

I.

GENERAL REMARKS ON THE DWELLINGS OF PRE-HISTORIC RACES  
IN ORKNEY; WITH A SPECIAL NOTICE OF THE "PICT'S HOUSE"  
OF SKERRABRAE, IN THE PARISH OF SANDWICK, SHOWING THE  
PRESENT STATE OF THE EXCAVATIONS LATELY MADE THERE.  
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Public attention has of late been much directed to the investigation of facts concerning the aboriginal inhabitants of Britain and Northern

Europe generally; and such a mass of valuable information has been already accumulated, that some might think the subject exhausted, or at least that the following brief remarks are superfluous, were it not that in the present transition stage of archaeological knowledge, where conjecture must too often take the place of fact, all independent observations are useful, even if they do not contribute any startling novelty, inasmuch as they afford materials to compare or contrast with the experience of others. Without attempting further introduction, I shall now endeavour to describe the appearance of the *chambered mounds* or tumuli, as they usually occur in Orkney. Captain Frederic Thomas, when engaged in the Admiralty survey of these islands, computed that upwards of 2000 of these primitive dwellings still remain. In the parish of Sandwick alone there are above 100. The usual form of these buildings is that of a rectangular central chamber, with various passages leading into smaller chambers or cells; their shape, however, is variable, and one form in particular deserves some attention, as it differs so widely from the ordinary *chambered tumuli*, that it appears to belong to a different period, and possibly may have been constructed by a different race. I allude to the circular towers, or "brochs," as they are commonly termed, the most characteristic example of which is the well-known tower of Mousa, in Shetland; the remains of many such are to be seen both in Orkney and Shetland. In all "brochs" that I have examined, the building consisted mainly of a circular wall of great thickness, or rather of two concentric walls, containing between them chambers communicating with each other by stone steps, the central space being generally unoccupied, and showing no appearance of having been roofed. Some authors have suggested that these towers were constructed as places of refuge or defence; and this opinion appears supported by the fact that some of them are surrounded by two or three, or even four concentric walls. In more than one instance that I noticed, the central space was occupied by what appeared to be a well or reservoir containing water; and it is not unusual to find a rude substitute for a sentry box, in the shape of a recess in the wall, near the chief entrance; this device, however, is also characteristic of the more ordinary form of "Pict's house," and seems to me rather to indicate a turbulent state of society, where each household required to keep a strict watch upon their neighbours, and to guard against any hostile surprise.

It has not yet been satisfactorily decided which of these very dissimilar types of architecture is the oldest. Both kinds are built of rough stone, without the aid of mortar or lime, and both seem to have been partially banked up on the outside with earth and turf, apparently with the object of excluding wind and rain. On this point, however, opinions differ; it is not always easy to determine how much of the earth and *debris* that surrounds these buildings is artificial, or how much is the effect of natural accumulation. In the case of Skerrabrae, however, we can speak with tolerable certainty, as enough of the outer wall is exposed to show us that earth had been heaped against the wall to the height of 6 or 8 feet, and the sloping bank thus formed had been coated over with a thin crust of clay; there was no clay on the wall itself, or between the stones of it, but only on the surface of the sloping embankment, and the deposit of earth above that, consisting of broken shells and vegetable mould, is, I believe, chiefly the result of drifting sand, with successive growths of vegetation on the top of it. It is remarkable that bones and horns of red deer are generally found in both kinds of houses, and this circumstance is, I think, important in trying to arrive at some approximate date as to the age of these buildings; for, while we have undoubted evidence that these islands were formerly covered with forests abounding in deer and other wild animals, yet the writings of Cæsar, Diodorus Siculus, Solinus, and others, lead us to believe that at a time prior to the Christian era the forests had entirely disappeared, and we may justly conclude that the deer also had then ceased to exist: Assuming, therefore, as an established fact, that these early races of men were contemporaneous with the deer, we cannot bring them nearer to our own times than 2000 years; indeed, when we see how many links are wanting in the chain that connects them with our earliest recorded history, it is far more probable that we must assign to them an older date by some centuries. Articles of bronze and iron are occasionally found in the "brochs," and even ornaments of gold and silver; while the stone implements discovered in them, or in their immediate vicinity, are generally better polished, and finished in a more artistic manner than the very primitive articles found in "Picts' houses," which, moreover, consist almost exclusively of stone or bone. (I may here observe that I use the term "Pict's house" merely because it is the local name of the common form of *chambered mound*, as distinguished from the "brochs")

