

Report on Excavations in Ireland in 1928.

By E. K. TRATMAN, B.D.S.

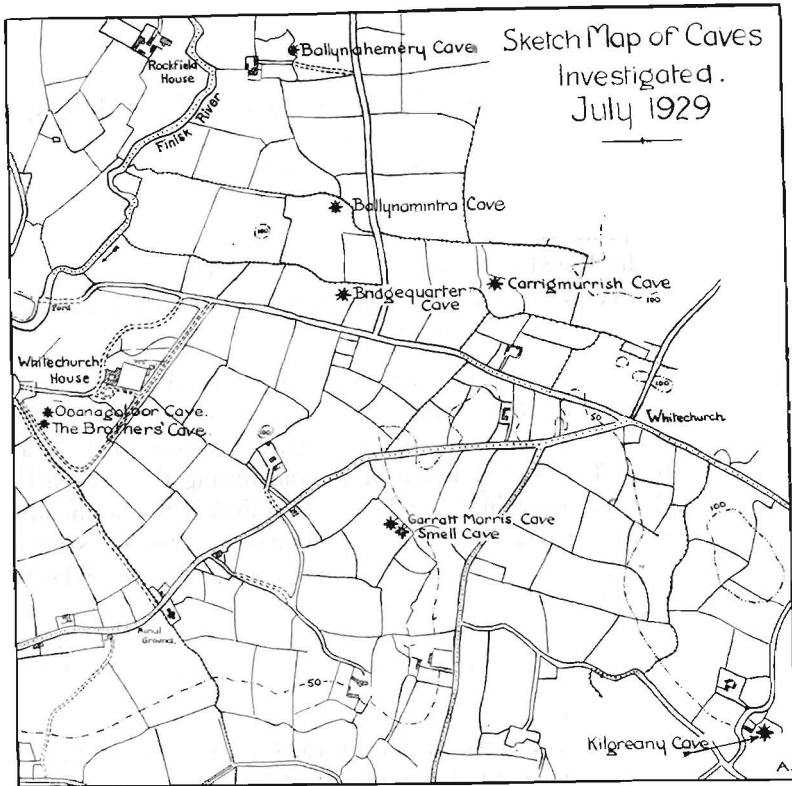
In the spring of 1928 a joint committee consisting of three members of the Royal Irish Academy and two members of the Speleological Society was appointed to obtain material for the comparison of the faunas of the Irish and English caves.

Members of this Society were invited to assist and to direct operations, and the Royal Irish Academy made a grant of £100 to the committee; this was used to defray the cost of tools and railway fares. The cost of living in Ireland during the excavations was borne by the individual members. In addition to the members of this Society the party was assisted by undergraduates and students from Dublin Universities and schools, and I would like to take this opportunity of expressing my sincere thanks to them for the help and assistance they have afforded me in these important excavations. Their travelling expenses were also defrayed by the Royal Irish Academy.

Two caves were selected at Easter 1928 as being likely to yield good results, but owing to the sudden withdrawal of permission to excavate these caves at the very last moment others had to be selected after the party had actually arrived in Ireland at the end of July.

The south of Ireland was selected by the committee as the best area in which to start work as recent research work¹ has shewn that this area was not covered by the Southern Irish End Moraine of the last glaciation and that therefore it would be in that area that evidence of the presence of pleistocene man would be most likely to be found. The actual area investigated was that lying between the head of the River Brickey and the River Finnisk, to the west and north of Dunganarvan. (Fig. 1) The area is one composed of a wide and rather marshy valley through which the limestone with its caves juts up in the form of small hills generally not more than 100 feet high. On either side of the valley rise the ridges of the old red sandstone.

¹ *Quarterly Journal*, Geological Soc., Vol. LXXXIV, Pt. 2. No. 334. J. K. Charlesworth. "The Glacial Retreat from Central and Southern Ireland." p. 293 ff.



Scale : 3 inches to 1 mile.

Based on Ordnance Survey Map, by permission of Minister for Finance for Saorstát Fireann.

FIG. 1.

In addition to the excavations at Kilgreany trial excavations were made at a series of other caves in an attempt to find another one suitable for excavation.

The Brothers' cave and Oonagaloor were visited. The former can be entered either from the quarry just outside the domain of Whitechurch House, or actually from inside the estate boundary. Oonagaloor is only shut off from the Brothers' cave by a short stretch of choked passages.

Some of the remaining stalagmite floor of the passage leading from the quarry was broken up over a considerable area, and the cave earth below carefully sorted but no animal or human remains were discovered. In the other part of the cave and in Oonagaloor there

were piles of the bones of domestic animals, found during the excavations of the late Col. Forsayeth, who amongst other things discovered a number of bronze implements. In the undisturbed deposits in Oonagaloor fragments of a human skeleton were found, but the bones were all so hopelessly crushed as to be almost unrecognisable.

Carrigmurrish is the name of a small knoll on the top of which there had been a settlement dating back possibly to as early as the Bronze age. Opening from the top of the hill an almost vertical shaft leads down to an extensive series of galleries and chambers the floors of which are only a few feet above the level of the bottom of the valley outside. The shaft had been used as the refuse pit of the settlement, and still contained vast quantities of bones, chiefly of domestic animals, mixed up with charcoal; these had all been turned over by previous excavators. A rapid survey of the galleries opening from the foot of the shaft shewed that they ran, in some cases, nearly out to the edge of the knoll. Trial excavations at the choked terminations of two of these passages yielded no results, but it is still possible that more extensive diggings from outside the cave inwards would yield good results.

Two other caves lying in the land of Mr. Garratt Morrissey were investigated. One was obviously no good; the second, or the "Smell Cave," looked most promising, but after much hard work in clearing the approach a layer of evil smelling refuse from a badger's den was found resting on ten inches of barren clay and stones, which in turn rested on the bed rock of the cave.

A cave in the townland of Ballynahemery was explored. As the mouth of the cave had originally been exposed by quarrying the main work was devoted to a trial trench inside the present mouth. After two days of hard work in the rather confined space available rock bottom was reached at a depth of 5-ft. 6-ins.; no remains were discovered.

