NOTICES OF RELICS FOUND IN AND NEAR ANCIENT CIRCULAR DWELLINGS EXPLORED BY THE HON. W. O. STANLEY, M.P. IN HOLYHEAD ISLAND.

THE vestiges of habitations of the early occupants of the British Islands present possibly a greater amount of instructive evidence than any other class of pre-historic remains, with the exception only of sepulchral depositories. They have, however, been little appreciated; it is only in very recent times that circular hut-foundations, pit-dwellings, the strange subterranean structures that abound in many districts of our country, where such traces of its ancient inhabitants have not been effaced by the progress of agriculture and improvement, have at length been systematically investigated. Having been so fortunate as to witness the examination of the hut-circles on Holyhead Mountain, the lively interest with which I have followed Mr. Stanley's researches enhances the gratification that I feel in offering a few remarks on certain ancient relics discovered at Ty Mawr, as related in the memoir for which the Institute is indebted to his kindness.

The excavation carried out in the autumn of 1862 was comparatively unproductive as regards the relics brought to light, which are inferior in variety and interest to those, hereafter noticed, previously obtained in the immediate neighbourhood. It is remarkable that no trace of metal, no weapon or personal ornament was noticed in the explorations; they were, however, repaid by the suggestive evidence that we obtained regarding the internal arrangements of such primitive dwellings, and the daily life of their occupants. It must be remembered that the mere rudiments of the hut-circles had been spared, concealed in shapeless hillocks that had long served as stores of material for any required purpose, in preference to the more laborious resource of quarrying stone on the adjacent mountain. I was assured by the old tenant, Hugh Hughes, that he well remembered

the circular walls of some of the cyttiau standing as high as his shoulder; they had been heedlessly demolished to form the adjacent fences on the farm, to which he came in 1814.

The first remarkable relic disinterred was one of the primitive stone appliances for triturating grain (see woodcut, fig. 1); it lay in the part of the dwelling that appeared

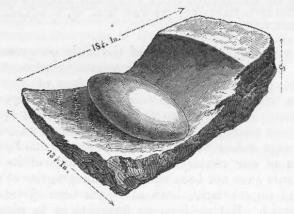


Fig. 1. Grinding-stone and muller found in the Hut-circle, Ty Mawr.

to have been a cooking-place, and consisted of a slab of coarse-grained stone, the mill-stone grit possibly obtained near Bodorgan, in Anglesey, measuring $18\frac{1}{4}$ by $13\frac{1}{2}$ in., the greatest thickness being about 5 in. Its upper surface was considerably hollowed away in the course of grinding; an oval rubber, measuring 12 by 5 in., flat on one face and convex on the other, lay near it. A second similar "runner" or grinding-stone, of granite, measuring $9\frac{1}{2}$ by $3\frac{1}{4}$ in. was subsequently found. The simplest and doubtless most ancient mode of preparing any grain for food was by crushing it, probably after being parched, between two stones; convenience must soon have suggested that the lower stone should be hollowed, so that the grain might not escape, and that the muller should be so shaped as to be readily held and passed backwards and forwards by the hands.

It has been truly observed by Sir W. R. Wilde, in reference to such a primitive appliance, that "when we consider the immense length of time that all nations, acquainted with the use of corn, have known how to work the rotary quern, this must be indeed an implement of extreme antiquity." 1 It were of no slight interest if we could ascertain what were the earliest cereals cultivated in Anglesey, and ground for the food of the occupants of the cyttiau under consideration.2

Some examples of "grain-crushers" resembling that found at Ty Mawr have occurred in Anglesey. One, of precisely similar fashion, was exhibited at the Bangor Meeting of the Cambrian Archæological Association by the Rev. W. Wynn Williams; it is figured in their Journal.3 The two portions of this object were found together in a wall on the land of Tre-Ifan, near the River Braint in Anglesey; this wall on one side forms the boundary of a village or group of cyttiau. Mr. Williams had found no other perfect specimen; but he possesses not less than sixteen portions of the lower stones, and eleven of the rubbers, some of them adapted for graincrushers of larger size than that above-mentioned, the dimensions of which are as follows:—Lower stone, length 19 in., breadth 13 in., thickness 8 in.; upper stone, length $16\frac{1}{2}$ in., greatest breadth $7\frac{1}{2}$ in., thickness $3\frac{1}{2}$ in. This last is carefully tapered, both ends alike. On one of the broken lower stones there is a shallow cavity, width 5 in., which may have been intended to receive the flour. Mr Wynn Williams observes that he does not consider these "graincrushers" to have been the most primitive appliances used in

¹ Catal. Mus. Roy. Irish Acad.; Stone Materials, p. 104, where an example of a similar kind of grain-rubber is figured; it is of sandstone, measuring $16\frac{1}{2}$ by 11 inches, and has a singular perforation at the side. There are other specimens in the museum at Dublin. I am indebted to Mr. Shirley for a notice of such "saddleshaped" grain-crushers of larger dimen-sions, found in Ireland, measuring in length from 30 inches to about 3 feet.

² It is asserted as well established that wheat, and probably also oats and rye, were grown in Ireland long before the Christian era. See Dr. O'Donovan's Essay on the Antiquity of Corn in Ireland; Dublin Penny Journal, vol. i. p.

3 Arch. Camb., vol. vii. Third series, p. 40. See at p. 245, ibid., a letter relating to this "grain-crusher" by Professor Babington, who states that he had obtained, at Anglesey Abbey in the fens of Cambridgeshire, a similar pair of stones, now deposited in the museum of the Cambridge Antiquarian Society; they are very rude, and show no attempt at finish, although well fitted for the required purpose. He believed that Mr. Wynn Williams' specimen and that found in Cambridgeshire were the only examples of this type that had been noticed in Great Britain; but he refers to similar crushers in the museum of the Royal Irish Academy. In the exploration of subterranean chambers at Treveneague, in the parish of St. Hilary, Cornwall, as related by Mr. J. T. Blight, amongst pottery and various relics there was a piece of fine-grained granite, measuring $13\frac{1}{2}$ in. by $5\frac{3}{4}$ in., rubbed down on one of its faces evidently by a muller. It is of the same class of grain-crushers as those found at Ty Mawr and Tre-ifan, in Anglesey. A rounded stone of the same material, diam. 4½ in., with a small depression on each side, was also found. Similar relics have occurred in Cornwall, and they are supposed to have been used in crushing grain. Trans. Penzance Nat. Hist. and Antiq. Soc., 1867, where both the relics above noticed are figured.

