11. Death, decay and reconstruction: the archaeology of Ballykilmore cemetery, County Westmeath

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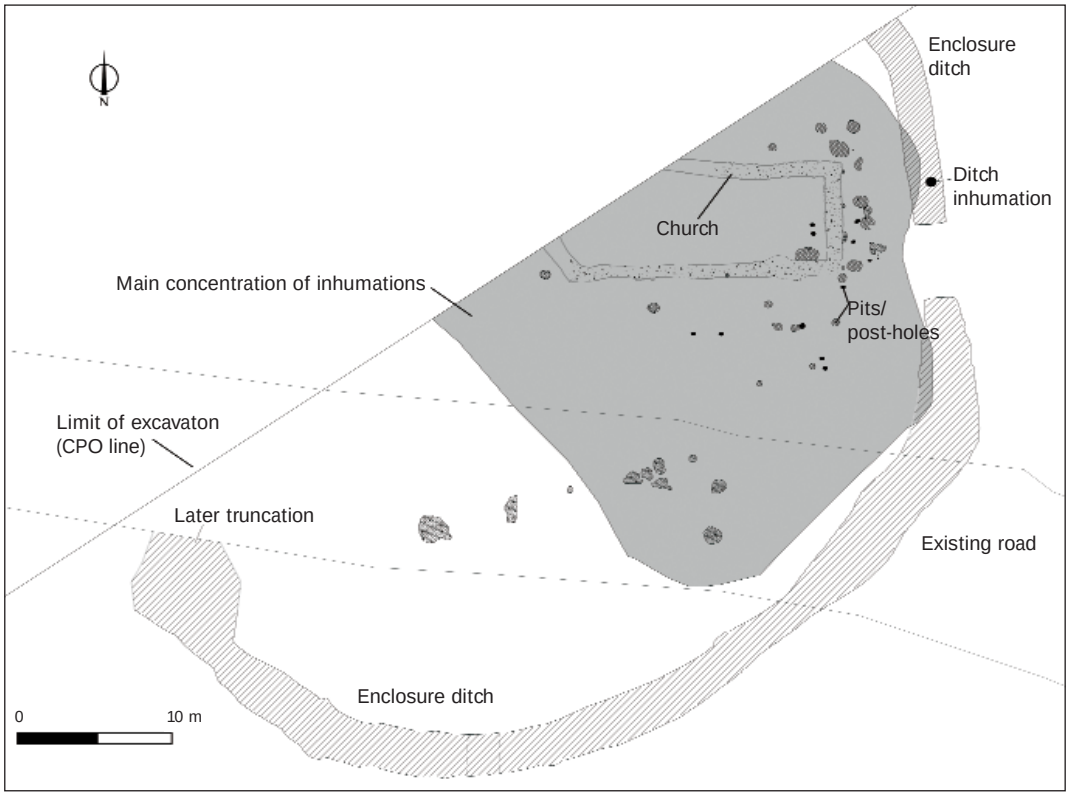
Illus. 1—Location map of Ballykilmore cemetery, Co. Westmeath (based on the Ordnance Survey Ireland map)

A medieval cemetery was discovered in Ballykilmore townland, Co. Westmeath (NGR 241842, 237245; height 113 m OD; ministerial direction no. A001-032), some 800 m south of the village of Tyrrellspass, alongside and beneath the existing Tyrrellspass–Croghan road (Illus. 1). The site was discovered by Cultural Resource Development Services Ltd during centreline testing (excavation licence no. 04E0879) during advance archaeological works for the new N6 Kinnegad to Kilbeggan dual carriageway. Excavation of the site was conducted by Valerie J Keeley Ltd on behalf of Westmeath County Council and was funded by the National Roads Authority (NRA) under the National Development Plan, 2000–2006. The site lay on a ridge of glacial gravel (an esker). (The highest point of this ridge was east of the site.) It was defined by a curvilinear ditched enclosure that straddled the west of the ridge. The ditch probably enclosed an area of c. 7700 m^2, within which the structural remains of a possible church, metalworking areas, and human burials were found (Illus. 2). This paper presents a provisional interpretation of the site, as the field records, finds and samples are currently undergoing post-excavation analysis. A full presentation of archaeological findings and osteological results will be published after completion of this work.