or round towers.) It is held by some that the "brochs" may have been the abodes of the more wealthy part of the community, or that the valuable ornaments found in them may have been placed there by a subsequent race for the purpose of concealment; but upon the whole, I think we shall find that the evidence is in favour of the greater antiquity of the "Picts' houses." A "broch" usually presents the appearance of a round grassy hillock, revealing, upon closer inspection, heavy masses of masonry projecting above the surface, which is penetrated here and there by small holes and fissures, and nothing is more likely than that extraneous articles may sometimes drop through these apertures accidentally, and occasion the perplexing anomaly by which manufactured articles of stone, bronze, iron, and gold, may be sometimes found mingled together. During the excavation of the "broch" of Burgar, in the parish of Evie, Orkney, one of the workmen picked up a snuff-box, and near it a pen, such as is often used for conveying snuff into the nostrils, and these items were actually included in the list of ancient relics discovered there! The terms "Stone age," "Bronze age," "Iron age," &c., though useful as indicating successive epochs of time in a given locality, do not admit of a general application. We cannot ignore the fact that while the inhabitants of Britain, and other civilised countries, possess their railways and electric telegraphs, there are at the present day native tribes in Australia, Africa, and other places, who have hardly yet emerged from the Stone Age. There can be no doubt that isolation and the want of raw material must often retard civilisation; while, on the other hand, facility of communication, and residence in a country favoured with natural advantages, conduce to rapid progress. Through the kindness of James Neish, Esq. of the "Laws," Forfarshire, I had lately an opportunity of examining the very curious ruins that he has discovered there. The complicated series of outer walls I could make nothing of, unless they have been used as a fort, for which, from their commanding position, they are well adapted; but the circular building behind them is, in its size and general shape, very like an Orkney "broch," and the similarity of their contents was even more remarkable. The *querns*, the charred grain, the double edged bone combs, and the small articles of bronze, closely resemble those found in the "brughs;" in fact, the only thing that I saw at the "Laws" decidedly different from those in Orkney, was a solitary specimen of the money cowrie—indicating

a greater intercourse with foreigners than was probably enjoyed by their northern contemporaries.

It is only by a careful examination and comparison of the architecture of different *chambered mounds*, in different countries, and by a classification of the implements and weapons peculiar to each, that we can hope to attain to some definite conclusion as to who these ancient races were, and when they lived.

The comparative remoteness of the Orkney Islands renders them peculiarly favourable for the classification of objects of antiquity. As Daniel Wilson says, in speaking of the north of Scotland, we are there more "free from the disturbing elements of foreign art." Thus we have the *rectangular* "Pict's house," and the *circular* "broch," which, with their contents, admit of pretty distinct classification. Next come the burial mounds. The stones of Stennis, and other huge monoliths scattered over the islands, will also merit attention; and I have no doubt that we shall yet be able to find their true place in prehistoric chronology. Then there is a class of antiquities which seem to hold an intermediate place between that and the Scandinavian era, viz., certain ancient graves that have been from time to time discovered in the island of Westray; they are generally brought to light by the shifting of the soil, which is in that place of a light and sandy nature. These graves often disclose remains of weapons and armour of *bronze*, some of which, I believe, has been sent to the Antiquarian Museum, where its relative age may probably be determined by comparing it with other allied specimens. Next we come to Scandinavian relics, and here tradition often enables us to understand the somewhat conflicting records of the period; for example, there is at Westness, in the island of Rousay, a grass field which from time immemorial has been named "Swendrow;" there is a slight elevation in one part of the field, which was laid open more than thirty years ago, when a number of human skulls and bones were found, thrown together in a confused heap, and along with them were fragments of weapons and armour of *iron*. A reference to Torfæus shows that this was the site of a bloody encounter between "Sweyn of Gairsay" and Earl Paul, in the early part of the twelfth century, when the earl was taken prisoner, after most of his followers were slain. I have introduced the Norse element here merely to indicate how the relics of different periods may be distinguished, and to show the importance of

classifying them whenever it is in our power to do so. An examination of the human skulls taken from different *tumuli* might be supposed to yield valuable information, but craniology has not hitherto afforded very satisfactory results. A considerable number of ancient skulls were lately found at "Elsness," in the island of Sanday, by Mr Farrer, the discoverer of "Maeshow," and we may rest assured that in the hands of that accomplished antiquary the subject will receive the full attention which its importance demands.

