by a wall constructed in 1884. In 1868 a school building was erected on Site 1. Following Gladstone's Education Act of 1870 the school was given over to the Newhaven School Board. By 1884 a larger building was required and this was built on Site 5 after the demolition of the 1843 building.[3]

Site 6 was still open ground in 1872 when it was occupied by allotments. Between 1871 and 1881 the town's population increased very dramatically,[4] and created the need for a new Church of England church which was built on Site 6 in 1881. Called Christchurch, it was designed by E. P. Loftus Brock in red and yellow brick, with a wide nave flanked by two aisles and an apsidal chancel. These buildings were demolished in the early 1970s prior to the present excavations.

The Post-Medieval Pottery by O. H. J. Pearcey, B.Sc.

Most of the Post-Medieval layers were removed by machine. Scaffolding pits for the construction of Christchurch in 1881, and a single rubbish pit sealed below the church yielded small amounts of pottery. Site 5 produced a small group from the cesspit related to the 1843 school building; it was sealed by foundations of 1884, in which year the pit was infilled. Most of the material discussed here was found unstratified, either in the allotment soil which predated the church on Site 6, or in the disturbed building rubble on Site 1.

1 I am grateful to John Hurst for examining vessels 294-296.
2 P. Brandon, ' The origin of Newhaven and the drainage of the Lewes and Laughton Levels,' *S.A.C.* vol. 109 (1971), pp. 94-106.
3 Information kindly provided by the National Society and from the Minutes of the Newhaven Board School in The East Sussex Record Office, Lewes.
4 *V.C.H. Sussex*, Vol. 7, p. 63.

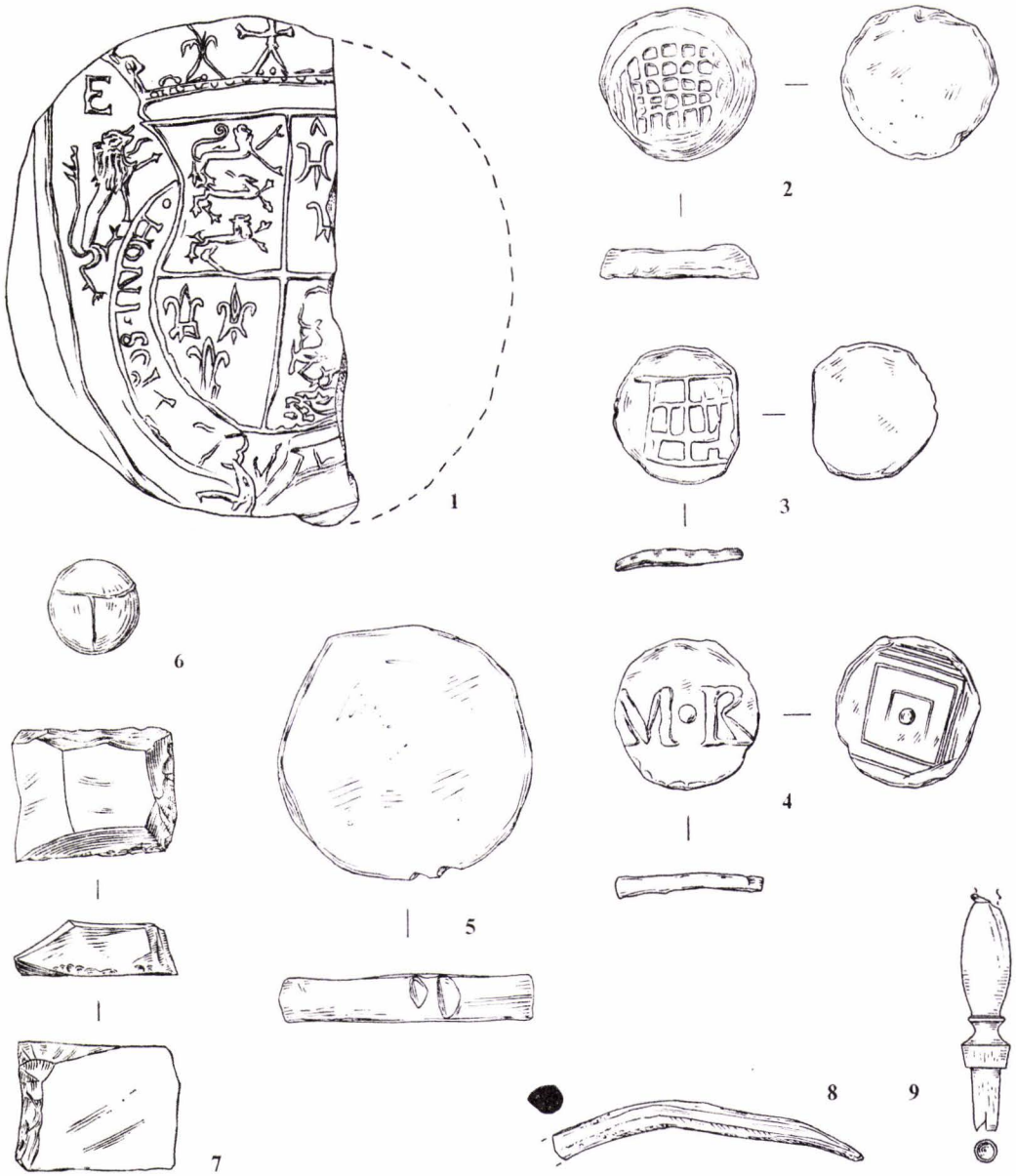

FIG. 46. Post-Medieval small objects; stoneware medallion, 1; lead, 2-6; gun flint, 7; copper alloy pin, 8; bone, 9. 1/1

Sixteenth and Seventeenth Centuries

Fig. 45. 309 A portion of the rim of an earthenware dish. This is in a white fabric, slipped first red and then white with sgraffito decoration cut through the white to the red slip, and glazed with lead coloured green in places with an underglaze paint. Almost identical to a sherd reported from Chichester which was manufactured in Beauvais in the sixteenth century.[1]

1 J. G. Hurst, 'Report on post-medieval pottery from All Saints, West Pallant,' in A. Down, *Chichester Excavations* vol. 2 (1974), p. 93.

Fig. 46.1. The earliest sherd for which a fairly precise date can be offered is part of a decorative medallion from a German salt-glazed jug or tankard. The medallion represents the Tudor coat of arms, with the letter E, presumably for Elizabeth I (1558-1603) to the left. The sherd has been carefully chipped around the edge, possibly for use as a counter or keepsake. It was probably made in Cologne in the last quarter of the sixteenth century.

Green glazed wares resembling those made in the sixteenth and seventeenth centuries in the Farnham area were found. Several vessels, both jugs and dishes, were in a hard red fabric coated internally with a brown lead glaze with iron speckles. These were produced from the mid sixteenth to nineteenth centuries and are generally of local manufacture.

Eighteenth Century

This is chiefly represented by stoneware, tin-glazed and lead-glazed earthenware, all made in this country, the lead-glazed pots probably locally. There is little material from the mass-producing Midland potteries, surprising in view of the fact that the poor of Newhaven were engaged in the collection of flint boulders for use as raw material by the Staffordshire potteries.[1]

Nineteenth and Twentieth Centuries

The cesspit on Site 5 contained a variety of nineteenth century domestic wares. These sherds, mainly transfer printed wares, dated from the beginning to the third quarter of the nineteenth, which is consistent with the documentary evidence suggesting that the pit was made in 1843 and finally infilled in 1884. The bulk of the pottery found elsewhere in the excavations is generally of late nineteenth and early twentieth century date. This reflects the major population increase in Newhaven at this period, and the expansion of the town over the sites excavated during the second half of the nineteenth century. It is nearly all domestic stoneware, porcelain and china and is all mass produced.

The Clay Tobacco Pipes[2] (Figure 47) by D. R. Atkinson, M.A., F.S.A.

Clay tobacco pipes came from the Post-Medieval ground surface and building levels, not from securely stratified deposits. They provide an interesting collection from Newhaven as well as evidence of activity in the vicinity of these sites during the seventeenth to twentieth centuries. With few exceptions the pipes can be identified as being of Sussex make, mostly from Brighton or Lewes.

No. 4 Smallish bowl with stumpy spur and heavy milling, a type common in Sussex *c.* 1660-70.
No. 5 Bowl of similar date with straight sides and flat ' heel ' at the base, a London type.
No. 6 Larger London-style pipe of late seventeenth century. Seldom found in Sussex but the type was made by John Holcom of Lewes (died 1699) who moulded his initials I/H upright at the sides of the base. This pipe has a stamp consisting of a single serif B, incuse and unframed on the base. Maker unknown.
No. 7 One of two pipes with initials T/H moulded in relief at the sides of flat base. Made by Thomas Harman I of Lewes who worked *c.* 1720-60.
No. 8 Piece with part of ' spread-eagle ' design on each side of bowl, initials M/G on spur—Mary Goldsmith working at Brighton in 1845.
No. 9 A bowl with design of leaves, fluting and masonic symbols. Initials W/S of unknown maker on spur, similar pipes by Stephen Leigh of Chichester are dated 1841-55. A similar unillustrated pipe came from the pit on Site 5 which was infilled in 1884.
No. 10 Pipe decorated with fluting and leaves; I/B on small ' square ' spur and relief design along stem. Made by John Blake, Lewes 1835.
No. 11 Small pipe with fluted bowl with leaves and a small star each side of spur. Found over a wide area from Steyning to Newhaven, unknown maker *c.* 1850-70.

The following are not illustrated:—

12 Similar to 4, but with thin stem, narrower spur and bowl. T/H on spur, by Thomas Harman junior, working 1758-74.
13 Plain eighteenth century pipe with cross mould in relief at base of inside of bowl—a mid-18th century feature, not pre *c.* 1750.
14 Large bowl, pointed spur, no initials. *c.* 1770-1800.
15 Stem fragment with serif R/N on spur, Richard Neave of Lewes, 1774-1818.
16 Bowl similar to 6, initials L/S on spur, Stephen Leigh of Chichester 1841-55. The initials must be due to an error in making the mould.
17 Plain bowl with short flat spur with initials W/F, probably William Farr of Brighton *c.* 1868.
18 Stem with moulded decoration and star each side of spur, W. Goldsmith, Brighton, in relief, working *c.* 1830-40.
19 Bowl with tile or scale decoration, one variety made at Pipe Passage Kiln, Lewes.[3]
20 Bowl possibly by Harrington and Sons at Horsham branch or at Pipe Passage Kiln, Lewes (ceased use *c.* 1880).

1 T. W. Horsfield, *The history and antiquities of Lewes and its vicinity* ' vol. 1 (1824 edition), p. 338.

2 For documentary references to makers, etc., see D. R. Atkinson, ' A new list of Sussex pipemakers,' *S.A.C.* vol. 110 (1972), pp. 37-43.

3 N. E. S. Norris, ' A Victorian pipe kiln at Lewes,' *Post-Medieval Archaeology*, vol. 4 (1970), pp. 168-170, Plate IX.

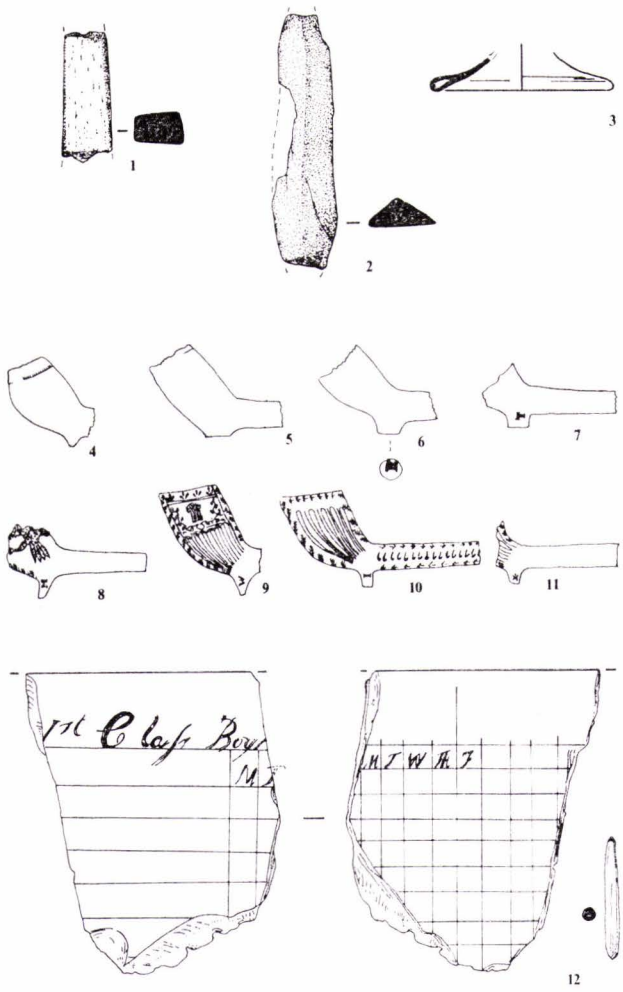

FIG. 47. Medieval finds; whetstones, 1-2; glass, 3. Post-Medieval clay pipes, 4-11; slate class register and pencil, 12.$\frac{1}{2}$.

21 Two late nineteenth century pipes inscribed Burns Cutty and Harrington and Sons.
22 Part of acorn shaped bowl, unknown maker, second half of nineteenth century; one variant was made in Pipe Passage Kiln.
23 Spur fragments initials C/B, probably Charles Bishop, Lewes, 1838-45.
24 Stem with Harrington Horsham incuse, worked 1866-99.
25 Spurless pipe rustic design on bowl dates *c.* 1880, maker unknown.
26 Piece with spikes or nobbles on bowl and stem, popular in late nineteenth century.
27 Piece with large star each side of the spur, hollow centre to star. Examples from Steyning and Upper Beeding, unknown maker *c.* 1870.
28 Piece with bowl design of vine leaves and grapes from pipe made by S. Goldsmith, Brighton, *c.* 1820-30.
29 Bowl fragment with fluting and beading. Richard Neeve, Lewes, produced this design, 1774-1818.
30 Piece of bowl with moulded milling round lip and R.A.O.B. design common in use *c.* 1880-1910.

Post-Medieval Small Finds (Fig. 46)

2 Lead weight with stamped chequer board pattern on one side, weight 12.02 grams. Site 1 unstratified.
3 Lead weight with stamped chequer board pattern on one side, weight 4.60 grams. Site 1 post hole.

4 Lead weight or token obverse with monogram M.R , reverse plain, weight 4.94 grams. Site 6 Post-Medieval allotment soil.
5 Circular lead weight, diameter 3.5cm., thickness 5mm., weight 61.06 grams. Two file marks were presumably cut to reduce it to the correct weight; unstratified.
6 Lead pistol ball, diameter 1.2cm., weight 12.50 grames. Site 6, pit.
7 A gun flint, rectangular plan, trapezoidal section, worn on one face by use. Site 6, allotment soil.
8 Pointed object of copper alloy.
9 Shaft of bone spoon, wheel turned.

Fig. 47.12. One of several fragments of classroom slate from a cess-pit infilled in 1884, this belonged to the first school on Site 5. The illustrated example is a piece of a class register. On one side are incised horizontal lines with at least two vertical columns on the right hand side. On the top lines the words ' 1st Clafs Boys ' have been carefully incised several times. On the line below ' Name ' can just be made out. In the first of the vertical columns is an M. The opposite side is divided into squares of roughly 1cm. In the top row of squares are the letters M, T, W, Th, F. Both sides of the slate were presumably used as a register with pupils' names followed by a record of their attendance during the week. The other slates are only inscribed with horizontal lines; they are of rectangular shape with the longest side measuring 20.5cm. Several slate pencils were found.

ACKNOWLEDGEMENTS

Permission to excavate was readily given by the East Sussex County Council, Architects and Roads Departments, the Police Authority and R. and J. Contractors Ltd. The excavations were organised by the Brighton and Hove Archaeological Society and financed by the Department of the Environment, the Society, and numerous individual and corporate donors. Finds processing premises in Newhaven were made available by the Police Authority and G. Sargent, Esq. When excavations finished the Brighton Museums enabled work on the finds to continue by making rooms at Preston Manor available; Miss M. Waller and Caroline Dudley arranged this. Tony Payne provided much help locally.

The administration was handled by Mr. John Makin, helped by Messrs. J. Holmes (Treasurer) and W. Gorton. Excavation staff were Chris Green (Assistant Director), Ken and Marion Suckling, E. W. O'Shea (Surveying), J. Sharpe and E. Carter. The photographers were B. Westley and D. Robinson. The finds department was organised by P. Norman, J. Palmer and J. Biggar. Thirty-four weeks of excavation cost under £500, a tribute to the volunteer helpers numbering over 100. They included Misses E. Guy, T. Patten, M. Nichols, D. Westley, Mrs. M. Maloney, Messrs. C. Skeggs, O. Pearcey, P. Wilkinson, M. Mander and A. Sayers. For the writer the work was sometimes only made palatable and always only made possible by virtue of the fact that these personalities were involved.

The report owes much to the authors of the specialist contributions who are mentioned elsewhere. Chris Green drew all the pottery and small finds and helped extensively throughout. Brenda Westley as reports assistant was a constant help with background research, field work and typing the text. The pottery report and parts of the general text were prepared with the aid of a grant from the Sussex Archaeological Field Unit through the good offices of Peter Drewett.

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EXCAVATIONS AT OLD ERRINGHAM, SHOREHAM, WEST SUSSEX

PART I A SAXON WEAVING HUT

By E. W. Holden, F.S.A.

Archaeological investigations under the direction of the writer were carried out in two areas at Old Erringham Farm:

I A 'salvage' excavation of a Saxon weaving hut discovered during road-widening in February, 1964. This is described below.

II Excavations intermittently over a number of years between 1957 and 1966 on the remnants of an early medieval ringwork; also south and west of the adjacent flint building known as the 'chapel.' This area, with the exception of the standing 'chapel', was destroyed when several farm-workers' houses were erected in 1966. These excavations will be published in a future volume of the **Collections** *as Part II.*

INTRODUCTION

Old Erringham, consisting now only of a farm and a manor house of apparent Tudor date, within the parish of Old Shoreham, is situated on a slope of the South Downs (here of Upper Chalk) on the east side of the river Adur, about 1.5km. north of Old Shoreham church. The National Grid Reference of the hut site is TQ 20430754, about 45m. south-west of the modern farmhouse (Fig. 1). The natural slope of the downland is terminated on the west by a wooded Pleistocene river-cliff which is *c.*35m. O.D. at the ringwork, while to the south it plunges gently below the alluvium of the flood-plain. Until the embankment of the Adur, which may not have taken place until after the end of the medieval period, the present flood-plain would have been a tidal estuary nearly 1km. wide.

To ease a bend in the A283 roadworks south of the farmhouse, it was necessary to quarry away the chalk of the river-cliff for about 200m. from its southern end, which included the removal of the track leading to the farm and the construction of a new access roadway some 30m. to the east (see Fig. 1, inset 2, which shows how far the quarry had reached in February, 1964).