preparing cereal food; he is disposed to consider the simple mortars, that are of more rude workmanship, as having been the first means used for pounding grain. Of these he possesses many specimens, found in the parish of Menaifron and other parts of Anglesey; they measure from 12 to 2 in. in diameter.⁴

These relics of the occupants of Mona at a remote period are highly curious. It is almost unnecessary to remind our readers that similar crushing-stones have been used, and are still employed amongst uncivilized tribes in various parts of the world.⁵

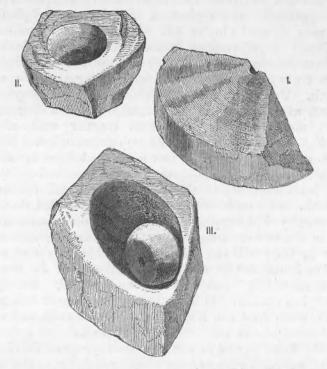
In the course of Mr. Stanley's researches in 1862, several stone querns and mortars were obtained in the neighbourhood that appear to deserve notice, although we cannot claim for them so high an antiquity as may be ascribed to the cyttiau. Three of these objects are here figured. I. A portion of the lower stone, of mill-stone grit; diameter, in its perfect state, about 16 in.; the top of the stone is convex; the hole is seen for insertion of a spindle upon which the upper stone, or "runner," revolved.⁶ This last existed within recent memory, but was lost.—From Glan rafon. II. A small

⁴ Letter from Rev. W. Williams, Arch. Camb. vol. viii., third series, p. 157.

⁵ A "saddle-quern," resembling that found at Ty Mawr, was sent to the museum of the Institute at the Hull meeting, 1867. It was found in the East Riding. Grinding stones of precisely similar fashion occur on the sites of Pfahlbauten, in the Swiss Lakes. Compare also examples amongst German antiquities; Wagener, Handbuch, fig. 117; Klemm, taf. 1. An object of the like description was in the Egyptian collection at the recent Universal Exhibition at Paris; this is the grinding-stone and muller used by the Soudan negroes; they are now at the British Museum, the entire collection having been presented by the Viceroy. In the Christy Museum may be seen another from Natal. Niebuhr describes a similar appliance for grinding millet used by the sailors in the vessel that conveyed him from Sidda; Descr. de l'Arab. p. 45. Sir S. Baker thus quaintly notices the apparatus. "I must have swallowed a good-sized millstone since I have been in Africa, in the shape of criti nubbed from the moortrake. of grit rubbed from the moortraka, or grinding-stone. The moortraka, when new, is a large flat stone weighing about 40 lbs. Upon this the corn is ground by

being rubbed with a cylindrical stone with both hands. After a few months' use half of the grinding-stone disappears, the grit being mixed with the flour; thus the grinding-stone is actually eaten. No wonder that hearts become stony in this country." The Albert Nyanza, vol. i. p. 65. The Rev. A. Hume, LL.D., Hon. Sec. Hist. Soc. of Lancashire and Cheshire, informs me that, in a recent journey to South America, he found the triturating stones in full use not only among the Indians, but among the inhabitants of Spanish origin. It was in full work for bruising maize, whether raw or boiled, at Santiago. In the latter case a paste is formed, which is worked into thin cakes like the Scotch oatcake. Dr. Hume brought home a grinding slab and its rubber from Lota, 283 miles south of Valparaiso. Examples may be seen in the Blackmore Museum at Salisbury, where is also a saddle-quern from the pit-dwellings near that city.

⁶ See notices of various types of querns by Sir W. R. Wilde, Catal. Mus. R. I. A., pp. 105—113, where several Irish examples are figured; also Remarks on Querns, by the Rev. A. Hume, LL.D., Arch. Camb., N. S., vol. iv. p. 89; Memoirs Hist. Soc. of Lancashire, vol. i., 1848. pentagonal mortar, of whin-stone, obtained at Ty Mawr, but probably of times comparatively recent; the basin measures about 3 in. in diameter. I saw two others, likewise of whin,



Fragment of a quern, and two mortars, found in Holyhead Island.

at Penrhos; the cavity in one of these is irregularly oval, measuring 9 in. by 7 in. III. A four-sided mortar, dimensions about 10 in. in each direction, with a small cylindrical grinder, measuring $4\frac{1}{2}$ in. in diameter; the basin is of oval form, measuring about 7 in. longest diameter.—From Pen y Bonc, where the cist enclosing urns and a jet necklace, described hereafter in this memoir, was brought to light. Stone mortars are not uncommonly found near ancient habitations in Anglesey; several were obtained with querns and other relics by the Rev. W. Wynn Williams at Llangeinwen.

⁷ Arch. Camb., third series, vol. ix. p. 280. See ibid., vol. iii. p. 356, a notice of a grinding slab of granite, having a cavity on its upper face apparently for

bruising grain by a globular stone. It was found with mullers and other relics in Cornwall,

They may probably have been used for pounding grain or

the like into pulp.

It has been stated that, in the same division of the hut, near the spot where the relic figured above was found, there was apparently a fire-place, E in the ground-plan; it measured about 18 in. by 2 ft.; it may deserve notice that its almost central position in the dwelling would doubtless facilitate the escape of smoke, if, as I am inclined to believe, the roof was of conical form with an opening, probably, at its summit. Two other small fire-places, however, may have existed, as indicated by some marks of fire and traces of jambs noticed against the main circular wall of the building—see н and к in Mr. Elliott's ground-plan. Within and near the little fire-place first mentioned there lay a considerable number of sea-shore pebbles, that had evidently been long subjected to the action of fire, and on careful examination we could not hesitate to conclude that they had been employed in certain culinary operations. I am not aware that in the recent investigation of primitive dwellings, especially in Cornwall and Somerset, in Caithness and other parts of North Britain, any distinct evidence of the practice of "stone-boiling" has hitherto been recorded. Mr. Tylor, indeed, has remarked in his interesting notices of that practice in North America, Kamchatka, New Zealand, and other Polynesian islands, that "the quantities of stones, evidently calcined, found buried in our own country, sometimes in the sites of ancient dwellings, give great probability to the inference which has been drawn from them that they were used in cooking. It is true that their use may have been for baking in underground ovens, a practice found among races who are stone-boilers, and others who are not."8 By such a rude expedient it is certain that, when pottery or other vessels which would bear exposure to fire were unknown, water might be heated in skins,9 in vessels of wood or the like, and even in baskets that would hold fluids, by means of stones made red hot in a fire close by, and gradually dropped into the seething liquid. The natives of the Hebrides, moreover,

