The Journal of Irish Archaeology, XI 2002

KILGREANY, CO. WATERFORD: BIOGRAPHY OF A CAVE

MARION A. DOWD

ABSTRACT

The title of this paper reflects the idea that certain places in the landscape have a biography of their own (Bradley 2000, 48). The archaeological material recovered from Kilgreany Cave is examined and the evidence for the diverse ways in which this natural place was used from the Neolithic through to the Early Medieval period is described and discussed.

LOCATION

Kilgreany Cave[1], located in the townland of the same name, is one of a number of caves that punctuate a band of Lower Carboniferous limestone that runs east-west through Co. Waterford, a county dominated by sandstone (fig. 1). This limestone band forms the underlying geology of a low-lying, relatively flat, valley captured between the Knockmealdown Mountains to the north-west, the Monavullagh Mountains to north-east, and the Drum Hills to the south. The valley is drained by the Rivers Brickey, Colligan and Finisk. Within this valley, in Whitechurch parish, is a detached tract of high limestone where a complex of nine caves, including Kilgreany Cave, are located. Seven of these nine caves have produced archaeological material (Dowd 1997, 42-60).

DESCRIPTION OF CAVE

Kilgreany Cave is situated at the base of a limestone escarpment and comprises a relatively small, simple, open cave. The walls and ceiling are undecorated, with no stalagmites, stalactites or other such calcite formations. The cave consists of three chambers: the Outer, Inner and Rear Chamber (fig. 2a). Originally, these would have achieved a total length of 16.5m. The cave varies in width from 1.5m to 6m and the walls are undercut in several areas. Prior to excavation the Inner Chamber measured between 1.5m and 2m in height and at present reaches an average height of 4m. The Outer Chamber was destroyed in the course of limestone quarrying some time prior to 1879 (Leith Adams *et al.* 1881, 180) but its original extent was established by the 1934 excavation. The original entrance appears to have been orientated west-

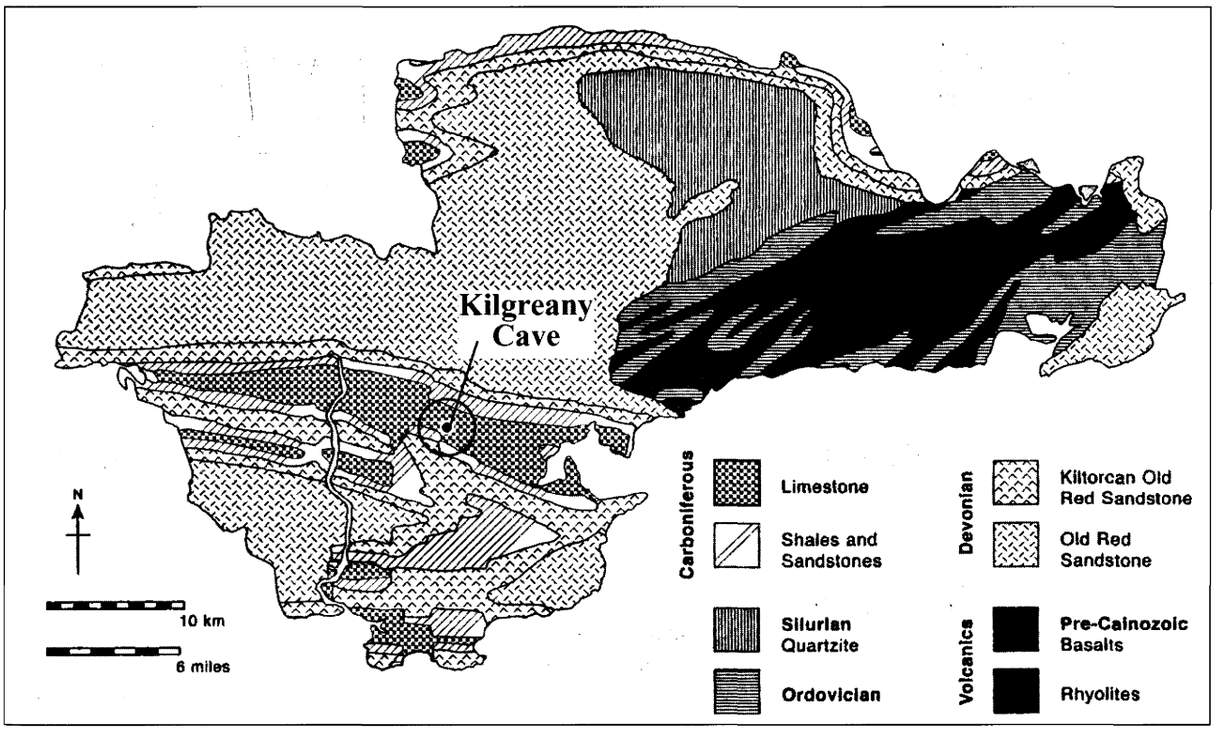

Fig. 1 - Geological map of Co. Waterford indicating location of Kilgreany Cave. (After Moore 1999, 291).

south-west (Movius 1935, 257). The Rear Chamber is separated from the Inner Chamber by a low natural rock bridge[2]. Late 19th-century quarrying north-east of the cave broke through the northern part of this Rear Chamber (ibid., 256) creating a 'new' second entrance. During periods of heavy rainfall, this chamber was, and continues to be, flooded with water. Two wells were located to the immediate north and southwest of the Rear Chamber (fig. 2a).

HISTORY OF INVESTIGATION AND EXCAVATION

Kilgreany Cave was not one of the several caves in Whitechurch Parish visited and documented by Charles Smith in the mid 18th century (Smith 1745, 328-35). The earliest recorded account of the cave appears to be in 1879, at which time the cave had already been partially destroyed by quarrying and it was noted that in the surviving chambers 'records of man' were visible (Leith Adams *et al.* 1881, 180). The cave is not indicated on the 1st Edition 6-inch Ordnance Survey Map (Sheet 30) nor is it mentioned in either the Ordnance Survey Namebooks or the Ordnance Survey Letters for Co. Waterford. No folklore has survived regarding the site.

Kilgreany Cave was first excavated in 1928 by a joint committee consisting of members of the Royal Irish Academy and the University of Bristol Speleological Society under the direction of Edgar Kingsley Tratman (Tratman 1929). The committee's objective was to obtain faunal remains for comparison with the evidence from English caves (ibid. 109). The archaeological discoveries, therefore, were unexpected and incidental. Excavations were conducted principally in the Outer Chamber, covering an area of approximately $5m^2$ x $6m^2$ (Grids C and D) (fig. 2a), during which eleven strata were recorded. A small test trench ($2m^2$ x $0.75m^2$) was opened in the Inner Chamber but was abandoned in favour of the Outer Chamber which was 'giving better results' (Tratman 1929, 112). A range of artefacts and human and faunal skeletal remains were found. A crouched burial of an adult male, termed Kilgreany B, was discovered beneath a layer of stalagmite associated with the bones of Pleistocene fauna and was consequently interpreted by Tratman as Palaeolithic, probably Magdalenian, in date (ibid., 120). The general consensus (Tratman 1929, 120; Power 1931, 247; Stelfox 1930, 121) was that the burial constituted 'the first definite proof of the existence of Palaeolithic Man in Ireland' (Ó Ríordáin 1931, 362).

In 1934, the Third Harvard Archaeological Expedition to Ireland, under the direction of Hallam L. Movius, returned to Kilgreany Cave for six weeks with the aim of 'obtaining additional Palaeolithic material' (Movius 1935, 254). Both the Outer and Inner Chambers were entirely excavated (Grids C to H inclusive) in addition to an area *circa* $11m^2$ x $4m^2$ outside the original cave entrance (Grids A and B) (fig. 2a)[3]. Similar to the preceding excavation, large quantities of human and faunal remains and artefacts were discovered. The 1934 excavation however, revealed that the stratigraphy in the cave was 'hopelessly disturbed' (ibid., 264) and that domesticated cattle bones and extinct faunal remains were contained in the same stratum as Kilgreany B. In addition, the layer of stalagmite overlying Kilgreany B comprised a broken floor which survived only in Grids C and D. Movius therefore concluded that the burial had not been placed in the cave during the Palaeolithic but more likely in the Neolithic (ibid., 282). Tratman however, continued to maintain that the burial was contemporaneous with the late Pleistocene fauna (Tratman 1937, 124). Consequently, for several decades the date of the burial was 'kept in the suspense account' (Jackson 1936, 56). In 1962, finally ending speculation and debate, Kilgreany B, and a second burial excavated in 1928, Kilgreany A, were radiocarbon dated to the Neolithic (Table 1) (Molleson 1985-86, 2; Brindley and Lanting 1989-90, 2). In recent years, the Irish Quaternary Fauna Project (Woodman *et al.* 1997, 129-159) selected a number of faunal species from Kilgreany for dating increasing to eleven the number of radiocarbon dates from the cave (table 1). Ultimately, the radiocarbon sequence confirms the disturbed nature of the stratification while also indicating that the cave was used over a prolonged period by both animals and humans.

METHODOLOGY

In the published reports of the 1928 and 1934 excavations, the archaeological strata, the formation of deposits and the artefacts recovered from Kilgreany were described. However, this archaeological material has never been discussed in detail nor has the long-term human use of the cave been examined. The present paper is based on results of a recent re-analysis of the published accounts of both excavations (Tratman 1929 and Movius 1935) and a re-examination of artefacts and unpublished records in the National Museum of Ireland (NMI). Unpublished notebooks listing the faunal remains (and occasionally human remains) recovered from both excavations are located in the Natural History Division of the NMI[4] but provide little relevant information to the present paper.

Correlating the 1928 and 1934 excavations

Movius claimed that the stratification he encountered in 1934 was different to that described by Tratman in 1928 with the exception of areas in Grids B and C (Movius 1935, 259 and 267). The existence of two distinct sets of stratification for the same site has proved unhelpful towards an overall understanding of the cave. However, on reassessment of the 1928 and the 1934 section drawings and written descriptions, several of the strata can be correlated (despite Movius' assertion to the contrary).

Movius recorded three principal strata in the Inner Chamber. These three strata correspond in stratigraphic sequence, artefact finds, description and dimension to Tratman's *First Hearth* [5], *Layer C* [6] and *Large Stones* in

Fig. 2a - Plan of Kilgreany Cave; Grids A to H indicated.

Fig. 2b - Phase I, Kilgreany Cave.

Fig. 2c - Phase II, Kilgreany Cave.