I shall now proceed to notice more particularly the *chambered tumulus* of "Skerrabrae," to which my attention was principally directed last summer, and to lay before you the various relics that I obtained there through the aid and co-operation of Mr William Watt, a gentleman residing in Skaill, who has for years made these antiquities his peculiar study. The aforesaid tumulus or Pictish village, if we may call it so, has been already described by Mr George Petrie in a paper lately read before this Society, accompanied with drawings and full details of the progress of the excavations, and an enumeration of the stone and bone implements that had been discovered up to that time. I shall therefore endeavour as much as possible to confine myself to a narration of the further progress made by Mr Watt, without trenching on the facts already communicated by Mr Petrie. In plan of construction, the ruined buildings at Skerrabrae differ, not so much in kind as in degree, from the "Picts' houses" found in other parts of Orkney. There is still the rectangular central chamber, and passages in the walls leading into side cells, while most of the stone and bone articles discovered there so closely resemble those found in "Pict's houses" in different islands in Orkney, and even in Shetland, as to point to an identity of race. Mr Watt has now entirely cleared out the rubbish from four houses, and from the direction of the winding passage he hopes to find a fifth. The walls in their present state vary from 6 to 8 feet in height; the form of each apartment is nearly square, close to the ground; but as the walls rise, they converge to form what is called the bee-hive roof—a shape difficult to construct of loose stones; and the builders have shown considerable ingenuity in strengthening the walls, by inserting at the inner corners large flat stones placed perpendicularly and edgewise, so as in some degree to serve the purpose of the key-stone of an arch.

The inner area of the larger house was fully 20 feet square, and Mr Watt was of opinion that, from its great width, rafters of some kind must have been used to support the roof. In support of this opinion, he told me that when the loose earth was removed from the apartment, he found two *jaw bones* of a large whale, in a very decayed state, lying across the floor, one on each side of the central hearth, as if they had fallen from above. One of the smaller side cells also appeared to have been roofed with flagstones supported by a whale's jaw of smaller dimensions, the broken pieces of which were found on the floor of the cell. From this it seems not unlikely that some of the houses of that period were roofed with flagstones, supported by rafters of whale jaws or perhaps of wood; and although we do not now find a trace of wood in the older "Picts' houses," this is in no way remarkable, except as further evidence of antiquity. The boats of these people, the handles of their axes, and many other articles, were doubtless made of wood, none of which now remains; indeed, if we turn to the comparatively modern relics taken from Saxon or Scandinavian graves, we generally find that articles of wood have so entirely disappeared, that rivets of brass and iron nails are all that remain to show where the wood has been; its absence in the older "Picts' houses," therefore, need not excite surprise.

Among the specimens on the table, are several of the stone flakes that are believed to have been knives; and when we reflect that the people who used them lived before the "Iron Age," it is difficult to conceive what other substitute for knives they could have used; they have, however, been alluded to in a former communication. They were most abundant, and in close proximity to them were found many rounded stone discs, varying in size from that of a small biscuit to the dimensions of an ordinary dinner plate. Some have supposed that they were covers for sepulchral urns, but against this it may be said that these people lived and died before the time of cremation and urn burial; others have maintained that they were *plates* or *dishes*. A few of them may have been used as covers for cooking vessels; it will be seen that two of the stone discs on the table are distinctly reddened round the edge, apparently by the action of fire. A few rounded beach stones, roughly chipped at their edges, lay about in different parts of the building, which are thought to be weapons. Two other weapons, however, were discovered of very superior workmanship; the

originals are in Mr Watt's possession, but they have been already described in Mr Petrie's communication. Some lumps of volcanic lava were picked up in the ruins a good deal abraded on the surface; it is possible that they had been used for shaping or smoothing their stone and bone implements. A few rounded pebbles of *quartz* were also found, and some pieces of iron ore. I have here a small piece of *red hæmatite* that was taken out of one of these buildings last summer, which has been reduced to an angular shape for some reason which does not, at first, appear very evident; but a piece of this *ore*, if rubbed on a wet stone, yields a dark red pigment, identical, I believe, with a well-known substance, *keele*. Such a colour would be highly valued by a rude race, who in all probability painted their bodies, hence the marks of diligent friction on this otherwise uninteresting bit of stone. The pigment so produced was then perhaps incorporated with clay or some earthy substance to give it consistence, as several solid cakes of red pigment were discovered; one of them, of a globular shape, was found deposited in a small stone cup, like one of those now on the table.<sup>1</sup> Another cake found by Mr Watt was of an elongated rectangular shape, like a small bar of soap.

