

Archaeological field survey of the Bhalto (Valto) peninsula, Lewis

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with contributions by Steve Dockrill, Tim Neighbour, Jim Pocock & Ian Simpson, and illustrations by Martin Wilson

ABSTRACT

This report describes the results of an archaeological field survey of the Bhalto peninsula in Lewis. The results are assessed in the light of both older research and the continuing programmes of excavation and palaeoenvironmental analysis in the area. The examples and distributions of various site-types provide a comparison with more general models recently proposed for settlement in the Western Isles and appear to suggest a series of settlement discontinuities in the Iron Age, Norse and medieval periods.

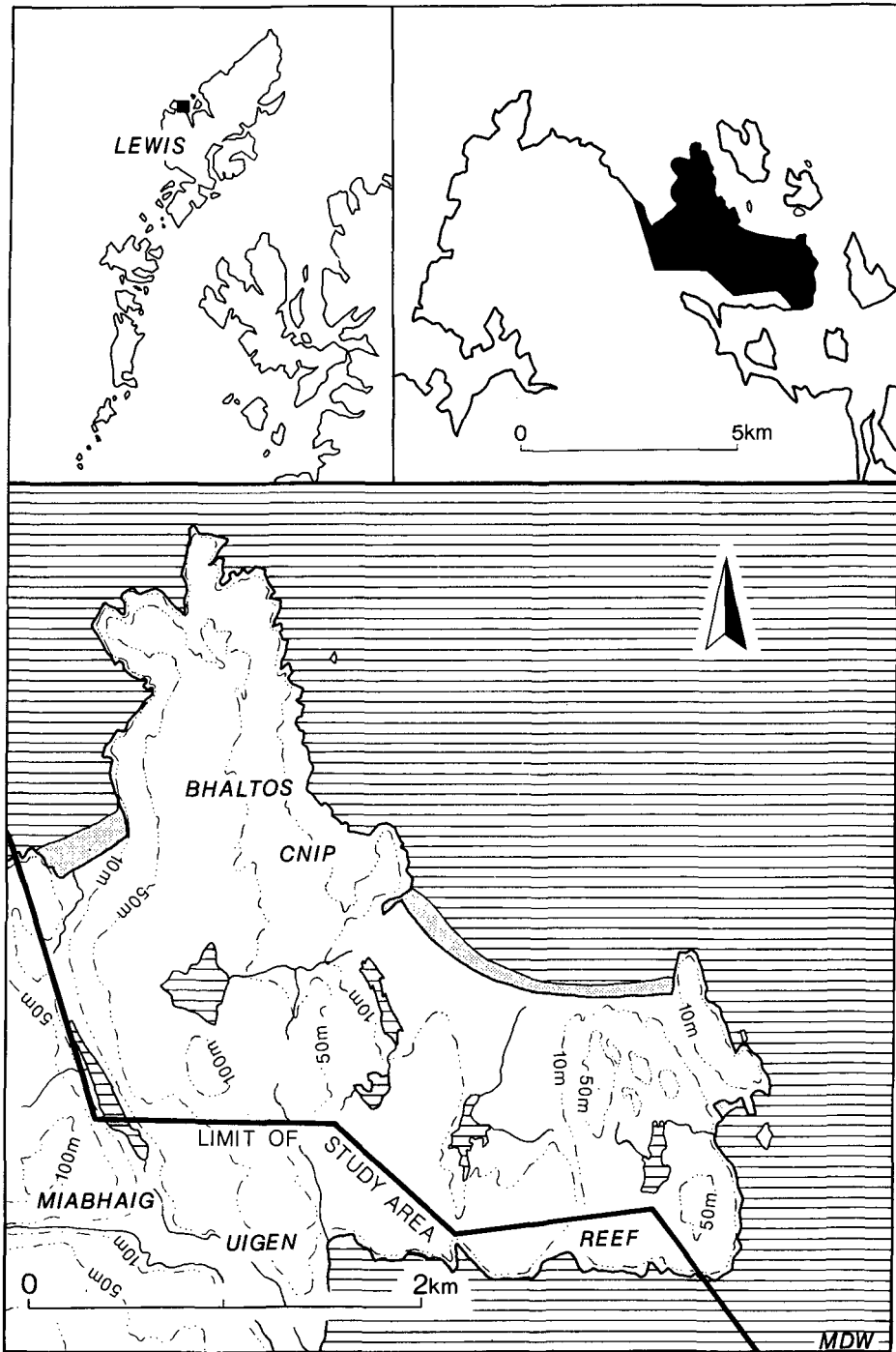
The detailed results of the fieldwork (illus 16–30) are presented on microfiche, and are arranged in sections as follows: gazetteer of sites; the machair systems of the Bhalto peninsula; geophysical survey; analysis of soil thin-sections from site 35; list of threatened sites.

INTRODUCTION

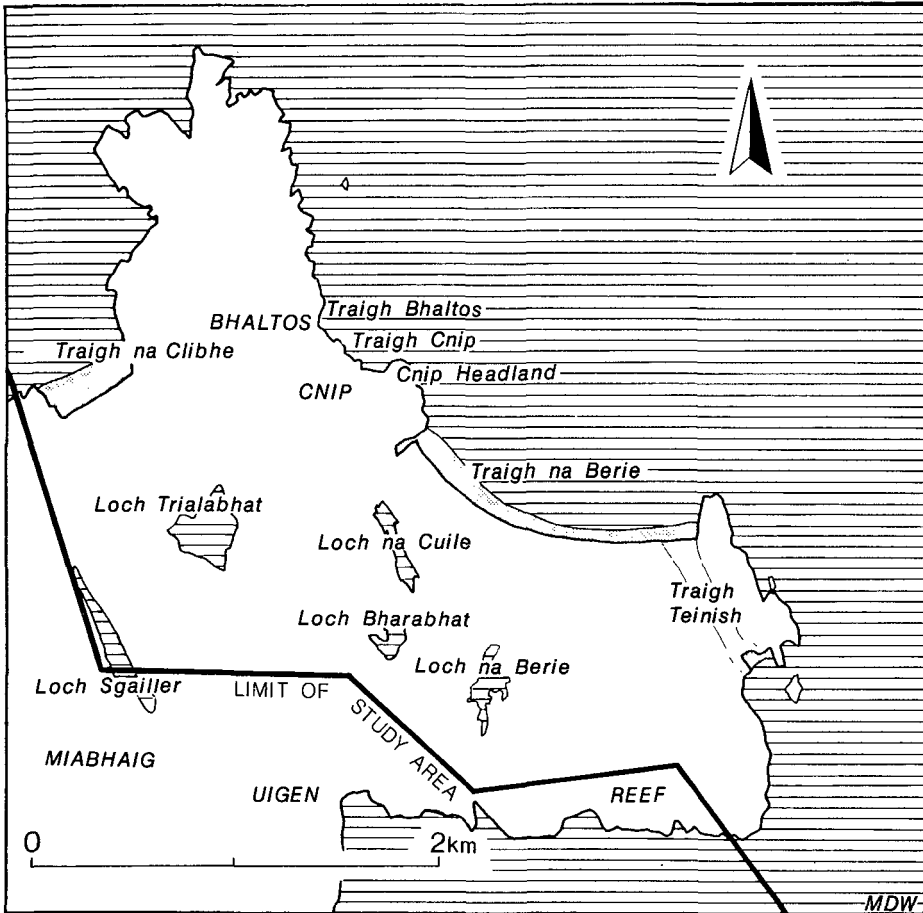
The Bhalto peninsula in Uig Parish, Lewis, has been a focus of archaeological activity for many years. The peninsula lies on the exposed west coast of Lewis, less than 20 km from such sites as Dun Carloway and the Callanish stones (illus 1). The present survey began in 1989 as part of a wider programme of survey and excavation carried out by Edinburgh University's Callanish Archaeological Research Project which has also included the excavation of later prehistoric sites at Dun Bharabhat and Loch na Berie (Harding & Armit 1990). The Cnip wheelhouse complex, also in the Bhalto peninsula, was excavated with funding from Historic Scotland (*ibid*). The survey was subsequently extended in scope in 1992 and was carried out by the Centre for Field Archaeology (CFA), University of Edinburgh, sponsored by Historic Scotland.

As a peninsula, Bhalto is naturally defined and self-contained, comprising an area of some 4 × 3 km. It contains a series of machair beaches which back onto steeply rising hills in the interior of the peninsula (Ritchie & Mather 1970). Traigh na Berie is a broad machair beach (illus 2) similar to the larger machair plains of Harris and the Uists, while Traigh Cnip and Traigh na Clibhe are typical of the numerous small beaches of Lewis itself. The peninsula contains small

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ILLUS 1 Location map. Based upon the Ordnance Survey map © Crown copyright



ILLUS 2 Study area. Based upon the Ordnance Survey map © Crown copyright

machair lochs and hill lochs which have formed settlement foci in prehistory. Bhaltois is thus almost a microcosm of the Lewis landscape, lacking only the extensive blanket peat which characterizes the northern parts of the interior of the island.

The machair environment, which forms the focus of the present study, dictates to a large extent the nature of the survey and the presentation of the results. There is little survival of any extensive field systems or dykes; if they ever existed they have long since been removed, buried or eroded away, and virtually all of what survives is already mapped on the 19th-century Ordnance Survey coverage. There is a significant contrast between the evidence available for this sort of area and that from areas such as Waternish in Skye, recently surveyed by the Royal Commission on the Ancient and Historical Monuments of Scotland (1993). In the latter the potential exists for the establishment of sequences in the 'layers' of the settlement landscape by means of area survey and analysis. Survey on the machair is, in general, much less amenable to this approach. Many of the sites in Bhaltois survive as 'islands' in a deflated machair plain, reduced to isolated points of

survival. This necessarily restricts landscape survey and dictates a concentration on the individual sites themselves.

