

IV.

NOTES ON ORNAMENTAL STONE BALLS, WITH REFERENCE TO TWO SPECIMENS PRESENTED TO THE NATIONAL MUSEUM BY MR ANDREW URQUHART. By ROBERT MUNRO, M.D., LL.D., F.S.A. Scot.

In 1894 I presented to the National Museum, on behalf of Andrew Urquhart, M.A., Headmaster of Rosehall Public School, Sutherlandshire, an ornamented stone ball, made, apparently, of hard sandstone and having six projecting discs symmetrically arranged on its surface, which he had picked up from the soil of a newly-dug grave in a neighbouring churchyard. Recently he has sent me another stone ball for the National Museum, also ornamented with six discs, which had been found on the surface of a cultivated field in Ross-shire. It is made of diorite, and differs from the former in having the discs only slightly raised above the intervening triangular spaces, and also in having the whole surface greatly weathered. As to the precise circumstances in which these balls were discovered, Mr Urquhart writes as follows:—

“The first stone ball I picked up at an interment in Achness burying-ground, Sutherlandshire. Its peculiar shape, as it lay among the earth of the newly-opened grave, first drew my attention. Judging from the remarks of the onlookers, it would have been reverently re-interred, had it not fallen into sacrilegious hands!

“The burying-ground is situated on the left bank of the Cassley river, about a mile above its confluence with the Kyle of Sutherland. The falls, from which the place takes its name (Gaelic Ach-an-eas, the field of the waterfall), are close by. Adjoining is a small chapel, now in ruins, and within a hundred yards is the broch of Achness, now much broken down.

“The second stone ball, which I now send for presentation to the National Museum, was found casually on the surface of an arable field on the farm of Contullich, two miles north of the village of Alness, Ross-shire. The farm is situated in a slope on both sides of the Boath

road, and the Gaelic name (Cunntulaich, 'con,' together, and 'tulaich,' a hillock) is accurately descriptive. This stone, unlike the Achness one, had no visible association with an interment. In spite of weather and the friction of farm implements, it has well maintained its six-sided character."

When a novel object, presumably a relic of bygone days, comes into the hands of a skilled antiquary, it becomes instinctively his duty to ascertain when, where, and why said object was manufactured. If it is absolutely new to him, he begins by searching museums, catalogues,



Figs. 1 and 2. Stone Balls from Contullich, Ross-shire, and Achness, Sutherlandshire.

books, and other archæological records, with the view of finding out if analogous objects had been discovered elsewhere. If so, he proceeds to examine them individually and collectively as to their resemblances and differences, the technique and style of art manifested in their manufacture, the circumstances in which each specimen was discovered, and, above all, the character of the relics (if any) with which they were associated. If, after a judicious and intelligent application of these methods, he fails to relegate his newly discovered relic to its proper position among the already classified remains of antiquity, there is no alternative but to place it among the category of undetermined objects which await the results of further discoveries and researches. Objects

thus held in suspense may sometimes continue to be isolated groups, often numbering many specimens, for longer or shorter periods before their archæological meaning becomes fully understood. Also, their distribution both in space and time often varies much. While one group may be confined to the narrow limits of a province or an island, another may embracé the greater part of the European continent. As an example of the former may be mentioned the polished stone implements known as "Shetland Knives," to which I directed your attention last session (*Proc. S. A. Scot.*, xl. p. 162). As an illustration of the more widely distributed objects of unknown use, but cognate in structure and function, there is no more remarkable group in existence than those curious wooden machines—the so-called otter and beaver-traps—which I brought under the notice of this Society in 1891 (*Proc. S. A. Scot.*, vol. xxv.). Shortly after my attention was directed to them, I collected and compared the details of some nine or ten specimens, all of which were disinterred from peat-bogs at different times, and in widely-distant localities. Two or three in North Germany were variously described as otter- or fish-traps; a specimen found in Wales was regarded as a kind of musical instrument; another from Ireland was variously held to be a fish-trap, a pump, a cheese-press, and a machine for making peats; while three newly discovered specimens in Italy were described as models of prehistoric boats. At the present time their number exceeds forty, and their geographical distribution embraces Carniola, Lombardy, Germany (several localities), Wales and Ireland (three localities). Although their peculiarity has attracted the attention of many archæologists there is even now no general agreement as to their function. The late Carl Deschmann, Curator of the Laibach Museum, labelled the two specimens under his charge as *Biberfalle*; but in Ireland, which has now yielded nine specimens, no remains of the beaver have been found in its post-glacial deposits, so that the beaver-trap theory cannot apply to the Irish machines.