The neighbouring cave of Ballynamindra was examined, and work carried out to prove the stratification in the lower levels as described by the late Mr. Ussher.² In an inner and lower chamber a recent rabbit burrow was discovered *under* an intact stalagmite floor; this burrow had been driven in from a concealed and choked entrance. Only a few bones of arctic fox were found.

² *Scientific Transactions*. Royal Dublin Soc. Vol. I, Series II, XIV. "Explorations in the Bone Cave of Ballynamindra, near Cappagh, county Waterford." R. J. Ussher and others. p. 177 ff.

EXCAVATIONS AT KILGREANY.

As this cave was the only one that had yielded any results so far, it was decided to concentrate on the work there for the rest of the time available, and in spite of the very severe handicap inflicted on the excavators by persistent bad weather, very good results were obtained.

Kilgreany lies at the foot of a ridge rising from the floor of the valley, and the hill to the north and east of the farmhouse contains several cave openings in the old quarry faces. The actual cave (Plate V, A) in which excavations were carried out opens out at a level of only 50 feet above O.D., and consists of a small chamber, leading by a steep passage down to the well that supplies the farm; this well is now approached from the old quarry immediately to the west of the cave. The outer chamber now quarried away reached out as far as the line indicated on the plan.

A trial trench inside the cave, amongst the loose stones covering the floor, revealed a hearth just under the surface. Some of the human bones from this were heavily mineralised, but with them were found a number of fragments of modern china, etc., and as the excavations outside the cave were giving better results work inside was abandoned till a future occasion. In the course of the excavations outside the cave Ussher's³ statement that the mouth had been quarried back 15 to 20 feet was proved to be correct, so that our excavations were really inside the cave as it was up to less than a century ago.

The site and nature of the original cave mouth could not be determined, but from the greater thickness of, and the greater admixture of earth with the upper layers it would appear to have been at the eastern end of the excavations, and to have been at least a little above the floor level of the cave.

The stratification was as follows: (see Fig. 5):

A.—SURFACE TO FIRST HEARTH.

- (i) Turf and humus. A very scanty covering.
- (ii) Quarry débris from the former roof and walls of the cave.
- (iii) Broken masses of tufaceous stalagmite from the old roof and walls of the cave. Not present over the whole area.
- (iv) A broken floor of tufaceous stalagmite. West end of the excavations only.

B.—The first Hearth.

³ Ussher *ibid.*, p. 180.



PLATE V, A.

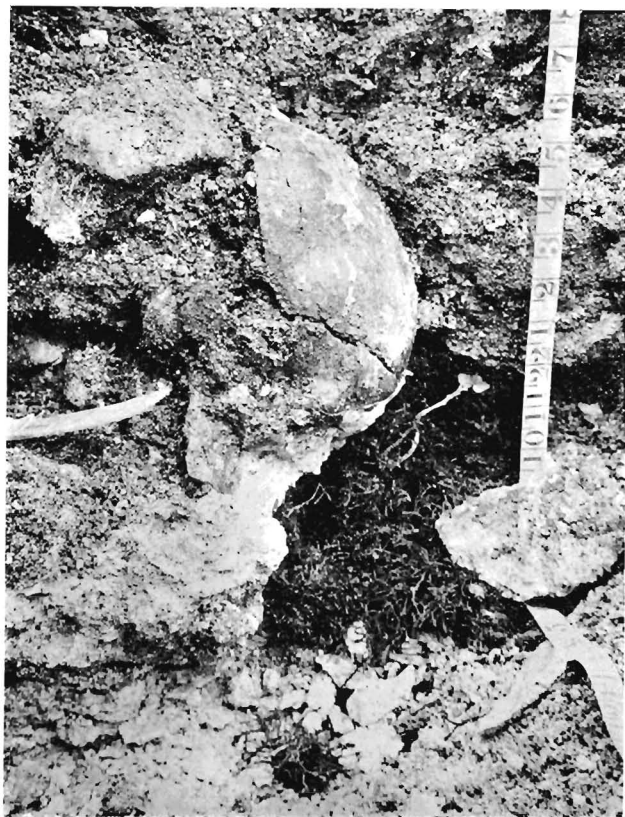


PLATE V, B.

C.—Layer of brown earth and stones. This was almost entirely composed of stones at the west end of the excavations.

D.—The second Hearth.

E.—The Lower Stalagmite.

(i) Upper tufaceous portion.

(ii) Third Hearth.

(iii) Crystalline stalagmite.

F.—Angular stones with many air spaces between them. The bottom of this layer was not reached at a depth of over twelve feet from the original surface.

The only layers that contained remains were those numbered Aii and B to E in the above list.

B.—FIRST HEARTH.

This consisted of a deposit of earth and stones reaching a thickness of two feet in places and black throughout by the presence of abundant charcoal fragments. Many fragmentary animal bones were present, and it was exceptional to find complete bones.

Towards the present cave mouth this hearth which was lying horizontally was truncated by the slope of the surface, and in this connection it is of interest to note that Ussher observed evidence of the occupation of the cave by man.⁴ It is unfortunate that the round headed bronze pin (Plate VI, No. 3), came from the area where the hearth was thinning out owing to its destruction during previous quarrying operations.

From the west end of the excavations, where the deposits were very loosely packed, came a small iron knife (Plate VI, No. 2); a socketed dagger or knife of bronze came from the middle of the hearth (Plate VI, No. 1). Part of a Kimmeridge shale bracelet and some bone spindle whorls were also found; one of the latter objects came from the very top of the hearth, and had been carefully turned on a lathe (Plate VI, No. 9).