In this paper the Gaelic spellings of Bhaltos, Cnip and Clibhe are used to accord with current road signs and forthcoming map editions. Older maps and previous archaeological work refer to these places by their Anglicized spellings, Valtos, Kneep and Cliff.

THE ARCHAEOLOGICAL SURVEY

Appendix 1 (fiche) comprises the gazetteer of the recorded sites. The gazetteer reference number for each site mentioned in the following text is listed in brackets next to the reference and is shown on the relevant site distribution plan (illus 5, 7, 9, 12). Appendix 2 (fiche) discusses the stability and potential problems of each of the principal machair systems in the Bhaltos peninsula.

AIMS

The survey was conducted in the context of the wider research programme described above and had a number of specific aims designed to complement and expand the results of the excavation programme. The aims most relevant to the present report were:

- (a) to examine wider models of settlement development in the Western Isles at the local scale;
- (b) to provide a local archaeological context for the excavated sites and to assess the archaeological potential of the locality beyond the known and excavated sites;
- (c) to assess the efficacy of the various survey methods employed, particularly geophysical survey, for site identification and definition in the machair environment.

METHODS

To achieve these aims a range of methods was adopted, principally as follows:

- (a) Existing records, eg NMR, previous excavation and survey data etc, were collated.
- (b) Fieldwalking was undertaken over the whole of the Bhaltos peninsula, with the exception of the south coast and south-facing hill slopes (illus 2). All features of actual or probable archaeological significance were recorded, with the exception of settlements and field systems marked as *occupied* or as *'ruins'* on the 1st edition and later Ordnance Survey 6-inch maps. On Traigh na Berie, however, the focal area of the field survey, such mapped settlements were included in the survey. Land boundaries and traces of former agriculture have generally not been included in the gazetteer, especially where these are marked on the Ordnance Survey map coverage of the area; there are in any case no such relict field systems on the machair itself which is the prime concern of this report.
- (c) Detailed surveys of selected monuments were carried out, using an EDM.
- (d) Geophysical survey was carried out on a range of machair sites. Magnetic survey was undertaken by Steve Dockrill, Jim Pocock and Mark Gillings. Resistivity survey was carried out principally by Tim Neighbour. The results of all this work are presented in Appendix 3 (fiche).
- (e) Coring of selected machair sites was conducted to amplify the field surveys and the geophysical results.
- (f) Selective soil sampling and analysis carried out by Dr Ian Simpson. The results of this work form Appendix 4 (fiche).

PREVIOUS RESEARCH

One of the reasons for the selection of the Bhaltos peninsula as the focal area for the Callanish Archaeological Research Project was the relative wealth of existing information. The first serious archaeological work in the area was conducted by RCAHMS in the preparation of their *Inventory* on the Outer Hebrides, Skye and the Small Isles (RCAHMS 1928). This appears to have been a rather more intensive survey than was carried out for most other parts of Lewis; a number of significant, though often ephemeral, sites were located in addition to the more obvious drystone monuments.

The next significant work in the area was undertaken by Lacaille, who identified what he considered to be primitive stone industries from a number of locations (1937; 1954, 299–304). One of these appears to have been site 3 in the present survey, of which he published a photograph (Lacaille 1954, 301, Fig 136). Lacaille considered that this material represented Mesolithic technological survivals into later prehistory, including material for which the closest technological parallels lay in what were then termed the Late Larnian or Obanian industries (Lacaille 1954, 301). Although there is no clear definition of the assemblage from any one location, Lacaille's work does provide an indication of the general nature of the lithic material in the area.

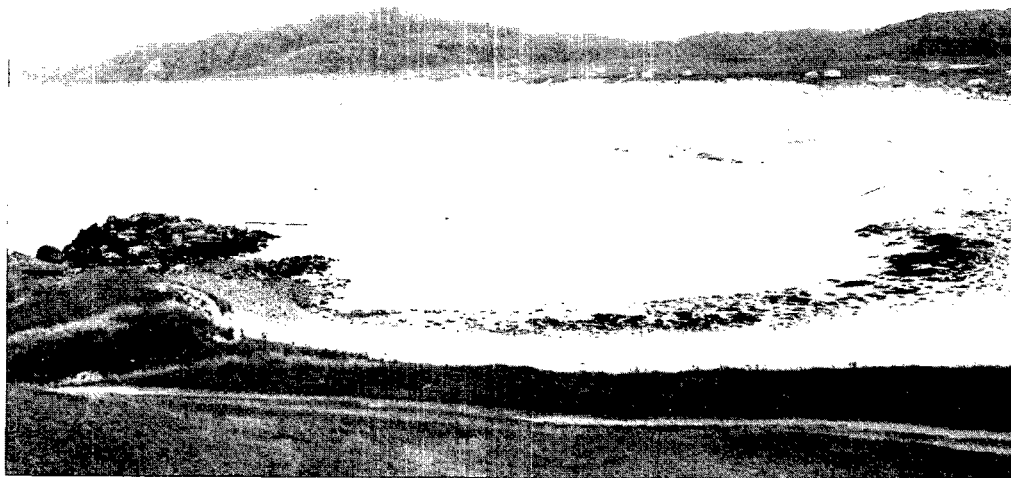
Subsequent work, prior to the mid-1980s, was sporadic and limited in scope. A wheelhouse was partially exposed by Mr Calum MacLeod of Reef in the 1950s (12) and a rich Viking grave was excavated in 1979 (15, Welander *et al* 1987). The most important fieldwork over this period, however, was the excavation of a multi-phase Bronze Age burial monument (2) on Cnip headland by Dr Joanna Close-Brooks (forthcoming).

The current programme of work by the Callanish Archaeological Research Project began in 1985 and has included three major excavations to date: a complex Atlantic roundhouse, Dun Bharabhat (5); a broch tower, Loch na Berie (6); and a wheelhouse and cellular complex, Cnip (9). The interim results of these excavations have been summarized elsewhere (Harding & Armit 1990). In addition, smaller excavations have been undertaken at other erosion sites on Cnip beach-front (Armit & Dunwell 1992, site 13). These excavations have all focused on the later prehistoric period, and collectively cover the period from the mid-first millennium BC until c AD 800. Work by CFA in 1992, in addition to the present survey, comprised further recording of the erosion sites of the Cnip beach-front (Dunwell 1992), a further cairn on Cnip headland (Dunwell *et al* forthcoming, a) and a probable Norse cemetery at the same location (Dunwell *et al*, forthcoming, b).

ENVIRONMENTAL BACKGROUND

The topography of Bhaltos provides three focal areas for settlement in which most of the archaeological evidence is concentrated. These are the machair areas of Traigh na Berie, Traigh Clibhe and Traigh Bhaltos / Cnip. The modern townships of Reef and Uigen occupy the southern part of the peninsula on a rocky, peat-covered coast. This area has not formed part of the present survey and has no recorded archaeological sites. The history of sea-level change, soils and vegetation are all subjects of controversy, and the arguments have been summarized elsewhere (Armit 1992; 1996). None the less there is little doubt over the main trends of environmental change: sea levels have risen, possibly drastically, over the period of human occupation, and tree cover has almost disappeared, although its original extent and composition is open to debate (cf most recently Bennett *et al* 1990).

The Bhaltos peninsula highlights some of the ways in which the processes of machair



ILLUS 3 Traigh na Berie

development can distort the perceived prehistoric settlement pattern. The wide beach of Traigh na Berie (illus 3) shows all the signs of continuing erosion which conform to Ritchie's model B of machair development, suggested for sites in South Uist (Ritchie 1966, 112). The occurrence of steep hills immediately behind the machair has led to the piling up of sand, forming machair slopes rising up to these hills at their nearest points to the beach. It has also led to the infilling of two former areas that were – at least periodically – open water: Loch na Berie and Loch na Cuilc, which lie between the machair and the higher ground. The retreat of the coastal dunes continues today both at Berie, where the coastal sites recorded by the RCAHMS in 1928 (RCAHMS 1928, nos 84 & 98) seem to have disappeared, and at the neighbouring beach of Cnip where a sea-wall has had to be constructed to halt the erosion. The eroded material is continually redeposited farther inland but the local topography prevents the development of a true machair plain. Probing of Loch na Berie has revealed that the Berie broch tower (6, illus 4) lies on a rocky island in what formerly was an extensive marsh with areas of open water; this is now reduced to a reed-filled pond, lying behind a machair plain stretching further seawards (Harding & Topping 1986, 34).

The processes of machair development and sea-level change, as well as factors introduced by human populations themselves, continue to operate and constitute a series of very significant threats to the survival of the archaeology of the area. The scale of past destruction in the area can be appreciated both by the examination of early map sources for the area and by the disappearance of sites located by the Royal Commission in the early part of this century. Current threats are clearly demonstrated at sites such as the Cnip beach-front, where coastal erosion is slicing through



ILLUS 4 Loch na Berie broch tower

deposits probably dating to the pre-Norse period (13); on Cnip headland where machair deflation is causing enormous damage to a whole hillside of great archaeological sensitivity; and on the settlement mounds set back from the coast, where rabbit burrowing is causing unquantified damage to the archaeological deposits (eg 12, 20, 24; see Angus & Elliot 1992, 9 on the problem of rabbits in the machair). The detailed survey report for the project lodged with the NMRS contains details of these threats.

It is generally accepted that the deflation of the machair has slowed down from the levels it reached during the 15th to 19th centuries. The high levels of damage caused during that period were due to a variety of anthropogenic influences (Angus & Elliot 1992) relating mainly to population increase (causing increased pressure on the machair for agriculture and grazing) and the

growth of the kelp industry (preventing the use of seaweed to bind the machair soils). The present incidence of deflation and redeposition, while minor in terms of the machair systems overall, still has the potential to destroy extensive archaeological sites. It is important that the scientific community's largely justifiable belief in the relative general stability of present-day machair (cf Angus & Elliot 1992) should not obscure the enormous threat posed by local machair deflation to individual sites of high archaeological significance.

