

III.

ON SOME REMARKABLE DISCOVERIES OF RUDE STONE IMPLEMENTS IN SHETLAND. BY ARTHUR MITCHELL, M.D., F.S.A. Scot.

In consequence of discoveries in the island of Unst, by Mr Edmondston of Bunes, the Earl of Zetland was induced to place a sum of money at the disposal of the Anthropological Society, to be expended on further antiquarian researches in Shetland. This sum was increased by a donation from the Society itself, and Dr Hunt and Mr Ralph Tate were deputed to go north in the summer of 1865, and conduct the explorations. Mr George Petrie, of Kirkwall, was fortunately able to join them. It happened that the occasional visit which I pay to Shetland was made at the time these gentlemen were there, and I had thus the advantage of

hearing much of what was done, and of seeing such objects as their explorations brought to light.

The absence in Shetland of those underground or semi-underground structures, which are so common in Orkney, has often been pointed out and commented on, and Dr Hunt's attention was directed to a spot where such a structure was said to exist, as one likely to yield results which would repay the labour and expense of a careful exploration. The spot alluded to is at Safester, in the parish of Sandsting, on the west side of the mainland, and is close to a notable tumulus. Having obtained the permission of the proprietor, Dr Hunt and Mr Petrie commenced operations, and they very soon came upon some sort of rude and ruinous building, only a few feet below the surface. In the earth which the workmen threw out, stones of a peculiar form attracted attention, and on examination they were thought to exhibit signs of having been manufactured. On looking round, many of these stones were seen lying on the surface of the ground, and on instituting a careful search many more were obtained, either on the surface, or in the soil immediately above the structure alluded to, or in the structure itself. The last locality, however, was the least rich, and the surface, I believe, yielded more than the other two put together—the whole *find* amounting, I think, to some hundreds.

The underground structure with which they were associated (see fig. 1) was about 45 feet long, and had a width varying from 16 to 19 inches, and a height of 2 to 2½ feet. One end was closed up, and there a squarish

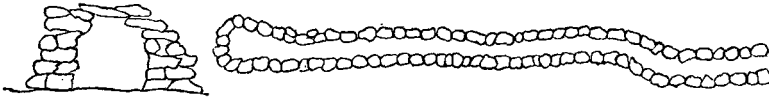


Fig. 1.—Underground Building at Safester (Section and Ground-plan).

expansion occurred, which was nowhere wider than 30 inches. The sides were perpendicular—having no tendency to converge—and the workmanship was extremely rude. The lintels were large and flattish, and many were displaced. There is good reason, indeed, for believing that

the spot was examined about 30 years ago by that *eident* antiquary, Mr Brydone, the minister of the parish, who is said to have found *many* stone weapons there. If he did so, it is probable that they consisted of the usual polished celts and knives, for his attention does not appear to have been caught by objects fashioned so rudely as those now under consideration. The structure was filled with earth and stones, and in this rubbish some of the implements were discovered, but, as already stated, not nearly so many as in the soil over the lintels, and on the surface of the cultivated ground, over an area of one to two hundred yards in diameter.

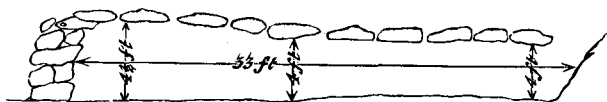


Fig. 2.—Elevation of underground Structure at Eriboll, Sutherlandshire.

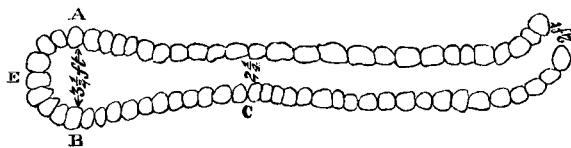


Fig. 3.—Ground-plan of ditto.

