II.

NOTICE OF AN ARTIFICIAL MOUND OR CAIRN SITUATED 50 YARDS WITHIN THE TIDAL AREA ON THE SHORE OF THE ISLAND OF ERISKA, ARGYLLSHIRE. By ROBERT MUNRO, M.A., M.D., F.S.A. Scot.

During the autumn of last year, J. Meliss Stuart, Esq., of the Royal Highland Yacht Club, Oban, forwarded to me some correspondence he had with Dr Joseph Anderson regarding a supposed burial-cairn which had been discovered on the shore of the island of Eriska. This island is situated just at the entrance to Loch Creran, opposite the upper third of the very elongated island of Lismore. On its south side it is separated from the mainland by a small firth, the entire bed of which is laid bare for several hours during low water. At the west end of this firth, where it joins the open sea, glaciated rocks of Lower Silurian clays protrude, and the water channel is so narrow that it could be easily spanned by a light iron bridge—a project which Mr Stuart contemplates carrying out. As we move eastwards, this semi-aquatic firth widens out a little, and again contracts, forming a miniature bay, before curving round to join Loch Creran, which bounds the island on its west side. About half-way along this narrow firth, but considerably nearer the island shore than the opposite mainland, Mr Stuart's attention was directed to a low, circularly-shaped mound of stones and clay, which appeared to be artificial; and upon making some tentative digging, this opinion was confirmed by the discovery of bits of charcoal, burnt bones, and one or two large logs of wood, which were turned up from its interior. Mr

Stuart at once communicated these facts to the Secretary of the Society of Antiquaries of Scotland. The extreme novelty, if not improbability, of a burial-cairn being found in such a locality, led Dr Anderson to support the hypothesis, already broached elsewhere, that it might be a lake-dwelling, and he suggested that I might be asked to see it. Hence the origin of my relation with this interesting discovery. Accordingly, I started for Oban on the 17th September 1884, and on the following day accompanied Mr Stuart to the site of the mound. I may mention that on the island of Eriska, which had recently passed into the hands of Mr Stuart by purchase, he was building a mansion house, and consequently he had occasion to be a frequent visitor to the locality. Our route was by Connel Ferry, thence past the site of the lake-dwelling at Ledaig, the great cairn of Auchnacree (both of which have been explored and described by the late Dr Angus Smith), and the far-famed natural stronghold of Dun Mac Uisneachan, on the top of which the remains of a vitrified fort are still to be seen. Upon arriving at the island of Eriska, we were met by Mr Stuart's manager, Mr George M'Kenzie, and some half dozen men, who were in readiness to make any excavations that might be considered desirable. The mound is most accessible from the nearest point of the tidal limits on the island, from which it is 50 yards distant, and about double that distance from the opposite shore on the mainland. On its west side, after the tide retreated, there remained some stagnant water, which has got the name *Poll an Rón* (the seal's pool), and on its south and east sides the water-bed is somewhat lower than that which intervenes between it and the north shore of the island. During the previous investigations a trench had been cut half-way into the mound, running from north to south, from which two large logs of soft wood had been dug out, bearing marks of some sharp cutting implements, and one or two deep cuts as if made by a cross-cut saw. On inspecting the sections exposed by this trench, nothing could be made out as to the structure of the mound, as the sides and bottom of the trench had become smeared over with a thick layer of slime and sea mud. Before the extracted logs had been disturbed, they lay horizontally and pointing towards the centre of the mound, but at its outer margin we observed that others ran along the circumference. Further

digging showed that a wooden basement, formed of one or two lines of trunks laid along the margin, from which others ran inwards at right angles to the former, like the spokes of a cart wheel, extended beneath the entire mound. Above this wooden structure were stones and clay, rising from about a foot at the circumference to nearly 3 feet in the centre. The depth of woodwork was not more than the thickness of one layer of beams, but towards the centre brushwood was mixed up with the beams, and the whole structure appeared to have been originally placed on the littoral deposits, as on digging below the wood a soft clayey substance was turned up similar to that of the surrounding sea-bed. The original trench was then continued right across the mound, and in several places, about 6 inches below the surface, ashes, charcoal, and a few small fragments of burnt bone were met with. While digging at the western margin of the mound, merely to corroborate the inference that the wooden basement was coextensive with its area, a quantity of broken bones, apparently of the sheep and small ox, were found along with ashes imbedded some 2 feet below the surface and immediately outside the wood. The average diameter of the mound, measuring from the outside of the woodwork, was 60 feet; and at spring tide the water covered it to a depth of about 5 feet. No stone implements, or other relics of man, beyond the charcoal and animal bones already noticed, were found.