Between the period of the earliest settlement sites archaeologically recorded in the area (mid-first millennium BC, though doubtless preceded by occupation from the Mesolithic onwards) and the present day, the size of the area open for settlement has altered greatly and the resources available in terms of soil potential and vegetation cover have similarly been transformed. The Bhaltois area offers an opportunity to attempt to calibrate the scale and rate of these changes against a background of archaeological settlement evidence. Current work by Kevin Edwards and his team from Sheffield University will provide a more detailed environmental perspective on changes affecting human settlement in the peninsula.

ARCHAEOLOGICAL RESULTS

GENERAL

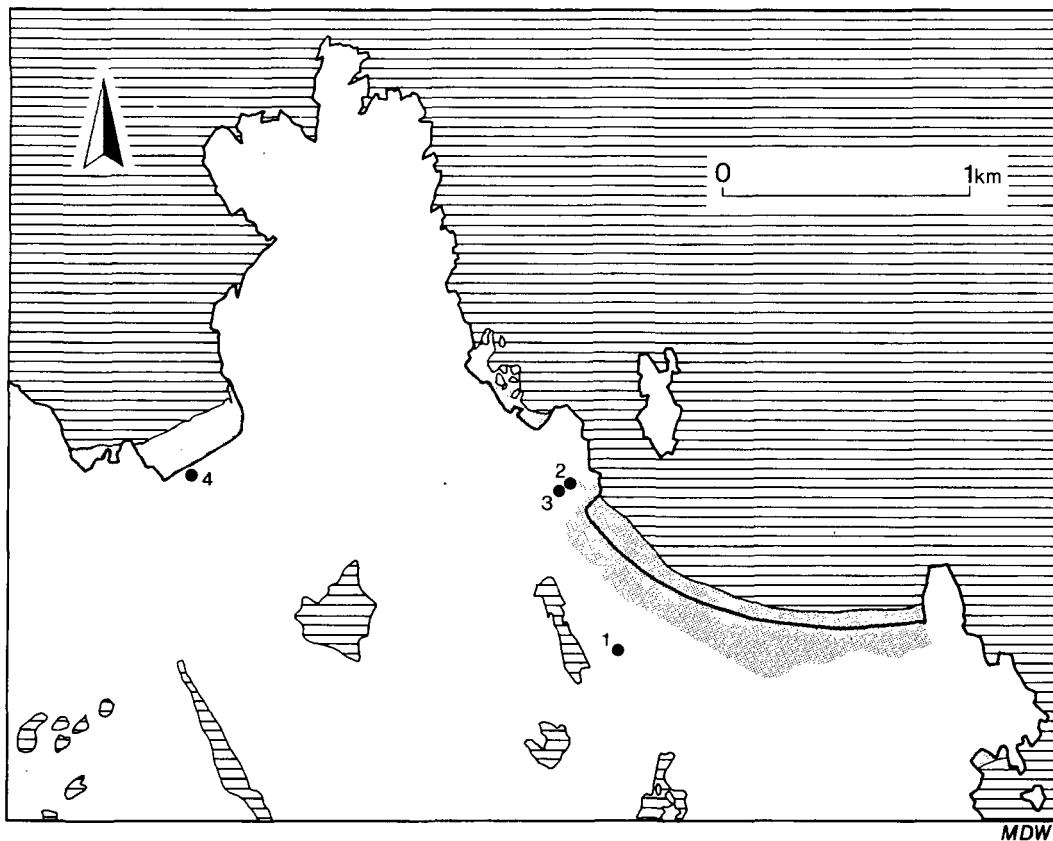
The field survey confirmed the archaeological wealth of the Bhaltois area. Approximately 40 previously unrecorded sites were identified, including many which are likely to be Norse or prehistoric. This gives a total of over 50 recorded monuments for the Bhaltois peninsula, excluding settlements and field systems marked as occupied on 19th-century maps. The sites are discussed below by broad chronological period, although perhaps the richest group of sites to emerge from field survey are the settlement mounds and middens which cannot yet be chronologically ascribed. It is argued below that this group may well include the 'missing periods' of Western Isles settlement: the Norse and medieval, as well as a range of pre-Norse settlement.

EARLIER PREHISTORIC

The distribution of sites potentially relating to the earlier prehistoric period (before c 1000 BC) is shown in *illus 5*. Despite Lacaille's identification of archaic Mesolithic survivals in the technology of some of the *Traigh na Berie* sites, there is no material of definite Mesolithic date in the area. Indeed the earliest evidence of a human presence in the peninsula is provided by the multi-phase Bronze Age cairn (2) excavated by Joanna Close-Brooks, and more particularly by the ard-marks which underlie it (Close-Brooks, forthcoming). These traces of cultivation provide the only tangible evidence for Early Bronze Age occupation in the area and demonstrate that agriculture had been adopted here by the early part of the second millennium BC. It is worth noting that the cairn and cultivated soil overlie a substantial depth of sterile sand, indicating that the machair had begun to form in this area some time prior to the Early Bronze Age.

The sequence of burials on *Cnip Headland* began with a D-shaped cairn containing an inhumation, subsequently disturbed by a corbelled cist containing a cremation, and finally capped by a kerb cairn (Close-Brooks, forthcoming). A second Bronze Age burial, in a cist (probably corbelled) adjacent to the kerb cairn, excavated in 1992 by CFA, appears to be broadly contemporary with the second phase of the larger monument (Dunwell *et al*, forthcoming, a.).

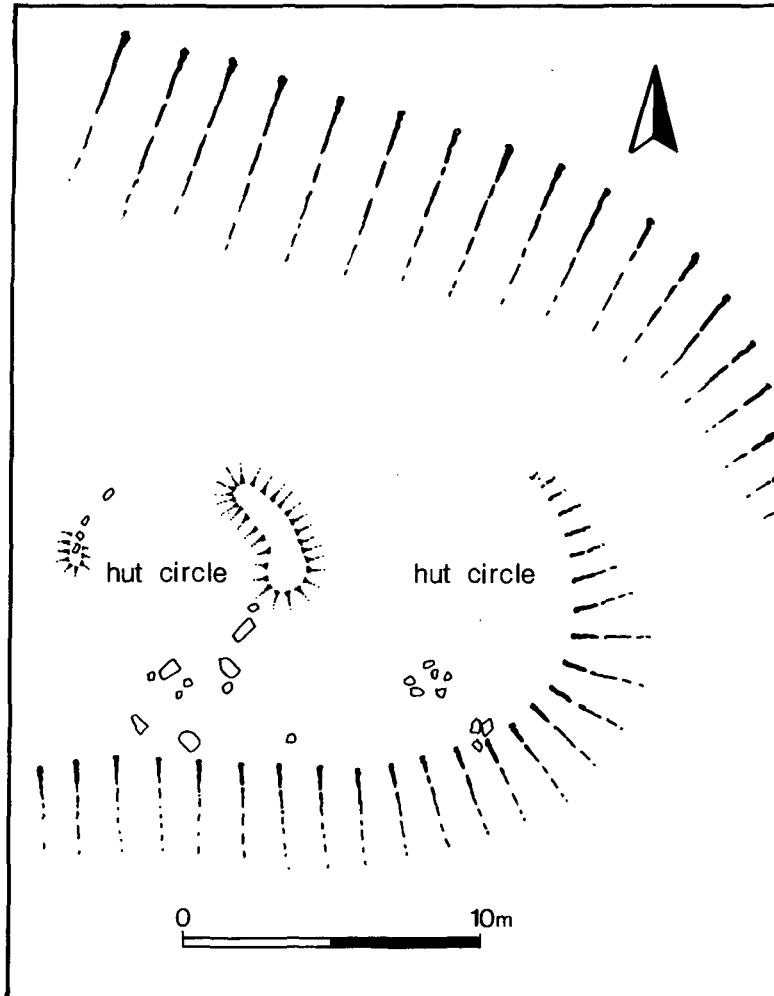
There are suggestions of other Bronze Age burials in the area: a stony feature at the rear of *Traigh na Berie* may represent a further Bronze Age cairn (1) while a sherd of Beaker pottery from



ILLUS 5 Distribution of early prehistoric sites. Based upon the Ordnance Survey map © Crown copyright

the same area may have been associated with two kerb cairns (Cormack 1973). The latter structures, however, have not been relocated despite intensive fieldwork by Close-Brooks and during the present survey.

Sites potentially relating to earlier prehistoric settlement are few in number. Perhaps the most promising in this regard are the hut circles (3) found initially by Lacaille, and subsequently relocated by Close-Brooks (illus 6). Auguring of a transect across the site demonstrated the survival of archaeological deposits at a depth varying from 0.3 to 0.45 m below the present machair surface. A circular structure, approximately 7 m in diameter, is visible with associated features in what was then an eroding sand hollow on the side of Cnip Headland (illus 6). From Lacaille's photographs and records it appears that the main structure was defined by a wall which was one stone in width and possibly sand-revetted (Lacaille 1954, Fig 136). If Lacaille's chipped stone assemblage was in primary association with these buildings, then this, along with their proximity to the cairn (2) and their morphology, would suggest an earlier prehistoric date. Although most pre-Iron Age domestic buildings in the Western Isles seem to have been elongated ovals or sub-rectangular – see, for example, Eilean Domhnuill (N Uist) in the Neolithic (Armit 1992) and Northton (Harris) in the Early Bronze Age (Simpson 1976) – there is a precedent for



ILLUS 6 Hut circles (site 3)

circular sand-revetted structures in the sequence at Dalmore in Lewis (Sharples, pers comm). The close spatial association between settlement and funerary remains which would clearly pertain if these structures were of Bronze Age date would again restate the relationship which occurs on numerous sites of the period where settlements such as Northton on Harris, Rosinish on Benbecula, and Barvas on Lewis, all contain scattered burial remains on ostensibly domestic sites.

