The Archaeological Journal.

JUNE, 1865.

NOTICES OF THE EXAMINATION OF ANCIENT GRAVE-HILLS IN THE NORTH RIDING OF YORKSHIRE.

I. Barrows near Ebberston and the Scamridge Dikes; the Danes' Graves; barrows near Whitby and Thirsk.

By the Rev. WILLIAM GREENWELL, M.A.

THE purpose of the present memoir is to give an account of the examination of several grave-hills, which was made during the course of the year 1864, in the North Riding of Yorkshire. The district in which they were found, rich in early remains, is that tract of high ground between the Tees and Derwent, bounded by the sea on the east, and by the plain of York and the vale of Mowbray on the west.

It may be thought that so many accounts have been given of the facts connected with primitive interments, that nothing can be added, and that any fresh record is only a repetition of well-known details, which can bring no additional data to the stock of knowledge that we already possess. Such is, however, a mistaken idea. No two interments present quite the same features, and each one that is examined is valuable, either as a confirmation of views not as yet based on a sufficiently exact or wide foundation, or as giving some new fact which may modify, or perhaps destroy, the theory which, in such matters, we are sometimes obliged to erect.

When we enter upon the consideration of a subject such as the history of the tribes which occupied our country previous to the Roman invasion, and travel back into an age upon which the light of history sheds no rays, our course is necessarily tentative. We deal, indeed, with facts which are in themselves absolutely true, for there can be no misreading or corrupt passage, no prejudiced or false account, in the bronze

dagger or the flint arrow-head which we find laid beside the body of its owner, but the inference that we draw may be more false than the figments of a Geoffrey of Monmouth. And therefore the value of accumulated facts cannot be over-rated. We need to heap flint on flint, to add bronze to bronze, in order that the base of our theory may be laid upon the firm substructure of well-sifted and oft-recurring detail; and each additional object that we gather, each new feature that we bring to light, is not only not superfluous, but is necessary, as giving strength to the foundation we have laid, or as adding another stone to the fabric which is being raised upon it.

The district with which I deal abounds with the sepulchral remains of its early occupants. As the eye travels along the ridges which form divisions between the lovely dales, so thickly interspersed amongst the heathy uplands of Cleveland, it catches every here and there the rounded outline of the houes,[1] as the grave-hills are there called, which are the resting-places of the chieftains or other early inhabitants of the district. They form, indeed, a distinctive feature in the landscape, and, from their frequency, give the impression that either the country was then thickly peopled, or the period during which they were raised was a lengthy one. As a rule they crown the heights,[2] and we can scarcely avoid the thought, that, as the dagger or the arrow was laid by the hunter-warrior's side, or the necklace was hung in death around the neck of her whom it adorned in life, in each case for use or ornament in another world, so the chief was buried where his family or tribe fondly thought that his eye might range over the valley where he had ruled, or the

[1] Houe, from old Norse Haugr, *collis, tumulus mortuorum;* the verb being At hauga, *coacervare:* Haldorsen. Old Swedish Hög, Danish Hoj. The Jutland form of the word is Hog, which, in pronunciation, approximates closely to the North Yorkshire houe. The primary idea is that of elevation, the secondary that of heaping up, so as to make high: and the participle heygd, houe-ed, heaped, is continually used in the Landnamabok, &c., in the sense of buried or deposited in a grave-mound. A large proportion of the language, and even of the proverbs, of Cleveland, is old Danish. The subject is at present engaging the attention of the Rev. J. C. Atkinson of Danby, the author of several valuable papers on the grave-hills of Cleveland in The Gentleman's Magazine.

[2] Where interments have been found on the low ground, and where cultivation has destroyed all trace of the barrow, if such ever existed, they have almost invariably been placed on a rising piece of ground. So marked is this characteristic, that, on several occasions, when I have been taken into a field to see the site of a grave, I have at once pointed out the spot, though there was nothing except the natural swell in the land to indicate it.

hills where the stag[3] and the boar had often, amongst the primeval oaks, fallen a victim to his bow and spear.

The tribes settled in the north-eastern parts of Yorkshire, the sepulchral remains of which this paper illustrates, were undoubtedly of kindred origin and habits with those located further north, as, for instance, in Northumberland. The similarity of the mode of interment, the fabric and ornamentation of the burial urns,[4] the identity of weapons and implements, as well as the marked character of the crania, prove this beyond questioning. And yet, with so many well-defined points of resemblance, there are also such great differences as suffice to show that, though the same people, they lived in these two localities under quite different systems.

We find in both districts the same mode of constructing the habitations; for, though in the North Riding the foundation of the hut is generally a circular hollow, sunk in the surface of the ground,[5] yet I have found near Ebberston, in connection with an entrance through the well-known Scamridge Dikes, a number of hut-circles,[6] constructed in exactly the same manner as those so common in Northumberland. The incised rocks,[7] first discovered in the same county, and since found spread over a wide area, which takes in Scotland and Dorsetshire, and extends to Ireland, these rocks, marked with the mysterious concentric circles, also occur in this district of Yorkshire. Near Robin Hood's

[3] At Tosson, in Northumberland, was found, in a short cist, with the unburnt body of a man, an urn, a javelin-head, and a portion of a large red-deer's horn, a cherished trophy, no doubt, of some successful day's hunting.

[4] I have used the word *urn* throughout this paper for all the fictile vessels, of whatever shape or kind, discovered with an interment, whether of a burnt or unburnt body. The different types have received different names, as cinerary urn, incense-cup, drinking cup, food-vessel, and vase. I have preferred to retain the general word *urn*, as applied to these sepulchral vessels, none of which were, I believe, domestic, but all specially manufactured for the purposes of burial.

[5] This is, however, after all, only a different fashion of constructing the same kind of habitation; the hut in the one case being raised upon a circular foundation of stones and earth, in the other over a circular pit, which in many instances is lined with a walling of stones.

[6] No doubt the habitations of those who guarded the entrance. The hut-circles are here very perfect, having never been ploughed over, and they would well repay a careful examination.

[7] Perhaps I may here be allowed to assert my claim to having been the first to bring the subject of these most interesting symbols before the public, in a paper I read at the Newcastle Meeting of the Institute in 1852. By a mistake of the late Dr. Johnston, in his Natural History of the Eastern Borders, I am set down as having entertained the conjecture that these markings are the plans of camps, and this view I have seen elsewhere attributed to me. I may say, that from the first, I maintained the opinion which I still hold, that they are

Bay, a rock[8] was found which had several series of circles cut upon it, and in connection with interments at Claughton Moor, near Scarborough, and in a tumulus at Way Hag, near Hackness, the same symbols have been discovered engraved upon slabs, which, apparently, had formed the covers of burial places. But, when we look at the arrangements for defence, we find a difference so strongly marked, that it cannot fail to strike any one who is acquainted with the two districts; a difference which assuredly betokens a political state and government among these tribes widely dissimilar. In Northumberland every hill-end has its place of defence, in some instances[9] two or three in connection, each one stronger than the other. They are provided with enclosures for cattle, and covered ways for concealed ingress and egress. These fortlets, in many cases not above a mile apart, are so numerous, that in a day's walk some dozen or more may easily be visited. Can we come to any other conclusion than that we have in this the evidence of a number of small tribes living in a constant state of feud and warfare,[1] probably about hunting-grounds and pasturage, each tribe independent to some extent of the others, though possibly all, for certain purposes, joined into a general confederation by some bond of political, and therefore, at that time, of religious union? In Yorkshire, on the contrary, at least in the district under consideration, there is an almost entire absence of the like places of defence. Though a few are found, at wide intervals, such as the camp on Eston Nab, the Cawthorn

religious symbols, and, in my paper read before the Institute, I instanced, in support of this view, their having been found connected with burial, always a sacred rite. I am glad to say, that, under the liberal patronage of the late Duke of Northumberland, all the Northumberland incised stones will be reproduced upon a large scale in lithography, with illustrative specimens from other localities, and also that a valuable paper by Mr. George Tate, F.G.S., of Alnwick, with accurate representations on a smaller scale, has appeared in the last part of the Transactions of the Berwickshire Field Club, vol. v. p. 137. This memoir may be obtained separately from Mr. Blair at Alnwick.

[8] The inscribed portion of this rock, torn, I must say very wrongly, from its original bed, is now in the possession of Mr. Kendall, of Pickering, a person who has destroyed most of the barrows in his district.

[9] As at Greaves Ash, near Ingram. The forts and hut-circles there were carefully examined under the superintendence of the Berwickshire Field Club, and a record of this examination is given by Mr. Tate, in the Transactions of the Club, vol. iv. p. 293.

[1] It has been held by some that these forts are a series of defensive works against a common enemy, such as the Romans, and that they are, therefore, no proof of a division of interests and rule, such as that would be to which I have adverted. Careful examination, however, distinctly shows that no general plan of defence is comprehended in their arrangement.

Camps, and others, as a rule it may be said that the people lived without any fortified positions. It is true that there are the remains in several places of long lines of mounds and ditches, in some instances, as the Scamridge Dikes, of considerable strength; yet these appear to be rather a provision to prevent the driving off of cattle, or divisions between tribes, than defensive places of refuge against a neighbouring enemy. This singular absence of forts and camps, presenting, as it does, so marked a contrast to what is found in Northumberland, appears, therefore, to furnish an almost conclusive proof of a state of society and government completely different in the two districts. Whereas, in Northumberland we have this evidence to show the presence of many and hostile tribes, in Yorkshire all the evidence seems to point to a union under one head, and, in consequence, to the absence of frequent wars, and therefore of any necessity for numerous places of defence. Another remarkable circumstance in connection with the country we are treating of deserves notice; and the more so, because we shall find that the objects in question are frequent accompaniments of interments. This is the profusion of weapons and implements of flint scattered over the surface. In some localities it is no exaggeration to say that they are found by thousands; arrow-heads, knives, saws, and the so-called "thumb-flints,"[2] the last the most numerous of all, and presenting many varieties of form. That these flint articles were manufactured upon the spot where they are found is certain, from the abundance of refuse pieces, chippings and flakes, which are, as might be expected, more plentiful than the manufactured implements. It is difficult to account for their being found in such large quantities; the more so, because flint is quite foreign to the district;[3] but it is still more difficult to

[2] The "thumb-flint" must have served for several purposes, as it is, of all implements, by far the most numerous. One use, probably, was to scrape hides, to prepare leather, and to make pins and other articles of bone: it might also serve to fabricate arrow-heads and knives. The commonest type of the "thumb-flint" is the round one (see woodcuts, fig. 16, *infra*); but an oval form is also frequent. A long narrow implement (fig. 9), rather like a finger in shape, which in some cases has one end sharp, and in all has one end smoothed by continual friction, I am inclined to think was used in dressing hides, the sharp end for removing the loose parts of the skin, the smoothed end for rubbing down the seams when the leather was made up into a garment.

[3] On the Wolds on the south of the river Derwent, where flint occurs in the chalk, the native flint is only manufactured into coarse articles, such as slingstones; a finer grained flint, foreign to the district, and, probably, found in the

ascertain the material which in other districts equally peopled by the same tribes occupied the place of flint [4] for the fabrication of weapons and tools. Many a weary day might be spent by the most careful searcher, in Northumberland, before he found a single object of flint.

I will now proceed to give an account of each of the barrows in the order in which they were examined.

The first, [A,] situated two and a-half miles north of Ebberston, and about half a mile west of the Scamridge Dikes, was opened on March 22nd and 23rd, 1864. It was a true "long barrow," of a type rare in Yorkshire, and not common in any part of England. It lay nearly east and west, and was 165 feet long, with a breadth of 46 feet at the west and 54 feet at the east end, the average height being about 8 feet. It was formed, with the exceptions hereafter mentioned, of oolite rubble, with some mixture of clay and earth, and a thin layer of soil upon the surface, due probably to the decay of the vegetable growth of centuries. The examination was commenced by making a cut through the barrow at the west end. This, as I anticipated, judging from what had occurred in the long barrows of Gloucestershire and Wilts, brought to light no interment. About 5 feet from the exterior, on the north side, we came upon a regularly built wall of flat limestone flags carefully imbedded in clay. This wall extended in width about 8 feet towards the centre of the barrow, when we again came upon the rubble and clay of which the mound was formed. I cannot state how far east this wall was carried; it may have extended the whole length of the barrow; the cut was 10 feet wide, and the wall stretched through it and beyond it on either side.[5] A second cut was next made, about 20 feet from the east end, and on the south side, where a slight opening had been made on

shape of rolled pebbles on the coast, being used for arrow-heads, knives, &c.

[4] Bone, probably, to a great extent occupied in such districts the place of flint, and being perishable has not remained to our day. Flint implements are, however, sparingly found upon the surface in Northumberland; whilst in connection with interments they occur frequently, though not to such an extent as in the North Riding barrows.