⁹ Capt. Risk, with whom I had the

opportunity of conversing at Penrhos, soon after the investigation of the hutcircles at Ty Mawr, informed us that he had witnessed the process of cooking meat in skins, or "paunch-kettles," in the Brazils, at Buenos Ayres, and Rio della Plata,

⁸ See Mr. Tylor's sketch of the history of stone boiling, Early History of Mankind, p. 261—268; also the curious tradition related in p. 302. See also Sir John Lubbock's Prehistoric Times, pp. 250, 380.

as we are told by Buchanan, whose history was written about 1580, were accustomed to boil their meat in the paunch or hide of the animal. Many of the stones found in the caves in the Dordogne explored by the late Mr. Christy and M. Lartet, appear, as Sir John Lubbock remarks, to have been used in this manner as "heaters." 1

In Ireland, as I am informed by the Rev. James Graves, such pebbles constantly occur in the remarkable subterraneous structures known as Raths, the character of which has lately been so well set before us by Col. Lane Fox.² When they bear no signs of burning, Mr. Graves has been accustomed to regard such round stones as missiles, for use by sling or by hand; the Irish, to this day, as he observes, throw a stone with extraordinary force and truth of aim. But when such stones bear traces of fire, Mr. Graves considers that they had undoubtedly been used in cooking.3 It is remarkable that even in our own days "stone-boiling" is not wholly obsolete. In Carinthia, as the late erudite Swiss antiquary, Morlot, told me, they make a dark brown beer, called Steinbier, by throwing hot stones into the vat or cask; a fact that recalls the account given by Linnæus of Finnish beer called "Lura," prepared by throwing red-hot stones into the liquor instead of boiling it.4

In an adjacent part of the hut-circle, F, not far from the fireplace, was found, at I, a stone whorl (fig. 2). This little object, which at first sight suggested the conjecture that we had found, in that western part of the dwelling, the gynæcium or resort of the mistress of the cyttiau, is of a class of relics occurring constantly on all ancient sites: it is of dark red sandstone, and measures about $1\frac{1}{2}$ in. in diameter, $\frac{2}{3}$ in. in thickness. These massive little discs or rudely-shaped beads

¹ The Rev. W. Wynn Williams, in his account of the remarkable walled enclosure and circular buildings at Penrhos Lligwy, on the north-east coast of Anglesey, mentions the occurrence of numerous sea shore pebbles. These may, however, have been missiles for defence. No appearance of their being calcined is noticed. In kitchen-middings near the shore of Nova Scotia, were noticed, throughout Nova Scotia, were noticed, throughout the refuse deposit, with pottery, flint weapons, &c., many sea-beach pebbles, bearing evident marks of the action of fire. Anthrop. Rev., vol. ii. p. 225.

2 See pp. 123, 136, ante.

3 In connection with this very curious

subject may be here mentioned the "Giants' Cinders" in Ireland,—heaps of half-calcined grit stones, called sometimes "the cooking places of the Fenians."
They mostly occur, according to Mr.
Graves, near water, and in some instances consist of a hundred cartloads, or more, of stones; some are of small extent. He informs me that, as he believes, these were places where the spoils of the chase were cooked, the hot stones being heaped round the carcases and forming rude ovens. See Trans. of the Kilkenny Arch. Soc., vol. iii. pp. 59, 84; Gent. Mag., June, 1854, p. 627.

4 Tour in Lapland, vol. ii. p. 231.

are commonly designated distaff-whorls, and many examples seem well suited to be affixed as weights to the spindle: there is a considerable collection of such articles in the

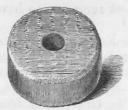


Fig. 2 Whorl of red sandstone. Two-thirds orig. size.

Museum at Dublin; they have been called by popular tradition in Ireland, "fairy mill-stones," and sometimes, by the older antiquarians, "amulets." They have occurred frequently on the sites of Crannoges, as likewise around the Pfahlbauten of the Swiss Lakes. Some of these discs may be relics of female industry, but I incline to believe, with Mr.

Franks, that not a few were fastenings of the dress. He remarks, in noticing a specimen found at Haverfordwest, and given in 1851 to the British Museum by Mr. Stokes:—"This is one of those curious objects frequently found in England, but regarding which various opinions have been expressed. By some it has been conjectured to be the verticillus of a spindle, from its similarity to such objects found with Roman remains; by others a bead or button. This last opinion seems not unlikely, as very similar objects have been found in Mexico which have certainly been used as buttons." The specimen from South Wales has evidently, as Mr. Franks notices, had a cord passed through it, the edge of the central hole being much worn by friction.6 The reader who may care to investigate more fully such relics of female industry, will find abundant information in Dr. Hume's treatise on spindle-whorls, beads and pendants, in his Account of Antiquities found on the Sea-coast of Cheshire.7

I might mention other examples of the stone whorl found in North Wales; they present, however, no remarkable variation in their size or fashion. One similar to that above

Professor Nilsson's observations on ancient Scandinavian buttons of amber and stone. Primitive Inhabitants of Scandinavia, translated by Sir John Lubbock, pp. 85, 86.

pp. 85, 86.

7 Ancient Meols, by the Rev. A. Hume, LL.D.; London, 1863, p. 151; where numerous specimens are figured. Notice of several found in Anglesey may be found in the Arch. Camb., vol. vi., third series, p. 376.

⁵ There are 70 specimens in the collection of the R. I. Academy. Wilde's Catal., p. 116. The industry of spinning and weaving flax was prevalent amongst the old occupants of the piled dwellings in Switzerland. See Mr. Lee's translation of the Memoirs by Dr. Keller on the Lake Dwellings; London, 1866: Longmans. The form of whorl is somewhat peculiar—one side is mostly flat, the other conical. They are usually of clay.

⁶ Arch. Journ., vol. ix. p. 11. See also

figured is in Mr. Stanley's possession at Penrhos. It was found in Anglesey, in the parish of Llanynghenedl, and not far from Ynys Llyrad, where, as before mentioned, a cluster

of cyttiau may still be seen.