But still more interesting, especially to Scottish antiquaries, is that large group of ornamented stone balls, now under consideration, which for

upwards of half a century has held a conspicuous position in the category of unexplained objects. Their number at the present time cannot be far short of two hundred, three-fourths of which, including casts, are in the National Museum, and the rest in other museums and private collections. All these have been found within the Scottish area, with the exception of one said to have been found at Ballymena, Ireland. Previous to 1874, when Dr John Alexander Smith contributed to this Society his exhaustive monograph on the subject (*Proceedings*, vol. xi.), both Sir Daniel Wilson (*Prehistoric Annals*, 2nd edition, vol. i. p. 194) and Sir John Evans (*Ancient Stone Implements*, p. 376) had taken notice of the special characteristics of the Scottish stone balls, so far as they were then known to exist. It appears that before 1851 there was only one specimen in the Scottish Museum (*Proc. S. A. Scot.*, vol. xxxvi. p. 16), but when the second edition of Wilson's *Prehistoric Annals* was published (1863), the author had a good few specimens to deliberate upon, among them being that most remarkable of all the carved stone balls hitherto known, viz. that found on the Glasshill in the parish of Towie, Aberdeenshire, "in the vicinity of several large tumuli." It presents four rounded facets projecting from the surface of a central ball, three of which are highly sculptured with incised patterns of spirals, circles, and zigzag lines analogous to the ornamentation characteristic of the Bronze Age. The various designs on this stone have been more recently (1897) examined by Mr J. Romilly Allen, and his verdict is that "the Towie stone ball clearly belongs to the Bronze Age" (*Reliquary*, N.S., vol. iii. p. 105). According to Sir Daniel Wilson, the circumstances under which the stone balls occur leave no room to doubt that they belong to the prehistoric period, "and were held in esteem by the primitive races of Britain." He informs us that two were shown to him in 1850, "as part of the contents of a cist recently opened in the course of farming operations on the estate of Cochno, Dumbartonshire, one of which was made of highly polished granite, a species of rock unknown in that district." He also quotes from the *N. Stat. Acc. of Kirkcudbrightshire* (vol. iv. p. 332) the record of another highly polished

ball of flint found in a large cairn on the Moor of Glenquicken, under the following exceptionally interesting circumstances:—

“When the cairn had been removed, the workmen came to a stone coffin of very rude workmanship, and on removing the lid they found the skeleton of a man of uncommon size. The bones were in such a state of decomposition that the ribs and vertebræ crumbled into dust on attempting to lift them. The remaining bones being more compact, were taken out, when it was discovered that one of the arms had been almost separated from the shoulder by the stroke of a stone axe, and that a fragment of the axe still remained in the bone. The axe had been of greenstone, a species of stone never found in this part of Scotland. There was also found with this skeleton a ball of flint, about 3 inches in diameter, which was perfectly round and highly polished, and the head of an arrow, also of flint, but not a particle of any metallic substance”

Sir John Evans (1872) treats the group somewhat curtly. After describing the more artistic forms he discusses the various uses assigned to them, and comes to the conclusion that it was “more probable that they were intended for use in the chase or war, when attached to a thong which the recesses between the circles seem well adapted to receive.” Their chronological range he thus defines: “Whatever the purpose of these British balls of stone, they seem to belong to a recent period as compared with that to which many other stone antiquities may be assigned.” At the same time, he expresses the opinion that from the character of the patterns the Towie stone “would seem to belong to the Bronze Period rather than to that of Stone” (*Ancient Stone Implements*, p. 377).

Dr J. Alexander Smith, in his already mentioned monograph, classifies the ornamented stone balls into three varieties—first, those covered over all their surface with small rounded projections; second, those with circular discs, either plain or ornamented, which project from their surface; and third, those of a corresponding size with their surface more or less carefully polished.