Context	Species	Lab. No.	Date	Reference
C.5	Cattle	OxA-5734	1515± 55BP	Woodman *et al.* 1997, 141
C.5	Pine Marten	OxA-5735	2780± 55BP	Woodman *et al.* 1997, 141
C.7	Human Kilgreany A	BM-135	4660± 75BP	Brindley & Lanting 1989-90, 2
C.8	Cattle	OxA-4269	5190± 80BP	Woodman *et al.* 1997, 141
C.9	Human Kilgreany B	Pta-2644	4820± 60BP	Brindley & Lanting 1989-90, 2
C.9	Reindeer	OxA-4240	10,990± 120BP	Woodman *et al.* 1997, 141
C.9	Giant Deer	OxA-4241	10,960± 110BP	Woodman *et al.* 1997, 141
C.9	Wild Pig	OxA-4242	8340± 110BP	Woodman *et al.* 1997, 141
C.10	Arctic Lemming	OxA-4239	10,360± 120BP	Woodman *et al.* 1997, 141
C.11	Stoat	OxA-5732	9980± 90BP	Woodman *et al.* 1997, 141
C.11	Lynx	OxA-5733	8875± 70BP	Woodman *et al.* 1997, 141

Table 1 - Radiocarbon dates from Kilgreany Cave, Co. Waterford.

the Outer Chamber (fig. 3 and Appendix 1). By correlating the three principal strata discovered in 1934 with strata previously recorded in 1928, it is now possible to devise a single stratigraphic matrix for Kilgreany Cave, which combines both excavations (fig. 4). The terms employed by Tratman and Movius to denote strata, for example *First Hearth* and *Second Hearth*, have been replaced by 'neutral' context numbers (See Appendix 1). The fact that a total of only 23 contexts (principally substantial strata) were identified in the cave is standard for excavations of the 1920's and 1930's but highlights the quantity of stratigraphic and contextual information that must have been lost.

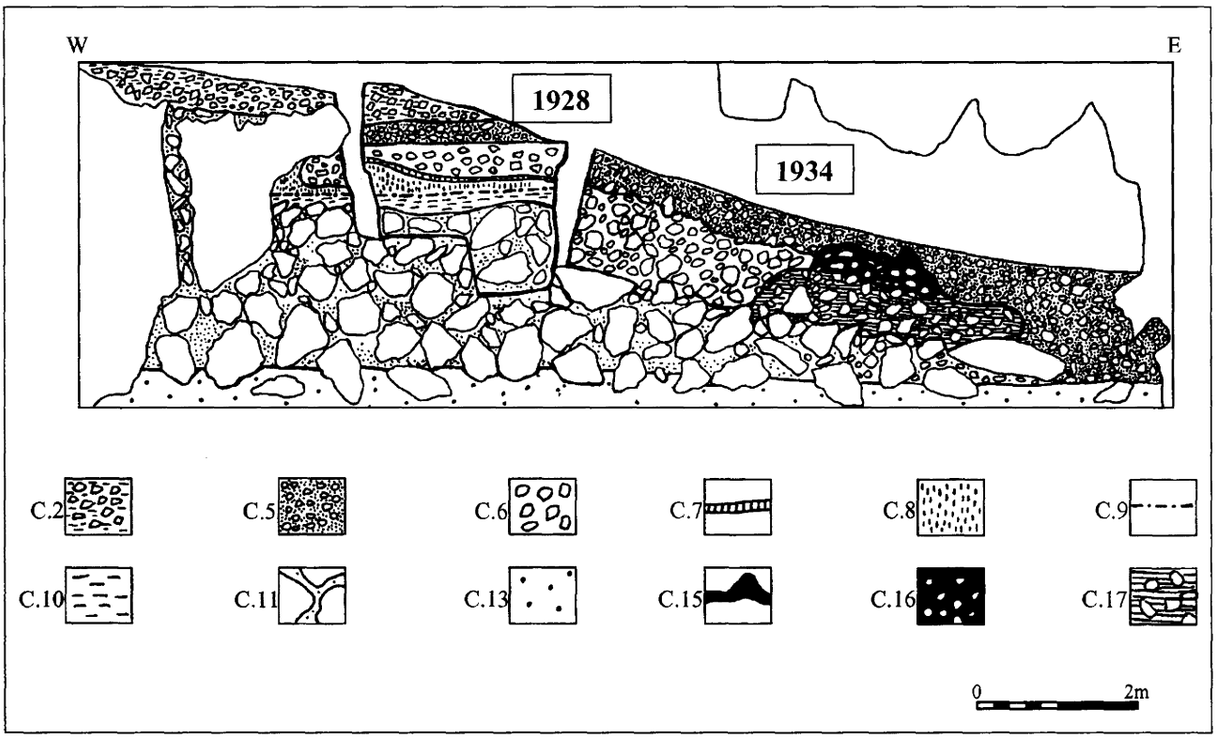

Fig. 3 - Longitudinal section of stratification in Kilgreany Cave. 1928 section superimposed on 1934 section (After Tratman 1929 and Movius 1935).

Over 865 artefacts were recovered from Kilgreany, the vast majority of which are housed in the Antiquities Division of the NMI (Appendix 2). The present location of approximately ten artefacts, principally from the 1928 excavations, is unknown. The human and faunal remains are housed in the Natural History Division of the NMI (apart from two cremations, the present locations of which are unknown). During both excavations, the stratum and grid from which an artefact was discovered was generally noted. However, the exact findspots of artefacts and human and animal bones were not recorded nor the spatial associations of material. In some cases, there is no record at all as to where material (particularly human bones and burials) was discovered in the cave. Despite these constraints, the findspots of the majority of artefacts have now, for the first time, been spatially and stratigraphically plotted. This information is tabulated in Appendix 2. It is now possible to establish the chronological sequences and locations of activities in the cave.

It is undeniable that deposits in Kilgreany Cave suffered a very high degree of disturbance, a fact that has been widely acknowledged (Tratman 1929, 117; Movius 1935, 256, 264 and 296; Molleson 1985-86, 1; Dowd 1997, 55 and 59; Woodman *et al.* 1997, 141). The radiocarbon dates presented in table 1 indicate that faunal remains of widely different dates were found in the same stratum; of particular note are bones from C.5 and C.9. This disturbance would appear to be largely the result of fluctuating water levels in the cave. It appears that there was a greater movement of artefacts and bones vertically upwards, rather than downwards, through strata. Thus the occurrence of extinct faunal remains in Neolithic levels and the presence of Neolithic artefacts in the Early Medieval layer but the absence of Early Medieval material in Neolithic levels. The present paper endeavours to interpret the archaeological material recovered from the cave, albeit from severely disturbed strata. As a result of plotting the stratigraphic locations of artefacts (Appendix 2), the revised matrix (fig. 4) has allowed correlation between particular strata and distinct periods of past activity. Whilst accepting a certain degree of movement of artefacts between strata, it is believed that the majority of artefacts and skeletal remains found

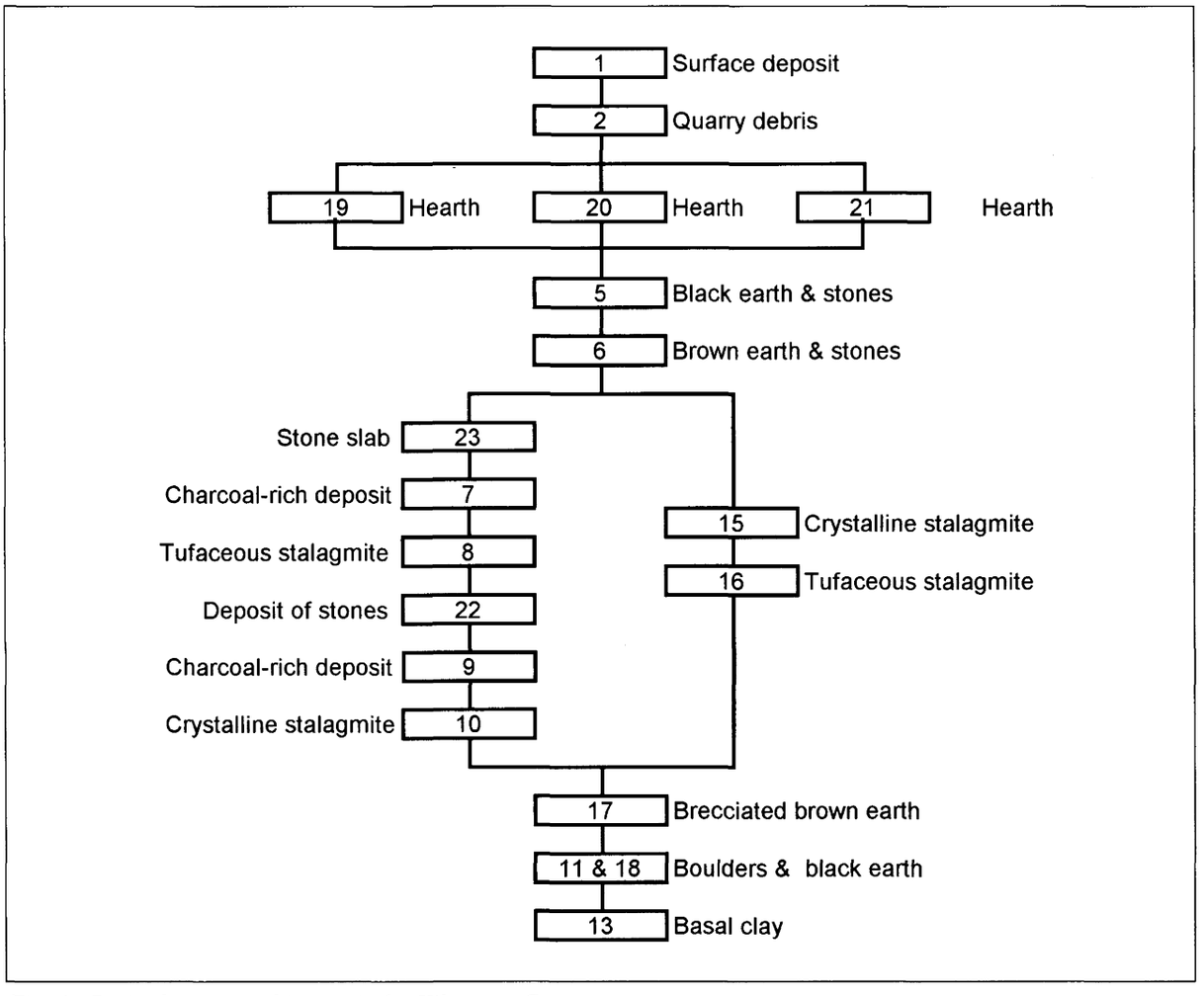

Fig. 4 - Revised stratigraphic matrix for Kilgreany Cave.

in the strata at Kilgreany, while not necessarily *in situ*, are more or less in their correct chronological sequence.

The chronological sequence of activity, represented in the artefacts and radiocarbon dates, is described below and followed by overall interpretations as to how the cave was used through time, and how these uses changed. Contextual references and descriptions are available in Appendix 1 (see also figs. 3 and 4).

SEQUENCE OF ACTIVITY IN CAVE

The majority of extinct faunal remains at Kilgreany, representing a Late-glacial horizon (Woodman *et al.* 1997, 141), appear to have been originally located in C.18 and C.11 (figs. 3 and 4). These strata were relatively sterile. The presence of extinct faunal remains in C.17, C.10, C.9 and C.8 (Tratman 1929, 143) is best interpreted as material brought upwards from lower levels by fluctuating water levels.

Phase Ia: Neolithic

The earliest evidence of human activity in Kilgreany Cave relates to C.17, a deposit of brown earth and stones (figs. 3 and 4). This deposit probably originally extended throughout the whole cave but was later largely removed by flooding. It survived in the Inner Chamber where it was sealed beneath a stalagmite boss (C.15 and C.16). This deposit (C.17) contained three concentrations of undecorated Early Neolithic pottery sherds (fig. 2b). Human bone and bones of extinct species were also discovered in C.17, indicating disturbance of deposits at this level (Movius 1935, 266-7, 278-9).