A few other relics of stone were brought to light within or in immediate proximity to the hut-circle at Ty Mawr. They consist of an irregularly rounded pebble, that may have been used as a sharpening stone or a polisher; and an oblong four-sided rolled pebble, length about $3\frac{1}{2}$ in., in its general appearance like a rudely-shaped celt, the smaller end being rubbed down, as if for some mechanical use: Mr. Franks informs me that similar pebbles occurred in kjökkenmoddings in the Isle of Herm, one of the Channel Islands. Also a rolled pebble of quartzite approaching to greenstone (fig. 3). It may have been a hand-hammer, or used for



Fig. 3. Ovoid pebble from the Cyttiau'r Gwyddelod, Ty Mawr. One-third orig. size

pounding; each extremity shows effects of much percussion; there are also fractures where flakes appear to have been struck off, such as may have been used for rough arrowpoints or the like. It is here figured on a reduced scale. The dimensions are about $3\frac{3}{4}$ in. by $2\frac{5}{4}$, greatest width. I may here likewise notice a ponderous cylindrical muller or grinding-stone of trap (fig. 4), found in an adjacent field in 1866. It measures $8\frac{1}{2}$ in. in length, the girth at the thickest part is $10\frac{1}{4}$ in.; the weight 6 lbs. 2 oz. One end was broken by the finder; the other bears indications of considerable percussion; one side also is somewhat flattened, possibly in triturating grain or other substances. See woodcut, one-third original size. No stone-

muller of precisely similar description has come under my notice, and I failed to find any in the Christy collection, so rich in the various types of antiquities of stone. The late

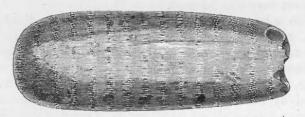


Fig 4. Cylindrical grinding-stone found near Ty Mawr. One-third orig. size.

Mr. Bateman, in his excavations in Derbyshire, found, on the site of a so-called British habitation, a cylindrical object of stone that he supposed to have been used for bruising grain, and he observes that it resembles one found in an Aztec burial-mound in South America examined by Capt. Nepean.⁸ Mr. Anderson, in his report on cairns and remains in Caithness explored in 1865, describes an "oblong shore-pebble wasted at the ends by use as a pestle."

I may here notice an implement, probably used likewise in the preparation of food, that was found, as Mr. Stanley informs me, a few years since in Holyhead Island, at no great distance from the vestiges of ancient habitations that he has brought under our notice. This object, now unfortunately lost, was a club-shaped stone pestle (fig. 5),



Fig. 5. Stone pestle found in Holyhead Island.

measuring in length about 11 in., and apparently suited for crushing grain or the like, by a process somewhat different to that for which the rubbers or cylindrical stones that have been described were suited. A few other examples of this comparatively rare type of implement are known to me. In the Edinburgh Museum there is a cylindrical-shaped

S Capt. Nepean's researches are noticed in the Archæologia, vol. xxx. Many of the relics discovered were presented to the British Museum.

⁹ Other similar objects are likewise

mentioned, found in a "Picts' House," Wick. Memoirs, Anthropol. Soc. vol. ii, pp. 228, 231. It is said that these implements resemble some obtained in shell-mounds, at Keiss Bay, in Caithness.

implement of porphyritic stone; the ends are rounded off to blunt points; it measures 11 in. in length, and 21 in. in diameter; it was found with celts of serpentine, in a cairn at Daviot, Inverness-shire, where, according to tradition, one of Fingal's battles occurred.1 This seems to have been one of the stone pestles under consideration, that may have served for grinding grain, or possibly as a club in close con-There is also one in the Museum of the Chichester Philosophical Society, found in digging gravel on Nutbourne Common in the parish of Pulborough, Sussex, near barrows and sites of primitive habitations. It lay in the mould about 18 in. deep, above and distinct from the gravel. Length 11½ in., diam. 2 in.2 Another, of greenstone, found near Carlisle, length 16 in., was in possession of the late Mr. C. Hodgson, of that place. A specimen of this comparatively uncommon implement is also in the Museum formed at

Audley End by the late Lord Braybrooke.

It has been stated by Mr. Stanley, that a considerable deposit, chiefly consisting of weapons and implements of bronze, was brought to light in 1832, under some large stones near the cyttiau at Ty Mawr. The discovery was brought under the notice of the Society of Antiquaries by the late Lord Stanley of Alderley.³ The spot is marked in the Ordnance Map. A portion of the south-west flank of Holyhead Mountain, which had been left in waste, was brought under the plough; in removing one of the hutcircles, the relics here figured were exposed to view. It has been suggested that they appear for the most part to bear resemblance to relics of similar description found in Ireland; and this circumstance has been regarded with interest, in connection with the name and the traditions that would ascribe this fortified village of ancient dwellings to Irish occupants. Whilst recognising certain peculiarities that would lead us to regard some of these relics as of Irish types, it must be admitted that they may have been part of the spoils of Hibernian rovers, by whom doubtless the coasts of Anglesey and North Wales were constantly infested; the evidence of such a casual deposit will scarcely justify any inference that might bear on the supposed Irish

Proc. Soc. Ant. Scot., vol. vi. p. 179.
 Catal. Museum formed at the meeting of the Institute, Chichester, 1853, p, 63.

³ Archæologia, vol. xxvi. p. 483. In the Ordnance Map, 1830 is given as the date of the discovery.

origin of the cyttiau on Holyhead Mountain, or on the probability of any permanent Irish occupation of the strong position at Ty Mawr. It may seem more reasonable to suppose that the group of dwellings explored by Mr. Stanley may have been in its original intention an outpost to the great British fortress of Caer Gybi, that crowns the summit of the mountain, and have presented an important defence of the approach on that side, as also in a certain degree of the landing-place and small roadstead below. Here many a deadly conflict must have occurred between the occupants of the island and the rapacious rover, whether Irish, Dane, or Norwegian.⁴

The relics, shown in the accompanying woodcuts, are as

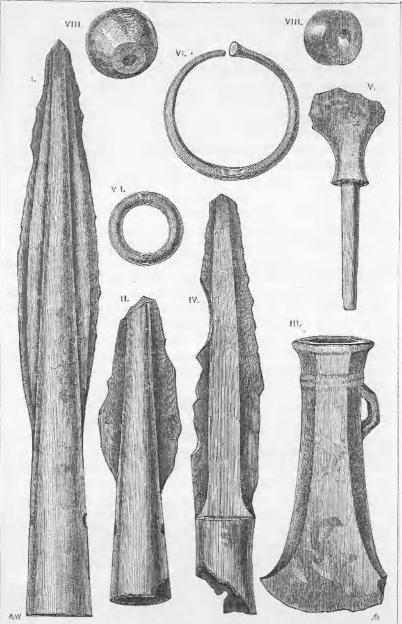
 $ext{follows}:$

I. A bronze spear-head, of the leaf-shaped type, beautifully formed, but somewhat decayed, as are also the other bronze objects, by oxidation. Its length is nearly 9 inches, the socket is perforated for a rivet; the blade has featheredges perfectly worked and symmetrical; the rounded central rib or prolongation of the socket is hollow almost to the point, as shown by a narrow aperture caused by decay of the metal. This weapon closely resembles that in the Museum of the Royal Irish Academy, figured in Sir W. R. Wilde's Catalogue; spears of the same type, however—rarely so skilfully fabricated—have repeatedly occurred in England.⁵

II. A plain, leaf-shaped spear-head, of simpler fashion, the point broken. In its present state, its length is nearly 5 inches; the socket is perforated for a rivet. It may deserve notice, that in deposits where several bronze weapons have occurred together, two or three spears of various sizes have been noticed, as if forming together the customary equipment. On the moiety of a stone mould for casting weapons of bronze, found between Bodwrdin and Tre Ddafydd, in Anglesey, two of the dimidiated matrices were

⁴ A short distance to the east of Ty Mawr, on or near the boundary of the ancient village of circular huts, a large stone may deserve notice, being known as "Mein Bras"—Stone of the Copper,—possibly on account of some deposit of bronze or other relics there brought to light at some former period.

