

Hermisgarth, Sanday: the investigation of pyre settings and Pictish cist burials in Orkney

Jane M Downes* with Christopher D Morris†
with contributions by S Carter, A Challands, S King
& D Home Lorimer

ABSTRACT

Cist burials and stone pyre settings at Hermisgarth Farm, Sanday, were exposed by coastal erosion and subsequently excavated in 1993. Two of the cist burials were situated under a cairn; one of these contained an inhumation which was radiocarbon-dated to the later Roman Iron Age/early Pictish period. Another cairn and pyre setting were discovered by further investigations in 1997, prompted by continuing erosion. Geophysical survey indicates that the burial complex may be extensive. All phases of the project were funded by Historic Scotland.

INTRODUCTION

Archaeological remains were exposed in a low, west-facing cliff face at North Bay, by Hermisgarth Farm, Sanday (NGR: HY 6672 4288). In height, the cliff does not exceed 5 m OD, and is typical of Sanday's low-lying coastline. The underlying geology consists of blocks of the Rousay flags series, which extend beyond the shoreline at the foot of the cliff as a broad wave-cut platform; above the flags the drift is wind-blown sand (Lamb 1980). Two phases of fieldwork were undertaken, in 1993 and again in 1997.

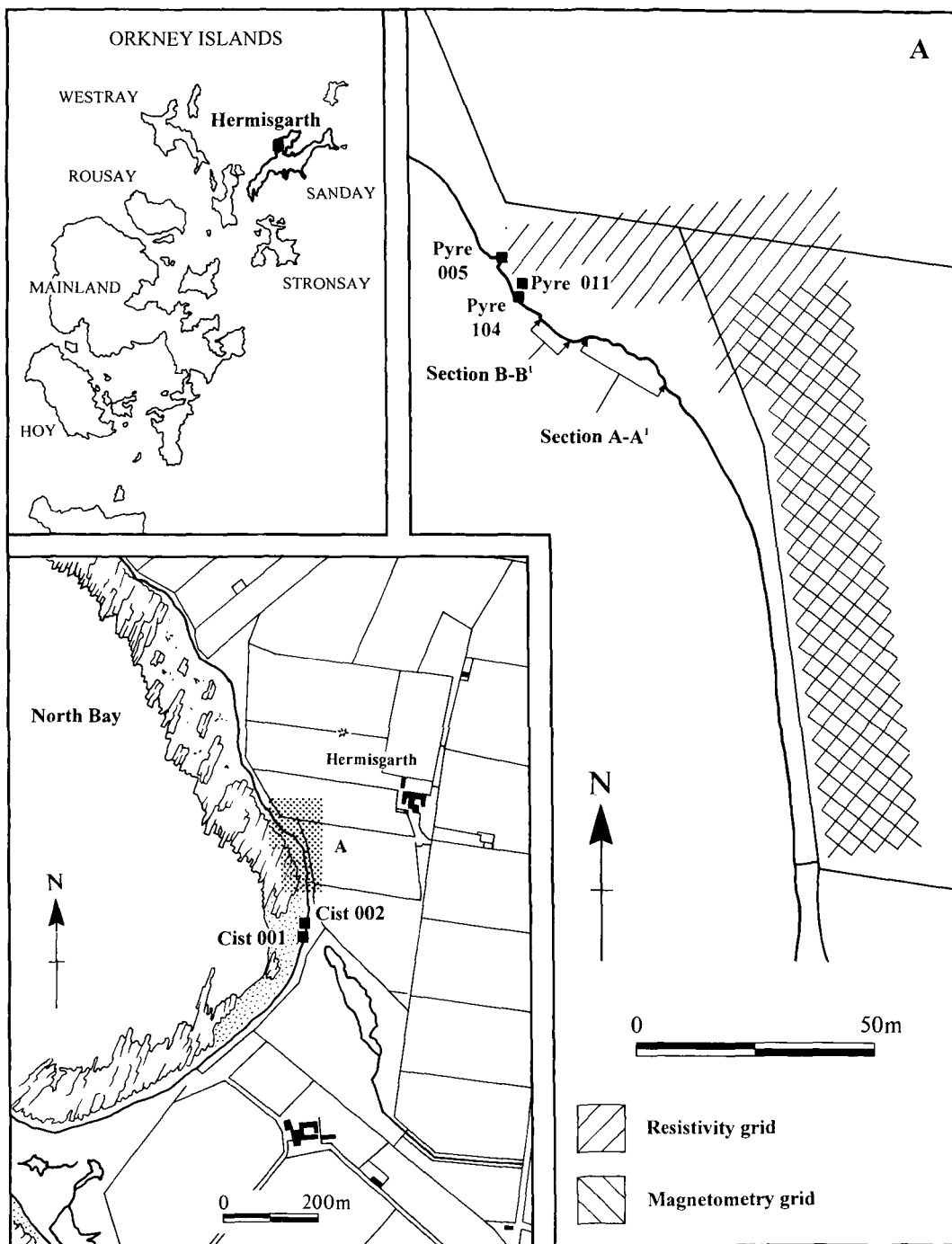
The remains exposed in 1993 comprised cists, two of which were below a cairn, and two cremation sites. These were discovered by Freddie Tulloch of Burness when human remains became visible through coastal erosion, culminating in the storms of winter/spring 1993. Following this discovery, Raymond Lamb and Julie Gibson carried out preliminary investigations of the features. Historic Scotland funded subsequent excavations and post-excavation analyses by Glasgow University Archaeological Research Division (GUARD) in September 1993. Further investigations undertaken by ARCUS (University of Sheffield) in 1997 are also described by the present report.

EXCAVATION RESULTS

The remains of three, or possibly four, cists were excavated (features 001, 002, 003 & 004). Features 001 and 002 were located only 11 m apart, but the remaining features were dispersed along a wide sector of the shoreline (illus 1).

* ARCUS, Department of Archaeology & Prehistory, University of Sheffield, Sheffield S1 4DT

† Department of Archaeology, Gregory Building, University of Glasgow, Glasgow G12 8QQ



ILLUS 1 Site location plan; the excavated features were widely dispersed. (Based on the Ordnance Survey map © Crown Copyright)

FEATURE 001

This feature consisted of a single upright stone amongst the large shingle of a storm beach. The orthostat was firmly bedded into the ground with packing stones, but no other orthostats or features were located. There is no conclusive evidence as to whether this stone was the single remaining stone of a cist, or whether it was a lone standing stone or even a modern fence strainer.