The thickness of the hearth must denote a fairly prolonged occupation, and the coarse and very fragmentary pottery, which came chiefly from the base, would indicate a bronze age date. The socketed dagger would indicate a fairly late bronze age date. The Kimmeridge shale bracelet may be as early as the end of the bronze age. The round shouldered iron knife, the turned spindle whorl, the implied use of the lathe, and the practice of the art of spinning, and the

⁴ Ussher, *ibid.*, p. 180.

round-headed bronze pin may be as early as 500 B.C., but all three types of implements survived to a later date, and the two first may even be as late as the Christian period. Therefore the end of the occupation indicated by the first hearth cannot be earlier than 500 B.C., and may well be later by a considerable margin. The date of the beginning of the occupation cannot be ascertained.

The human remains from this level were scanty and very fragmentary, and as some of the pieces could be fitted to those from levels C and D it is best to defer the consideration of them till a later part of this paper.

The diet of these people included fish, animal and vegetable foods, and the worn condition of the teeth would indicate that the last mentioned formed a very substantial portion of the whole.

C.—BROWN EARTH AND STONES LAYER.

AND

D.—SECOND HEARTH.

These two levels are best considered together as the second hearth was so thin that remains belonging to it were sticking up into the layer of brown earth and stones above; further as the absence of charcoal indicates that the cave was not occupied by man during the formation of layer C, and as, in fact, this absence of charcoal constitutes the only difference in the nature of the material forming this layer and the First Hearth above, and the Second Hearth below it follows that any artifacts in layer C must be regarded as derived either from above or below. This disturbance of the deposits is due in the first place to the looseness of the material, and to the activities of burrowing animals such as rabbits and foxes; secondly, the occupation of the cave at the subsequent period of the First Hearth would introduce later objects into the loose deposits below.

When these two layers were excavated the first six inches were dug first, and the remains therefrom kept separate, so as to avoid, as far as possible, any admixture, other than that already present, from taking place.

At the east end of the excavations layer C was thickest, and had on top a more compact layer due apparently to the trampling action of the later occupants of the cave; in this area also appeared small patches of bright red pure clay, the origin and purpose of which was not clear. At the west end the earthy part of layer C was almost completely absent and the deposit was so loose that it was impossible during the excavations, even with the utmost care, to prevent material

from the First Hearth from falling down and becoming mixed in this layer. It is to this fortuitous mixing that the presence of the few sherds of pottery from this level at the west end of the excavations must be attributed, especially as the sherds recovered are identical in all respects with those from the First Hearth.

The artifacts found were not numerous, and are described separately. From the Second Hearth and from the west end of the trench came part of a polished axe of flint of very rounded section (Fig. 2); this may be dated as belonging to the dawn of the bronze age, and possibly even later, that is to say about 2,000 B.C. It may be argued that the axe, owing to reasons given above, may belong to a higher level: and this would mean dating the Second Hearth even earlier, which would be in keeping with the evidence of the human remains.

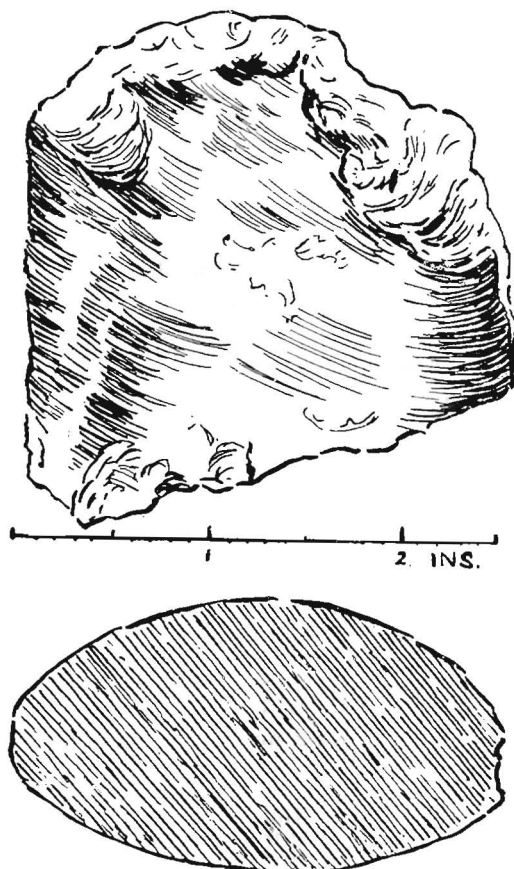


FIG. 2.

The very scanty quantities of pottery from layer C, and its complete absence from the Second Hearth, layer D, except at the loose western end, together with the absence of implements associated with weaving, supports the date given above for the Second Hearth.

At the east end of the excavations and resting on and in the Second Hearth were the disturbed remains of the burial of a female (Fig. 3). The skull, owing to its size and the thinness of the hearth, protruded into the layer above, and it was to a certain degree mixed up with the remains of other individuals, including those of a young person of about seventeen years of age. This burial, or skeleton "A," had been made with the left shoulder pinned under a large flat stone. From the position of the vertebræ it is obvious that the limbs must originally have been strongly flexed, and it is most unfortunate that the body had been disturbed, apparently by animals and not by human agency.