The discovery of what proved to be a weaving hut came about through the alertness of Mr. A. Haffenden, driver of one of the earth-moving machines used by the contractors. Whilst climbing up the slope of the quarry face he saw several baked clay rings (which he jocularly described as 'Stone Age doughnuts') in or near to the edge of the surface soil, which here stood at *c.*18m. O.D. These objects were then shown to Mr. M. Carson, W.S.C.C. Site Engineer, who took them to Miss Jean Cook, then Curator of Chichester City Museum, who immediately recognised them as Saxon loom weights. The writer was informed and a salvage excavation was put in hand forthwith by kind permission of the two landowners involved and Mr. F. Grantham, the farmer. Voluntary labour was provided by members of the Brighton and Hove, and the Worthing, Archaeological Societies. It was impossible to clear the whole of the hut in one operation because the new access road to the farm ran over the eastern half, so the western section was the first to be excavated after machine removal of a large bank of dumped soil along the top edge of

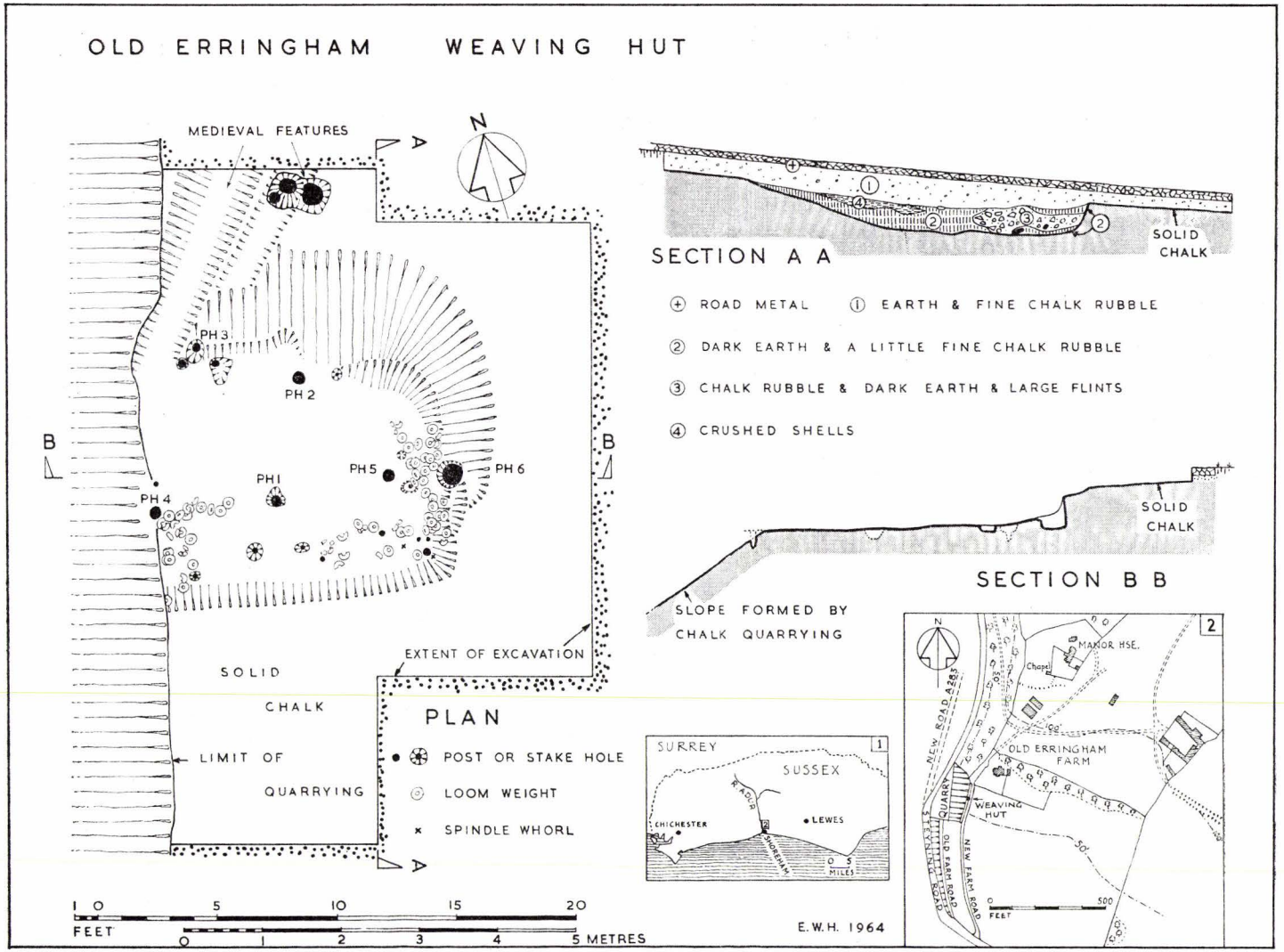

FIG. 1. Excavation and site plans

the cliff (Plate I). When the western part had been completed, the eastern half was done in very wet weather over one week-end, while the farm road was temporarily diverted (Plate IV). Soil from the eastern section was dumped on the already excavated western part and as soon as the work was finished the roadway had to be filled in and re-metalled. Before the roadworks the land had been under cultivation, including rotovating as well as ploughing, for many years and no traces of a hut, or huts, were visible on the surface.

The history of Old Erringham will be dealt with in Part II, but it can be stated here that nothing has been traced prior to the Domesday Book entry of 1086. The name itself, however, is of Saxon derivation, interpreted as ' homestead of Erra's people.'[1]

The Excavation (Fig. 1, Pls. I, III, IV)

One end of the hut had been lost through quarrying, but it is unlikely that the structure extended much farther to the west and it seems that at least three-quarters of the hut survived. The floor had been cut into the natural chalk between 0.3-0.5m. in depth, leaving a steep scarp on the south side and at the south-eastern corner. The scarps on the east and north were shallow, suggesting that the south-west prevailing winds had weathered them to their present profile after the hut was abandoned.

The sunken hut follows the common Saxon pattern of a roughly rectangular excavation into the subsoil, with a single large post at each gable end, which implies sloping rafters along the north and south sides, the tops of which rest on a ridgepole supported by the end posts (Plate V). An uncommon feature is the presence of three postholes in line, more or less, with the surviving gable end posthole, presumably to give additional support to the ridgepole.[2] There were several small shallow stakeholes along the south side and two postholes and three stakeholes on the opposite side; those on the north side may be structural.

Two substantial postholes and one smaller one lay outside the hut to the north and are dated as not earlier than medieval by the potsherds and roofing slate fragments found therein. These postholes cut through an earlier hollow, one of a pair, neither of which contained any datable objects. Trial trenches at and near the southern end of the modern quarry picked up the probable continuation of these hollows, which are interpreted as a track, later than the hut, but earlier than the medieval postholes, not the entrance to the interior of the hut. Overburden from the quarry prevented an extension to the excavation to follow up these features.

The filling of the depression was removed in 3in. (75mm.) spits and consisted of dark soil intermingled with fine chalk rubble (layer 2). Against the southern scarp in an irregular layer were large chalk rubble and flints (layer 3), which originally may have been packing around the bases of the sloping roof rafters. There were no traces of sockets for the ends of rafters as are sometimes found near the edges just outside the sunken area, but even if there had been any sockets originally, centuries of chemical weathering of the chalk, aggravated by recent rotovating, scars of which could be seen on the south side, could have removed them.

Pottery sherds, oyster shells and burnt clay fragments (resembling what is termed ' daub ') were found in the topsoil as well as in the filling of the sunken section. Estuarine mollusc shells

[1] A. Mawer and F. M. Stenton, eds., *The Place-Names of Sussex*, Part 1, *English Place-Name Society*, vol. 6 (1929), p. 247.

[2] Also noted as exceptional at Mucking, Essex by Mrs. M. U. Jones, *Antiquaries Journal*, 54 (1974), pp. 196-8. The occasional occurrence of a central post is there interpreted as possibly required to support a sagging ridge-pole.

PLATE I. Old Erringham. Western part of weaving hut excavated. The eastern part extends below the roadway on left. The river Adur and flood-plain in background

Photo by Sussex Photo Agency)

PLATE II. Simulated warp-weighted loom (after Hoffman) leaning against the rafters of an experimental sunken hut at Singleton

(Photo by E. W. Holden, published by permission of the Director, Weald and Downland Open Air Museum)

PLATE III. Old Erringham. The western group of loom weights. (Scale in inches)

The weathering of the north and east scarps, the absence of signs of a conflagration, the fact that the loom weights were not taken away, lead to the supposition that the hut was abandoned for some unknown reason, left to collapse and was not deliberately filled in; eventually the hollow became filled with soil by natural processes, augmented possibly by later rubbish tipping. Ploughing caused a downhill drift of earth, so that finally the site became indistinguishable from the surrounding soil. As Saxon weaving huts do not normally exist in isolation, it is probable that more huts and possibly post-built rectangular structures are in the area, as yet undiscovered.[1] Several trial trenches were executed between the old and new farm roads, south-west of the hut site, without result except for medieval sherds and roof tile fragments in the ploughsoil.

Contact with far away places is afforded by a bronze brooch (Fig. 4, no. 1) having connections with similar brooches found at Dombourg in Holland. Also from across the North Sea came the lava quern, but as this material occurs throughout both Saxon and medieval periods, it could be later than the hut, though not necessarily so. Limestone for a second type of quern came from a site now under the sea near Selsey Bill, but which was accessible in Saxon times. Although some animal bones and marine shells may have been dropped in the partly filled hollow after desertion, their presence throughout all layers implies that some, at least, are remains of meals consumed in the hut by the weavers.

Dating

There is only one reasonably dated object, a bronze brooch (see p. 318), which Miss V. Evison places in the eighth century, but as it was found above the western group of loom weights this could mean that the latter are earlier than the eighth century. As has been mentioned before, the stratification appears to have been well mixed and objects were not necessarily found in their original positions. Apart from the possible upward migration of the brooch, or dropping subsequent to the abandonment of the hut, it could have been placed by its owner by the foot of one of the roof rafters and forgotten. The brooch could then conceivably be one of the last objects to fall into the hollow. Furthermore, the brooch may have been an heirloom of considerable age at the time the hut was in use. It follows that a single brooch is totally unreliable for dating purposes as has already been noted on other occasions.[2]

If attention is now directed to the loom weights, pottery and querns, it is found that there were only minor changes over several centuries from middle-Saxon to early medieval times. Saxon loom weights have been divided into three main types by J. G. Hurst,[3] viz., *annular*, *intermediate* and *bun-shaped;* the former tending to be pagan Saxon, the *intermediate* middle Saxon and the *bun-shaped* late Saxon. An examination of the literature on published loom weights, however, shows that, while this is true as a generalisation, there are instances of *annular* and *intermediate* being found together, also *intermediate* and *bun-shaped* are sometimes associa-

[1] E.g., as at Mucking and West Stow; also Chalton, Hants, see *Med. Archaeol.*, 17 (1973), pp. 1-25, or Bishopstone, East Sussex, see Institute of Archaeology, London University, *Bulletin*, vol. 12 (1975), 30-2; *Med. Archaeol.*, 13 (1969), p. 240. Cf. P. V. Addyman, "The Anglo-Saxon House; a new review," in P. Clemoes, ed., *Anglo-Saxon England*, vol. 1 (1972), pp. 273-307.

[2] E.g., the pagan Saxon cemetery of Sutton Courtenay was dated too early because of a single brooch, see *Med. Archaeol.*, vols. 6-7 (1962-3), p. 139: at Thetford a brooch d. 800-850 was high in a pit containing late Saxon pottery, *Archaeological Newsletter*, Jan. 1950, 118. There was no knowing it was of great age when lost.

[3] G. C. Dunning, J. G. Hurst, J. N. L. Myers and F. Tischler, "Anglo-Saxon pottery: a Symposium," *Med. Archaeol.*, vol. 3 (1959), pp. 23-5.

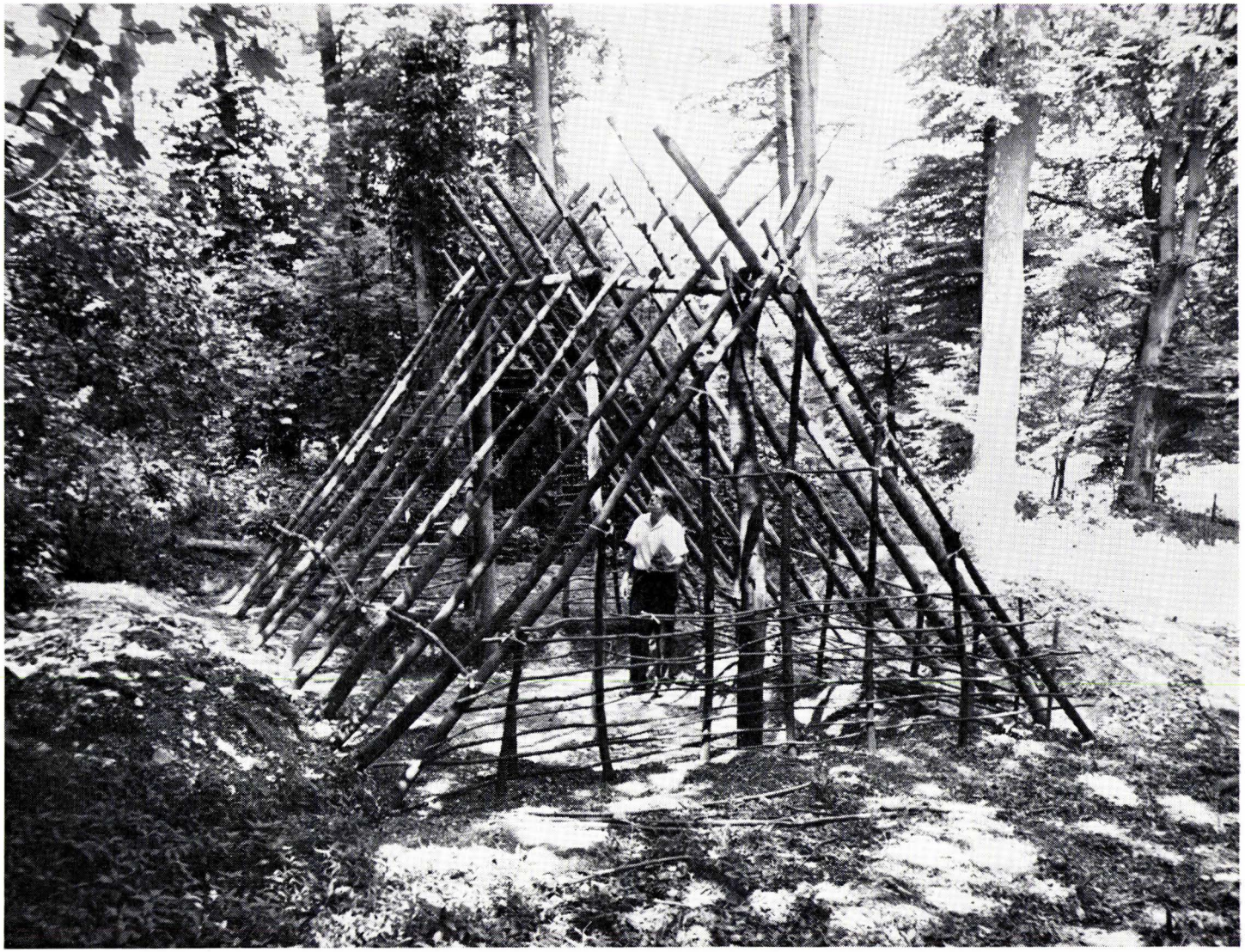

PLATE V. Simulated sunken hut under construction. An experiment carried out in 1970 at Singleton
(Photo by E. W. Holden, published by permission of the Director, Weald and Downland Open Air Museum)

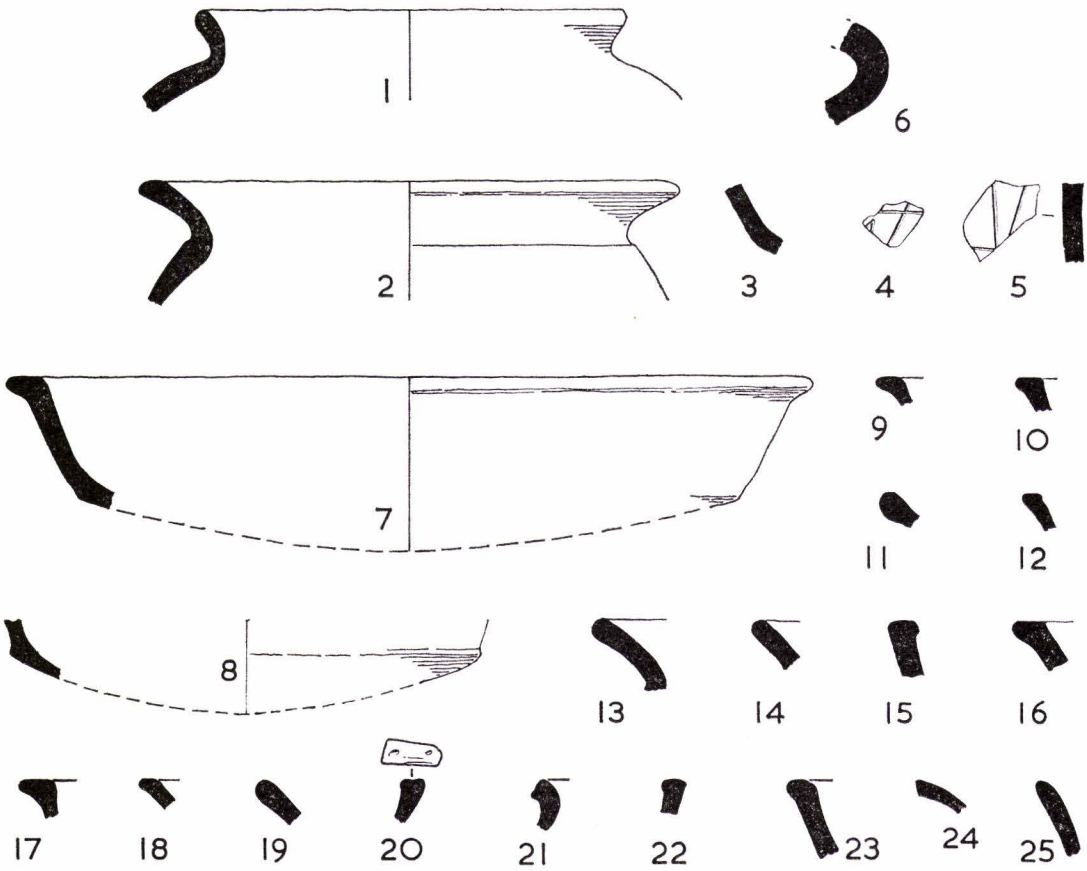

FIG. 2. Old Erringham. Pottery (⅓)

2. Rim of cooking pot with a slight step in the profile at the junction with the neck (C). Cf. similar at Chichester which are Saxo-Norman.[1]
3. Base of ? cooking pot with slightly rounded angle (B).
4, 5. Body sherds bearing scratched decoration which is indicative of Saxo-Norman traditions (B).
6. Neck of large ? cooking pot (A).