CIST 002

The seaward side of this cist had been completely removed, and the inner part scoured by the action of the sea. The remaining three sides stood proud of the beach. The remains of the cist measured 0.95 m by 0.65 m on an east/west axis, with sides up to 0.55 m in height. It was constructed of thin slabs inserted into earth-cut slots, and held fast by many packing stones, placed mainly to the exterior. The landward side of the cist comprised two slabs, whereas the remains of the shorter sides were made with one slab each. Within the cist, a sherd of pottery, a piece of burnt bone and some fragments of unburnt bone were recovered from a matrix of sand and shingle.

Human bone in Cist 002

Daphne Home Lorimer

The bones from this cist are human. They appear to derive from the same individual, a juvenile of about three to four years of age. The body seems to have been partly cremated, during which process only the bones from the head can be seen to have been burnt.

The fragment of burnt bone was a piece of skull, possibly occipital bone from the region of the lambda, with small parts of the right and left lamboid sutures; this was possibly of juvenile age range. The unburnt elements consisted of a fragment of centrum of a possibly juvenile cervical vertebrae, and a fragment of centrum of possibly juvenile sacral segment, as well one small fragment of possible tibial shaft, one of possible proximal end of fibula, and two small fragments of long bone shaft.

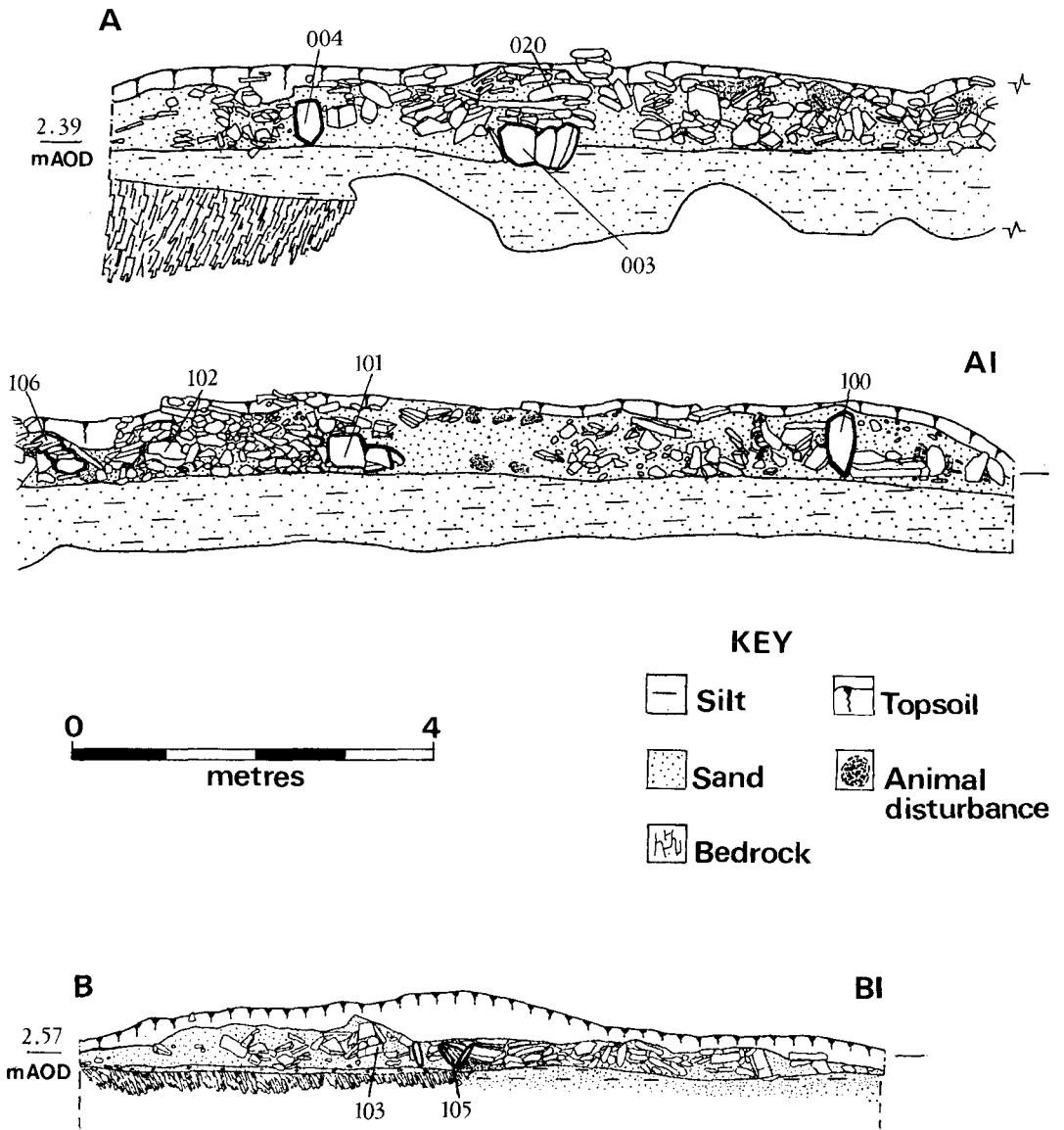
Pottery in Cist 002

Jane Downes

The pottery fragment is a small (longest axis 24 mm), undecorated, featureless body sherd from a thin-walled (6 mm), hand-made coarse vessel. The temper added to the clay comprised medium-sized pieces of stone. It is undiagnostic, but could date from the later prehistoric period.

CIST 003

Both Cists 003 and 004 lay beneath Cairn 020 and were exposed in the cliff face by coastal erosion (illus 2). Cist 003 was constructed by the insertion of large slabs within the splayed sides of a pit which was dug into a relict dune. The cist consisted of large flat slabs, 0.45 m high, surmounted by two or three courses of smaller stones which supported the cist lid. Thus, the interior of the cist had an overall height of 0.64 m. The surviving part of the cist was filled with loose sand, up to 0.35 m deep. This covered the leg bones of an extended inhumation; the feet lay at the eastern or landward end of the cist.