This underground building was puzzlingly rude, insignificant, and meaningless. At first sight it looked like a drain, but it was too large for that, though barely large enough for anything else. Besides, it could not have been a drain in the proper sense, as in some places the floor rose and fell with the surface of the underlying rock. I have not seen a similar structure in any part of Scotland. That, perhaps, which most nearly approaches it, is the earth house at Eriboll (see figs. 2 and 3), which I described to the Society some time ago, but even between these two the distance in style and design is very great. The one at Safester may possibly have been underground to some overground structure, but if so, no trace remained of the superterranean edifice—the whole surface being under

crop. It was suggested to me that it might have been a grave, begun at the closed end with the first interment, and added to at each succeeding interment. I learn that a similar suggestion has been made in reference to some of the ruins in Brittany. Nothing, however, was found at Safester to give support to such a theory. Another view of its use naturally suggests itself—viz., that it had been a store or hiding-place for these hand-fashioned stones; but against this there are the facts, that the stones were found in smaller numbers within than without it, and that we know nothing of the man who could creep into and out of such a structure in order to deposit or withdraw the implements. In short, I have no theory to advance as to its use; yet I can well believe, that if it were known, there would be little about it of the wonderful.

The large tumulus, close to which this structure is situated, was also examined by Dr Hunt, and was found to consist of small broken stones (which had been exposed to the action of fire), and to contain a built chamber, in a state of too great ruin, however, to permit of its plan being made out. It is worthy of remark, in passing, that many, both of the large and small green tumuli in Shetland consist of small *burnt* stones,—not waterworn and rounded, but irregular and angular fragments of large stones.

When I first saw the collection of worked stones from Safester, I felt much inclined to doubt their having been fashioned by the hand of man; but when I saw them again, and in larger numbers, these doubts were dissipated. It was impossible, I felt, to resist the belief that they were the product of human action, and that there was a purpose in their design.

The day after I had an opportunity of examining the entire Safester *find*, it happened that I halted for the night at the house of a very intelligent Shetlander, and in the course of conversation I described to him the rude implements I had seen. He went straightway to his garden, and, much to my surprise, brought me a rude implement, which he said had been found at a place called Houland, over which, he added, I should have to ride next day. He told me further that many had been found there, and that he had carried away about a dozen, which had all been lost or destroyed, except the one shown to me. Other people, he said, had carried away those displaying the best workmanship; but, as they had been turned up in great numbers, he felt sure that many would still

be found in the rubbish near the spot. According to his description, the workmen, while deep trenching some waste land, came upon a building which was underground, and which it was necessary to remove; but whether the worked stones were found *above* or *in* this building he could not say. He thought, however, that in the heaps of rubbish, which had been wheeled beyond the enclosure or *infield*, I should still find many worked stones, but that they would, probably, for the reasons given, consist of the ruder forms.

Next day I was made aware that I had reached the spot he had spoken of by seeing such an implement as those from Safester at my horse's feet. It was lying close to several heaps of stones. I dismounted and picked it up, and in less than five minutes I found fifteen more. I carried these to a crofter's house, which was near at hand; and on showing them, I was at once presented with a *casie*¹ full, lying in a corner of the room under a heap of peats. Among these was a finely-polished oval *knife* of hornblendic rock.

The people of the cottage undertook to convey my *find*, which in a quarter of an hour had become very heavy, to the nearest merchant, through whom it eventually reached Edinburgh. The crofter and his family accompanied me to the *grind*² of the enclosure, and when we came again to the heaps of stones, two or three dozen more of the implements were picked up in a few minutes. Others were found after I left, and the whole collection, when it arrived in Edinburgh, amounted to about 150.

There is no tumulus near the site of the *find* at Houland, as was the case at Safester; but there is, on the top of an eminence near at hand, a remarkable grey cairn. I got no information regarding the character of the underground structure said to have existed there. Oats were growing over the spot when I visited it. In the rubbish thrown out of it I was told that oysters, cockles, whilks, bones, burnt wood, burnt stones, twigs of birch, a hazel-nut, and a whorl were found. The last two objects were thought worthy of preservation, and fell eventually into my hands.

I have described two of these remarkable *finds* of worked stones; but I have a later one to tell of, and this I think is not the least interesting. The two *finds* at Safester and Houland were in the same part of Shetland,

¹ A sort of creel or basket.

² The gate.

and were not more than a few miles apart. The third *find* was at least forty or fifty miles from the others, being in the south tongue of the mainland, at Braefield, near Clumlie, in Dunrossness. I first heard of it through Mr Laurensen, the schoolmaster there, who sent me some excellent specimens of what had been found, and these were afterwards increased, to a valuable extent, through the kindness of Mr Gilbert Goudie. The information obtained through these friends enables me to state that the implements were not found side by side in any particular position, but were scattered over a patch of waste grassy land which was being taken in, and on which the foundations of a building were evident. I am assured that this building was not a *broch*, being something much smaller, and showing no tendency to a circular form. In the course of the digging, ashes were found in considerable quantity.