Herity (1982, 265, 372 and 391) interpreted the Early Neolithic pottery as evidence of habitation in the cave. The evidence for burial at Kilgreany (described below) suggests that the pottery more plausibly relates to ritual and/or funerary activity. The fragmentary nature of the pottery may be merely the result of natural processes. However, the possibility exists that the pots were broken elsewhere and that token deposits were placed in the cave. Sherds of undecorated bowls have also been recovered with the Linkardstown-type burials at Jerpoint West, Co. Kilkenny, and Ashleypark, Co. Tipperary (Brindley and Lanting 1989-90, 2) and in Annagh Cave, Co. Limerick (Ó Floinn 1992, 20) and in the pseudo-cave site at Cahirguillamore, Co. Limerick (Hunt 1967, 25-6) – all Neolithic burial sites.

Calcite deposition took place at Kilgreany forming a floor which sealed the three concentrations of pottery sherds in C.17 (fig. 4). This floor appears to have been destroyed at a later date, but in the Inner Chamber survived in the form of the aforementioned stalagmite boss (C.15 and C.16) (figs. 3 and 4). It is likely, and was suggested by Movius (1935, 268), that this stalagmite boss relates to the same period of calcite deposition as C.8 in the Outer Chamber (figs. 3 and 4). Archaeological material of Neolithic date was found directly beneath both C.8 and C.16 (Kilgreany B and pottery respectively – see below). Consequently, C.8 and C.16 both appear to have formed portions of the same tufaceous stalagmite floor. Therefore, the concentrations of Early Neolithic pottery sherds in C.17 in the Inner Chamber are either contemporaneous with, or earlier than, Phase Ib described below.

Phase Ib: Neolithic

An earlier crystalline stalagmite floor (C.10), predating the tufaceous stalagmite floor (C.8), survived in the Outer Chamber (figs. 3 and 4). It is not possible to establish the chronological relationship between this crystalline stalagmite floor (C.10) and C.17 in the Inner Chamber as C.10 was not identified in the Inner Chamber and C.17 was not encountered in the Outer Chamber. This crystalline stalagmite floor (C.10) is likely to have been whitish in colour and would have created a hard, brittle, almost translucent, wet, slippery and shiny surface. A black charcoal-rich deposit (C.9) overlay this floor (C.10) in Grids C and D (figs. 3 and 4). This charcoal-rich deposit could represent an area where fires were intensively and repeatedly lit, resulting in a high concentration of charcoal. Alternatively, the blackened earth, in contrast to the underlying off-white stalagmite, may have been deliberately introduced as a bed on which to place a burial.

The body of an adult male (Kilgreany B), *circa* 40 years old at the time of death, was placed on this charcoal-rich deposit (C.9) at approximately 4820 ±60BP (table 1). The burial was located in Grid C, immediately inside the cave entrance (fig. 2b). The inhumation was located 'on and in' C.9. The published report (Tratman 1929, 119) records no pit or cut feature, nor can one be inferred from the meagre description (contrary to Brindley and Lanting 1989-90, 2). The individual was described as having 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' (Tratman 1929, 119). The description does not readily indicate a typical crouched burial but suggests a cadaver placed in a kneeling position, which is impossible to confirm in the absence of an illustration of the burial. The 1928 section drawings (Figure 5 in Tratman 1929) and description indicate that Kilgreany B was not placed against the main cave wall but against a natural projection of limestone rock towards the centre of the Outer Chamber. A 'large number' of stones (C.22) were placed over the skull and upper thorax of the individual. Tratman (1929, 119-120) suggested that these stones might have acted to secure the burial in place and to prevent the skull from dislodging when the flesh had decomposed. No gravegoods were discovered with the individual. The skull was located 0.45m-0.70m above C.9, explained by Tratman as the result of the sloping ground surface in this location (ibid., 119), but more probably reflects post-depositional disturbance.

This adult male, Kilgreany B, was possibly the first dead person, or at least one of the very first, to have been

placed in the cave. Teeth of two other individuals were recovered from the same charcoal-rich deposit (C.9) though it is impossible to say whether they represent contemporaneous burials or *ex situ* remains. In 1934, partial remains of a 'small medium sized individual' (Kilgreany U) were also recovered from C.9 in Grids B and C (Movius 1935, 296), indicating at least two primary burials. As the exact location of Kilgreany U was not recorded, this burial is not indicated on fig. 2b. A period of time may have elapsed before further cadavers were deposited in the cave allowing for the formation of a layer of tufaceous stalagmite (C.8) over Kilgreany B and Kilgreany U.

A domesticated cattle tibia from C.8 was radiocarbon dated to the Neolithic (table 1; Woodman *et al.* 1997, 141) but predated the underlying crouched burial in C.9, confirming the disturbed nature of the stratification. It is not possible to establish whether this cattle bone entered the cave via natural agencies or was associated with human activity.

Phase II: Neolithic

Stalagmite (C.8) continued to be deposited in the cave, forming another floor which sealed the primary burials (Kilgreany B and U) in C.9. This stalagmite would again have comprised a very hard, wet, shiny almost translucent surface. Reminiscent of the earlier stratification, this tufaceous stalagmite was overlain by another thin, charcoal-rich deposit (C.7), once more localised to Grids C and D. Similar to C.9, this charcoal-rich deposit either indicates an area of intensive burning or a deposit deliberately introduced as a bed on which to place burials.

At about 4660 ±75BP, the body of a middle-aged woman (Kilgreany A) was brought to the cave. This burial was located in the southern part of Grid C (fig 2c), south of the natural rock projection against which Kilgreany B had rested. This adult female was placed on the charcoal-rich deposit (C.7) in a tightly flexed position (Tratman 1929, 116). Once more, the burial was located 'on and in' the charcoal-rich deposit (ibid., 116) with no reference in the report to burial in a pit (contrary to Brindley and Lanting 1989-90, 2). A large stone slab (C.23) had been placed on the individual's left shoulder (Tratman 1929, 116). No gravegoods were discovered with the burial. Skeletal remains of other individuals were scattered in proximity, including the remains of an individual who died at approximately 17 years of age (Kilgreany V) (ibid., 116). This individual may be contemporaneous with Kilgreany A.

Two further relatively intact burials (Kilgreany C and D) were placed on the same charcoal-rich deposit (C.7) as the crouched adult female (Kilgreany A). These interments were placed in the northern area of Grid C (fig. 2c), though the exact locations were not recorded. Kilgreany C and D, both adults, comprised unprotected, extended and unburnt inhumations. A fragment of a polished stone axe was discovered in proximity to the two inhumations. The stratigraphic link with the crouched adult female (Kilgreany A) indicates that these two burials (Kilgreany C and D) and the stone axe fragment also date to the Neolithic.

During the 1934 excavations, the scattered remains of at least three other individuals – a large adult, a small adult and an infant (Kilgreany W, X and Y) - interpreted as badly disturbed burials - were recovered from C.5 and C.6 in Grid D (Movius 1935, 295) (figs. 3 and 4). It is possible that these burials are also Neolithic in date due to the concentration of burials in Grids C and D and also because C.6 contained Neolithic material. If Kilgreany W, X and Y are Neolithic in date, then at least seven burials were placed in the cave during Phase II (Kilgreany A, V, C, D, W, X and Y?). Fig. 2c illustrates only Kilgreany A, Kilgreany C and Kilgreany D as the exact locations of the other burials were not recorded and they cannot be dated to the Neolithic with certainty.

Neolithic artefacts

The axe fragment from C.7 seems to have been associated with one or both of the extended inhumation burials (Kilgreany C and D). Broken axe fragments are known to have accompanied a number of Neolithic burials, for instance Cahirguillamore, Co. Limerick (Hunt 1967, 29) and Lough Gur, Co. Limerick (Brindley and Lanting 1989-90, 2). An axe fragment was most likely of different symbolic significance, and may have carried an entirely distinct message, to a complete axe during the Neolithic. Importance may have been placed on where or how the axe was damaged or the activity during which the axe was broken (See Cooney 2000, 174-176). The same reasoning applies to the three concentrations of Early Neolithic pottery sherds located in C.17 in the Inner Chamber (see above). How, where and by whom the pots were broken (if they were deposited in a broken state) may have been significant (for discussion of the meanings of stone axes and pottery in the Neolithic, See Cooney 2000, 178-180).

A number of artefacts were recovered from the lower levels of C.6 in Grids C and D, overlying the Neolithic burials on C.7. Though from different strata, Tratman (1929, 114) stated, 'These two levels (*ie. C.6 and C.7)* are best considered together as the second hearth (*C. 7*) was so thin that remains belonging to it were sticking up into the layer of brown earth and stones above (*C. 6*)'. The Neolithic artefacts include a hollow scraper (fig. 5), six perforated Flat Periwinkle shells (*Littorina obtusata* or *Littorina littoralis*) (fig. 5), a fish vertebrae bead (species unrecorded) and nine worked or perforated animal teeth (the majority of which were pig teeth) (Tratman 1929, 124-5, 143). These artefacts may consist of gravegoods placed with the Neolithic burials on C.7. Alternatively, the artefacts may comprise Neolithic votive deposition in the cave, particularly as hollow scrapers seem to be more apparent in Late Neolithic assemblages (Woodman and Scannell 1993, 58), somewhat later than the date for Kilgreany A. If the scraper, shell beads and perforated animal teeth are evidence of votive deposition, artefacts and disarticulated

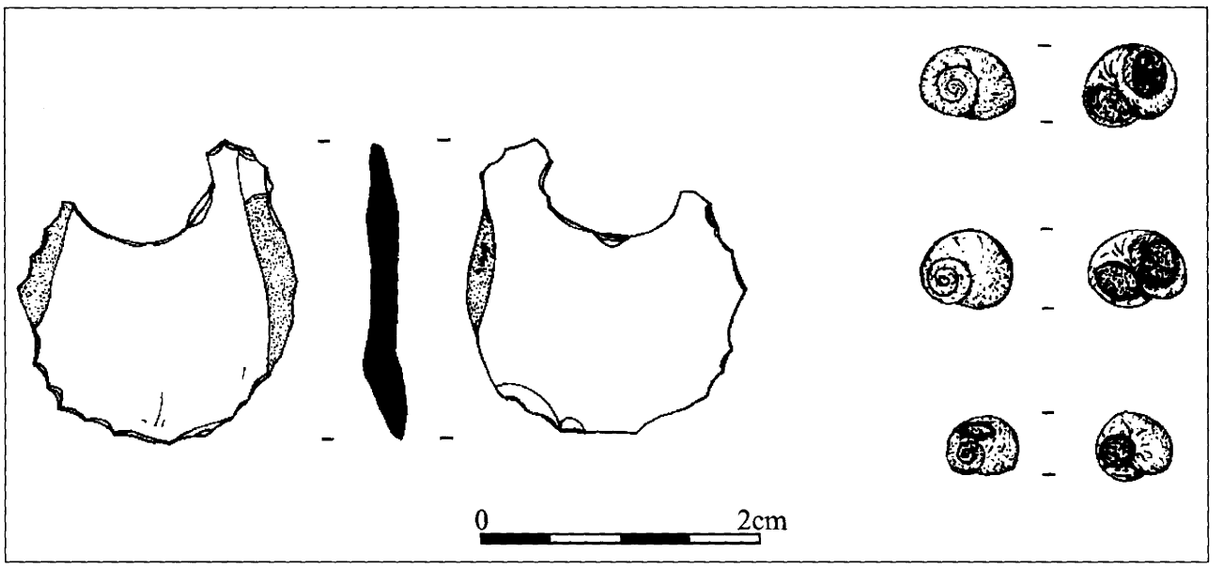

Fig. 5 - Neolithic artefacts from Kilgreany Cave.
Hollow scraper (1928: 870) and three perforated Littorina obtusata *shells (E9: 104, 105 and 106).*

human remains may have been deposited at Kilgreany in addition to using the cave at this time for burial.

