**INTRODUCTION**

Excavation of a Mesolithic site was undertaken by Wessex Archaeology at The Rough, Rock Common, Washington, West Sussex to fulfill a condition of planning permission relating to sand extraction. The presence of Mesolithic material had been identified in an earlier evaluation (Southern Archaeology 1995).

The development area covered approximately 6 ha (NGR 51301139, Fig. 1). It lay approximately 1.5 km north of the South Downs on a knoll of Lower Greensand characterized by sand and silty sand with occasional sandstone doggers and iron enrichment. The summit (at 73 m OD) was crossed by a ‘hollow way’ aligned north–south (Fig. 2), with a coniferous plantation to its west.

An evaluation (Southern Archaeology 1995) defined a series of areas which contained significant quantities of Middle Mesolithic flintwork, particularly within the coniferous plantation. The location, artefact assemblage, preservation, geological formation, and date of the finds were used to characterize those areas which required further investigation.

The evaluation exercise defined an Area, ‘A’, as 1750 square metres above the 70 m contour, on the crown of the hill west of the hollow way (Fig. 2). Six one-metre-square test pits and a machine trench $5 \times 1$ m near the summit revealed potentially undisturbed Mesolithic knapping waste and artefacts. The material appears to have been largely in situ, although localized vertical and horizontal movement of artefacts through the sandy subsoil has led to a blurring of spatial patterning. The distribution is interpreted as suggesting that re-tooling and repairing of hunting equipment was undertaken around a series of hearths, represented by burnt flint. Some Neolithic flintwork was also recovered.

Colluvial deposits located at the base of the slope (‘hillwash’) on the edge of The Rough were also sampled and found to contain derived Mesolithic material. A ‘hollow way’ bisecting The Rough was also sampled and contoured and seen to include a palaeosol thought to contain Late Glacial artefacts.
Fig. 1. Rock Common: location plan.
excavated in four spits, each 150 mm deep. Bulk samples were taken to recover microdebitage and environmental data, sieved through a 1 mm mesh.

Small foci of chips, microliths or microburins from isolated test pits in the west and north, which suggested possible activity areas, were also investigated (Figs 2 & 3). Individual metre squares were enlarged to 4 square metres and excavated to a depth of 600 mm or to localized deposits of iron pan which occurred near the surface in these parts of the site.

The evaluation exercise ascertained that Area B contained derived Mesolithic material in colluvial deposits at the base of the slope on the eastern edge of The Rough within an area of probable post-medieval quarrying. To explore these findings, rapid recovery of Mesolithic material within broad stratigraphic divisions was considered to be sufficient in Area B to provide an assemblage comparable to Area A. An area of 25 square metres (Fig. 2) was cleared of vegetation by machine and was excavated stratigraphically in 1 m squares. All material was sieved through 4 mm mesh.

The evaluation also examined the hollow way which lay within a natural late Pleistocene trough, formed by surface melt-water during the last glaciation. Areas C and D both lay within the late Pleistocene trough. In Area C, a palaeosol within the base of the trough contained artefacts of
potentially Late Glacial date. These represented important evidence of possible early open-air occupation of the site. Further investigation by digging additional trenches and test pits in these areas confirmed that the late Pleistocene trough was of geological origin (see Appendix 1). Area D was defined as the surface of the heavily eroded hollow way, undated but presumed to be of medieval or earlier date, and this was recorded by a contour survey (retained in archive).

Area E consisted of a ruined post-medieval house and outbuilding, known as ‘The Mount’. The site was known to have existed from the early 19th century and appeared on maps up to 1914. Trenching in the immediate vicinity failed to establish any earlier phases of construction. Plans and photographs were used to record the two ruined sandstone and brick domestic cottages, which measured 12 × 4 m and 12 × 5 m (retained in archive).

The evaluation also involved the sectioning and recording of undated field lynchets of probable medieval or earlier date (Fig. 2). Much of the eastern side of the site was heavily disturbed by stone quarries with associated trackways. Other probable post-medieval sand quarries were examined in the south-east. Additional work was considered unnecessary in these areas.

CONTEXT AND TAPHONOMY

AREA A

The flint artefacts in Area A were recovered from heavily rooted, moderately compact, dark grey-brown, slightly silty, podzolized Lower Greensand, between 300 and 450 mm thick. There was no recognizable topsoil. The basal parts of the sequence were mottled with alternating stripes of less compacted, light grey-brown Greensand and iron-panned sand, which were aligned downslope slightly north-east to south-west. Artefacts were rare within the lower sand, which broadly correlated with spit 4, but were entirely absent from the iron pan.

The Greensand has suffered from surface erosion by wind, water and, most significantly, agricultural soil creep, particularly following clearance of the presumed natural woodland cover. The flint assemblage from Rock Common has undergone extensive vertical re-sorting by root, worm and burrowing activity. Prehistoric and later material (see below) occurred throughout the sequence, especially in spits 1 and 2, and indicated an extensive degree of mixing of material. The inclusion of post-
medieval artefacts within the sequence indicates that these influences are continuing to the present. It was apparent that flint artefacts within the densest part of the Mesolithic concentration were more prevalent within spits 2 and 3 (Fig. 4). Beyond the epicentre, material was more evenly distributed throughout the entire deposit. Differential vertical movement has likewise been noted at Three Ways Wharf, Uxbridge, where it was attributed to the inability of soil processes to penetrate and redistribute dense accumulations of ‘interlocking’ debris (Lewis forthcoming).