I have received seventeen worked stones from this spot, but I am led to understand, and I think correctly so, that, if all seen had been picked up, the collection would have been quite as extensive as that from Houland or from Safester.

Worked stones of a precisely similar character have also been found in the district opposite Vaila in Walls, about three miles from Houland, and there also in considerable numbers. I saw a large collection in the Parish School-house, which had been made by the teacher, the Rev. James Russell.

Mr Umphray, of Reawick, a gentleman full of interest in Shetland antiquities, informs me that in the island of Unst he picked up several worked stones of exactly the same character as those now under discussion. He believes that they are very widely distributed.

We have five localities, therefore, in Shetland, in which collections of extremely rude stone implements have recently been found. At least four of these collections have been large. Three of them were associated with buildings, and two of these buildings were underground. In all the localities many of the implements were found scattered about on the surface. Three of the *finds* were within a few miles of each other, but the remaining two were far distant, to the north and south. The implements from all the *finds* show a striking resemblance in shape and workmanship. They are as rude in execution and design as the rudest implements from the drift, and are in most respects as puzzling.

On first seeing one, or even half-a-dozen of the ruder of these stones, I should scarcely expect any cautious person to admit that the hand of man had touched them. I was myself very unwilling at first to admit that there was any evidence of hand-fashioning about them. It will be borne in mind, however, in examining them, that they were found together in large numbers, in different localities, and generally in association with buildings; that they exhibit the same forms and characters wherever found; and, above all, that a considerable number of them show evidence of a fashioning by man, as much beyond question as that presented by the finest polished celts ever found.

They may be called a new thing to the Scottish Antiquary, though our Museum has for some time contained one implement exactly like these from Shetland; and, rather curiously, this one has found a place on a shelf among the polished stone celts. It was presented to the Society by Mr George Petrie, who thus becomes the first to have recognised the hand of man in these rude implements. He had picked up and preserved four of them, found under circumstances of great interest, and he has kindly prepared a note¹ for the Society detailing the history of each of the four. That history, since it connects them with sepulture, gives a feature of interest to the whole collection. Three of them he found on the *outside* of, but close to, kistvaens in barrows, with clear evidence that they had been designedly placed there. The fourth he found in the *inside* of the kistvaen, along with a very handsome and finely-polished celt.

The shape is given to the great majority of these implements from Shetland by a rude sort of flaking. Except in the case of the knife (which stands quite alone in this respect), there is little evidence of polishing; but not a few show signs of having been rounded or shaped by picking with a pointed instrument. This mode of finishing or dressing the implements deserves special note. Wherever they are found it presents itself, and it occurs in well-shaped celts from various parts of Scotland. I have also seen it in the *necked celts* from Canada. Many of the markings on our sculptured stones seem also to have been executed in this way. I am assured that weathering can never produce the appearance referred to; but whether it can or cannot, I feel certain that every one who care-

¹ The note here referred to follows this paper.

fully examines the whole collection of these rude stone implements from Shetland, will come to the conclusion that, as regards them, the appearance I speak of is not due to weathering.

In their form these implements present several types. The most noteworthy, perhaps, is the club-like form, of which there is one perfect specimen 21 inches long, about $2\frac{1}{2}$ inches in diameter, and $6\frac{3}{4}$ lbs. in weight. There is in the collection seen in the Parish School-house of

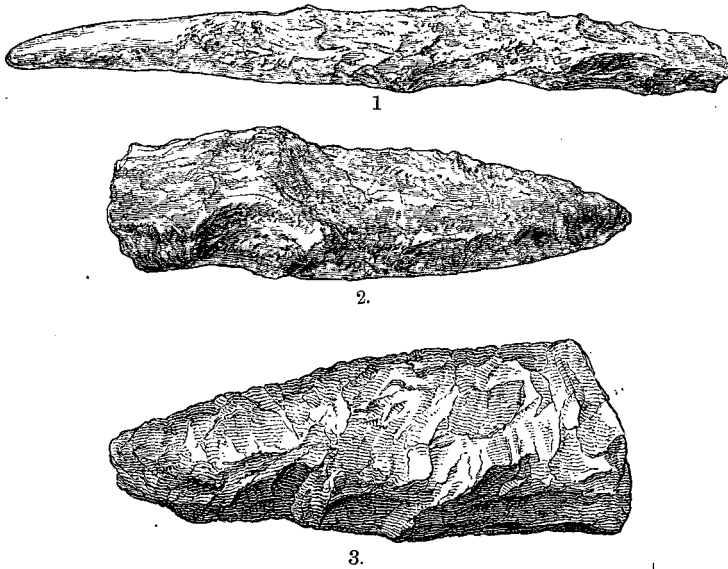


Fig. 4.—Stone implements found in Shetland.