Similar to Kilgreany, scrapers have been recovered from Killuragh Cave, Co. Limerick (Woodman 1997, 67-8) and the Catacombs Cave, Edenvale, Co. Clare (Scharff *et al.* 1906, 70) – caves in which human remains have also been recovered. A Neolithic radiocarbon date was obtained from human remains from Killuragh Cave (Woodman 1997, 67-8) but the human remains from the Catacombs Cave are undated.

The six perforated Flat Periwinkle shells from Kilgreany (fig. 5) are relatively rare finds in Ireland. The most spectacular parallel are two necklaces, each manufactured from *circa* 220 perforated Flat Periwinkle shells, which accompanied the burials of two crouched adult males in a megalithic tomb in Chapelizod (Knockmaree), Co. Dublin (O' Neill 1852-53, 43-44; Wilde 1863, 180-183; Kelly 2002, 58 and 73) dated to 4650± 70BP (Brindley and Lanting 1989-90, 2).

Like the perforated shells, the perforated fish vertebrae and the perforated pig teeth are likely to have formed components of objects of personal adornment which may have been worn by the dead buried at Kilgreany or ritually placed in the cave. These beads or pendants, derived from animals, shellfish and fish, reflect the importance of wild and domestic fauna in the lives of the Neolithic people associated with the cave.

Phase III: Late Bronze Age

Artefacts have been recovered from Kilgreany Cave which appear to be components of a Late Bronze Age hoard or hoards; though they have not formerly been considered as such (for example, Eogan 1964; Eogan 1983). These include a bronze bifid razor, a bronze socketed knife, two bronze bulb-headed pins, two amber beads and possibly coarse undecorated Late Bronze Age pottery, a perforated boar's tusk and an unperforated boar's tusk (fig. 6). A 'bronze tanged knife', its present location unknown, may also have been of Late Bronze Age date. The majority of these items were recovered from C.5 in Grids C and D in the Outer Chamber (See Appendix 2).

The Kilgreany razor (fig. 6) is a Class II bifid razor (Piggott 1946, 133 and 138). Only 19 examples of Class II razors are known from Ireland, typically found in hoards of Late Bronze Age date (Piggott 1946; Eogan 1983), suggesting that the Kilgreany razor also formed part of a hoard. The only other Bronze Age razor from the south-east of Ireland is from Harristown, Co. Waterford. The Harristown razor (Class I) was associated with the cremated remains of an adult male inserted as a secondary burial into the mound of a passage tomb (Binchy 1967, 59; Waddell 1990, 145; Kavanagh 1991, 98). It cannot be discounted that the Kilgreany razor was also a gravegood, possibly associated with one of two cremations, both of adult males, which were discovered in the cave (Movius 1935, 295). However, razors found in funerary contexts are typically Class I, as is the Harristown example, and relate to Early Bronze Age burials (Kavanagh 1991).

Of the three principal forms of socketed knife in Late Bronze Age Ireland and Britain, the Thorndon-type is the most commonly occurring and is frequently found as a component part of hoards (Hodges 1956, 51-2; Eogan 1983, 85-86, 146, 163-4, 165-6, 173). The Kilgreany socketed knife (fig. 6) is a Taunton-type, a further sub-division of the Thorndon-type. Taunton-type knives are less commonly found in Ireland. Only two are mentioned in Eogan (1983) both from the Dowris hoard, Co. Offaly (Eogan 1983, 128-9).

Bronze bulb-headed pins (globe-headed, globular-headed, ball-headed or spindle whorl-headed) are relatively rare objects in Ireland and the presence of two

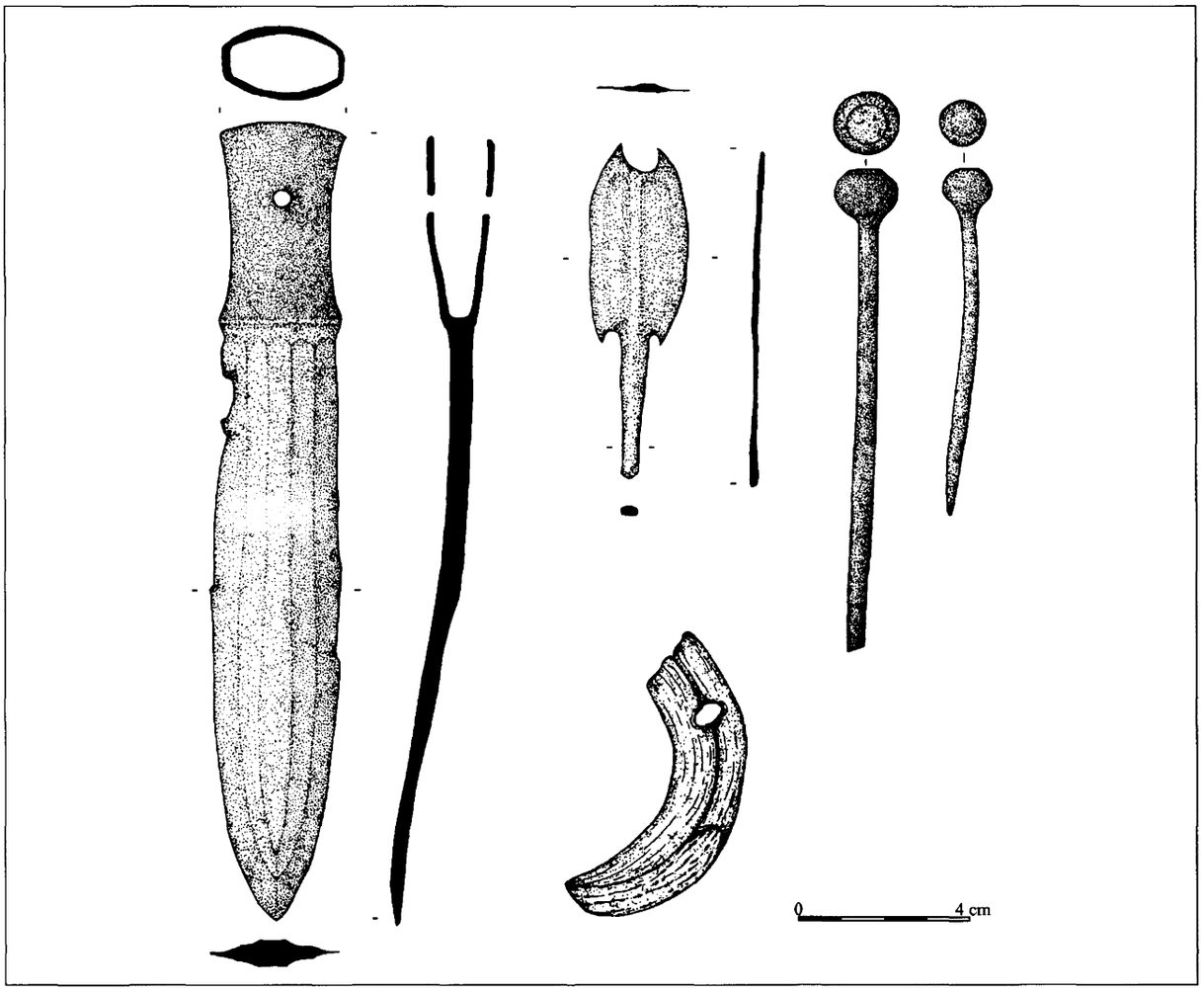

Fig. 6 - Late Bronze Age artefacts from Kilgreany Cave. Socketed knife (K66); bifid razor (E9: 71); bulb-headed pin (K77); bulb-headed pin (E9: 69) and perforated boar's tusk (K65).

pins in Kilgreany Cave (fig. 6) indicates the importance of the site. The difficulty of assigning a date to Irish bulb-headed pins is due to the scarcity of examples, particularly from secure contexts. In addition, there is an absence of literature on this artefact type; they have not been considered in studies of Irish Late Bronze Age pins (Hodges 1956, 42-43; Eogan 1964, 306-7; Eogan 1974). On the continent, bulb-headed pins are known from Late Bronze Age hoards, the most notable being the Seine at Paris hoard that contains four bulb-headed pins (O'Connor 1980a, 124-5; O'Connor 1980b fig.38). In Britain bulb-headed pins have been recovered from Early Bronze Age contexts (Pearce 1983a, 46) such as at Camerton, Somerset and St. Columb, Cornwall (Pearce 1983a, 46; Pearce 1983b 376, 564 and 653). In Ireland however, the bulb-headed pins from Aughinish Island, Co. Limerick (Éamonn Kelly pers comm.) and Moynagh Lough, Co. Meath (Bradley 1997, 51 and 52) and the stone moulds of bulb-headed pins from Garranes ringfort, Co. Cork (Ó Ríordáin 1941-42, 108, 109-110) and Dún Aonghasa, Aran Islands (Claire Cotter pers comm.) are all from Late Bronze Age horizons. The Kilgreany pins are therefore also probably of Late Bronze Age date, contemporaneous with the bifid razor and socketed knife.

Sherds of five Late Bronze Age coarse undecorated vessels were recovered from C.5 (Helen Roche pers comm.). This pottery may indicate short-term occupation of the cave. However, considering the evidence for prehistoric burial and votive deposition at Kilgreany, the pottery more likely relates to non-secular activity.

The amber beads from Kilgreany (Movius 1935, fig. 7, nos. 19 and 20) belong to Group 1B amber beads - beads that are not chronologically diagnostic (Beck and Shennan 1991, 52, 53 and 55). The Kilgreany beads and a large quantity of amber beads from the nearby Brothers Cave, Ballygambon Lower are not included in Eogan's study of Bronze Age amber (Eogan 1999, 75-86). MacWhite (1944-45, 127) interpreted the beads from these Waterford caves as evidence of habitation. However, the Brothers beads were unquestionable

associated with a Late Bronze Age hoard discovered in the cave (Forsayeth 1931, 180; Dowd and Corlett 2002, 8-9) and it is plausible that the Kilgreany beads also formed part of a Late Bronze Age hoard.