In the first class he enumerates four specimens—one from Kincardineshire, one from the isle of Skye, one from Morayshire, and one from Orkney. There was nothing in the circumstances under which the first three were found to give any indication of their age, but the fourth was

found in the remarkable underground dwelling at Skara, on Skaill Bay, Orkney, which, though disclosing a very primitive civilisation, belonged undoubtedly to the early Iron Age. In the same dwelling there was also an oval stone with angular knobs, but it was perforated for a handle, thus reminding one of the well-known bronze maceheads so frequently found in this and other European countries, and which are regarded as products of a period later than that of bronze, as they have been occasionally found associated with Roman and even mediæval remains. Since then a few more specimens which fall into this category have been recorded, but none with associated objects which give any clue to their chronological range. One highly ornamented with circles, triangles, grooves, and diamond-shaped knobs, was found near Kirkwall, and is now in the collection of Mr J. W. Cursiter (*Proceedings*, vol. xv. p. 195).

Dr Smith's second class comprises 35 specimens, of which 11 are from Aberdeenshire, 5 from Fifeshire, 3 from each of the counties of Kincardine and Perth, 2 from Moray, 2 from Forfar, and 1 from each of the counties of Dumfries, Wigtown, Banff, Nairn, Lanark, Inverness, Sutherland and Caithness; also one from County Antrim, Ireland.

On looking over the records of some 73 specimens in the *Proceedings* of the Society (including purchases, donations and exhibitions), and three in the *Reliquary* (N.S. vol. iii. pp. 45, 47), all subsequent to the publication of Dr Smith's monograph, and classifying them in the same way, and then adding the results to the above list, the following figures will, approximately, give the present geographical distribution of the Stone Balls by counties: Aberdeen, 56; Fife, 8; Perth and Moray, 6 each; Caithness, 5; Forfar, Banff, Lanark, Inverness, and Kincardine, 3 each; Argyll, Ross, Dumfries, Sutherland, and Wigtown, 2 each; Islay, Orkney (not counting the exceptionally ornamented one in Mr Cursiter's collection), Midlothian, Nairn, and Ireland, 1 each.

Again, on tabulating them according to the number of their projecting discs or facets, the following is the result:—58 with 6 discs, 18 with 4, 7 with 7, 5 with 12, 5 with 8, 4 with 5, 1 with 3, 2 with 15, 1 with

some kind of foliage, and 10 unclassified. One from Lanark is made of bronze and ornamented with a late Celtic pattern.

As to their provenance and archæological associations the following notes are so far suggestive:—One (6 discs) was found in Cairn Robin (Kincardineshire); one (6 discs) near cists and a stone circle (Aberdeenshire); one (6 discs) in a cairn at Old Deer (Aberdeenshire); one (6 discs) near a stone circle (Morayshire); one (6 discs) near a half-demolished tumulus (Nairnshire); one (4 discs) in a cairn at East Braikie (Forfarshire); one (6 discs) in trenching at Kilphedar near some faint remains of a chapel (Sutherlandshire); and one (6 discs) found on the gravel at the bottom of the Moss of Cree (Wigtownshire). Thus of the 35 described by Dr Smith six were more or less associated with cairns or stone circles, presumably burying-places of the Bronze Period, and one with a churchyard. The stone ball from the Moss of Cree indicates great antiquity, as this locality has yielded several heads of the extinct urus, canoes, stone and bronze celts, a Roman battle-axe, etc. The others were either without a history, or discovered incidentally in digging operations, or on the surface of cultivated fields.

Of subsequent finds little information is derived from their position and collateral associations. One (6 discs) was found in a peat moss in Caithness; one (6 discs) was turned up in a garden at Newburgh (Fifeshire); one (8 discs) found while digging close to the church tower of St Vigeans (Forfarshire); one (6 discs) turned up in the soil from a modern grave at Achness (Sutherlandshire); one (6 discs) from the fort of Dunadd (Argyllshire); two (8 discs) in a stone cist at Ardkeiling (Morayshire); and one (12 discs) found near a stone cist associated with a polished stone axe, some iron slag, and the foundations of huts.