Within the main scatter, the area of greatest flint concentration maximally measured approximately 10 m (north–south) by 8 m (east–west) (Fig. 5), and was aligned downslope where the gradient is approximately 1 in 20. This gradient, augmented by wind, rain, post-medieval ploughing, root disturbance, and animal activity would have initiated soil creep of the sand which Collcutt (1992) has shown provides the least stable material for the retention of artefacts in situ. The degree of movement could be increased on a landscape which was free of vegetation. However, Collcutt (1992) argued that chips were the largest component of the assemblage which would be removed from the site by wind deflation or worm activity. Two ten-litre soil samples from the centre of the concentration at Rock Common (spits 2 and 3, sieved through 1 mm mesh) produced only 27 chips, including an obliquely-blunted point, a retouch chip and a probable by-product of platform abrasion. This quantity represents only a small proportion of what would have been produced at the site and confirms that a degree of post-depositional transformation has occurred. Nonetheless, the greatest density of worked flint (Fig. 5) showed a strong correlation with the distribution of flint chips (Fig. 6).

The distribution, shown by square metre (Figs 3, 5, 6 & 7), indicates that the Mesolithic activity comprised a single major concentration of worked and burnt flint. The assemblage (Table 1) contains 52,595 pieces of worked flint, of which 50% are chips and micro-debitage under 10 mm in length. The two most abundant squares produced a total of 810 pieces of flint, with 153 flints from a single quadrant spit. The assemblage includes the entire flaking sequence, from core preparation and blank production to tool manufacture, with identifiable retouch chips, and rejected tools. Burnt un-worked flint was counted, weighed and discarded with the exception of a representative sample which was retained for possible thermoluminescence (‘TL’) dating.

**AREA B**

The stratigraphy in Area B comprised 440 mm of dark grey-brown, silty loam colluvium which overlay orange to yellow-brown sand, mottled grey. This material became markedly red-brown towards the east. Artefacts were distributed throughout the colluvium and were definitely not in situ, but probably derived from activity which was originally located near the summit of The Rough.

The flint density of 15 pieces per square metre in Area B is comparable with the low-density test-pitted areas in Area A which were excavated to a depth of only 300 mm. No clear concentrations of worked or burnt flint were apparent, although 83% of the material was recovered from the upper silty loam. The assemblage (Table 1) included a considerably higher proportion of patinated pieces than that from Area A but the overall composition was similar, including 40% chips. This is a surprisingly high percentage for derived material and is only 10% lower than for all squares in Area A. The industry is technologically indistinguishable from Area A, although the quantity recovered is insufficient for detailed analysis. Bladelets dominated the production. Platform abrasion has been used to prepare core edges. Microlith production was represented by five microburins, and there was a single obliquely-
MESOLITHIC SITE: ROCK COMMON

blunted point. There were no Late Glacial artefacts.

Work in Area B confirmed that colluvium at the base of the slope on the east side of Rock Common contains Mesolithic artefacts which are technologically and typologically indistinguishable from those from nearer the summit of The Rough. This demonstrates that Mesolithic activity extended onto the summit east of the hollow way, across an area which has been heavily ploughed and quarried, but which now offers no detailed information about Mesolithic activity in the local landscape.

SUMMARY

Extensive re-sorting, surface erosion, and the inclusion of later material indicated that no occupation surfaces remained in situ anywhere on Rock Common. However, Collicutt (1992) has argued that, despite the erosion of chips, extensively re-sorted assemblages (as excavated within Area A) are typologically, technologically and functionally unbiased. He also considered that artefact distributions, including concentrations of burnt flint, were only ‘blurred’ by post-depositional movement allowing activity areas and hearths to be broadly defined. The results from area A at Rock Common confirm these views (see below).

FINDS ANALYSIS

Finds which are Neolithic or later and those which are non-lithic are reported in Appendix 2, below. In this section, the lithics from Area A are analyzed, a sample of them is illustrated in Figures 8–11, and selected artefact distributions are shown in Figures 12, 13 & 16–21, superimposed on the contoured distribution of unworked burnt flint.

LATE GLACIAL

The evaluation report (Southern Archaeology 1995) stressed the uncertainty regarding the quantities and identification of this material. Apart from the projectile point from the evaluation (Fig. 8:1), there was also a truncated blade which was of possible Late Glacial date, but which may equally have been part of the Mesolithic assemblage. The projectile point was distinctive not only typologically, but also by its light-coloured flint and glossy, sand-blasted surfaces which resulted from exposure on an open ground surface.

The results of the excavation within Area A confirmed the difficulties of identifying this material but produced additional problematic pieces. These included a retouched blade (Fig. 8.2), which was 82 mm long and 35 mm wide, and was made of light-grey flint with a glossy surface. The butt had been removed by inverse retouch; one edge had irregular, direct, semi-abrupt flaking, while the opposite edge had irregular, alternating retouch which may have been post-depositional. There was also the proximal end of a hard-hammer-struck blade of glossy, light-grey flint, and a lightly-stained blade (82 mm long) (Fig. 8.3), both of which had damaged edges.

There were other, isolated, well-made blades, some with broad faceted butts, which contrast with the linear and punctiform butts that characterize the Mesolithic assemblage. However, their condition and the raw material from which they were made are otherwise indistinguishable from those of the Mesolithic material. On balance, the excavation has not defined any discrete Late Glacial activity and has shown that this period is unlikely to be represented by anything more than isolated artefacts.