At this stage I considered it imprudent to advise any further excavations until such time as antiquaries would have an opportunity of having their attention directed to the unusual position and character of this structure. Moreover, when Mr Stuart comes to reside on the island, which he expects to do next summer, such further investigations would have the advantage of his own careful supervision. Meantime Mr George M'Kenzie, whose intelligence in superintending the day's work was only equalled by the anxiety he displayed in ascertaining the archæological value of the discovery, thus writes in answer to a request to ascertain if there are any oral traditions floating among the natives regarding the island and its connection with the mainland :—

ERISKA, APPIN, *October* 3, 1884.

There is an old story current here that a man who stole cattle off the island was shot on the spot (site of cairn) by the owner of the island while standing on the hill towards the Ferry, or rather east from the cairn, which must have been quite 500 yards distant. It is not said whether the cairn was there at the time or not. It is said the name of the robber was Thick Sandy, and people thought he was buried in the mound. There was a road or ford about 20 yards east of the cairn, and this was the only safe place for horses to pass at low water. My impression is that at one time the cairn was not surrounded by water, but that there was a narrow channel between the mound and the mainland, and that it was of late date the bay on the island side was formed by strong currents.

The name of the firth on the Ordnance Map is "Doirlinn," which suggests the existence of a pool of some kind. That a stagnant marsh existed here in former times, sufficient to afford protection for a fort or crannog, before the sea encroached upon it to the extent it now does is probable. This might be determined by digging through the sea-silted bed to ascertain if the stuff below consists of mossy deposits.

Though the result of this investigation is, so far, of a negative character, I do not think a record of what has already been done, should, for this reason, be less acceptable to the members of this Society, more especially as it opens up problems in which geologists as well as archæologists may find some points of common interest. That considerable changes in the aspect of this country—such as the deepening of river channels, the filling up of lake basins, and especially alterations in its littoral borders, by partial subsidences or upheavals of land, and the action of the waves in denuding here and depositing there—have taken place within historical times, is at least rendered probable by many recorded facts.

While the discovery of the Culzean bronze hatchets,[1] beneath a bed of littoral gravel, in a position 100 yards removed from the present limits of the tides, and 25 feet above the level of high-water mark, suggests a rise of land on the Ayrshire coasts, the Eriska mound seems to me to indicate a reverse operation.

The only instance in Scotland, so far as I remember, of an artificial

[1] *Proc. Soc. Ant. Scot.*, 11th June 1883.

structure, analogous to that at Eriska, is in the Beauly Firth near Inverness, a notice of which is given in the *Statistical Account of Scotland,* vol. xvii. p. 350, as follows :—

"To the south-east of Redcastle, about 400 yards within flood-mark, there is a cairn of considerable dimensions. Many of the stones, notwithstanding their collision through the violence of the tide, still bear the marks of art, and indicate the existence of a considerable building at some very remote period. There are several cairns of this description in the firth, about the origin of which even tradition is silent. Were there any vestiges of tumuli on which they could have been built, or any other circumstances which should indicate the eligibility of the sites on which they are placed, from the predatory excursions of rude barbarous tribes, but none such exist. Urns have been found in one of them. . . . . Mr Fraser, minister of Kirkhill, supposes that a considerable part of the area which is dry at ebb tide, but covered with from 2 to 16 feet of water when it flows, being at least 10 square miles, must have been inhabited."

This same structure is thus referred to by Miss Maclagan (*The Hill Forts and Stone Circles of Scotland*, p. 89) :—

"Nearly over against Redcastle, in the centre of Beauly Loch, stand the remains of the 'Black Cairn,' now only visible at low tide. We visited it at low-water of the lowest tide of the year, and believe it to be a crannog greatly resembling one in the neighbouring 'Loch of the Clans,' but resting on larger, stronger piles. Our boatmen declared they had often drawn out of it beams 9 or 10 feet long and 3 feet broad, fresh and fit for use. They had great difficulty in pulling them out, which they did by fixing their anchors in a log or pile. Tradition says that as late as 1745 the place was an island, and a refuge to which some of Prince Charles Edward's defeated adherents fled after the battle of Culloden. The country people aver that all the land has subsided, the houses at Fort-George having sunk several feet since they were built. The fact of this crannog being now in the centre of Beauly Loch, the salt sea sweeping over it except at low tide, is proof enough of extensive change. . . . Near the mouth of the river Ness, at high-water mark, are remains of a once large cairn, called 'Carn-aire,' or 'Cairn of the Sea;' and due west from it are other three, at considerable distances apart."