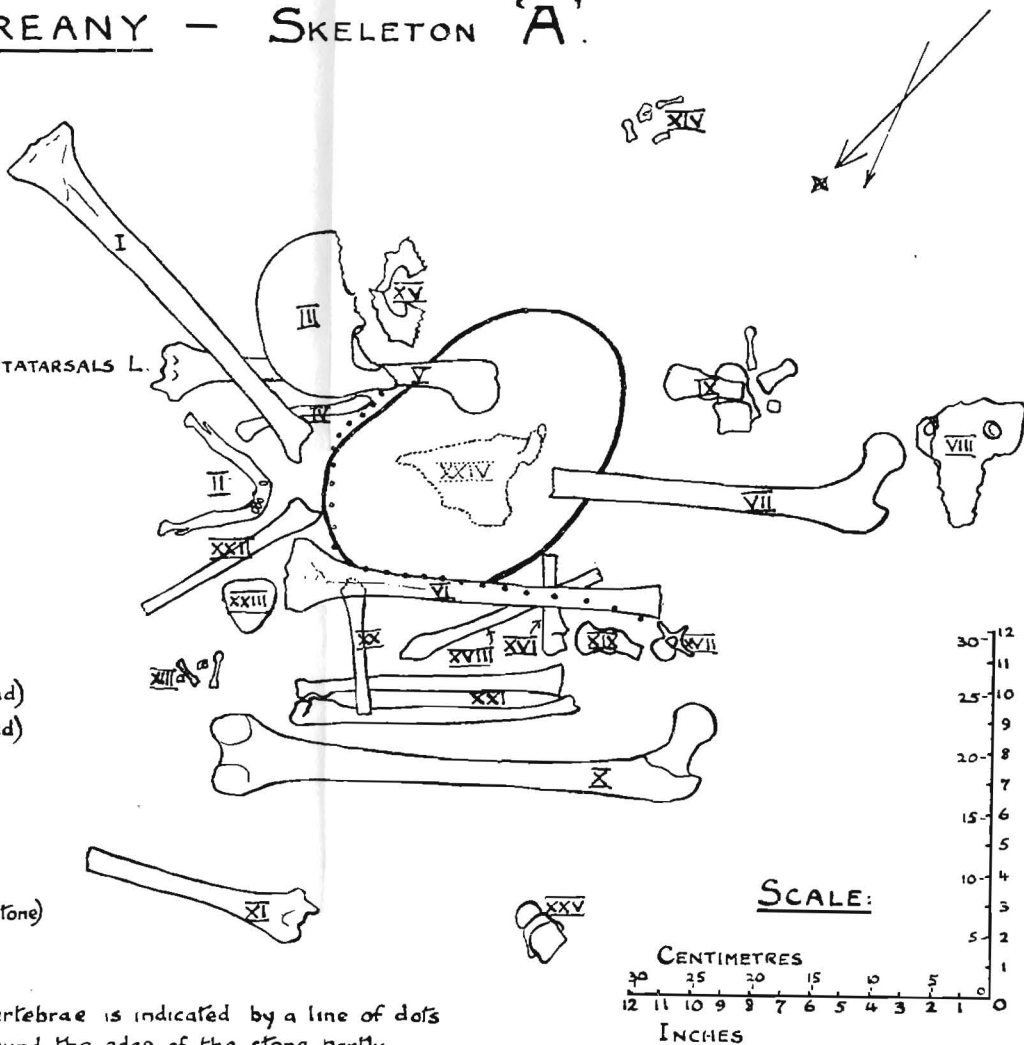
At the west end of the trench on and in the Second Hearth were the very fragmentary and disturbed remains of several individuals; two at least, of these skeletons, "C" and "D," had been intentionally buried in the extended position on their backs. One of them was an old individual, and portions of the skull and some of the limb bones were found; in several cases the bones as in skeleton "A" were covered with a film of stalagmite. The bones of the second individual were newer in appearance, and parts of the cranium, arm, leg, hands and feet bones were found, together with most of the vertebræ with the ribs in their anatomical relationship. Though some of the skull fragments of the second and younger person had a very new appearance they must be at least as old as the First Hearth, as other pieces of the same skull were found in this level badly charred by the fire, and, further, because the First Hearth was a continuous layer unbroken by pits, therefore the bones do not represent an intrusive burial of later date; the new appearance of the bones is due to local differences in the mineralizing conditions in the cave, a feature that is to be observed repeatedly in other caves.⁵

Throughout the brown earth and stones layer human bones were relatively abundant, being more so as the level of the Second

⁵ In Read's Cavern, in the Mendip Hills, for example, a cave occupied during the first century B.C., some of the human bones look as fresh as if they had just come from a dissecting room; others are so heavily mineralised that they would not be out of place in a deposit of vastly older date.

KILGREANY — SKELETON 'A'.

- I TIBIA R.
- II INFERIOR MAXILLA
- III CRANIAL VAULT
- IV CLAVICLE R.
- V HUMERUS R.
- VI TIBIA L.
- VII FEMUR R.
- VIII SACRUM
- IX ASTRAGALUS CALCANEUM & METATARSALS L.
- X FEMUR L.
- XI HUMERUS L.
- XII SCAPULA L.
- XIII } MIXED TARSALS & CARPALS
- XIV }
- XV MAXILLAE (separate)
- XVI ULNA R.
- XVII LUMBAR VERTEBRA
- XVIII FIBULA L. (lower end)
- XIX " " (upper end)
- XX CALCANEUM L.
- XXI RADIUS & ULNA L.
- XXII RADIUS R.
- XXIII PATELLA L.
- XXIV SCAPULA R. (under large stone)
- XXV ASTRAGALUS R.



N.B. The position of the vertebrae is indicated by a line of dots extending from XVII round the edge of the stone, partly below its bevelled edge, and reaching the skull III.

FIG. 3.

Errata. I The complete tibia is right and not left as drawn.
 X The complete femur is left and not right as drawn.

Hearth was reached. In all at least eight persons are represented by the bones recovered, and most of these may be safely referred to the period of the Second Hearth.

The human bones were in most cases very fragmentary, but this is not due to breakage during excavation for, as in the case of the animal bones, the vast majority of the fractures are ancient. In a number of cases it was necessary to remove a film of stalagmite from the broken edges before pieces could be fitted together.

The animal bones though still fairly plentiful were far fewer in number than in the First Hearth, especially when it is recalled that owing to quarrying operations part of the First Hearth had been removed, and that therefore a larger area of the layers below were excavated in comparison with the area of the First Hearth similarly treated.

The occupation represented by the Second Hearth was a short one, and seems to have come to an abrupt end through the death by disease or other causes of a number of the persons making up the community. The presence of cuts on some of the skull and limb bones, and the burning of some of the skull fragments, though this may be quite accidental, faintly suggests cannibalistic practices, which is quite in keeping with some of the evidence from English caves occupied as late as the Early Iron Age.⁶ Two other skull fragments appear to have had circular pieces cut out of them *post-mortem*, and here it is possible that the continental practice of making amulets from portions⁷ of human skulls is in evidence.