ILLUS 2 Sections exposed in the eroding cliff-face; facing south-west (see locations in illus 1)

Lying beneath the leg bones was a rectangular ridge of cemented sand, possibly representing an object 0.5 m long, embedded within the compact sand which formed the floor of the cist. The long axis of this object was parallel to the leg bones. It broke upon excavation, but a detailed microscopic examination was undertaken of the fractured sections (see Carter, below).

A small flint flake was found within the silt underlying the cist. Due to its position, this artefact is best interpreted as residual material, unrelated to the cist.

Human bone in Cist 003

Daphne Home Lorimer

The bones from the cist are human and are all compatible with being from a single skeleton. They were gracile and appeared to be those of an adult female of unknown age.

The surviving fragments come from the lower extremities and include the shaft of a right femur, the shaft of a right tibia and three small fragments of right condyle, the shaft of a left tibia, the shafts of right and left fibulae, fragments of tarsal and metatarsals of both sides, and phalanges of unknown side and number.

The right femur was flattened from front to back, and a flange on the lateral surface of the left femur suggested that it too would have been flattened. The right femur was slightly bowed antero-posteriorly, compensation being made by some pilasterism, the *linea aspera* being very pronounced. This was not noticeable on the left side. Pilasterism is thought to suggest stress from the maintenance of the upright posture (Oettking 1930). The tarsal bones were very damaged, but a medial talar facet was noted on the right talus which, in the absence of the proximal ends of the tibia, may be evidence of acute dorsiflexion of the foot, possibly due to squatting.

Radiocarbon dates from Cist 003

Two radiocarbon dates were obtained by the Scottish Universities Research and Reactor Centre through Dr Gordon T Cook, from the right and left femurs of the inhumation. The results were as follows.

Lab code	Yrs BP	Calibrated (2-sigma)
GU-4232	1480 ± 80	AD 410–670
GU-4233	1580 ± 100	AD 240–650

The radiocarbon dates are quoted in conventional years BP (before AD 1950). The errors are expressed at the one-sigma level of confidence. The calibrated age ranges are determined from the University of Washington Quaternary Isotope Laboratory, Radiocarbon Dating Program, 1987. The 20-year atmospheric calibrations curve is used throughout and the calendar age ranges, obtained from the intercepts (Method A), are expressed at the two-sigma level of confidence.

Cemented sand in Cist 003

Stephen Carter

Microscopic examination suggests that the cemented sand from the base of Cist 003 was the internal cast of a totally decomposed organic artefact. The cast is visible because of carbonate cementation which occurred in the basal portion of a larger object. Thus, the nature and composition of this artefact remains unknown, and it is possible that it was much larger than the cast reveals. It is suggested, however, that the artefact represents the remains of a fold of cloth.

Examination revealed three principal layers of sediment: Layer 1 formed the object identified during excavation; Layer 2 was a less cemented sand layer; Layer 3 was the natural sediment underlying the cist. The lower boundary of Layer 1 was abrupt, with a clearly curving shape. This ranged from a semicircular profile, 42 mm wide and 12 mm deep, to a much more open, shallow profile 60 mm wide, forming a discontinuous planar void. Both Layers 1 and 2 are sands, the texture of Layer 1 being significantly coarser than Layer 2. Layer 1 has a much higher porosity than layer 2, and has thick, continuous carbonate cement on all grains. This is clearly stained brown, particularly close to the interface with Layer 2. In Layer 2 the

cementation is thin and discontinuous with no apparent staining. The highly porous structure of Layer 1 is maintained only by a cement that could not have been present during deposition of the sand. This indicates that voids, other than packing voids, must have been filled with another material. This is most likely to have been organic matter. The discontinuous planar void at the base of Layer 1 is suggestive perhaps of a fabric or other thin sheet.

CIST 004

Cist 004 was affected badly by marine erosion, to the extent that only one orthostat survived (illus 2). This had evidently formed the end-stone of a cist, as fragments of human skull were recovered immediately adjacent to it.

Human bone from Cist 004

Daphne Home Lorimer

These fragments showed the inhumation within the cist to have been that of an adult female, who was approximately over 40 years of age.

The bone comprised the partial cranium of a skull. The female sex was shown by the mastoid processes and the external occipital protuberance — which were small — and the lightly marked nuchal lines, while the posterior root of the external auditory process did not extend over the external auditory meatus. In the absence of teeth, only approximate age could be ascertained: the surface of the skull was granular and rough and the grooves for the middle meningeal artery were deep and a possible depression for a Pacchionian body was seen by the sagittal suture, all of which indicated an age group of over 40 at the time of death (Krogman & Iscan 1986, 117–29).