A perforated boar's tusk (fig. 6) and a split boar's tusk were also retrieved from C.5 in Grid C where much of the Late Bronze Age material was located. The perforated tusk is similar to an undated example from the Catacombs Cave, Co. Clare (Scharff *et al.* 1906, 70). Five boars' tusks were included in the Late Bronze Age hoard deposited at Rathtinaun, Co. Sligo (Eogan 1983, 152), but none of these tusks were perforated. Boar's tusks have been recovered in association with Late Bronze Age metalwork in Western Europe and two boars' tusks formed part of the Feltwell Fen hoard, Norfolk (Eogan 1964, 310). The Rathtinaun hoard and evidence from hoards outside Ireland suggest the possibility that the Kilgreany tusks were also associated with the Late Bronze Age metalwork deposited in the cave.

Ex situ prehistoric finds

Several finds of Neolithic and/or Bronze Age date were found in C.5, but are clearly *ex situ* and derived from underlying strata. This material includes lithics, a perforated dog or wolf canine, quartz crystals and a stalactite bead (fig. 7).

Twelve bipolar flakes, eight split pebbles and five waste flakes from Kilgreany indicate flint knapping took place in the cave. This knapping debris is surprising in that there is virtually no evidence that caves were used for conducting 'mundane' activities in prehistoric Ireland (Dowd 1997, 191; Dowd 2001, 25). Though Kilgreany is likely to have been known locally as a sacred place during the Neolithic and the Late Bronze Age, it is possible that this belief was not continuous or may not have been a belief held by all members of the community. It is also possible that the manufacture of flint tools was not always an entirely profane activity and that production in a sacred place may have imbued the finished products with certain significance. A number of finished flint tools were found in the Inner Chamber including a side and end scraper (fig. 7), an end scraper, a side scraper and a fragment of a plano-convex knife. These artefacts may relate to knapping activities in the cave or they may consist of gravegoods or ritual deposits.

The perforated dog or wolf canine (fig. 7) from Kilgreany is comparable to canine canines from Bat's Cave, Newhall, Co. Clare (Scharff *et al.* 1906, 72) and Glencurran Cave, Tullycommon, Co. Clare (unpublished find, NMI). The perforated canines from these two caves appear to have been associated with human remains, albeit of unknown date. Pierced dog canines are known from Bronze Age funerary contexts in Britain (Annable and Simpson 1964, 53 and 107) and the examples from Irish caves are also likely to relate to prehistoric funerary practices. The occurrence of these teeth in three caves, considering the relative paucity of perforated dog or wolf canines in the Irish archaeological record, may suggest that the dead who wore these pendants and were buried in caves were of particular status within their respective communities.

The three unworked quartz crystals from Kilgreany are relatively large. The cave is developed in limestone bedrock without major veins or mineralisation. In such a cave, crystals of calcite might be expected but not quartz of such large size. This indicates that the crystals were not introduced by natural processes (Nigel Monaghan pers comm.) but were deliberately deposited. Quartz held special significance and a symbolic role in prehistoric Ireland. Indeed, the connection between quartz and the dead can be traced from the Neolithic through later prehistory and the medieval period to the present day (Koeberl 1997, 7; Cooney 2000, 177). Part of the significance of quartz must be due to the glow achieved by rubbing two pieces of quartz together in the dark (Smith 1998, 23 in Cooney 2000, 177) and the spark created when two fragments are struck together (Laurence Dunne pers comm.). Such results would have

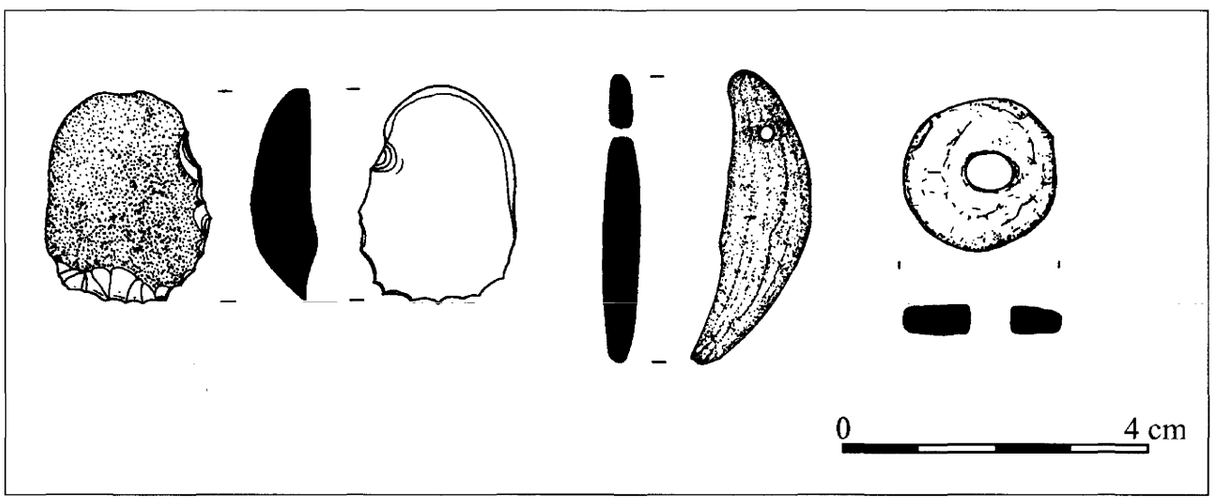

Fig. 7 - Ex situ *prehistoric artefacts from Kilgreany Cave. Flint side and end scraper (E9: 24); perforated dog/wolf canine (K81); stalactite bead (E9: 103).*

been particularly effective and potent in a cave. It is quite plausible therefore that the Kilgreany crystals date to one of the phases of ritual activity in the cave.

A microcrystalline stalactite disc bead (fig. 7) was recovered as a surface find in the Inner Chamber of the cave. Stalactite straws have natural perforations and therefore minimal modification would have been necessary to produce a bead. The author knows of no other instance of worked stalagmite or stalactite from Ireland. What is particularly interesting is that the bead is manufactured from a raw material that can only be found in caves. It is likely that the bead was manufactured from stalactite that came from Kilgreany Cave itself, possibly associated with one of the crystalline stalagmite floors (C.15 and C.10) which were exposed during the Neolithic. If the bead is of Neolithic date (and it may be later), it indicates that stalactite was removed from the cave, worked, and the finished product returned to its place of origin. Because the raw material came from a sacred place, the manufactured object may have been considered to imbue the sacred nature of its source of origin.

Phase IV: Early Medieval

A significant quantity of artefacts, indicating Early Medieval settlement in the cave, was discovered primarily in the Inner Chamber (fig. 8). It appears that the Early Medieval activity was confined to C.5 (figs. 3 and 4) as no material of that date was discovered in underlying contexts. Movius (1935, 268) stated that C.5 was 'not older than the Early Christian Period' and a cattle bone from this context provided a contemporaneous date (table 1). Context 5 was the most severely disturbed stratum in the cave. It contained bones of extinct fauna, fragments of the skull of 'Kilgreany D' from C.7, Late Bronze Age metalwork, a range of Early Medieval artefacts and post-Medieval pottery. However, Phase IV relates only to the Early Medieval material from C.5.

Within this Early Medieval stratum (C.5) there were three areas 'where the ash was especially concentrated' (Movius 1935, 268) which were called hearths (C.19, C.20 and C.21). The smallest hearth, C.19 (0.60m x 0.80m), was located at the mouth of the Inner Chamber; C.20 (0.95m x 1.45m) abutted the north wall of the Inner Chamber and the largest hearth, C. 21 (1.55m x 1.20m), abutted the south wall of the Inner Chamber.

Shells of periwinkle, cockle, mussel, oyster and scallop were also recovered from C.5 (Tratman 1929, 143; Movius 1935, 287). Marginal damage was evident on some of the periwinkle shells which may have been sustained by the removal of flesh from the shells (Molleson 1985-86, 1). Thus, food was collected from the sea shore, which is approximately 10km from Kilgreany (ibid., 1), and brought back to the cave for consumption. However, as the shells were almost all recovered from C.5, these marine molluscs formed part of an Early Medieval diet rather than providing evidence of a prehistoric 'hunter's camp' as suggested by Molleson (1985-6, 2). Some of the large quantity of bones of domestic and wild fauna from Kilgreany must also represent food consumed by Early Medieval inhabitants of the cave. However, the identification of faunal remains that represent food debris, rather than animal bone introduced into the cave by one of several natural processes (Simms 1994), would require specialist analysis.

Early Medieval artefacts recovered from Kilgreany indicating everyday secular activities, possibly within the cave itself, include whetstones, spindle whorls (fig. 8), a tanged iron knife, amorphous bone 'points', fragments of worked bone and antler, a bone needle (fig. 8) and fragments of two rotary quernstones. The majority of the eighteen whetstones from Kilgreany were unmodified before use which suggests the *ad hoc* exploitation of suitable stones for short periods or for less specialised tasks (O'Connor 1991, 48). Presumably these whetstones, and some of the other artefacts, were left behind when the cave was abandoned as they may have been broken or considered too cumbersome to carry or could have been easily replaced. Of the ten bone spindle whorls from Kilgreany, eight consisted of the perforated epiphyses of cattle femora (fig. 8) and nine were undecorated. The decoration on the tenth whorl comprised three incised circles (Tratman 1929, 122), similar to one from Lagore crannóg, Co. Meath (Hencken 1950-51, 195). The antler dice from Kilgreany (fig. 8) is a Class 3B, parallelepiped dice (Breen 1994, 112). Sixteen other examples are known from both Iron Age and Early Medieval contexts in Ireland, such as Barntick Cave, Co. Clare, Ballinderry crannóg, Co. Offaly and Lagore crannóg, Co. Meath (ibid., 111-12).

Several personal items were also discovered at Kilgreany. An incomplete bronze, baluster-headed, ringed pin (fig. 8) and a bone pin with a decorated head (fig. 8) were discovered in proximity to one another in the Inner Chamber. An iron, loop-headed, ringed pin was found in a fissure in the Rear Chamber, where it may have been placed for safekeeping. A lignite bracelet fragment and a fragment of a composite, double-edged, bone comb (Class D1) were also discovered (fig. 8) (Dunlevy 1988, 358-59). Class D1 combs have been recovered from Carrigmurrish Cave and Ballynameelagh I Cave – both sites are in proximity to Kilgreany (Dowd 1997, 73). This may indicate contemporaneity in the use of these caves and a shared manufacturer or supplier of combs. A 5th to 10th century date is indicated by the comb type (Dunlevy 1988, 358-59) and the iron ringed pin, while baluster-headed pins are generally regarded as pre-Viking (Fanning 1994, 23). None of the artefacts provide a more precise date.