The recovery of this small quantity of flint artefacts from Areas A and C at Rock Common is significant. It demonstrates that the re-colonization of this part of the Weald was initiated by groups of migrating hunters at the end of the Glacial period sometime between c. 10,300–9700 BP. Jacobi (1978) has referred to only one other Late Glacial implement from Sussex, a shouldered point from Old Faygate.

MESOLITHIC

The extent of the worked flint assemblage in Area A, which included large quantities of micro-debitage and occasional refitting pieces within 500 mm quadrants, suggested that the general spatial patterning was intact but that horizontal and vertical re-sorting had ‘blurred’ the definition of activity areas. Individual quadrants were amalgamated into 1 m squares to produce a coarser resolution, to isolate broad patterns of activity. No attempt was made to establish the extent of material re-sorting by undertaking a concerted programme of refitting.

<table>
<thead>
<tr>
<th>Table 1. Total count of flint types from Areas A, B and C. NB: Burnt unworked flint by weight (g).</th>
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<tr>
<td><strong>Flint class</strong></td>
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<td>Blade core</td>
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<td><strong>Total flakes</strong></td>
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<td>Crested</td>
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<td>Core rejuvenation</td>
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<td><strong>Total core prep.</strong></td>
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<td>Microburins</td>
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<tr>
<td>Chips</td>
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<td>Microliths</td>
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<td>Scrapers</td>
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<td><strong>Total micro/ scrape and other tools</strong></td>
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<td><strong>Total Flint</strong></td>
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<td>Burnt unworked flint (g)</td>
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<td>Burnt worked flint (count)</td>
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Fig. 8. Rock Common: Late Glacial artefacts (1–3) and Mesolithic cores (4–10).
Fig. 9. Rock Common: microliths. Obliquely-blunted points (A type) 1–18, blunted-back (B type) 19–33, basally-blunted (C type) 34, triangles (D1 type) 35–44, crescents (D2 type) 45–64, hollow-based Horsham points (F type) 65–6.
RAW MATERIAL
The entire assemblage was composed of flint, with one piece of chalcedony. The flint was principally black/dark grey in colour but some examples showed a mottled, light-grey colour towards the interior, with some coarser cherty inclusions. Cortex was generally thin and weathered. At least one core was made on a cortical flake from gravel flint, but the principal source was undoubtedly the Chalk of the South Downs. It is unclear whether the flint was brought to Rock Common as unworked nodules, flakes and fragments, or as prepared cores. The presence of some poor-quality, shattered fragments suggests that flint brought to the site may not have been subjected to stringent quality control at the source.

CORES AND DEBITAGE
Core totals as shown numerically in Table 1 indicate that the principal output was blades and bladelets. The distribution of all cores (Fig. 12) shows that some cores coincided with the main concentration of flintwork but other cores lay on the periphery of this area of debitage. Bladelet cores, some of which could have been produced from blade cores undergoing the final stages of blade production, are three times more common than blade cores. Other bladelet cores (Fig. 8:5 & 6) were made on the edges of cortical flakes, pot-lids, or other thermally-fractured slices. This technique utilized the best-quality flint, which often occurs towards the outside of the nodule, and avoided the cherty interior. Striking platforms were invariably prepared by flaking, and flaking faces were crestet, where necessary, to guide the initial blade/bladelet. The crested pieces show that this activity occurred mostly towards the southern part of the site, although there were others in the north. Most cores were prepared with a single platform (Fig. 8:4), and opposed platforms (Fig. 8:9 & 10) were used for remedial purposes, principally. Cores were sometimes trimmed flat at the back but were otherwise unmodified. Once blade/bladelet production had been commenced, striking platforms were usually prepared by abrasion (Fig. 8:7) to remove overhang and isolate the intended point of percussion before the blade was removed. Some cores were flaked to exhaustion (Fig. 8:8); however, most were rejected when the flaking angle had become too steep to permit the removal of additional blade/bladelets. Rejuvenation tablets were sometimes removed to remedy this but in other cases, continued percussion resulted in crushing of the striking platform and the flaking angle became irrecoverable. This was usually associated with the development of hinge fractures on the flaking face, a problem sometimes alleviated by re-cresting.

A small number of cores may have served to produce blanks for unspecialized, retouched flake tools and scrapers. However, blanks for this type of tool would have been produced automatically during the preparation and trimming of blade cores. Some of these cores may represent failed blade cores.

Blades and bladelets constituted the principal blank form...
Fig. 11. Rock Common: Mesolithic burins 1–11, piercers 12–14, trancheet axe 15, truncated flakes and blades 16–20.
within the concentration of Area A. The total number recovered is shown in Table 1. This shows that the ratio of blades (length = twice breadth) and broken blades to bladelets (breadth less than 10 mm) and broken bladelets is larger than the ratio for the corresponding cores. It also shows that over 70% of both groups were broken, mainly by manufacturing snaps. Two hundred blades/bladelets from eight square metres in the central flint concentration have been analyzed technologically and metrically, using a system similar to that used at Hengistbury Head (Barton 1992), and compared with a similar analysis of 100 blade/bladelets from nine square metres in the northern part of the excavation. The results showed no perceptible variations between the two groups, suggesting that the material is broadly contemporary.

The technology involved using platform abrasion to strengthen the striking platform of predominantly single platform cores and to allow the blow, which was struck by soft-hammer percussion, to be located close to the core edge. Organic materials, including bone and antler, provide the most suitable materials for soft hammers but would not have survived in the sandy subsoil. A flint hammer and a core used as a hammer were found during the excavation, which indicate limited use of stone hammers. These might also have included sandstone doggers which occur naturally at the site. Blades and bladelets range from 11 to 92 mm long. Some of the shorter examples are unlikely to have been suitable for conversion into microliths and may be seen as by-products of platform abrasion.