Fabric 4 Red-brown both sides, grey core. Filler mainly shell fragments plus a little medium flint grit and sand. Most sherds are too small to say whether hand or wheel made. Three vessels in A, four in B/C. The shallow bowl, no. 7 is not particularly well made if wheel-thrown. This vessel resembles some found at Chichester, except for a flatter rim, and those are considered to be Saxo-Norman.[2] Some of the sherds could be early medieval.

7. One sherd giving profile of side of shallow bowl with flat rim and convex base, the angle of which is slightly rounded (C).
8. Convex base projecting slightly in front of the wall at one point on the single sherd; fairly sharp angle (C).
9, 10. Rim fragments of ? shallow bowls (B). No. 10 is *c.*300mm. diameter.
11. Piece of everted rim from a large vessel (A).
12. Rim of a shallow bowl (A).

1 K. J. Barton, in A. Down, ed., *Chichester Excavations*, vol. 2 (1974), Fig. 8.28, no. 35.
2 Ibid., Fig. 8.28, no. 41.

Fabric 5 Grey or red-brown both sides, grey core. Filler of medium to fine flint grit and sand. Probably wheel-made, but many sherds are too small to be positive. Four vessels in A, four in B/C; one C sherd has black residues on the inside. Several large body sherds in B suggest cooking pots. There were no drawable sherds in B/C. Probably Saxo-Norman to early medieval.

13, 14. Everted rim sherds of fairly large ? cooking pots (A).
15. Rim of ? bowl with bead on the inside (A).
16. Rim of ? shallow bowl, *c.*26.5cm. diameter (A).

Fabric 6 Pink or red-brown both sides, grey core. Filler similar to fabric 5, but somewhat finer. All sherds are too small to decide on methods of making. Four vessels in A, 4 in B/C. One sherd (not illustrated) is from a round-section jug handle, *c.*23mm. diameter. The dating is likely to equate with fabric 5, viz., Saxo-Norman to early medieval.

17, 18. Rims of ? shallow bowls (C).
19. Piece of everted rim of largish pot (C).
20. Rim, with stab-holes, angle uncertain (B).
21. Rim of small ? jar, *c.*10cm. diameter (A).
22. Rim, angle uncertain (A).
23. Rim of ? bowl, *c.*20cm. diameter (A).
24. Rim, probably everted, angle uncertain (B).
25. Rim of ? storage jar, *c.*15cm. diameter (A).

Fabric 7 Buff, pink or grey both sides, buff cores. Filler of very fine sand. All the sherds are too small to be illustrated, but pots may have been wheel-thrown and are from hard, thin, well-fired wares. One A sherd has a piece of finger-impressed applied strap decoration. Three vessels in A, 2 in B/C. Dating is difficult as some sherds could be from the unglazed parts of partially glazed pots. No sherd is quite identical with fabric 8. All probably early medieval.

Fabric 8 (None illustrated). Buff, pink or grey both sides (where not hidden by glaze), pink or grey cores. Fillers of fine, or very fine sand; hard, well-fired wares, up to 7mm. thick and probably all wheel-thrown. All, except two sherds, bear splashes of glaze or are entirely glazed on one side in orange or green. One base sherd is glazed internally up the wall and on the convex base. Two differing unglazed sherds are decorated with a band of brushed white slip. Ten vessels in A, 7 in B/C. The intrusive nature of some of the glazed or decorated sherds is suggested, as of seven vessels represented in the hut depression (B and C), six were in C, i.e., at the same level as the loom weights and the earliest pottery. An early medieval date is postulated. Caution is necessary, however, in applying dates to glazed sherds as glazed fragments have been found at Winchester dating to the late tenth century,[1] and at Porchester in tenth to early eleventh century contexts.[2]

Discussion of the pottery

The minimum number of vessels in the deposits is, group A, 26; groups B/C, 31. If the alleged later wares of fabrics 7 and 8 are eliminated, A would have 13 vessels, B/C 22 vessels. The total weight of all potsherds is 2.3kg., represented by 286 sherds. Of these 60% of A sherds have abraded edges or other signs of weathering: B, 22% and C, 15%. There were no weathered sherds among fabrics 1 and 2. Fabric 1, which is considered to be the earliest, is confined to C (31 sherds) except for a single sherd in B. Fabric 2, another early ware, is absent from the topsoil (A), being distributed between B (22 sherds) and C (40 sherds). Fabric 3 is about equally divided between A, B and C. Fabrics 4, 5 and 6 added together are found more in A (49) than in either B (41), or C (28), although if B and C were taken as one layer and not arbitrarily divided into two, they would count more than A. The supposed later sherds of fabrics 7 and 8 are more frequent in A than in B and C, either separately, or put together.

The value of assumptions based on so small a quantity of pottery is limited, and doubts arise because of the probable vertical movement (up, as well as down) of sherds by animal or natural causes, but the evidence suggests that fabric 1 (middle to late Saxon) is confirmed as the primary deposit, with fabric 2 coeval or not much later. The fact that the remaining fabrics are present throughout the topsoil and filling suggests they were accumulating in the topsoil around and in the lightly silted hollow left by the abandoned hut over a long period. More or less continuous occupation somewhere at Old Erringham, from the late Saxon period onwards into the medieval period, is confirmed by the excavations to be described in Part II.

Loom Weights (Fig. 3, Pl. VI)

Allowing for nine weights found in the quarry edge and other fragments, there were about 75 weights in all, but there may have been a few more in the western group as some could have been lost in the initial quarrying. There was a minimum of 32 in that group and 43 in the eastern group. Such weights, which are well known from Saxon excavations and isolated finds were used for tensioning the warp threads.[3] Apart from a few fragments all came from the lowest level, resting on the chalk floor (C).

1 *Antiq. Journ.*, 45 (1965), pp. 255-6.
2 Ibid., vol. 50 (1970), 80.
3 Hoffman, op. cit. Apart from excavated *bun-shaped* weights from Medmerry and Chichester (Chichester Museum), others are known to the writer at Barbican House Museum, Lewes; viz., Barcombe, Eastbourne (2 sites), Selmeston and Telscombe (and see *Sussex Notes and Queries*, vol. 16 (1963-7), pp. 154-8); an *intermediate* was also a stray find at Selmeston; an *annular* weight comes from Friston. A further *annular* example (now lost) came from Hurstpierpoint (*Sussex Archaeological Collections* (hereafter *S.A.C.*), vol. 8 (1856), p. 297).

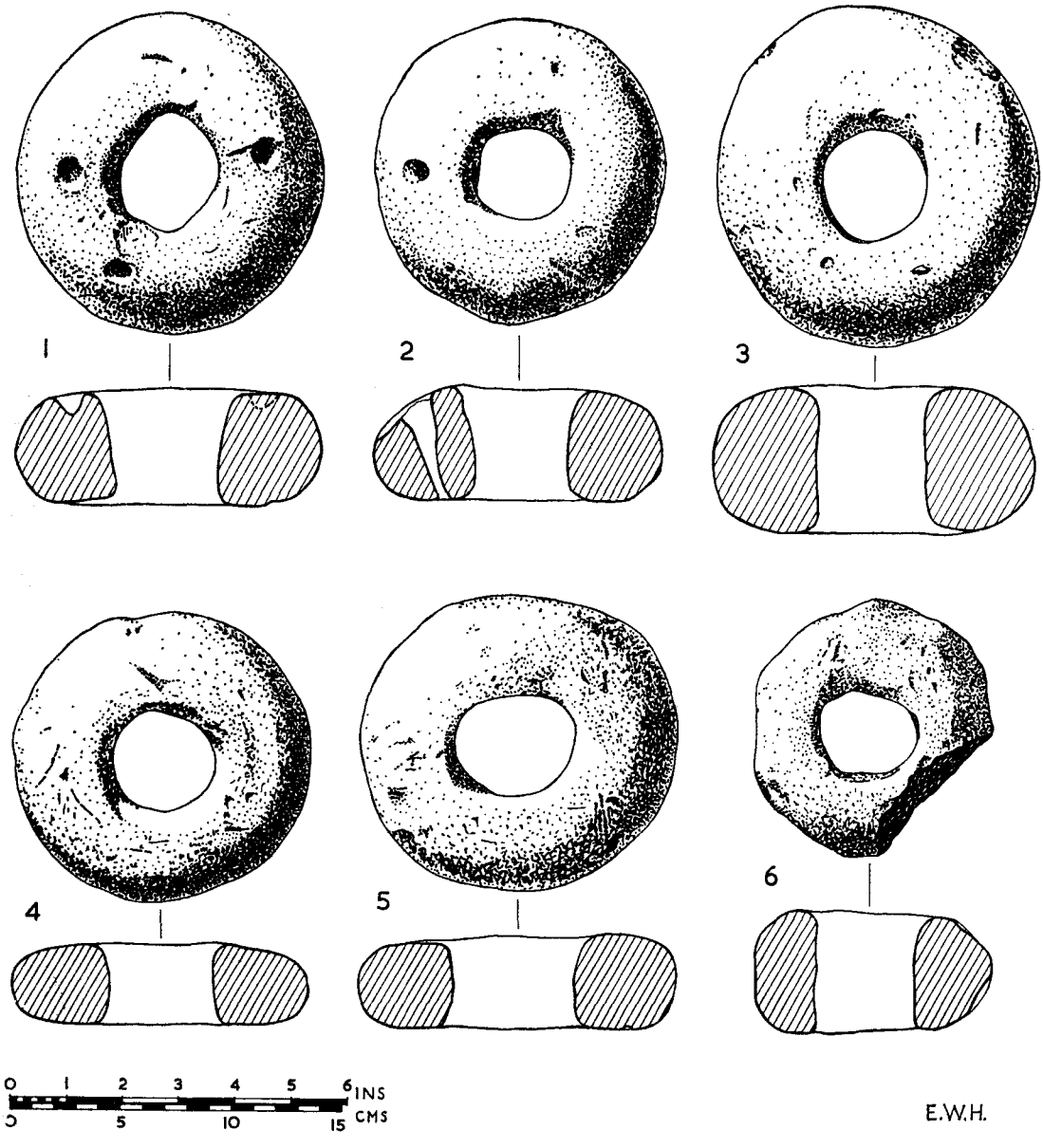

FIG. 3. Old Erringham. Examples of loom weights: 1, LW 10, dimpled, weight 917 grams; 2, LW 13, perforated, 829 gm.; 3, LW 45, heaviest, 1396 gm.; 4, LW 3, lightest, 532 gm.; 5, LW 12, 716 gm.; 6, LW 46 (damaged)

Fig. 3, 1-6 shows a selection of the loom weights. Nos. 1, 2 and 5 are from the western group. No. 1 has three dimples on one face, while no. 2 has a tapered perforation. Dimples are not uncommon, but a perforation is rare. According to Hoffman warp threads are not tied directly to a loom weight, but a number of threads are attached by a slip-knot to a small loop of cord, which is fastened to the loom weight.[1] This loop does not need a special hole for fixing as it is tied through the central hole of the weight. Eighteen weights show traces of a shallow groove worn in one or both faces, caused by friction of this cord. It may be that the cord was passed through the perforation of no. 2, but this hole seems to be an unnecessary feature.

The loom weights are, on average, of the *intermediate* type as defined by Hurst.[2] None were *bun-shaped*, but some were just *annular* according to the present classification.[3] Most of these, however, have oval or elongated holes, thus acquiring a higher mean diameter than usual. Such weights, in the opinion of the writer, are marginal cases, especially when the difference is only a millimetre or two, and should not be put into the *annular* class.

All the weights are of hard fired clay, the greater number containing grains of chalk, chips of flint and tiny red-brown flecks of an unidentified substance (possibly natural to the clay), none of which appears to be an added filler. Local marsh clay from the alluvium close to the site contains similar materials. Even with a tidal estuary in Saxon times clay would be available in marginal places (see p. 316 for details of an experiment in making loom weights of local alluvium). In colour the weights fluctuate between pink, buff and red-brown, rarely being of a uniform colour, and 60% show more or less patchy blackening where reduction has taken place during firing which appears to have been done in a clamp. Generally, they show that they were made with reasonable care, the clay being smoothed all over and the edges rounded. The top and bottom surfaces are reasonably flat; a few have scratches, minor dents or slight swellings (e.g., no. 6 is less well made than the rest). Some have lacunae where vegetable matter incorporated in the clay has burnt out. LW 12[4] has an unidentified impression on the side made before firing, thought possibly to be of cloth or a leaf, but experts consulted were unable to confirm.

Method of shaping

Every loom weight was examined to see if the method of shaping the raw clay could be determined, but final impressions must to some extent be subjective because the interior of whole weights could not be seen. Two weights appear to have been made from rings or ' sausages ' of clay; one (LW 14) from one ' sausage ', while the other (LW 24) was made from two thin rings, one above the other and pressed together. After handling the weights many times and practising with moist clay it was found that the most effective method of making was to form a clay disc, then push the thumbs through the centre to form a hole, pressing outwards, followed by smoothing of all the surfaces while revolving the clay in the hands. All central holes are too large to have been pierced from a solid disc of clay, as are *bun-shaped* weights.[5]

Sizes and weights of loom weights

Out of 75 weights 62 were able to be measured and only 53 were sufficiently complete to be weighed. These details are given in full in a Table deposited with site records at Barbican House, Lewes.

All the loom weights are approximately circular in plan, each with a central hole; 24 holes are truly circular within a tolerance of 2.5mm. The remainder of the holes are oval or elongated, as might be expected when objects are hand-made without gauges or moulds, and in these cases the mean of the two axes has been taken as the diameter. The following Table lists the average dimensions and weights.

No. of loom weights	Average dimensions				No. of loom weights	Average weight
	External diameter	Wall width	Diameter of central hole	Thickness (61)		
62	mm. 133	mm. 46	mm. 43	mm. 48	53	grams 833
	Extremes					
Maximum Minimum	150 109	51 36	50 30	65 38	Maximum Minimum	1,396 532

The majority of loom weights have a nearly similar external diameter as only nine are less than 127mm. and 14 are 140mm. or over. Likewise, the extra light or heavy weights are in the minority, four being less than 652g.

1 Hoffman, op. cit., p. 37 and 307.
2 *Med. Archaeol.*, 3 (1959), pp. 23-5.
3 R. E. M. Wheeler, *London and the Saxons* (London Museum Catalogue No. 6, 1935), pp. 154-5, Fig. 31.
4 Where LW (short for " loom weight ") followed by a numeral occurs, it is the serial number given to the loom weight as found on the site. They should not be confused with illustration numbers.
5 This disagrees with Hurst's contention that only annular weights are made as rings, or have been pushed out with the fingers, and that all later weights are discs which have been pierced with holes of varying sizes. Hurst, loc. cit., p. 23-4.

while eight exceed 936g., the remaining 41 being within this range, and if the weights of these are averaged, a figure of 795g. emerges, which is rather less than the overall average (833g.).

Ideally, loom weights should weigh the same so as to provide an even tension throughout the warp threads. In recent times variations in weight were overcome by attaching more or less warp threads to heavy and light loom weights to achieve the same result.[1] In a recent experiment a heavier loom weight was used for the outermost group of warp ends so that they would be under somewhat greater tension than the others.[2] It is possible that Saxon weavers were also aware of those techniques.

Dimpled loom weights

Four weights have small shallow depressions on one face, made deliberately before firing—casual fingermarks and dents excluded. LW 10 (Fig. 3, 1) and LW 47 each have three dimples; LW 25 has four and LW 27 is a broken half of a weight containing two dimples. There may have been more in the missing half. Dimples are known on English and continental weights, but their purpose is obscure. The number of dimples does not seem to have any bearing on the heaviness or lightness of the weight.

Width of loom

The eastern group of weights, where the majority are in a line close to the gable-end, spans about 1.5m. If it be accepted that a loom stood here it is probable that the weights represent the width of the material last being woven on the loom. An experiment on an Icelandic loom demonstrated that a 500mm. width of warp needed 14 weights (7 pairs);[3] thus 1.5m. would require 42 (there were actually 43 weights at or near to the east end).

Firing experiment

Clay from the alluvium 1½km. north of the site was used by Mr. Philip Mayes in an experiment.[4] The clay was shaped by hand into loom weights which were placed between the walls of a previously used clamp kiln. These walls were 0.4m. high made of stacked sods of earth plastered with clay internally; some small holes were prodded near the bottom. The replica weights were placed on the firm ash bed with cooking pots above them and all surrounded with peat. Hot ashes were then dropped into the bottom of the kiln, between its wall and the peat and the whole covered over with more peat. The kiln was then topped with bracken and grass. The temperature rose fairly quickly with the vents open, and went out of control. The vents were sealed, more grass piled on top and the clamp left to burn out. The resulting weights resemble the Saxon ones very well, including the patchy blackening. The experiment shows that the local alluvial clay is suitable for loom weights and that the originals probably were fired in some form of a clamp kiln.

A different form of clamp kiln, in this case a trench below ground, was found at Rochester in 1969 by Mr. A. P. Harrison. There was a trench about 2m. long, 1m. wide and 0.6m. deep, lined with clay in which bun-shaped loom weights had been fired. Associated pottery was dated *c.*1100.[5]

Daub

Irregularly shaped pieces of burnt clay, mostly fragmentary, were found throughout the excavation, the total weight being 4.4kg. Of this amount only 0.4kg. was in A; 2.1kg. in B and 1.9kg. in C. The composition of the material, sometimes including flint grit or chalk, visually did not resemble the fabric of the loom weights. Some of the larger pieces bore impressions from sticks, twigs or wattles, but there were no flat faces suggesting well smoothed plaster.

Roofing Tile

A handful of roof tile fragments, mostly from the topsoil, A, but there were some tiny pieces in B and two fragments in C. All bore a general resemblance to medieval roofing tile found elsewhere on the farm and in the medieval excavations. Many of these fragments probably arrived there through manuring of the land over the centuries.

Querns

(none suitable for illustration)

Sandstone

Fifteen fragments of sandstone querns were in B/C. They were mostly small and only two of the larger pieces had any flat surfaces; these had been subject to wear and both had a minimum thickness of 83mm. One other fragment had part of a central hole; no outer edges remained. Petrographic examination of two specimens by Mr. R. W. Sanderson of the Institute of Geological Sciences showed that both of the rocks are typical of the Cretaceous Greensands of south-eastern England.

Lava

A handful of small pieces of basaltic lava from querns imported from the Niedermendig or Mayen area of the Rhineland, all too small for reconstruction, were found in B/C.