Walls, an unbroken implement of this type, which is 20 inches long, 5 to 6 inches in diameter, and 14 lbs. in weight. Not a few of the stones appear to be fragments of such club-like implements—sometimes the small end or handle being found, and sometimes the large end. Some of these fragments are of such size as to indicate that the complete implements must have been even larger than those whose dimensions are given. The foregoing woodcuts in fig. 4 illustrate this form or type.

After the club-like form, the most numerous and striking, I think, is a long, narrow, flattish stone—from 11 in. by 3 in. to 6 in. by $1\frac{1}{2}$ in.—thinned and somewhat rounded at each end. Of this variety there are many specimens having a remarkable resemblance to each other, and apparently entire. Some of the smaller stones in the collection are evidently fragments of this form, which is well illustrated in the following woodcuts (fig. 5):—

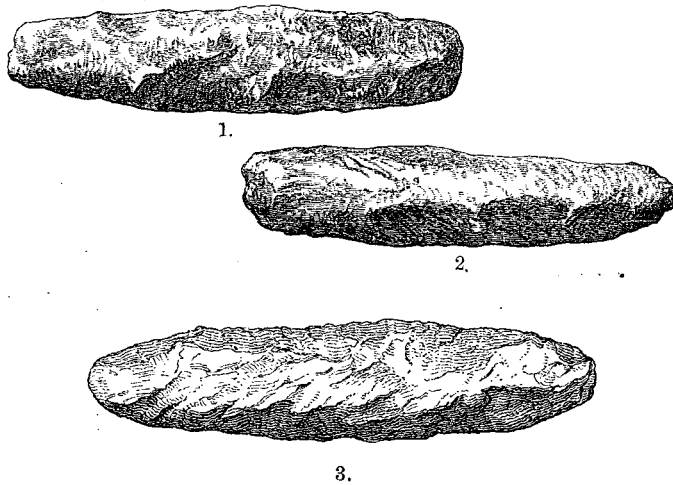


Fig. 5.—Stone Implements found in Shetland.

A third type, of which two woodcuts (fig. 6) are subjoined, is a broad flat stone, showing a tendency to be pointed at one end. All the stones of this type in the collection appear to me to be fragments, and often fragments of large implements. Two such implements in a complete state are in the possession of Mr Umphray of Reawick.

These three types constitute the great bulk of all the *finds* of these rude implements. They have their form given to them by flaking, though the thinner ends of some of the club-like type appear to be roughly rounded by picking. It has been pointed out to me by Mr

Umphray that the ends of many of the flattish stones appear to have been rubbed till they are more or less smooth on one or both aspects, as if from use in some way.



Fig. 6.—Stone Implements found in Shetland.

A fourth variety, of considerable frequency, appears to be a water-worn stone, 10 to 12 inches long, more or less cylindrical, but tapering at the ends. All of these, wherever found, have their surface picked in the way described. [An implement of this kind is figured in Mr Petrie's communication, fig. 2, p. 136.]

Among the worked stones picked up at Safester, one attracted particular attention. It was the fragment of the handle of a spud-like implement. An implement, exactly the same, and in a complete state, was found by Dr Hunt in the heart of a large *burnt-stone tumulus* in Bressay (fig. 7, No. 2). Three of the same type—one only being complete—were found with the implements at Braefield in Dunrossness (fig. 7, No. 3), and one, in a fragmentary state, appears in the find at Houland. In addition to these, there are in the Museum one from Shetland presented by Mrs Hope (fig. 7, No. 4), and one from Orkney presented by Balfour of Trenaby, and there is still another in the possession of Mr Umphray of Reawick. There are thus nine implements of this type known to me. Eight of them have been found in Shetland and one in Orkney—five of those from Shetland being found under circumstances which were very similar, and one in the heart of a *burnt-stone tumulus*.