CAIRN 020

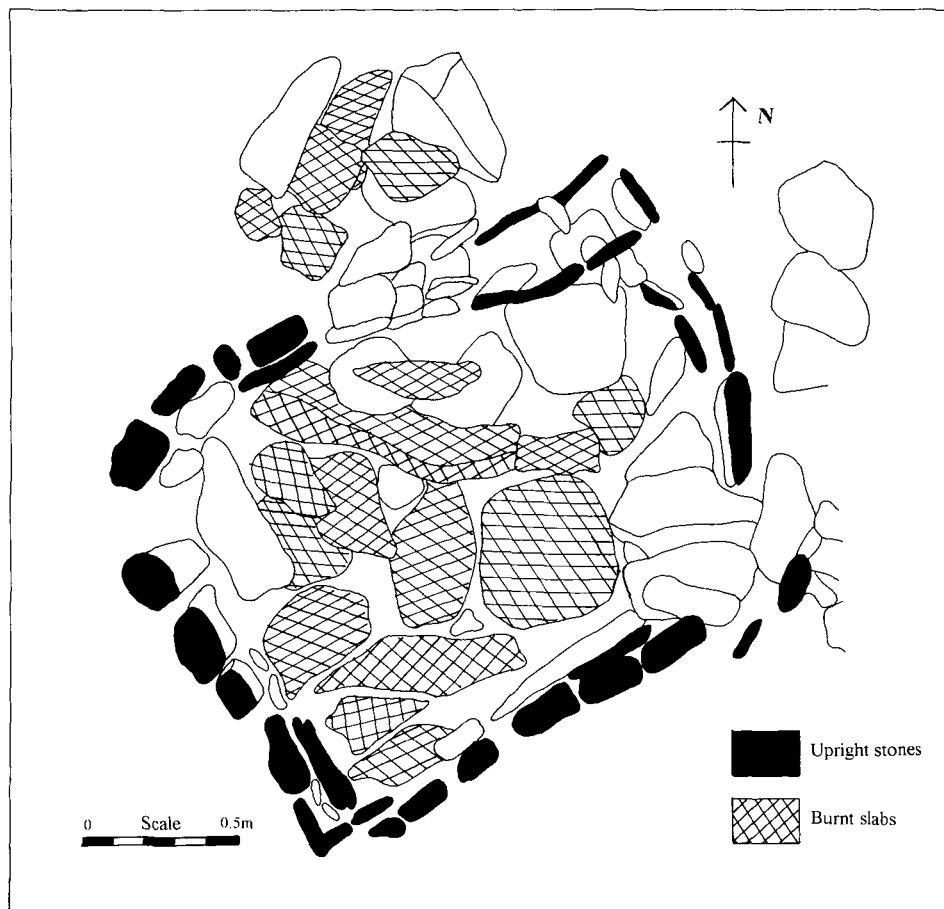
Cairn 020 overlay Cists 003 and 004. It was 8.0 m long in section and up to 0.8 m high (illus 2), and constructed from medium and large stones derived from the beach. It was difficult to determine the sequence of construction of the cists during excavation. From the exposed section, it could be suggested that each cist was originally covered by its own small cairn, with the smaller amount of stones covering Cist 004 possibly underlying and pre-dating those which covered Cist 003. However, a degree of uncertainty remains about this, as the sandy matrix of the cairn was of a loose consistency, and it is possible there had been movement of the stones during the storms.

PYRE SETTINGS: STRUCTURES 005 & 011

Narrow, upright, rounded stones (probably derived from the beach), were observed eroding from the cliff face at c 10 m and 22 m north-west of Cairn 020. These proved to be the orthostatic setting of orthostats or 'stone posts', cut into the compacted silty subsoil, but subsequently submerged in wind-blown sand. (Thus, there was no stratigraphic distinction between these features and Cists 003 and 004.) It appears that these structures were pyre settings, constructed for the purpose of cremating human remains (see King, below).

Structure 005

This had internal dimensions of 1.80 m by 1.30 m and stood 0.45 m above the surrounding early ground surface (illus 3). It was aligned SW/NE. The structure was built by the insertion of stone posts into a

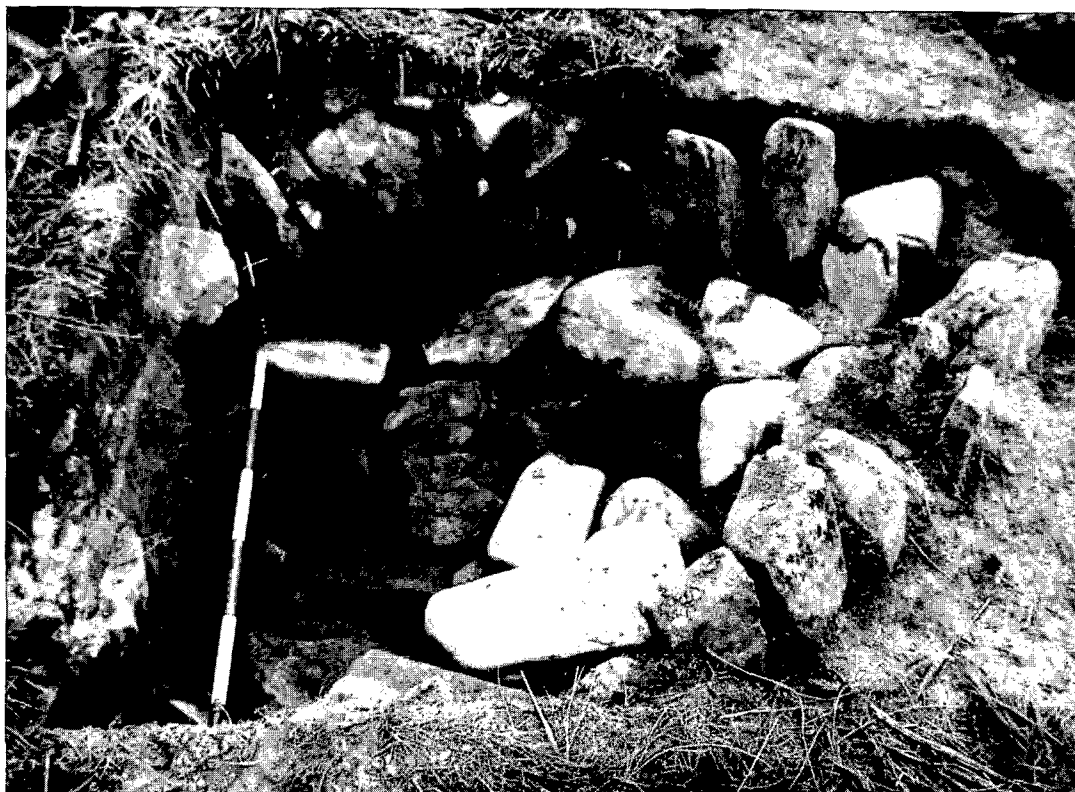


ILLUS 3 Structure 005: a stone pyre setting

bedding slot which was cut into the underlying compact silt, and lined with small stone slabs. The ends of the posts were made more secure within the slot by the addition of further, small, packing stones. The interior was paved with slabs of stone which had been heavily fired. In total there were three layers of this paving, and upon all three were fragments of bone and pieces of the vitreous fuel ash slag known as 'cramp'. The third layer of paving and burnt bone was covered by a layer of clean small rounded gravel; this appeared to have been deliberately placed as there was no observable humic element, and particles of this size are unlikely to have been transported by the wind.