[5] The chambered long barrows, at Stoney Littleton, Somersetshire, and Uley, Gloucestershire, described in this Journal, vol. xi. p. 315, had a dry wall of horizontal courses of stone, from 2 to 3 feet in height, round them. The barrow at West Kennet, in Wiltshire, seems to have had a similar wall of horizontal courses, with large upright stones at intervals. See a paper by Dr. Thurnam in the Archæologia, vol. xxxviii. Dry walling, running throughout a great extent of the mound, was found in the long barrows at Rodmarton and Ablington in Gloucestershire.

some previous occasion. This opening, however, did not extend above 15 feet from the outside. Just beyond the limit of this former cutting, and disturbed to some extent by the falling down of rubble at the end of it, we found an interment of an unburnt body. On account of the disturbance to which the body had been subjected, it was not possible to determine whether it had been deposited at full length or doubled up; from the narrow compass, however, within which the bones were found, I think it is scarcely possible that it had been laid at full length. This, I feel satisfied, was a secondary interment, and having no connection with the people who first raised the mound. It was apart from the rest of the bodies, and at some distance from the centre of the barrow, where the principal deposit of bones was found. The skull from this interment, of a very different type from all the others discovered in the barrow, is No. I. of those of which a minute account is to be found in the Table given hereafter.

On coming near the centre, a difference in the material was observed; the mixed rubble, clay and earth closely compacted—so close in fact, that to work it was almost like quarrying stone—gave place to loose oolite rubble. This ultimately proved to be a trench[6] $3\frac{1}{2}$ feet wide, running east and west from the east end of the barrow towards the middle for about forty feet. This trench was 3 feet deep, and had above it 2 feet of earth and small stones, the bottom resting upon a thick stratum of forced clay, which again was laid upon the natural surface of the ground. In the trench were found the original interments; the mode of burial and the state of the bodies were very remarkable. Amongst the loose rubble were placed the remains of about fourteen bodies, not laid in any order, but the broken bones scattered and lying in the most confused manner—half a jaw, for instance, resting upon part of a thigh-bone, and a fragment of a skull amongst the bones of a foot, whilst other portions of the same skull were found some feet apart. Nor was this disarrangement due to any subsequent disturbance of the barrow; on the contrary, there were most certain indications that the bones had been so deposited originally.

[6] I use the word *trench* for convenience. I cannot say whether this was a trench proper, cut into the barrow, or was a space left open when the mound was raised; I think the first most likely.

From the broken and dislocated state in which they were found—no two in their relative positions—there can be little doubt that before they were entombed the flesh must have been removed; and this fact, together with the evidence of violent fracture of at least two of the skulls, at or before death, suggests a theory which will presently be considered. The opening was cut into the trench about mid-way; and as it was explored towards the east we came upon signs of burning, at first slight, but gradually becoming more evident, in burnt earth, stones, and bones, together with charcoal, until, at the east end, the oolitic limestone became lime, and all traces of bone had disappeared. As we explored it towards the west, the deposit of bones became gradually more sparing, until, before reaching the extremity of the trench, all remains of bone had ceased. Immediately beyond the western extremity of the trench, we came upon a regularly constructed cairn of stones, carefully laid in order from a centre; here our hopes rose high, in anticipation of finding beneath it the remains of the person in whose honor so large a mound had been raised; nothing, however, was seen when the pile was removed but the layer of forced clay before mentioned; nor, indeed, was there the slightest appearance of a body having rested below the cairn, which, being enclosed within the larger mound, must necessarily have been constructed before it. No trace of metal, no fragment of pottery or of flint, was found in this barrow. The complete calcining of the stones at the east end of the trench, and the gradual disappearance of burning as the trench was examined towards the west, seems to show that the fire had been applied at the east end, and after the trench had been filled in with the oolite rubble, among which the unburnt bones had been deposited. This singular mode of interment has no parallel, so far as my experience serves, except in a similarly-shaped barrow upon the wolds six miles south-east of Ebberston. About two years ago, the east end of that barrow was removed for the purpose of burning the stone for lime, when a trench similar to that in the Scamridge grave-hill was found, running, likewise, east and west. The east end of this trench was filled with perfectly calcined limestone, whilst, farther west, no trace of burning appeared. Amongst the rubble which filled the trench was found, with

other broken bones, a perfect skull. Unfortunately, this was not preserved; and it cannot, therefore, be compared with those from the Scamridge barrow.

The remarkable nature of grave-mounds of this class, the "long barrow," and of the skulls which they have been found to contain, calls for some remarks. They are nearly always placed, approximately, east and west, and have the interments at the east end.[7] They occur more abundantly in Gloucestershire and Wiltshire than in any other part of England. In districts where stone is found of a kind suitable for such a purpose, they contain a long chamber,[8] at the east end, formed of large slabs, and in some cases having offsets. Where stone is wanting, the interments are found deposited upon or nearly upon the natural surface[9], also at the east end, but the long barrows of the south-west of England do not appear to have had any trench similar to that in the Scamridge mound. They all, chambered or not, contain unburnt bodies, which present marked peculiarities.[1] The skulls are distinctly dolicho-

[7] Mr. Cunnington, in a letter in the Archæologia, vol. xv. p. 338, observes that nearly all the long barrows in his district (Wilts) stand east and west, the east being the wider end; and that, out of eleven which he opened, nine had skeletons at the east end. Sir Richard Colt Hoare says, "We have invariably found the sepulchral deposit placed under the east end of the tumulus, and the interments to consist of skeletons, buried in an irregular and promiscuous manner, and unaccompanied by those fine urns, gilt daggers, &c., which have rewarded our labours in the bowl and bell-shaped barrows."—Archæologia, vol. xix. p. 43.

[8] Nympsfield, Uley, and Rodmarton, in Gloucestershire; Littleton Drew, and West Kennet, in Wiltshire; Weland's Smithy, in Berkshire; and Stoney Littleton, in Somersetshire, are instances of chambered long barrows.

[9] At Winterbourne Stoke, and Tilshead, Wilts, as was the case in many other long barrows in the chalk district of that county, the bodies seem to have been placed on the surface of the chalk, after the turf was removed. In a few instances a rough pavement of flint nodules was found below the bodies, whilst at Winterbourne Stoke, and elsewhere, circular or oval hollows, sunk in the chalk, were placed near the deposit of bones; these contained nothing, but may possibly have served the same purpose, namely, receptacles for food or drink, as the urns deposited with unburnt bodies in the later grave hills.

[1] I am indebted to Dr. Thurnam for the valuable account of the Scamridge skulls which is appended in this note; the measurements are given in the table at the end of this memoir. "Five of the *calvaria* are sufficiently perfect to be measured, and their dimensions are given in the subjoined table. These, with four others still more fragmentary, appear to be the remains of five men and four women; four from 20 to 25, and five from 40 to 65 years. Of another adult the fragments are too scanty to indicate sex or age. In addition, there are fragments of the skulls of four or five children, of from 3 to 7 years; making a total of fourteen or fifteen. With one exception, all seem to have been of more or less elongate dolichocephalous type. There were marks of previous disturbance in the barrow; and Mr. Greenwell thinks that the excepted skull (No. 1) may have belonged to a secondary interment, which is probable from its more porous texture and lighter color, due, perhaps, to its more superficial position in the barrow. This skull is of moderately brachycephalous type, having a relative breadth of

cephalous,[2] and of a type quite different from those found in the round barrows; whilst, in many instances,[3] as at Scam-

·80, and its general form corresponds to that of the round-barrow skulls. I have classed it as that of a man, but it is below the medium size, and as the sexual characters are not well marked, it may be of a female. Of the four other skulls which can be measured, two, Nos. 2, 4, are moderately (·71), and two exaggeratedly dolichocephalous (·67—·56). The two last, Nos. 3, 5, require particular notice. No. 3 is probably the *calvarium* of a woman of sixty years, with all the great sutures ossified and nearly effaced. It is the most elongate and narrow cranium I have ever examined; its scaphoid character being most extraordinary, considering that it is not an example of *scaphocephalus* proper, or congenital synostosis of the parietals. The sagittal suture is, however, exuberantly ossified in the interforaminal region; and the obliteration probably dates from the infantile period. There is a single patulous parietal foramen, with rounded edges, in the border of the left parietal; and very distinct traces of a *carina* along the median line of the very narrow and flat frontal. To a small extent, some of the existing narrowness of this calvarium may be due to posthumous distortion; the lower edges of the parietals having been pressed inwards by the superincumbent earth. No. 5 appears to be the skull of a young man of about twenty. All the sutures are perfectly open within and without. It has the same narrow frontal as No. 3, but without any trace of a central ridge. There is marked annular depression in the post coronal region, which, with the full parietal tubers, gives a slightly klinocephalic character to the calvarium. The left parietal foramen is a little larger than the right, corresponding with which the left parietal tuber is fuller than that of the opposite side. But for the greater development of these tubers the skull would be almost as narrow as No. 3. This skull is, moreover, of great interest, from the clear indications it affords of having been violently cleft at the time of death. The clefts affect the centre and left side of the frontal and the left parietal. The numerous fragments of No. 6 could scarcely fail to convince the most incredulous of their character and origin; the edges of the divided bones being perfectly sharp and clean, and the fragments themselves having a porcelaneous character quite distinct from that of the uncleft bones. Two, perhaps three, blows must have been inflicted on the head, probably by a blunt instrument, as a club or stone axe. One, on the frontal region, did not at first split the skull, but broke away part of the outer table, and produced a depression and cracking of the inner. In one or two other very fragmentary skulls, including that of one child, less decided marks of cleavage are seen. The very distinct proofs of it in No. 5, and above all in No. 6, are most important, as establishing the same rites and usages in the north of the island with those the traces of which I have now so often noticed in the long barrows of Wilts and Gloucestershire."

[2] Long barrows at Heslerton-on-the-Wolds, in the East Riding, and at Dunington, near Rotheram, contained several skeletons, of which the skulls are dolichocephalous. The examination of the long barrows of Derbyshire and Staffordshire by Mr. Bateman and Mr. Carrington has afforded the same results. Bateman's Vestiges, pp. 46, 47, 91, 103; Ten Years' Diggings, pp. 94, 144. The long barrows of the S.-W. of England contained similarly shaped skulls. See papers by Dr. Thurnam, Crania Brit., *passim;* Archæologia, vol. xxxviii. p. 405; Arch. Journ., vol. xi. p. 315; Memoirs Anthropol. Soc., vol. i. pp. 120, 459. To Dr. Thurnam we are indebted for having established the connection between the long barrows and the dolichocephalic skulls, as also that the broken skulls from the long barrows are the result of purposely inflicted violence.

[3] A long barrow, four miles from Pickering, in the North Riding, almost leveled by cultivation, and which ran east and west, produced at the east end portions of a leg and arm bone, quite black, and below these a skeleton, which wanted the skull, which, indeed, had never been buried with it. Bateman's Ten Years' Diggings, p. 227. In the south-west of England cleft and broken skulls have been found in the long barrows of West Kennet, Littleton Drew, Uley, Tilshead, and Rodmarton.—Crania Brit., pl. 59. Dr. Thurnam has since found such cleft crania in the long barrow on Fyfield Hill, near Pewsey, Wilts.

ridge, some of the bodies have been subjected to violence and mutilation, the skulls being broken into pieces, apparently by a blunt instrument, such as a stone hatchet or a club. At Scamridge the flesh must have been removed from the bones before they were buried, or they would not have been found displaced in the manner above described. This strange breakage of the skulls and removal of the flesh suggest practices, at the burial of these people, which even historic evidence might lead us to look for. It appears to me, that, in these broken skulls and disjointed bones, we have the result of feasts, at the interment, where slaves, captives, or others were slain and eaten. In what other way are we to account for the circumstances connected with these deposits? If they were the bodies of persons slain in war, we might indeed find the cleft skull and the broken bones, but the accidents of war do not account for the scattered state in which the bones are found, and that in cases where no subsequent disturbance appears to have displaced them. And though anthropophagism may appear so repugnant to us, that we can scarcely realise its ever having occurred in our country, yet it has been so universal, that we may, from this very universality, admit the possibility that the early inhabitants of Britain may have practised it. But we have, beyond this, the authority of ancient writers,[4] that, at a time many centuries probably after the period when these long barrows were raised, cannibalism was common in Britain and the adjacent countries. I leave the facts as I have described them, and which present so remarkable a feature in the Scamridge barrow, to the consideration of the reader, only repeating that the circumstances are consistent with the supposition that these broken bones had been the relics of the funeral feast, but scarcely, I think, with any other hypothesis.

It is probable that in these long barrows we have the earliest sepulchral remains in Britain.[5] Their great extent, and the disproportion between the size of the mound and that of the place of burial within it, betokens high antiquity. No trace of metal has been found with the interments, and in

[4] Diodorus Siculus, Lib. v. cap. 32; Strabo, Lib. iv., cap. 5, s. 4; Plinius, Lib. vii. s. 2, Lib. xxx. s. 4; Hieronymus adv. Joviuum, Lib. ii.