**TOOL DEBITAGE**

**Microburins** form the largest group of typed artefacts and indicate the importance of this technique as a means of removing unwanted ends in the production of microliths. Their presence in such large numbers confirms that tool manufacture was a significant function of the site. The principal concentration of microburins (Fig. 13) coincides with the centre of debitage immediately west of the main spread of unworked burnt flint. Most (79% i.e. 786) are proximal microburins which have the characteristic notch on the left side (Clark 1934). This feature occurs repeatedly on microburins from Britain and has been used as an indicator of a predominantly right-handed population. The microburins show a remarkably high success rate (85%), although snapped blades with notched proximal ends and others with snapped (rather than oblique) microburin terminations indicate failed mishits.

There are also 31 double microburins which have a micoburin facet at both ends on alternate edges. Tixier et al. (1980, fig.16.10) regarded these as a by-product of dividing a blade into five parts to manufacture two microliths. Crescents, which form the main microlith form at Rock Common, could have been made in this way. It is questionable whether bladelets of sufficient length to allow the blade to be divided into five parts were manufactured at Rock Common. It may be preferable to see the blade as having been divided into three, leaving the distal end as an obliquely-blunted point, the
proximal end as a distal truncation, and the mid-section as the double microburin.

**Axe debitage** consisted of six probable tranchet-axe-sharpening flakes, none of which could be refitted to the recovered axe (see below). Occasional flakes from the site were catalogued as possible axe-thinning flakes; however, the numbers were insufficient, and the morphology too uncertain, to conjecture that axe manufacture occurred at Rock Common. It seems more likely that axes were manufactured on the Chalk and were merely resharpened at Rock Common.

**TOOLS**

**Microliths,** which form the largest, most diagnostic category of retouched artefacts, were classified according to Clark (1934). The results (Table 2, Fig. 14) indicate that 63% of the microliths could be listed according to this system. The remainder comprised unclassifiable broken fragments, unfinished and burnt pieces, and fragments with backed edges. The assemblage is dominated by geometric microliths, particularly crescents (D2 type), which grade imperceptibly into lozenges (D3 type), with obliquely-blunted points (A type) and occasional hollow-based Horsham points (F type). The obliquely-blunted points, two of which were found on the evaluation exercise, were invariably made using the microburin technique to remove the proximal end. Some microliths retain the microburin facet which may be a Krukowski microburin facet. Elsewhere, the point has been formed by abrupt anvil retouch (Barton 1992, 264). The obliquely-blunted points have a maximum length of 64 mm (mean 19 mm). They display a greater degree of size variation (Fig. 15) than the crescents which were clearly manufactured to a high level of size standardization, possibly the size of a vice-like thumb-and-forefinger grip! Breadth analysis of these two groups of microlith shows that they were usually made on bladelets, a conclusion confirmed by microburin width. Blades, which comprise c. 6% of the assemblage, may have been preferred as unretouched knives.

The distribution of all microliths (Fig. 16) is broadly similar to the overall flint distribution, and larger groups of individual microlith types (Figs 17, 18 & 19) clearly lie outside the centres of major burning, suggesting that activity occurred around hearths. There is nothing to indicate that these groups define different activities, or that they relate to specific burnt flint concentrations.

Most microliths show no preferential raw material selection; however, a type F and a type A microlith, both from the same square, are made of flint which is perceptibly lighter in colour than elsewhere. Test pit 2000 also produced a finely made, obliquely-blunted point and a crescentic microlith of similar raw material. There may be a direct association between exotic raw materials and some of the well-made microliths.

**Scrapers:** The 46 scrapers are distributed across the site (Fig. 20) with small, poorly-defined groups in the north and south-east corner. Thirty-six pieces have been examined in detail, the remainder including broken and burnt fragments. The
majority of complete specimens are end scrapers made on the distal ends of flakes (Fig. 10:1–6) and only four were made on blades. There is a double-end scraper (Fig. 10:7), one side scraper, and two double-side scrapers (Fig. 10:8). Flake blanks were generally elongated or squat, ranging from 20 to 50 mm long and 20 to 40 mm wide. Blanks were selected from well-flaked cores of which almost 50% show no cortical remnants. Continuous, direct retouch, which was usually semi-abrupt, was often used to form a short, convex scraping edge, although well-finished scrapers were also made with longer blades.

Other tools shown in Table 1 (Figs 11 & 21) include small numbers of burins, piercers, tranchet axes, a microdenticulate and truncated blades and flakes, as well as pieces with miscellaneous retouch.

Burins. The 30 burins (Fig. 11:1–11) comprise the second or third most common tool type. Most have only a single spall, which was usually crested before its removal, although multiple removals, similar to bladelet cores, were also present. The most prevalent forms are single angle burins (18), with double angle burins on opposite ends of the blank (4) and dihedral burins (3) also present. Twelve burins were made on blades, although broken/snapped flakes and blades were also used. Blanks were often prepared by an oblique truncation at the distal (7) or proximal (5) ends, although straight or concave truncations are present. Four isolated possible burin spalls were noted in the assemblage. There were no composite tools.

Piercers. Five implements (Fig. 11:12–14), averaging 25 mm long, can be added to the two implements found on the eastern side of the evaluation area near Area B. They all have short, squat, tapering tips, made by narrowing the distal end of the blank to a point, using direct retouch. Three were made on flakes and four on blades.