This handled or spud-like implement may be considered the fifth variety, and is well illustrated in the following woodcuts:—

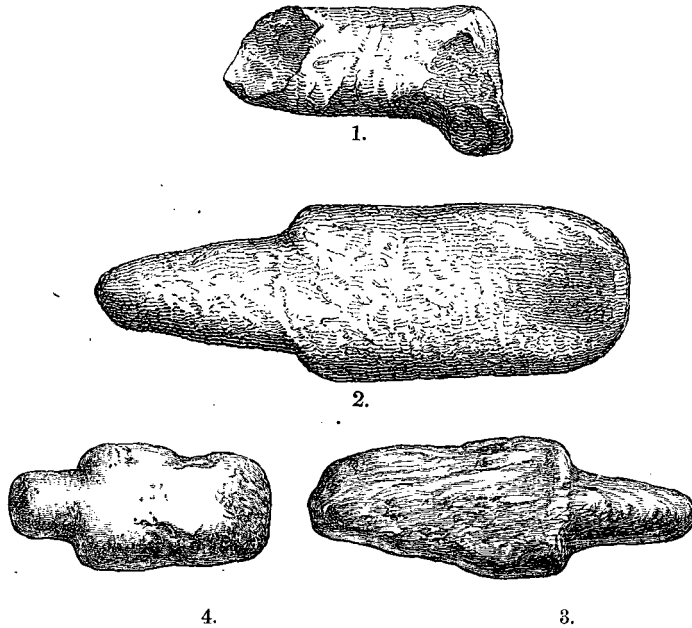


Fig. 7.—Spud-like Implements of stone found in Shetland.¹

The next four forms are represented in the collection each by a single specimen, but they are of importance as exhibiting unmistakable evidence of workmanship and design.

The first, which occurred in the find at Houland, is a water-shaped stone, with the ends rubbed down as if by long use as a pestle in grinding or crushing grain. Stones of the same character are found in excavations about *brochs*. The form and character of the specimen from Houland are well seen in the woodcut (fig. 8) which follows.

¹ I have to thank Dr Hunt for the use of the woodcuts, figs. 1, 2, and 3; fig 4, No. 3; fig. 5, No. 3; fig. 7, Nos. 1 and 2.

The second, which was found at Braefield, and which is represented in fig. 9, is a flat four-sided stone, 5 inches long, 3 wide, and $1\frac{1}{2}$ thick. At the middle of each of the long sides a groove is cut, so that the stone

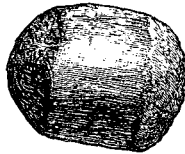


Fig. 8.—Stone Pestle found at Houland.

becomes necked, as it were, at this point, making it somewhat like stones which I have seen used in Shetland as sinkers. In these grooves, and in a hollow on the face of the stone, and at its ends, there is the evidence of picking with a pointed instrument, which I have shown to be frequent in these worked stones.

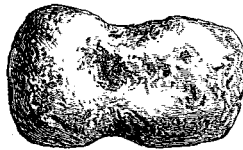


Fig. 9.—Stone found at Braefield.

The third of these exceptional forms is a large lump of sandstone, with a small cup-like oval hollow in it, about $3\frac{1}{2}$ in. long, and $1\frac{1}{2}$ inch deep. Stones like this are also found in excavations about *brochs*, and in such half under-ground buildings as occur at Skail in Orkney.

The last of the four forms, which occurred singly, was found at Houland. It was a well-polished thin flat stone of hornblendic rock. Such stones are often found in Shetland, and are there known as *stone knives*.

Perhaps the stone *whorl*, of steatite, which was found among the rude implements at Houland, should also be included as a fifth exceptional form.

So much for these recent discoveries of stone implements in Shetland, but it would appear that worked stones, collected together in considerable numbers, have previously and not unfrequently been found there.

Hall, in his *Travels*, published in 1807, p. 539, speaks of "a large collection of curious weapons, formed of a very hard blue stone," as having been found between the parishes of Sandsting and Nesting, and he says that the weapon he saw was "very like the bludgeons which modern voyagers have described as being used by the inhabitants of the South Sea Islands."