[5] I here only refer to Britain since it assumed its present geological features and system of animal and vegetable life. Many earlier forms of man have no doubt occupied this country, of some of which we find the implements in the drift, associated with animal remains of a type, as regards species, other than that now existing upon the earth.

many of them, as at Scamridge, no implements or weapons of any kind have occurred. It is doubtful also whether any pottery, of the same date as the original burials, has been discovered in a long barrow.[6] The presumption then is in favor of their having been raised by a people ignorant of metal, though, of course, no proof of such ignorance can be alleged from its absence. Taking, however, all the circumstances into consideration, I am inclined to attribute them to a stone-using race, which was supplanted or intruded upon by one acquainted with bronze, and whose burial places remain in the round barrows described in this memoir. This view is strengthened, I think, by the craniological features of the long-barrow skulls. They certainly possess a marked character, and one which, I agree with Dr. Thurnam in thinking, is typical of a distinct race. Had one or two of the long barrows afforded the dolichocephalic skull, whilst others had given us skulls similar to those of the round barrows and the short cists, perhaps no theory of distinct races would have been tenable. But the long barrows have, hitherto, universally produced the dolichocephalic skull, which, taken in connection with the shape and method of the mound, the absence of metal and perhaps of pottery, and the manner of the burial, affords strong grounds for believing that, in them, we have the places of sepulture of a different and an earlier race than the bronze-using people to whom the round barrows belong.

The barrows next examined [B] lie a little beyond the district which we have been considering. They are found in a hollow in the chalk hills of the wolds, about four miles north of Driffield. They are called the Danes' Graves, and number nearly two hundred,[7] lying close together in a wood. Several were opened a few years ago by the Yorkshire Antiquarian Society, but the greater number have been destroyed in digging for rabbits. I examined fourteen of these barrows on March 27th and 28th. They are all small, from 16 to 24

[6] Dr. Thurnam found fragments of pottery in the chamber at West Kennet, but as that barrow had, undoubtedly, been disturbed before, perhaps more than once, it cannot be asserted that these fragments belonged to the primary interments. By the kindness of Dr. Thurnam I possess specimens of this pottery, and, judging from the shape, ornamentation, and ware, I am inclined to attribute it to a late period—the end, in fact, of the round-barrow burials.

[7] Before the wolds were enclosed a great many more existed; it is stated that there were, originally, as many as 500.

ft. in diameter, and from 2 to 4 ft. in height, and are formed of chalk-rubble, the material at hand. The interment, in every one which I examined, as I believe was the case in those previously opened, was contained in an oblong hollow made in the natural surface, and the bodies appear to have been laid therein without coffins. As all the interments were, except in some unimportant particulars, similar, I will give the general character of the burial, noting separately those which presented any exceptional features. The bodies[8] were doubled up, so as to suggest that they must have been tightly swathed, in order to bring them into the required

[8] I am indebted to Dr. Thurnam for the account of the skulls, which is appended in this note. The measurements are in the table at the end of this memoir. "In the table, measurements of eleven skulls from the Danes' Graves are given. The six first were obtained by the Rev. W. Greenwell in the excavations of 1864; the other five were procured in 1849 in excavations under the direction of Dr. Thurnam, during a visit of the Yorkshire Antiquarian Club. Two of these last (Nos. 7, 8) are in the museum of the Yorkshire Philosophical Society, and three (Nos. 9, 10, 11) are in Dr. Thurnam's collection. The eleven skulls have an average relative breadth of ·73, and, with one exception, may be called dolichocephalous. Seven of the number are of very elongate form (·70—·73); three are of the intermediate, ovoid, or orthocephalic form (·75—·76); one only is sub-brachycephalous (·79), and this is the skull of a woman (No. 3), from grave No. 8. This last may, perhaps, but not necessarily, indicate an intermixture of race. In two of the skulls (Nos. 2, 7) the frontal suture is persistent, which has produced a slight degree of frontal brachycephalism, so that the general form is less elongate than it might otherwise have been. The dolichocephalism of these Danes'-Grave skulls is more marked than those of an extended series of Anglo-Saxon skulls, the measurements of which are given in Crania Britannica (tables vi., vii.) the relative breadth of which is ·75. On the other hand, it is less than that of the still more extended series of ancient British skulls from the long barrows, in tables I., II., of my paper "On the Two Principal Forms of Ancient British and Gaulish Skulls." (Memoirs of the Anthropological Society of London, 1865, vol. i. p. 120, 459.) In this class of dolichocephalous British skulls, the average relative breadth is not more than ·70 or ·71. The problem in regard to the skulls from the Danes' Graves seems to be—are they what the popular name of these small barrows would imply, the skulls of Scandinavian settlers, during, perhaps, the ninth century, or are they those of descendants of a remnant of the primeval British long-heads, whose skeletons are found in the long barrows of the stone period? The archæological data are not sufficiently conclusive to enable us to decide positively this question. So far as the craniological evidence goes, there would be no difficulty in connecting these skulls with the cranial form of the Scandinavian peoples at the present day. This is well known to be a long ovoid, and to be characterised by a full and protuberant occiput. (Meigs' Catalogue of Crania, &c., pp. 19, 20. *Id.* in Nott and Gliddon's Indigenous Races, 1857, p. 290. Crania Brit., pl. 27, 48, 56.) This last is a marked feature in the Danes'-Grave skulls. On the other hand, they appear to be distinguished from the ancient British long-barrow type, not only by their more moderate dolichocephalism, and by the somewhat greater prominence of the parietal tubers, with which the former is intimately connected, but likewise by the slighter prominence of the glabellæ and supraciliaries. These distinctions are not adduced as conclusive; but so far as they go, they are more readily connected with the cranial characteristics of some Teutonic-speaking people, than with those of any ancient Celtic-speaking people of the west of Europe, so far as these are known to us. As regards the facial characteristics of the Danes'-Grave skulls, the jaws are, with scarcely an exception, upright or orthognathous. The crowns of the teeth are moderately eroded."

shape; the hands were placed upon the chin, the bodies were laid some on the left side, some on the right;[9] of those which were sufficiently perfect to determine this, six were on the left and five on the right side; and, whilst seven had the head to the north, or to the west and east of north, two had the head to the south-west, one to the west, and one to the east. In one instance two bodies were interred in the same barrow; the first, that of a child about five years old, just below the summit of the mound; the second, that of an old person, and, judging from the imperfect pelvic bones, most probably a male, in the usual hollow made in the natural surface of the ground. In three of the graves an urn had been placed close behind the head; these urns, however, were so much decayed that the shape can scarcely be ascertained. They are quite plain, pale grey-colored on the exterior, but of a dark-colored ware in the middle, full of small pieces of stone. These urns are well formed by the hand, with the lip slightly turned over, and they measure a little under 5 in. in height. The most remarkable interment, [c] was that of a man, laid upon his right side, and with his head to the west; lying close to the mouth, so close that some of the teeth are discolored by the oxidation of the metal, was a piece of iron, too much corroded to assign any certain use to it (see woodcut, fig. 1, half orig. size). On each side of the man were placed two goats, their heads like his to the west. The occurrence of a goat with an interment is exceedingly rare; we have numerous instances where a horse,

Fig. 1. Iron relic, Danes' graves.

ox, deer, boar, or dog has been buried with a man, but except this at Danesdale, I only know of two other cases where a goat has been found associated with a burial.[1]

[9] Of five bodies discovered, when the examination by the Yorkshire Antiquarian Club took place, two had been laid upon the face.

[1] In a barrow six miles north of Pickering was a cist, in which was found a skeleton, where, along with several flints, was deposited near the head of the man a head of a goat. Bateman's Ten Years' Diggings, p. 223. At Therfield, near Royston, with the remains of other animals, were found in a barrow two crania, which Professor Quekett considered to be those of goats. Proc. of the Society of Antiquaries, 2nd series, vol. i. p. 306.

In the almost entire absence of weapons or implements in these barrows, it is difficult to arrive at any conclusion as to the period of their erection, or the people by whom they were made. The name "Danes' Graves" cannot, I think, be taken as proof of their Danish origin, for that designation has been frequently applied to camps, lines of entrenchment, and barrows,[2] which have certainly no connection with that people. The cruelties practised by the Danes seem to have made so strong an impression, that the people who suffered by them appear, sometimes, to have called certain works of unknown origin after the name of their oppressors, just as similar remains were named after the Devil. At the same time some weight must be allowed to the popular tradition, and if nothing about these grave-hills is inconsistent with a Scandinavian origin, it is only fair to admit the probability of their being the burial-mounds of some Danish settlers.[3]

My own opinion is against their Scandinavian origin. The mode of interment is unlike any which has been found in Denmark, Norway, or Sweden; I do not make this assertion upon my own authority, but on that of Mr. C. F. Herbst, of Copenhagen, the Scandinavian archæologist, to whom my notes of these barrows were submitted. The pottery also is not such as is found in Danish grave-mounds, either in shape or fabric. On the other hand, if we attribute these mounds to a tribe of kindred origin with those who buried under the ordinary round barrows, we are met by more than one difficulty. The bodies in the "Danes' Graves" had been interred in a much more contracted position than is usual in the "British" burials. The great number of these barrows, and their close grouping, are also peculiar features; for, though two or more "British" grave-hills are frequently found together, they are never massed like graves in a churchyard, as at the "Danes' Graves." The crania, as will be seen from Dr. Thurnam's account, are not of the brachycephalic type, so distinctive of those found in the round barrows and stone cists, but approach nearer to the long Scandinavian type; a fact of great importance, when the number of

[2] The "Danes' Hills," near Skipwith, in the East Riding, are barrows which contain interments of burnt bodies, having nothing in common with what we know of Danish interments.

[3] The burials are those of a settled population and not of any mere invaders. This is indicated by the number of the barrows, and the frequency of the interments of women, as well as by that of a child.

skulls examined is considered. The pottery is neither in shape or color like that of which so many specimens are described in this memoir, and it also differs from it in the absence of ornamentation, but it is still more unlike Scandinavian or Anglo-Saxon ware. The presence of iron indicates a comparatively late period; but the nature of the objects found, whether of iron or bronze,[4] gives little, if any, clue to the origin of these barrows. I therefore prefer, in the absence of any distinctive data, to offer no conjecture as to the people to whom these burials belong, nor do I think that further examination would add much information to that which we already possess.

April 20th, August 30th and 31st, and September 1st, were occupied in examining two "houes" on the moors, about two miles south-west of Egton Bridge, near Whitby. One of these, called "William Houe," had been in great part removed to make a road, passing close by it. It must have been, originally, not less than 80 ft. in diameter, and was formed entirely of stones. When the greater part was taken away, forty-seven years ago, several urns were found. I examined nearly the whole of that which remained, and found two interments of burnt bodies. The first [D], which was at the south-east side of the barrow, was laid upon the natural surface, and extended over an area of about 3 ft. in diameter; the burnt bones, interspersed with fragments of charcoal, were scattered on the surface, and amongst them were placed, here and there, at intervals of several inches, fifteen jet beads (see woodcut, fig. 2), which had doubtless

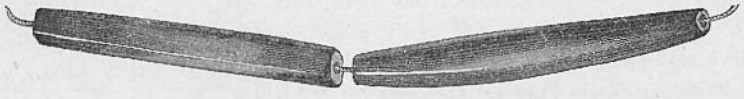

Fig. 2. Beads of jet; orig. size.

formed the necklace of the female whose ashes were here deposited. The beads had been unstrung, and strewn amongst the burnt bones, after they were cold, for there was not the

[4] A bronze armlet, found with part of a jet armlet and what is called an iron comb, was disinterred in one of the "Danes' graves;" it is now in the Ashmolean Museum at Oxford, and is figured, Arch. Journ., vol. xvi. p. 83. It is not unlike an armlet of gold, in the Copenhagen Museum, figured in Worsaae's Nordiske Oldsager, No. 380, edit. 1859, and so far countenances the supposition of the Danish origin of these barrows.

slightest trace of the action of fire upon the jet. Fourteen of the beads are cylindrical, swelling in the middle, and measure in length from 1 in. to $1\frac{3}{4}$ in.; the remaining bead is of an oblong square form. They are all perforated with great regularity; and this, together with the narrowness of the piercing, makes it almost certain that the drilling must have been worked by a metal implement. The other interment [E] lay just east of the centre of the "houe," and about 3 ft. above the original surface of the ground. An urn was found, surrounded by burnt bones,[5] placed without any protection amongst the stones of which the barrow was formed. This urn, flower-pot shaped, is $5\frac{1}{2}$ in. high, 6 in. wide at the rim, $2\frac{3}{4}$ in. at the base; it is ornamented with four lines of impressions, herring-bone fashion, round the upper two inches; the impressions are formed probably by a square-ended piece of wood or bone; the lip has, on the inner surface, a row of similar impressions.[6] Some burnt flint chippings were found scattered amongst the material of which the barrow was made. I, at the same time, examined thoroughly a barrow, consisting entirely of stones, [F], about 50 yds. north of "William Houe." This, though it had been disturbed in digging stone for the road, had never been touched in the centre; however, except some burnt stones, charcoal, two pieces of burnt, and two of unburnt, flint, no signs of an interment were discovered.