Contemporaneous but inconsistent with the artefacts described above, a decorated fragment of bronze, plated with silver and with a central amber inlay was discovered at Kilgreany (fig. 9). This arc-shaped piece is composed of two parallel bars, the ends of which indicate it was broken from a larger object. It measures 14.5 cm in length

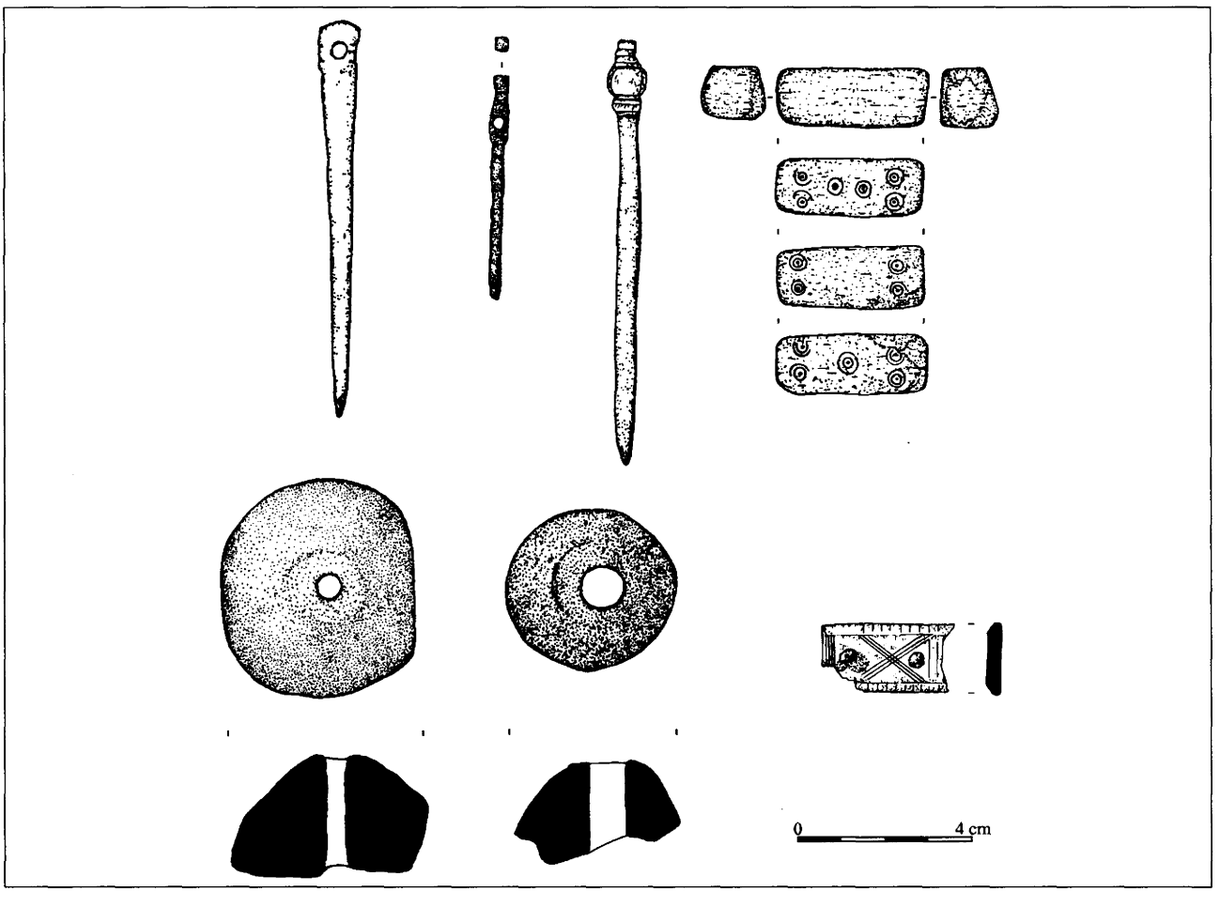

Fig. 8 - Early Medieval artefacts from Kilgreany Cave. Bone needle (K67); bronze baluster-headed ringed pin fragment (E9: 70); decorated bone pin (E9: 4); antler parallelepiped dice (K93); two bone spindle whorls (E9: 13 and 10) and bone comb fragment (E9: 2).

and 2.3cm in width (Movius 1935, 277-78). Two opposed, backward-looking, stylized, disembodied animal heads meet above the amber stud. Pear-shaped granules are set at the back of the mouths, features which have been interpreted as representing the eucharistic host (Whitfield 1995, 94). The bars are decorated by a pair of snakes which terminate beneath the amber stud in crossed birds heads. Snakes terminating in bird, beast and human heads are also represented in the Book of Kells, on the copper-alloy finials of the Irish house-shaped shrine at St Germain-en-Laye, France and on the 'Tara' Bettystown brooch, Co. Meath (Movius 1935, 278; Youngs 1989, 145 and 166; Henderson 1987, 60). The crossed birds heads and animal heads are comparable to those on the 'Tara' brooch, where they are also associated with amber studs (panels 43C, 44C and 51C) (Movius 1935, 278; Whitfield 1976, 17 and 20).

Movius (1935, 277-78) suggested the Kilgreany object was an 8th century shrine fragment and more recently, it has been interpreted as probably part of the crest of an early bell-shrine, the decoration supporting an 8th century date (Raghnall Ó Floinn pers comm.). Several fragments of a strip of gilded bronze with interlace ornament were recovered in proximity to the shrine fragment and are likely to originally have formed part of the same object (Movius 1935, 278).

Phase V: 11th Century to 17th Century

Artefacts ranging in date from the late Viking period to the late 17th century were recovered during the 1934 excavations, primarily concentrated in the Inner Chamber (See Appendix 2). This material does not represent a phase *per se*, but rather irregular use of, or visits to, the cave over several hundred years. The finds include a *Hnefatafal* gaming piece, a token, a coin, over 200 sherds of post-medieval pottery, 26 clay pipe fragments, over 200 fragments of iron and eight fragments of leather. The gaming piece is similar to examples from late 11th to late 12th century Waterford city; artefacts indicative of Viking origin or Viking influence (Hurley 1997, 666). The token is late 17th century in date; the obverse reads *John Merrick* and the reverse *Of Youghal*. Merrick was a bailiff and mayor of Youghal in the 1660's and 1670's (Hayman 1859, 228). The coin, a St. Patrick's farthing from the reign of Charles II, is also of late 17th century date (Seaby and Seaby 1958, 95).

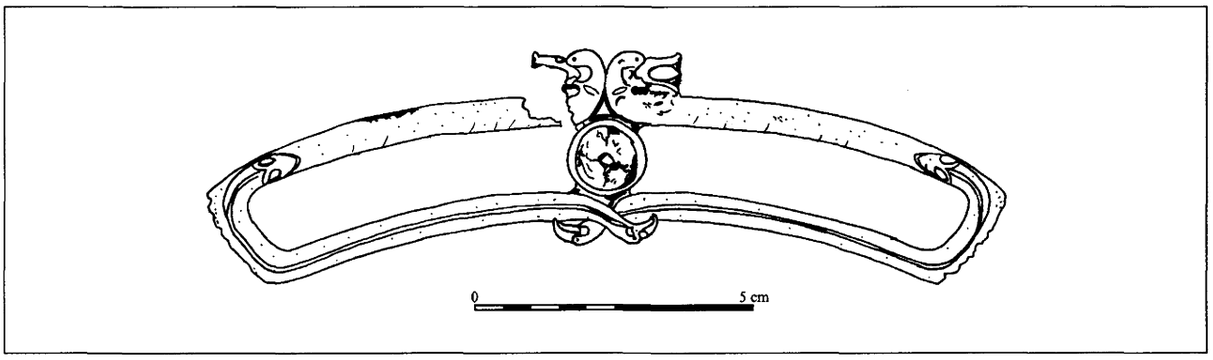

Fig. 9 - Bell-shrine fragment from Kilgreany Cave (After Movius 1935, 278).

DISCUSSION

Neolithic (Phases Ia, Ib and II)

The human skeletal assemblages recovered in 1928 and 1934 represented at least eight individuals (Tratman 1929, 117) and at least twelve individuals (Movius 1935, 294) respectively. A re-examination of both assemblages has established the presence of at least 15 individuals including adults, both male and female, children and several very young infants (Dr. Rick Schulting pers comm.). In addition to these 15 individuals are two cremations, each of an adult male. One cremation was discovered outside the entrance and the second in a fissure extending from the Outer Chamber (Movius 1935, 295). There was no stratigraphic evidence or associated artefacts to suggest a date for these cremations.

Kilgreany Cave was used for deposition of the dead during the Neolithic (fig. 10). At least eight adults and an infant (Kilgreany A, B, C, D, U, V, W, X and Y) appear to have been placed in the cave at this time. The seven other individuals identified in the human skeletal assemblage (by Dr. Rick Schulting) may also relate to Neolithic funerary rites. The interments comprised both crouched burials (Kilgreany A and B) and extended inhumations (Kilgreany C and D) with no evident age or gender discrimination. While the scattered nature of the majority of the human bone from Kilgreany may be the result of natural disturbance of deposits, it is also possible that disarticulated remains or token deposits of bone were placed in the cave in addition to the intact burials. The cave may also have been used for excarnation (Molleson 1985-86, 2) with some skeletal elements subsequently removed to another location. In addition to the human remains, a stone axe fragment, shell beads, perforated and worked animal teeth and a hollow scraper (fig. 5) were deposited in the cave during the Neolithic. These objects may have comprised gravegoods accompanying the burials or may indicate votive deposition in the cave.

The majority of burials in Irish caves date to the Neolithic (Dowd 1997, 149-168), a fact supported by the evidence from Kilgreany. Rather than serving as convenient places in which to dispose of the dead, the author suggests that in prehistoric Ireland caves were perceived as sacred foci in the landscape, linked to concepts of death, the unknown and passages to another world (Dowd 2001, 25). Kilgreany Cave would therefore have been construed as a symbolic place during the Neolithic and individuals buried there may have been of particular status within their communities.

Late Bronze Age (Phase III)

It is possible that some of the human remains from Kilgreany, both unburnt and/or cremated, date to the Bronze Age. Knockninny Cave, Co. Fermanagh and Castlemartyr Cave, Co. Cork are just two examples of caves that were used for burial during the Bronze Age (Waddell 1990, 89 and 60). Only further radiocarbon dates will determine whether any of the human remains from the cave post-date the Neolithic.

During the Dowris Phase of the Late Bronze Age, Kilgreany Cave became a focus for votive deposition. This indicates the possibility that a belief in the sacred nature of the cave sustained over thousands of years from the Neolithic through to the end of the Bronze Age.

Rather than representing a single hoard, the material from Kilgreany (fig. 6) may indicate a number of successive depositional acts. It has been suggested that the hoards recovered from Mooghaun, Co. Clare, Dowris, Co. Offaly and the Bog of Cullen, Co. Tipperary represent a series of depositions in the same place over a prolonged period of time (Cooney and Grogan 1994, 164 and 166). Alternatively, if the artefacts are to be considered as a single hoard, the combination of razor, socketed knife and bulb-headed pins is not known from any other Irish context. The Dowris hoard, the closest parallel, contained two socketed Taunton-type knives, three Class II bifid razors but no pins (Eogan 1983, 128-9). In Britain, hoards with similar components include the Taunton hoard, Somerset which contained a Class I razor and a Taunton-type knife (Piggott 1946, 127) and the hoard from St. Andrews, Fife which contained seven socketed knives, a bifid razor, a boar's tusk and amber beads (Eogan 1999, 79). The Kilgreany hoard is both unusual and unique particularly considering the scarcity of bulb-headed pins and Taunton-type knives in Ireland combined with the limited evidence for Late Bronze Age hoards in caves.