Structure 011

This was initially visible as a few earth-fast slabs showing through the turf on the cliff edge. Upon excavation, it was discovered that upright stone posts marked an area which was roughly rectangular in plan, and aligned in the same SW/NE direction as Structure 005 (illus 4). Although the excavated area did not reveal the entire structure, it would have measured at least 1.8 m by 1.6 m. It contained two distinct layers of burnt stone slabs, and in both cases large lumps of 'cramp' adhered to the fire-reddened stones. The inner faces of the stone posts were also fire-reddened. Again, burnt bone was recovered from the upper and lower pavings, as well as fuel-ash slag or 'cramp'.



ILLUS 4 Structure 011; viewed from north

Burnt bone from Structures 005 & 011

Sarah King

The cremated bone was analysed according to methods devised by McKinley (1989). The identifiable bones are human, although it is possible that a very small number of the remains (ie some unidentified long bone fragments) may be non-human. The remains from each structure represent at least one individual, as there are no apparent duplications of any bone. However, as in each of the structures the cremated bones derive from between different layers of burnt paving and are probably the remains of different episodes of burning, it is likely more than one individual is present in each structure. Adult individuals are represented by bone fragments from both structures: the fragments appeared large in size and permanent teeth were present (although none of the cranial sutures was fused). An adult male may be represented by fragments from the lowest layer in Structure 005 (Layer 010). Otherwise, the surviving fragments did not allow attribution of sex. No pathological conditions were observed on any of the remains.

Context	Total wt(g)	% > 10 mm	% > 5 > 10 mm	% > 2 > 5 mm	% < 2 mm
005	183.4	33.2	42.1	23.2	1.7
010	390.2	21.4	44.2	32.2	2.0
014	14.1	10.0	52.0	38.0	0
Total	587.76	25.0	44.0	30.0	2.0

A total of 573.6 g of cremated bone was collected from the two stone structures (Table 1); most of this derived from Structure 005 (Context 05 & 010), with very little bone from 011 (Context 014). Fragments from both structures were relatively small, the majority being 50–100 mm in size. The bone attached to the fuel ash slag ('cramp'), although not sieved, included all size categories.

Due to the small fragment size of the cremated bone, very few pieces could be identified to element. Cranial vault fragments and tooth roots were most positively identified. Although long bone fragments comprise a large percentage of total weights (35.4%), they were difficult to identify to element due to their small fragment size, lack of diagnostic features, longitudinal splitting and curling. The regions of the skeleton most often represented appeared to be the cranium and long bones.

Modern adult collections of cremated bone (> 2 mm) may weigh from 1001.5 g to 2422.5 g with an average of 1625.9 g (McKinley 1993). The cremated remains from Structure 005 (Contexts 005 & 010) could represent approximately 33% of one individual, or very small percentages of several individuals. The remains from structure 011 (Context 014) may represent approx. 1% of a cremated body.

The majority of the bone was calcined white. A small percentage of the bone from Structure 005 was grey or grey/white, whereas all the bone from Structure 011 was white. The white colour of the fragmented bone suggests the individual(s) may have been efficiently cremated with sufficient time, oxygen and heat need to complete the process (McKinley 1989). The small percentage of grey/white fragments appeared to consist mostly of long bone fragments. It is possible that their position within the pyre may be responsible for their uncalcined state, at the base of the pyre where the bone may be deprived of oxygen (Wells 1960), or at the edges of the pyre where the heat may be less intense.

DISCUSSION

THE CIST BURIALS AND CAIRN

Christopher D Morris

It is necessary first of all to establish the chronological parameters for the cists and cairn from Hermisgarth. In this connection, it has been stated in the past that:

From about 1000 BC until the Viking Age in Scotland, it is notoriously difficult to identify the burials of a particular people or of a particular period of time, because there was no strong tradition of placing grave goods alongside the dead. Without grave goods, or a recognizable type of grave structure, an isolated burial can be dated only by radiocarbon analysis of the surviving bones; and many burials were found and the bones subsequently lost before the development of scientific dating methods (Ritchie 1985, 189).

It is possible, in the absence of such evidence, for cist burials to be misattributed. An obvious example is that of the cemetery at Saear Howe, in Birsay Bay: this was originally thought to be pre-Viking and Early Christian, but is now seen quite clearly to be Christian Late Norse (Farrer 1862 & 1868; Hedges 1983; Morris 1989, 23–4). An isolated, but similar, cist-grave from Sandside, Graemsay, has been radiocarbon-dated to a similar period (Hedges 1978, 377). Conventional wisdom sees short-cist burial monuments (usually with cremations) as Bronze Age in date, but it is quite clear that they can occur much later than this with inhumations, at least in Shetland and Orkney, for example at St Ninian's Isle and Oxtro broch (Small *et al* 1973, 6–7; Morris 1989, 24–6). The current suggestion is that they were replaced by long cists (with extended inhumations) as the Picts became Christian (Close-Brooks 1975, 210; 1984, 96). Equally, as observed in an interim report on Hermisgarth (Downes 1994, 5), some long cists are known from the Bronze Age. Thus, it is critical that unaccompanied burials are dated scientifically to produce absolute calendrical dates.

Now that radiocarbon dates have been received for Hermisgarth, it is possible to identify a cultural context for the cists and the cairn (although it is noted that only the bones from Cist 003