On April 21st and 22nd, I opened two of the "Three Houes" on Egton South Moor. The northernmost barrow [G] first examined is 68 ft. in diameter, and 8 ft. high. It is formed of alternate layers of sand and turf, with here and there a stone at wide intervals, and had never previously been disturbed, the bands of yellow sand and dark-colored turf showing a beautiful section as we proceeded. We cut a trench 12 ft. wide from the south side, through the centre, and then extended it parallel to the outside, towards the east and west, for 40 ft. on each side of our first cutting. Two interments of burnt bodies were discovered; the first was 9 ft. from the outside of the mound, on the south side, and only 14 in. below the surface of the houe; nothing was found with it; the second occurred 9 ft. east of the centre,

[5] The bones are those of a single body, and of a person of moderate size, probably under thirty years of age.

[6] This urn is very similar in shape and ornamentation to one found near Castle Howard, figured in this memoir, *infra*.

and was 4 ft. below the surface of the houe, neither was anything found with it. I believe that this last was the original interment, and that it was intended to be in the centre of the barrow; that, however, had been lost in throwing up so large a mass of material. The examination was carried out for a considerable distance round the centre without finding any other burial, and I feel convinced that in this deposit—without urn, implement, or even a piece of flint—we have the interment of the person in whose honor the barrow was raised. A fragment of burnt flint was found on the S.E. side amongst the material of the houe.

The middle mound of the "Three Houes" [H] was examined by cutting a trench 16 ft. wide at the exterior, and narrowing to 12 feet at the centre, beyond which it was carried above 8 ft. This houe, 40 ft. in diameter, 5 ft. high, was, like the first, formed of alternate layers of sand and turf. Nothing was found in it. Though the cutting was so extensive, I fear that we missed the interment, and I reserve to a future opportunity a further examination.

The barrows next examined were equally disappointing. They were situated upon the Hambleton Training Ground, near Thirsk, and were two undisturbed grave-hills, amongst several already opened, which occupy a position overlooking the great plain of York. They possess a view of almost unrivalled extent, standing as they do on the verge of the limestone cliffs that formed the shore of the sea, which, once occupying the plain of York, rolled its waves against that massive barrier.

The first [I] was examined on April 25th; it lay on the E. side of the Casten Dike, an earthwork which runs for some miles parallel to the range of the cliffs. It was situated a few hundred yards from a small fortified place on the very edge of the crag, which, in fact, forms one side of its defences. The barrow, 68 ft. in diameter, $3\frac{1}{2}$ ft. high, was entirely of sand. We opened it by a cut 12 ft. wide, carried through the centre from the south side, and supplemented by another trench 14 ft. wide, which extended about 30 ft. along the south and south-east side. Just south-east of the centre, on the natural surface, was a space 3 ft. in diameter, covered with burnt earth and charcoal. Here and there amongst the sand were a few flint chippings, some burnt, the greater number unburnt, and also pottery, mere shards, however, and

Fig. 3.—Height 12 inches, width 11 inches.

Fig. 4.—Height 16 inches, width 18 inches.
Urns found in a barrow, Sutton Brow, near Thirsk.

which had never formed an entire vessel since they were deposited in the houe. We noticed a quantity of charcoal, but not a vestige of bone or any signs of an interment were found in any part of the barrow. Here again it is possible that the burial-place was missed.

The second barrow [J] about half a mile south of that last described, was opened on April 26th. Unlike the first, it was entirely of stone, 30 ft. in diameter and 4 ft. high. The stones were regularly laid from a central point overlapping each other; on approaching the centre these limestone flags became larger, and were placed with great regularity, sloping from the centre on every side. Notwithstanding so much promise, nothing was found below this pile but a layer of clay about 6 or 8 in. in thickness, placed there purposely, and in this were found some fragments of charcoal. Two flint chippings occurred near the top of the barrow. It was so carefully examined that I think it impossible that the interment could have been missed, and the only conjecture which suggests itself is this, that an unburnt body had been placed upon the layer of clay under the pile of stones, and that it had gone entirely to decay.[7]

After so many failures, I commenced, on April 28th, upon another barrow [K] without much hope. It was in a plantation on the left side of the road, ascending Sutton Brow, within a few yards of the edge of the cliff, and about a mile south of the barrow last described. It was 44 feet in diameter, 5 feet high, and formed of earth and clay, with a few stones here and there. A trench 10 feet wide was cut from the south side, and several flint chippings, amongst them a well formed "thumb-flint," were found, together with four fragments of pottery. On reaching the centre, and just 3 feet E.S.E. of it, 1 ft. below the summit, we came upon an urn (see woodcut, fig. 3) standing upright and full of burnt bones.[8] Owing to damage when the trees were planted, and to its being so near the surface, the upper part was much decayed. It is 12 inches high, 11 inches wide, with an overhanging rim, ornamented with two lines at the top

[7] I have examined a large number of small barrows in Northumberland, where no trace of an interment remained; the absence of any remains of bone is due, I believe, to the shallow burial in these cases, the free admission of air and wet completely destroying the body.

[8] The bones are those of a single body, and that of a person of full age and of small size.

and two at the bottom, round the rim, the space between being marked out into a series of triangles, filled in with parallel lines. Below the rim the urn slopes inward slightly for $3\frac{1}{4}$ inches, when the sides fall away rapidly to the bottom, which is 4 inches wide. The space below the rim is occupied by a double zigzag line. All the lines are made by impressions of cord.[9] At the bottom of the double zigzag is a row of short impressions of cord $\frac{3}{8}$ths of an inch in length, and half an inch apart. At the centre of the barrow, just below the surface, were a few stones placed together, no doubt to protect the urn, which we found just 2 feet below them. This urn (see woodcut, fig. 4), a large and fine specimen, was carefully packed round with clay and charcoal. It contained a burnt body,[1] which had been so perfectly consumed, that the bones occupied only a few inches at the bottom of the urn. This urn stood upright, about 2 feet above the surface of the ground, the intervening space being filled in with well-worked clay. The urn is 16 inches high, $12\frac{1}{2}$ inches wide at the mouth, and 18 inches at the bottom of the rim. The rim, which is overhanging, is 5 inches high, and has two lines at the top and two at the bottom, of impressed cord, running round it; between these are alternate series of horizontal and vertical lines of impressed cord, and the lip has likewise two lines on the inside, similar to those on the outside. Below the rim, for a depth of $2\frac{1}{2}$ inches, are rows of impressions, made by a sharp oval-ended instrument, probably of wood or bone. The width of this urn, at the bottom, is $4\frac{1}{2}$ inches.

It will be remarked, that, amongst the material of this barrow, were found chippings of flint and shards of pottery.[2] This is of almost universal occurrence in barrows, and they seem to have been placed with some religious significance. They cannot be accidental; flint is not found in the district, and the sand or other material of the barrow could not

[9] This impression, the most general ornament of the cinerary urns, has, probably, not been made by a cord of hemp, but by one of twisted strips of hide, as at least may be inferred from the appearance of the impression.

[1] The bones are those of a single body, and that of a person of average size and of full age.

[2] What are pious rites in one religion are frequently accounted accursed in a new one, and it is not impossible that this, a sacred Pagan custom, was remembered in Christian times, but was then associated with what is irreligious and unholy. A passage in Hamlet, act. v. scene 1, may have reference to this ancient rite, where the priest, answering Laertes relative to the burial of Ophelia, a suicide and so unholy, says:—

naturally contain them, and, moreover, they are more or less artificially chipped. The position in which they are found, here and there one, gives the impression that they were thrown in as the barrow was raised; and we may infer, I think, that they were scattered over the grave by the friends or relations. We can readily understand why the flint arrow-head or the knife was placed by the side, or with the ashes, of its former owner; the pious hope that it might be of use in another life was the motive; but what was the object in putting near the body these chippings of flint and fragments of pottery? Doubtless they symbolized some religious idea, though what that idea was we may scarcely conjecture. Was flint, the producer of fire,[3] an emblem of fire and light, and symbolical of purification and a new life? Did the potsherds,—the vessel broken and its use gone,—betoken death, destruction, and decay?

"Her death was doubtful;
And, but that great command o'ersways the order,
She should in ground unsanctified have lodged
Till the last trump; for charitable prayers,
Shards, flints, and pebbles, should be thrown on her."

[3] The Abbé Cochet adduces instances where, with Gallo-Roman, Frankish, and Anglo-Saxon interments, a flint and steel have been found. La Normandie Souterraine, 2nd edit. 1855, pp. 258—9.

(*To be continued.*)

NOTICES OF THE EXAMINATION OF ANCIENT GRAVE-HILLS IN THE NORTH RIDING OF YORKSHIRE.

PART II.

Barrows on Wykeham Moor, near Troutsdale; on Hall Moor, near Castle Howard; and at Scale House, near Skipton, in Craven.

By the Rev. WILLIAM GREENWELL, M.A.

THE district in which the next barrows I opened are found, is singularly rich in sepulchral remains. It is the range of oolitic hills between Troutsdale and the valley of the Derwent. A reference to Sheet 95, S.W., of the one-inch Ordnance Survey, will show how thickly studded it is with grave-mounds. Of these the greater part have been opened before attention was paid to the remains of the early inhabitants of our country; but many have been examined of late years, and, I fear, without record of the contents and of the manner in which they were deposited having been kept. It is impossible to reprobate too strongly that ignorant and greedy spirit of mere curiosity-hunting, which has done—and, alas! is still doing—such injury to a proper investigation of our ancient places of sepulture. The urn, the dagger, and the arrow-head, possess a very trifling interest, and give us, comparatively, little information, unless we know the circumstances of their deposition, and the objects with which they were associated.

A few barrows, however, remain in the district in question, wholly or in part untouched; and I proceed to record the opening of some of them. On Wykeham Moor are three houes a few yards apart, called the "Three Tremblers." Of the largest of these [L], on May 31st, June 1st and 2nd, I made an extensive examination. It is that which lies the furthest to the south, and is 98 feet in diameter, 11 feet high, and is formed entirely of sand. About 16 feet from the outside, and resting upon the natural surface of the ground,

was a line of stones,[1] which I have no doubt runs round the whole barrow. I cannot, however, affirm this, as I did not examine every part of the outside. At a distance of 13 feet from the outside, and just without the encircling line of stones, a trench 14 feet wide, and 49 feet long, was cut down to the natural surface. This trench was carried, parallel to the circuit of the barrow, from a little west of south, to the east side of the mound; we then took it through the centre, gradually narrowing it, until at 42 feet from the commencement of the trench, 56 feet from the outside of the barrow, we finished with a width of 14 feet. In this way all the central part, and the south and south-east parts of the houe were thoroughly examined. Shortly after commencing, we came upon a few fragments of pottery, just above the natural surface. These had never formed an urn, but were such pieces as are so often met with scattered amongst the material of grave-mounds. Throughout our digging we met with frequent chippings of flint, and pieces of charcoal, another common incident in grave-hills. Our first discovery of interest was made 25 feet from the outside of the mound, and S.E. of the centre. It was a small cist, 2 feet long by 13 inches wide, 5 feet from the surface, 3 feet from the bottom of the barrow, and consisted of a cover and two side-stones, these last resting on another flag-stone. In it was a small urn (fig. 5) lying on its side, and full of the sand of which the houe was made. The urn is $4\frac{1}{4}$ inches high, 5 inches wide at the mouth, and 2 inches wide at the bottom; the lip is $1\frac{1}{8}$ inch wide on the inside, a width much above the average, and is ornamented with three lines of impressed cord; the rim has a similar line

[1] These encircling rings of stones or earth, so frequently found surrounding barrows or other places of interment, have generally either a break in the ring if they are of earth, or a portion built up if they are of stones standing apart. This feature holds good, whether the ring encloses the barrow or a burial within it, or whether it surrounds interments which have never had a mound over them, and which are frequently called "Druid's circles." This peculiarity is too remarkable to be accidental; the break in the ring is represented in the stone circles by the portion which is built up, and both make the circle incomplete, or rather form a way into the inclosure within. Have we in these small incomplete circles, and in the great ones of Avebury, Stonehenge, Callernish, and Stennis, the same feature, the like symbol which is represented by the circular markings on the inscribed rocks? In them the central hollow has a duct leading from it, which makes all the circles incomplete. I believe there is a similar figure intended in the penannular rings of metal, where the incomplete circle is so persistent a type. This shape is surely not caused by its necessity for any purpose to which they might be put, but is rather to be considered as symbolical.