⁵ Wilde, Catal. Mus. R. I. A., p. 496, No. 6. Compare an example, somewhat differing in proportions, the socket being very short. It was found in the Thames. Horæ Ferales, pl. vi., fig. 29; also a spear-head found at Nettleham, near Lincoln, figured in this Journal, vol. xviii. p. 160.



Antiquities of bronze, with beads of amber, found in 1832 at Ty Mawr on Holyhead Mountain. Scale, two-thirds orig. size,

for casting spear-heads, dissimilar however in fashion to those found at Tv Mawr, and, in each instance, furnished

with two side-loops.6

III. A looped and socketed celt, of Irish type, and of unusually good workmanship. Length 4½ inches. A specimen in the Dublin Museum, resembling this celt in its general fashion, is one of those selected by Sir W. R. Wilde, out of a series of 201 socketed celts, as types of the most remarkable varieties of form that the socketed celt assumes. He has described the example in question as "a slender socketed celt, 4½ inches in length, of an irregular hexagon form in the middle, and circular in the slightly everted and decorated socket."7 In the example found at Ty Mawr, the termination has a more strongly defined "hatchet face;" the hexagonal form is continued to the mouth; the opening is of irregularly square form. Several other slightly varied specimens have occurred in the sister kingdom.

IV. A small socketed dagger-blade, feather-edged, length somewhat more than 61 inches, in its present slightly imperfect state. The blade is leaf-shaped, the socket oval, and pierced for a rivet that passed from front to rear, as most frequently found in objects of this description. In some specimens it passed from side to side. This type is distinctly, if not exclusively, Irish, and Sir W. R. Wilde enumerates 33 specimens in the Dublin Museum. He supposes that the pommel was of wood, bone, or horn; the length of the metal portion varying from $3\frac{3}{4}$ to $11\frac{1}{2}$ inches. The socket is occasionally circular or quadrangular, and ornamented.8 Mr. Franks gives, in the Horæ Ferales, a specimen with a short oval socket and two sets of rivet-holes: it was found at Thorndon, Suffolk, with a bronze gouge and

⁶ This mould is figured, Arch. Journ., vol. iii. p. 257. A similar object found in the Co. Limerick, and presented by Mr. de Salis to the British Museum, is figured ibid., vol. xxii. Another stone mould for spears had been found in Co.

is figured in Dr. Wilson's Prehistoric Annals of Scotland, vol. i. p. 346, second edit., and a casting from the mould.

mould for spears had been found in Co. Galway. Archæologia, vol. xv. p. 394.

7 Wilde. Catal. Mus. R. I. A., p. 384, No. 406. Compare the celt found at Roscrea, Co. Tipperary, now in the British Museum. Horæ Ferales, pl. v. fig. 11. Mr. Franks describes it as having the sides divided into three facets, the socket oval. A stone mould for socketed celts of similar form, but curiously ornamented, found in Ross-shire,

ibid., p. 384.

8 Wilde, Catal. Mus. R. I. A., pp. 465, 483. Amongst examples figured, one, No. 218, found in the Shannon, is similar to that found at Ty Mawr. Hore Ferales, pl. x. p. 165. Two Irish specimens are in the Blackmore Museum, Salisbury; also one from Burwell Fen, Cambridgeshire, length 8 in. See also a similar weapou found with others in Argyleshire, Wilson's Prehist. Annals, vol. i. p. 390.

other relics. This specimen, and also two obtained from Ireland, are in the British Museum. In recent excavations of pit-dwellings at Highdown Camp, Sussex, Colonel Lane Fox found, at a depth of 3 feet, a dagger of the same type, $8\frac{1}{2}$ inches in length, the point upwards; the socket is pierced for two rivets. These cavities are cut in the chalk, within the rampart, steps being cut around to descend into the pit.

V. An implement, unfortunately in imperfect state, length, in its present state, $3\frac{1}{4}$ inches; this is doubtless one of the four varieties of the chisel, described by Sir W. R. Wilde, as having a broad axe-shaped blade, a long slender spike or tang, and raised collar, against which the straight wooden handle abutted. There are thirteen specimens of this type in the Dublin Museum, ranging from $2\frac{1}{2}$ to $6\frac{1}{4}$ inches in length. A specimen from Burwell Fen, Cambridgeshire, is

in the Blackmore Museum, Salisbury.

VI. A slight, plain penannular armlet, diameter 2 inches, the inner side flat, the outer face of the hoop rounded; one extremity obtusely pointed, the other is slightly dilated, a feature often seen in the gold Irish armlets. These personal ornaments occur in great variety in Ireland; they have been sometimes classed amongst objects regarded as a kind of currency, or "ring-money," but no reference to any such mode of barter, as Sir W. R. Wilde remarks, has been found in ancient records. Some of these rings, it is believed, were worn as bangles on the ancles. Usually each end is dilated, and sometimes slightly cupped.

VII. Several stout rings, diameter about 1 inch, probably cast in moulds; relics of this class occur abundantly in Ireland, frequently double, and varying greatly in dimensions.² It may be remembered, that bronze rings occurred in the deposit of relics, mostly of Irish character, found at Llangwyllog, Anglesey, as described in this Journal, and

also in the Archæologia Cambrensis.3

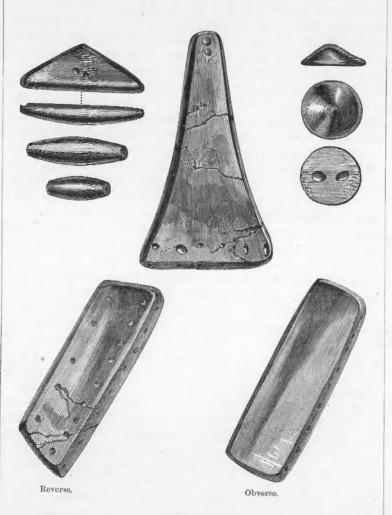
VIII. Amber beads, of various sizes, and more than commonly symmetrical in form; diameter of the largest beads somewhat more than an inch. A necklace of amber beads,

R. I. Academy, exclusive of finger rings and the like.

⁹ Ibid., p. 521, No. 75; length 64 inches.