Illus. 2—Schematic diagram of Ballykilmore cemetery (Valerie J Keeley Ltd)

Excavation of the cemetery

The enclosure

The enclosing ditch had a V-shaped profile with a slightly rounded base. An entrance causeway, some 2 m wide, broke the ditch line at its eastern extent. The surviving width of the ditch varied between 2 m and 3.3 m; it was narrowest at the entrance terminals. The surviving ditch varied between 1.47 m and 1.61 m in depth. Circumstantial evidence supports the former existence of an internal bank with a similar circumference to the ditch. The ditch fill consisted of three broad groupings: (1) initial silting up, followed by (2) deliberate backfilling and, finally, (3) all surface expression being removed through agricultural processes. Two pits (one of which may have been used for *in situ* metalworking) and 10 later burials were cut into the ditch backfill.

Internal structures

The drystone wall foundations of a rectangular structure with an east–west alignment were found at the eastern edge of the enclosure interior. This lay some 5 m from the enclosure ditch, partly in front of the entrance causeway, and was built on gently sloping ground. The eastern wall measured 7.3 m long externally, and the southern wall was 20.71 m long. The north-west corner lay outside the area of archaeological investigation. The width of the foundations varied between 0.98 m and 1.25 m, with a surviving depth of cut of between 0.09 m and 0.37 m.

Owing to truncation of the interior of the building by burials and robbing of stone from the foundation trenches, it was not possible to identify a floor or construction surface conclusively. A general spread of irregular stones sealed the foundation trenches and most of the surrounding adult burials. However, there were occasional inhumations both on the surface of and within the stone spread. The structure enclosed multiple burials, directly truncating 12 of them, and was itself overlain by several later infant burials. Without a clear floor surface it is not possible to identify categorically which internal burials pre-/post-dated or were contemporary with the structure. The structure is provisionally interpreted as a church.

Internal features

Elsewhere in the interior of the enclosure—in particular close to the stone foundations—pits and post-holes suggested the presence of other timber-built structures, with associated domestic and iron-working activities. The pits contained evidence of both redeposited ferrous metalworking residues and domestic waste (such as butchered animal bone and charcoal). However, the intensity of truncation by later burials meant that no complete structures could be identified.