A tranchet axe (Fig. 11:15), sharpened by a single tranchet blow, was found in the area excavation. A series of parallel flake scars on one side suggest that it may have been adapted from a failed blade core. A broken fragment of a second axe was also recovered.

A microdenticulate was found at the western edge of the site. This implement, together with an unretouched blade with visible edge gloss, provides the only evidence for edge use at the site. Levi-Sala (1992, 241) concluded that microdenticulates were possibly used for ‘incising or cutting green, but woody plant material’, perhaps in the preparation of hunting equipment.

Truncated blades and flakes (Fig. 11:16–20) account for 83 pieces from the excavation, of which blades account for over 60%. Retouch is predominantly direct and used at the distal end (80%) to form an oblique truncation (62%). This technique probably served to remove the distal end and create a functional, unretouched edge which could be used in composite tools. Retouch occasionally extended beyond the truncation to function as backing.

Retouched pieces which are unclassifiable account for the remainder of the ‘other tools’. The category includes...
complete and broken pieces, bladelets, flakes, and fragments, with varying amounts of miscellaneous retouch. Some pieces probably represent expedient tools, while others can be assigned to accidents of manufacture. Marginal retouch may be an accidental by-product of utilization, but may also be post-depositional, caused by ploughing, or even excavation, damage.

A fabricator, 60 mm long and 19 mm wide, with a plano-convex section and well-worn end, was also recovered. This tool type was manufactured from the Mesolithic into the Late Neolithic and has been included as one of the most common tools in the latter period (Wainwright & Longworth 1971, 255), and so may be intrusive.

**CHRONOLOGICAL ASSOCIATIONS OF THE ASSEMBLAGE**

**CHRONOMETRIC DATING**

Nine samples of burnt flint were submitted for assessment as to their suitability for TL dating. The samples, taken from spits 2 and 3, were selected from a bagged bulk sample collected during the excavation, from an area adjacent to the principal concentration of burning, while others were selected from other burnt clusters, subsequently. The material had been wrapped in black plastic. The results of the assessment suggested that the samples were unlikely to produce results of suitably fine resolution. For instance, a one standard deviation error of ±11% is estimated (N. Debenham pers. comm.); therefore, a date producing a central point of 8500 BP would have a 68% chance of falling between 9435 and 7565 BP. At two standard deviations there would be a 95% chance of the date falling between 10,370 and 6630 BP and that would simply confirm that the assemblage was of Mesolithic date.

Unstratified charcoal occurred in isolated fragments only and these were unsuitable for radiocarbon determination. The entire Mesolithic period is represented by only a few well-stratified and reliable radiocarbon dates (Jacobi 1994) and they are extremely difficult to calibrate accurately. Therefore, dating of the assemblage relies on typological comparisons with Mesolithic assemblages excavated elsewhere in Britain.

**RELATIVE DATING**

The microlith assemblage from Rock Common justifies inclusion within the Horsham tradition, although the proportion of hollow-based Horsham points is considerably lower than in sites listed by Clark (1934). It is most closely mirrored by the microliths from Hermitage, High Hurstwood (Jacobi & Tebbutt 1981) (38 km north-east of Rock Common). That site produced 91 classifiable microliths, including not only a Horsham point, but also large numbers of scalene (34%) and short lanceolate pieces (26%), the latter most closely correlated with Clark’s crescentic (D2 type) and lozenge (D3 type) microliths which were dominant at Rock Common.

The chronology of the Horsham industries has been the subject of much debate (e.g. Clark 1934; Jacobi 1978;
Horsham tradition continued into the Late Mesolithic. Large numbers of scalene triangles, demonstrated that the Horsham industry does not represent the earliest Holocene re-colonization of Southern England but lies within the later part of the Early Mesolithic, i.e. c. 9000–8500 BC (Reynier 1998). The site at Hermitage, High Hurstwood (Jacobi 1978), which provided dates ranging from 7105±70 BP and 6800±100 BP (Jacobi & Tebbutt 1981), and which contained large numbers of scalene triangles, demonstrated that the Horsham tradition continued into the Late Mesolithic.

**Human Activity as Represented by the Lithics**

The south-facing slope of the Lower Greensand knoll which forms Rock Common provides an attractive site for settlement. It lies at the eastern end of high ground which rises to 90 m OD on Washington Common, a kilometre to the west, and commands a view across the Weald to the north extending along the Greensand ridge as it descends to the Adur valley, 7 km to the east. The Weald drains along a series of major river courses which have cut crucial navigable route ways north to south through the Chalk towards the sea, and easy access to these would have been important. There is additional access through the Chalk, with its flint, via the dry valley which now exits into the Weald at Washington. The site is well served with natural springs. A water source is mapped c. 600 m north of Rock Common and such sources were probably more plentiful during the Mesolithic.

It is impossible to determine whether more than one episode of occupation is represented at Rock Common. The well-defined nucleated concentration implies only one phase of activity at the site, of several days duration. However, the results of the excavation in the colluvium of Area B have shown that occupation, which may represent a separate camp, probably extended onto the east side of Rock Common. Mithen and Tolan-Smith (Young 1998) have established that Mesolithic campsites in Islay and the Tyne Valley with similar assemblage structure to that of Rock Common were often revisited. Irrespective of the duration of the stay, it is reasonable to assume that the occupants required some form of shelter, even on a temporary basis. Simple ‘pit’ structures in the Weald were first discussed by Clark and Rankine (1939), since when it has been recognized that Mesolithic groups were capable of constructing not only temporary hunting structures, but also substantial long-term dwellings.