While on the subject of pigments, I may mention that in turning over the earth in these houses, I occasionally noticed that small portions of it were of a bright blue colour; the same has been observed in digging into ancient mounds in other places, and I regret that I did not secure a little of it for the purpose of analysis.

Mr Petrie has noticed the interesting fact that these houses were provided with well-constructed stone drains. I examined the outlet of one leading towards the sea, and found it to be about one foot square, measured *inside*; some of the stones covering these drains were tinged

<sup>1</sup> A portion of the contents of this stone cup was submitted to Dr Macadam, F.R.S.E., Surgeons' Hall, for analysis. The following is the result:—

Silica and Silicates (sand and clay),	84.46
Oxide of Iron,	13.68
Carbonate of Lime,	1.23
Moisture, &c.,	0.63
	100.00

Essentially a ferruginous earth.

STEVENSON MACADAM.



with green on the under side, and the bottom of the drain was lined with a hard grey concrete mass, a specimen of which is on the table. These drains were very little under the level of the adjacent ground, showing that the term *under-ground building*, so often applied to *chambered tumuli*, is, in this instance at least, incorrect. Mention has been made of the large blocks of stone with cup-shaped cavities, found in the different apartments, and the stone *pestles* or grinders lying near them; there is reason to believe that these are not corn-crushers, as generally supposed, but that they were used for crushing bones. Several of the larger mortars actually contained pounded bones; and Mr Watt informed me that he found heaps of the same substance, amounting to several bushels, lying near the mortars. Without venturing too confidently to explain the presence of these comminuted bones, it may be useful to note a fact stated by Sir John Lubbock, viz., that the Esquimaux and certain African tribes "are in the habit of pounding up bones of animals to get at the fat and marrow; the Danish Laplanders also used to break up with a mallet all the bones which contained fat or marrow, and then boil them until all the fat was extracted."

It is natural to suppose that a wild race of men, unprovided (so far as we know) with flocks and herds, and depending for a subsistence mainly on their skill in hunting or fishing, must have been often compelled to resort to such an expedient in times of scarcity. From the Romans we learn, that 2000 years ago, "Britain was full of marsh and forest, grain being only cultivated on a few patches near the shores, the natives of the interior subsisting wholly on milk and flesh, clad in skins, and painting their limbs blue." If such was the social condition of Britain so near the heart of the empire, it cannot be supposed that, at a period even more remote, these northern tribes were so far advanced as to cultivate grain.

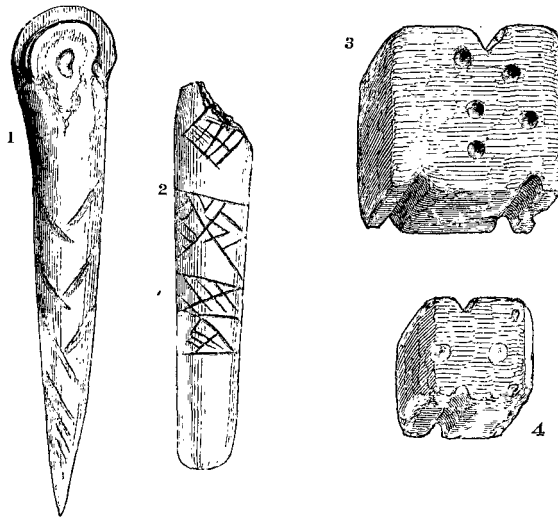
The people who lived in the "brochs," however, understood cereal culture; *querns* or hand-mills are generally found in their dwellings, and this fact is further established by the occasional discovery of charred grain of different kinds; but I am not aware that hand-mills or grain have ever been seen in the more primitive "Picts' houses," though the stone mortars of the latter are not unfrequently found in "brughs." But this is not more extraordinary than the fact that *querns* are still to