E.—THE LOWER STALAGMITE.

Down as far as the top of this layer all the deposits must be regarded as disturbed to a greater or less degree, and the dating of any particular object must to a certain extent be suspect.

It is of the greatest importance to note, then, that this stalagmite presented an entirely unbroken surface over the whole of the area excavated, so that an object from a given level in it would be contemporary with any other object from the same stratigraphical level; and further the introduction of specimens of a date differing from that of the rest of the remains would be impossible save by actual excavations into the stalagmite.

⁶ Balch. *Wookey Hole, Its cave and cave dwellers*. Similar evidence is available from Read's Cavern.

⁷ See Déchelette, *Manuel d'Archeologie*. p. 474 ff, and fig. 164. p. 1294 ff, fig. 560, Nos. 6 and 7.

Such excavations, even if they were made before the stalagmite had ceased to form, and as a result were covered with a layer of that material, would, from the very nature of the deposit, be exceedingly obvious when re-excavated at the present day. Thus again it is important to note that throughout this deposit there was no trace of disturbance of any description.

This stalagmite floor was excavated in four portions as follows :

1. The top one to two inches including the bones actually cemented to the surface.
2. The next six inches.
3. The remainder of the tufaceous portion down to, and including the third hearth. Six to eighteen inches.
4. The crystalline or lowest portion of the floor. This part yielded no remains, but reached a depth of over two feet at the western end of the excavations. At the east end it was represented by a thin floor cementing the stones of the level below into a continuous mass.

Parts 1, 2, 3, were tufaceous in nature, and were made up of many thin laminæ, which were often separated by films of yellow earth ; the latter in places formed quite large pockets, and was mixed with rubbly material. In the stalagmite, and in the yellow rubble were a number of animal bones which are dealt with by Dr. J. W. Jackson, who identifies them as being undoubtedly of late Pleistocene age.

Now it might be argued that as the Second Hearth rested immediately on top of the lower stalagmite, and as there was reason to date this hearth as being not earlier than late Neolithic, therefore the lower stalagmite and the remains in it cannot be as early as late Pleistocene. But such a direct superposition of deposits of a much later date on older ones is by no means unknown, particularly at the period under consideration. In a number of the Mendip caves⁸ the "Beaker" level of the Bronze Age rests immediately on deposits of undoubtedly late Pleistocene date, and this sequence occurs also at the open site at Brean Down. The causes of this super-position of a late deposit on an earlier one without the interpolation of strata representing intermediate stages have not yet been established. In the caves there is usually a thickness of two feet of earth and stones above the "Beaker" level just inside the cave mouths, a depth

⁸ e.g. Rowberrow Cavern, several caves in Ebbor Gorge, Sun Hole, Soldier's Hole and Chelm's Combe at Cheddar.

of material that corresponds exactly to the conditions at Kilgreany. Further the late Pleistocene deposits below in the Mendip caves are usually, on the surface at least, cemented with tufaceous stalagmite, and are mixed with a rubble which varies in colour from yellow to red. Thus there is a close parallel between the nature of the late Pleistocene deposits at Kilgreany, and the Mendip caves; and the fauna bears this out.

The presence of the Third Hearth under the tufaceous of part the lower stalagmite, with its contained late Pleistocene fauna, and separating it from the crystalline portion of the floor must be accepted as definite proof of the presence of man between Ireland in late Pleistocene times; a fact of prime importance in the prehistoric archæology of Ireland for this is the first occasion on which this fact has been proved beyond doubt.

While the topmost layer of the lower stalagmite was being removed the head of a human humerus was uncovered, and in following up this clue the clearing of the stalagmite led to the discovery of other limb bones, more or less in their true anatomical relationships, and finally to the complete skull (Plate I, B), and lower jaw of a person aged about 40 years.

The limb bones of this skeleton "B" broke very readily, and were poorly preserved, so that in following them through the stalagmite that completely enclosed them it was often impossible to save more than fragments. But this tracing of the limb bones brought to light several facts of importance. Firstly as they reached down to the level of the Third Hearth, skeleton "B" must be of its date as no pit had been dug from above into the stalagmite; for such a pit would have been painfully obvious in the whiteness of the stalagmite section. Secondly from their position it was obvious that the skeleton had been placed with its left side against a projecting portion of the cave wall, in a kneeling position, the trunk bent forward over the thighs in a semi-crouched attitude, the elbows a little splayed outwards.

Now the top of the vault of the skull of this skeleton "B" was 18-24 inches above the level of the Third Hearth to which level the skeleton belongs. Again the stalagmite was thickest at this spot, and contained a large number of stones, which were absent in other parts. Further the slope of the cave floor would have allowed the skull to roll away from the rest of the skeleton as soon as the flesh decayed, and at the very least would not have left the skull

resting in anatomical relationship to the cervical vertebræ. The only material present that could have held the limb bones and skull in the positions in which they were found while the stalagmite slowly formed round them was the pile of stones found embedded in the stalagmite. Therefore the skeleton "B" represents an intentional burial of the period of the Third Hearth, which is dated from the animal bones as being of late Pleistocene age, and thus not only has man been proved to have been living in Ireland in these times, but also again for the first time his actual bodily remains have been recovered; neither is this an isolated discovery for in the material recovered from the lower stalagmite are part of a temporal bone and two teeth which represent at least one additional person and another upper molar which does not belong to either skeleton "B" or the second individual, and represents yet a third person.

In view of the importance of these discoveries it is most unfortunate that no implements were recovered from the excavated area in the late Pleistocene levels, but as Dr. Jackson points out, there is some evidence from the fauna for assigning them probably to the Magdalenian period.

F.—ANGULAR STONES.

The depth of this deposit which lay immediately below the crystalline part of the lower stalagmite floor is not known, but it was devoid of remains. The stones had many air-spaces between them, and were free of any rubble or gravel. From their angular condition and from the absence of gravel it is possible that they represent the result of prolonged frost action possibly coincident with the maximum extension of the Southern Irish End Moraine; but this is a supposition that requires much further evidence to confirm it as an actual fact.