Hibbert tells us that considerable *assemblages* of stone weapons have been found in the parishes of Walls, Delting, and Unst, and he considers that these *assemblages* "indicate a little armoury, from which a number of weapons might be distributed on an emergency, by the hand of some chief, to a small band of natives met together on the alarm of common danger."

Mr Low speaks of a collection of twenty-four found in one place; the Rev. Mr Archibald, of Unst, of another; and the Rev. Mr Brydon tells us that he himself also found a number of broken stone weapons in one spot.

It is probable that all these gentlemen referred chiefly to worked stones of a higher finish than those now under consideration; but it is of interest to learn that collections, more or less like them, have previously been met with in Shetland. It is possible that more would have been recorded about their numbers, if the ruder forms had attracted attention, which none of the references, unless that by Hall, lead us to suppose they did. In fact, a quarter of a century ago, objects, to be of much antiquarian interest or value, required to be artistic or curious; and objects of rough workmanship were often overlooked, or thrown aside as valueless. In reality, however, rude objects have as much to do with the disclosure and history of a past social condition as highly-finished ones.

In determining the mineralogy of these rude worked stones, I obtained the assistance of Dr Macbain and Captain Thomas, both of whom have a personal acquaintance with the mineralogy and geology of Shetland. Dr J. A. Smith also examined them at my request, and gave me his opinion.

The conclusion come to is, that the material of the great majority is sandstone—of greater or less coarseness and hardness in different specimens. A small number are made of clay slate, also varying in quality; while a few are of micaceous schist, and one is of hornblendic rock. All of these

minerals are of common occurrence in Shetland, and are known to exist in proximity to the spots where the implements were found.

The rude implements hitherto found—such, for instance, as the drift and Pressigny ones—have been made of flint. Here, therefore, we have a new material. The rude implements recently found in a quaternary deposit in the Madras and Arcot districts of Southern India were made of quartzite, a mineral which may be regarded as intermediate in character between the flint and the sandstone.

It is worthy, perhaps, of special note that these rude worked stones have been found in very different positions—(1), on the surface of the ground ; (2), in curious subterranean structures ; (3), in the heart of a large tumulus ; (4), on the outside of short stone coffins with urns in them ; and (5), in the inside of a kistvaen with a skeleton and a well-polished celt.

As regards the age of the implements under discussion, I think the safe conclusion from the facts is, that it may be either a great or a comparatively small one, or that some of them may be old and others recent by comparison. If rudeness were an evidence of great age, they should belong to what is called the early stone period. This view has influenced speculations as to the age of the implements found in the drift and elsewhere. It is doubtful, however, whether it is altogether a correct view. It is true that perfect works are reached by a series of upward steps from imperfection ; but it is true also, that when new discoveries supplant an old art, in which great skill may have been attained, that art often dies out by a process of degradation. Its higher productions are first ousted, and its inferior ones only continue to appear,—growing less and less perfect, as the skill needed for high class work becomes lost and forgotten. Illustrations of this may *now* be seen in those remote parts of our country which follow the general progress at a distance, and in which native art and skill are sickened, but not extinguished, by the faint hold which the outside progress has obtained. It becomes at least possible, therefore, that the ruder forms of implements may both precede and follow the more finished and perfect forms, and that the overlapping of the so-called stone and metal periods may yield stone implements of as rude a character as the hand of man has ever fashioned. These Shetland remains may thus come to be a useful check on incautious conclusions, especially in those inquiries which relate to the condition and capacities of early man.

Stone implements, it must be remembered, even in this quarter of the globe, were used by a somewhat late, as well as by the prehistoric man. If we may trust a manuscript preserved in Cassel, a translation of which is given in Weber & Jamieson's "Illustrations of Northern Antiquities," the Teutonic races used stone weapons as late as the eighth century. The manuscript in question speaks of the warriors "thrusting together resounding stone axes." We learn also from Giraldus that, as late as the time of Henry III., the Irish used slings and stones as offensive weapons; and Torfeus, I believe, speaks somewhere of a vessel putting into Deerness, in Shetland, to replenish its stock of stones, to be used against the enemy.

Though I make these references, I do not wish it to be understood that in my opinion such implements as those specially referred to in this paper could ever have been correctly written about as *resounding battle-axes*; nor is it easy to conceive that they were used against an enemy either as sling-thrown or hand-thrown weapons. In speaking of them I have endeavoured to avoid the use of such terms as axes, hatchets, hammers, spear-heads, &c., thinking it best, in the present state of our knowledge, to use no terms which involve a theory of the use of the implements.