be found in many of the older cottages in Orkney; and although water-power mills are now universal, the use of the *querns* was long and stubbornly maintained, from a natural reluctance to abandon the customs of their forefathers—a feeling then very prevalent in Orkney. I have here a small quantity of the pounded bones above mentioned; a few fish bones may be detected in the mass, and probably a microscopic examination would throw further light on its component parts. Doubts have been often expressed as to whether these aboriginal races possessed dogs in a domestic state. Their bones and teeth are often found, which only shows that they may have been eaten; but judging by the frequent occurrence of what appears to be their dung in a semi-fossil state, deeply embedded in the refuse mound, I am inclined to believe that this useful animal was then domesticated. A few of these semi-fossil remains are on the table, as also a collection of bones of various animals, showing the broken state in which they are generally found. Among them is a small leg bone of an ox, selected as being almost the only entire bone of the kind that could be seen. Burnt bones are so numerous in the refuse heap, as to lead us to suppose that they were sometimes consumed as fuel. We find it stated in “Darwin’s Voyages” that the natives of the Falkland Islands “often kill a beast, clean the flesh from the bones with their knives, and then with these same bones roast the meat for their supper.” Many pieces of pottery lay about in the refuse heap, and also in some of the stone cists on the floor. The fragments picked up were very coarse and thick, full of small angular stones, and generally blackened with smoke, especially on their inner surface. I have here a small bit of burnt clay, taken from the heap of ashes, that at first sight appeared quite insignificant; but a closer inspection revealed marks which, I confess, invested it with no small interest in my eyes. They were the traces of a thumb and fingers that may have been impressed there more than 2000 years ago, and yet the delicate curved lines of the cuticle are seen as distinctly as if it had been done yesterday. Many lumps of *unbaked* yellow clay were found in the ashes, remarkably free from stones or other impurities, making it evident that the presence of stones in the pottery was not due to accident or carelessness, but that they had been mixed with the clay for some specific purpose. Unfortunately, the pottery was so much broken that the original shape

of the vessels could not be distinguished, but from the situation in which the pieces were found, I believe that they were the remains of cooking pots. I saw nothing to lead to the supposition that they were cinerary urns; indeed, the finding of one skeleton and a part of another in the ruins would lead to a very different conclusion.

A good many bones, chiefly those of the ox and sheep, were found curiously fashioned into rude implements, of which the specimens now arranged on the table form a tolerable sample. They are, I think, interesting, as showing the rudimentary state of art in a people apparently ignorant of the use of iron or any other metal. The bone scrapers or chisels are supposed to have been used in dressing skins, and some of them closely resemble implements used by the Esquimaux of the present day for a similar purpose. It will be seen that most of the small bone pins are made from the shank bone of a sheep or goat, the articulating extremity of the bone being generally retained as a convenient head to the pin. In one chamber Mr Watt found twenty-six bones of this kind collected together, evidently laid aside for use. Some of these shank bones are occasionally found deeply scored with circular notches, the object of which was unknown until a late discovery of similar bones in different stages of manufacture enabled Mr Petrie, in conjunction with Mr Watt, to determine that they had been divided into sections in the process of making bone beads. Mr Petrie has already mentioned this in detail; but I cannot forbear from thus alluding to it again, as showing the good results of patient perseverance in prosecuting any inquiry. Every such discovery facilitates the work of future explorers, and substitutes solid facts for airy theories. Mr Watt had at that time found very few beads, but in the course of last summer, when I was living at "Skail," a further search at the same place was rewarded by the discovery of more than 1000 beads of different sorts and sizes, most of them formed of the incisor teeth of oxen, both the crown and the fang of the tooth being used for this purpose. With these were a few large ivory beads made from the teeth of a small whale. Some entire whale's teeth were also found, perforated at one end as if they had been strung together and worn as amulets, a practice not unfrequent with modern savages. I have here a few beads, chiefly of the smaller sizes, some of them in an unfinished state. With them is a solitary specimen of larger size, made of a hollow

bone, the natural cavity of which has obviated the necessity of perforating it; a smaller fragment near it, however, shows marks of careful drilling at both ends. These two beads are much decayed, and I may here remark that great caution is needed in judging of the apparent age of bone or ivory. Some specimens appear so fresh and new, that we are apt to believe that they are comparatively modern; while others are so much decayed and altered in colour, that they have an *appearance* of



Figs. 1 and 2. Ornamented Bone Pins. (Half-Size.)

Figs. 3 and 4. Bone Cubes or Dice. (Full Size.)