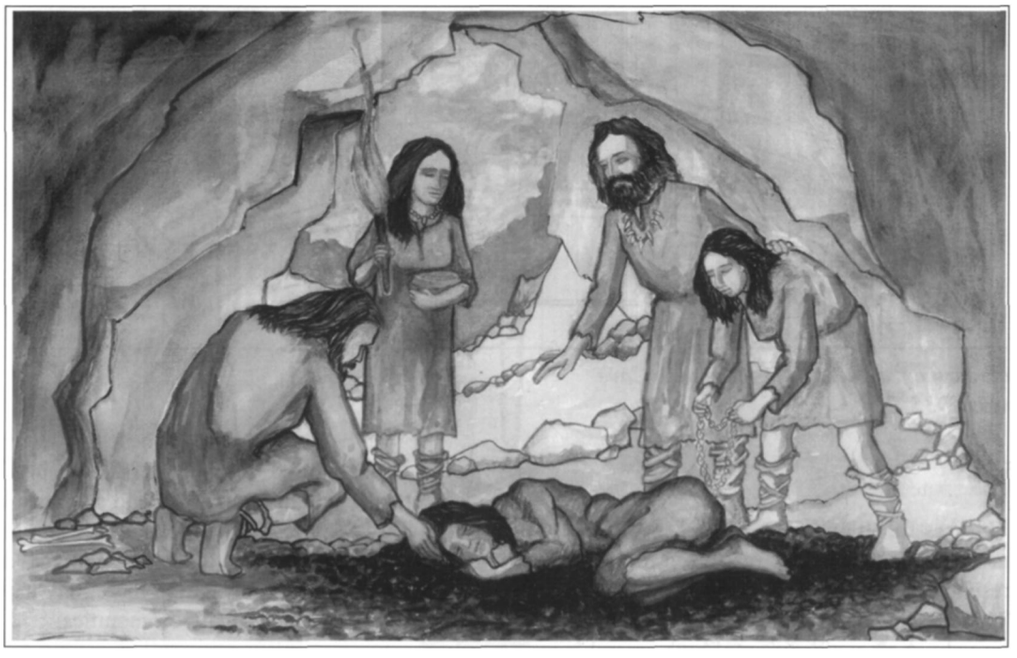

Fig. 10 - Artist's reconstruction of a Neolithic burial in Kilgreany Cave (John Murphy).

Though Late Bronze Age hoards are typically found in wet places, most notably rivers and bogs, two hoards have been recovered from caves supporting the interpretation that the Kilgreany metalwork constitutes votive deposition. A socketed axehead, socketed sickle, socketed gouge and amber beads were discovered on the floor of Brothers Cave, less than 1.5km from Kilgreany Cave (Forsayeth 1931, 180; Dowd and Corlett 2002, 8 and 9). Another Late Bronze Age hoard consisting of a bronze socketed spearhead, a bronze socketed axehead and three bronze penannular bracelets was discovered 'close to the entrance to a natural cave' at Kilmurry, Co. Kerry (Eogan 1983, 93). Interestingly, both Kilgreany Cave and Brothers Cave are flooded during heavy and continuous rain transforming them into 'wet places', at least during part of the year.

Early Medieval period (Phase IV)

Kilgreany Cave was inhabited some time between the 5th and the 10th centuries AD (fig. 8). Several other caves in proximity to Kilgreany have also produced evidence of contemporaneous domestic occupation. The archaeological assemblages from these caves are comparable to material from ringforts, cashels and crannógs (Dowd 1997, 99-112). The absence of enclosed settlements in this area of Waterford is more likely a reflection of 20th century agricultural practices, rather than an accurate reflection of early historic settlement patterns, particularly considering the caves are all located on good agricultural land. Caves are just one form of Early Medieval unenclosed settlement likely to have been 'homes of those who lacked the prestige, wealth or need for more impressive habitations' (Edwards 1990, 47). However, the occupant/s of Kilgreany Cave are not likely to have been low-status individuals. Low-status or unfree individuals, it has been argued, are archaeologically invisible (Mytum 1992, 136). Rather, the presence of items of personal ornament (ringed pins, lignite bracelet etc.) suggest the material belonged to free clients (ibid., 136), for instance the *bóaire* or *ócaire*.

The majority of the Early Medieval material at Kilgreany was located in the Inner Chamber, where there is no natural light. It could be argued that this material was washed in from the Outer Chamber, particularly considering that the cave deposits sloped inwards (ie. from west to east). However, the three hearths discovered in the Inner Chamber are likely to date to the Early Medieval period and imply that people were in fact living, cooking and probably sleeping in the cave. In the Outer Chamber, the surface of C.6 was quite compact, which was suggested as evidence for the 'trampling action of the later occupants of the cave' (Tratman 1929, 114) and may reflect an Early Medieval surface or floor area.

Occupation in Kilgreany Cave is likely to have been temporary and seasonal as part of the cave is flooded during wet months. The cave is large, spacious, has free circulation of air and would have provided shelter from the elements. It would have offered a habitable and comfortable dwelling place for a single individual or a small family unit. There was no evidence that a door was fitted at the entrance though postholes and stakeholes are unlikely to have been noticed during the excavations. As the Rear Chamber frequently floods, it would have acted as a valuable supply of water for drinking, cooking, cleaning and washing. Whetstones discovered in the cave indicate the sharpening of tools, weapons or personal ornaments.

The spindle whorls and needle attest to stages of textile manufacture. The worked bone and antler and amorphous bone 'points' indicate the casual working of skeletal material and the probable manufacture of certain items in the cave, such as spindle whorls and simple bone needles. The rotary quernstone fragments indicate food preparation. Food consumption is indicated by the seashells and probably by some of the animal bones. Most importantly, the bone pin, ringed pins, lignite bracelet, comb and dice indicate that the cave functioned as a home where people got dressed, hair was combed and games were played.

The bell-shrine fragment (fig. 9) could be interpreted as evidence that a reliquary was concealed in the cave when an attack appeared imminent. It has similarly been suggested that the St. Ninian's Isle hoard represents metalwork hoarded in times of strife (Small *et al.* 1973, 146). Alternatively, loot may have been hidden in Kilgreany Cave by raiders following an incursion on an ecclesiastical centre. The fact that the shrine was broken supports the idea that it was stolen for its bullion value – by either the Vikings or the Irish. The proximity of Kilgreany to the Viking settlement at Waterford is worthy of reminder. Presumably the main body of the shrine was retrieved following the initial concealment in the cave. Such interpretations are also likely to explain the presence of shrine fragments in a cave at Park North, Co. Cork (Coleman 1942, 75).

It is possible that beliefs regarding the sacred nature of Kilgreany Cave continued from the Late Bronze Age through to the Iron Age and Early Medieval period. Parallelepiped dice have been found in Iron Age contexts at Newgrange and with Iron Age burials at Knowth passage tomb (Breen 1994, 110). It is possible therefore that the Kilgreany dice is not Early Medieval in date but reflects Iron Age recognition of an earlier sacred place. Similarly, the bell-shrine fragment may suggest that at some point in the 8th century, the piece was deposited at Kilgreany acknowledging the non-profane nature of the cave, particularly if the site was associated with a saint (though no such evidence survives).

11th Century to 17th Century (Phase V)

There is no evidence to suggest that Kilgreany Cave was used to any great extent subsequent to the Early Medieval period. The gaming piece, coin, token and some of the later artefacts were probably lost by interested and inquisitive individuals visiting the cave or those seeking temporary refuge from the elements. In post-medieval times the cave appears to have provided a convenient place in which to dispose of general household waste.

CONCLUSION

Kilgreany Cave has a biography of human activity spanning approximately 5,000 years. During these millennia, the cave was utilised and interpreted in a number of very different ways by people with very different approaches to life, death and the landscape. A number of commentators have interpreted the prehistoric material from the cave as indicative of prehistoric settlement (Tratman 1929, 117 and 120; Movius 1935, 282; MacWhite 1944-45, 127; Herity 1982, 265; Molleson 1985-86, 2; Moore 1999, 52;). The evidence presented in this paper suggests the contrary; rather, it seems that from at least the Neolithic, Kilgreany Cave was considered a sacred place on the landscape, outside the domain of profane life. This perception changed with the advent of Christianity, after which the cave was used largely for secular purposes. The next step towards further understanding the complex biography of Kilgreany Cave lies in a re-examination of the human and animal skeletal remains and specialist analysis of elements of the artefactual assemblage. A radiocarbon project, targeting the undated human remains from the cave, would be beneficial in identifying whether funerary or ritual activity in the cave was confined to the Neolithic or extended into other periods.

NOTES

1 Parish: Whitechurch. Barony: Decies without Drum. RMP: WA030-018 - delisted. NGR: X1762 09438. 0-60m OD.

2 This 'bridge ... formed a sort of dam which kept material from accumulating in the rear chamber of the cave' (Movius 1935, 269). Consequently, the only deposit encountered in the Rear Chamber was roof and wall collapse (C.2), which overlay the basal clay (C.13). Animal bones and modern objects were found on the surface. The fissure extending east from the eastern wall of the chamber contained charcoal and animal bones, some of extinct fauna, a bone spindle whorl and a broken and incomplete iron ringed pin (Movius 1935, 272 and 277).

3 No artefacts or stratification of archaeological significance were encountered in Grids A and B. However, this cannot be interpreted as an absence of activity outside the cave entrance because the original stratification was evidently entirely removed, possibly by quarrying, and the surviving C.12 comprised material introduced in the 20th century (Movius 1935, 257).

4 Kilgreany Cave 1928 (2 notebooks). Kilgreany Cave 1934 (5 notebooks).

5 Tratman (1929, 113) described C.5 as the *First Hearth* - a layer of earth and stones 'black throughout by the presence of abundant charcoal fragments'. This *First Hearth* appears identical to the uppermost stratum excavated in 1934 in Grids E, F and G. Movius stated that this uppermost stratum contained 'no trace of Bristol hearth 1' but continued to describe it as 'black earth containing much ash and charcoal' (Movius 1935, 262 and 268). It appears that the use of the term *First Hearth* may have misled Movius. It seems certain that the

two strata described separately are in fact the same context.

6 The section drawings, in addition to the two descriptions of the stratum, indicate that *Layer C* of 1928 corresponds with the *Brown Earth and Stones* of 1934.

7 Kilgreany A, B, C and D were terms coined in 1928. Kilgreany U, V, W, X and Y have been coined by the author for ease of reference.