SUMMARY AND CONCLUSIONS.

The excavations at Kilgreany have shewn that the cave had had an interesting history, and perhaps further excavations will add still more to our knowledge of the prehistory of Ireland.

The cave was occupied for a long period covering the end of the Bronze Age and the beginning of the Iron Age. This was preceded by a period of considerable length when the cave was only used by animals.

Another short period of occupation by man accompanied by inhumations took place at the very end of the Neolithic period

and the dawn of the Bronze Age. The lapse of time between this period and the late Pleistocene is not represented in the cave by any deposits.

The lower stalagmite yielded a late Pleistocene fauna, and it has been proved that man was contemporary with this fauna; his actual remains, some in the form of a deliberate burial, and traces of his occupation of the cave, during this period, have been found.

The faunal list contains a species new to that of Ireland, past or present, namely a Field Vole.

The presence of man in Southern Ireland in late Pleistocene times is an additional piece of evidence in support of the suggestions put forth by Charlesworth⁹ on the extent of the Southern Irish End Moraine, and of the possibility of a land connection with England at that period, especially when it is recalled that it was a period of considerable land elevation in the south west of England at least.

Finally I would like to express my thanks to the Royal Irish Academy for their grant of £100, which alone made it possible for members of this Society assisted by students from Dublin to carry out the excavations recorded above. To Mr. B. G. Ussher I am indebted for the use, free of rent, of a camping site at Cappagh, and to the varied assistance he and his wife afforded me. To Mrs. Williams the owner of the cave I am grateful for permission to excavate there. To Prof. Fawcett for his work on the human bones and to Dr. Jackson for that on the animal bones from the cave, to Prof. Reynolds, Prof. Darbishire, and all those others who in one way or another have helped me in connection with the material from the cave I am very grateful. Above all I am grateful to Mr. Stelfox and to Dr. Praeger for the varied assistance they have given me at one time or another.

DESCRIPTION OF FINDS.

FIRST HEARTH.

(Plate VI).

1. Bronze socketed knife or dagger. Total length 19-cms. Maximum width of blade 3-cms. The socket is oval in form, and is pierced by rivet holes, which are not, as is usually the case,¹⁰ in

⁹ Charlesworth, *ibid.*, p. 322.

¹⁰ Macalister. *The Archæology of Ireland.* p. 73.

the line of the seam produced by the meeting of the two halves of the mould. Internally the socket, which is oval in section, ends in two pits with a wedge shaped septum between which would act as a wedge to force open and hold the split end of the shaft.¹¹ Such daggers appear in Ireland in the fourth period of the Bronze Age¹² and persist till the end of the age.

2. A small tanged iron knife. Length 9.5-cms. Knives such as the one illustrated may be as early as 500 B.C., but persist in only a slightly modified form into the Christian era.

3. A round-headed bronze pin. Length 8-cms. These pins are known from bronze age deposits, but were in use as late as the Crannog period in Ireland.

4, 5, 8 and 9 are bone spindle whorls. No 8 has possibly and No. 9 certainly been turned on a lathe. The latter¹ bears a projecting neck, and is decorated with a triple series of incised circles¹³ and came from the very top of the hearth. In both the diameter is 4.0cms. and the hole measures 1.0cms. across. Nos. 4 and 5 are made from the epiphyses of the heads of the femurs of young oxen. In the former the upper surface has been flattened a little. In both the hole is pierced through the depression for the *ligamentum teres* and is 0.7-cms. in diameter.

7. A bone die rectangular in form, and having its four larger sides numbered "6, 4, 5, blank" in that order. The numbers are picked out by means of a series of dot-and-double-concentric-circles patterns. This is an artifact new to the prehistoric archæology of Ireland. A similar one comes from the Glastonbury Lake Village¹⁴ and Déchelette¹⁵ figures a number of somewhat similar specimens.

Personal ornaments are few in number, and comprise a canine tooth of a dog pierced for suspension at the apex of the root, 6; an upper tusk of a boar also pierced near the basal end, 12: the hole is irregular in form, this being due to prolonged wear by some cord or similar material that has passed through it, and it is possible that this is a cheek piece and not an ornament. 17 is a small portion of a bracelet of Kimmeridge shale. This material was known in Ireland by the end of the Bronze Age, and has been found in association with

¹¹ Macalister. *ibid.* See also spear head with split shaft from Loch Erne. p. 77.

¹² Macalister. *ibid.* p. 73.

¹³ A very similar specimen comes from the Romano-British deposits of The Long Hole, Cheddar.

¹⁴ Vol. II. p. 408 and fig. 146.

¹⁵ Déchelette. *ibid.* Vol. II, part 3, p. 1396 ff. Fig. 623.