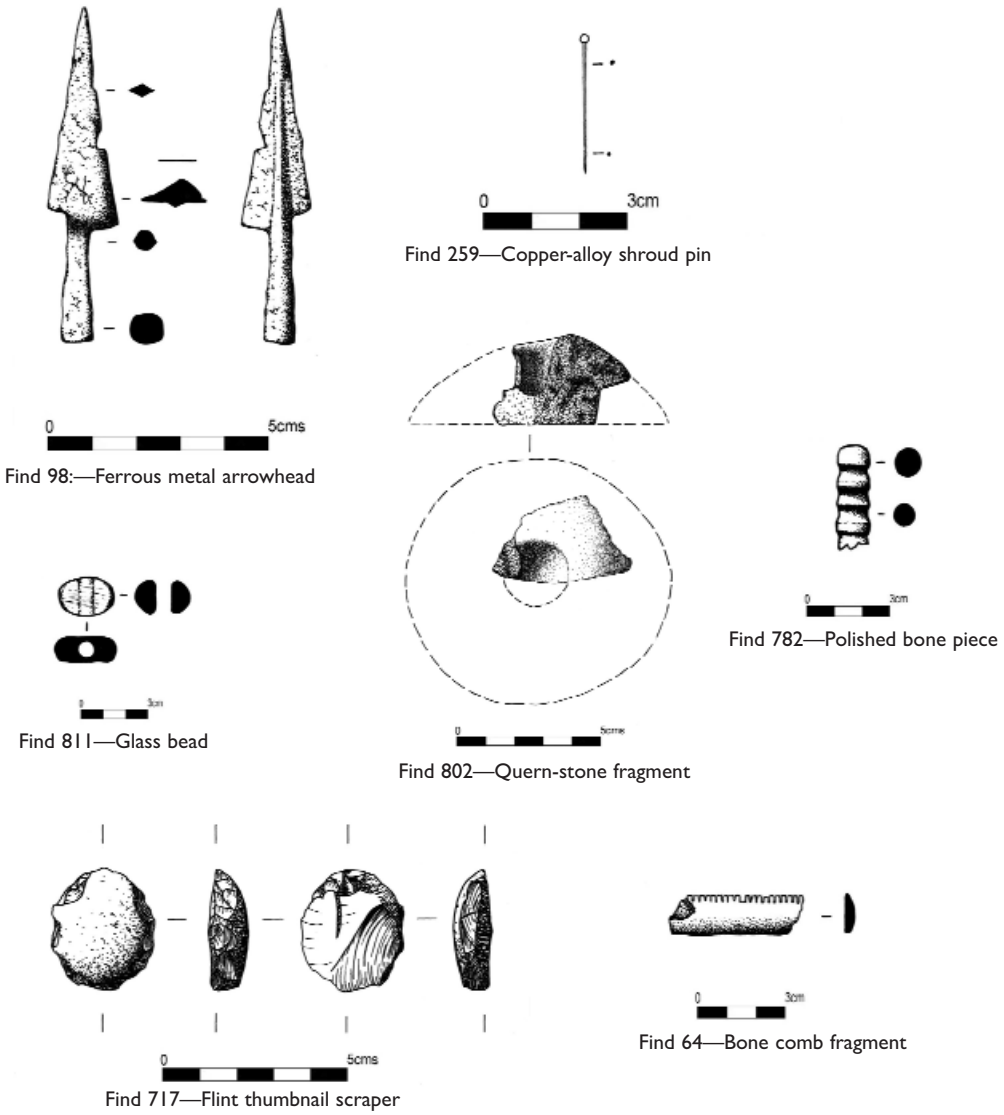
Finds

The site produced very few artefacts. The finds assemblage was dominated by coffin nails, shroud pins, and 18th- or 19th-century ceramics, together with occasional medieval and early post-medieval pottery sherds. Flint artefacts were recovered, including a single thumbnail scraper, some debitage (waste flakes), and a possible core (a stone from which flakes are struck). The site assemblage also contained cut stone (possibly from a window moulding), glass beads, a bone comb fragment, and a range of ferrous metal objects, including knife blades and an arrowhead (Illus. 3). In general, the finds are not well provenanced, coming from redeposited contexts such as grave fills or topsoil.

The cemetery population

Over 900 'burial events' could be identified within the limits of excavation (Table 1), varying from individual graves (c. 817) to discrete clusters of reburied bone (c. 85), together with a large quantity of disarticulated bone, including butchered faunal remains. Further burials remain preserved *in situ* outside the northern limit of the roadtake. The population of the Ballykilmore cemetery would have been significantly greater than the number of inhumations excavated, perhaps in the order of 1,500 individuals. Of the 800 or so intact or surviving inhumations, a provisional minimum of three burial phases was recognised:

1. Phase 1 (Illus. 4a) comprised burials that were predominantly east–west in alignment. These were mainly unlined graves with frequent use of stone head supports and no grave goods. Many of these were flexed (knees drawn up toward the chest and the back straight). This first phase may be contemporary with the cutting of the enclosure ditch and almost certainly pre-dates the foundation of the stone church.
2. Phase 2 (Illus. 4b) comprised burials that were mainly east–west inhumations; many of these were directly aligned with the stone church. In the main they were extended, supine inhumations (resting on the back with the face upward), often multiple. Some



Illus. 3—A selection of finds from Ballykilmore cemetery (Valerie J Keeley Ltd)

individuals were buried within coffins or in loosely stone-lined graves with the use of stone head supports (and very occasionally using skulls from other burials as supports).