This occasional overlapping of geological phenomena with historic or prehistoric remains of man has frequently occupied the attention of archæologists, with the view of finding some well-attested fact which might give more definiteness to the natural methods of registering the occurrence of past events than their mere chronological sequence. For this purpose the position of Roman remains, and especially of the ends

of the two Roman walls in Britain relative to the limits of the adjacent seas, have been a fertile field for speculations as to the relative levels of sea and land before and since the Roman occupation of this part of the island. Many of the inferences derived from such investigations are well known to be diametrically opposed, so that while one observer says that a change in the relative level of sea and land to the extent of 25 feet has taken place in post-Roman times, another finds proof in the very same data that all such changes took place in pre-Roman times (see Geikie in *Edinburgh New Philosophical Journal*, vol. xiv. p. 106; and Smith of Jordanhill in *Proceedings of Geological Society*, vol. ii. p. 427). The subject has also not escaped the attention of continental archæologists, and a slight reference to one or two instances of a similar character which have come under my own cognizance during last summer may not be here out of place. The physical phenomena to which I refer have been especially observed in the Morbihan in the south of Brittany, a sketch of which will be found in *L'Homme* for July 25, 1884, p. 421, from the pen of Professor Gabriel de Mortillet, under the title "Envahissement de la mer sur les côtes du Morbihan."

On the small islet Er-Lanic, situated in the Morbihan sea and close to the island Gavr' Inis, M. G. de Closmadeuc, the proprietor of the latter, has described and figured, in the *Proceedings of the Societé Polymathique du Morbihan*,[1] two cromlechs, *i.e.*, stone circles, situated so near to each other as to resemble the figure 8, the peculiarity of which is that only a portion of the upper cromlech is on the dry land, the rest being only visible when the tide is out. The lower cromlech is only discerned when the tides are specially low. Mr W. C. Lukis thus refers to this little island:—"El Lanic, worth visiting for the purpose of seeing a portion of a stone circle which the restless waves have encroached upon and partly destroyed, and if the tide should happen to be low, of also seeing upon the beach the prostrate stones of a second circle of equal dimensions and touching the first, as well as a fallen menhir still farther from the shore. Within the first circle have been found many flint and other stone implements, fibrolite and diorite axes, knives, scrapers, hammer-stones, animal bones, and innumerable

[1] *Bull.*, 1867, p. 18; *et ibid.*, 1883, p. 8.

fragments of earthenware vessels. The south beach, and the entire island, appears to be strewn with similar objects. Instead of the common pattern on Brittany pottery, which consists of horizontal streaks, or bands of diagonal indented lines made with a square-pointed tool, or, it may be, with a revolving toothed disc, the fragments which have been found here have mostly a vandyke ornament filled in with small round dots, artistically and carefully made. The rims of the vessels are also similarly adorned."[1] Some of the relics found here, when examined in 1867 by M. de Closmadeuc, are exhibited in the Archæological Museum at Vannes. M. de Closmadeuc has frequently visited the island and always returned with additional discoveries. Besides pottery and flint implements of all kinds, he has collected stone mortars and hatchets similar to those found in the dolmens. Regarding the latter he writes as follows:—"Des centaines de celtæ, ou haches en pierre, de toute forme, de toute dimension, le plus grand nombre en diorite; très peu en quartz-agate, en fibrolithe, &c.; presque tous brisés."[2] M. de Closmadeuc justly argues that, since it cannot be supposed that these cromlechs were erected under water, the land has sunk and has thus permitted the waves to wash over a portion of the island, including that portion on which these stone monuments were placed.