Among the third class, viz., the stone balls smoothed over their whole surface, Dr Smith enumerates six specimens. Of these, one in the National Museum and one from Orkney are without a history; the third is that already referred to as having been found in a cairn on Glenquicken Moor; the fourth was found on the hill of Tillygrieg,

Aberdeenshire; and the fifth and sixth are the two mentioned by Sir Daniel Wilson (already referred to) as having been found in a cist on the estate of Cochno, Dumbartonshire. Thus, of these six specimens of unornamented stone balls three are unequivocally associated with burials of the Stone or Bronze Age. Since then a few more round plain balls have been recorded from various localities, but only one has associations with other objects, viz., one from Papa Westray, Orkney, found among ancient ruins.

The above facts, though by no means so comprehensive as might be attained by more extended researches, are sufficiently accurate to entitle us to draw, at least provisionally, some general conclusions as regards the age and use of these stone balls which will now be briefly stated. On this phase of the subject Dr Smith, in his monograph, displays much ingenuity in support of the following opinion:—

“Considerations such as these make me incline to the opinion that, instead of belonging to Stone or Bronze Ages, or any such indefinite or ancient period, it was much more likely these curious stone balls might belong to the ancient, though comparatively historic, periods of the sculptured stones, these silver chains and brooches, and cufic and Anglo-Saxon coins. The places where some of the stone balls have been found, as, for example, the two found in an underground dwelling at Skara, Bay of Skaill, Orkney, or of that found at Kilpheadar in Sutherland, etc., seem also to tell against any idea of their being relics of a very great antiquity.”—*Proc. S. A. Scot.*, vol. xi. p. 56.

This opinion may perhaps be regarded by some as strengthened by the subsequent discoveries at the churchyards of St Vigeans and Achness and the Fort of Dunadd, each of which sites has yielded a typical specimen; but it may be argued that the date indicated by the remains and historical associations of these sites may not be later than the sixth century A.D., a date which can be readily admitted as being the proximal end of the chronological range of the stone balls. Having somewhat hesitatingly formulated his theory, Dr Smith endeavoured to strengthen it by collateral evidence. “I have looked in vain,” he writes, “for any corroborative evidence on this subject from the usages detailed in our early historical periods, or allusions in our early literature; and telling our highly-valued curator, Mr Joseph Anderson, my views of the

probable age of these stone balls, asked if he could help me to any references or suggestive allusions in the writings of these early periods." The result of their united forces was an elaborate effort to show a striking resemblance between the Scottish Stone Balls and the maces carried by the Saxons in the battle of Hastings as depicted on the Bayeux tapestry, on which Dr Smith thus descants:—

"The maces borne by these Saxons have their heads coloured red, or some paler colour, in the tapestry, and in shape they exactly correspond to two varieties of these stone balls, each cut into six projecting knobs or circles which I have already shown to be the kind of balls of which most examples have been found. I have copied the plates of tapestry referred to, and a glance at them will show, I may say almost beyond a doubt, the exact correspondence of the one with the other. The mace heads in the tapestry show four equally projecting rounded knobs or bosses, each about the same thickness as the shaft to which it is attached. If one of these six-knobbed balls, like those, for example, which I have figured found at Mountblairy or Thurso, was tied on the top of a short staff or handle of corresponding size and thickness, the resemblance would be complete to the mace thrown by a Saxon against a Norman knight in Plate XIV. Or if we take the deeply cut and knobbed ball found at Kilpheadar and figured in Plate I., and attach it to a handle, we have an exact representation of it in Plate XVI. of the tapestry, where the Saxons on foot are represented as giving way before the Norman cavalry at the close of this hard-fought battle.

"These stone balls, in all their varieties, are therefore, in all probability, actually the stone heads of maces, which each man probably made and ornamented according to his own taste, and afterwards fastened to a stout and short cylindrical handle of wood, and had thus a most efficient weapon for defence and offence."—*Ibid.*, pp. 57, 58.