Earlier prehistoric material from the peninsula seems to be confined to Cnip Headland with a scatter of possible burials across the Traigh na Berie. The sole exception is a possible hut circle on Traigh Clibhe (4) which has long since fallen into the sea and had only rather dubious morphological grounds for the attribution of date.

The lack of chambered tombs in the peninsula is of some interest in the context of the Western Isles as a whole. The distribution pattern of the Hebridean chambered tombs has been

examined in a separate paper (Armit 1990b) and the absence of such sites in Bhalto is part of a pattern of exclusion from most areas of Lewis, with the exceptions of the Callanish and Stornoway areas. No Neolithic pottery has yet been reported from the peninsula, despite its ubiquity in other areas and the relative intensity of work in Bhalto. One possible explanation for these absences is that the area was without Neolithic settlement at this time, either because of the persistence of traditional Mesolithic communities or because Neolithic settlers had not penetrated far beyond North Uist where the concentration of chambered tombs lies. Recent reassessments of the transition to agriculture on the western seaboard of Scotland, however, have tended to stress the continuity of existing communities who seem to have adopted conventionally Neolithic traits in piecemeal fashion dependent upon perceived cultural needs (Armit & Finlayson 1992). In this context the absence of chambered tombs need not preclude the existence of communities practising some aspects of the new agricultural economies. However, the area around Loch Roag, on Lewis, has already been noted as a potentially highly favourable environment for Mesolithic populations (Sharples 1992, 326) and it may be that there was no perceived need to introduce exotic economic practices.

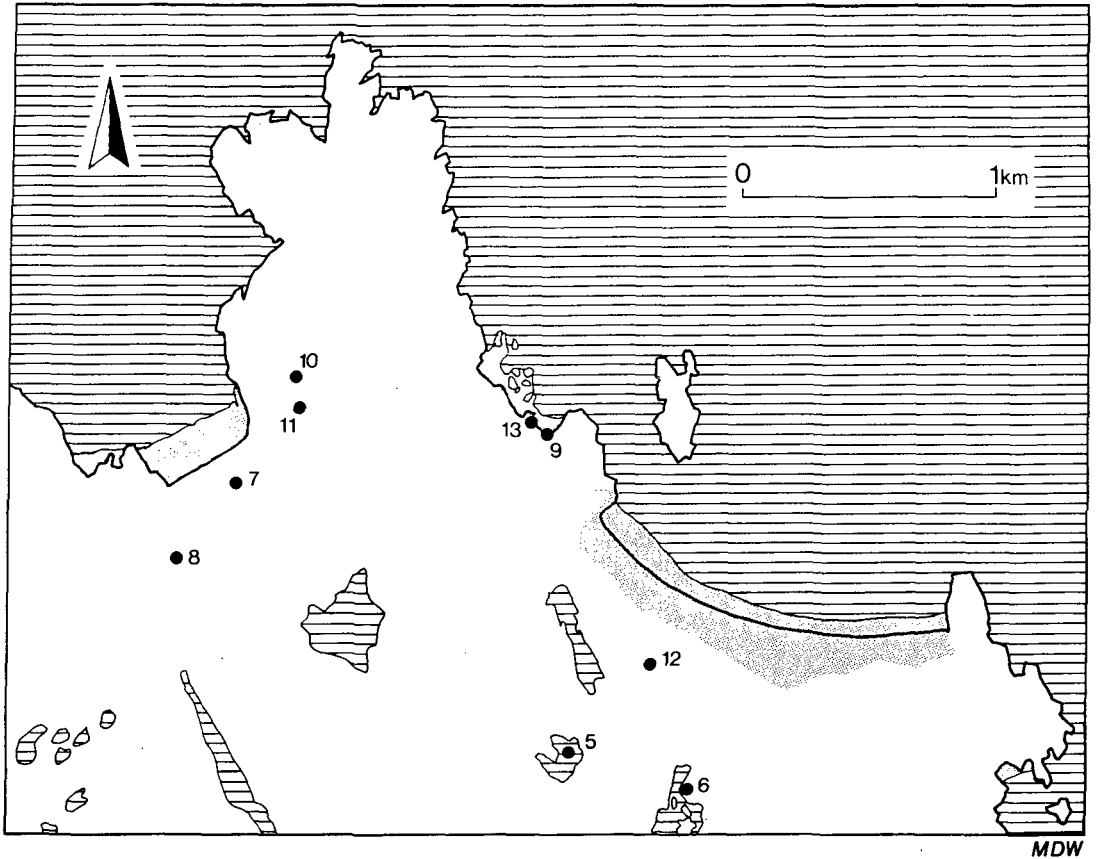
By the Bronze Age, however, moderately elaborate funerary rites comparable with those practised throughout the rest of the Western Isles had certainly been adopted and pottery styles show broad affiliations with the wider Scottish scene (although ceramic vessels from several Hebridean Bronze Age graves seem to defy easy attribution to specific styles within the generic groupings of Urns and Food Vessels, cf Dunwell *et al.* forthcoming, a).

The absence of definite earlier prehistoric settlements in the peninsula is unsurprising in the context of the Hebrides as a whole. Such sites as have been identified, eg Northton in Harris (Simpson 1976), Rosinish in Benbecula (Shepherd 1976), Barvas in Lewis (Cowie, pers comm) and Kilellan on Islay, tend to indicate relatively slight domestic structures, albeit in association with substantial midden spreads. The evidence from the range of excavated sites suggests that settlement may have been extensive rather than intensive for many parts of the Hebrides; economies may have followed a logistic pattern with a range of economic activities carried out at specialized activity areas some distance from a permanent or semi-permanent base (Armit 1995). A number of Hebridean Bronze Age settlements, such as that at Dalmore in Lewis (Sharples 1984), have been identified as a result of coastal erosion and it may well be that in Bhalto, as in many other parts of the region, the Bronze Age shorelines, where many settlements and activity areas may have been sited, have been lost.

ATLANTIC ROUNDHOUSES: FIRST MILLENNIUM BC

Evidence for later prehistoric settlement is much more extensive than for earlier periods (illus 7), and domestic structures are qualitatively as well as quantitatively distinct. The best-known sites in this category are the Atlantic roundhouses which, as monumental structures, were obvious to early archaeologists in the area. Two such structures, Dun Bharabhat (5) and Loch na Berie (6), fall into this category, both having been partly excavated as part of the Callanish Archaeological Research Project (Harding & Armit 1990). Recent reviews of the chronology of such monuments suggest that they are likely to fall within the middle centuries of the first millennium BC and may have been constructed into the last centuries of that millennium (Armit 1991; 1992). The radiocarbon dates from Dun Bharabhat demonstrate secondary occupation in the last two centuries BC and construction some time about the middle of the millennium (Armit 1991, 211).

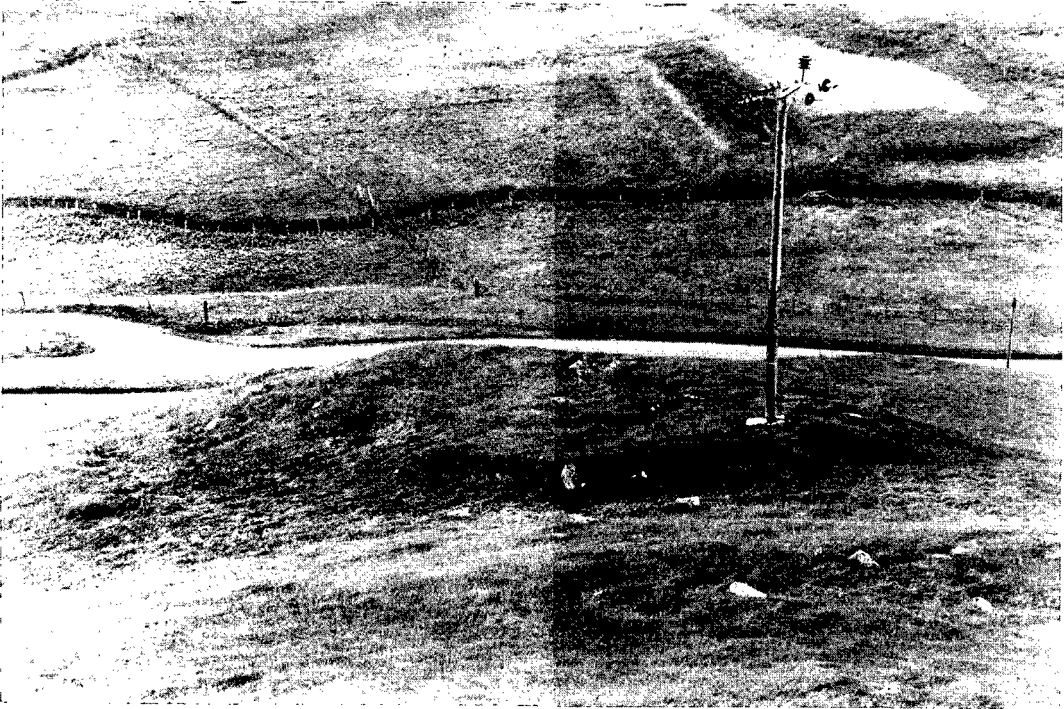
A more contentious site is that of Dun Camus na Clibhe (7), an Atlantic roundhouse which, according to tradition, ought to be sited on Traigh Clibhe (RCAHMS 1928, no 101). The



ILLUS 7 Distribution of Iron Age and pre-Norse sites. *Based upon the Ordnance Survey map © Crown copyright*

traditional site, however, displays no evidence for the former presence of a substantial stone structure and its topography does not make it an attractive location for a massive stone construction. By contrast, perched on the steep slopes above Traigh Clibhe, and discovered during the present survey (8), are the remains of a substantial stone roundhouse, now grassed over and punctured by two successive modern telegraph poles (illus 8). This structure commands views over Traigh Clibhe to the north, and down the glen of Loch Sgailier, to the south. Modification of the site's position to either north or south would lose these advantages of siting, suggesting that this locational quality is deliberate. If it genuinely does represent the site of Dun Camus na Clibhe, then this is clearly one of the major individual sites located during the survey.