3. Phase 3 (Illus. 4c) represents the informal use of the burial ground as a *cillín*, or unconsecrated burial ground. The inhumations were predominantly those of neonates (babies from birth to four weeks) and infants, with wide variation in alignment, body position and burial depth. Some of the infants were buried in wooden coffins, though most were uncoffined or wrapped in shrouds fixed at the head with copper-alloy pins.

Analysis of burial orientations suggests that more than one church may have existed on the site and that several successive structures were built, culminating in the stone building described here. The vast majority of Phase 1 and 2 burials were orientated around 270°

Illus. 4—Typical images of the three phases of use of the cemetery: (a) Phase 1, flexed child inhumation; (b) Phase 2, multiple burial cluster; (c) Phase 3, cillín *burial with shroud pins (arrowed)* (Valerie J Keeley Ltd)

Table 1—Quantification of bone clusters and inhumations by provisional age group

Age group	Bone cluster	Inhumation	Total
Perinate/neonate	7	148	155
Infant/child	18	296	314
Juvenile	11	95	106
Adult	19	276	295
Unassigned	30	2	32
Total	85	817	902

(east–west), with the majority clustered around the alignment of the church. However, sub-clusters were noted at 240° and 255° (WSW–ENE), which may have been aligned on earlier wooden buildings, although convincing evidence for this did not survive.