If the mace used by the Saxons at the Battle of Hastings consisted of an ornamented stone ball attached to the end of a short stick, is it not very remarkable that not a single specimen of such stone balls has ever been found, either in the vicinity of Hastings, or anywhere south of the Scottish border? Indeed, this alone seems to me a sufficient reason for rejecting the hypothesis as absolutely untenable. Nor does it coincide with the opinion which Dr Joseph Anderson, his coadjutor in the Saxon theory, subsequently gave currency to in his Rhind Lectures (*Iron Age*, p. 172), in which he assigns them to the period that lies beyond the Christian time and reaches back until it merges into the Bronze Age. But while we have only the Dunadd specimen

which can be dated to proto-historic times, there are many of the other recorded specimens which clearly relegate the distal end of the chronological range of these stone balls as far back as the Bronze Age, if not to the end of the Stone Age. We have already noted the Towie ball with its characteristic Bronze Age ornamentation; the unique bronze ball with its equally characteristic "late Celtic" designs; and some half a dozen found in cists or associated with cairns. If those presenting a smooth polished surface be accepted as belonging to the same class of antiquities as the carved balls, the precise record of the discovery of the Glenquicken stone ball is, in my opinion, valid evidence for holding that it is a genuine relic of the Stone Age. This is how Dr Smith gets rid of the difficulty presented to his theory by the contents of the cist in the Glenquicken cairn. "From the view I take of the comparatively recent character of the other stone balls, I would be inclined to believe this cairn had also belonged to a not very remote period." Dr Smith had not, however, the benefit of the facts disclosed by the excavations conducted at Ardkeiling, near Elgin, and recorded by Mr Hugh Young, F.S.A. Scot. In the article already referred to, Mr Young writes (p. 45): "A third grave was opened twenty feet to the south-west of the cairn, the features being the same as in the others, but in this grave a find of great interest was made, consisting of two jet-black stone balls of some granite stone, with eight projecting knobs on each, and well-formed grooves between them." Another stone ball of black granite with twelve knobs is described as having been found near the same place, though not in a cist. It is figured in the *Reliquary* for 1898 (N.S., vol. iv. p. 119).

These facts leave little doubt in my mind that the chronological range of the ornamented Stone Balls extends from the end of the Stone Age down to the close of Paganism in Britain. Their geographical distribution seems to me also to have an ethnological significance. Thus, of the 111 specimens here dealt with as coming within Dr Smith's second class, no less than 56 have been traced to Aberdeenshire, and the rest to the eastern districts of Scotland, chiefly north of the Firth of Forth—

the exceptions being three from Lanarkshire, two from each of the counties of Dumfries, Argyll and Wigtown, one from Islay, and one from Ireland. Now the Scottish regions thus defined strikingly coincide with the little we know of the geographical area occupied by that most obscure of all the people who formerly inhabited North Britain, viz., the Picts or Caledonians. When the Romans came into contact with them they were sufficiently powerful and well organised to place an army of 30,000 on the battlefield. Whether the Picts were then comparatively recent immigrants into Britain, or among its earliest occupiers, is a debatable problem. If, however, the hypothesis that they were the manufacturers and owners of the ornamented stone balls, which constitute so great a puzzle to archæologists, be correct, then they must have been inhabitants of the country during the entire Bronze Age, and continued to be so until their national institutions became amalgamated with those of the Scoto-Irish some time in the ninth century of the Christian era. The idea that we owe the origin of the carved stone balls to any of the Celtic immigrants into Britain cannot be entertained, otherwise some specimens would have been met with in the wider lands so long occupied by them outside the Scottish area. For a similar reason the claim that they are of Saxon origin must also be rejected.

As regards the probable function of these balls the only suggestion which seems to me to have a better foothold than mere guesswork is that they were used as a badge of distinction and solemnity in the performance of religious ceremonies, somewhat analogous to the crozier of the subsequent Christian period. The archæological grounds for this suggestion are, (1) the fact that so many of the balls were associated with stone cists, cairns, and other remains of Pagan cemeteries; and (2) the survival of their symbolism in connection with burial customs into the Christian period—a transition-process which can be paralleled by many other Pagan rites, some of which survive in the religious and ecclesiastical ceremonies of to-day.