Aside from the Atlantic roundhouses themselves there is little to signify settlement in the mid-first millennium BC. There are no burials of the period and no evidence for middens of this date. The contrast with the preceding period is striking. For the first time the elaboration of the settlement became significant for the communities in the area and considerable amounts of labour must have been expended in the construction of these buildings. The solidity of their construction and indications of permanent occupation suggest that for the first time these sites represented definable and permanent home bases for the inhabitants of the peninsula. A similar pattern is



ILLUS 8 Atlantic roundhouse (site 8) – possibly Dun Camus na Clibhe

implied by the appearance at broadly the same time of Atlantic roundhouses throughout the Western Isles (Armit 1992). In other areas, notably North Uist, the appearance of Atlantic roundhouses has been associated with the constriction of settlement onto the coastal belt, due principally to the deterioration of the environment of the interior of the islands. In Bhaltois the same process may be happening on a smaller scale and we may be seeing a drawing in of settlement: the elaboration into a permanent monumental structure of what may previously have been only a semi-permanent or seasonal base. Dun Bharabhat itself is built on the foundations of earlier and probably slighter structures (Harding & Armit 1990). A corollary of this process would be the lessening of economic dependence on areas farther afield, which were probably becoming less attractive for settlement and economic usage, and a more intensive exploitation of the immediate environment. In such a context it is easy to imagine the increase in group tensions and concern with demonstrating the community's legitimate tenure of the land that might lead to the adoption of monumental domestic building.

The small study area represented by Bhaltois, rather than the 'island-wide' scale used in the formulation of the North Uist settlement model (Armit 1992), highlights a significant problem in traditional interpretations of 'brochs and duns'. The difference in scale between the Loch na Berie broch tower and Dun Bharabhat does not accord with models based on the uniformity of broch architecture and function. In terms of internal floor area, Berie is some 3.6 times larger than Dun Bharabhat at ground level and it appears to have had as many, if not more, internal floor levels (Harding & Armit 1990). The difference in scale is thus very marked between two sites which would appear to have been broadly contemporary. This is matched by a locational difference: Berie

occupies a prime machair site with extensive views over Traigh na Berie, while Bharabhat lies in a hill loch, with difficult access and little obvious good ground in its immediate vicinity.

Bhaltos, then, highlights the local variability of the populations inhabiting Atlantic roundhouses in terms of their apparent wealth and social status. This forms a useful local perspective on the wider models of settlement development which have been proposed for North Uist and Barra (Armit 1992). The general conclusion of these studies – based on site distributions and population figures – was that, although people of various social levels lived in Atlantic roundhouses, they extended from high-ranking élite families down the social scale to a point below, for example, the equivalents of medieval tacksmen (minor lease-holding aristocracy). The difference in scale between Dun Bharabhat and Berie gives a vivid local illustration of this conclusion.

LATER IRON AGE AND PRE-NORSE

A further group of settlement structures dates to the period from the later centuries BC until the immediately pre-Norse period (illus 7). These comprise two wheelhouse sites (9, 12), of which the example at Cnip also has a series of later cellular structures, and two souterrains (10, 11). A series of cellular structures built into the broch tower of Loch na Berie (6) also relate to the latter part of the pre-Norse period, as, probably, do the structures identified at Cnip sites 2/3 (Armit & Dunwell 1992, site 13).

The wheelhouses at Cnip (9) date to the later centuries BC and were replaced by cellular structures in the first century AD (Harding & Armit 1990). Wheelhouses represent a radically different form of monumentality to that represented by the Atlantic roundhouses. They were semi-subterranean and barely visible from above-ground except for their protruding roofs. They had no significant visual impact on the landscape and thus do not seem to have acted as overt symbols of dominance in the same way as their Atlantic roundhouse predecessors. None the less, wheelhouses were elaborate constructions and highly monumental in their own way. Even the relatively small Cnip example would have stood 6 m tall from the floor to the apex of the roof when first occupied. Unlike the Atlantic roundhouses, in which space was organized vertically on superimposed floors, wheelhouse settlements tended to evolve cellular patterns of space, often suggesting the same broad scale of settlement unit and possibly the same range of functions (Armit 1992).

A further wheelhouse, partially excavated by Mr Calum MacLeod of Reef in the 1950s, is visible as an eroding mound on a spur above the Traigh na Berie (12, illus 16). The mound is c 27 m long (north/south) by 16 m wide. The internal diameter of the wheelhouse appears to be c 7–8 m, similar to that at Cnip, and several piers are visible. The mound is considerably larger than the wheelhouse and almost certainly contains further structures, as did the Cnip complex. Given the close architectural similarities and generally coherent dating of the Hebridean wheelhouses it is highly probable that this site was occupied at the same time as the Cnip complex.

The poor visibility of the wheelhouses, relative to the Atlantic roundhouses, prevents any detailed comparisons of distribution in Bhaltos. It is impossible to know if further wheelhouses await discovery or have been already destroyed by the rising seas. None the less the distribution as it is known is what might be expected on the basis of comparisons with the Vallay Strand – the one area of North Uist where excavation (carried out by the antiquary Erskine Beveridge) has been so extensive that we can be fairly confident about the representativeness of the wheelhouse distribution. Analysis of distributions in the Vallay area showed that broadly similar numbers of Atlantic roundhouses and wheelhouses were present, occupying similar landscape units, probably sequentially and in some cases with the wheelhouse built into the ruined roundhouse (Armit 1992).

It appears that there were three Atlantic roundhouses present in the Bhaltos peninsula, thus the Vallay model would suggest a similar number of wheelhouse settlements with little change in the division of the landscape. The Bhaltos evidence is at least consistent with this expectation.

The early/ mid first millennium AD, prior to the arrival of the Norse c AD 800, is characterized by the replacement of monumental building by cellular complexes which evolved out of the wheelhouse settlement form. This process is most clearly seen at Cnip where in the first century AD the wheelhouses were replaced by a less clearly structured and non-monumental cellular complex. The cellular structures excavated within the former broch tower at Loch na Berie (6) comprise the latest structures in a series there extending probably into the eighth century AD. Settlement at this period seems to have maintained the traditional foci: the two excavated Atlantic roundhouses contain cellular constructions or modifications as does the wheelhouse complex at Cnip and almost certainly the other wheelhouse on Traigh na Berie (12).

Souterrains are not a well-known site type in the Western Isles but parallels in better-excavated contexts would seem to date them to the earlier part of the first millennium AD. One of the Bhaltos examples (11) was exposed briefly in 1914 and cannot now be traced. A second souterrain at Sidhean a' Chairn Bhuidhe (10) was located by local contractors in 1965 and subsequently covered over. All that now remains is a series of wall fragments and possible platforms set in the northern and eastern lee of a rocky outcrop. It is tempting to compare these souterrains with the final phase in the Cnip complex where a sunken, rectilinear structure occupied the remains of the former cellular buildings, probably in the second century AD. However, in the absence of proper recording there is little that can usefully be added to the existing accounts of these structures.

Other sites which may relate to this pre-Norse occupation include nos 84 and 98 in the RCAHMS *Inventory* (1928). These comprised a complex string of middens and 'hut circles' along Traigh na Berie, containing much later prehistoric and possibly more recent material. Unfortunately it is no longer possible to locate these sites and the local evolution of the machair system makes the location descriptions provided by the Royal Commission impossible to follow in most cases. What does appear clear is that in 1914, when the sites were recorded, significant concentrations of archaeological material were being exposed and eroded along Traigh na Berie. Whether that material has been entirely lost through erosion or simply covered over by sand is unclear, although Ritchie and Mather describe indications of former erosion episodes in this area which may have removed these deposits (1970, 60). Two sherds of Samian ware, recorded from these beach-front middens by the RCAHMS (1928, no 98), represent the only find of Roman material from the area. Like the Western Isles as a whole, the Bhaltos area appears substantially unaffected by the Roman occupation of southern Scotland.