Found at Skail, Orkney.

much greater antiquity. However, while searching for beads among the rubbish, a trifling incident that occurred considerably enlightened us upon this point. One of our party found the half of a large ivory bead under the floor of one of the buildings, embedded *in moist earth*; and Mr Watt, on another occasion, was fortunate enough to pick up the other half of the same bead, in a different part of the building, *lying in dry sand*.

The two halves fitted accurately, but the piece found in damp earth looked *old* and *worn*, while the other half taken from dry sand was almost *as fresh as if newly made*. Close to the beads were found several discoloured bits of ivory, roughly cut into cubes. Several of them were notched, and curiously impressed with round dots something like modern *dice*; see the annexed woodcuts, figs. 2 and 3, the figs. 1 and 2 represent the only examples found here of bone implements showing any trace of ornament.

In addition to these rather unique specimens, Mr Watt discovered a flat piece of bone or ivory about an inch and a half in diameter, accurately cut into the shape of an equilateral triangle. I did not see the specimen, but it is somewhat remarkable that, in Mr Laing's list of bone implements lately found in Caithness, he specifies and figures a bone triangle of like appearance. In a communication made to this Society by Mr George Petrie in 1856, he alludes to the occurrence of a triangle, circles, and other geometrical figures, carved on stone in a "Pict's house" in the Holm of Papa Westray. It might be interesting to ascertain if these rude tribes had any knowledge of mathematics, a science which, even at that remote period, must have been well understood in Europe.

I have endeavoured to find out if any principle of selection was shown in the choice of certain bones for making particular implements, and I found that in general such bones were chosen as, in their natural form, most nearly resemble the shape of the article required; however, in the case of one kind of sharp implement, like a quill pen without a split, it appeared that they were always made of a bone from the wing of some large bird. Several of these pointed implements are now on the table, and in Mr Watt's collection I saw five or six others, all of which were made from similar *birds'* bones—evincing a practical acquaintance with a well-known zoological fact, *viz.*, that the bones of birds' wings, though thin and light, have a compensating density of structure, which renders them harder than the bones of quadrupeds.

The number and variety of ancient relics discovered at Skerrabrae is surprising; and for this we are much indebted to the zeal and perseverance of Mr Watt, and above all to the fact that he usually prosecuted his most successful researches just at the stage where a less experienced explorer would be apt to consider his work ended. The removal of drift sand or

rubbish seldom disclosed anything but bare walls, and it was not until the last spadeful of earth was thrown out, and the house appeared literally empty, that Mr Watt expected to find anything very interesting. Every flat stone on the floor was then carefully lifted, especially near the corners of the apartment, and in this way I have seen him unearth stone implements, bone pins, bodkins, and beads, &c., some of them even taken from below the foundation of the wall. From Mr Watt's extensive experience in such explorations, his sagacity and accuracy of judgment as to the habits of that early race were seldom at fault, and only on one point did I feel disposed to differ from him. He was strongly impressed with the belief that the "Picts" were cannibals, but I could not find that he had any proof of this further than the occasional presence of human bones in the heaps of bones of animals used as food. Now I hold that the stigma of cannibalism ought not to be laid to the charge of a long-buried race without most overwhelming evidence. The presence of human bones in unusual places may surely be accounted for without the necessity for such an imputation. Sir John Lubbock states, that the Esquimaux "have a superstitious idea that any weight pressing on a corpse gives pain to the deceased, the result of which idea is that in burial their dead are so lightly covered up, that foxes and dogs frequently dig them up and eat them. This the natives regard with the utmost indifference; they leave the human bones lying about near the huts, among those of animals which have served as food." And in another place he remarks—"On the whole, the burial customs of the Esquimaux are curiously like those of which we find evidence in the ancient tumuli of Northern and Western Europe."

The day may yet come when we shall have materials for a written history of the early inhabitants of Britain, and I would fain hope that cannibalism may not be found included among their manners and customs.

Since writing the above, I have been favoured with the sight of Mr S. Laing's recent paper "On the Age of the Brochs." It affords me satisfaction to find that, for the most part, our facts and deductions have led us to the same conclusions. This is all the more gratifying, from the fact that neither of us knew that the other was working in the same field; and it is not unreasonable to hope that further independent research in the same direction will ultimately enable us to determine, with some degree of accuracy, the relative ages of these interesting structures.