Wilde, Catal. Mus. R. I. A., p. 570.
 Ibid., p. 577, and following pages.
 There are not less than 578 bronze rings of various fashion in the museum of the

³ Arch. Journ., vol. xxii. p. 74; Arch. Camb. vol. xii., third series, p. 97, where rotices of amber beads discovered in the British Islands may also be found.



Portions of a necklace of jet found, in 1828, in a sepulchral cist at Pen y Bonc, in Holyhead Island.

(Original size.)

of large dimensions, was found with the antiquities at

Llangwyllog, formerly mentioned.

I proceed to notice a relic of considerable interest found in 1828 at Pen y Bonc (head of the bank), about a quarter of a mile south of the cyttiau at Ty Mawr. It is a necklace formed of jet, or possibly cannel coal, of excellent quality, and highly polished; it was found, as stated, in a kind of rock-grave—a sepulchral cist, rudely hewn out. Two urns were likewise found in the cavity, but on exposure they fell, as was reported, into fragments, that were not preserved. Unfortunately, a number of the beads, and other portions of which this ornament had been composed, were missing; they had probably been dispersed when the discovery occurred, a mischance that too frequently happens, such a find being casually brought to light without any supervision. When I made the sketches from which the woodcuts have been prepared by Mr. Blight, I found two end-portions, of which the reverse of one is figured, four oblong four-sided pieces, of which the obverse is shown in one case, and the reverse, in the other, so as to indicate the arrangement by which the intervening rows of beads were adjusted, strung on threads that passed through perforations



Probable arrangement of the jet necklace found at Pen y Bonc, Holyhead Island.

contrived with considerable ingenuity. There were also many beads, of various sizes; a triangular object, the intention of which has not been ascertained, and a flat conical button perforated on its under side; these last may have

formed parts of the fastening. Of all these, however, the woodcuts, of the full size of the originals, will supply an accurate notion; they are accompanied by a representation of a necklace, such as—after careful comparison of other examples—I believe that the ornament in its perfect state may have been. This valuable relic was exhibited at a meeting of the Society of Antiquaries, in March, 1844, by

the late Lord Stanley of Alderley.⁴
According to the account of this discovery, as given by Hugh Hughes, tenant of the adjacent farm, the rock-grave, in the corner of which the jet necklace lay, measured about 3 feet in each direction; it was covered by a slab of stone. Besides the "crockery," he stated that armlets of bronze were found in the cist; according to another report, there was also a "penny piece," probably a coin. He remembers, moreover, to have seen three or four foundations of houses near the site of this deposit, of rectangular form, long uninhabited; they were formed of large stones, and known as "Ty Adda" and "Ty Eva," Adam's and Eve's Houses, indicating a tradition of the unknown antiquity of these dwellings.

The jet (gagates) of Britain was highly esteemed by the Romans, and many highly beautiful ornaments exist found in this country with Roman remains. It had been, however, employed at a much earlier period, as we may infer from numerous relics found throughout the British islands, and it is very possible that certain physical or phylacteric properties had been attributed in times long antecedent to the period when Pliny, Solinus, and other writers, described its inflammable quality, its power of attracting small objects, when rubbed, like amber, and various recondite medicinal virtues, to which it were needless here to advert.⁵ The most

⁴ Proceedings Soc. Ant., vol. i. p. 34. ⁵ Pliny, Nat. Hist. lib. xxxvi. c. 19: Solinus, Polyhistor. c. 22. These statements, more or less modified, seem to have originated those given by subsequent writers, down to the often-cited observations of Bede: Hist. lib. i. c. 1. The estimation is which gagates was held by the Romans is a circumstance of great interest in connection with the extensive Roman manufactories of armlets and various objects of shale, at Kimmeridge and Worth barrow, Dorset, the refuse waste

pieces of which were so long a mystery to antiquarians under the description of "coal money." A certain resemblance to jet probably led to these extensive workings in shale in times of Roman occupation of Britain. The problem of "coal-money" was solved by Mr. Sydenham at the Archæological Congress in Canterbury, in 1845. Arch. Journal, vol. i. p. 347. See also the memoir by the Rev. J. Austen in the Transactions of the Purbeck Society.

ancient ornaments of jet or of amber that have been brought to light in Great Britain obviously appertain to a period of comparatively advancing civilization and skill in mechanical arts. They sometimes accompany relics of a race conversant with the use of metals, and practised in their manipulation. In the course of the late Mr. Bateman's explorations of barrows in Derbyshire, several necklaces were disinterred closely resembling that found on Holyhead Mountain. In a barrow near Buxton, called Cowe Lowe, several interments without cremation occurred, two of the skeletons being, as supposed, of females; two sets of beads, described as "of Kimmeridge coal," were here brought to light, with intermediate ornaments resembling those above described and bearing slightlymarked diamond patterns; there was also a round-ended implement of flint, a kind of scraper, but no object of metal was found. The two necklaces, consisting of not less than 117 pieces, are figured in Mr. Bateman's works.⁶ The contents of this remarkable barrow were of very mixed character. In another barrow near Hargate Wall, encircled by a ring of large slabs, a central cist was brought to light, enclosing unburnt human and animal remains, deposited apparently at various periods, with an armlet and a necklace "of Kimmeridge coal" combined with ivory, a remarkable use of such material, of very rare occurrence.7 Of the former substance were oblong beads and conical studs, similar to those found at Pen y Bonc; with these were intermediate four-sided pieces, and two triangular terminal ornaments, all of them, as stated, of ivory, worked with chevrony patterns. Two other necklaces of more elaborate character are preserved in Mr. Bateman's museum at Youlgrave: one of these was found on Middleton Moor, in a barrow that contained a cist, in which lay unburnt remains of a young female and a child: this necklace is described by Mr. Bateman as "the most elaborate production of the pre-metallic period" that

⁶ Bateman's Vestiges, p. 92. See also Mr. Roach Smith's Collectanea, vol. v. p. 147.

Riding of Yorkshire, by Mr. Tissiman, of Scarborough, and is composed chiefly of oblong beads and conical studs, graduating in size; the central portion is of jet of the best quality; it is four-sided, stippled in a lozengy pattern. This interment was accompanied by a ring of "jet-wood," a rudely-shaped object of flint described as a spear, and two flint arrow-heads.