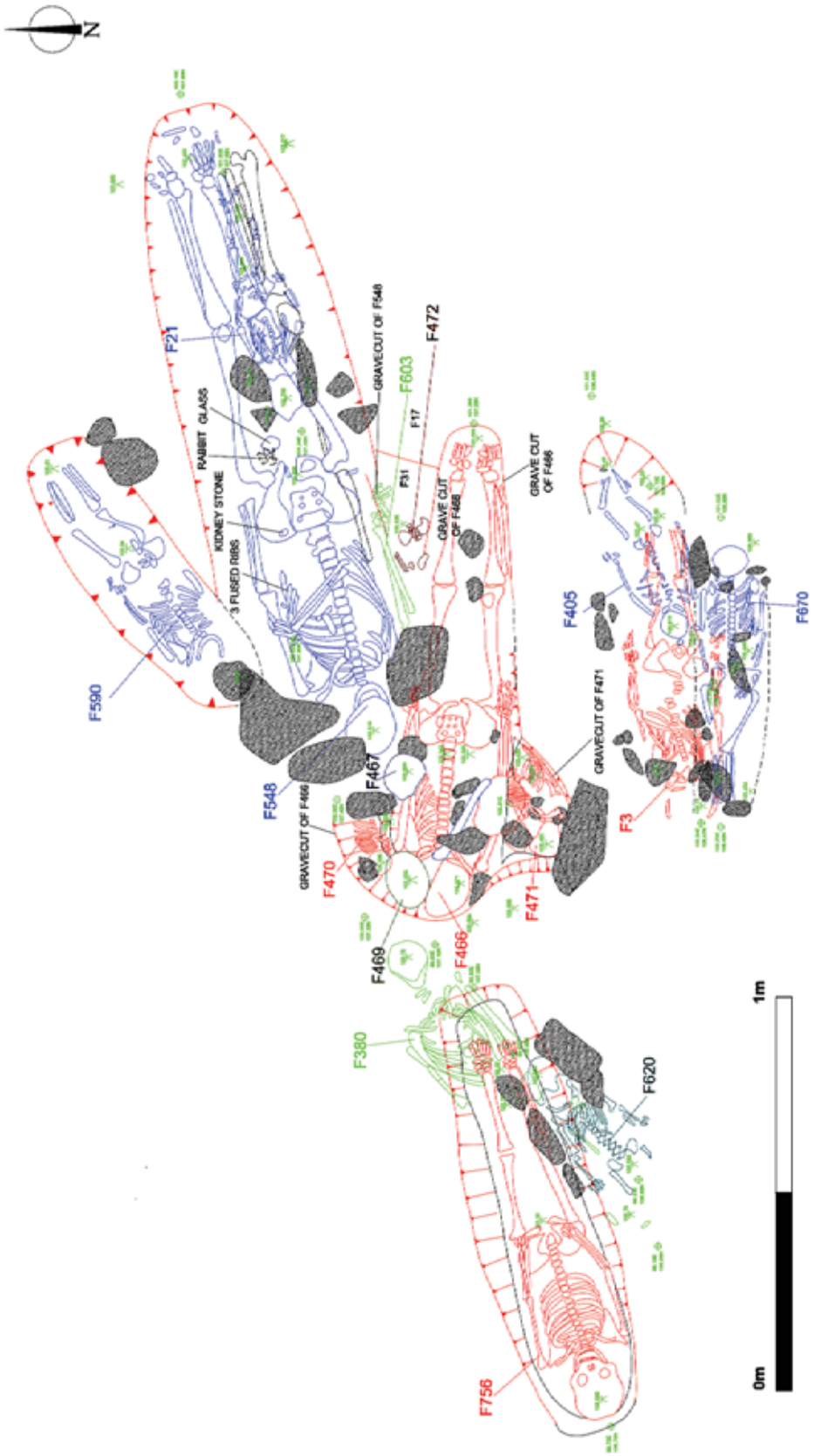
The reconstruction of burial events

The most common archaeological finds encountered at Ballykilmore were human skeletal remains. It may seem strange to write of human bones as archaeological 'finds', but the act of burial is a cultural one—as the dead do not bury themselves—and is often imbued with ritual and symbolism that the archaeologist attempts to understand in the same way as other aspects of material culture (Parker Pearson 1999, 197). Traditionally, the osteoarchaeologist was recruited for post-excavation analysis and would rarely be involved in the excavation process or interpretation of the archaeological sequence. Today it is recognised that much information is lost if the bone specialist is not directly involved in the recovery process. Rather than simply reporting on the biology of the bone assemblage after the skeletons have been lifted, the specialist can directly influence interpretation of archaeological deposits on-site (Saul & Saul 2002). With this in mind, we here discuss how the osteoarchaeologist (Randolph-Quinney) and archaeologist (Channing) working together can bring additional insights to our study of past behaviour.

Osteoarchaeology is loosely defined as the specialised study of human behaviour through skeletal remains. These are not simply 'dry bone' but represent the end product of a complex series of interactions, some genetic, some environmental, that record bio-cultural information about life history. As such, they tend to inform about the life of an individual rather than the manner of their death. Osteological analysis can provide us with information about the biological sex of an individual, their age at death, how tall and well built they were, what diseases they may have suffered from, their ancestry and the geographical region of their upbringing, and very rarely, the manner or cause of their death. (For an excellent example of skeletal analysis in practice as part of NRA road projects see Fibiger 2005.)

Archaeology is often compared to detective work, with an excavation and a crime scene being seen as similar in many ways. At each, investigators attempt to reconstruct and interpret a past event through the preservation, recovery and interpretation of physical evidence, a major difference being the time-scale of the events and the delay since they occurred. In both forms of investigation it is now realised that understanding the processes of decay, decomposition, and skeletonisation of human remains can be a powerful tool in our interpretation of past events; this investigation is generally referred to as taphonomy. Taphonomy was first applied to palaeontological sites, the term being derived from *taphos* (burial), and *nomos* (law). Subsequently, it has been applied to a wide range of studies in archaeology and forensics and deals with patterns of bias, damage, dispersal and/or accumulation of bones or other clastic components (transportable elements such as stone tool debitage) in the soil in an attempt to infer their depositional history in greater detail. The use of such data has shed significant light on funerary behaviour and treatment of the dead at Ballykilmore.