1 Hoffman, op. cit., p. 21, 42 and 150.
2 Ibid., p. 135.
3 Ibid., p. 133.
4 To be published in *B.A.R.*, forthcoming.
5 A. C. Harrison, " Rochester East Gate, 1969," *Archaeologia Cantiana*, 87 (1972), pp. 123, 155-6; Figs. 2; 20, no. 12.

Limestone

Two pieces were found in C. One was measurable, being *c.*15 by 13cm. containing part of an apparent outer edge, where the thickness varies between 3 and 4cm., the maximum thickness elsewhere is 50mm. It is part of the top stone of a quern. The lower surface had been subject to wear, the other being reasonably flat. The 10cm. long outer edge has an irregular curvature, suggesting a diameter of 50-60cm. A thin-section was examined by Mr. M. J. Hughes of the Institute of Geological Sciences and reported on as follows:

> " The thin-section consists of an alveoline-miliolid limestone. Alveolina spp. are only known from the Eocene (Auversian) of Bracklesham Bay and the Isle of Wight. The admixture of alveolinas and miliolids occurring as a limestone is only known (in Britain) from the Mixon Rocks—a reef south of Selsey Bill. Loose blocks of this rock can be picked up from the pebble beach on the west side of the Bill."

Mr. E. M. Venables kindly informed the writer that the Mixon Rocks are less than a mile (1.6km.) offshore and that he has not known them at any stage of the tide accessible, unless by boat. Mr. Venables considers that the Mixon Rocks were, in Saxon times, either a reef exposed on the foreshore at low water or possibly actually still under the brickearth of the land surface before erosion had progressed so far. If the latter was the case, then the reef would have run out to sea on either side of the Bill. Quernstones of alveolina limestone, 40-50cm. diameter, were recovered from the late Saxon site at Medmerry Farm, Selsey.[1]

Whetstones (Fig. 4, 5)

A broken whetstone was found in the south-east corner of the hut depression, in C, near the large piece of limestone quern. Mr. Sanderson reports:

> " It is a false-bedded sandy limestone. The detrital grains are sub-angular and include fresh feldspar grains. Some glauconite is present and the matrix appears to be composed in part of impure siderite. It shows a Lower Cretaceous lithology and is probably of very local origin, probably from somewhere in the Weald."

A second probable whetstone (not illustrated) was found in the top of posthole 5 (C). This is a beach pebble, 1.3cm. thick, 11.4cm. by 7.7cm. in plan, of trapezoidal shape, with waterworn edges and grey-green in colour. It was not examined petrographically, but visually it resembles hard rock pebbles of south-western origin occasionally found on local beaches.

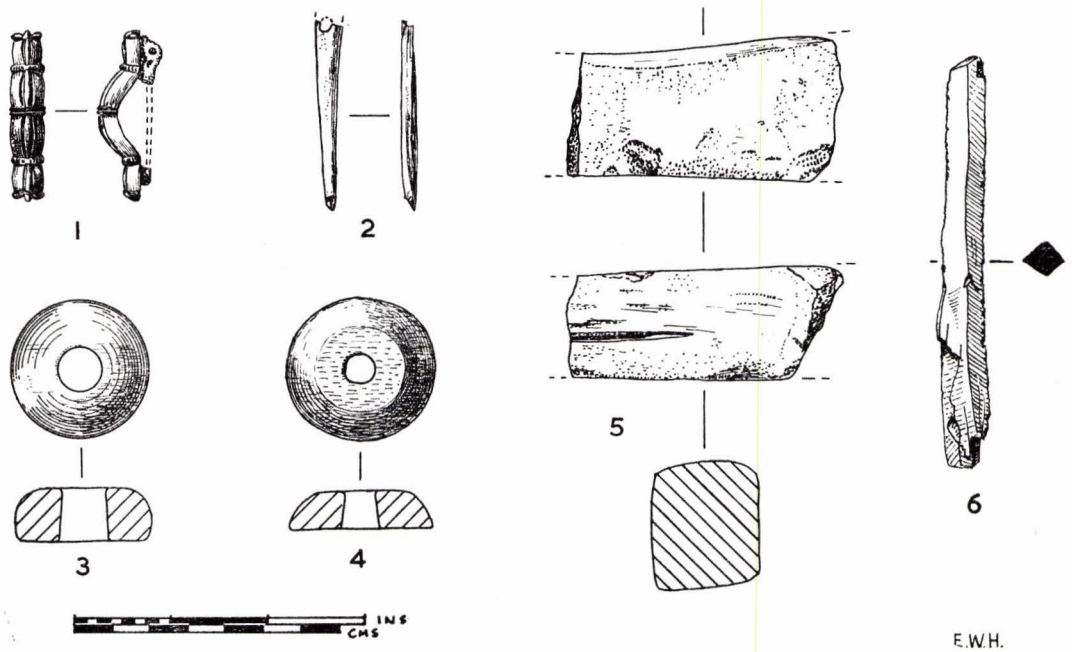

Fig. 4. Old Erringham. 1, Bronze caterpillar brooch; 2, Bone needle; 3, Chalk spindle whorl; 4, Shale spindle whorl; 5, Whetstone; 6, Utilised flint artifact

1 White, op. cit.

Spindle Whorls (Fig. 4, 3, 4)

Two spindle whorls were found on the solid in C in the south-east corner of the hut near the group of loom weights. Miss I. Gedye, then of the Institute of Archaeology, London University, kindly examined them and stated that no. 3 is of chalk and no. 4 of shale.

Flint (Fig. 4, 6)

A rod-like piece of flint, unpatinated, of roughly diamond-shaped section was found in B. It is 10.8cm. long by 9mm. by 8mm. This appears to be a natural starch-fracture of unusual form, with sharp edges, two of which have slight denticulations indicating utilisation without actual manual retouch. Faint traces of gloss adjacent to a utilised edge suggest that a cutting action was involved.

Pebbles

Ten beach pebbles, mostly small, the largest being 7.5cm. long, were found: 2 in A, 4 in B and 4 in C. None showed signs of having been used as an artifact. A larger example of boulder size was with the scatter of large flints in layer 3. All these pebbles could have been obtained locally.

Granite

A very small fragment of granite was in B. Mr. Sanderson reports that it is a piece of muscovite biotite granite, the source of which has not been traced.

Slate

Eleven pieces of broken roofing slate, 10 grey and 1 lilac in colour, were found; 7 in A, 1 in B, 2 in C. The slate, in all respects, resembles that found on the medieval site to the north, also many slates found on medieval sites throughout Sussex.[1] The slates came from quarries in South Devon or Cornwall.[2] All slate and roof tile fragments are intrusive.

Objects of Metal

Copper Alloy (Fig. 4, 1)

A copper alloy caterpillar brooch with part of the pin missing. This object has been fully reported elsewhere by Miss Vera I. Evison[3] who has kindly provided the following abbreviated description:

> " The caterpillar brooch is a type of ansate brooch which first appears in the seventh century Merovingian cemeteries in northern France. These are of hollow construction and the Old Erringham example lies typologically between these and the solid, cast brooches from Holland, of which two may be dated to the early ninth century by associated finds and coins. It must therefore be an eighth century import."

It was found 0.5m. east of the quarry edge, 0.9m. north of the southern scarp of the hut, in the top spit of the depression, 0.3m. above the chalk floor on which was lying the western group of loom weights.

Iron

No iron objects were found in the hut depression. An ox shoe and two nails in the topsoil may be post-medieval.

Clinker and Slag

A small amount of the former was in B and two fragments of the latter in C. They were examined by Mr. Henry Cleere, whose report follows. Neither can be closely dated.

> " *Clinkery material*, possibly formed by interaction of alkalis in wood ash and sand or clay hearth lining. The material resembles a light vesicular slag, but is probably not connected with metal-working.[4]
>
> " *Slag-type material*, similar to that described above, but of higher specific gravity, with iron oxide staining. This might have been formed like the previous specimens, but in contact with more highly ferruginous sand or clay. However, it resembles forging hearth slag, resulting from the re-melting and oxidation (from Fe_3O_4 to Fe_2O_3) of scale formed during the heating of iron objects. This material would collect on the forging hearth and would need to be cleared away regularly."

1 E. W. Holden, " Slate roofing in medieval Sussex," *S.A.C.*, vol. 103 (1965), pp. 65-78.

2 J. W. Murray, " The origin of some medieval roofing slates from Sussex," *S.A.C.*, vol. 103 (1965), pp. 79-82.

3 V. I. Evison, " A Caterpillar Brooch from Old Erringham Farm, Shoreham-by-Sea, Sussex," *Med. Archaeol.*, vol. 10 (1966), pp. 149-51, Pl. x, B, C; Fig. 60, a-d.

4 R. T. Evans and R. F. Tylecote, " Some vitrified products of non-metallurgical significance," *Bulletin of Historical Metallurgy Group*, vol. 1 (1967), no. 9, pp. 22-3.

Other Finds

Charcoal

The amount of charcoal found was small—only 26 fragments. They were examined by Dr. P. Myerscough, then of the Dept. of Botany, Royal Botanic Gardens, Edinburgh, who states that where the species are queried it was because the piece was not in a good state of preservation, or it was minute. There was no charcoal in the topsoil (A).

Upper part of hut depression (B) (5 pieces). Oak (*Quercus* sp.); elm (*Ulmus* sp.); beech (*Fagus sylvatica*); ? apple (? *Malus sylvestris*) or rowan or whitebeam (? *Sorbus* sp.) (2 pieces).

Lower part of ditto (C) (21 pieces). Oak (*Quercus* sp.) (11 pieces); elm (*Ulmus* sp.) (2 pieces); beech (*Fagus sylvatica*) (2 pieces); birch (*Betula* sp.) (3 pieces, 2 queried); poplar (*Populus* sp.) (2 pieces); ? apple (? *Malus sylvestris*) or rowan or whitebeam (? *Sorbus* sp.).

Bone Needle (Fig. 4, 2)

Bone needle or bodkin, the point remaining at one end, but the head broken off at the eye. Such needles are common throughout the whole of the Saxon period, especially as an adjunct to the weaving process. Found in the north-east corner of the depression (B).

Animal Bones By Mrs. B. Westley, B.Sc.

Group A (Topsoil)

Bos	Molar	1 fragment	Metacarpal	1 complete, 20.4cm. overall
	Rib	1 do	Tarsal	1 fragment
	Vertebra	1 do (thoracic)	Rib	1 do
	Innominate	1 do	2 indeterminate fragments, probably **Bos**	
Sheep/Goat	Mandible	2 complete and 2 fragmentary	Rib	1 fragment
			Phalanx	1 do
	Teeth	12, loose, mostly young adults	Tibia	2 shaft fragments
	Innominate	2 fragments, young		
Pig	Skull	2 fragments	Teeth	4 (2 young)
	Mandible	1 fragment, young (M_3 developing)		
Bird	1 fragment, indeterminate, probably a fowl.			

Group B (Upper half of depression)

Bos	Mandible	3 fragments	Ulna	1 fragment
	Maxilla	3 do	Tarsal	4 do
	Teeth	2	Phalanges	5, complete and fragmentary
	Vertebrae	7, cervical and sacral—1 young animal (?)	Femur, tibia, innominate fragments	
	Radius	5 fragments		
Sheep/Goat	Skull	4 fragments 1 horncore (large)	Innominate	2, fragmentary
			Rib	2 do
	Mandible	9 fragments (5 young)	Scapula	2 do
	Radius	1, complete, and 4 fragments, one of which matches with a piece from group C	Tarsal	1, complete
			Tibia	3 fragments, distal
			Metatarsal	3 shaft fragments
	Humerus	5, fragmentary		
Horse	Skull	3 fragments	Femur	1 shaft fragment, cut to a 5cm. length
	Patella	1, complete		
	Ribs	6, probably horse	Phalanx	1 complete, third (hoof)
Fox	Teeth	1 canine	Phalanx	1

Pig	Skull	8 fragments	Femur	2 fragments
	Teeth	11 (4 young)	Metatarsal	2 do
	Ribs	2, probably pig	Phalanx	1
	Scapula	4 fragments		

Bird 6 indeterminate fragments; three are probably fowl and the others some small wild bird.

Group C (Lower half of the depression)

Bos	Skull	7 fragments	Ribs	9 fragments
	Mandible, max.	10 do	Innominate	6 (2 of calves)
	Teeth	2 molars	Femur	3 (2 young)
	Radius	1 shaft	Tibia	1 distal fragment
	Metacarpal	2 (1 calf, a small adult)	Metatarsal	3 fragments
	Scapula	1 fragment	Calcaneum	2, complete
	Vertebra	2 do	Phalanges	4
Sheep	Skull	1 large horncore, almost complete	Vertebra	3 (1 young)
	Mandible	13 fragments (3 young)	Scapula	5 fragments
	Teeth	14 (5 young)	Tibia	7, shaft and distal fragments
	Humerus	3 (2 young)		
	Radius	5, mostly shaft fragments	Femur	1 shaft fragment
			Calcaneum	1 complete, young
Pig	Skull	9 fragments	Ulna	1 fragment
	Mandible	1 do	Tibia	1 do, shaft
	Maxilla	1 fragment, with 3 teeth	Patella	1, complete
			Metapodial	1 fragment
	Teeth	1 tush	Phalanges	3 complete
	Vertebra	1, young		
	Radius	3 fragments		

Dog Mandible 1, complete, left, of a large animal, with M3, P_1, P_2, P_3

Fox (probable) Phalanx 1

Bird 8 fowl bones

Rodent Humerus 1 fragment, ? rat

The collection represents an average assembly of domestic and wild animals. The cattle are small but not as small as the Celtic ox. One measurable bone, a metacarpal from group A falls between the range of measurements given by Cornwall[1] for *Bos taurus* and *Bos longifrons*. There is no apparent distinction between the animal types of the three groups. Sheep is not distinguishable from goat in the group A bones, but in groups B and C there is found in each a large horncore belonging undoubtedly to sheep. They are not a pair. It seems safe to assume that all the small ruminants are sheep and the breed is an average-sized but large-horned one. The diameter of one horncore is 17½mm. maximum.

The pig bones are of average-sized animals and not numerous or complete enough to furnish information. Horse remains seem to represent one animal and a femur fragment is cut into a 5cm. length for an unknown purpose. One dog is represented, a large adult, about the size of a modern retriever. Many of the bones show signs of being gnawed. (End of Mrs. B. Westley's report).

Some of the bones, especially in the upper layers, could be from rubbish tipping or downhill drift from a late Saxon or medieval deposit not far away, but others are probably remains of meals taken during the life of the hut. One immature sheep radius, complete with loose distal epiphysis resting on top of the shaft, but lacking the proximal epiphysis, was found in a tiny vertical hole in the floor near the east end of the hut, so that the epiphysis was level with the chalk surface. This bone must have been pushed deliberately into the hole by human effort, as it is inconceivable that it could have found its way there naturally. It helps to confirm that the actual solid chalk was the floor of the sunken hut.

It is of interest to note that the sheep were horned as at the medieval village of Hangleton 6km. to the east of Old Erringham,[2] and that there is little difference between the bones in the various groups. Doubtless much of the wool from the sheep was spun and later woven on the looms.

1 I. C. Cornwall, *Bones for the archaeologist* (1958), p. 155.
2 E. W. Holden, "Excavations at the deserted medieval village of Hangleton," Pt. I, *S.A.C.*, vol. 101 (1963), p. 176.

Coprolites

A piece of coprolite was found in B and a tiny piece in C, both possibly from dog.

Mollusca

Identified by the late H. Brazenor, then of Brighton Museum. *Land snails, Helix aspersa* in quantity throughout. *Helix nemoralis, Cepaea hortensis* and *Helicella itala* in small numbers. No bulk samples were taken, only hand specimens were recovered. *Marine shells.* Most appear to be food remains, found in all layers, but mostly in the depression. 236 Oyster valves (*Ostrea edulis*), smaller numbers of cockle (*Cardium edule*), mussel (*Mytilus edulis*) and winkle (*Littorina littorea*); large numbers in a heap of the estuarine bivalve *Tellina crassa*, plus 53 more throughout the hut. All shellfish could have been obtained from the estuary or the seashore. One of the oyster shells is perforated with a roughly oval hole 9mm. by 7mm. (found in the topsoil). Similar perforated oyster shells have been noted in a medieval context at Hangleton[1] and elsewhere, but the reason for the hole is unknown.

Acknowledgements

It is a pleasure to acknowledge the generous co-operation given by so many people, especially the landowners concerned: Mr. F. S. C. Bridger, his solicitors Messrs Donne, Mileham and Haddock, and his Agent Mr. J. Ellman Brown. The western half of the site was owned by West Sussex County Council, every assistance being afforded by Mr. M. Milne, then County Engineer and Surveyor and his site engineer, Mr. M. Carson. The contractors, Tilbury Construction Co. Ltd. and their Agent, Mr. R. Baxter kindly afforded access. Thanks are expressed to Mr. A. Haffenden, the first person to find loom weights. A special mention must be made of Mr. F. Grantham, the farmer of Old Erringham, for his continued friendly assistance. Amongst those who worked on the site special thanks are due to Mrs. H. G. Holden, Miss Jean Cook, Miss Vera I. Evison, Mr. C. Ainsworth and his fellow members of the Worthing Archaeological Society; also Messrs. R. Hartridge, F. Witten and others from the Brighton and Hove Archaeological Society.

Advice in various ways, including several specialist reports, were generously given by Mrs. M. Barton, Miss E. Crowfoot, Miss V. Evison, Miss I. Gedye, Mrs. B. Westley; Messrs. K. J. Barton, M. J. Hughes, J. G. Hurst, A. Harrison, P. Mayes, R. W. Sanderson, E. M. Venables; Drs. I. Cornwall, G. C. Dunning and P. Myerscough. Grateful thanks are expressed to all, but any errors of interpretation are the author's responsibility.

The Society is greatly indebted to the Department of the Environment (Directorate of Ancient Monuments and Historic Buildings) for a financial grant towards the cost of the publication of this paper. The author additionally wishes to acknowledge with gratitude a grant towards the costs of the excavation from the then Ministry of Public Building and Works in 1964.

Deposition of Finds

Through the kindness of the landowners finds were donated to the Sussex Archaeological Society. Students and others wishing to examine the finds should make an enquiry of the Curator at Barbican House, Lewes, as some of the material may be on loan to other museums.

Site and other records have been deposited at Barbican House, Lewes.

1 Ibid., p. 177, Fig. 39, nos. 5-8.

A SOCIETY ANTHOLOGY 3

The *Sussex Archaeological Society* in the pages of THE TIMES

" A photographic survey of Sussex, similar to that already working in Surrey and Warwickshire, is proposed. The intention is to allot to each person who may wish to assist in the Survey one section three miles by two miles of the Six Inch Ordnance Map, containing an area of six square miles. The work will then proceed systematically and in course of time the whole county will be photographically surveyed." 18 April, 1904, p. 3f.