⁷ Vestiges, p. 89. These beautiful relies are also figured Journ. Brit. Arch. Assoc., voi. ii. p. 234. Another necklace, formed of a material of inferior quality, designated "jet wood," is described and figured in that Journal, vol. vi. p. 4. It was found in a barrow near Egton, N.

he had seen: it is composed of not less than 420 pieces of jet and bone, cylindrical beads, perforated plates, conical studs, etc. In this instance one portion was obtained, in form an obtuse angled triangle, and resembling that found at Pen y Bonc. Mr. Bateman seems to have regarded it as the link by which a very elaborate pendant was attached to the necklace.8

The fourth example obtained by Mr. Bateman lay with three skeletons, a male and two females, deposited on the rock under a barrow at Grindlow, near Over Haddon. interment was accompanied by rude implements of flint. The forms of the various objects of jet, 72 in number, vary slightly from those already noticed; there is much stippled ornament on the intermediate plates, and one of these is of bone. Of the beads 39 are conical studs, pierced at the back by two perforations meeting at an angle in the centre.9 The skill with which so fragile a material, whether shale or jet, was drilled in the construction of these necklaces is remarkable; it is difficult to comprehend by what kind of implements, in an age possibly anterior to the use of metals, so difficult an operation could have been effected.

Several other examples of these necklaces of jet might doubtless be enumerated. The relics of that material found in the primitive cists and cairns in North Britain, as we are informed by Dr. Wilson, are of frequent occurrence. circumstances under which they occur, in many instances, lead us to conclude that they are productions of native ingenuity, at an early period, unaided, as some antiquaries have been disposed to believe, by any civilizing influence

⁸ Ten Years' Diggings, p. 25, where the skeletons in the cist are figured. The skull found in this very remarkable interment has been selected for the "Crania Britannica," as the type of the British

able fashion was found a few years since on the estates of the late Marquis of Waterford, at Ford Castle, Northumberland. It had been deposited in an urn, and consisted of beads with four-sided and consisted of beads with four-sided plates described as resembling "miniature hatchets." In a cist on the moor near Old Bewick, in the same county, examined in 1865 by Mr. Langlands and Canon Greenwell, seventy beads of jet were brought to light. The depository was one of a group of cists in a cairn surrounded by upright stones. This "Druidical Circle" may have been the burial-place of a family. In another cist lay a very large urn, of the class usually found with unburnt remains. Gent found with unburnt remains. Gent. Mag., vol. xix., N. S., p. 716.

female. See pl. 35 (2).

⁹ Ten Years' Diggings, p. 47. Crania
Brit. 35(3). In the minute description of this and the preceding example of these necklaces, Mr. Bateman mentions jet as the material. A very good example of the conical stud, similar to those above noticed, but of rather larger dimensions, may be seen in the museum of the Antiquaries of Scotland. It is figured in Dr. Wilson's Prehistoric Annals, vol. i. p. 442, second edition.

A jet necklace of somewhat remark-

from intercourse with the Romans. On the other hand, certain specimens unquestionably present evidence of experienced skill and of ornamental fashion, that would associate them with objects of a comparatively late period.² In the Museum at Edinburgh a remarkable necklace of jet may be seen, that has been figured by Dr. Wilson. It closely resembles that found in Holyhead Island, but the chevrony, lozengy, and other ornaments, on the four-sided portions especially, are stippled with gold. This relic was found at Assynt. Ross-shire, within an urn enclosed in a rude stone cist, in which lay some bones, the evidence doubtless of an interment without cremation. The cist was brought to light in removing a mound of earth, the small dimensions of which, as suggested by Dr. Hibbert, by whom the discovery was made known to the Antiquaries of Scotland, may have indicated the grave of a female.3 Sir Richard Hoare, however, states that he had very rarely found an urn with the remains of a female. Dr. Wilson has noticed other ornaments of a similar description found in North Britain. A necklace of jet and amber beads of different fashion, and probably of somewhat later date, was exhibited in the Museum formed at the meeting of the Institute at Edinburgh in 1856, amongst relics contributed from the Arbuthnot Museum. Peterhead; it was found, with a celt of black flint, 7 in. in length, at Cruden, on the coast of Aberdeenshire; the jet beads are of oblong form and range from 1 to 5 in. in length.4 A precisely similar bead of jet of the same unusual dimensions exists in the Museum of the Royal Irish Academy, and is figured in the catalogue by Sir W. R. Wilde, by whom we are informed that jet as well as amber was extensively used in Ireland, not less than 60 specimens of studs, buttons, and

² Prehistoric Annals of Scotland, vol. i. p. 433, second edition.

the Edinburgh meeting, p. 10. In the centre of a cairn at Rothie, Aberdeenshire, examined in 1864 by Mr. John Stuart, was found a cist enclosing bones, supposed to have been burnt, an urn, and a necklace of jet, composed of oblong beads, rectangular and triangular pieces; also two beads of amber and a small object of bronze. Proc. Sec. Ant. Scot., vol. vi. pp. 203, 217. In a recent communication, also, to the society by Capt. Courtney, R.E., mention is made of the discovery of a jet necklace in a cairn on the moor near Kintore, Aberdeenshire.

³ Archæologia Scotica, vol. iii. p. 49, pl. v., where the various objects of jet are figured. Dr. Hibbert assigned their interment to the Scandinavian Vikingr. The fine necklace found at Assynt is minutely described by Dr. Wilson, and well figured, Prehist. Annals, vol. i. p. 435. It was exhibited in the museum at the Edinburgh meeting of the Institute with another of like fashion found in a cist near Brechin. Museum Catal, p. 15.

beads being preserved in that collection.⁵ Large rings and armlets of the same material have likewise been found, especially on the sites of stockaded islands or Crannoges.

The occasional combination of portions of bone in the jet necklaces of the type so remarkably exemplified by the specimen found at Pen y Bonc is a circumstance of considerable interest. The contrast of colours was doubtless very effective; the use of such luxurious ornaments suggests the conclusion that they must have appertained to a race of no very barbarous conditions. Not only do we find, however, the mixture of bone, or of ivory, if we may so regard the material employed, in one memorable instance recorded by Sir Richard C. Hoare, in an early interment in a barrow at Kingston Deverill, Wilts, beads of jet and of horn with other relics were found with burned bones in a cist cut in the chalk; there were also more than forty beads of amber, and six oblong plates of the same material, perforated so as to be strung together lengthways, and, when thus combined, measuring together nearly 7 in. in length by $2\frac{1}{8}$ in. greatest width.6 There can be little doubt that these amber tablets were not intended to be strung together, as figured by Sir Richard Hoare; the oblong and other beads found with them no doubt had originally been arranged in intervening spaces, in like fashion as in the necklaces of jet already described. It must be noticed that the interment at Kingston Deverill was accompanied by a small ornamented cup and a little brass pin; the conclusion was obvious that the cist enclosed the ashes of some distinguished female. Ornaments of jet, and more frequently of amber, were of frequent occurrence in the Wiltshire barrows; they were accompanied in many instances by objects of metal.7

⁵ Catal. Mus. R. I. A., by Sir W. R. Wilde, Vegetable Materials, p. 241. Some very large beads of jet, from Mr. Chambers Walker's collection, found in co. Sligo, are now in the museum at Alnwick Castle.

wick Castle.