Of particular interest is evidence for primary versus secondary deposition of human remains. Primary deposition concerns the initial location in which the body is placed; the recognition of a primary context indicates an undisturbed context and one that records a



Illus. 5—Plan of the Phase 2 complex burial cluster (Valerie J Keeley Ltd)

Illus. 6—(a) Adult female burial (left) cut by later adult male inhumation; (b) the female burial after excavation of the male burial (Valerie J Keeley Ltd)

high level of contextual information. Secondary deposition occurs when remains are removed from the site of initial deposition and redeposited elsewhere; contextual information relating to the original depositional environment is usually lost, and the remains tend to be out of anatomical position and invariably winnowed with respect to smaller skeletal elements such as hand and foot bones. In general, there was intense competition for burial space at the Ballykilmore site. The area used for interments seems to have been restricted (Illus. 2), either by social proscription or by a physical boundary. This limitation forced the reuse of existing burial plots, with the effect that earlier, primary burials were disturbed or truncated by later ones. This is clearly shown by Illus. 5, in which 14 sequential burials were intercut and commingled within an area of just under 5 m^2. Such intensity of ground use was not uncommon across the site.

The deposition of secondary contexts seems to have been largely expedient. Later burials cut through earlier ones, with some or all of the disturbed material being placed back into the grave fill of the truncating burial. This is demonstrated in Illustration 6, where the primary burial of a young adult female (left) was truncated by the intrusion of a young

Illus. 7—Burial showing articulated neck vertebrae in situ (Valerie J Keeley Ltd)

adult male (right). After excavation of the later burial, the damage to the female skeleton can clearly be seen: the majority of her left side has been truncated and removed. The disturbed left-side humerus, radius, femur and fibula of the woman were placed in their approximate anatomical position within the grave of the man, with the remaining truncated parts (primarily bones of the hands and feet) dispersed randomly through the grave fill.

Analysis of the pattern of damage to the young woman's remains indicates that the individual was most likely fully skeletonised when the truncation took place and had therefore been interred for a considerable time before disturbance. This is indicated by the nature of spade damage to the remaining *in situ* skeletal parts. A small portion of the medial border of the left shoulder blade and the vertebral ends of the left ribs remained undisturbed within the grave fill. These had been cleanly cut with transverse fractures, indicating impact to dry bone, the bone subsequently remaining in its anatomical position. If truncation had occurred when the individual was fleshed, the resulting spatial distribution would have been different. In the latter case, the presence of soft tissue around bone creates a void-space as decomposition proceeds; the bones within remain in an unstable position until decay has finished and the surrounding void is filled with soil. If truncation had occurred while the bones were unsupported by soil then a degree of disarticulation and dispersal would be evident in the remaining tissues as a consequence of spade impact.

A variant on the theme of secondary deposition, this time before full skeletonisation, was recorded in another burial, where the disarticulated and semi-articulated remains of at least three individuals were recovered. Of note was a fragmented adult male skull under which lay five articulated cervical (neck) vertebrae arranged vertically (Illus. 7). (In general, the neck vertebrae below the second cervical element tend to remain articulated for a longer period than other parts of the skeleton, due to strong ligament attachments and complex interlocking surfaces, whereas the first and second cervical vertebrae, and the

Illus. 8—Perinatal burial deposited onto legs of earlier, adult inhumation (Valerie J Keeley Ltd)

hands and arms tend to be the first areas to undergo disarticulation (Roksandic 2002).) These directly overlay an articulated left elbow and wrist joint, probably derived from the same individual. The articulated nature of these anatomical parts suggests that they were derived from a primary deposit while still bearing flesh, muscle or connective tissue and were probably disinterred within the first year or two of burial (Galloway 1997; Rodriguez 1997). This highlights the competition for burial space that took place, with the removal of body parts from recently disturbed earth during the process of digging fresh graves. It is possible that such competition may have been brought about during times of 'plague or pestilence' when local death rates may have soared, prompting rapid reuse of the burial ground.