(This project did not come to fruition. The Photographic Survey and Record of Surrey was begun by enthusiasts at Croydon Public Library in 1902. It appears to have died through lack of support about 1950. A collection of more than 10,000 prints is held by the Croydon Library. *Ed.*)

" . . . The East Sussex County Council on Tuesday last decided to purchase ground adjacent to the Castle of Lewes, and within its ancient precincts, and to build upon it an extension to its offices . . . It is difficult to obtain exact particulars, but it is understood that the ground on which it is proposed to erect a modern structure is in the garden, lying between the Bowling Green (the ancient tilting ground) and the still standing curtain-wall of the Castle, through or over which it will be necessary to make a passage . . . The Keep and the Barbican were purchased some years ago from the ' Lords of the Castle ' and conveyed to the Sussex Archaeological Society, a flourishing association, comprising more than 1,200 members, in trust for the public. In the event of the Society's ceasing to carry out its duties as trustee, the buildings are to pass to the National Trust . . . I am confident that a protest against this menace would be carried with almost complete unanimity. And such a protest I am equally sure, would have the support of archaeologists throughout the country, and of all who love and reverence our ancient buildings."

Charles Thomas-Stanford, Chairman of the Council, *Sussex Archaeological Society.*
July 30, 1927, p. 7f.

" Is there no generous supporter of archaeology and research work who would present to the County of Sussex photostat copies of the ninety-nine folio volumes of the Battle Charters, the originals of which are now lying useless for research work and uncatalogued within the Huntington Library, San Marino, California."

Lady Wolseley.
August 18, 1928, p. 11d.

(Unhappily, there is little change to report after almost half a century because no printed catalogue of this magnificent collection of Sussex archives has yet been produced. *Ed.*)

(Ed. S.A.C.)

SHORTER NOTICES

This section of the *Collections* is devoted to short notes on recent archaeological discoveries, reports on small finds, definitive reports on small-scale excavations, etc., and also to similar short notes on aspects of local history. Material for inclusion should be sent to Mr. Alec Barr-Hamilton, 226 Hangleton Road, Hove. Those without previous experience in writing up such material for publication should not be deterred from contributing for Mr. Barr-Hamilton will be happy to assist in the preparation of reports and illustrations.

ANCIENT MONUMENTS IN SUSSEX—The following monuments have been Scheduled since publication of the last list in *Sussex Archaeological Collections* (hereafter S.A.C.), vol. 112 (1974), p. 152. The numerals on the left are the county numbers allotted to the monuments.

East Sussex

383	*Battle*	Romano-British ironworking site, Beauport Park.
394	*Hartfield*	Pippingford blast furnace.
406	*Glynde* and *Ringmer*	medieval settlement site on eastern side of Saxon Down.
409	*Hartfield*	pillow mounds on Ashdown Forest.
411	*Ewhurst*	Romano-British settlement site south of Bodiam bridge.
412	*Buxted*	medieval settlement site in Buxted Park.
413	*Westdean*	Exceat church (site of)
414	*Friston*	dewpond.
419	*Buxted*	Rendall's furnace.
420	*Buxted*	Oldland's furnace.
421	*Bexhill*	remains of Northeye village.
422	*Arlington*	medieval earthworks south and west of the church.
423	*Falmer*	medieval earthworks at Balmer.
431	*Bexhill*	Cooden moated site.

West Sussex

405	*North Chapel*	furnace site in Frith Wood.
410	*Ashington*	Roman building site 200yds. north-west of Spring Copse.
424	*Climping*	medieval earthworks east and south-east of St. Mary's church.
425	*Angmering*	medieval earthworks at Lower Barpham.
426	*Shoreham-by-Sea*	medieval earthworks at Old Erringham.
427	*Singleton*	linear earthwork 350yds. north-west of The Trundle.
430	*Newhaven*	lunette battery, Newhaven west foreshore.

E. W. HOLDEN (*Honorary Correspondent for Sussex, Ancient Monuments Inspectorate, Department of the Environment*)

PORT'S ROAD, THE ANCIENT ROAD OF PORTSLADE—The Doctors Eliot and E. Cecil Curwen published a paper, with this title, in which they described an ancient track or road, largely of prehistoric origin, running from the Devil's Dyke by Hangleton to Old Portslade and the mouth of the River Adur.[1] The purpose of this note is to place on record that the name " Port's Road " is a modern one, Dr. E. Cecil Curwen informing the writer in the 1950s that he and his father had given this distinctive name to the track during the early 1920s, when they were assembling material for their paper, and that it had not been so named before that time.

Their interpretation of the name " Portslade " led them to believe that " . . . it originated in Saxon times as *Portes Lad*, which means Port's Road." They were careful to point out, in a footnote, that there were alternative meanings. Soon after their paper was in print, the authoritative volumes on Sussex place-names were published, the explanation for Portslade differing from that of the Curwens. Port's Road as such was not mentioned, but the authors agreed with the Curwens that the first element represented the personal name of *Port;* the second element, however, was said to be " . . . probably *slæd*, meaning ' shallow valley,' used also in dialect of ' low marshy ground.' "[2] The younger Curwen may have been influenced by this when he published his well-known book in 1937, for, although he refers to the track, he does not call it " Port's Road."[3] Margary records the track as a minor Roman way, calling the stretch from near the Devil's Dyke to Portslade, " the ancient Port's Road," following the Curwens.[4] A section of the track is Scheduled as an Ancient Monument under the name " Ports Road."[5]

1 Eliot Curwen and E. Cecil Curwen, " Port's Road, the ancient road of Portslade," *Brighton and Hove Archaeologist*, vol. 3 (1926), pp. 28–42.

2 A. Mawer and F. M. Stenton, eds., " *The place names of Sussex*," Part II, *English Place Names Society*, vol. 7 (1930), p. 289.

3 E. Cecil Curwen, *The archaeology of Sussex* (1937), p. 296.

4 I. D. Margary, *Roman ways in the Weald* (1948), p. 179.

5 Dept. of the Environment, *List of Scheduled Monuments in England* (H.M.S.O., 1973), p. 211, Scheduled Ancient Monument No. 183 (E. Sussex).

If the " Place-Names " version is accepted, then the Curwens were only half right in their interpretation but there seems to be no good reason why the name, invented by the Curwens, should not continue to be used, despite its lack of antiquity for, after all, the road did lead to land occupied by a Saxon named Port.

E. W. HOLDEN

KITCHENHAM FARM, ASHBURNHAM (TQ 677 125 and TQ 679 133)—At the edge of the flood plain of the Ashbourne stream (TQ 677 125), a spring, emerging from higher ground, has caused a swamp in the water meadows. In a trench, dug to pipe-drain this, Mr. Beeny, the farmer, found a whole Romano-British pot, now in his possession. In digging an open ditch along the boundary of the valley side, near the same spot, timbers, lying horizontally, were disturbed and, in the ditch side, were found the neck of a Roman glass bottle, a sherd of Samian ware and pieces of Roman floor tiles. Silt from the ditch, now spread over the meadow, seemed to contain traces of shell.

It is probable that the sea reached here in Roman times and there seems to be a possibility that a jetty or landing-stage existed here.

Short terraces on a field at TQ 679 133 might represent the site of the original " ham."

C. F. TEBBUTT

QUEEN'S HALL MUSEUM, CUCKFIELD—In July, 1976, thanks to the good offices of our member, Mr. William Newnham, of Warninglid, I was able to see the remaining contents of the former museum, once on view in Queen's Hall, Cuckfield and now dumped in the cellar under the Hall. All that could be found, comprised:—

Flints from Dr. Eliot Curwen—A small, glass-topped table case, given by Henry Taylor, 1937, contained a Thames pick, a Mesolithic axe (from House Brow), a polished, flint axe, fifteen items consisting of flint flakes, knives, cores and pot-boilers; two broken, polished, flint axes (no provenance); a broken, large, polished, flint axe or chisel, four pot-boilers and a concave scraper (Downs); a Mesolithic core (Ditchling); five flakes and an end-scraper (rock shelter, Tilgate Wood, Balcombe); a " slug " knife and a flake knife (Tilgate Forest Lodge, 1928); worked flake and scraper (Cliftonville, Margate); three scrapers (Court Gardens, Ditchling); five Mesolithic scrapers and flakes (Portways Farm, Warninglid, by W. Newnham); long flake " strike-a-light " (Saddlescombe 1924, Robinson) and a combined end-scraper and knife (Downs (?), 1906—label faded).

In a cardboard box with vases, etc., were two very fine polished, flint axes (one marked " Ham Lane, Scaynes Hill, 1931 "); and a label marked " flint arrowhead," with the specimen missing.

A Bronze Age axe, known to have been in the collection, could not be found.

Bygones—An ox bow; a child minder; a very large, canister-type, bronze bell; and a man-trap.

The above collection appears to be the property of the Mid Sussex District Council and is, obviously, at great risk. Steps are being taken to ascertain the best way in which to approach the Council in order to suggest that the collection should be given, or loaned, to this Society.

C. F. TEBBUTT

WALLHURST MANOR, COWFOLD (TQ 226 237)—Flints from this site are described by Curwen and Winbolt in *Sussex County Magazine*, vol. 11 (April 1937). Mrs. Sawyer, of " Kenmore," Parkminster, Partridge Green, has been finding more flints on this site; they appear to include microburins, microliths, Mesolithic cores and a fine specimen of a horned scraper.

C. F. TEBBUTT

APPARENT HUT CIRCLES, PIPPINGFORD PARK, NUTLEY (TQ 446 310)—while walking along a riding, running east and west in North Wood, Pippingford Park, I noticed, at TQ 446 310, on the south side, five circular, earthwork banks that looked like ancient hut circles. The banks were made of earth and stones and each was of about 22ft. in diameter; in some cases,there was a slight ditch on the up-hill side and an entrance gap through the bank. Another, single example was found, further west along the track.

In case these apparent hut circles should puzzle or deceive future archaeologists, it should be recorded that Mr. A. Morriss, of Pippingford Park, has informed me that they were constructed by the Army, during the 1939–45 War, as bomb blast protection for bell tents.

C. F. TEBBUTT

THE WORK OF THE MID SUSSEX ARCHAEOLOGICAL SOCIETY 1961–65—The Mid Sussex Archaeological Society was based in the Horsham-Crawley area of the Sussex Weald. It grew up around the personality of Stanley Beckensall then teaching at Ifield Grammar School.

Accounts of the Society's most important work have been published in the *Sussex Archaeological Collections*[1] and *Sussex Notes and Queries*.[2] Other activities have, so far, gone unrecorded, due largely to Beckensall's sudden departure for a teaching post in Malta and the dispersal of his papers. This is an attempt to bridge that gap.

1 S. G. Beckensall, " The excavation of Money Mound," *S.A.C.*, vol. 105 (1967), 13–30; T. K. Green, " Roman Tileworks at Itchingfield," *S.A.C.* 108 (1970), 23–38.

2 T. K. Green, " A building on Shelley Plain," *S.N.Q.*, vol. 16 (1963), 19–22.

A couple of earthen mounds were excavated between Colgate and Pease Pottage in 1962 and 1964. The first one at Shepherdsfield (TQ 2394 3325) stood 2ft. high at the centre, above the old land surface; that at Black Hill (TQ 2437 3303) stood 2ft. 6in. Both were about 30ft. across and covered spreads of jumbled stones. Shallow ditches ran round each mound; they were 6ft. across but no more than 1ft. deep. Neither mound produced any grave goods or evidence of burial. A dense spread of flint debris, with six scrapers and a utilized flake, came from the small area excavated beyond the ditch in the south-western quadrant of the Black Hill mound.

Part of the Mesolithic site at TQ 285 346, called " Tilgate 1," was excavated and an occupation layer detached. No signs of pits or post-holes were seen, however.

A rescue dig, on 21–22 June, 1963, examined a bell-shaped well found in the south-western embankment of the Horsham bypass at approx. TQ 153 292. The top 6ft. was of dry-stone masonry; it was then cut down through the 2ft. thick Horsham Stone bed and the 18in. orange clay below that, to the top of the blue marine clay forming the local water table. The mouth of the well, 3ft. across, had been paved over with slabs, supported with planks, when it went out of use.

Some trenches were dug at the defended promontory site at Henfield " camp " (TQ 225 158) in 1963. The rampart was shown to be considerably disturbed and to have just a slight ditch, and the suggestion is that it is a cattle enclosure rather than a defended site. Pits were found in the interior and two contained flint flakes: in my opinion, they are not diagnostic chronologically.

A brief trial dig was made on the crest of Two Trees Hill, a small hillock just north of the A264 Horsham–Crawley road at TQ 237 347. Although the profile of the hill-top suggests a low barrow of the Money Mound type, nothing man-made was found.

A considerable amount of flinting and field walking went on, and a collection of finds (made chiefly by Beckensall and Jack Hicks, formerly of Crawley) is now with Lewes Museum, along with the finds from Shepherdsfield, Black Hill, Tilgate 1, and Henfield. Findspots have been marked on the Society's 6in. OS maps. Lists of findspots, notes on the collections, and papers and photographs relating to the Shepherdsfield, Black Hill, and Horsham bypass excavations have been deposited at Barbican House.

Finally, while we were digging at Shepherdsfield, an old farmworker gave us half a flat bronze axe of Migdale/Marnock type,[1] which he had found in his kitchen garden at TQ 2395 3346. Its maximum width is 3.4in. and, in shape, it matches the front half of the axe from Selsey, now in Worthing Museum, almost exactly. It has been entered on the card index of bronze implements in the British Museum and is now in Lewes Museum.

It is a pleasure to record the help in recovering Beckensall's collections and papers received from Mr. and Mrs. J. M. Taylor and Mrs. S. Standing, of Horsham, and that of Miss Evans (Worthing), Mr. Manwaring Baines (Hastings), Mr. Brazenor (Brighton), and Mr. Norris (Lewes) for allowing me to examine Sussex bronze axes in their museums.

TALBOT K. GREEN

RICHARD OXENBRIDGE OF HORSTED KEYNES AND HIS FAMILY, 1644–1719—" Richard sonne of Jonas Oxenbridge " was baptised in the parish church of St. Giles, Horsted Keynes, on November 3,[2] 1644. He had no settled childhood; by the time he was five his family was at East Grinstead, where his brother John was born. Five years later they were at Buxted where his sister Ann was born: it is possible they lived in other places too. In 1657, when Richard was thirteen, his " vagrant " family was split up by order of the Justices; his father and mother and three year old Ann were sent to Cuckfield, Jonas's native place, John to East Grinstead and Richard to Horsted Keynes.[3]

His name does not occur in Giles Moore's tithe accounts,[4] nor in those of John Wood[5] who followed Moore almost immediately as Rector of Horsted Keynes, nor is he one of the many workmen of various kinds mentioned by Moore in his Journal. However, Moore did give Oxenbridge 6d, either in November or early December, 1665;[6] this was the kind of sum Moore often gave away, usually, however, when it was so relatively small a sum, to a child—disappointingly he gives no reason for the gift, though he often does so in similar cases. Perhaps Richard was about to get married; he did marry not long after this, for his first child John was baptised on 8 March, 1667/8.[7] His wife's name was Isabell[8] but the marriage is not in the Horsted Keynes parish registers, so her surname before marriage is not known. A second son, Henery, was baptised on 9 February, 1669/70[9] and a third, Thomas, on 8 January, 1673/4,[10] but Isabell died in a little over a week after his birth and Thomas himself did not live beyond 28 May, 1675.[11] Richard married a second time, again, apparently, outside the parish; we only know that his second wife's name was Bridgett.[12] Their daughter Hanna was baptised on the 28 August 1692[13] and another daughter, Elener on 25 March, 1694.[14]

Horsted Keynes was not so prosperous as it had been, now its iron industry was in decline, and the landless poor suffered most. Richard, perhaps out of work, ventured to break up and start cultivating three roods of waste, but this was discovered, and, at the court called by Mistress Sapphira Lightmaker's steward on 30 March, 1701, he was fined what for him must have been the crippling sum of 5/- for his encroachment and enclosure.[15] On 10 August 1702 he died—" Richard Oxenbridg poor day labour Relefed by the parish " and was buried three days later " by

1 D. Britton, " Traditions of Metal-working in the Later Neolithic and Early Bronze Age of Britain: Part 1," in *P.P.S.* 29 (1963), 263ff.

2 Horsted Keynes Parish Registers (unprinted).

3 E.S.R.O. Quarter Sessions Order Book 1655–1660, f.35v. Mr. Anthony Fletcher's reference to this occurrence in his *A Country community in peace and war 1600–1660* first introduced the Oxenbridge family to the present writer.

These, which cover the years 1656–1679, form the bulk of the first part of the Journal of Giles Moore, which is unpublished.

5 This tithe book, also unprinted, runs from 1680 to 1705.

6 Sussex Record Society, vol. 68, p. 329.

7 Horsted Keynes Parish Registers.

8–14 Ibid.

15 Horsted Keynes-Broadhurst Court Rolls (unpublished) in the possession of the Sussex Archaeological Society.

Will. marchant and John Wood churchwardens and James Warnett and Thomas Roffe overseers."[1] His widow was given a little money from the church collections every year from 1713 to 1718 inclusive.[2] She had yet another family misfortune before her death. On February 16 1716/7 " Hannah Oxenbridge of East Grinsted parish was delivered of a Son by an Unknown father baptiz'd at her Mother's house and named Thomas being as was said in danger of death "[3] -and so he was, for he was buried at Horsted Keynes on March 13, 1716/7.[4] When his grandmother Bridgett was buried on 8 September 1719 there is no indication that she had a pauper's funeral.[5] Perhaps she had, and the clerk omitted to mention it: perhaps her stepsons or her daughters could afford to pay for the funeral. There is no clue. Her burial is the last reference to the Oxenbridge family in the Horsted Keynes records.

RUTH BIRD

EARLSDOWN, DALLINGTON (TQ 6442 1954)—During deep garden trenching at Warren House, Mr. A. Flood uncovered an assemblage of Neolithic flints and related flakes which included blades, round or thumbnail scrapers and some points. There were twelve artefacts in all, some with re-worked edges. Charcoal and burnt pebbles indicated something of a camp site. The material was left at Barbican House for dating. From other finds of assemblages, of this kind, reported in the past and others, which have not, so far, been reported, it would appear that the main Wealden watershed, which at one time extended across what is now the Channel, was continuously occupied from, at latest, Mesolithic times, onwards. The Warren House site is less than 2km from the Dallington Forest site.[6]

W. R. BESWICK

DEANS FARM, WARBLETON (TQ 6427 1754)—Two hand axes or tools have been found by Mr. Mesa, beside the farm road. Although these were together, they have entirely different characteristics; one being of Acheulian type and the other of Iron Age type, in stone. The Acheulian flint is umber brown to ochre in colour, measures 11cm. long, 8cm. at the widest and 5cm. thick, weighs 560g., and has been broken. The stone axe is of polished ironstone, though not recognisably of a Sussex material, and is oxidised to a brown colour externally. The dimensions are: length 15cm., width 8cm., thickness 5cm., and it weighs 2kg. The only explanation for these tools being together is that they may have been used by Iron Age gatherers of ore, which is abundant in the adjacent woodlands.