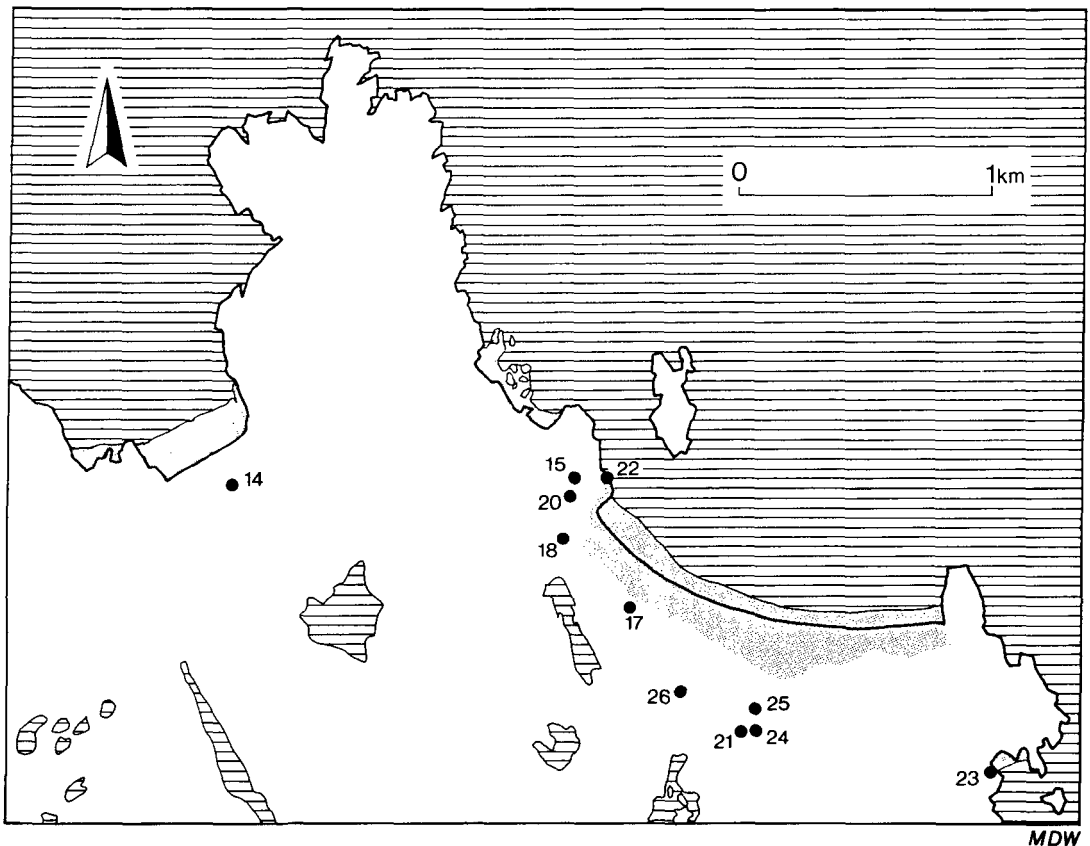
Similar midden traces were indicated on Traigh Cnip (RCAHMS 1928, no 97) with occasional traces of human remains. This site appears to correlate with the excavated wheelhouse and later complex at Cnip. Other sites such as the Teampull (RCAHMS 1928, no 99) at Bhaltos have entirely disappeared. Clearly survey in such an area can never hope to be definitive given the periodic exposure and subsequent covering over of so many sites.

One final site which may date to the centuries leading up to the Norse incursions is Cnip 2 / 3 (13), identified during the 1989 field survey and partially excavated (Armit & Dunwell 1992). Further excavation in 1992 confirmed that the elements recorded in 1989 did indeed form part of a single, extensive site (Dunwell 1992). The site represents a stratified settlement and industrial complex with evidence for both bronze- and iron-working. Importantly, in terms of the identification of threatened sites, no trace of these deposits is visible from the surface and discovery was made possible only by the erosion of the retreating dune face.

The number of sites and find-spots dating to the first millennium AD, prior to the Norse incursions, combine to suggest an element of population increase in the peninsula or that there was a larger number of individual settlement units over this period. It is possible that the process of settlement contraction discussed above in the context of the appearance of the Atlantic roundhouses may have continued into the immediately pre-Norse centuries as communities were forced more and more towards the rare patches of cultivable Lewis machair. Certainly the extensive beach-front middens point to intensive occupation of the machair at this time.

NORSE

There is a significant lack of Norse influence or activity on any of the settlement sites excavated as part of the Callanish Archaeological Research Project. This reflects a wider lack of evidence for Norse settlement throughout the Western Isles, despite burial evidence (represented in Bhaltois by sites 14 & 15, illus 9), the historical record and the strong body of linguistic data (particularly place-names). This in itself must tell us something about the nature of Norse settlement in the islands from the ninth century onwards. It certainly seems to imply a disruption in the patterns of settlement which had existed since the earlier part of the Iron Age with recurrent reoccupation of



ILLUS 9 Distribution of Norse sites and of settlement mounds. Based upon the Ordnance Survey map © Crown copyright

the same settlement locations. It is possible that the period marked a formal reorganization of land-holding and settlement generally, resulting in the absence of distinctive Norse artefacts from sites occupied in the earlier part of the millennium.

The most important concentration of Norse material in Bhaltos comes from the Norse cemetery on Cnip Headland (15). The first burial to be excavated here (in 1979) was a rich female grave of 10th-century date (Welander *et al* 1987). Subsequent excavations in 1991 and 1992 exposed first a child burial and then three adult inhumations close to the first grave (Dunwell in prep. b). The probable extent of this cemetery (the child burial is some distance from the other concentration of graves), and the wealth of the first grave to be excavated, suggest that an important Norse settlement must exist in the vicinity. Another female burial of ninth-century date was found in 1915 at Clibhe (14) but unfortunately the site cannot now be relocated. There are, however, numerous stony patches in the area, some of which may mask the positions of other burials.

It is probable that many Norse settlements in the Western Isles are either unrecognized among the mass of post-medieval rectilinear settlement forms, or else lie under modern townships. If the former explanation is true then an extensive programme of detailed survey and sample excavation will be required to establish means of recognizing Norse buildings among later structures of broadly similar morphology. The Bhaltos survey, however, has led to the recognition of numerous undated settlement sites on the machair itself, away from the potentially confusing mass of post-medieval settlement. The Cnip Headland cemetery lies near two sites of large settlement mounds (18, 20), either or both of which might represent contemporary Norse settlement (illus 10 & 11). These sites, and others like them in the area, are discussed below.

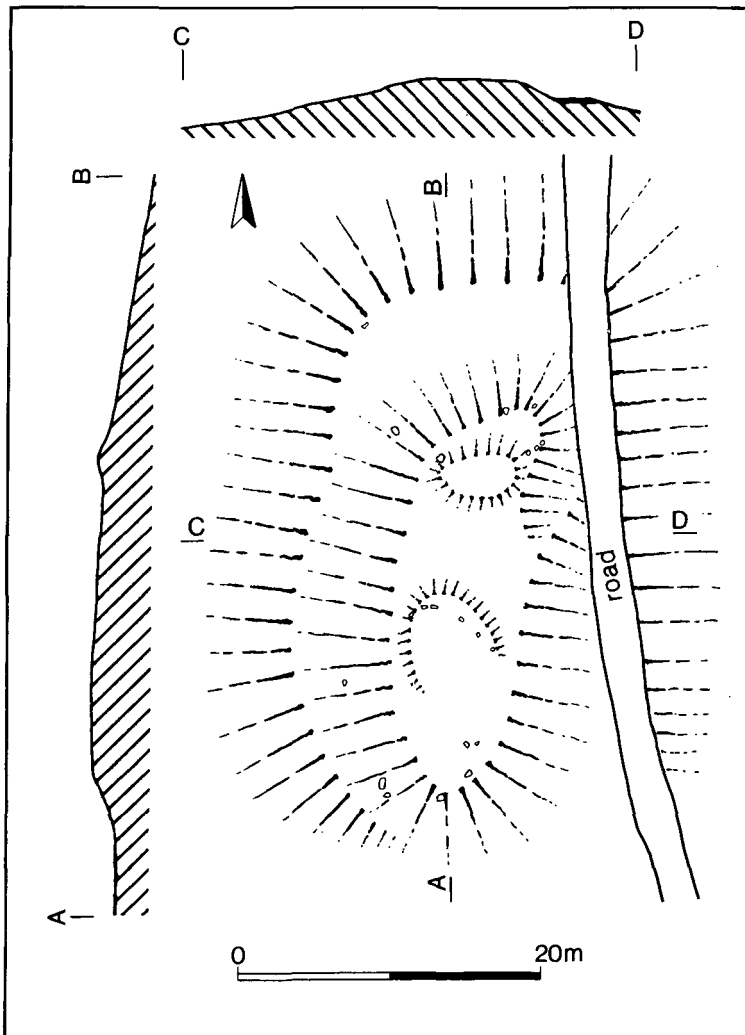
UNDATED SETTLEMENTS

A number of the undated settlement mounds and middens may relate to the later prehistoric period, Norse, or medieval, periods (illus 9). Nine such sites were located during the field survey. Many of these are very substantial (eg 18, 26), many have signs of extensive stonework, and all contain dense midden material (illus 10). A number of these sites were investigated by geomagnetic survey, and this generally confirmed their anthropogenic nature and indicated their considerable extent (Appendix 3).

Site 18 is a large settlement mound known locally as the Teampull (illus 10). It measures c 47 m long, north/south, by c 32 m, by c 3.5 m high and has gently sloping sides and a flat top with several set stones projecting through its surface. Magnetic and resistivity survey of the mound produced two complementary sets of data (Appendix 3, illus 24); resistivity in particular demonstrated the presence of at least two well-defined circular structures. The combined evidence of surface survey and geophysical prospection seems to indicate that the mound represents a substantial accumulation of structures.