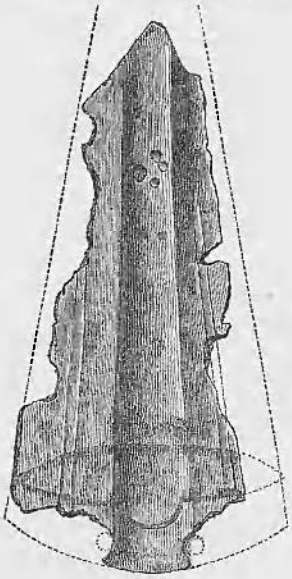

Fig 6.—Bronze dagger; length of orig. 8 inches.

Fig. 7.—Flint knife; length of orig. 4½ inches.

Fig. 5.—Height of orig. 4½ inches, width at the mouth 5 inches.

Urn, with relics of bronze and flint, found in a barrow on Wykeham Moor.

on the edge ; below the rim the urn has two lines impressed round it, and it here narrows to a diameter of $4\frac{1}{4}$ inches, swelling out again at $2\frac{1}{2}$ inches from the bottom to a width of $4\frac{1}{2}$ inches. No traces of bone, nor any signs of an interment, were found in or near the cist. About 8 feet from the centre, and 4 feet above the natural surface, a quantity of burnt earth and charcoal was found. Nothing more was discovered until we reached the centre ; when, about 2 feet S.E. of it, 4 feet below the summit, and 7 feet from the bottom, a bronze dagger (see woodcut, fig. 6), and a beautiful flint knife (fig. 7) were found, lying side by side, but without any bones, or signs of an interment. The dagger is of the ordinary type ; it was originally about 8 inches long, and had been deposited in its sheath of wood, of which portions were still upon it. The line where the handle, probably of wood, had joined the sheath, is very apparent ; it is of the semilunar pattern, not uncommon in such weapons ; the handle had probably been attached by two rivets—the hole for one of these is quite distinct. It is strengthened by a central rib, which has on each side two depressed lines, parallel to it. The flint knife,[2] $4\frac{1}{2}$ inches long, 2 inches wide, has been taken off from the nucleus at one slice, and that side has never been touched again ; whilst the other is carefully chipped over the whole surface, and has a ridge up the middle, both edges being very regularly serrated. There can be no doubt that both the bronze dagger and the flint knife had belonged to the person who was buried in this houe ; and we have, therefore, a valuable illustration of the contemporaneous use of bronze and stone.

During the highest cultivation of the bronze period, it is, I think, certain that stone implements were in common use. Poorer persons, probably, had no other articles than those of flint, or other stone ; whilst the richer had some of metal and some of stone. All who are acquainted with our early remains, must have observed that no bronze arrow-heads[3] have been found, whilst, on the contrary, flint arrow-

[2] I call this implement a knife because it has more in common with such an article than with any other. It generally figures in accounts of barrow openings as a spear-head, of which weapon, however, it has none of the distinctive shape. The people who fashioned the arrow-heads so beautifully, if they fabricated a spear-head in flint, would not have made one side straight, the other curved, and carefully rounded it off at the sharper end.

[3] Hoare, Ancient Wilts, vol. i. pl. xxxii. fig. 1, figures a bronze weapon, which he calls an arrow-head; but, judging from the broadness of the metal at the point

heads are abundant; and also that spear or javelin-heads[4] of flint, of which material they could have been as easily fabricated as the arrow-heads, are exceedingly rare. The explanation, I believe, is this;—such articles as a man retained by him, when in use, such as his sword, dagger, spear, and celt, were made of the more valuable material, bronze, while such as he threw from him, and which were therefore liable to be lost, such as arrow-heads, were of the commoner material, flint. Knives also and implements for scraping hides or bone, would continue to be made of flint long after the introduction of bronze, because for such uses it is well adapted.

On digging down to the original surface of the ground, 7 feet directly beneath the dagger and knife, and 11 feet below the summit of the barrow, we found the interment. The body had, apparently, been unburnt; no trace of bone was found; and burnt bone is so little liable to decay as to be almost indestructible. The remains of the body presented the appearance of a thin layer of dark matter,[5] which felt greasy when rubbed between the fingers; with this was a small fragment of bronze, so much damaged that it is impossible to conjecture what it had been.

The features in connection with this barrow are, in my experience, singular;[6] there was no indication that any other than one person had been buried in the grave-hill, large as it is, whilst the objects connected with the interment were not, as is generally the case, placed close by the body, but at a considerable distance from it. I cannot but attribute the urn, dagger, and knife to the burial which was found at the centre of the barrow, for no bone or trace of animal matter

where the rivet-holes are placed, to attach it to the handle or shaft, I should rather take it to be a small dagger. Toy weapons and implements have been found in barrows. A miniature bronze dagger, smaller than that from Wilts, is figured in Worsaae's Nordiske Oldsager, p. 33, No. 152. A remarkably diminutive bronze celt, found in Yorkshire, is figured in the Transactions of the Archæological Institute at the York Meeting, Museum Catalogue, p. 27.

[4] I must protest against giving grand names to very common things. We continually see in records of the opening of barrows, accounts of the finding of daggors and of spear and javelin-heads of flint. In most cases such objects are nothing more than mere flint flakes, and persons not practically acquainted with the usual contents of a barrow, will form a most erroneous notion of the frequency of the occurrence of such weapons when they read these accounts.

[5] A chemical analysis of this showed it to contain a large quantity of animal matter.

[6] Mr. Ruddock found in a sandy houe of large dimensions, 10 miles north-east of Pickering, an urn, deposited at some distance from the cist which had at one time contained the body. Another houe, situated not far distant from the last, produced nearly the same results. Bateman's Ten Years' Diggings, p. 218.

Fig. 8.—Height 5¼ inches.

Fig. 10.—Height 3½ inches.

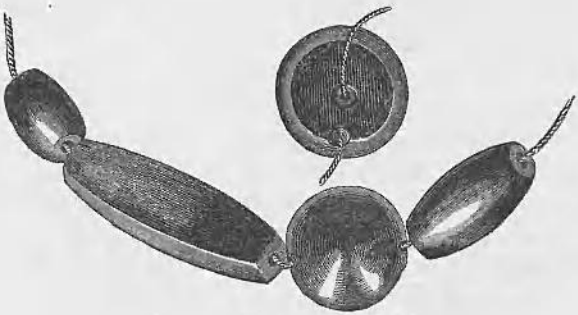

Fig. 13.—Jet Beads, original size.

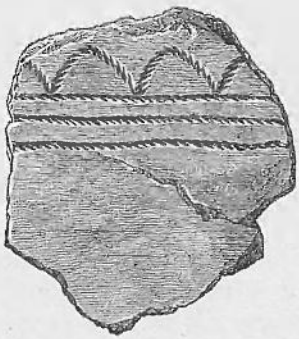

Fig. 11.—Fragment with unusual ornament.

Fig. 12.—Height 2 inches.

Urns and relics found in Barrows on Wykeham Moor.

was observed in contact with these articles. They must, therefore, if they did not belong to the central interment, have been placed in the mound without being connected with a body at all, which seems highly improbable. The body was laid upon the ground, earth was heaped over it, and above it were placed amongst the earth the dagger and knife; the mound gradually increased, and at some distance from the body was deposited the usual urn, after an unusual fashion.

June 5th and 6th were occupied in examining three houes, about a mile to the north of "The Tremblers," and upon the verge of the steep ground which slopes rapidly into Troutsdale [M]. The first, 30 feet in diameter, and 4 feet in height, was formed entirely of stones, and had a circle of large stones round the base. The several interments which it contained were placed upon a pebbly flooring, resting upon the original surface of the ground. About 6 feet from the outside, on the N.W., was a deposit of burnt bones without any urn or flint. Nine feet from the east side of the houe, and north of a line drawn through its centre, was a deposit of burnt bones, scattered over a space of above 3 feet in diameter. Amongst the bones were portions of pottery, apparently deposited as fragments, together with an urn. This urn (fig. 8) is $5\frac{1}{4}$ inches high, 6 inches wide at the mouth, and 3 inches at the bottom. The lip has, on the inside, two lines of impressed cord, running round the whole circumference; below the lip the urn narrows slightly, and then swells again about the middle to its first width. The upper half is ornamented with six lines of short impressions of cord about $\frac{1}{2}$ in. long, and placed herring-bone fashion. It was broken into pieces by the pressure of the stones, so that I cannot say whether any of the bones had been contained in it or not—I think the latter most probable.[7] Amongst the bones was an oval flint implement, carefully chipped on one side over the whole surface, and unburnt. It is of a type of which I have seen three or four specimens, that, unburnt themselves, have been found with burnt bodies. It has been probably used as a knife, and to scrape hides and bone. Due west of the centre, about 8 ft., and laid amongst

[7] I have no doubt that this is one of that class of urns found accompanying a burnt body, but which does not contain the bones. A few notes respecting this type of urn will be found hereafter.

the stones of which the tumulus was made, and about 2 ft. above the surface of the ground, were two unburnt, or very partially burnt bones, portions of a *tibia* and an *ulna*. They

Fig. 9. Flint: original size. See *note*, p. 99.

appeared to have been placed where we found them, as single bones, without any other part of a body, whilst the tumulus was being raised. In the centre of the houe was a circle of stones, set on edge, 4 ft. in diameter; within this circle, on the west side, was an urn so much decayed that the greater part fell into dust when touched; there was placed on its mouth, inverted over the burnt bones which filled it, a smaller urn (fig. 10), plain, $3\frac{1}{2}$ in. high, $3\frac{1}{2}$ in. wide at the mouth, and $4\frac{1}{5}$ in. at the middle, having two pierced ears opposite each other, apparently for the purpose of suspension. The larger urn has a pattern of an unusual kind (fig. 11). Amongst the burnt bones in the urn was a single piece of calcined flint. On the east side of the space within the circle was another urn, likewise filled with burnt bones, but so much decayed that it fell to pieces before the pattern could be distinguished. About 3 ft. east of the circle, and 2 ft. above it, was a single fragment of pottery. Above the circle the stones were much burnt, and burnt earth in considerable quantity was mixed with them.

Two other grave-hills, a few yards from the last, were then examined. They were natural elevations in the ground, and a few stones had been added to give a little increased height. The first [N] was 16 ft. in diameter and 3 ft. high. In the centre, in a circular hollow, in the natural surface, 2 ft. in diameter, and $1\frac{1}{4}$ ft. deep, was a deposit of burnt bones, with a single piece of calcined flint. The second [O], 16 ft. long by 12 ft. wide, and $2\frac{1}{2}$ ft. high, had a similar hollow in the centre, $1\frac{1}{2}$ ft. in diameter, and 2 ft. deep. This contained a deposit of burnt bones, with four calcined chippings of flint.

June 7th and 8th were employed in examining two bar-

rows about a mile to the west of "The Tremblers," and about 30 yds. apart. The first [P] was 27 ft. in diameter, and 4 ft. high, having, on the south side, an additional portion which projected about 5 ft. beyond the original circle of the houe, and had evidently been made since the mound was raised. The whole barrow was of sand. We commenced by examining the additional portion; and in it, 8 ft. S.W. of the centre, and 1 ft. from the surface, we found a deposit of burnt bones, scattered over an area $1\frac{1}{2}$ ft. in diameter. Amongst the bones was a small urn (fig. 12), of the so-called "incense-cup" type,[8] 2 in. high, $2\frac{6}{8}$ in. wide at the mouth, $3\frac{1}{8}$ in. about the middle, and $2\frac{1}{4}$ in. at the bottom. The lip, which slopes slightly outwards, is ornamented by a zigzag, the triangular spaces within which are filled in with parallel lines; below the lip and round the middle is a zigzag encompassing the urn; all the lines forming the pattern are faultily and irregularly made by a sharp-pointed instrument. With the bones was a small flake of calcined flint, a portion of a bronze pin, much oxidised, and four jet beads (fig. 13), two of which are oval-shaped, of different lengths; one is an oblong-square, and the fourth button-shaped, having the hole at the back pierced from the centre to the side. We then commenced upon the north side: when 8 ft. N.E. of the centre, and 1 ft. below the surface of the houe, we came upon a broken urn lying amongst burnt bones. This urn, much decayed and fragmentary, is quite plain, without any rim, $4\frac{3}{4}$ in. wide at the mouth, $2\frac{3}{4}$ in. at the bottom, and has probably been about $5\frac{1}{2}$ in. high. Amongst the bones were four pieces of calcined flint, which appear to be remnants of fabricated implements, and one chipping of unburnt flint. On reaching the centre, 1 ft. below the surface of the mound, we came upon portions of three urns,[9] with burnt bones, the urns appearing as if they had been broken by the introduction into the barrow of the two urns to be next mentioned. There can scarcely,

[8] These small urns, generally shaped like a common earthenware saltcellar, are not unfrequently found amongst the burnt bones; sometimes, as in this case, when the bones have been merely laid upon the ground, at other times amongst the bones within a larger urn, or in a circular hollow in the ground. They are often pierced with two holes closely adjoining to each other, sometimes near the top or middle of the urn, but also not unfrequently near the bottom.