It may be well briefly to notice here the flint implements found at Pressigny le Grand, and the quartzite implements lately found in the Madras and Arcot districts of southern India.

Those at Pressigny were found on the surface of the ground, or very little below it, and in great numbers. They are frequently large, and some of them very closely resemble the worked stones from Shetland. I refer to them chiefly for the purpose of stating some of the speculations as to their use.

M. Leguay regarded them as votive objects, collected or deposited on a spot which was sacred; and he thought this view strengthened by finding similar stones in graves, though not in the precise locality. As regards the Shetland *finds*, there is ground for the same speculation.

M. Broca and M. Giraldes thought them destined for the cultivation of the soil—ploughshares, in short. In reference to this speculation I may state, that in the Museum of the Royal Irish Academy there are two stone implements which are regarded as ploughshares, and in the catalogue it is stated that even in the present day examples are to be found both of the plough and harrows being composed in part of stone.

M. Brouillet thought the Pressigny flints were the matrices or cores from which knives had been flaked or detached; and M. Meillet shared this opinion, and regarded the place in which they were found as a workshop or manufactory for stone implements.

M. Robert and M. Decaisne again thought the collection was nothing but the residue of a manufactory of gun and pistol flints.

No one appears to have looked on the larger and ruder of the Pressigny stones as weapons of offence.

The Pressigny flints, so far as I have observed, have all one common feature, which I regard as of some interest. The feature I allude to is this—none of them show any evidence of having been used; that is, they have not been roughened, chipped, or worn on the ends or edges by striking hard objects. If they had been employed in this way, traces of such a use would certainly have been found on them. But this is not the case. They appear to be in the very condition in which they were when the last flake was struck from them.

The sandstone implements from Shetland present the same feature. They do not exhibit signs of use, yet the greater softness of their material should have made such signs all the more evident. They could never have been driven with force against a hard substance without retaining very distinct traces of such a use.

I have now only to notice the rude stone implements which have recently been found in great numbers in the Madras and Arcot districts of southern India, by Mr Foote and Mr King, who are engaged in the geological survey of our Eastern possessions. An excellent and fully-illustrated account of them was published by Mr Foote in October last (*Madras Journal of Literature and Science*), and from this we learn the following particulars.

All these implements are made of quartzite, or metamorphosed sandstone, more or less coarse, but generally hard, tough, and semi-vitreous.

The first was found in May 1866, in the debris thrown out of a gravel-pit. Some months after, others were found in similar circumstances, or were picked up in the dry beds of nullahs.

There were good reasons, however, for thinking that these had been carried by the streams, or by other agencies, into the positions which they occupied; and a careful search proved this to be a correct view; for

they were found in considerable numbers, and in various localities of the districts alluded to, imbedded and tightly impacted, at depths of three to ten feet below the surface, in a bed of hard, ferruginous laterite conglomerate, resting unconformably on plant shales. This bed comes within the group of quaternary or recent deposits, which is understood to embrace all those whose included organisms are of living species. No animal or vegetable remains, however, appear to have been found in those portions of the deposit which actually contained the implements.

There were generally two to three feet of soil, and three to four feet of clay above the pebbly lateritic conglomerate in which the implements were imbedded.

In the classification of their forms, Mr Foote follows pretty closely the classification adopted by Mr Evans in describing the flints of the drift; and in speaking of them he uses such terms as spear-heads, axes, hatchets, wedges, knives, arrow-heads, and sling-stones. They were of various sizes—some being small, while one is said to have been of considerable weight, and to have measured 12 by 5 inches.

In certain localities they occurred in such quantities as to have suggested to Mr King's mind that these were the sites of manufactories, selected because a suitable material was abundant. Many things are stated to show the probability of this view, and among others, the concurrence of numerous flakes, such as would have been struck from masses of quartzite in forming them into implements.

No one can examine the well-executed plates which accompany Mr Foote's paper, and look at these rude implements from Shetland, without being struck with the remarkable similarity—a similarity which is probably as great as the difference of material would allow; but no one will read the account of the circumstances in which the one set, and those in which the other set were found, and find any trace of a resemblance between these circumstances, which, indeed, could scarcely have differed more widely.