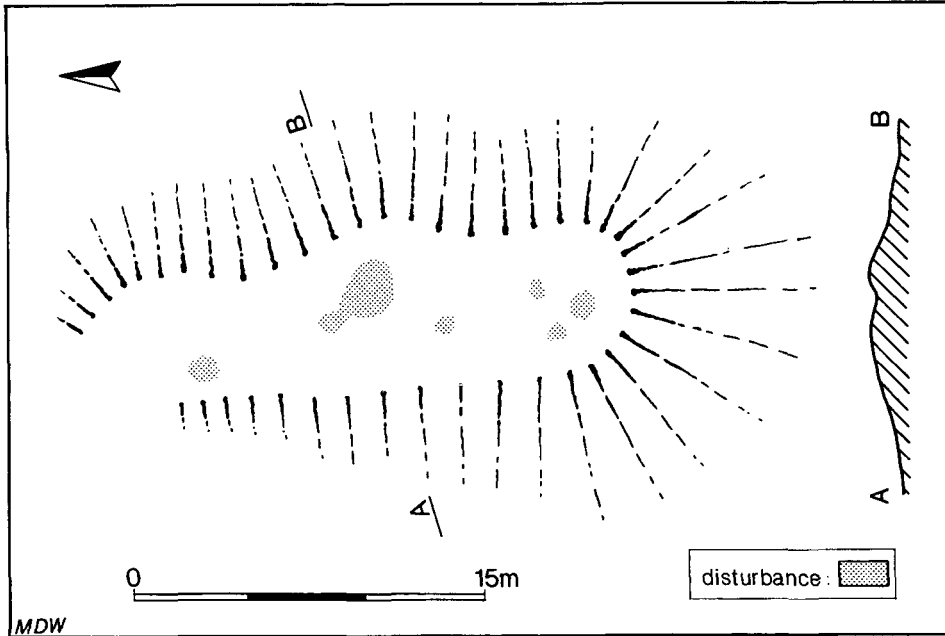
Another substantial rectilinear, flat-topped mound (20) measuring c 35 m north/south by 20 m east/west, by c 2 m high, lies immediately east of the road across Cnip headland, close to the known Norse cemetery (illus 11). Farther south along the Traigh na Berie, a steep-sided, flat-topped mound (24) measuring c 20 m north/south by 13 m in overall area and surviving to c 2 m in height, lies in an otherwise flat area of machair surrounded by deflating dune systems (illus 15). Nearby, a conical mound (25), lying in a similar relationship to the surrounding topography, measures 10 m north east / south-west by 7 m at its base and survives to c 1.3 m in height. Both appear to represent former areas of settlement and midden surviving as 'islands' of archaeology in a deflated machair plain.

All of these settlement mounds lie on the machair itself, below the level of later, post-medieval settlement on Traigh na Berie. They appear to represent former settlement locations.



ILLUS 10 Teampull Berie (site 18)

None has any indication of blackhouse-related structural forms and several have indications of revetted walling eroding from their edges. Comparable sites elsewhere have produced evidence for much of the known later prehistoric settlement in the Western Isles. In North Uist, for example, Erskine Beveridge trenched a large number of such mounds and found extensive traces of later prehistoric and – in retrospect, from pottery analysis – Norse material (Beveridge 1911; Lane 1983). It is quite possible that medieval material was located but not recognized and/or not retained. Crawford's long-running excavations at the Udal in North Uist have shown the chronological range of another such group of settlement mounds in an area near Beveridge's original work (eg Crawford nd). The likelihood must be, therefore, that in an area of known Norse occupation these settlement mounds include the remains of Norse settlement.



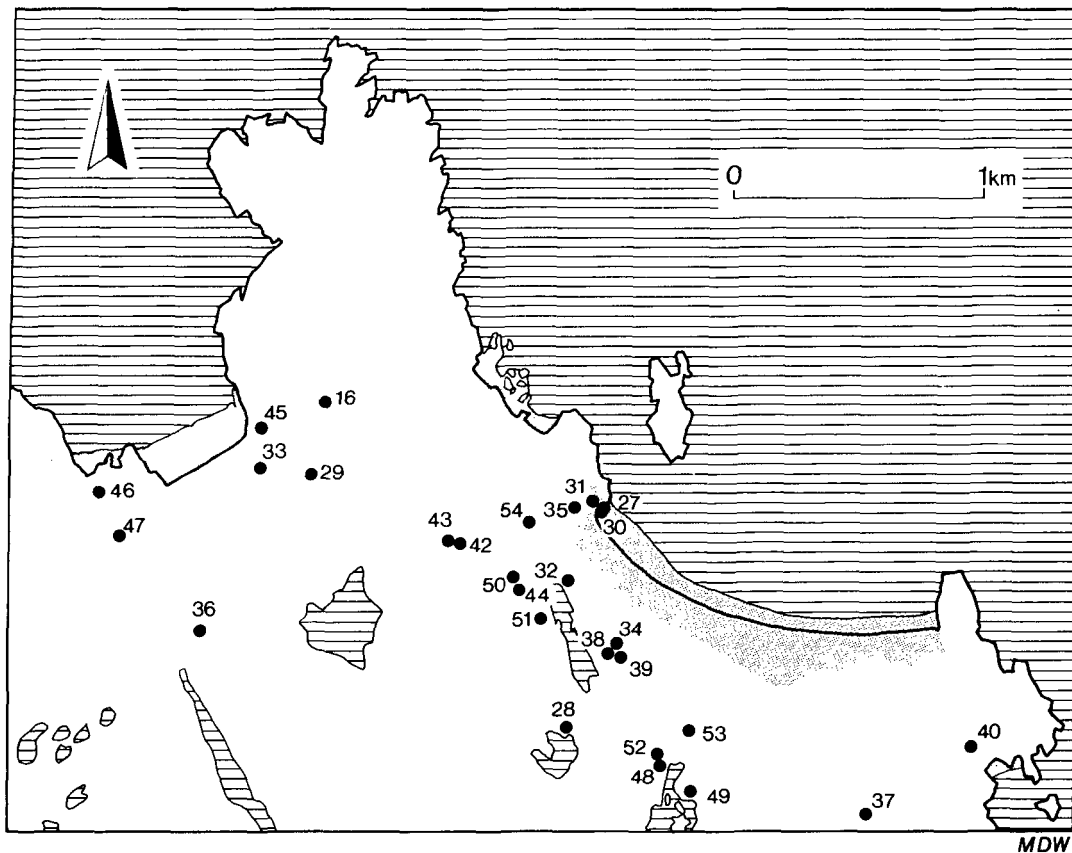
ILLUS 11 Settlement mound (site 20)

MEDIEVAL AND LATER

Medieval rural settlement in the Western Isles, as in the rest of Scotland, is very poorly understood, although a recent series of seminars and projects organized by Historic Scotland have begun to address the problem (Hingley 1993). Only the unpublished medieval elements of the Udal and perhaps Druim nan Dearcag in North Uist (Armit 1988; 1990a) represent medieval settlement excavated in recent years. Although outwith the Western Isles, survey on Skye has begun to make inroads into the disentangling of the complex medieval and later landscapes (eg RCAHMS 1993).

As in many upland areas the problem is one of definition and identification. Many medieval sites may be visible but indistinguishable from a mass of later settlement. The use of turf construction may have led to the decay of many medieval and later structures and this, together with stone-robbing of the boulder foundations, may have almost entirely removed them from the landscape. Examination of structures indicated as 'ruins' on the 1st edition Ordnance Survey map has shown that many of these (presumably abandoned as recently as the 18th or early/mid 19th century) would already be difficult to identify by archaeological means alone.

In the Bhalto peninsula numerous sites have now been identified which do not fit either the traditional blackhouse type, or any known earlier structural form (illus 12). These include a range of rectilinear structures, generally fairly small and with markedly rounded corners (40, 43, 44, 46, 48). An extensive agricultural landscape of uncertain date (but including probable early elements, eg site 42) is preserved in the area around Loch Trialabhat, in the Bhalto hills (illus 13, site 41). This area is too extensive to have been mapped within the remit of the present survey. Until a wider sample of possible medieval sites has been subject to some limited excavation, it will be impossible to progress beyond morphological classifications, to assess, for example, absolute chronologies of such monuments.

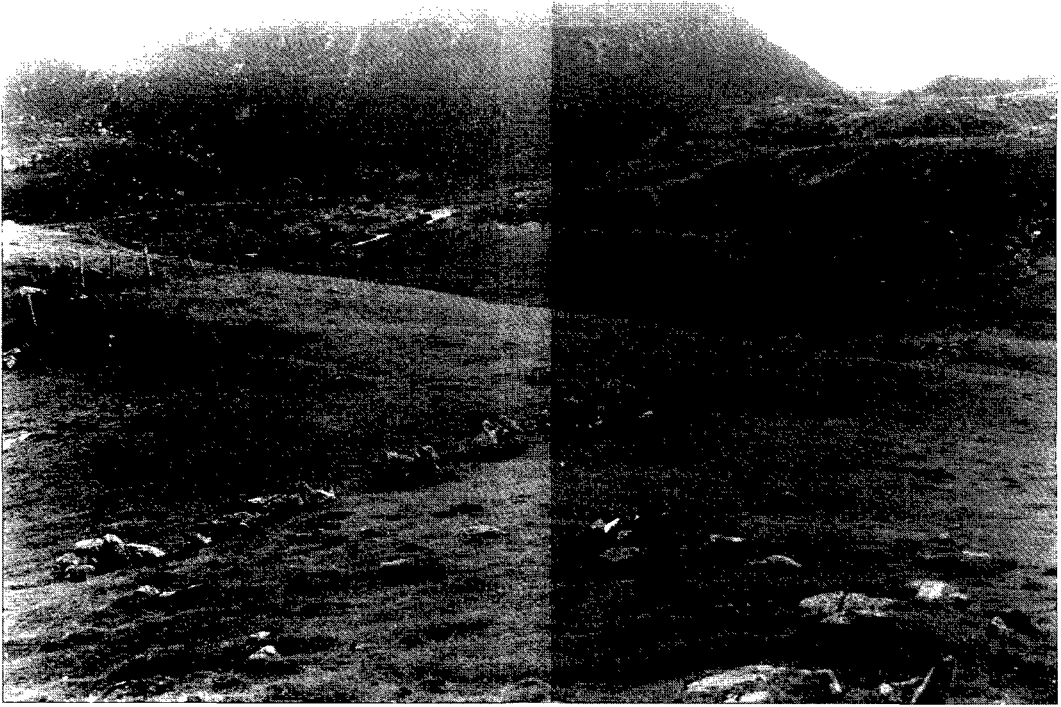


ILLUS 12 Distribution of miscellaneous, pre-19th-century features and blackhouse settlements *Based upon the Ordnance Survey map © Crown copyright*

One site which deserves special mention here is site 47, set on a locally high and dominant position overlooking Traigh Clibhe (illus 14). This comprises a rectilinear structure, apparently the focus of the settlement, five annular structures, two sets of parallel banks, and a series of rigs. The rectilinear structure is aligned approximately north-east / south-west and measures c 11 m by c 6.5 m externally. It has an entrance in its short south-west wall and a semicircular extension on the western end of its north wall. The annular structures vary from c 3.5 to 6 m in external diameter and appear as raised platforms with hollow interiors. The three to the north of the rectilinear structure have north-facing entrances while the others have no obvious entrances at all. They appear to be constructed largely of turf and earth, with little sign of stone walling.