W. R. BESWICK

A MESOLITHIC SITE AT LODGE HILL, DITCHLING (TQ 323 153)—Mr. C. Skeggs has recently passed the following report to me, of a Mesolithic industrial site which he discovered whilst field walking.

The site seems to be a typical Mesolithic site situated on the Lower Greensand close to the foot of Lodge Hill, in close proximity to several springs. Although there is no natural flint in the immediate locality, the industry must have been carried out on the site since a high percentage of waste flakes was found, together with several hammerstones. Approximately 2,000 flints have been found, so far, concentrated in an area of about 30m. square.

The completed tools are almost totally unpatinated and include parallel-edged blades, microliths, scrapers, microburins, awls and points; the latter include a few excellent examples of hollow-based points. No axes or picks have been recovered, so far.

Other finds—which may well be intrusive—include a fine, convex scraper, (?) Neolithic, and various pottery sherds which may well have been spread with farmyard manure.

A complete report will be published in due course.

SIMON GARRETT

MESOLITHIC AND NEOLITHIC FINDS FROM KEYMER (TQ 3190 1585 and TQ 319 152)—A Mesolithic tranchet axe, together with several scrapers, worked and waste flints have been found by a local resident in a ploughed field above Church Mead, Keymer, at TQ 3190 1585.

Three (?) Neolithic rough-out axes, a tranchet axe and a number of worked flints have come from a ploughed field adjacent to Ditchling Pumping Station, at TQ 319 152.

All the above finds are remaining in private possession.

SIMON GARRETT

ROMANO-BRITISH FINDS FROM PLUMPTON—Mr. R. Wells, of Plumpton, recently asked me to comment upon a large amount of pottery and tiles which he had found in a recently-ploughed field near the course of the Roman road (Margary 154), outside the village of Plumpton. The material which I saw included large pieces of roofing tiles—both tegulae and imbreces—and, what seemed to be, portions of flue tiles. The pottery is mainly second and third century.

SIMON GARRETT

1 Horsted Keynes Parish Registers.
2 Horsted Keynes Vestry Book, 1695–1888 (unpublished).
3 Horsted Keynes Parish Registers.
4–5 Ibid.
6 C. F. Tebbutt, "A Prehistoric Site in Dallington Forest", *S.A.C.* vol. 112 (1974), 156.

REPORTS FROM F. G. ALDSWORTH, ARCHAEOLOGY OFFICER, WEST SUSSEX COUNTY COUNCIL

Some Recent Discoveries on the Slindon Estate—A considerable number of sites and monuments has been found and reported by Mr. R. Upton, of 2 Church Road, Slindon, who retains many of the finds. Some of the sites have been visited by P. L. Drewett, Director of the Sussex Archaeological Field Unit, and the writer.

The National Trust's Slindon Estate lies upon the southern slope of the South Downs and, to the north, is partially overlain with clay-with-flints and, to the south, by gravel making up the 180-foot raised beach. Much of the area was under woodland until earlier this century but, further north, the locality, generally referred to as ' The Gumber ', appears to have been cleared before the seventeenth-century and, until recently, was extra-parochial.

The following list includes a selection of the sites reported:

Paleolithic

Handaxes have been found on the raised beach at SU 9567 0832, at SU 9512 0893, in the kitchen garden at SU 9612 0812 and at ' The Willows ', West Walberton Lane, Walberton, at SU 9577 0677.

Flint-working Sites, probably ranging in date from the Mesolithic to the Bronze Age, have been found over a wide area. Finds include tranchet axes, chipped and polished axes, scrapers, cores and waste flakes.

SU 9618 0859 Mesolithic site, including cores and flakes, found during ploughing.
SU 9513 0857 Mesolithic site, with unfinished cores.
SU 9515 0916 Tranchet axe found.
SU 9584 0786 Mesolithic site.
SU 9608 0815 Mesolithic site, including a tranchet axe.
SU 9685 0816 Mesolithic site, including cores and flakes.
SU 9667 0822 Mesolithic/Bronze Age site.
SU 9571 0952 Chipped flint adze.
SU 9596 0983 Two Neolithic chipped flint axes.
SU 9577 1023 Mesolithic site.
SU 9574 1011 Mesolithic site.
SU 9626 1005 Mesolithic site.
SU 9550 1030 Mesolithic sites on either side of a dry stream bed.
SU 9587 1077 Mesolithic site.
SU 9563 1089 Neolithic site.
SU 9548 1110 Mesolithic site.
SU 9544 1080 Mesolithic site.
SU 9573 1121 Mesolithic site.
SU 9592 1143 Mesolithic and Neolithic site, including a flint adze and a sickle.
SU 9604 1080 Mesolithic site.
SU 9627 1113 Mesolithic and Neolithic site.
SU 9605 1057 Mesolithic and Neolithic site including a partially polished axe, roughouts and flakes.

Barrows

' THE GUMBER '. At SU 9621 1257 is a probable Neolithic long barrow, oriented east-west and measuring about 45m. in length by 12m. wide. It is of flint and stands up to about 0.5m. in height. At its east end (see Fig. 2) is a round barrow, 14m. in diameter and 0.5m. in height. To the south, at ' B ', is a round barrow, 10m. in diameter and, at ' C ', twin round barrows, each 12m. in diameter. (During recent excavation the long mound, which resembled a ploughed-down barrow, was found to be a natural, residual mound of clay-with-flint. The round barrow was shown to be a Bronze Age burial mound.)

NORTH WOOD. At SU 9794 1105 is a round barrow cemetery, comprising about ten ploughed-down mounds, although only three are now surveyable.
' A,' SU 9587 1103, is 20m. in diameter and 1m. high.
' B,' SU 9587 1100, is 12m. in diameter and 0.3m. high.
' C,' SU 9582 1095, is 14m. in diameter and 0.4m. high.

GREAT DOWN. At SU 9708 1149 is a possible Neolithic long barrow comprising a mound, oriented north-south and measuring 42m. by 12m. It is under pasture and survives to 0.4m. in height. There is some evidence for flanking ditches.

Round barrows are visible at:

SU 9602 1069 24m. in diameter and 0.6m. high.
SU 9632 1160 A slight mound which may be a barrow.
SU 9653 1202 24m. in diameter and 0.8m. high.

Occupation Sites—At SU 9644 0789, a scatter of Romano-British material appears to indicate an occupation site underlying the garden of 45 Park Lane, Slindon.

At SU 9590 1016, a scatter of Romano-British material, including tesserae, has been found during ploughing and a ditch was observed during the construction of a new farm building in 1974.

At SU 9677 1079, a probable Romano-British settlement can be seen on Air Photographs BKS 1971 151746-747.

At SU 9552 1140, there is a scatter of Romano-British material, including tile and quern fragments.

WARREN BARN. At SU 9631 1145, an Iron Age/Romano-British farmstead is visible on Air Photographs BKS 1971 151746-747. A scatter of surface finds appears to confirm the date. The settlement appears to include a rectangular enclosure of about 0.7 acres, a field way, hut circles and pits.

Field Systems—Iron Age/Romano-British field systems are visible on the ground and on air photographs throughout the area but several features appear to represent a different land-use system. A linear bank and ditch extend from SU 9528 1138 to SU 9575 1097. In general form it is not unlike a field lynchet, but at its south-eastern end, it continues across a dry stream bed and rises the slope on the other side. Other examples are visible further north where they are, in places, interrupted by causeways and large, circular depressions. They do not conform to the usual pattern of Iron Age/Romano-British fields, with contour lynchets and cross banks and may be medieval boundary banks.

Earthworks at ' Old Mill Ground,' Albourne (TQ 2536 1630)—In a valley to the north-east of St. Bartholomew's Church, Albourne, is a series of earthworks which appear to represent the site of a Medieval or post-Medieval watermill. The remains comprise a pair of parallel banks which may have been constructed to divert Cutlers Brook, and a leat which terminates in a rectangular depression which may have been the wheel pit.

On the Tithe Map for Albourne, dated 1839, the area is called ' Old Mill Ground ' but a search, through old maps by Speed (1610), Budgen (1724), Yeakell and Gardner (1778), and the Ordnance Survey (1813), has revealed no evidence for a mill in the area.

Surveys of 1583 and 1640[1] refer to two mills on the Danny Estate but these cannot be topographically located from the text.

Earthworks at Oldpark Farm, East Lavington—To the south-east of Oldpark Farm is a series of earthworks, comprising a moat-like feature, measuring about 30m. square, a rectangular fishpond, an overflow channel and two pond bays.

A map of 1806[2] shows the feature within a field called ' House Meadow ' but it is not shown on the Tithe Map for Woolavington, dated 1839, although the field is called ' The Ponds '. It is shown and annotated ' pheasantry ' on a map of 1880.[3]

The central island of the moat-like feature is rather small to suggest that it is a homestead moat and, bearing in mind the documentary evidence, it seems likely that this complex represents a series of ornamental ponds of Medieval or post-Medieval date.

A Roman Brick and Tile Kiln, Fernhurst (SU 9140 2670)—This site was reported by Mr. J. Swabey, of Home Farm, Fernhurst. This is a probable site of a Roman brick and tile kiln, indicated by a dense concentration of Roman brick, tile (tegulae, imbrex and roller-stamped), and burnt soil in boundary ditch and adjoining field at SU 9140 2670.

Possible Medieval Pottery Kilns, Durleighmarsh Farm, Rogate (SU 7817 2370)—This site was reported by Major J. L. M. Henslow. When the area centred at SU 7817 2370 was ploughed for one season in 1965, the owner noted two circular ' burnt red areas '. To the south-west a wide scatter of pottery was found when a marsh was drained. The pottery was taken to Chichester Museum, where it was tentatively dated to the thirteenth, or fourteenth, century but it can no longer be traced.

Romano-Celtic Temple, Lancing (TQ 1784 0670)—A ring-ditch, visible with other soil marks at TQ 1784 0670, on air photographs 08/73/122-123 appears to confirm the excavator's view that the temple, excavated in 1828 and 1829,[4] had been inserted into a pre-existing Bronze Age barrow, although it is possible that the evidence could be interpreted to suggest a ring-ditch enclosure.

Ring-ditches near Tangmere (SU 8887 0583 and SU 9102 0598)—A ring-ditch, about 95m. in diameter, visible on Meridian air photographs 1973 05/73/147-148 and BKS 1971 151482-483 at SU 8887 0583, is very regular in form and may be comparatively modern.

A local farm worker has suggested that it may represent a marker of chalk laid out in the Second World War for aircraft using the airfield at Tangmere.

Another ring-ditch, about 135m. in diameter, occurs partially underlying the west runway of the airfield, at SU 9102 0598, on Meridian air photographs 1963 108205 and 1965 22/64 041. It may be of similar date.

Settlement Site at Oving (SU 8950 0600)—Crop and soil marks, indicating the former existence of a settlement site, comprising rectangular enclosures, field ways and field boundaries, are visible on air photographs BKS 1971 151481-482 and Meridian 1963 108205-206, 1965 22/65 41 and 42 and 1973 05/73 149-153, at SU 8950 0600.

The marks appear to be restricted to one area, because this was wooded until the middle of the nineteenth century and has not been so intensively cultivated as elsewhere, or because of the nature of the subsoil which is of freshwater alluvium over the gravel. J. M. Hodgson[5] has suggested that this area was once a freshwater lake.

1 J. A. Wooldridge, ed., *The Danny Archives*, Documents Nos. 1128 and 1130 (East Sussex Record Office, 1966).

2 A map of Westerland and Park Farms (1806) by Richard Crabtree (West Sussex Record Office Wilberforce MS 101).

3 First Edition Ordnance Survey six-inch map Sussex 35 (1880).

4 *Gentleman's Magazine*, 1828, Part 2, 63 and 1830, Part 2, 17 and 18; *S.A.C.*, vol. 29 (1879), p. 24, 30 and 80; and *S.A.C.*, vol. 81 (1940), pp. 146-150, 158-169 and 170.

5 *S.N.Q.* 16 (1963), p. 12-15.

A 'Heathen' Burial found near The Trundle, Singleton.

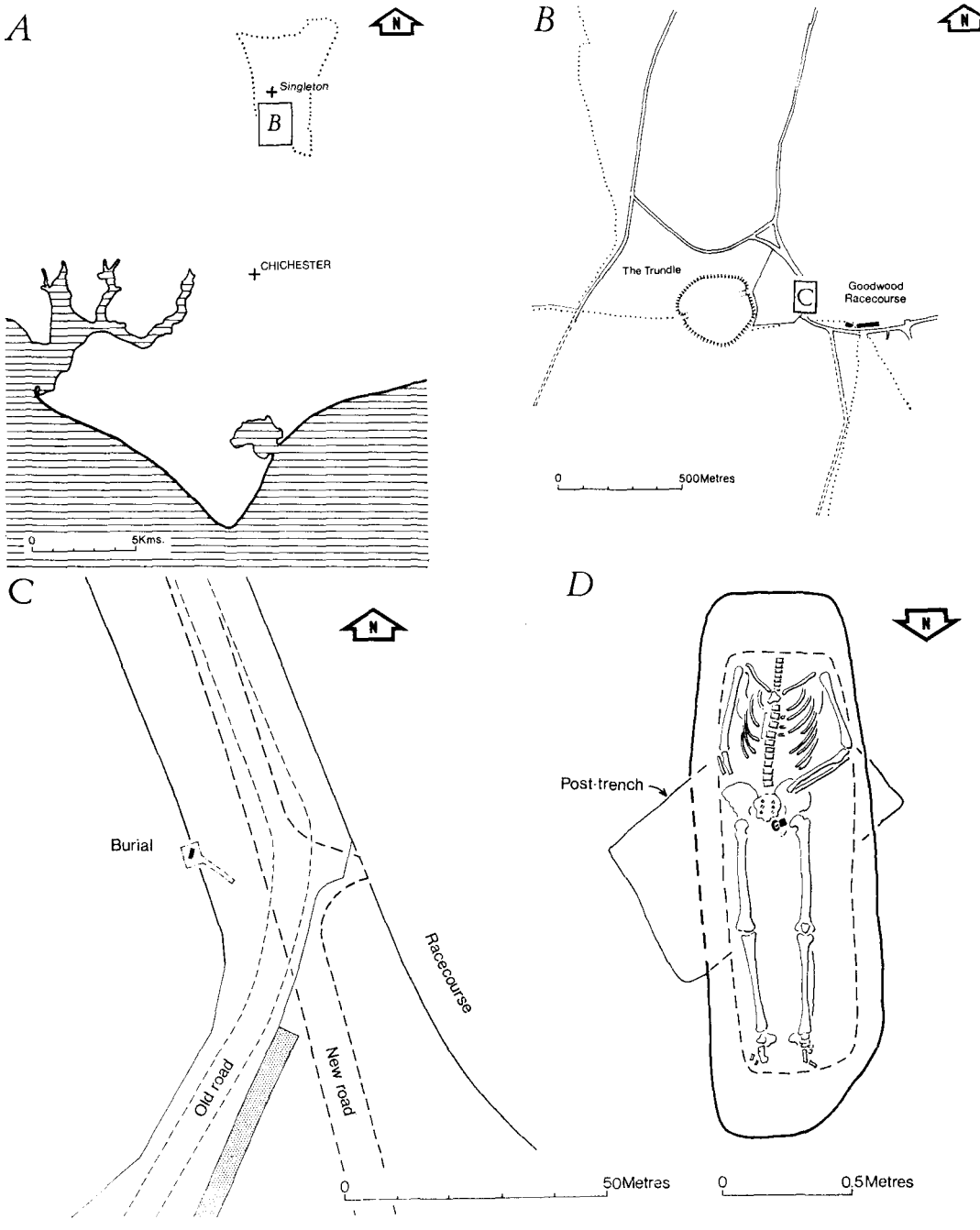

FIG. 1. Heathen burial, Singleton

A Human Skeleton found near the Trundle, Singleton (SU 8810 1113)—West Sussex County Council workmen, engaged in the digging of post-holes for the erection of fencing alongside the road improvement scheme at Goodwood Racecourse, Singleton, discovered human bones on 11 November, 1975 (see Fig. 1). The police were alerted and the Coroner's Office informed. Since there appeared to be no evidence to suggest that the remains had been buried within the last one hundred years, the County Council's Archaeological Officer was invited to examine them.

On the same day, an archaeological investigation was commenced. An area of 12 sq. m. of topsoil was removed and the original grave-cut located in the chalk. On the following day, the grave was excavated and the remains photographed, drawn and raised for further study. A 1m. wide trench was cut diagonally from the south-east corner of the main area for a distance of 9m. in an attempt to locate further burials, or an enclosing ditch, but undisturbed chalk was located at about 30cm.

The remains were found to be those of an adult male, probably between 5ft. 8in. and 5ft. 10in. tall. They were lying in a shallow grave cut about 30cm. into the chalk, under 15cm. of topsoil. The body was oriented north-south, with the feet to the north. The skull and several of the upper vertebrae were not present in the grave and the evidence, the length of the grave-cut and the absence of loose teeth or vertebrae fragments, suggested that the head had been removed, perhaps by decapitation or hanging, prior to interment. Otherwise, the body, which was accompanied by a fragmentary iron belt buckle, had been carefully laid in the grave. The body lay on its back, with the legs straight. The arms were flexed at the elbow; and the hands, which had been partially removed by the men engaged in the erection of the fencing, were on the pelvis.

The grave lay below the Trundle Hill, in a position which was once occupied by the western termination of the finishing straight of Goodwood Racecourse, at grid reference SU 8810 1113. There was insufficient evidence in the grave to provide a date for the interment. The belt buckle, which comprised a plain iron loop with fragments of a rectangular plate, could not be dated.

Since the grave lay within 80m. of the Lavant/Singleton parish boundary, on the Singleton side, it seems likely that the remains were of a ' heathen ' burial, perhaps a criminal, who had been executed nearby. There is ample documentary, and some archaeological, evidence to suggest that this type of burial has taken place in other areas since the late Saxon period. At Stockbridge, in Hampshire, a cemetery of executed late Saxon criminals was excavated in the late 1930s; and the place-name evidence for Steyning includes a ' Heathen Burials Corner '.

Documentary research for Singleton parish has provided little evidence but this may be due to paucity of suitable documents rather than negative evidence for the burial. The Ordnance Survey map of 1813, however, shows a ' Gibbet ', on Trundle Hill, which may have succeeded an earlier execution place on the same site; but the gibbet had been removed before 1825.

In the absence of any exact archaeological or documentary evidence, it is difficult to provide a precise date for the burial but it seems likely that it is of a person executed on the nearby hill between 1000 and 1825 A.D. The remains have been placed in the Chichester City Museum.

Preliminary Bone Report

SEX. Probably male, since the greater sciatic notch was narrow and deep and the pre-auricular sulcus was absent.