The same antiquary has also observed that some of the stones in the celebrated dolmen of Gavr'inis are of a kind of rock which is not found on the island itself, but at some distance on the mainland, as at Baden and Arradon. Hence he suggests that when the dolmen was built, Gavr'inis was not really an island but part of the mainland, a theory in my opinion quite in harmony with the depth of water and the disposition of the extraordinary currents in this part of the Morbihan Sea.[3]

In the commune of St Pierre-a-Quibèron there are several remains of antiquity which furnish undoubted evidence that the sea has greatly encroached upon the land since the Neolithic period. Among these may be noted particularly the menhirs or standing stones of St Pierre, near the village of that name, two dolmens at Port Blanc, and a Celtic cemetery on the isle of Thinic. The menhirs are to be seen in a culti-

[1] *Morbihan*, by W. C. Lukis, p. 9.
[2] *Bull. Soc. Polymat.*, 1882, p. 10.
[3] *Ibid.*, p. 12.

vated field overlooking the shore, whose abrupt crumbling banks at once indicate how potent is the present disintegrating power of the waves. Mr Lukis describes them as forming a "series of five lines, which run in a south-east direction for a distance of 635 feet, and appear to have been partially destroyed by the encroachment of the sea. The stones are almost all prostrate, but they may be traced to the very edge of the beach, and even on the rocks below when the tide is out."[1] When I visited the locality on the 29th June 1884, there were only seven of the menhirs standing. Six of them are in a group within a stone's throw of a dilapidated cromlech, and, owing to irregular weathering, present curious fantastic shapes, two of which are called *the pilgrims*. The tide being low at the time, I took the opportunity of wandering among a chaos of granite blocks within the tidal mark, and greatly hidden by a luxuriant covering of sea-weeds; but I confess that I could find no evidence to prove, from any regularity of position, that these had ever been menhirs, or formed part of the alignments on the shore. But, on the other hand, should they have been so, I would not expect much evidence of the fact to remain, as, when the soil on which they stood became washed away, these standing stones would topple over irregularly, and become like ordinary boulders among the shingle.

To reach the dolmens of Port Blanc, we cross the peninsula to its west side. Here, on the summit of a high communal dune, just overlooking the precipitous sea-board, are to be seen two recently explored dolmens. They were discovered on the 18th February 1883, owing to the progressive demolition of the cliffs by the stormy sea which here constantly prevails, and which had already undermined and exposed the funereal chamber of a dolmen. Upon examination another dolmen was found close to the one thus exposed. They were at once investigated, under the auspices of the Commission des Monuments Megalithic, and found to contain skeletons, vases, and various objects of art, as bone pins, a bronze bodkin, two celts of diorite, flint flakes, a wild boar's tusk, &c. (see "Fouilles des Dolmens du Port Blanc," par Felix Gaillard, *Rapport déposé a la Commission des Monuments Mégalithiques*, 1883).

L'île Thinic, or *Inistilleuc*, according to the old inhabitants, is a small

[1] *Morbihan*, by W. C. Lukis, p. 29.

oval plateau, not exceeding three quarters of an acre in extent, near the village of Pontivy. During low water it is accessible on foot by a sort of rough causeway, which extends some 200 yards in length. Here an extensive burial-ground containing many stone cists enclosing bodies, flint flakes, "en quantité extraordinaire," pottery "de l'epoque des dolmens," hammer-stones, and various other stone implements, portions of stags' horns, &c. This burial-ground, designated in the report as a Celtic cemetery, was discovered and examined in August 1883 by M. Felix Gaillard. This indefatigable and most practical archæologist is proprietor of the Hotel du Commerce at Plouharnel, and among the relics in his private museum is now placed a facsimile of one of the cists from this cemetery at Thinic, containing a skeleton and other funereal furnishings in their natural positions (see *Fouilles du Cemetière Celtique de L'ile Thinic*, par F. Gaillard. Vannes, 1884).

Professor de Mortillet of Paris, who made a careful inspection of this cemetery and its geological surroundings during an archæological excursion he made last summer into Brittany with a number of his pupils, and whom I had the pleasure of meeting on that occasion, thus writes, in concluding his article already referred to :—"Il faut forcément reconnaitre qu' à l'époque robenhausienne l'ile de Thinic était enclavée dans le plateau de terre ferme et se trouvait même à une certaine distance de la mer. Ce n'est que plus tard, après, bien après la fin de l'époque robenhausienne, que la mer est venue battre contre l'ile de Thinic et l'isoler du reste du plateau. Cet isolement ne peut remonter au plus qu' à deux ou trois mille ans, peut-etre est-il même beaucoup moins ancien" (*L'Homme*, 1884, p. 424).