The Ballykilmore grave-diggers sometimes respected the position of an underlying primary burial when cutting later graves, as shown in Illustration 8, where, in attempting to cut a grave for a perinatal (newborn) burial, they encountered the legs of an earlier, adult inhumation. The spade marks of the grave-digger are clearly evidenced just above the knee joints of the adult; the digger obviously decided to cut no deeper into the earlier burial and deposited the infant remains directly onto the skeletonised legs of the adult.

Finally, we have evidence for casual disposal of the dead. In this example a well-preserved adult burial was discovered within the upper layers of the enclosure ditch (Illus. 9a), with no grave cut discernible. The inhumation was orientated roughly east–west, with the head to the west. The remains were those of a young adult female of relatively short

Illus. 9—(a) Young adult female deposited in the upper fill of the ditch; (b) foetal bone cluster within the maternal pelvis; (c) articulated foetal remains in situ *outside and below the maternal pelvis* (Valerie J Keeley Ltd)

stature (1.53 m). The body was deposited in an extended supine position, with the upper body and torso at a higher level than the lower body. The pitch and inclination of the inhumation generally reflected the profile of the surrounding ditch at the same level. The disposition of the body was irregular. Although the burial was supine and extended, the right arm was highly flexed, lying over and above the skull, with the metacarpal (palm) bones preserving a flexed position; the right phalanges (finger bones) were slightly dispersed but generally reflected the curled aspect of the hand. The left arm was lightly flexed and splayed away from the torso; the bones of the left hand were disarticulated and dispersed, being recovered at a lower level adjacent to the left hip. The placement of the body is consistent with the dumping of the corpse into the silted up enclosure ditch without a formal grave being dug. From a taphonomic perspective, the relative lack of skeletal element dispersal (particularly the right hand), together with the condition of the remains, suggests that the body was covered with a soil mantle after being deposited into the ditch. Why was the body treated in such a casual and disrespectful way?

The answer may lie in the discovery of the partial skeleton of a foetus within the pelvic cavity of the young woman. The bones recovered comprised fragmented cranial squama (skull vault bones), parts of the pelvis, and the long bones of the legs; the leg bones were orientated with their proximal (upper) ends pointing toward the maternal head (Illus. 9b). After excavation of the foetal and adult remains, a second cluster of infant bones was found some 0.15 m to the south and just below the level of the adult pelvis. These remains were found in an extended prone position (face downward), head orientated toward the maternal pelvis, with the bones arrayed in near-anatomical position (Illus. 9c).

The spatial disposition of the clusters would at first suggest the presence of two individuals, with the lower limbs of the foetus within the maternal pelvis pointing towards the mother's head, and the upper limbs, torso and skull of a second infant (also pointing in the same direction) fully articulated outside the pelvis. However, analysis of the two bone groups indicates that there was no replication of anatomical parts between the sets of remains, and conjoins were possible between broken cranial squama of the foetus found within the adult pelvis and the skull of the infant found outside it. This indicates that the two assemblages comprised parts of the same individual, which were determined to have been between 35 weeks *intra uterine* (in the womb) and full term at death. The spatial disjunction between the two groups can be explained through decomposition processes and post-mortem changes in the soft tissues of the mother (Clark et al. 1997; Gill-King 1997). In this instance, portions of the infant were left inside the mother, in addition to the articulated remains found outside the pelvis.

This highlights one of the problems facing archaeologists when attempting to determine whether a mother and infant died in childbirth. The presence of foetal bones within the birth canal, irrespective of their spatial orientation, does not unequivocally indicate that death occurred during the birth process, given that foetal tissue can migrate towards the low point of the pelvis or the outlet, as appears to have been the case here. Owing to these taphonomic considerations we cannot with certainty say whether the mother and child died during birthing, but we can say that the mother was heavily pregnant at the time of her death.