AGE. Skull absent, hence presumed adult from size and stature.

HEIGHT. Skull and first five cervicals absent but no definite evidence for a cut on the sixth cervical which may have indicated decapitation.

Bone lengths: Radius 26cm.; humerus 33.7cm.; femur 47.5cm.; tibia 39.5cm.

Height assessment based on regression tables for estimation of *maximum* stature (D. R. Brothwell, *Digging Up Bones* (1965), 102:

1.26 x (femur + tibia) + 67.09	176.71cm.
2.32 x femur + 65.53	175.73cm.
2.42 x tibia + 81.93	177.52cm.
1.82 x (humerus + radius) — 67.97	176.62cm.
2.89 x humerus + 78.10	175.49cm.
3.79 x radius + 79.42	177.96cm.
Average	176.67cm. or 5ft. 9½in.

Spur Dyke above Anchor Bottom, Upper Beeding (TQ 2080 0910)—This comprises a bank with flanking ditches up to 15m. in overall width and 180m. in length (Fig. 2), linking the head of one dry combe with the side of another.

A collection of bones was found further south, in September, 1976, when the face of the quarry was being cut at TQ 2064 0904. They appear to represent the remains of a sheep and of a human some 1.73m. (5ft. 8in.) in height. There were no accompanying finds and there was no evidence to suggest that the bones were associated with the spur dyke.

A Nineteenth-century Chalk Abstraction Site at High Copse, Compton—Recent replanting of woodland, at High Copse, has revealed a number of features, initially reported by Mrs. A. Edmonds, of Finchdean House, Finchdean, Hampshire, in the area centred at SU 7580 1370.

At SU 7572 1369 is an apparent flint-lined well, filled to within 1m. of the surface. To the west of this is a rectangular depression, measuring about 5m. east-west by 4m. and about 1m. deep, surrounded by a flint, dry-

Spur Dyke above Anchor Bottom, Upper Beeding

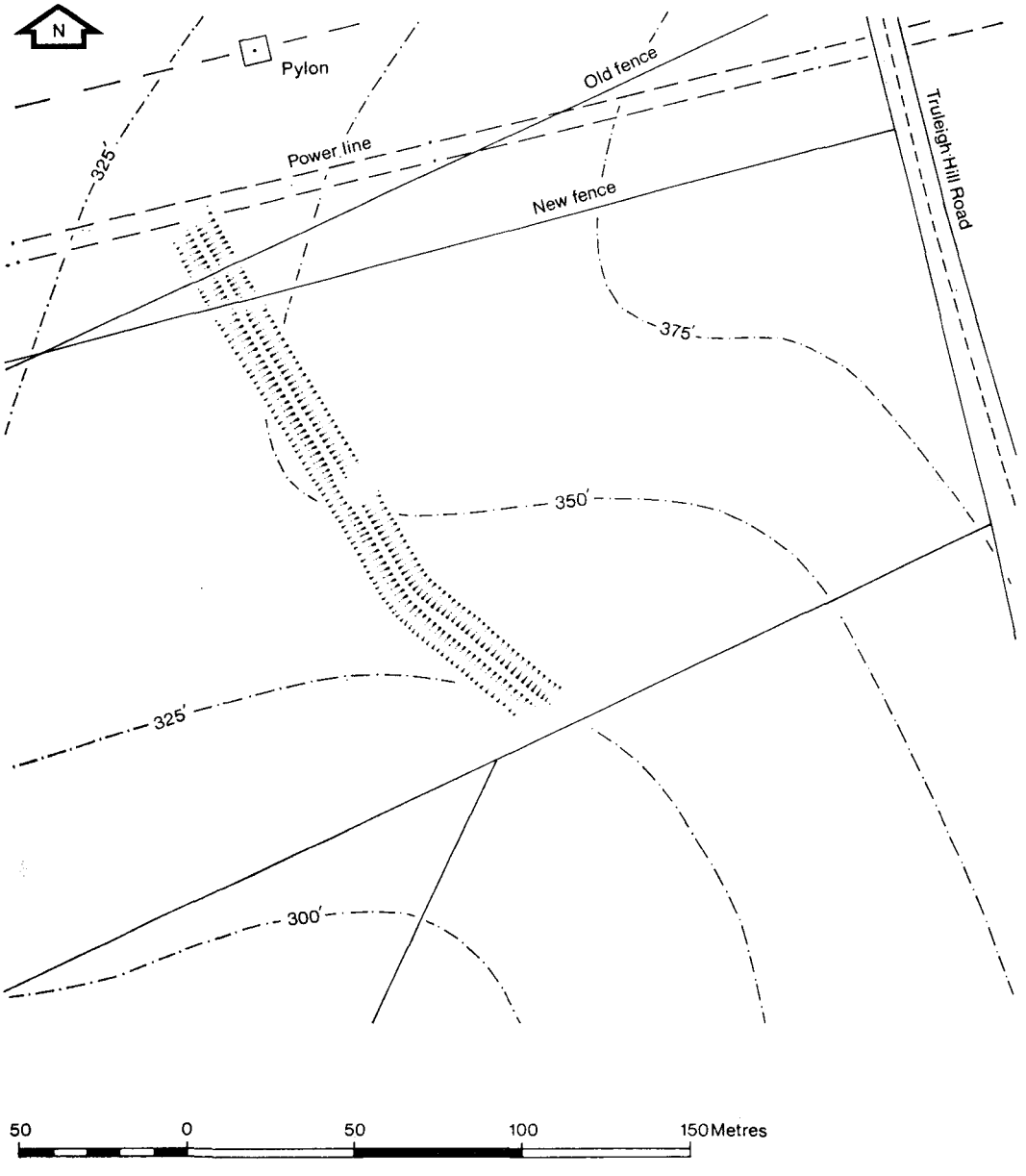

FIG. 2. Spur Dyke, Upper Beeding

stone wall, several courses high. Adjoining this, is a circular depression about 6m. across and 1m. deep. Similar circular depressions are visible in the area at SU 7575 1370 and SU 7578 1373.

At SU 7574 1364 is a rectangular ' house platform ', measuring about 5m. by 4m. Several linear boundary banks occur in the area as also do several mounds of unworked flint.

Further east, at SU 7590 1366, are a pair of marling pits of the bell-shaped variety, surrounded by a bank. Nearby, are several large, disused chalk quarries.

The site falls in the bottom of a shallow valley, on chalk with a clay-with-flint capping, at the junction of several parishes.

None of the features noted, apart from the boundary banks, is shown on Ordnance Survey maps of 1874 and 1898 but the rectangular depression and a circular pit appear to be shown on a map of 1837,[1] within an area which is partially wooded and partially arable.

The documentary evidence would appear to suggest that the remains are of a nineteenth-century occupation site, perhaps connected with the chalk abstraction and marling industry.

F. G. ALDSWORTH

THE POLEGATE HOARD—The City Museum, Birmingham, has in its possession a small hoard of 3rd century *antoniniani* which was found at Polegate, Sussex. The accessions register describes the hoard as having been " found in garden of Cairn Cove, Polegate, Sussex " and that it was purchased for the museum in January 1961. Accompanying notes confirm, presumably on the authority of the finder, that there were no associated finds. The exact date of discovery is not known. The seventeen *antoniniani* are as follows:

1	Gallienus	*o.*	IMP GAL[LIENUS]	bust right, radiate.
		r.	DIANAE CONS AUG 1 ////	quadruped
			19mm.	2.43g. cf RIC 176 ff.
2	Gallienus	*o.*	[ ] V [ ]	bust right, radiate and draped.
		r.	IOVI S[TATOR x|	Juppiter st. left with thunderbolt.
			20mm.	2.10g. cf RIC 216
3	Gallienus	*o.*	GALLIENUS AUG	bust right, radiate.
		r.	illegible	
			21mm.	1.91g.
4	Postumus	*o.*	IMP C POSTUMUS PF AUG	bust right, radiate and draped.
		r.	PAX AUG p|	Pax std. left with olive branch and trans-verse sceptre.
			19mm.	2.07g. RIC 318
5	Claudius II	*o.*	IMP C CLAUDIUS AUG	bust right, radiate and draped.
		r.	MARS ULTOR 1	Mars advancing right with spear and trophy.
			21 x 19mm.	3.22g. RIC 66
6	Claudius II	*o.*	IMP CL [ ]	bust right, radiate.
		r.	ANNONA [AUG] 1	Annona std. left with corn ears and cornu-copiae; foot on prow.
			19mm.	2.02g. RIC 139
7	Victorinus	*o.*	IMP C VICTORINUS [ ] VG	bust right, radiate and draped.
		r.	COME [S AUG]	Mars std. right with spear and shield.
			21 x 16mm.	1.21g. RIC 43 very poor flan.
8	Victorinus	*o.*	[ ] INVS PFAVG	bust right, radiate and draped.
		r.	[PIETASAUG] 1	Pietas std. left sacrificing at altar.
			19mm.	2.59g. RIC 57
9	Victorinus	*o.*	illegible	
		r.	[PROVIDENT]IA AUG 1	Providentia std. left with baton and cornu-copiae.
			17 x 15mm.	1.86g. RIC 61
10	Victorinus	*o.*	IMP C VICTORINUS [ ]	bust right, radiate and draped.
		r.	SALUS AUG 1	Salus std. right holding serpent in her arms.
			18mm.	2.49g. RIC 67

1 Map of Horsley Farm, East Marden, 1837 (WSRO Cap. I/29/33).

11	Victorinus	*o.*	IMP [ ] INUS [ ]		bust right, radiate and draped.
		r.	[VIRT] US AUG $\frac{1}{-}$	17mm.	Mars std. right with spear and shield. 1.80g. RIC 78
12	Victorinus	*o.*	[ ] PF AUG		bust right, radiate and draped.
		r.	[VI] RTVS A[UG] $\frac{1}{=}$	20 x 17mm.	Mars std. right with spear and shield. 2.21g. RIC 78
13	Victorinus	*o.*	[ ] USP [ ]		bust right, radiate and draped.
		r.	[VIRT]US AU [G] $\frac{1}{-}$	19mm.	Mars std. right with spear and shield. 2.22g. RIC 78 off centre rev.
14	Victorinus	*o.*	[ ] INUS PF AUG		bust right, radiate.
		r.	[IN] VI [CTUS] $\frac{1*}{-}$	21 x 17mm.	Sol advancing left, right hand raised whip in left hand. 2.44g. RIC 114
15	Tetricus I	*o.*	IMP TETRICUS PF AUG		bust right, radiate and draped.
		r.	LAETITIA AUG $\frac{1}{-}$	18mm.	Laetitia std. left with wreath and baton. 1.65g. RIC 90
16	Tetricus I	*o.*	ill.		bust right, radiate and draped.
		r.	MO[NETA AUG] $\frac{1}{-}$	18mm.	Moneta std. left with scales and cornucopiae. 2.43g. RIC 92
17	? *o* + *r* illegible			19mm.	Of different fabric to the other coins, this may be a stray or intruder of some sort.

The condition of the coins is poor both in terms of wear and corrosion but also in terms of original execution. In some cases the flans are irregularly shaped with ragged edges, in others up to half the design of one die has missed the flan completely. The hoard is from no particular archaeological context but there are many hoards known of this period, several from this area of the South Coast in general.[1]

F. BRODRIBB

ROMANO-BRITISH FINDS FROM DITCHLING (TQ 329 156) AND HASSOCKS (TQ 2916 1559, TQ 2935 1558 and TQ 2924 1567)—Mr. G. Holman, a farmer, has shown me quantities of RB pottery and several coins—second and third centuries A.D.—which he ploughed up in one of his fields last year. He says that similar material comes up every time that he works the field. A watch will be kept on the area in question, when he next ploughs. The grid reference is TQ 329 156.

During field walking to the west of Hassocks, as part of an archaeological survey of a wider area, concentrations of RB pottery and tiles have been noted at TQ 2916 1559, TQ 2935 1558 and TQ 2924 1567.

SIMON GARRETT

MEDIEVAL POTTERIES AT EAST LAVINGTON (SU 9460 1830)—A collection of Medieval pottery, mainly of the mid-fifteenth to early sixteenth-century and including painted wares, with olive-green internal glaze, has recently been found in a stream-bed at East Lavington. The finds, which include one complete vessel, a fire-bar and several wasters, have been donated to Chichester Museum by the finders, Martin and Gary Oates, of East Lavington.

Subsequent field walking at Upper Norwood, by the same children, has revealed a widespread scatter of potter y sherds, tiles and burnt earth in the area SU 9370 1790. Recent redevelopment has revealed a tile clamp and a brick-lined kiln. A preliminary identification indicates a date range from the fourteenth, to the seventeenth, century and the material includes fourteenth-century face jugs and fifteenth and sixteenth-century painted wares, including jugs, cooking pots and bung-hole pitchers. The later sixteenth and seventeenth-century wares include chamber pots with Tudor green glaze, possible stool pans, storage jars, butter pots and mugs, all with an internal yellow, green or brown glaze. There appears, at present, to be a number of gaps in the production range because no pipkins, chafing dishes, candlesticks or costrels have been identified.

In order to correlate the material from this production centre with the closely dateable material from Chichester, the Chichester Excavations Committee intend to undertake further work on these kilns.

F. G. ALDSWORTH
ALEC DOWN

1 cf. C.H.V. Sutherland *Coinage and Currency in Roman Britain*, Oxford, 1937, pp. 159-60.

SMOCK ALLEY: a minor Sussex place-name—The reason why the origin of this enigmatic place-name appears to have lapsed is as revealing, sociologically speaking, as the meaning itself. In Sussex it is noted at Amberley, West Chiltington, and formerly, at Petworth. Orthographical variants have led to some confusion: e.g. ' smoke ' and ' smoake '. But the Ordnance Survey for Sussex (1813) correctly uses the form ' Smock '. R. L. Hayward, in a reference[1] of 1849 and the enumerators' returns for the Decennial Censuses of 1841[2] and 1851,[3] refer to ' Smoke Alley ' at West Chiltington which would seem to be of phonological significance for there can be no doubt that ' Smock ' is the correct form.

The name also occurred, as would be expected, outside Sussex, most notably in eighteenth century Dublin which had a road from which the Smock Alley Theatre took its name. That has led to an erroneous connection with Sussex examples which have otherwise been tenuously derived in oral tradition from local speculation involving associations with the smock-frock worn by agricultural workers, the prevalence of smoke or mists in the vicinity, an allusion to a smock-shaped field[4] and an onomatopoeic reduction from ' smuggler '.[5] There is no philological or collateral evidence for any of these interpretations, which are all inadmissible. The view[6] that in relation to fields ' smoke ' or ' smock ' names indicate land on which timber tithe had been commuted has no relevance here as in those cases the correct form is ' smoke '. The plain truth is that ' Smock Alleys ' were ' Love Lanes ' where the amorous indulged their proclivities or places—usually in secluded or remote locations—frequented by loose or immoral women. That unfortunate fact was unlikely to commend itself to local decorum as communities became more self-consciously sophisticated, which explains why the original meaning has disappeared and why Dubliners found it expedient to revise the designation of what is now called West Essex Street!

For the evidence as to provenance we turn first, not to etymology but to seventeenth century drama. This particular morsel of social life was not lost on uninhibited dramatists like Ben Jonson who in his " Cataline " (1611) refers to ' smock-treason ' (Act IV, Sc. v). It was in his rollicking play " The Devil is an Ass " (1616) that I came upon the reference that put the enquiry beyond doubt. In Act I, Sc. i, Satan calls up Iniquity (the Vice). Then, in a racy monopolised dialogue with Pug (the Less Devil), Iniquity, with pungent ellipsis, declares:

" Like a needle of Spain, with a thread at my tail.
We will survey the suburbs, and make forth our sallies,
Down Petticoat-lane and up the Smock-alleys."

and later, with the same subtle prurience:

" . . . Tissue gowns,
Garters and roses, fourscore pound a pair,
Embroider'd stockings, cut-work smocks and shirts,
More certain marks of letchery now and pride,
Than e'er they were of true nobility! "

contemporary audiences would have had no difficulty with these bawdy allusions.

Edward (Ned) Ward[7] and other seventeenth century writers refer to ' smock-agent ', ' smock-employment ', ' smock-vermine ', etc. Edward Ward (1667-1731), a vulgar humourist of " low extraction " and little education, kept an inn in Moorgate and found himself in the pillory for attacks on the government.[8] Lascivious and crudely coarse he was the author of such work as " The insinuating Bawd, or the Repenting Harlot "—with the inscription "Written by a Whore and Dedicated to a Bawd"—and, according to Pope, the composer of "vile rhymes ". Unlike Jonson he makes no concessions to taste in his use of ' smock-alley ' in immediate reference to female pudenda.

Later, even John Clare, purest of English rural poets, in characteristically more delicate vein, uses ' smock' with for him unusual directness to denote the willing village maiden:

" Where man was never feared to come
And smell smocks that from view retires
'Mong rustling leaves and bowing briars."

His first editor, John Taylor, deleted these lines from Clare's greatest poem—" The Shepherd's Calendar "—in the edition of 1827 in deference to contemporary taste.[9]

Long before country folk took to the frock as everyday garb a smock was a woman's most intimate garment and it is easy to see how the word came to be tropologically attached to feminine attributes in salacious prose and usage. The word itself, now obsolete in this sense except in dialect, has OHG and ON roots and is *smoc* in OE c. 1000 so it is reasonable to assume that it had this connotation in colloquial usage, with the obvious extension to " Smock Alley " much earlier than the seventeenth century examples quoted. Archival enquiry would no doubt reveal numerous examples of its use as a minor place-name even though erased from public memory and conscience as local pride (and prejudice) prevailed over the rustic ebullience of earlier society.

KENNETH NEALE

1 R. L. Hayward, *Yesterday in Sullington* (rev. ed., 1969).
2 P.R.O. HO 107-1092.
3 P.R.O. HO 107-1650.
4 T.G. *Sussex County Magazine* (S.C.M.) 7, p. 687 (1933).
5 J. L. Naimaster *S.C.M.*, p. 478 (1933).
6 Margaret Gelling, *The Place-names of Berkshire*, English Place-name Society, vol. xlix, Part I, p. 282.
7 H. W. Troyer, *Ned Ward of Grub Street* (1946).
8 D.N.B.
9 E. Robinson and G. Summerfield, *The Shepherd's Calendar* (1964).

FARM FORMATION IN EIGHTEENTH-CENTURY BISHOPSTONE—Near the end of the eighteenth century, Arthur Young remarked on the large size of farms in the Ouse valley south of Lewes.[1] Several were over 500 acres by 1793, some were to grow to between 800 and 1,200 acres and a few, in the 1840s, occupied entire parishes.[2] By the 1790s, the parish of Bishopstone was already divided between only two farms, of 800 and 900 acres. The process by which these farms were formed was similar to that in other parishes but occurred earlier.