The large spread of unworked burnt flint within Area A rarely fell below 50 g per square metre (Fig. 7). Its distribution coincided with the focus of Mesolithic activity suggesting that it is also of Mesolithic date. Two individual clusters exceeding 300 g, together with a smaller cluster to the west, were apparent within the general spread of burnt flint. There was a certain amount of overlap between the extent of these clusters and the distribution of worked flint and of some artefact groups (Figs 13 & 21) caused by post-depositional ‘blurring’ but, in other instances, they were clearly separate (Figs 12 & 16–20). It seems likely that the burnt flint clusters represent dispersed hearths, although no formal hearth structures, hearth stones, areas of burnt sand, or charcoal were noted. The absence of satellite hearths beyond the spread of debitage suggests that a range of activities including flint-knapping, tool manufacture, hide-processing and food preparation were focused around communal hearths. The distributions of lithic artefacts in Figures 12, 13 and 16–21 are, therefore, plotted against the contoured distributions of burnt flint, representing the dispersed hearth sites.

It can be argued that, despite the results of ‘blurring’ of artefact distribution by post-depositional factors, evidence of more detailed patterning of activity around the hearths can be detected. The distribution of chips and microburins (Figs 6 & 13) which are by-products of flaking and microlith production, corresponds very closely with the distribution of all worked flint (Fig. 5) which is predominantly waste material and is centred at the edge of the main hearth. Cores (Fig. 12) are also distributed around the hearth, though they are more prevalent around the periphery of the distribution of all worked (waste) flint. It is reasonable to assume that flint-knapping and tool production took place at the edge of the hearth where waste material was dropped, but that the heavier cores were tossed away. Binford (1976; 1978) observed this form of activity among the Inuit of Alaska.

Tool distributions similarly reflect general activity around the main hearth (Figs 16–21); however, there are significant differences to the spread of manufacturing waste. The spatial pattern of microliths is more diverse than that of microburins while the distributions of scrapers and other tools are more frequent beyond the hearth and the associated concentration of worked flint. This strongly suggests that it may be possible to distinguish an area of flaking and tool manufacture immediately adjacent to the main hearth, with a
broader zone of tool use and domestic activity beyond it.

The quantity of microliths from Rock Common is exceptionally high. The total number of successful microburins indicates not only the reliability with which the technique was used but also the potential output of microliths. The number of successful proximal microburins (668) when set against the total number of classified microliths (397) provides a balance of 271 microliths which were not recovered from the site. These implements, which undoubtedly formed part of composite tools, have otherwise failed to be interpreted successfully. Hafted examples preserved in European wet-land sites indicate that some were used as composite arrow points. Camp-site activities are assumed to have involved the repair or manufacture of new arrows to replace broken ones. Clark (1967) showed that microliths could be used in pairs, as points and barbs, or be mounted in slots along a foreshaft, where at least six microliths could have been used. This Rock Common ratio of microliths to microburins indicates that microliths for c. 135 arrowshafts or c. 45 foreshafts are unaccounted for on the site and implies that a considerable population of hunters used it. Impacted flint arrows in bones from Scandinavia (Clark 1963, 81), and experimental analysis (Barton & Bergman 1982; Friis-Hansen 1990), attest to the efficiency of microlith-tipped arrows. Impact fractures, however, are rarely the most common form of breakage amongst microlith assemblages; Barton (1992: Hengistbury Head), for example, recognized only six, and Grace (1992: Thatcham) only one (tentatively). Similarly, there was nothing to indicate that large numbers of microliths had been broken by impact fractures at Rock Common. Unger-Hamilton (1992) failed to provide a conclusive interpretation of microliths using microwear analysis at Hengistbury Head, while Grace (1992) argued that most microliths from a sample at Thatcham had been used in a rotating motion.

The output of the Rock Common camp should not be seen to be exclusively microliths (for the manufacture of which bladelets were produced); blade manufacture accounted for almost an equivalent proportion of the blank output. The remaining retouched-tool component was often made on flakes and it seems reasonable to assume that the blades were manufactured as knives to be used unretouched. Levi-Sala (1992, 246) has stressed the inadvisability of attempting microwear analysis on microdenticulates which were apparently in mint condition, but which had undergone post-depositional movement and emphasized the unreliable nature of any subsequent results. The Rock Common assemblage was not, therefore, considered suited to microwear analysis.

Barton (1992), following the work of Mellars and Rheinhardt (1978), has examined the diversity of tool kits between selected Early Mesolithic sites and discussed their location relative to the surrounding terrain. He defined those with a restricted tool inventory, containing principally oblique microliths, end scrapers, and microdenticulates, as high-ground hunting camps, at least 30 m above the surrounding landscape, which had good potential to monitor animal movements. He noted the presence of axe-sharpening flakes on these high-ground sites and interpreted the absence of axes themselves as features of ‘curated technology’ (Binford 1976); the axes would not be discarded unless broken or worn out. He compared the high-ground camps with a group of sites which occupied low-lying river locations and had a wider, more diverse range of activities, with significant quantities of burins, axes/ adzes, and drill bits. The composition of the eight
Mesolithic assemblages shown in Figure 22 confirms that the Rock Common, West Heath, Hampstead (Collins & Lorimer 1989), and Hermitage, High Hurstwood (Jacobi & Tebbutt 1981) assemblages, which all contain Horsham points, mainly comprise microliths and are as expected for a high-ground hunting strategy. They contrast both with the Early Mesolithic sites of Star Carr, Yorkshire (Clarke 1954), Thatcham, Berkshire (Wymer 1962), Broxbourne, Hertfordshire (Reynier unpublished), and Three Ways Wharf, Uxbridge, Middlesex (Lewis forthcoming) and with the Late Mesolithic site on the A34, Berkshire (Bellamy 2000), which all occupied low-lying river-side locations and which all presented more diverse tool assemblages.