6 Ancient Wilts, vol. i. pl. iii. p. 45.
In a small barrow near the same spot burned bones lay piled together in an oval cist, with beads of amber, jet, and glass, and a "pair of ivory tweezers," figured ibid., p. 46.

7 See especially the large ring, Ancient Wilts, vol. i. p. 239, pl. xxxiv., found with barbed arrow-heads of flint, a dagger

of gilt bronze, and other relics, around a skeleton at Woodyates; also the singular objects, ibid., p. 202, pl. xxv. The frequent mention of objects of "ivory," as found with British interments examined by Sir R. C. Hoare, and also by Mr. Bateman, claims careful consideration. The occurrence of oriental or of African ivory would imply intercourse with distant lands that it were not easy to comprehend. Morse ivory, or tusks of marine animals, might possibly be obtained on the shores of some parts of the British islands, or from Scandinavian countries. The expression "bone or ivory," in notices The conical buttons or studs, of which specimens occurred at Pen y Bonc, are perhaps the objects of jet most frequently noticed. In a memoir by Mr. Bateman on his researches on the Moors of Derbyshire in 1845, he describes a barrow called Net-Lowe, in which lay a skeleton at full length; close to the elbow was a large brass dagger, and a pair of studs, that probably had been attached to the dagger-belt. Rude implements and chippings of flint lay around. Here, as in other interments, relics of jet or shale occurred with objects of metal; they have likewise, as already noticed, frequently accompanied Roman relics in Britain, but in these instances their fashion has, I believe, invariably indicated their Roman origin.

On reviewing all the facts that have been adduced, especially in regard to the female ornaments, of which Mr. Stanley has brought a remarkable example under our notice, I am inclined to agree in the opinion of Mr. Bateman, and to assign such necklaces, with some other relics of jet or shale, to a race that inhabited our island previously to the use of metals—at a period when interment in cists, without cremation, prevailed. This, however, is not in accordance with the opinion of another accomplished archæologist, Mr. Roach Smith, for whose discernment in such questions I have the highest respect: he considers the tumuli in which such necklaces have been found to be probably of early Romano-British origin.

In regard, however, to the discovery at Pen y Bonc and the remarkable ornament that I have described, there can, I apprehend, be no hesitation, although the site is not far distant from the Roman stronghold at Holyhead, in considering the deposit as distinct from any vestiges of Roman

of the relics in question, appears to show some uncertainty in regard to the material, which often it may be difficult to identify. The "ivory" armlet found with a female skeleton near Woodyates Inn, measuring 5 inches in diameter, cannot have been of any ordinary bone obtained in Britain. Ancient Wilts, vol. i. pl. xxxii. p. 235.

i. pl. xxxii. p. 235.

Barrows opened in Derbyshire, in 1845, by Thomas Bateman, jun.; read at the Winchester meeting of the Archæological Association; Winchester volume, p. 209. A similar stud of smaller size is

figured, Hoare's Ancient Wilts, vol. i. pl. xxxiv. See in Dr. Wilson's Prehistoric History of Scotland a remarkable example found in Lanarkshire, vol. i. p. 442.

⁹ A bulla of jet found at Strood, Kent, is figured in Mr. Roach Smith's Collectanea, vol. i. pl. xi. p. 19, where mention of Roman relies of gagates may be found. In vol. v. p. 146, pl. xv., a sculpture at Lincoln is figured, representing a lady wearing a necklace of a type that occurs amongst Roman ornaments of jet found in England.

date. Objects of jet are comparatively rare in the Principality; a few relics of that material found at Llangwyllog, in Anglesey, have recently been noticed in this Journal; they have been presented by the Ven. Archdeacon of Bangor, in whose parish the discovery occurred, to the British Museum. The objects of stone found in Mr. Stanley's excavations at Ty Mawr have been there also deposited; it were doubtless much to be desired that the neck-ornaments above-noticed, and which are not in his possession, should likewise be preserved in the National Depository, where no relic of the same description is to be found.

ALBERT WAY.

ADDITIONAL NOTE ON SUPPOSED TRACES OF "STONE-BOILING" FOUND IN A HUT-CIRCLE ON HOLYHEAD MOUNTAIN.

Whilst the foregoing notices were in the press I have had occasion, through the kindness of Mr. Edward T. Stevens, to examine the relics found in pit-dwellings near Salisbury, in 1866, and preserved in the Blackmore Museum in that city. The highly instructive collection there displayed, chiefly in connection with the "Stone Age," and comprising a very important series of ethnological evidence bearing on that obscure period, has been brought together through the generosity of the founder, Mr. Blackmore, with the zealous co-operation of Mr. Stevens, by whose intelligent exertions in the arrangement of the collection archæological science has been essentially promoted. The singular domed pit-habitations at Fisherton, about a mile west of Salisbury, consisted of groups of circular chambers excavated in the drift gravel, and supposed to have been winter-dwellings of a people whose summer-station was explored by Dr. Blackmore at Petersfinger and Belmont in the same neighbourhood. The first indication of such troglodytic habitations was supplied by the occurrence of calcined flints in large quantities, of which specimens were shown to me by Mr. Stevens; his conclusions seem in accordance with my own, that these burned stones, mostly of a size to be conveniently grasped by the hand, may confidently be regarded as evidence of the practice of "stone-boiling." In corroboration of this supposition, it must be noticed that the pottery, of which abundant fragments were found, seems to have been ill suited to bear exposure to fire; and, as Mr. Stevens pointed out, the inner surface of many portions is coated by carbonaceous matter, suggesting the conclusion that it had been deposited by the charred stones thrown into the vessels, according to the primitive culinary process. No signs of fire or encrustation from smoke upon the roof of the chambers could be perceived; the cooking may, however, have been carried on outside the dwelling, according to a practice to which Mr. Stanley has adverted. It is hoped that detailed publicat