[9] One had an overhanging rim ornamented upon the rim and below it with impressions of a pointed oval instrument. The other two had impressions of cord upon them.

I think, be a doubt that a subsequent burial had taken place in an already completed houe, and that the first burials had been in part disturbed by the second, possibly that of some member of the family over whose remains the tumulus had originally been raised. This secondary interment lay 4 ft. S.E. of the centre, when, on digging about 2 ft. below the surface of the houe, we came upon a flat stone; this covered an urn, standing upright, and carefully packed round with charcoal. About one-third part of the urn was filled with burnt bones;[1] above these, the remaining space was occupied by charcoal, and by a second urn placed within the first in an inverted position, and full of soil, with a few burnt bones. Amongst the bones in the larger urn was a calcined flint[2] (fig. 14), 2 in. long, and $\frac{7}{8}$ in. wide, which has lost a portion of the broader end during the burning. It is taken off the original core or nucleus at one slice on the one side, having the other side carefully chipped along both edges. It is not an arrow-head, and is perhaps one of the many types of the "thumb-flint."

Fig. 14.

The larger urn (fig. 15) is 13 in. high, $10\frac{3}{4}$ in. wide at the mouth, and $12\frac{1}{2}$ in. at the lower edge of the overhanging rim; the inside of the lip has two lines of impressed cord running round it. The rim, $2\frac{3}{4}$ in. in depth, is ornamented by five lines of angular impressions, made apparently by the end of a square-cut piece of wood. Below the rim the urn falls perpendicularly for 3 in., and then slopes away to the bottom, $3\frac{7}{8}$ in. in diameter; the perpendicular portion has six lines of impressions, probably made by a knot tied into a thong. The smaller urn (fig. 15*), found inverted within the larger one and shaped like it, is 7 in. high, 6 in. wide at the mouth, and $6\frac{1}{2}$ in. wide at the bottom of the overhanging rim. The inside of the lip is ornamented in the same way as that of the larger one; the outside has a line of short

[1] The bones are of a single person, scarcely of full age, probably of either a woman or a small man.

[2] A similar-shaped flint, there called an arrow-head, is noticed, Arch. Journ., vol. viii. p. 344. It was found in an urn in a barrow at Broughton, Lincolnshire.

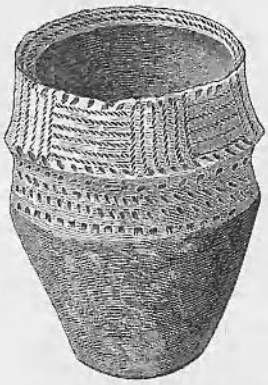

Fig. 15*.—Height 7 inches, width at the mouth 6 inches.

Fig. 15.—Height 13 inches, width at the mouth 10¾ inches.

Urns found in a Barrow on Wykeham Moor.

slanting impressions, made probably by the end of a piece of wood; and the bottom of the rim is similarly marked, except that the impressions slope in the other direction, the interval being filled in alternately with vertical and horizontal lines of impressed cord. The perpendicular portion, below the rim, has four lines of short impressed marks around it. About 6 ft. S.W. of the centre, and just below the surface of the houe, were three stones, and under them a deposit of burnt bones, with an urn crushed and decayed. This urn is 6 in. in diameter at the mouth, $7\frac{1}{4}$ in. at the base of the rim, which is $1\frac{3}{4}$ in. in depth, and 3 in. in diameter at the bottom; the height has, probably, been about 7 in. The rim, which is overhanging, has one line of impressed cord at the top, and alternate series of vertical and horizontal lines of similar impressions occupying the remainder. Amongst the bones was a portion of a large and well-made barbed arrow-head of flint, calcined, and three other fragments of flint, likewise calcined. Just S.E. of the large central urn, and like it placed on the natural surface of the ground, was a very rudely-made urn, 7 in. high, $5\frac{1}{2}$ in. wide at the mouth, and $6\frac{1}{8}$ in. at the base of the rim, which is overhanging, and marked with irregularly-placed impressions, apparently of loosely-twisted cord. In the urn and around it were burnt bones, amongst which was a small-barbed arrow-head of calcined flint. This houe showed more signs of burning than any I have examined; the south side had on the surface of the ground a great quantity of burnt earth and stones, and the north side had large portions of charcoal; in fact, for about 5 ft. in width and 1 ft. in depth, running through the houe, the entire material was charcoal; many of the pieces were large, one being 11 in. long, 7 in. deep, and 7 in. wide.[3]

[3] In barrows where many urns, evidently of contemporaneous deposition, and all containing burnt bones, are found, it is difficult to understand how it happened that so many persons were buried at the same time. We may suppose that, occasionally, an epidemic or a battle had caused many deaths, and therefore the necessity for several burials at one time, but the finding of more than one interment in a barrow is so common that such a mode of accounting for it seems scarcely satisfactory. It has occurred to me, that the dead may have been burnt and inurned, and then kept unburied until at the decease, perhaps, of the head of the family, a barrow was raised over his remains, when the other members who had died before him, and whose burnt bodies were preserved, each in its urn, were placed in the tumulus with him. This feature may also be accounted for on the supposition that some of these burnt bodies are the remains of wives or other persons slain at the burial of the chief.

The second houe [Q] was 28 ft. in diameter, and $4\frac{1}{2}$ ft. high. It was formed of sand, and had a ring of stones round the base. We soon found that it had been previously opened, both in the centre and upon every side except the south, where, a few feet from the centre, standing upright and placed upon the surface of the ground, we found an urn containing burnt bones.[4] This urn is $12\frac{1}{2}$ in. high, 11 in. wide at the mouth, and 12 in. at the bottom of the overhanging rim, which is $3\frac{3}{4}$ in. in depth, and has five irregular lines of circular-dotted holes running round it; below the rim it descends perpendicularly for $2\frac{1}{2}$ in., and then falls away to the bottom, which is $5\frac{1}{2}$ in. in diameter. Amongst the bones were two fragments of calcined flint.

On September 7th, 8th, and 9th, by permission of the late Earl of Carlisle, I opened three barrows on Hall Moor, near Castle Howard. These were in an unusual position, being in a valley, and though those I examined were not on the lowest part, yet one, previously disturbed, was close by the stream which runs through the hollow. The first mound [R], 56 ft. in diameter, and 6 ft. high, was of mixed clay and sand, very firmly compacted, and difficult to dig into. We began by cutting a trench, 10 ft. wide, into the barrow upon the north side; this was carried through the centre, where, to our disappointment, we found that an opening had been made previously. This opening had been cut down to the bottom of the barrow, and the interments disturbed. They had been placed in a circular hollow in the natural surface, 2 ft. in diameter and 1 ft. deep. The burnt bodies had been deposited in or with four urns,[5] and placed in this hollow;

[4] The bones are those of a single body, of a person of moderate size; age from 25 to 30 years.

[5] Two of these have been large urns, and two much smaller. The first of the larger urns had been a fine specimen, with an overhanging rim $3\frac{1}{4}$ in. deep, ornamented with five lines of short, sharp-ended oval impressions running round the urn, whilst the inside of the lip had a similar line of roundish-shaped impressions. Below the rim for a space of 3 in., as much of the urn as is now left has lines of impressions similar to those on the rim. The second large urn had an overhanging rim ornamented with lines of impressed cord, those on the only piece which is left are horizontal; the inside of the lip had three, if not more, similar lines round the circumference. One of the smaller urns had, on the overhanging rim, which is $1\frac{5}{8}$ in. deep, two lines at the top and three at the bottom of impressions made by a very delicate cord, the intervening space being filled in with three rows of short parallel lines, made by the same kind of cord, herring-bone fashion, these rows being divided from each other by a line similar to those which encompassed the urn at the top and bottom of the rim; the lip had on the inside a similar encompassing line. A small fragment, probably of the same urn, has a fine diamond pattern of delicate impressed cord, and below this three lines of impressions of

but the urns had been broken at the former opening, the bones taken out, and reburied in a hole made near the surface of the barrow, just south of the centre, and the greater part of the broken urns carried away or thrown aside. At the bottom of the hollow, and just under the bottom of an urn which had not been disturbed, was a round, thick, well-formed "thumb-flint" (fig. 16). At the centre of the barrow, and just below its surface, several stones were laid over the spot where the principal interments had been deposited; this is an incident of not unusual occurrence. Amongst the bones which had been taken out of the urns were several pieces of calcined flint. When we got within 15 ft. of the outside of the barrow, upon the S.E. side, about 2 ft. from the surface of the houe, we came upon an urn placed upright and filled with burnt bones. This urn, rudely made and decayed, is $13\frac{1}{2}$ in. high, 12 in. wide at the mouth, $13\frac{1}{2}$ in. at the bottom of the overhanging rim, and 4 in. at the bottom of the urn. The rim, 3 in. deep, is ornamented with impressions irregularly placed, and forming no pattern; below the rim the urn falls away perpendicularly for 3 in., and then slopes to the bottom. Amongst the burnt bones within was a flint knife, of the same shape as that from "The Tremblers" (fig. 7); it is $3\frac{3}{8}$ in. long, and $1\frac{1}{4}$ in. wide. It had been burnt with the body, and during the burning it had splintered into six pieces; this is the only instance in which I have been able to put together the fragments of an implement which had been placed upon the funeral pile, and had become shattered during the burning. Scattered amongst the material of the barrow were flint chippings, and also a small round "thumb-flint."

Fig. 16.—Thumb-Flint; original size.

The second barrow [s], formed of sand, was 16 ft. in diameter and $1\frac{1}{2}$ ft. high. The interment, of a burnt body, was at the centre, in a hollow about 12 in. in diameter and 6 in. below the surface of the ground. Over this hollow, and

similar cord encompassing the urn. The second of the smaller urns had the overhanging rim, which is $1\frac{1}{2}$ in. deep, ornamented by lines of impressed cord, also very delicate, encompassing the urn.

overlapping the place of the deposit, was a layer of charcoal, 1 in. thick, whilst above the charcoal, and extending through the whole barrow, was a layer of clay and sand, about 4 in. thick, evidently indurated by fire. Amongst the material of this houe was a single piece of calcined flint.

The third and most remarkable barrow [T] was situated about 50 yards from the last; it was 60 ft. in diameter, $7\frac{1}{2}$ ft. high, and of loose sand. We cut a trench 10 ft. wide through the centre, from the N. to the S. side. Three feet from the surface of the barrow we came upon a stratum of sand, gravel, and clay, $1\frac{1}{2}$ ft. thick, burnt into a hard mass;[6] this extended throughout all that part which we examined; at and around the centre it was almost as hard and red-colored as brick, and must have been subjected to strong, long-continued fire before it could have undergone so great a change. This barrow thus contained the like burnt stratum as the last, but the interment in this case was above and not beneath it. The burnt remains, reduced to a small compass, had been deposited at the centre, resting upon the burnt stratum; with the bones was an urn (fig. 17), rather rudely formed, but of well-baked clay, with an unburnt "thumb-flint" of the long type, 2 in. in length and $1\frac{1}{4}$ in. wide. The urn, similar to that found in William houe (p. 17), of the so-called "food-vessel" type, is 5 in. high, 6 in. wide at the mouth, and $3\frac{1}{4}$ in. at the bottom. The lines of impression by which the pattern is formed are those of a square-ended piece of wood or bone; some of them are produced by the application of the end, and others by the side of such an implement. The burnt stratum, extending throughout the barrow, is a very singular feature. With the exception of these two cases, I have seen no other. It is not an unfrequent occurrence to find spots in a barrow where burning[7] has taken place, but these extend over comparatively a small area, and do not show signs of a large or long-continued fire, whilst those in

Fig. 17.—Height of original, 5 inches.

[6] "About a yard from the bottom, a thin ferruginous seam ran through the mound, perfectly solid and hard, like pottery, which might possibly be the effect of heat."—Bateman's Ten Years' Diggings, p. 62.

[7] I do not think that these have been places where a body was burnt, the space

question have the burnt matter extending throughout the area, and everything indicates a lengthened burning.