ROCK COMMON IN WIDER CONTEXT

Mesolithic flint artefacts are well-attested throughout Sussex, and locate the distribution as being along the West Sussex coastal plain (Pitts 1980) and northwards onto the Chalk of the South Downs (Butler 1988, 228), where flint was exploited. The county is, however, best known for sites which lie principally on the narrow ridge of the Lower Greensand. This runs parallel and immediately north of the South Downs escarpment and returns on the north though Farnham, Surrey (Clark & Rankine 1939) to Kent.

Early Mesolithic Maglemosian groups (producing obliquely-blunted microliths) favoured Lower Greensand ridges, as did later groups (using Horsham points) who extended their distribution across the central wealden sands. These sites were classified by Clark (1934) on microlith types as the Horsham Tardenoisian industry. Apart from the hollow-based points, the Horsham industry is characterized by obliquely-blunted points and geometric microliths, together with tranchet axes (usually evident as axe-sharpening flakes). In his original analysis, Clark (1934) recorded variations in relative numbers of microlith types at different sites but felt that he was still justified in calling it a homogeneous culture.

Mesolithic sites from Sussex with Horsham points (Gardiner 1988) are mainly small-scale, situated on sand geologies, and discovered by surface collection; adjacent scatters were not interpreted as indicating site complexes. The stratigraphy on the Lower Greensand, as at Rock Common, was often disturbed, inhibiting detailed interpretation. In contrast to Rock Common, the assemblages of these sites comprise relatively small quantities of material with a few microliths and are regarded as relatively short-stay bases for repair of hunting equipment.

The composition of the Rock Common microlith assemblage is similar to other Horsham industries in Sussex. Short, obliquely-blunted points are accompanied by geometric microliths. Reynier (1994) has established a clear relationship between the mean lengths of obliquely-blunted points and specific dated Mesolithic industries. The mean length of obliquely-blunted points from Rock Common is 19 mm which compares with 22 mm at other Horsham sites. This contrasts with those from Early Mesolithic ‘Maglemosian’ sites which were calculated at 40 mm. The crescentic microliths are remarkably standardized, implying that they served a specific function. Standardization makes it possible to repair individual broken elements of composite tools easily, although the frequency of unbroken microliths suggests that it may have been the haft (not the flint) which more often broke. The ratio of diagnostic Horsham points to other microlith forms from the site is low: only six Horsham points were found, none of which were broken. Horsham points are rare on other sites of this type and it is possible that similar sites have been allocated a Late Mesolithic date on the basis of geometric microliths (without distinctive Horsham points).

Gardiner (1988, fig. 6.7 & table 6.3) has illustrated the prevalence of tranchet axes on the Chalk and Clay-with-Flints, where they were undoubtedly manufactured, and contrasted it with the increased frequency of axe-sharpening flakes to axes in the Sussex Weald. With respect to the Weald at Hermitage, High Hurstwood, Jacobi and Tebbutt (1981) found only three flakes which they ascribed to adze-thinning, and others occurred at Graffham (Holgate et al. 1986). Two small tranchet axes (70 mm and 110 mm long) comparable with that found at Rock Common were found at Selmeston (Holloway 1979, 245). These tools provided the only heavy-duty woodworking implements for construction of shelters in a lightly-wooded, hazel landscape.

The Lower Greensand ridge provides poor conditions for the preservation of organic and faunal remains. There are no recorded instances of bone from Mesolithic sites in Sussex (Jacobi 1978) although, from evidence recovered elsewhere (Wymer 1991), it is likely that deer (particularly red and roe deer), wild boar and aurochs were hunted.
throughout the year. Wild fowl and fish could have been hooked, netted or trapped. The diet also undoubtedly exploited a wide range of plant and fruits as they became available in season.

Post-depositional disturbance and soil development at Rock Common have also eliminated any pollen. This also pertains to the material from the palaeosol in Area C. Pollen analysis was possible at Iping Common, 28 km to the west (Keef et al. 1965), where dense, natural hazel woodland was replaced by heather as a result of human activity. Dimbleby and Bradley (1975) also studied a pollen profile associated with Neolithic activity at Rackham, 8 km to the west, and recorded a similar sequence. Reduced proportions of hazel pollen, which may be associated with Mesolithic activity in the area (Garton 1980), indicated that the natural oak and hazel canopy had been opened and regenerated before its reoccupation in the Late Neolithic. For the North York Moors, Simmons (Young 1998) has shown that repeated small-scale forest clearance by fire on the same site was sufficient to alter the detail of pollen diagrams and was a regular feature of this landscape in the Mesolithic. Therefore, it is envisaged that Rock Common lay within, or adjacent to, small areas of open woodland which had been cleared of undergrowth repeatedly.

CONCLUSIONS

The excavation of the Mesolithic flint scatter at Rock Common represents one of the largest systematic area examinations of a site associated with Horsham points undertaken in Sussex. In so doing, it met one of the aims identified in Research Frameworks for Palaeolithic and Mesolithic of Britain and Ireland for the Mesolithic Period (Prehistoric Society 1999). This document recognized that Mesolithic peoples had widely-spaced sites and called for consideration of the potential value of examining larger scale areas of landscape. Although much of the fine detail of the site was lost in the sandy subsoil, the project strategy of test-pitting followed by detailed area excavation provided a valuable method for locating and investigating a Mesolithic site threatened with destruction by large-scale development.