ACKNOWLEDGEMENTS

This paper forms part of doctoral research being conducted at the Archaeology Department, U.C.C. and funded by the Irish Research Council. For reading and commenting on the text, I would like to thank Laurence Dunne, Dr. Sarah Milliken, Tomás Ó Carragáin, Professor Peter Woodman and the referee. Thanks also to the general editor, Dr. William O'Brien. Several weeks were spent in the National Museum of Ireland and for their kindness and helpfulness, I would like to thank Mary Cahill and Raghnall Ó Floinn, Antiquities Division and Nigel Monaghan and Ivor Harkin, Natural History Division. I would like to express my gratitude for the expertise of several people in relation to specific artefacts: Mark Holmes for identification of the perforated shells, Eamonn P. Kelly for his comments on bulb-headed pins, Dr Sarah Milliken for identifying the lithics, Nigel Monaghan for his opinions on the dog/wolf tooth, quartz crystals and stalactite bead, Raghnall Ó Floinn for his comments on the shrine fragment and Helen Roche for examining the prehistoric pottery. Dr. Rick Schulting provided valuable information on his unpublished re-analysis of the human skeletal material. I am grateful to Nina Koeberl for the artefact illustrations (figs. 5, 6, 7 and 8) and to the Archaeology Department, U.C.C. for funding these drawings. Thanks to John Murphy for the reconstruction of a burial in the cave (fig. 10). For assistance with the production of the figures, I wish to thank Anluan Dunne and Eachtra Archaeological Projects. The author would like to acknowledge Gerry Breen for permission to use his unpublished M.A. thesis, Claire Cotter for access to unpublished information on the Dún Aonghasa pin and to Dan Noonan for reference material.

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APPENDIX 1: Kilgreany Cave contexts

C.	1928 description	1934 description	2002 description	Grid/Extent	Depth
1	A (*i*): Turf and humus	Not encountered	Surface deposit	C and D	0.05m
2	A (*ii*): Quarry debris	Quarry debris and fill	Limestone stones and boulders	A, B, C and D	0.50m
3	A (*iii*): Broken masses tufaceous stalagmite	Not encountered	Quantities of tufaceous stalagmite	C and D	0.50m
4	A (*iv*): Broken floor of tufaceous stalagmite	Not encountered	Broken layer of tufaceous stalagmite	W area Grid D. Crevices in Grid B.	0.04m
5	B: First Hearth	Black earth and stones	Black earth and stones	C, D, E, F, G and H	0.60m - 1.75m
6	C: Brown earth and stones	Brown earth and stones	Brown, coarse, gritty clay with moderate inclusion of stones.	C, D, E and F	max. 1.35m
7	D: Second Hearth	Charcoal-rich earth and stones	Charcoal-rich deposit	C and D	'Very thin'
8	E (*i*): Tufaceous stalagmite	Tufaceous stalagmite floor, broken	Tufaceous stalagmite	C and D	0.25m
9	E (*ii*): Third Hearth	Not encountered	Charcoal-rich deposit	C and D	0.05m - 0.10m
10	E (*iii*): Crystalline stalagmite	Not encountered	Crystalline stalagmite	C and D	0.20m
11	F: Angular stones	Grey earth and stones	Limestone boulders and stones	C, D, E, F, G and H	5.60m
12	Not encountered	Grey earth and large stones	Grey earth and large stones	A and B	4m
13	Not encountered	Clay	Fine, reddish brown, sandy silt clay, with manganese banding	A, B, C, D, E, F, G & H	Unknown
14	Not encountered	Grey earth and stones permeated with calcium	Grey earth and stones	Crevices in Grid B	Pockets
15	Not encountered	Crystalline stalagmite	Micro-crystalline stalagmite boss	F and G	0.08m
16	Not encountered	Tufaceous stalagmite and stones	Tufaceous stalagmite boss and stones	F and G	0.50m
17	Not encountered	Brecciated brown earth and stones	Brecciated brown earth and stones	F and G	0.75m
18	Not encountered	Black earth and stones	Pockets black earth and stones in C.11	F and G	Pockets
19	Not encountered	Hearth 1	A hearth	E and F	0.06m
20	Not encountered	Hearth 2	A hearth	F and G	0.09m
21	Not encountered	Hearth 3	A hearth	G and H	0.11m
22	Large number of stones	Not encountered	Deposit of stones	Skull Kilgreany B	Unknown
23	Large flat stone	Not encountered	Stone slab	Shoulder Kilgreany A	Unknown

APPENDIX 2: Kilgreany Cave artefacts

Context 5

Artefact	Reg. No.	Illustration	Grid
Flint side scraper	E9:23	**M** Fig. 6, no. 11	F or G
Flint side and end scraper	E9:24	**M** Fig. 6, no. 12	E
Flint split pebble	K69	None	C
Waste flint flake	E9:26	**M** Fig. 6, no. 13	H
Waste flint flake	K73	None	C/D line
Quartz crystal	K70 / 1928: 871	**T** Fig. 4, no. 2	C or D
2 quartz crystals (upper C.5)	E9: 101, 102	None	F, G or H
Stone disc bead	K130	**T** Pl VI, no. 18	C/D line
16 sandstone whetstones	E9: 48 – 63	**M** Fig. 8, no. 26, 27 (48-9)	F, G or H
Whetstones (unknown quan.)	Unknown	None	C or D
2 rubbing/grinding stones	E9: 64, 65	None	F, G or H
2 rubbing/grinding stones	K101 & ???	None	C/D line
2 rotary quernstone frags.	E9: 66, 67	None	F, G or H
Stone disc	E9: 68	None	F, G or H
Perforated stone disc	E9: 46	**M** Fig. 6, no. 14	H
Perforated stone disc	E9: 47	None	F or G
Perforated dog/wolf canine	K81	**T** Pl VI, no. 6	C
Perforated boar tusk	K65	**T** Pl VI, no. 12	C
Split boar canine	K83	None	C
Antler parallelopiped dice	K93	**T** Pl VI, no. 7	C/D line
Bone needle	K67	**T** Pl VI, no. 15	C
Bone comb fragment	E9: 2	**M** Fig. 6, no. 4	F or G
Bone disc bead	E9: 1	**M** Fig. 6, no. 3	F or G
Bone pin – decorated head	E9: 4	**M** Fig. 6, no. 1	H
5 bone spindle whorls	E9: 8 - 11, 13	**M** Fig. 6, no. 6	F, G or H
4 bone spindle whorls	K: 68, 94, 135, 136,	**T** Pl VI, no. 4, 5, 8, 9	C
Bone gaming piece	E9: 3	**M** Fig. 6, no. 2	H
3 fragments worked antler	E9: 21, 22, 22a	**M** Fig. 6, no. 7	F or G
Perforated bone and antler	K: 137, 85	**T** Pl VI, no. 13, 16	C
2 bone points	E9: 14, 15	None	H
13 fragments worked bone / points	K: 52, 61, 75, 79, 86, 89, 95, 100, 103, 104, 112, 122, 125	**T** Pl VI, no. 11, 10, 14 (122, 125, 52)	C & C/D line
8 fragments worked bone	E9: 5 - 7, 16 - 20.	**M** Fig. 6, no. 8, 9, 5 (5-7)	C or D
Lignite bracelet fragment	K82 / X2843	**T** Pl VI, no. 17	C
12 prehistoric pottery sherds	E9: 89 – 100	**M** Fig. 7, no. 24 (90)	F, G or H
54 prehistoric pottery sherds	Kp: 43, 45, 50-60, 62, 64-8, 79, 81, 83, 88-9, 90-4, 97-101, 103-115, 119, 124-8, 180	**T** Pl VII, no. 10, 23, 24 (88, 89, 90)	C & D
23 prehistoric pottery sherds	Kp 6, 9-21, 38-9, 117-8	None	C / D
246 post-med. pottery sherds	E9: 120 – 365	None	H
Taunton-type bronze knife	K66 / X2841	**T** Pl VI, no. 1	C
Bulb-headed bronze pin	K77	**T** Pl VI, no. 3	C/D line
Bulb-headed bronze pin	E9:69	**M** Fig. 7, no. 15	H
Bronze ringed pin	E9:70	**M** Fig. 7, no. 16	H
Bronze bell-shrine fragments	E9: 74, 75	**M** Fig. 9, no. 28	H
Tanged iron knife	K124	**T** Pl VI, no. 2	C
2 fragments of iron	K: 123, 80	None	C
253 fragments of iron	E9: 366-618	None	F, G & H
26 clay pipe fragments	E9: 619-644	None	H
Tin and bronze objects	E9: 645, 656	None	H
17th C. coin	E9: 646	None	H
17th C. token	E9: 655	None	H
8 leather fragments	E9: 647-654	None	H

Context 6

Artefact	Reg. No.	Illustration	Grid
Flint hollow scraper	K27 / 1928: 870	**T** Fig. 4, no. 1	C or D
Flint plano-convex knife	E9: 25	**M** Fig. 6, no. 10	E
2 waste flint flakes	K: 21, 28	None	C
Hammerstones (no. unknown)	Unknown	None	C or D
3 shell beads	E9: 104, 105, 106	**M** Fig. 7, no. 17 (105)	D
3 shell beads	K: 22, 23, 24	None	C or D
Fish vertebra bead	None	None	C or D
9 worked/pierced animal teeth	Inc. K: 30, 35, 42	**T** Pl VII, no. 1 - 9	C or D
2 pieces worked bone	K: 40, 39	None	C or D
9 prehistoric pottery sherds	Kp: 1-7, 22, 24	**T** Pl VII, no. 11 (24)	C or D

Context 7

Artefact	Reg. No.	Illustration	Grid
Polished stone axe fragment	Unknown	**T** Fig. 2	C
Amber bead	E9: 108	**M** Fig. 7, no. 20	D

Context 8

Artefact	Reg. No.	Illustration	Grid
Amber bead	E9: 107	**M** Fig. 7, no. 19	B

Context 17

Artefact	Reg. No.	Illustration	Grid
9 prehistoric pottery sherds	E9: 76-84	**M** Fig. 7, no. 25, 21 (76, 80)	F or G
2 prehistoric pottery sherds	E9: 657-8	None	F or G

Context 18

Artefact	Reg. No.	Illustration	Grid
4 prehistoric pottery sherds	E9: 85-88	None	F or G

Surface finds

Artefact	Reg. No.	Illustration	Grid
Stalagmite disc bead	E9: 103	None	Fissure. F
Bone spindle whorl	E9: 12	None	Rear – fissure
11 post-med. pottery sherds	E9: 109-19	None	Rear chamber
Bronze bifid razor	E9: 71	**M** Fig. 7, no. 18	E
Iron tanged knife	Unknown	None	D
Iron ringed pin	E9: 73	None	Rear – fissure

Context unknown (no illustrations of artefacts)

Artefact	Reg. No.	Grid
Flint end scraper	E9: 30	Unknown
2 flint split pebbles	K10, K43	C or D
5 flint split pebbles	E9: 41 – 45	Unknown
12 bipolar flint flakes	K9, E9: 28, 29, 32- 40	Unknown
2 waste flint flakes	E9: 27, 31	Unknown
Stone with partial perforation	XIV 14.8.28	C or D
64 prehistoric pottery sherds	Kp 23-8, 30-37, 41-2,44, 46-8, 70-8, 80, 82, 84-7, 95-6, 102, 120-3, 129 + 18	C or D
Bronze tanged knife	E9: 72	D

Notes

All finds are housed in the National Museum of Ireland.
Artefacts: are arranged by raw material: stone, shell, bone, pottery, bronze, iron.
Reg. No.: beginning with 'K' are 1928 finds; those beginning with 'E9' are 1934 finds.
Illustration: Refers to illustrations in published reports. **M** = Movius 1935; **T** = Tratman 1929.
Grid: Grids and contexts of artefacts are based on the published reports and on information contained in the Topographical File for Kilgreany in the NMI.