The last barrow examined [U] was quite out of the district in which those previously described are situated, but in one which, like it, abounds in early remains. It was at Scale House, in the parish of Rylston, near Skipton, in Craven ; it was opened on October 25th. The barrow, 30 feet in diameter and 5 feet high, was of clay, and had a shallow ditch around it, close to the base. Over the centre and just beneath the surface was a layer of flat stones, carefully arranged. Under this the clay was well packed, and lay upon a thin stratum of dark earthy matter, full of charcoal. Below this was a layer of finer clay, better worked than that above the earthy matter. Beneath this, carefully embedded in it, was an oaken coffin laid upon clay, among which were a few stones, apparently to support the coffin, placed in a hollow in the surface of the ground. The coffin was formed of the trunk of an oak,[8] split in two and then hollowed ; the trunk was 7 ft. 3 in. long, and 23 in. wide, cut off at each end and partly rounded, but not squared at the sides. The hollow within was 6 ft. 4 in. long and 12 in. wide, roughly cut out, showing marks of the tool ; the ends finished off square. The coffin, much broken and decayed, but perfect enough to exhibit its arrangements, was laid N. and S., having the thicker end, which had probably held the head of the body, to the S. No trace of the body was discoverable beyond an unctuous whitish substance, the remains, as chemical analysis showed, of animal matter. The corpse had been enveloped in a woollen shroud,[9] of which enough remained to show that the whole body had been wrapped in it. It was, as might be expected, very rotten, so that it was impossible to remove more than small portions ; these, however, are sufficiently perfect to show the material and fabric.[1]

is not large enough to contain so great a mass of wood as would be required for the funeral pile. I believe that they are, rather, the sites of the fires at which the burial-feast was cooked.

[8] Similar coffins have been found in barrows in Denmark ; one at Biolderup, North Slesvig, in 1827, and another near Flynder church, in Jutland, in 1863 ; within this last were the remains of a garment, and a bronze dagger.—Gent. Mag., 1863, vol. ii. p. 328.

[9] In a grave-mound called King Barrow, near Stowborough, Dorset, was found in 1767 an oaken trunk hollowed, containing remains of an unburnt body wrapped in deer skins sewed together, which had been passed, apparently, several times round the corpse. At the S.E. end of the coffin was a small wooden vessel, of very unusual character, figured in Hutchins' Dorset, vol. i. p. 25.

[1] A small portion of woollen fabric, very much like this in texture, was found

It is of a dark brown color, probably due to the tannin in the oak, whilst to the acid in the wood, set free by the percolation of water through the barrow, is perhaps to be attributed the total destruction of the bones.[2] The woollen fabric, of coarse and loose texture, has apparently been woven by a kind of platting process without a loom; in this opinion Mr. James Yates concurs, and no more competent authority on such matters is known to me. Nothing, except this woollen stuff, was found in the coffin, nor was anything besides a few fragments of charcoal discovered in the mound. We are thus left without much evidence to determine to what people this very remarkable interment may belong, no weapons or implements having been deposited with it. But if we take into consideration the size, shape, and make of the barrow, the encircling ditch, the stones placed over the centre, the presence of charcoal and signs of burning, I see no reason to hesitate in referring it to the same people who usually placed the body in a stone cist within the mound, but who, in this and other instances, for some unknown cause, departed from their usual practice. This mode of interment is certainly rare,[3] although burials in cleft and hollowed trees, without any grave-mound, are not uncommon.[4]

Such is the record of my Yorkshire barrow-diggings

by Mr. Mortimer, of Fimber, amongst a deposit of burnt bones, in a barrow on the Wolds, near that place.

[2] At Featherston Castle, in Northumberland, where several coffins similar to this have been found in a wet situation, the bones had entirely decayed, except in one instance, where, however, all the earthy part had disappeared, leaving the bones of a substance very much like leather. The hollows within the bones were filled with the rare mineral *vivianite*.

[3] Besides the well-known burial at Gristhorp, I know of three other cases in Yorkshire, in which an oak coffin was discovered in a barrow. One at Sunderlandwick, near Driffield, where, I believe, nothing was found in the coffin except the bones; the second on the Wolds near Fimber, where, under a mound which had been previously opened, Mr. Mortimer discovered in a hollow sunk in the rock a coffin, made from a cleft trunk of an oak, much damaged by the former opening. With the broken coffin, besides fragments of bone, was a small portion of an urn. It is possible that this may not have been in the coffin originally, but may have been brought into contact with it when the persons who first opened the barrow filled in their excavation. The third was in a barrow called "Center Hill," at West Tanfield, near Ripon, where the Rev. W. C. Lukis, in 1864, found the remains of an unburnt body, lying N.E. and S.W., within what had once been a wooden coffin, probably the trunk of a tree. This had been placed in a cavity 18 in. deep, made in the surface of the ground. With the body were a flint implement and a rudely-ornamented urn. Sir R. C. Hoare met with three barrows in Wilts, in each of which was a body, placed in a hollow tree; with them were found bronze implements of the ordinary kind.

[4] They have been discovered in Yorkshire, near Beverley, and at Selby. In other parts of England they have occurred repeatedly.

during the year 1864, which I have endeavored to make as concise as possible, consistently with giving a full account of the facts observed. A few questions suggested by these facts remain to be considered, and to these I now address myself, with much diffidence, because our data are so few and in many cases so obscure, that it becomes difficult even to one's own mind to arrive at any distinct conclusion, much more to make that clear to the minds of others.

The first and most important question is this,—to what people and to what date are these remains to be attributed; and if they are the burial-memorials of one race, have we evidence to enable us to divide the time of their erection into any distinct periods? I only refer here to the round barrows and their builders, the subject of the "long barrows," and the people who made them, having been considered in a former part of this memoir, p. 100; neither do I include the Danes Dale barrows in the inquiry.

I have no hesitation in assigning these grave-memorials to the tribes who inhabited the country previous to the Roman invasion. They cannot have been raised either during that occupation or after the Roman power had ceased, for in that case the associated pottery, weapons, and implements would doubtless have shown some trace of Roman art. This is only negative evidence, but in some cases, and this is one, negative evidence is incontrovertible. Taking then for granted that these barrows date from an earlier period than Roman times, is it possible to arrive at any conclusion as to the age at which the earliest were constructed? I do not think that, with our present knowledge, it is safe to lay down even an approximate date, though it may be safely allowed that they go back to an age many centuries before our era. In Cæsar's day iron was the common material for the weapons of the people who opposed him in Britain, and it must have been in use for some considerable period before his landing, or it would not have been the ordinary metal for arms and implements. These barrows, however, exhibit no instance of the occurrence of iron, and though, from its greater liability to oxidation than bronze, it is much more perishable, yet, if iron articles had been commonly deposited with these burials, some trace of that metal must have been discovered. We may then, I think, justly assign to these interments an antiquity greater

than that of the ordinary use of iron[5] in Britain, and thus at once carry them back many centuries before the Christian era. It might seem, indeed, judging from the contents of the barrows, which show a paucity of bronze and an abundance of flint implements, that the greater number were formed before the introduction of bronze, but this would, I think, be an erroneous conclusion. I believe that bronze was in use during the whole period through which this mode of interment prevailed; the absence of bronze and the presence of flint is no proof that these people were ignorant of that metal. We find bronze and flint associated together with the same interment, which shows their concurrent use. We also frequently find in a barrow, which contained several burials, one of them having an article of bronze deposited with it, whilst the others have relics of flint, which shows either that the more valuable material was rarely placed in the grave, or that the weapons and implements of bronze were not those which it was the custom to bury with the dead. The most common articles found with interments are arrow-heads, knives, and "thumb flints" or scrapers; these were always, even in the height of the bronze period, made of flint. Articles such as swords, spear-heads, and celts, which were of bronze, appear, on the contrary, only on the rarest occasions to have been interred with their owners. Daggers and pins are not unusual adjuncts to the tomb, but a dagger accompanies only a male burial, and not all of them; we can therefore only expect to find it in some barrows, and as a bone pin would answer the same purpose[6] as a bronze one, and was much less valuable, it was more frequently used at the burial. In this way, the

[5] The occurrence of iron with interments of a pre-Roman time is very rare. It was found at Arras in the East Riding, in the form of chariot wheels, in connection with unburnt bodies, and with bronze articles, having a style of ornamentation of the same character as that of the Stanwick, Polden Hill, and other finds, the bronze shields of the Witham and Thames, and the bronze sheaths of certain iron swords. I have an iron javelin-head found in a cist with a bronze buckle, and an urn of the flower-pot shape, covered with lines of herring-bone pattern, cut and not impressed upon the clay, accompanying an unburnt body. This was discovered at Tosson in Northumberland, where four cists were placed close together, without any indication of a mound having ever covered them. The skull, a brachycephalic and very typical one, with the urn and other objects, is engraved in Crania Britannica, pl. 54.

[6] Pins were probably used to fasten the garment in which the body was wrapped before burning, or the cloth in which the burnt bones were collected, and therefore, as they were not placed in the grave, like the dagger or the arrow-head, for an after use or from a pious feeling, we need not be surprised that pins of the less valuable material were ordinarily used.

absence of bronze, though at the period a common material, may be accounted for, without supposing that, where it is not found, it was unknown at the time when the interment took place. Its absence may also arise from its decay; in several instances I have found a fragment of bronze so small that a very little longer time, or greater exposure to the atmosphere and wet, would have destroyed all trace of it. It is possible that, in many interments where no bronze is discovered, it may have existed, but have become quite destroyed.[7] If we grant, then, that the absence of bronze is no proof that it was not in use, and I think we need not hesitate to allow this, we may perhaps carry our conclusions further, and admit that, where we find one interment without bronze, the other accompaniments of which are similar to those which we find with another interment where bronze is present, the two belong to the same people, and living, at the time of the raising of the two barrows, under much the same conditions. I cannot perceive any distinctive difference between barrows where bronze has been found, and those in which only flint has accompanied the interment, when I have regard to the other details of the burials. The shape and the size of the mounds, and the manner in which they have been thrown up, the way in which the bodies have been deposited, the character of the pottery, both as regards material, shape and ornamentation, and the nature of the flint implements are the same in both cases.

The conclusion, therefore, to which I feel obliged to come is this, that the grave-hills under consideration[8] are the work of one people, and that they were raised during a period which, ending some centuries before our era, goes back to a time many centuries before that date. Nor can I doubt that this people, from wherever they came, arrived in this coun-

[7] This may appear inconsistent with a previous statement regarding the absence of iron, where it is argued that because no trace of it is found, it had never been placed in the barrow. This apparent inconsisteney, however, may be explained by the fact, well known to those who have examined ancient burial-places, that whilst bronze, in its decay, leaves few or no traces, iron, on the contrary, betrays its former presence by the ferruginous oxide which invariably remains. I have, in more than one instance, seen a bone, where a slight trace of green color showed that some bronze article had once been in contact with it, but where every other trace of the metal was wanting.

[8] I would be understood here to refer only to barrows and interments before the knowledge of iron, a knowledge which, whether arising in Britain itself or coming in from abroad, I believe commenced about two or three centuries before Christ.

try bringing a knowledge of bronze, and also that from the time of their arrival they used it for certain weapons and implements, whilst they used for other articles the commoner material, namely flint.[9]

Another important question connected with the burial of this people is that of cremation and inhumation. Were their earliest interments of unburnt or of burnt bodies? The barrows which I opened in Yorkshire do not, as will have been seen, afford any evidence to settle this question. But if the facts recorded of Mr. Ruddock's operations in the same district, given in Bateman's "Ten Years' Diggings," can be depended upon, we may assume that the earliest burials were of unburnt bodies. He found in many instances under burnt bodies, deposited sometimes with, at other times without, urns, cists sunk in the ground, and containing skeletons with no signs of burning. With many of these skeletons, urns and articles of bronze and flint were associated. The lowest interment must unquestionably have been the earliest, and it may be that we have in such cases the burial-mound of a family, used through a considerable period, during which the mode of interment had changed. At the same time it is possible that these different burials may have been almost contemporaneous, and that at the same period some bodies were burnt whilst others were buried unburnt.[1] A comparison of the articles of bronze

[9] I believe that the introduction of iron gave the last blow to the use of flint. When once the manufacture of that metal was understood, the ore is so common, and the metal so easily wrought, that it could not fail to supersede flint, which the use of bronze, a more expensive and scarcer commodity, had been unable to supersede. Whilst flint and bronze are commonly associated together with interments, I do not know that flint has ever, except on the rarest occasions, been found with a burial where iron weapons or implements accompanied the body. It is true that the late Mr. Bateman records, in his "Vestiges" and "Ten Years' Diggings," instances where iron and flint occurred together; but his examinations were not made with such care, or his accounts given with that clearness, which allow us to depend upon them as trustworthy evidences.

[1] I have no doubt that inhumation and cremation were practised at the same time. In fact there must have been a period, during which the new mode was coming into use, when both were prevalent; but, besides this time of change, I believe that, for some unknown cause, during the time that cremation was in use, some bodies were interred unburnt, and *vice versâ*. I opened a barrow in Northumberland, which had a central cist containing an unburnt body of a child, and an urn of the late type, whilst, placed round the cist, were nine interments of burnt bodies enclosed in urns. As far as I was able to judge, the mound had been raised at one and the same time. Trans. Berwickshire Nat. Club., vol. iv. p. 390. At Acklam Wold, in the East Riding, were ten or twelve barrows, some of which were opened in 1849 by the Yorkshire Antiquarian Club. In these unburnt remains were found, evidently the principal interments, and associated with them were burials of burnt bodies, one of which had apparently been placed near the skeleton when the bones were hot,

and flint discovered with the several interments would have been a great help to the settlement of this question, but unfortunately no engravings of these are given.[2] Into this inquiry I do not purpose entering more fully, since the facts resulting from my own diggings do not bear upon it.