The motivation behind the dumping of her body may relate to a number of social factors on which we can only speculate. Was her rough and ready post-mortem treatment a result of the fact that she died in or close to childbirth, due to the paternity of her child, because she was diseased and feared contagious, or because of some other segregating factor relating to her social standing or physical appearance? Although no evidence of infectious disease was noted on her skeleton, many pathogens such as influenza, typhus and cholera do not leave skeletal lesions, while others such as tuberculosis, syphilis and leprosy may manifest themselves skeletally only in chronic cases. She did, however, display pronounced shape abnormality of the skull, with the vault very long and low, with the formation of multiple bony platelets between the major bones making up the back of the skull (Illus. 10). This is consistent with craniostenosis, a congenital abnormality of unspecific cause whereby cranial vault bones fuse together at a premature age (usually <7 years), leading to distortion along the trajectory of continuing cranial development.

It is likely that the burial dates from the final, *cillín* phase of the cemetery, and the act highlights the fact that unconsecrated burial grounds were not used solely for stillborn or unbaptised infants. Such sites were also used for adult burials of individuals whose manner of death might be considered 'abnormal' or socially unacceptable (see Nolan, this volume). This included suicides, murder victims, drowning victims, persons of unknown religion and women who died in childbirth. The last category may have been the reason behind the disrespectful treatment of this young woman, although it is worth noting that there are several other cases at Ballykilmore of burials with full-term infants in similar pelvic positions. These individuals were buried conventionally within the consecrated zone of the burial ground, although, given the taphonomic issues surrounding such burials, we cannot be certain in these instances that the cause of death was in any way birth related.

Illus. 10—Side view of the skull of the female ditch burial, showing long and low profile and the formation of multiple bony platelets between the major bones comprising the back of the skull (Valerie J Keeley Ltd)

Conclusions

The Ballykilmore cemetery highlights the seemingly informal use of burial space and disrespectful treatment of the dead during the medieval period. (Radiocarbon dates are awaited at the time of writing but should confirm the broadly medieval date of the burials.) This runs counter to the modern preconception of what a Christian burial ground should look like, with formal, well-tended graves and an air of solemnity. In context, Ballykilmore fits very well with what archaeologists and historians have come to understand of pre-modern treatment of the dead and social use of burial space.

In medieval Europe the realities of illness and death were an everyday part of life. Adult life expectancy was considerably less than today, and infant mortality was enormous. During times of war, famine and plague, death was ubiquitous. The dead were an accepted part of the living community, and, as Leigh Fry (1999, 47) has pointed out, 'in a time when houses were tiny and crowded and streets were narrow, muddy and filthy, the cemetery served as the town's public space. The cemetery—rather than being removed from the daily life of the living community—was at its centre.' Rather than being solemn, segregated places, medieval Irish cemeteries displayed a closeness between the living and dead almost unknown today, being used for fairs and markets, as locations to make contracts and swear oaths, as places of shelter, and to graze cattle.

A strong tradition of respect for noble and elite graves and tombs existed, but the general state of non-elite burial grounds seems to have been poor, although it must be noted that, however badly the burial environment was maintained, compassion for the individual dead at Ballykilmore was obviously still important. Our analyses point to the repeated use of single graves, with later generations of burials successively interred within the same cut, possibly indicating familial ties. Many of the graves clearly show the time and effort invested in their construction, with great care being taken in the placement of the bodies within, whether coffin-contained, shroud-wrapped or unenclosed. In the vast majority of cases, bodies were not simply dumped into graves, or left for the attentions of the elements and scavengers, but were treated with respect and deference.

Acknowledgements

We would like to thank the Ballykilmore excavation crew and support staff of Valerie J Keeley Ltd, Westmeath County Council archaeologists Rónán Swan (project archaeologist) and Orlaith Egan (assistant project archaeologist) for their help during the excavation, Sinéad Doyle for preparation of the line drawings, Dr Tim Young for advice on site archaeometallurgy, and Jennifer Randolph-Quinney for her comments on an earlier draft of this paper.