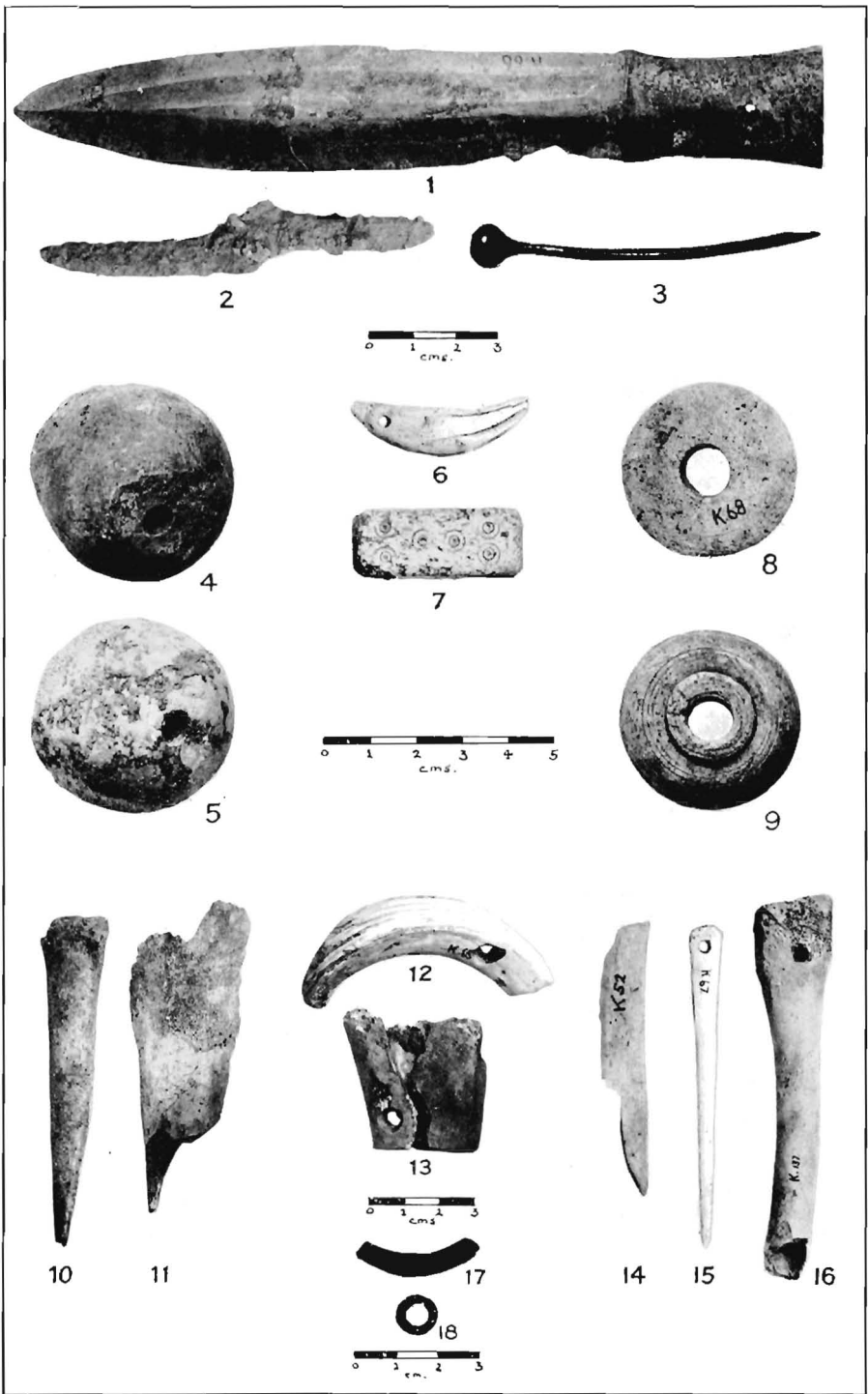


PLATE VI.

bronze artifacts from the sandhills sites at Dundrum Bay, Co. Down. 18 is a small ring shaped bead of 1.0-cms. diameter, and of some metal-like substance.

10, 11 and 14 are bone points. Of these number 10 is of the form so common at many sites, and is made from the tibia of a sheep or goat in which the distal end has been cut off, and the remaining portion of the shaft bevelled to a point. The other two are blunt points made from odd scraps of bone.

15 is a fine example of a bone needle while 13 is a piece of antler that has been sawn off the main stem and carved to its present shape; it is pierced near the base by a single hole. The purpose which it served is not clear as the implement is not complete.

16 is a bone shewing an incomplete perforation.

There are two very fine examples of the upper stones of saddle backed querns. The larger of the two has been carefully "pecked" to a symmetrical form, and the under surface shews signs of considerable use. The smaller specimen has been prepared in the same way, but is not so symmetrical in form. These are of common occurrence, and are known from many sites.

The other artifacts from the First Hearth not figured include hone stones, a small fragment of a polished stone implement, a small flat slab of sandstone chipped to a roughly circular form to serve possibly as a pot cover. A piece of quartz has been chipped to serve as a steep end scraper (Fig. 4, No. 2), and another piece of sandstone, measuring 9 x 7 x 6-cms. has been "pecked" to form a round-ended pounder. Various fragments of flint and chert are present.

There are several fragments of bone that appear to have been utilised for some purpose not evident while a piece of a stout limb bone, (16), shews part of a hole drilled through it, and another piece shows a bevelled facet. There is also a piece of the lower canine of a boar; the tooth has been split longitudinally and the split edges carefully smoothed down. Some odd fragments of iron are present, but some of these are obviously of recent introduction, and their presence in the First Hearth is due to the disturbed nature of the deposits.

The pottery from the First Hearth is coarse, and is all very similar in texture and spatulated lip form. The actual shapes of the vessels it is impossible to know owing to the small number of sherds recovered. In colour the pottery varies from black to a reddish brown, the difference being due to the firing and not to the paste. (Plate VII, Nos. 10 and 11).

C AND D.—BROWN EARTH AND STONES LAYER AND SECOND HEARTH.

The finds from these levels are not very numerous. The most important, perhaps, is the portion of a polished flint axe of oval section found at the west end of the excavations in the Second Hearth in association with the inhumations at that end and level, (Fig. 2). There is also a fine specimen of a hollow scraper of flint patinated white, (layer C); this is a type common in Ireland as the large series in the National Museum bears witness (Fig. 4, No. 1).

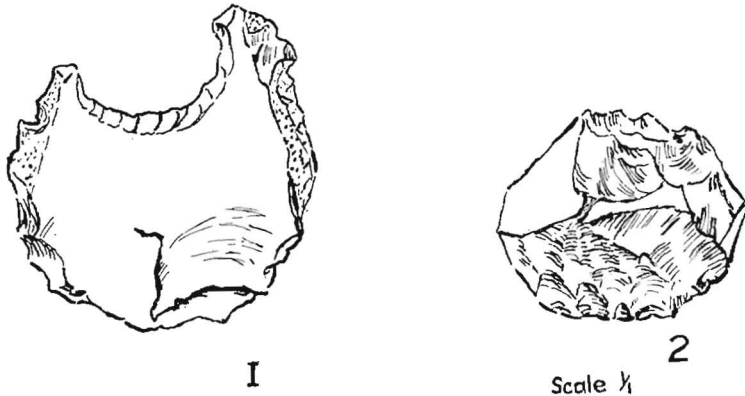


FIG 4.