have been scientifically dated). Long bones from Cist 003 yielded date ranges (two-sigma) of AD 380–600 and AD 240–650. These clearly relate to the later Roman Iron Age and early Pictish period. It would be unwise (and unnecessary) to attempt to tighten the chronological control further. In the past decade or so, similar dates have been received for other burials related to cists and cairns. Examples would be Sandwick, Unst, Shetland (Bigelow 1984), Dairy Park, Dunrobin, Sutherland (Close-Brooks 1980) and Birsay (Morris 1989, 119–27 & 287–91). Additionally, a number from the north of Scotland have been found in association, direct or indirect, with Pictish symbol stones, such as Ackergill, Dunrobin and Watenan, Caithness (Edwards 1926 & 1927; Batey 1991, 52–4; Close-Brooks 1980; Gourlay 1984), and it can now be argued that a similar association may have existed on the Brough of Birsay, Orkney (Morris 1996b, 221–4 & 252; 1996c, 18–19). It has become clear that these at least seem to provide us with a distinctive northern Pictish form of burial monument. The form is of a kerbed, low cairn overlying a mound of sand, itself over the primary inhumation in a long cist; the form may be circular or a rounded rectangle, sometimes with orthostats at the corners, if not along the sides (Ritchie 1974, 31–2; Ashmore 1980; Close-Brooks 1984; Batey 1987, 36–8, & 1991; Morris 1996a, 50–3). It is likely that there were other, simpler forms co-existing, such as the long cist on its own. This would explain a number of examples from this period, such as the cist-grave at Freswick Links, Caithness (Batey in Morris *et al* 1995, 111–14), or the phase of the cemetery excavated at Westness, Rousay, Orkney, and radiocarbon-dated to the Pictish period (Kaland 1993, 312–14). Isolated examples from Birsay also fall into this category, such as Cuttings 3 and 4, Brough Road or Buckquoy (Morris 1989, 61–5 & 287; 1996a, 53; Ritchie 1977, 183–4; 1983, 61–2; 1985, 189–90).

An interesting aspect is the fact that the radiocarbon dates for Sandwick, Birsay, and, now, Hermisgarth seem to pre-date the conventional date for the arrival of Christianity among the northern Picts (see Hughes 1971; Morris 1990, 5–6). According to J Close-Brooks, radiocarbon dates from Dunrobin ‘suggest the burial took place in the 6th, 7th or 8th century’ (1984, 102) and even that ‘the importance of the C14 dates is that they show the date of the cist burial is fully compatible with the date range generally accepted for Class I symbol stones . . . suggested by Stevenson . . . in the late 7th or the 8th centuries AD’ (1980, 332). However, the weighted average of these two dates gives a range of AD 525–725 (two-sigma; uncalibrated) (Close-Brooks 1984, 330). The dates themselves are barely compatible (1335 ± 40 BP and 1135 ± 100 BP). More recently, John Hunter has suggested that a Class I symbol stone (or perhaps a proto-symbol stone) found in his excavations at Pool, Sanday, dates from the sixth century (Hunter 1990, 185–7). It will be of considerable importance to see what radiocarbon date is returned for the structural context with which this was associated.

It seems clear that the burial tradition represented by these cists antedates the period of the advent of Christianity, whether or not the absence of grave-goods is seen as representing a move from paganism to Christianity. In this context, it is worth noting that Charles Thomas’s revised chronology for Class I symbol stones is ‘probably within the 6th and 7th centuries AD’, and that he sees them quite explicitly as ‘originally set up at or hard by Pictish graves, including low-cairn, long-cist interments’ (Thomas 1984, 184).

The form of the Hermisgarth cists and cairn fit well with the general picture of low-cairn long-cist interments, although there is not such clear evidence of a substantial sand mound or layer above the cists and below the cairn. On the other hand, marine erosion may have modified the structure and eroded or deflated its sandy matrix. The suggestion of two cairns made into one is intriguing, although it is perfectly possible to have two (or more) burials under one cairn either vertically or horizontally, as at Birsay, Newbigging, Crantit and Isbister in Orkney (Morris 1989,

291), Ackergill (Edwards 1926, nos 4 & 4; 1927, nos 9 & 10), and further afield in Islay at Cnoc Aingil (Ritchie & Ritchie 1975). Cairn 4 at Ackergill would appear to be the closest parallel to the Hermisgarth examples.

Unfortunately, there was no clear-cut stratigraphic relationship between Cists 003 and 004 (beneath Cairn 020), and Cist 002, located some distance to the south. None the less, there is a slight possibility — though this would be unusual — that the partly cremated remains in Cist 002 were contemporary with the inhumations in Cists 003 and 004. The most recent review (Alcock 1992) has emphasized the ubiquity of inhumation within the overall range of burial practices in Scotland from the third century onwards. Cremation is absent in this period and its presence on a particular site would normally indicate that this was multi-period. It is possible that the pyre sites are contemporary with Cists 003 and 004, which would indicate that cremation may have been practised after all in the early Pictish period. This must be regarded as a tentative suggestion, however, pending some more convincing evidence from this or another site.

THE STONE PYRE SETTINGS

Jane Downes & Christopher D Morris

Unfortunately, it was not possible to obtain a radiocarbon date from the deposits within the stone pyre settings. Viking Age examples of burnt bone spreads are recorded both in Britain and Scandinavia (eg Bersu & Wilson 1966, 88). However, the stratigraphic position of the pyre settings suggests that they are unlikely to have been much later than the radiocarbon-dated cist beneath Cairn 020: the stone-posts were bedded in a stone-lined slot cut into silty subsoil, and were later inundated by wind-blown sand, possibly in the same episode of sand accumulation which covered Cairn 020. Alternatively, the pyre settings might have been much earlier than the cairn and cists, as the prevalence of cremation as a funerary rite in the Bronze Age would appear to provide the most ready chronological context. However, the archaeological evidence also mitigates against this interpretation: the structures did not appear as though they had been exposed to the elements for millennia before being covered by wind-blown sand. Furthermore, although cremated human remains commonly occur on Bronze Age sites in Britain, pyre sites are rarely discovered. The interpretation of the pyre settings at Hermisgarth is problematic, therefore, as they appear most likely to be broadly contemporary with the Cairn 020 and to derive from a period when cremation is not known to have been practised.

These structures are also interesting in terms of pyre technology. An extended adult inhumation could not easily have been laid within the constricted space enclosed by the stone posts, and even less easily surrounded with fuel, with spaces remaining for air to circulate. It is possible that either the body was contracted, or only parts of the body were burned (suggesting that secondary burial rites were taking place). Alternatively, the area contained within the stones was heaped with fuel and the body laid on top. It is tempting to suggest that a wooden or lattice frame was used for this, resting on top of the stone posts, but there were no indications that wood was burnt at either structure (ie no charcoal was identified). Instead, from the fuel ash slag, it would appear that either sea weed or turves, or a combination of the two, were used as fuel.