The presence of a few Late Glacial lithic artefacts is important. Finds of this date are scarce in Britain. Where known, findspots tend to be located in the river valleys of southern and eastern England, near good sources of raw material. The presence of Late Glacial activity on the sandy knoll at Rock Common shows that human exploitation of the landscape was not confined to the river valleys.

The spatial distribution of the Rock Common Mesolithic flintwork shows that most of the human activity represented by the lithic assemblage in Area A was carried out adjacent to hearth sites. Comparison of the retouched tool assemblage with other sites indicates that Rock Common conforms to the upland/lowland model proposed by Mellars and Rheinhardt (1978). The composition of the Rock Common tool assemblage would suggest that the primary concern was the production of microliths, probably to repair and ‘retool’ composite tools and hunting equipment.

Acknowledgements

Wessex Archaeology would like to thank UK Waste Ltd for funding the excavation and analysis at Rock Common. In particular, we would like to thank the site manager, Andrew Arnold, for his enthusiastic co-operation. Dr Simon Collcutt of Oxford Archaeological Associates Ltd made an important contribution to the success of the fieldwork and the completion of the work. John Mills of West Sussex County Council monitored the project on behalf of the Local Planning Authority, and Wessex Archaeology thanks him for his constructive comments. P. Harding directed the fieldwork and post-excavation elements, S. E. James and Rob Goller provided illustrations and Emma Loader developed the computer database, all under the project management of John Lewis.

The finds from the evaluation and the subsequent work, and the site archive have been deposited in Horsham Museum.

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REFERENCES


Bellamy, P. S. 2000. An interpretation of the Lambourn Valley Mesolithic site based on an analysis of the flint


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APPENDIX 1 — CONTEXT AND TAPHONOMY OF AREAS C AND D

Detailed descriptions of the profiles through the sedimentary sequence in the hollow way were recorded by Dr S. Collcutt of Oxford Archaeological Associates and Dr M. J. Allen of Wessex Archaeology. These records have been retained in the archive, and the following summary draws on these reports.

The compact, pale yellow-brown, unconsolidated natural sand was overlain by yellow to blue-grey clayey sand which showed signs of gleying. The contact with the overlying palaeosol was indistinct but the soil was apparent as a discontinuous, mid-brown, silty sand loam 360 mm thick but in places up to 690 mm thick. It also contained isolated patches of silty sand, which probably migrated into the trough as blocks of soliflucted frozen soil and small sandstone doggers up to 50 mm across. It was also heavily disturbed by roots, insect and small mammal burrows.

The palaeosol was overlain by over 1.4 m of coarse, compact orange-brown sand, a slightly silty pale yellow-grey sand and a dark grey-brown silty sand topsoil. The entire sequence of deposits was heavily disturbed by bioturbation and/or pedogenesis, and charcoal flecks could not be associated reliably with the palaeosol.

Test pits dug by hand into the palaeosol produced ten additional pieces of worked flint (Table 1). Of these, only the proximal end of a lightly stained broken blade with broad faceted butt, directly associated with two other flakes of probable Mesolithic date, could be assigned to the Late Glacial activity. The remaining flint also showed similar characteristics to the Mesolithic material of Area A. The additional excavation of the palaeosol concluded that there is nothing to indicate a significant quantity of Late Glacial material on the site. Isolated artefacts, which may have been deposited by solifluction, were directly associated with later Mesolithic material in the palaeosol which has undergone subsequent bioturbation.

APPENDIX 2 — Neolithic AND LATER FINDS

A chisel arrowhead, two small fragments of polished flint axe and a discoidal knife were found during the excavation. These objects, which were additional to the leaf arrowhead found during the evaluation in trench 45 on the south side of The Rough, probably represent casual losses, breakages or by-products of manuring. Unrecognized undiagnostic waste flakes may also be present.

NON-LITHIC FINDS by Lorraine Mepham

Non-lithic finds are summarized in Table 3. The animal bone was unassociated with the Mesolithic flint and is likely to be of medieval and post-medieval date. The summaries below concentrate on the finds of medieval and earlier date, and other objects of intrinsic interest amongst the post-medieval finds. These finds have been retained, while other post-medieval material has been discarded following quantification.

Clay pipes

Most of the clay pipe fragments recovered comprised plain stems and bowl fragments too small for classification, but ten bowls were also present, all of later 17th-century type, as well as one stamped spur (with the letters FC in relief).

Glass

This material includes an annular blue glass bead such as are found on Iron Age sites. They are also found frequently throughout the Roman period and are also common in early Saxon graves (Guido 1978, 66–8). The remaining glass, including both vessel and window glass, is almost exclusively of post-medieval date.

Pottery

Eleven plain body sherds from Area A in oxidized, or partially oxidized, sandy fabrics are probably of Romano-British or medieval date. However, most of the pottery is post-medieval in date. Three sherds, found together in Area B, are in a coarse, flint-tempered fabric, and are of probable later prehistoric (?)Late Bronze Age) date.

Metalwork

Iron nails and other structural items comprised most of the metalwork assemblage. A few copper alloy objects were identified, including a small bell, a strap and a decorative fitting; these are all likely to be of post-medieval date. Three coins were also identified: a penny of William III, and two farthing tokens of Charles I.

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