PLATE VII.

ALL THE FOLLOWING CAME FROM THE LOWER PORTIONS OF LAYER C

1 and 4 are upper incisors of pig pierced for suspension by the root. The former shews a double perforation, and the latter a broken single one; 9 is the lower canine of a young pig similarly pierced for suspension. In addition there are three shells of *Littorina Obtusata* in which the mouths have been ground down in such a way as to make a second opening into the interior, so that the shells could be suspended as part of a necklace. Such necklaces are of common occurrence at Upper Palæolithic sites, but in these cases the perforations are usually through the umbo. These comprise all the personal ornaments.

2, 3, 7 and 8 are lower incisors of pig. These have all had the ends of the roots trimmed to a point by a single slice having been cut off. Similarly trimmed teeth are known from the "Beaker" level at Rowberrow Cavern in the Mendips, and from the disturbed deposits in Merlin's cave in the Wye Valley. In the latter cave they are also probably referable to the early Bronze Age. The

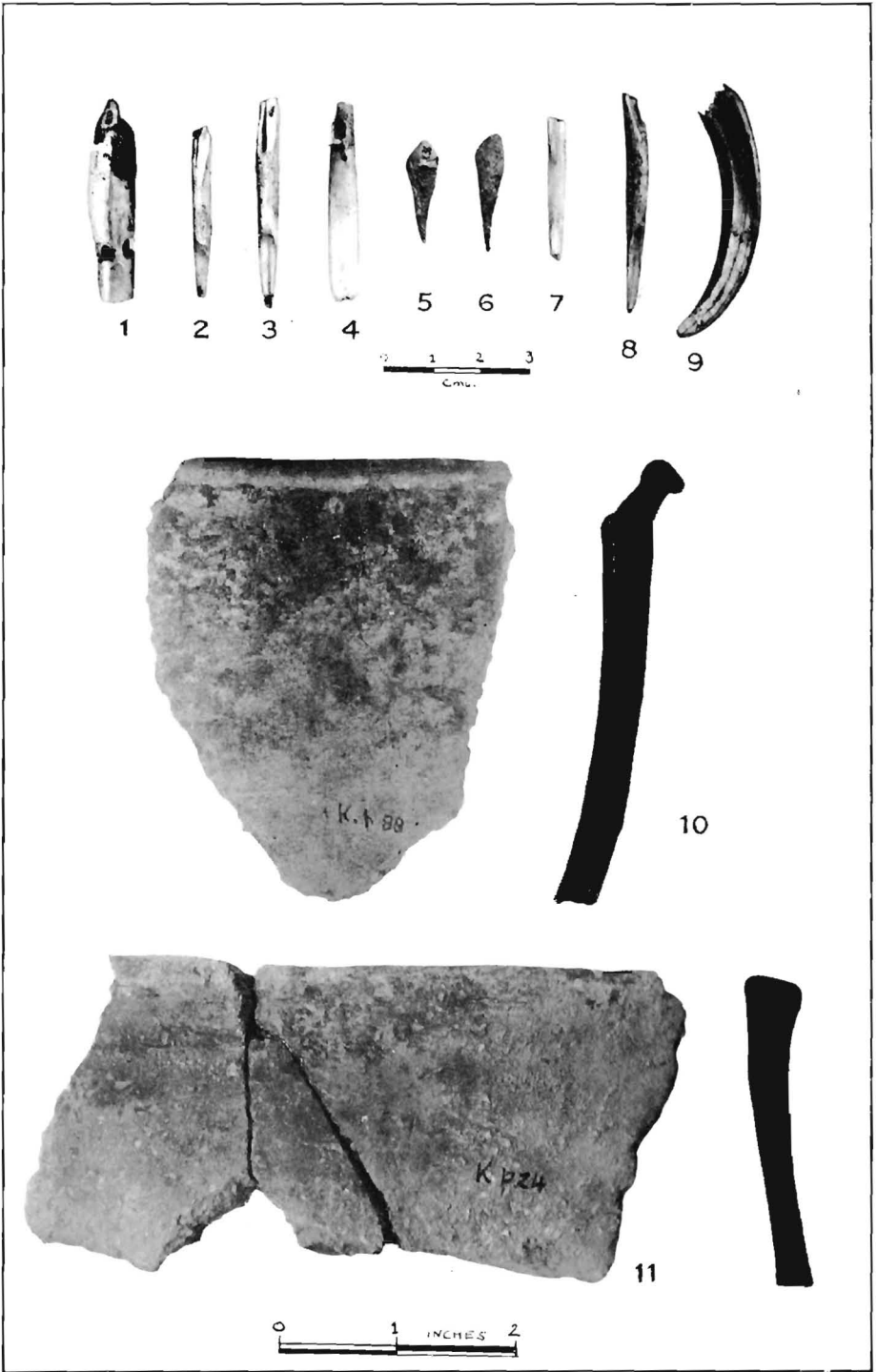


PLATE VII.

purpose that they served is not apparent unless they were used to decorate pottery, which cannot have been the case at Kilgreany for pottery is practically absent from these layers, and where it is present is probably intrusive and is quite plain.

5 and 6 are two teeth which have had their roots trimmed to a point, and look as if they might have served as markers in some game and are therefore of interest in connection with the die found in the First Hearth. A small peg of bone from Merlin's cave also possibly for this purpose has been described.¹⁶

The other artifacts from these levels, not figured, include fragments of polished stone implements, hammer stones, part of a pounder with a pecked surface and similar in form to one from the First Hearth, while from the first six inches of layer "C" was recovered a longitudinally split piece of the lower canine of a boar very similar to the one from the First Hearth.

¹⁶ *Proc. University of Bristol Spelæological Soc.* Vol. II, p. 220 and fig. 1, (12).