The burnt bone in each of the structures was found between two or three layers of burnt slabs. Thus, it would seem that each of the structures was used on a number of occasions and the cremated bones picked out, either for burial elsewhere or for casting into the sea.

HERMISGARTH IN ITS ORCADIAN CONTEXT

Christopher D Morris

The radiocarbon dates for the cists and their relationship to the cairn clearly places them in the later Roman Iron Age or early Pictish period. The Picts are first named in AD 297 and, on this basis, some writers have suggested that ‘the Pictish period is taken to begin around AD 300’ (Ritchie & Ritchie 1981, 159). Others are more adventurous and suggest that, as the term was already known by that time, it is legitimate to claim that Pictish identity originated in an earlier period. Alfred Smyth (1984, 52) suggests this goes back to Caesar’s day, and the most recent work by Sally Foster (1996, 13) concludes that ‘the term Pictish might be applied to the period between AD 79, when the Romans advanced beyond the Forth-Clyde isthmus into Caledonia, and AD 842/900, when the mac Alpin dynasty came to establish itself’. On this basis, the burials from Hermisgarth can be regarded as ‘Pictish’, even in the context of the wider, two-sigma date-range (AD 240–650). According to Anna Ritchie (1994, 4) ‘Eumenius used the term *Picti* simply because it was familiar to his audience in 297, who would understand it to mean the people who lived in the far north of Britain, just as they would understand the Hibernians to be the people of Ireland’. Certainly, the Iron Age tribes of the north coalesced into the Picts, whatever their more local names during the Roman period; this process was paralleled by events on the European mainland (Mann 1974, 41). There can now be little doubt that Orkney formed part of a northern Pictish grouping, with its focus around the Moray Firth (see Henderson 1971 & 1975; Ritchie 1983 & 1985; Thomson 1987, 1–11; Morris 1990, 5–6; 1996a, 40–1). The archaeological evidence which underpins this identification is now well known and needs no rehearsal here (see Ritchie 1983; 1985).

Within Orkney, there are concentrations of Pictish material. The best known is in the area around Birsay Bay (although inevitably this reflects the intensity of archaeological investigation there: eg Morris 1996a; 1996c), but where other areas have been investigated Pictish material has also emerged. Examples include Deerness (Gelling 1984 & 1985) and the Howe (Neil 1985; Smith 1990 & 1995, 91–117), but this can also be seen by re-examination of records from some early broch excavations (Hedges 1990). It is no different in the island of Sanday. When Raymond Lamb, the former Orkney Archaeologist, issued his list, *Archaeological Sites and Monuments of Sanday and North Ronaldsay*, in 1980, few sites were specifically assigned to a Pictish milieu. Since then, however, the picture of the island’s archaeology has been transformed, mainly through the work of survey and excavation by John Hunter and Steven Dockrill (eg Hunter & Dockrill 1982), but with other contributions from environmental scientists on aspects of the tell-like accumulations of occupation material known as ‘farm mounds’ (eg Davidson *et al* 1983 & 1985).

Pool has been characterized as a major, multi-period site. It is already clear from various interim accounts that it is of fundamental importance for the understanding of settlement mechanisms on this island, including the nature of late Iron Age/Pictish settlement and the transition to the Viking period (Hunter 1990 & 1991; Hunter *et al* 1991 & 1993). It certainly provides a local cultural context for the discoveries at Hermisgarth. A nucleated settlement had developed by the seventh century, and the excavated artefacts have included a (proto-) symbol stone and an example of the distinctive Pictish ogham stones. Elsewhere on the island, a number of broch-sites have been tentatively identified, including one north-east of Pool; and a possible round-house has been identified on Lambaness, on the opposite side of the bay from Pool. Thus, the late Iron Age/Pictish period is clearly established in settlement terms; and the Hermisgarth cist burials now add the funerary dimension to this period of Sanday’s past.

FURTHER INVESTIGATION IN 1997

Further archaeological recording of the cliff face at Hermisgarth took place during August 1997 in response to ongoing erosion. The investigations combined recording of the cliff face and geophysical survey of the field above the cliff (Downes 1998). Further features, some of which are part of the burial complex and some of which may be unrelated, were recorded through both techniques.

Cists, cairns and other masonry

A large amount of masonry had become visible between 1993 and 1997. This was recorded as a low cairn (103) which had not been apparent previously, and further masonry surrounding and to the south of cairn 020 (illus 2).

Cairn 103 was exposed as a low heap of medium-sized slabs and blocks of stone. The cairn measured 8.4 m wide and 0.6 m high in the cliff section. It is possible that slabs leaning at an angle in the central part of the cairn section (illus 2, 105) form part of a cist; this area of the cairn was substantially disturbed by rabbits and no human bone was recovered during the recording exercise.

Cairn 020 appeared as a discrete structure overlying Cists 003 and 004 in 1993. The structure was similar in size to Cairn 103, measuring 8 m wide and 0.6 m high. The appearance of this structure had not altered substantially since 1993 except that the remains of Cist 004 had disappeared. However the southern side of the cairn was found to merge with other stonework (illus 2, 106/102). This may be part of the same cairn complex, or the remains of buildings, or could represent a mixture of the two.

Part of a wall formed by slabs being placed on a larger block footing was recorded in section (illus 2, 106). This had collapsed northwards, and may have served as facing to the loose masonry to the north.

The remains of another wall were also visible in section (illus 2, 106). This wall appeared much more substantial than wall 106, being formed of large blocks of stone. The wall runs out of the cliff section obliquely: it could be traced for 2 m and survived to no more than two courses high.