The parish and manor of Bishopstone were co-terminous. The Pelham family was the freeholder (except for two acres), Lord of the Manor and lay impropriator, and was represented, from 1716 to 1768, by Thomas Holles-Pelham, Duke of Newcastle. He used his houses at Laughton and Halland more frequently than Bishopstone, which was an outlier from the main body of his Sussex estates. Newcastle used the small, probably late, Elizabethan house (just east of the church), as a hunting lodge and during parliamentary elections for his pocket borough of Seaford. On his death, the Bishopstone estate passed to his second cousin, Thomas Pelham, of Stanmer, who tried first to lease and later to sell the house.[3] It was demolished in 1830 but the family retained the estate, which was administered by a steward, along with property in Halland, Laughton and Lewes.

In the early eighteenth century, land in Bishopstone was generally copyhold and held by farmers living in the nucleated settlements of Bishopstone and Norton. Some tenants also held land in adjoining parishes. Only two acres of the parish were not owned by the Pelhams and these were divided, throughout the century, into four holdings held by the church, a family of wheelwrights, a smith and a family which was to tenant Bishopstone farm from about 1750.[4]

When Newcastle inherited the Sussex estates in 1716, they were not very profitable, probably because of the large amounts spent on Laughton Place and Halland.[5] It is likely that the change of the tenurial system in Bishopstone, from copyhold to leasehold, was the result of attempts to increase income from the estates to meet Newcastle's political and domestic expenditure.[6] What happened in Bishopstone, is illustrated by terriers of Norton Tenantry Laines, 1766, and of Bishopstone Tenantry Laines, 1685 and 1762, and the manor court book.[7] Both laines were held in common, with each field divided into strips. The documents showed clearly the increase in the rate and number of the copyholds which had reverted to the Pelhams as Lords of the Manor in the first half of the century. As the Pelham share of a tenantry field became dominant, then the increased acreage was consolidated to make it more convenient to farm, thus increasing its potential value. The tenancy was changed to leasehold and, if necessary, the land was enclosed by a temporary boundary.

Rather than lease the fields to several farmers and so end up with larger units but still with dispersed holdings two large farms were developed, one at Bishopstone and the other at Norton, where there was a leasehold farm by 1710. As copyhold land reverted, so the two farms increased in acreage, absorbing land in their respective parts of the parish. By 1777, when the estate was surveyed, all the farmland was cultivated by either Norton or Bishopstone Farm.[8] To achieve this, copyholds which had not yet reverted were leased by the Pelhams' stewards from the copyholders and leased by the estate to the respective tenants as part of their farm. As the farms increased in acreage, so their rents rose, then, after 1777, when the farms were virtually completed, rents increased as the value of the two farms rose. However, the estate, and not the tenants, paid land and window tax, waterscot, and for extensive maintenance and repairs of farm buildings and river drains.[9]

The farms were physically two separate units; Bishopstone, the larger, included 60% of the parish. The way in which the land was divided between the farms suggests recognition of the complementary roles of the three land types within the parish; and the deliberate inclusion of a share of each within the confines of both farms, in approximately proportionate amounts. The arable land produced fodder crops, wheat and barley. However, rougher, steeper land for sheep pasture and brookland for hay, cattle and plough-team grazing, played roles which were vital. The sheep provided the manure for arable land and the brookland hay was valuable as fodder. Evidence of the agricultural patterns and practices within the parish is slight, mainly a few inventories which do indicate that fodder crops, such as peas and tares, were included in crop rotations with wheat and barley throughout the century. Oxen and horses were used as plough animals and large flocks of sheep were kept.[10]

The emergence of two leasehold farms altered the parish's social structure. The range of sizes of holdings apparent during the first years of the century probably resulted in varying levels of prosperity amongst the population of approximately eighty to ninety.[11] There appear to have been several prosperous farmers, usually holding land in adjoining parishes, and smallholders. By 1777, the majority of the inhabitants were families of farm labourers, residing in cottages with small gardens, nominally rented to them by the steward but probably under the control of the two tenant farmers. The other residents within the two settlements were the curate and the two craftsmen (both remaining self-employed).

By the end of the century, the majority of the inhabitants of Norton and Bishopstone were, at least occasionally, in need of some Poor Law assistance. The two farmers, and William Catt at the tidemill, were the only employers in the parish and the farmers were also the Overseers and may have regarded the Poor Rate as a wage subsidy which could be adjusted, with less difficulty than wages, to fluctuating prices.[12]

Between 1736 and 1777, no additional houses were constructed in Bishopstone village, which suggests that either an increase in the number of occupants in the existing houses was considered sufficient or an attempt to prevent further population increase because the existing labour provision was sufficient.[13] Although there is

1 A. Young, "A tour through Sussex" in *Annals of Agriculture*, vol. 22 (1793), pp. 225-9.
2 Tithe award schedules; estate maps.
3 *Sussex Weekly Advertiser*, 11 May, 1772, 8 October, 1792.
4 Sussex Archaeological Trust, A 688-690, manor court books.
5 British Library, Add. MS 33338, accounts, 1764.
6 R. A. Kelch, *Newcastle, a Duke without money* (1974), p. 82, 166, 180.
7 E.S.R.O., CHR 1/21, 22, 23.
8 E.S.R.O., D.1100, estate map 1777.
9 B.L., Add. MSS 33338, 33339, accounts 1764-87.
10 E.S.R.O., W/INV.
11 Ep I/26/3, Bower's visitation.
12 E.S.R.O., PAR 247/31, overseers' accounts.
13 E.S.R.O., Add. MS 3427, survey and map 1737.

no early map of Norton, it is probable that the same applied. Immigrants were not encouraged, and those without right of settlement were removed.[1] The registers suggest, from the paucity of incoming families until the last twenty or so years of the century that, possibly, immigrants during the mid-century generally replaced emigrants; and there was little net population increase until the Tidemill began to expand and require a substantial labour force, for whom accommodation was supplied on the site because of the irregular hours of work which resulted from reliance on the tide.[2]

Thus the Bishopstone estate was very easily managed by the end of the eighteenth century, as the local bailiff and the Pelhams' steward had only to collect rents from, and cope with, the problems of two farms and a tidemill. As rents rose, in the later years of the century, because of the favourable prices for products from these downland farms, so the Pelhams increased the rents of Norton and Bishopstone.[3] The two families of tenants must have found these farms to be very attractive, for they remained on both until the late nineteeth century. The Farncombes, at Bishopstone, then left but the Coopers eventually purchased Norton.[4] From the late eighteenth until the early twentieth century, the boundaries of the two farms were very little changed.

SUE FARRANT

HASTINGS COUNTRY PARK (TQ 8610 1117)—FIELDWORK 1976—A study of a piece of ground at 480ft. above sea level, on Ashdown Sand and forming a tilted plane sloping south-east, shows it to have been subjected, since early times, to storm drainage and ploughsoil drift. The deep tilth, so formed, contains Southern Third B potsherds and a circular hut perimeter delineated by postholes.

The range of decoration, on the potsherds, comprises slashings on cordons, annular grooving below recurved rims, swags, paint-infilled lozenges and Belgic-style combed patterns; all mostly on a hard, grey fabric, sometimes black burnished. Other fabrics are: a black paste with flint filler; a hard, red fabric; and a reddish-brown fabric, black-burnished. A mid-first century date is suggested.

The same tilth contains Mesolithic artefacts, with minimal inclusions from later cultures, i.e., Neolithic and geometric Mesolithic provide 0.01% of finished implements, a fact to be considered against the 80% of wastage demonstrably Mesolithic. This Fairlight culture, as it will eventually be known, comprises core axes and steeply blunted points of the oblique A type. Triangles and elongated trapeze forms of microlith are absent; and steeply-blunted awls, as also the squat, or spatulate, forms, are sparsely represented. All implements are clearly defined and free from ambiguity. Large microburins are numerous. True burins are present, but not in quantity. The range of artefacts indicates, once again, the engima of the, as yet, ill-understood cycle of hunting and gathering activities in remote prehistory.

It is intended to continue charting the vertical and horizontal distribution of the artefacts, since a settlement pattern is emerging. The basal geology of the site has enabled the original Mesolithic landscape to be defined. Settlement took place on dunes of white Ashdown Sand, backed by slopes of light-brown sand, also of Ashdown Sand origin. This site provides an instance where the plough has covered, rather than destroyed, a significant site. Erosion features in the basal, friable rock are presumably from solifluctions associated with the Allerød phase of post-glacial climatic development.

The intention is to provide field data and a lateral platform for any major studies, as at Star Carr, Yorkshire, a site which owed its discovery entirely to studies pursued some distance away at Flixton 1. An early Boreal date is suggested for this Fairlight culture.

JOHN W. MOORE

A BRONZE AGE BARROW ON SULLINGTON HILL—I have received the following interesting information from Mr. F. M. Goddard of Buckham Hill House, Isfield. As a member of the armed forces in 1940 he camped on the South Downs at Sullington Hill about 350 yards E. of the top of Chantry Lane, where it meets the Ridgeway. Invasion was imminent and the troops were ordered to dig slit trenches. In the area of their camp were a group of round barrows of which one was more prominent and appeared to be intact.[5] One trench was ordered to be dug through part (not the centre) of this barrow. He protested that this was an ancient monument, and probably scheduled, but was told that the seriousness of the situation did not warrant such considerations.

He watched the digging of the trench and asked a young man, Gunner Jarrett, aged about eighteen, engaged on the work to look carefully for anything that might turn up. In the barrow they found a skeleton in what appeared to be a crouched position with the knees under the chin. The skull and teeth were in good condition. Associated with the burial were several artifacts. Of these he remembers a bronze socketted spearhead in good condition which still contained remains of the wooden shaft. With it was a curious flint of rectangular shape, about ½ inch thick, which had along one edge what appeared to be regular teeth cut, perhaps 5 or 6, giving the appearance of a coarse comb. His brother in law, the late Dr. W. B. Waddington of Littlehampton, saw the skull and thought that it belonged to a man in his mid-thirties. The young man Jarrett took the objects and said that he would take care of them, but he lost touch with him soon after.

C. F. TEBBUTT

1 E.S.R.O., PAR 247/31.
2 E.S.R.O., PAR 247/1/1, 2, 3, parish registers. Sue Farrant, "Bishopstone Tidemills", *S.A.C.*, vol. 113 (1975), 199-202.
3 B.L., Add. MS 33339, S.A.T., A 156, lease.
4 Post Office/Kelly's Directories, 1845-1927. E.S.R.O., CHR 21/8, 9, sales of outlying parts of Stanmer estate.
5 Mr. Goddard has seen a copy of the Societies' six inch annotated Ordnance map of the area (Sussex (west) Sheet L. N.E. Edition 1913) and identified the group marked "tumuli" in the position stated. He thinks the one in question is that plotted just S. of the Bridle Road. The grid reference would be approximately TQ 090118.

THE DATES OF JOHN BURTON'S JOURNEYS THROUGH SURREY AND SUSSEX—The Rev. John Burton's *Hodoiporountes Meletemata sive Iter Surriense and Sussexiense. Praemittitur de Linguæ Græcæ Institutionibus quibusdam Epistola Critica* was published in 1752 (London: J. and J. Rivington, and Oxford: J. Fletcher).[1] The volume contains three pieces: "A critical letter on certain elements of instruction in the Greek language" (pp. iii-lix, in Latin); "A traveller's reveries, or a journey through Surrey and Sussex" (pp. lxi-lxiv, dedicatory epistle in Latin; pp. 1-52, in Greek); and "A journey through Sussex" (pp. 53-56, in Latin). Most of the second and third pieces have been translated into English and published for their topographical descriptions of Surrey and Sussex in the mid-eighteenth century and they have been cited, quite frequently, by historians.[2]

The Sussex editor of "A traveller's reveries" (which is the more important of the two) assumed that the journey was made in 1751, apparently on the ground that "A critical letter" was dated from Eton College on 3 December, 1751, and was a preface to the former piece. In fact, there is no necessary link between the two. The Surrey editor dated the journey to 1745-51 by identifying Burton's host at Banstead as Christopher Buckle, born 1711, whose children were born in 1742 and 1745 and whose wife died in 1751: only the family surname appears in the text but the household comprised both parents and at least two children. In fact, the journey can be shown to have been made considerably earlier than even 1745.

"A traveller's reveries" is dedicated to William Greenaway, M.A., Vice-Principal of Hart Hall, Oxford, whom Burton had promised to keep a Greek diary of his progress. Hart Hall had ceased to exist in 1740 on the incorporation of Hertford College. The office of Vice-Principal may have been rotative and held only for a year or two at a time, and the terms in which Burton wrote (p. lxiii) suggest that Greenaway had only recently assumed it. I have not been able to establish the dates of his tenure of office but Greenaway was an undergraduate at Corpus Christi College at the same period as Burton, took his M.A. as a member of Hart Hall in 1719, was a tutor there by 1725 and died in August or October, 1734.[3] Thus, the dedication establishes outside dates of 1719 and 1734 for Burton's journey.

The later date of 1734 can be confirmed by one of Burton's observations in Lewes. He visited an ironmonger's shop, from the back of which he was led up to the Castle. The shop must have been that of Benjamin Court at 183 High Street, which backs on to Castle Ditch. Court was in active possession of the house from 1711 to 1734, when it was leased to the Duke of Newcastle and fitted up as a coffee house and assembly rooms. Burton referred to the conversion in a footnote (p. 45): since his visit "a certain ambitious citizen has modernised the old parts, in order to make a paradise in the desert and a palace in the ruins".[4] It is unlikely, though, that the journey was later than 1733, because, in September of that year, Burton's election as a Fellow of Eton College was confirmed and it would be surprising if he passed through Windsor after then without any reference to the College.[5] The range of dates can also be narrowed at the other end. At Brighton, he commented on the groynes which were protecting the cliffs. Their construction began in September, 1723, and was still in progress in March, 1724.[6]

If, on this evidence, a date between 1724 and 1733 is suggested, what of the evidence advanced by Malden for 1745-51? The explanation is that Burton stayed with Christopher Buckle, born 1684, who died in 1759 (as did his wife) and who was the father of Christopher, born 1711, and of other surviving children born between 1709 and 1721; so, even in 1733, Burton could write of a happy family of parents and dutiful children. Furthermore, in July, 1828, the son Christopher matriculated as a member of Corpus Christi College, of which Burton was a Fellow from 1721 until he went to Eton. We may guess that Burton was receiving the hospitality of a (prospective) pupil's parents in, say 1727-31. He stayed at Great Burgh and not Nork House (built in 1740) and, therefore, the former possessed the ingenious waterworks which he described at length.[7]

As to the time of year, Burton saw racing at Epsom; found the Wealden roads muddy; and walked on Brighton beach by a calmly lapping sea and beneath a purple sunset. The muddy roads suggest spring rather than autumn.[8]

A date of circa 1730, rather than up to twenty years later, makes better sense of several observations which Burton made. Thus, his description of the clientele of Epsom Spa accords with that in Defoe's *Tour*, published in 1724, but which was substantially changed for the second edition of 1738 to reflect the Spa's decline; and, if Burton had visited Brighton around 1750, he would likely have commented on those who were visiting it to drink and bathe in seawater.[9]

1 Copies in the British Library (Reference Division), Brighton Area Library and Surrey Archaeological Society Library, Guildford.

2 W. H. Blaauw, "Extracts from the 'Iter Sussexiense' of Dr. John Burton", in *S.A.C.*, vol. 8 (1856), pp. 250-65. Malden, H. E., "An eighteenth century journey through Surrey and Sussex", in *Surrey Archaeological Collections*, vol. 29 (1916), pp. 34-48. A manuscript translation of the whole volume is in British Library, Add. MS 11571.

3 J. Foster, *Alumni Oxoniensis 1500-1714*, vol. 2 (Oxford, 1891), 597. *Remarks and collections of Thomas Hearne*, vol. 8, ed. under the superintendance of the committee, Oxford Historical Society, vol. 50 (1907), p. 404; vol. 11, ed. by H. E. Salter, O.H.S., vol. 72 (1921), p. 370. I am grateful to Mr. T. H. Ashton, Keeper of the University Archives, for these references by Hearne and for other assistance in identifying Greenaway.

4 W. H. Godfrey, "Newcastle House, Lewes", in *S.A.C.*, vol. 92 (1954), pp. 3-5. Blaauw, 263, wrongly identified the ironmonger as Thomas Harben.

5 H. B. Fant, "John Burton, D.D., One of the Founders of the Colony of Georgia" in *Oxoniensa*, vol. 6 for 1941 (1942), 70-83, for the fullest available biography. Note that Burton did not take his D.D. until July, 1752, long after the journey (p. 75).

6 C. E. Clayton, "Some notes on the history of John Grover, of Brighthelmstone, and Extracts from the 'Chronology' of Elizabeth Grover", in *S.A.C.*, vol. 36 (1888), p. 85. British Library, Lansdowne MS 846, f. 11.

7 *The Registers of Banstead in the county of Surrey 1547-1789*, ed. by F. A. H. Lambert (1896), *passim* Foster, *Alumni . . . 1715-1886*, vol. 1 (1887), p. 184. *V.C.H. Surrey*, vol. 3 (1911), 256-7, attributed the waterworks to Nork House.

8 The Earl of Onslow, "Racing in Surrey", in *Surrey Arch. Colls.*, vol. 44 (1936), 5, refers to regular race meetings at Epsom in 1727, in May, July and September.

9 F. L. Clark, "The history of Epsom Spa", in *Surrey Arch. Colls.*, vol. 57 (1960), p. 31, 41. E. W. Gilbert, *Brighton, Old Ocean's Bauble* (1954), p. 59.

As to the date of "A journey through Sussex", there is only one clue. The reason for Burton's journeys was to visit his mother and stepfather, John Bear, who was Rector of Shermanbury and who, at least between 1736 and 1744, ran a small boarding school for the sons of local gentry.[1] Burton said that his stepfather had lived in that poor spot "per lustra plusquam septem", which literally means for more than 28 years—but presumably less than 32 years. Mr. Bear was instituted at Shermanbury in 1711, so the visit may have been during a summer between 1739 and 1743.

JOHN H. FARRANT

WEALDEN IRON RESEARCH GROUP—The Wealden Iron Research Group have continued their excavation of the first century bloomery site at Pippingford (TQ 45203003). A third furnace has now been found. Each furnace has a re-heating hearth attached and nearby were the apparent fragmentary remains of an anvil. Roasted ore was heaped up close to. The working area is being cleared with the help of "job creation" labour from Crawley. Much of this area is covered by fine slag and charcoal, possibly the result of screening to separate the larger material for use on the London-Lewes Roman road, only about 1¼ miles away.

The W.I.R.G. Field Group have resumed their monthly forays to discover and record bloomery sites in a given area in relation to the geographical and geological features.

C. F. TEBBUTT.

1 "Letters ... communicated ... by Mrs. Hunt, of Shermanbury Park", *S.A.C.*, vol. 22 (1870), p. 165. Sussex Archaeological Society muniments, RF 15/25, letters from John Fuller to Bear, 1743-4.

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