I will now add a few remarks in examination of the circumstances connected with burials after cremation,[3] chiefly with reference to the urns accompanying these interments. Two very different types of urns are found with burnt bodies, though the implements of flint which accompany each of these types are precisely similar. I believe that this variety of urns mark two periods during the time in which cremation prevailed. In the one case the urn accompanies the burnt bones, but does not contain them; in the other, and which I conceive to be the earlier, the bones are contained within the urn, usually placed upright, but not unfrequently found inverted. The urns of what I regard as the earlier period, and which strictly speaking are alone cinerary urns, are large, of coarser materials[4] than the later urns, thick, and having a considerable mixture of broken stone amongst the clay; the ornamentation is usually made by impressed cord, sometimes by impressions of a round or oval-ended instrument, or of a knot tied into a thong; they

for the knees were completely charred. These barrows, judging from the urns found in them, were of the later unburnt period.—See Crania Britannica, pl. 31.

[2] The want of figures of the urns and implements found with the burials, is a great drawback to the usefulness of Mr. Bateman's records of his diggings, for without these it is quite impossible to judge accurately of the facts related. Nor can they be regarded as careful or clear accounts of a most extensive series of barrow openings; there is a vagueness of description and a looseness of expression which detract from their value.

[3] A mode of burial of burnt bodies is found, which some suppose to belong to an earlier period than that in which the calcined bones are placed in an urn, but which more probably marks the graves of persons of humbler rank, than those over whom the larger tumuli were raised. The mounds over these interments are small, and the bones are contained in a circular hollow sunk in the ground without any urn, this hollow, in fact, being a receptacle similar to an urn, and supplying its place. I know of an instance near the village of Ford, in Northumberland, where about thirty of these circular hollows occurred close together, and each covered with a flat stone, on the under side of two of which the concentric circular markings were engraved. Nothing, except some calcined flint chippings, was found with these burials, which may, perhaps, be regarded as interments of the mass of the community. As the land had long been under cultivation, all trace of mounds over them, if any ever existed, had disappeared.

[4] Rudeness of fabric is no criterion of the age of an urn. It is not an unfrequent occurrence to find, lying almost side by side in the same barrow, urns beautifully made and ornamented, with others of the roughest make and commonest description. It may be well to correct a mistake which has very commonly been made regarding the urns of the barrows; they have been, and still are, called sun-baked. None such, however, occur in Britain: all of them have had more or less the action of fire.

have almost universally an overhanging rim,[5] to which, and to the part immediately below it, the ornamentation is confined. They have also frequently a smaller urn placed within them, sometimes of the same shape as the larger urn, but in other instances plain, and of the so-called "incense-cup" type. In tumuli which contain interments where an urn encloses the bones, three other contemporaneous modes of interring a burnt body are found.[6] The first, where the bones are simply placed in the mound without an urn or any provision to keep them separate from the surrounding earth; the second, where, with the bones, is deposited a small urn, of the "incense-cup" type, usually however of better make and more elaborate ornamentation than those "incense-cups" which are found within another urn; the third, where the bones are placed in a cist made of stones, when they are generally mixed amongst sand and gravel. Instances of the occurrence of the first two modes are recorded in this memoir; the last, I have met with in Northumberland. With all these modes of burial, relics of flint, both burnt and unburnt, are found associated, such as arrow-heads, knives, and "thumb-flints."

The second class of urns,[7] and which I suppose to belong to a later period, do not, as in the case of the earlier urns, contain the burnt bones, but are placed alongside or amongst them. They are small, generally about 5 in. high, and of well-worked clay, without any or a very small mixture of broken stone. Their ornamentation is generally formed by impressions of pointed or square-ended implements, probably of bone or wood, and it is confined to the upper parts of the urn; in some cases, however, the old style of impressed cord is found, but applied after a different fashion to that of the urns of the earlier period. They are usually more or less of the flower-pot shape, and never have the overhanging

[5] I can scarcely regard this peculiar feature, the overhanging rim, and the consequent form of the urn as accidental, or arising out of the nature of its fabrication, or as being merely added by way of ornament. I believe it to have reference to a symbolic representation of reproduction and regeneration, and to be another form of the symbol which is carried in the hand of the gods of Assyria, in the shape of the pine-cone: in fact, that it is a phallic emblem.

[6] I have never met with all the four modes in one barrow, but on more than one occasion I have found three of them in connection. It would be unsafe to draw any conclusion as to difference of time from the varied manner in which the burnt bones are deposited in the grave-mounds, the only certain test, I believe, is the type of the urns.

[7] Specimens are figured, see figs. 8, 17.

rim so characteristic of the urns which contain the burnt remains. I have not met with this class associated with the cinerary urn.

It remains to notice a class of urns which occur with a system of burial that superseded cremation, if not entirely, to a considerable extent, and which, commencing before the knowledge of iron, continued until after the introduction of that metal. This, the burial of an unburnt body, usually in a stone cist,[8] is rare in Yorkshire as compared with burial after cremation, though common in Northumberland and other parts of Britain. Many articles of use or ornament are found with these interments, such as bronze dagger-blades, javelin-heads, &c., also buttons and necklaces of jet, these last being frequently well made and ornamented. The urns are of two types, both being of fine clay and thin fabric, and generally ornamented over the whole surface. One type, the "food-vessel" of Bateman's classification, approaches closely in shape and style of ornament to the second class of urns found with burnt bodies, but it differs from them in having the ornamentation spread over the whole surface, and also in having it frequently made, not by impressions, but by lines drawn upon the clay by a sharp-pointed instrument. They range in height from 3 in. to 8 or 9 in. The other class, the so-called "drinking-cup," is still more highly decorated, of thinner fabric, and shows greater variety in pattern than the last. It has occurred very sparingly in the district to which this memoir refers.[9] The urns of this type are from 7 in. to 10 in. high, and the usual shape, though there are several varieties, has a globular bottom, narrows about the middle, and then widens again towards the mouth. The urns of both these types are found placed upright by the side of the body, and as nothing save a little dust has been discovered in them, it is difficult

[8] In many instances where cists have been discovered there is no appearance of a barrow. I think it possible that in all cases a mound, however slight it might be, was originally raised over the grave. This, in situations which have been under cultivation, would soon disappear, and therefore we cannot argue, from the absence of a barrow, that none ever existed. As these burials belong to the later period, the mound was never, probably, of large size.

[9] In widening the road at Orchard Hills near Egton Bridge, in 1861, a cist formed of four stones, with a cover, was discovered. It contained an urn and three pieces of bronze, now lost, probably portions of a dagger; the body had disappeared. The urn, of which I have a fragment (fig. 18, one-fifth orig. size), was of the "drinking cup" type, and of rather unusual style of ornamentation.

to say what purpose they fulfilled in the tomb; the most probable supposition is that they contained offerings of food and drink.

I will now briefly recapitulate the conclusions at which I have arrived with regard to the various methods of interment, and their succession in date, which prevailed in Yorkshire—probably also throughout the greater part of Britain—previous to the Roman invasion.

The first sepulchral remains are, I believe, the interments of unburnt bodies in the "Long Barrows," the burial-places of a race whose skulls are markedly dolichocephalic, and who were, so far as our knowledge extends, unacquainted with metal. They were succeeded, and probably to some extent extirpated, by another race, who brought with them acquaintance with bronze, to the use of which it is not unlikely that they owed their superiority over the previous people. The skull of this bronze-using race is brachycephalic, and the barrows which they raised are round. It is doubtful whether their earliest interments are of unburnt bodies or not; my own experience does not enable me to come to a decision upon this question. They practised cremation, however, during a long period, if indeed they did not bring the use of it with them. This period may, I think, be divided into two stages; the first, when the burnt body was deposited in an urn, or cist, or hollow sunk in the ground, or simply placed upon the ground under the mound; the second, when an urn of a different type from that which contained the body was deposited with and amongst the calcined bones, which were no doubt at the same time frequently also interred without any urn. With all these interments after cremation articles of bronze, usually pins, but sometimes daggers, objects of flint, both burnt and unburnt, sometimes fabricated implements, at other times mere flakes, stone hatchets, bone pins, and jet ornaments, are found deposited. To cremation succeeded burial without burning, in general under a smaller mound, and in many

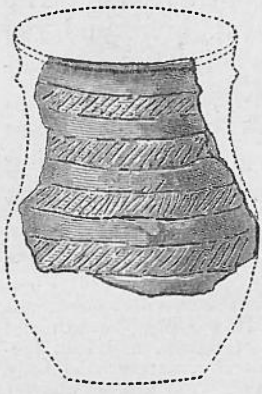

Fig. 18.—Fragment of Urn, Orchard Hills.

cases where no signs of a barrow having existed are observable. With these burials, urns of two types, the "food-vessel," and the "drinking-cup," are associated, together with bronze daggers and flint implements of the same types as those found with the burnt body, and also with jet and other ornaments. During the latter part of this period, when inhumation was the ordinary mode of burial, iron came into use; and it is probable that this kind of interment prevailed until Roman manners changed it: but even then, many Romanized Britons retained their old method of burial, as the cemeteries near Roman stations abundantly show. Indeed in some parts of Britain it may have lasted until Christianity altogether abolished burial under grave-mounds.

No.	Derivation of Skull.	Probable	
		Sex.	Age.
1	Long Barrow, near Ebberston (Secondary) . .	M.	65
2	,, ,, (Primary) . .	M.	60
3	,, ,, ,, . .	F.	60
4	,, ,, ,, . .	F.	40
5	,, ,, ,, . .	M.	20
	Averages of 2 Skulls of Men . . .		
	Averages of 2 Skulls of Women . . .		
	Averages of 25 Male Long-Barrow Skulls from Table I. Mem. Anthrop. Soc., vol. i. . .		
	Averages of 30 Male Skulls, Table II. *Ibid.* .		
	Averages of 20 Female Skulls, Table II. *Ibid.*		
1	Danes' Graves (1864), No. 2	M.	40
2	,, ,, 6	M.	60
3	,, ,, 8	F.	45
4	,, ,, 9	F.	5
5	,, ,, 10	F.	45
6	,, ,, 11	M.	40
7	Danes' Graves (1849) ,No. 1	F.	—
8	,, ,, 2	F.	—
9	,, ,, 3	F.	40
10	,, ,, 4	M.	35
11	,, ,, 5	M.	45
	Averages of 5 Skulls of Men		
	Averages of 5 Skulls of Women . .		

I. Cubic Capacity	II. Circumference	III. Length.	IV. Breadth.	V. Height.	VI. Face. Length	VII. Face. Breadth.	A. Breadth: Length =1.00.	B. Height: Length =1.00.
88	20.6	7. 1	5.75 *p.*	5.5	—	—	.80	.77
83	20.3	7. 3	5. 2 *p.*	5.1	—	—	.71	.69
—	21.4	8. 3	4. 7 *p.*	—	—	—	.56	—
—	—	7. 3	5. 2 *p.*	—	—	—	.71	—
—	20.7	7. 7	5. 2 *p.*	5.5	—	—	.67	.71
83	20.5	7. 5	5. 2	5.3	—	—	.69	.70
	21.4	7. 8	4.95	—	—	—	.64	—
99	21.6	7. 7	5. 5	5.7	4.5	5.1	.71	.74
98	21	7. 6	5. 3	5.6	4.4	5.1	.70	.73
90	20.4	7. 3	5. 2	5.3	4.3	4.9	.71	.72
101	20.6	7. 4	5.25 *p.*	5.7	4.4	5.1	.70	.77
97	21.1	7. 5	5. 6 *p.*	5.8	—	—	.75	.77
82	19.9	6. 9	5. 5 *p.*	5.4	—	—	.79	.78
78	18	6. 5	4. 8 *p.*	5.4	3	—	.73	.83
86	19.7	7. 2	5. 1 *p.*	5.6	4.4	—	.70	.77
94	20.3	7.25	5. 2 *p.*	5.4	4.4	5	.71	.74
—	20	7. 2	5. 3 *p.*	5.8	—	—	.73	.80
88	20	7. 2	5. 2 *p.*	5.4	—	—	.72	.75
86.5	19.7	7. 2	5. 2 *p.*	5.6	4.3	—	.72	.77
85.5	20.2	7. 2	5. 4 *p.*	5.6	4.1	4.6	.75	
91.5	20.2	7. 2	5. 5 *p.*	5.4	4.6	—	.76	
94	20.5	7. 3	5. 4	5.6	4.4	4.9	.73	.76
85.5	19.9	7. 1	5. 2	5.5	4.35	—	.73	.77