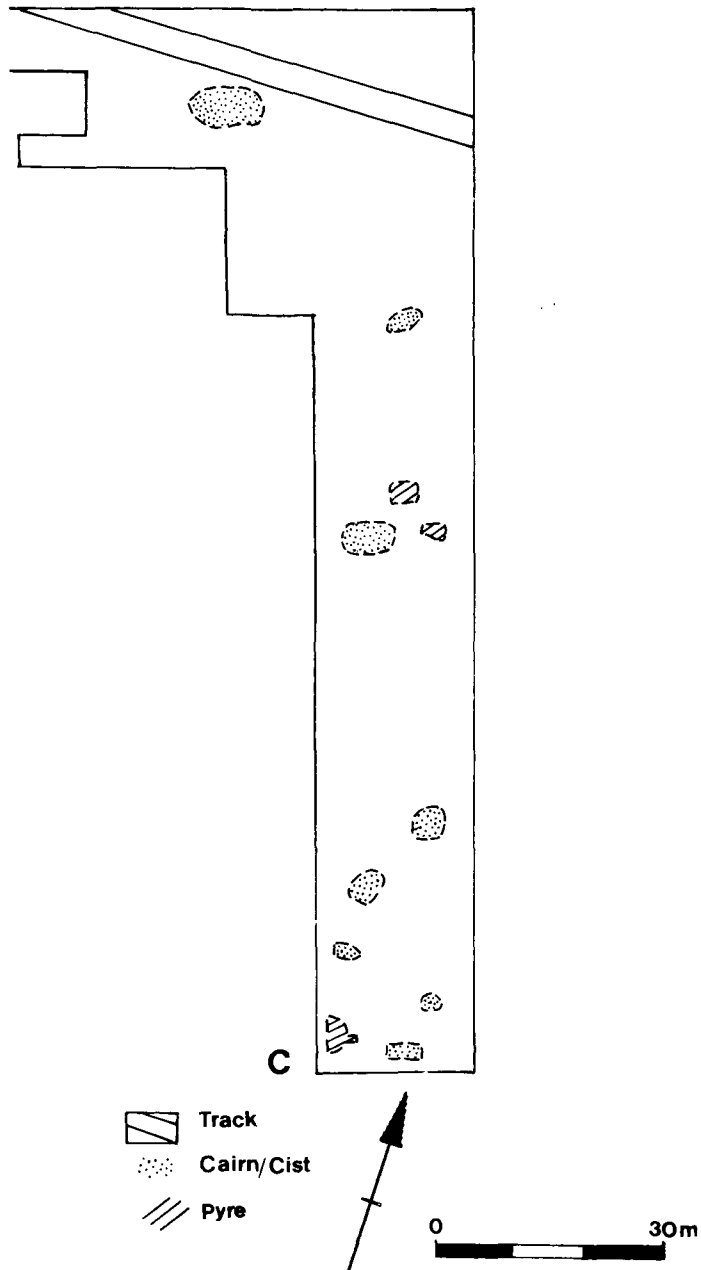
The stones between walls 106 and 101 comprise blocks and large beach pebbles, irregularly spaced but densely packed. This material could be cairn debris or part of a collapsed structure, but could simply be storm beach debris. Part of a hammer stone which had been broken by fire cracking was found at the base of this material.

Another possible cist was recorded to the south of the walls and Cairn 020 (illus 2, 100). This structure comprised a large orthostat and large horizontal slabs. The stones to the north of this feature may represent cairn material. This area of the site was much disturbed by the burrowing activities of rabbits, and had been *intruded upon by recent burials of farm animals*.

Pyre settings

Pyre site 104 (illus 1) had not been apparent in 1993. This structure appears as two stone orthostats in the cliff section. The orthostats are comparable to those of pyre settings 005 and 011, and, as with these two settings, stone paving was present within the area defined by the orthostats. The interpretation of this feature as a pyre setting is based in part on the similarity between the visible part of this structure and the pyre settings 005 and 011 which were investigated in 1993, but also upon the recovery of a piece of burnt bone from within the structure. The bone has been identified as a piece of cranium (parietal or occipital) which is possibly human (A Witkin, pers comm).

Pyre site 005 was found to have suffered destruction to the part exposed in the cliff and this was recorded photographically. Pyre setting 011 remained intact as this structure has not yet been exposed in the cliff section.



ILLUS 5 Interpretative plan of the geophysical survey results

GEOPHYSICAL SURVEY

Adrian Challands

Both resistivity and magnetic techniques were employed for the survey (for location of areas surveyed see illus 1). The survey area was relatively flat, and consisted of a thin sandy soil

overlying windblown sand. At the time of the geophysical survey, the site was under pasture. A detailed report and method statement can be consulted in the archive of the project records at the National Monuments Record of Scotland. The following is a summary only.

Results and interpretation

Both the magnetic and resistivity values are of low magnitude with very slight differentials between the background and the possible archaeological features. The interpretation of the anomalies is based upon comparing features showing up on different display techniques and the two survey methods — magnetic and soil resistivity.

Very slight variations within the numeric data generated by both survey methods indicated features. Circular and curved features were discerned and interpreted as variable diameter cairns and other structures. Magnetic survey may also have located the sites of possible pyres/cremations (illus 5). Some of the possible cairns appear to have diameters of between 6 and 13 m and as such are similar to the size of the cairns exposed in the cliff section. The cairns located by resistivity survey vary; some show up as high resistance values, and others occur as low resistance values. These high and low resistance variations between cairns may reflect different states of preservation or more likely different construction. The high (drier) resistance cairns may be upstanding structures, whilst the low (damper) resistance cairns may be damaged or flat cairns. Other smaller, cairn-like structures, appear to have much smaller diameters of between 3 and 5 m.

DISCUSSION

The erosion of the cliff through natural agents presents a random section through archaeological remains, and this can make interpretation of the exposed features very difficult. The periodic monitoring of damage and recording of sites subject to coastal erosion is a useful exercise — at Hermisgarth the 1997 investigations recorded features which indicate a greater density of structures related to burial practices, and a complexity of remains which may demonstrate the site to be multiperiod. The site is eroding rapidly at present; comparison between the coastline mapped by the Ordnance Survey and the coast today shows that approximately 10 m of coast line have eroded since c 1900. However it is likely that this erosion has not been constant and has greatly accelerated of late; the cliff had eroded by up to 2 m (notably in those parts facing south-west) during the three years 1993–7.

Geophysical survey was employed as a complementary technique to further indicate the nature and extent of the site. These geophysical anomalies may represent archaeological features unrelated to the burial site, or indeed natural features, but the present interpretation favours the possibility that they are structures associated with late Iron Age/early Pictish burial rites extending to the southern end of the area surveyed (illus 1 and 5); this would accord with the finding of at least one cist (illus 1, cist 002) in this area in 1993.

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