It seems that the cists in this cemetery were constructed in a stratum of fine sand, similar to the blown dunes on the mainland, a fact which could only be explained on the supposition that both the island and the mainland were formerly united. Moreover, it cannot for a moment be supposed that a people, who carried their respect to deceased friends to the extent of rearing such extraordinary monuments as the dolmens, would deposit their dead or even erect any gigantic monuments intended for perpetuity in places liable to be destroyed by such manifestly destructive agencies as the dashing waves over this boisterous coast.

Many other examples of change of sea-level bearing on archæological phenomena could be adduced, but I shall confine myself to one more. During the years 1868–9, while extensive excavations were being made for the purpose of extending the harbour of Ystad, in the extreme south of Sweden, the following sections were passed through in succession from above downwards:—(1) A thick bed of marine sands and gravels. (2) At 3 mètres below the level of the sea and 5 mètres below the quay, a stratum of moss, varying in thickness from $\frac{1}{4}$ to $\frac{1}{2}$ a mètre. In this moss were some hundreds of stumps of decayed trees of various sizes and still attached to their roots, which spread downwards to the soil underneath. (3) Below the moss were irregular layers of sand and clay of different colours mixed with striated pebbles, showing that this was the surface of a glacial "moraine du fond."

In the first or marine beds, which contained shells of the ordinary mollusca now inhabiting the Baltic, were found twenty-three boats of ordinary construction, several wooden vessels, two brass saucepans, some tin plates, two ancient guns of the 15th century type, several iron and stone cannon balls, two iron hatchets, a stone candle-holder, a dirk-sheath mounted with lead, portions of stags' horns sawn off, and a large quantity of bones, chiefly the skulls of animals. The animals represented were the ox, horse, dog (two kinds), pig, sheep, goat, fox, cat, and a small portion of two human skulls. Among all these there was not a fragment of the extinct animals usually found in the peat bogs, nor a single example of the implements usually associated with the Stone Age, nor any other article that could be considered as having a greater antiquity than four or five centuries. But, on the other hand, in the sand and clays beneath the bed of moss were found several species of land shells, a knife of grey flint, portion of a polished celt of a yellowish flint, a club head of bronze ornamented with lines and circles, two bone handles, one of which was beautifully carved and terminated in a dragon's head, and lastly a flint poignard neatly chipped. The inference drawn from these facts is, that before or about the time when Christianity was introduced into Scandinavia, land in this locality, now submerged for the last 400 or 500 years, stood above the level of the sea.[1]

[1] *Congrès International d'Anthrop. et d'Arch. prehist.*, 4th session, p. 15.

Last summer I visited a remarkable megalithic monument, just then explored on the island of Jersey, near St Heliers, on the road to St Aubins. It is called the "Mont Cochon Cromlech," and consists of an "allée couverte" and a stone circle (or, according to French nomenclature, a *cromlech*), surrounding a dolmen. These structures are situated in a cultivated field within a few feet of each other, and one peculiarity of them is that they remained for ages imbedded in a heap of blown sand. In addition to the value of this find, from the state of preservation of the megalithic structures, and the urns, flint implements, and other relics discovered in them, I have to note that the surface of the soil on which they were erected is only about 22 feet above the present level of the sea. The fact of this monument being now not only close to the shore, but at so unusually low a level, makes the author of the able and interesting description of it, published in the *Societé Jersiaise* for 1844, suggest that its site was formerly the centre of the island, when, according to local tradition, its area was much larger than it now is.

These few examples of marine encroachments on the land are sufficient to indicate the kind of evidence that we may expect to have to deal with in attempting to apply geological principles to the study of archæology. My chief object in drawing attention to them now is to suggest to future observers the importance of attending to the topographical position of antiquarian finds, and especially their exact localisation as regards sea-board, erosive streams, inland lakes, peat bogs, &c. I am told that in districts where blown sands accumulate along our coasts, flint arrow-heads and other stone implements of archaic types are rarely found close to the sea. In the case of the Stevenston Sands, Ayrshire, so rich in all manner of flint implements, these relics are generally not found within a distance of 300 yards from the present sea-shore; and hence this barren zone may be considered to measure the time since these stone implements and weapons ceased to be manufactured, or at least used, in the locality.