This site has close structural parallels to Druim nan Dearcag and comparable sites in the Olabhat area of North Uist (Armit 1990a). Survey and excavation has shown the North Uist sites to predate the 18th century and earlier baile at Foshigarry. Their absolute date remains unclear but they have no obvious structural relationship to the baile settlements or to later blackhouses.

A further unusual group comprises site 49. Three rectilinear structures are visible as raised areas in the marshy field in which Loch na Berie lies. The structures are indicated as unoccupied on

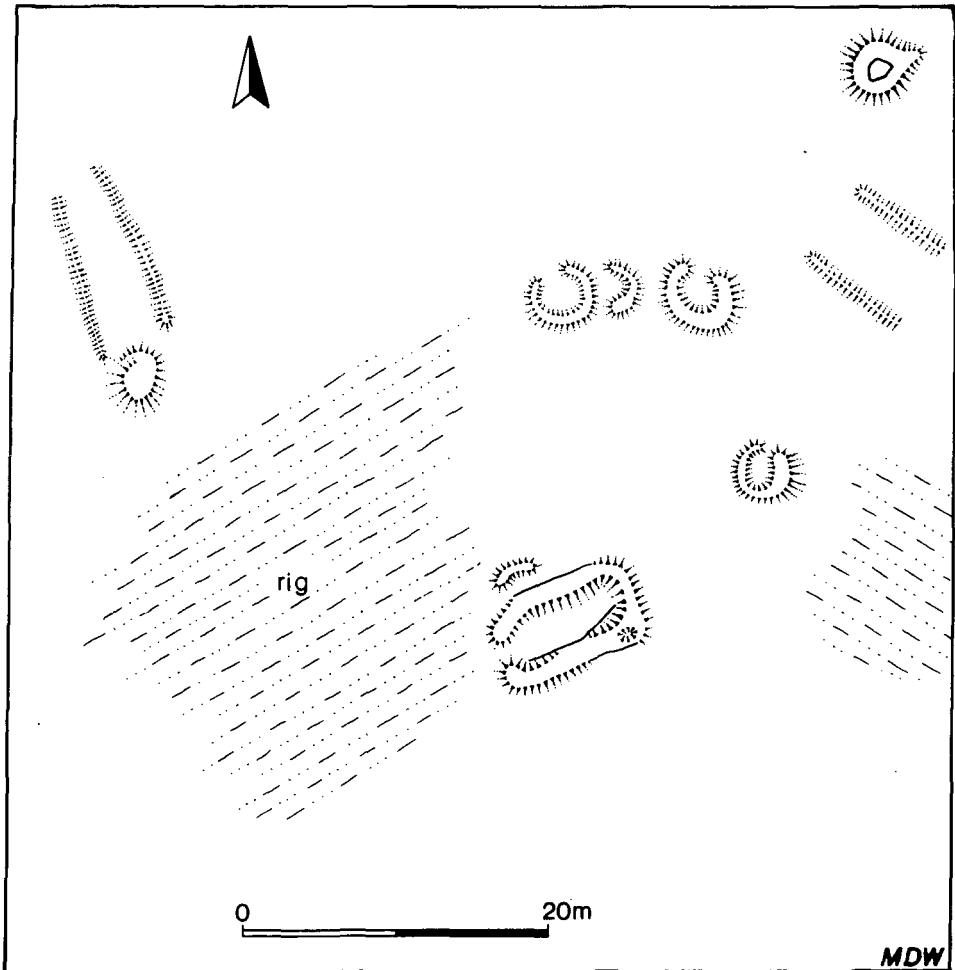


ILLUS 13 Agricultural remains around Loch Trialabhat

the 1st edition Ordnance Survey 6-inch map surveyed in 1850, which also indicates a further structure in the group. Of the three which can be traced, one is an enclosure while the other two are rectilinear structures (one 19 m by 8 m externally with an internal partition, and one 8.5 m by 6.5 m north/south). The dating of this group of structures is intriguing. Their location at the modern winter water-table argues for an early date, certainly earlier than the string of blackhouse settlements along the hill-foots. Morphologically, too, they are hard to relate to these blackhouse settlements. Probing of the structures revealed no trace of stone, indicating a construction of turf or timber. The structures must post-date the occupation of the eighth-century structures in Loch na Berie, on the basis of their geomorphological setting. They are perhaps most likely to date from the Norse or medieval period.

NINETEENTH CENTURY

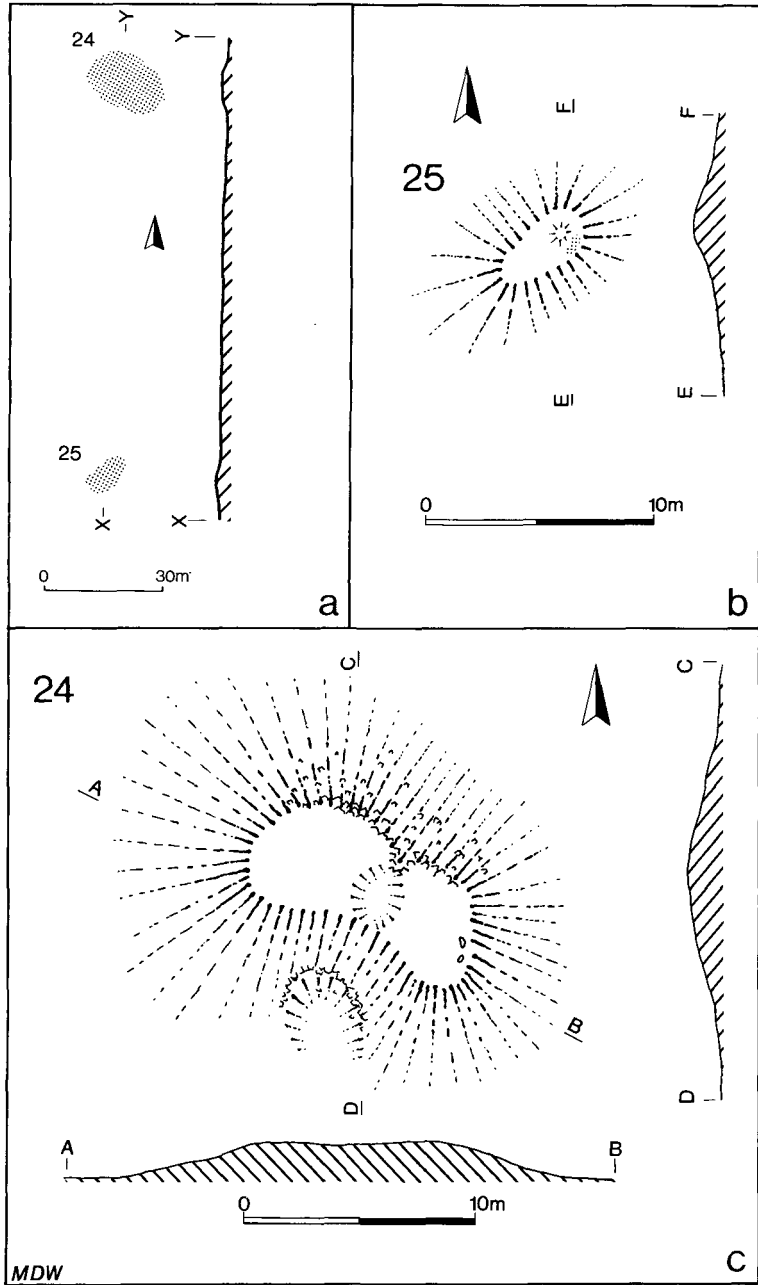
The evidence for 19th-century occupation in the Bhaltos peninsula, as elsewhere in the Western Isles, is ubiquitous. The 1st edition Ordnance Survey 6-inch map provides a useful indicator of the occupation patterns around 1850 and numerous changes are indicated on the 2nd edition surveyed in 1895. These maps show that 19th-century occupation on Traigh na Berie had all but left the machair for the slightly higher ground of the hill-foots, and the apparent (temporary) abandonment of two of the blackhouse settlements by 1850 (50, 51) shows that this move had taken place some time previously. This move was probably the result of the poor winter drainage of the machair plain. All-year-round settlement would certainly not be possible there now, given the winter



ILLUS 14 Settlement (site 47)

flooding. It is possible, then, that drainage has become much worse in the past few centuries and has caused the abandonment of the machair for permanent occupation. It is tempting to equate this process with the widely documented deterioration of the climate in the medieval period: the little Ice Age. This interpretation in turn reinforces the likely early date of the settlement mounds and other undated features on the machair plain.

Six settlements are indicated on Traigh na Berie on the 1st edition map of 1850, and two of those appear to have been abandoned by the time the map was surveyed. By 1895 the revised map shows a number of changes: of the three sites in the southern part of the area, two had been rebuilt as smaller settlements (53, and the now-vanished predecessor of Berie House) and the other (52) had been abandoned. In the northern part of the area, Liongol (54) had been abandoned while sites 50 and 51 had been re-occupied. Site 51 contains a large and exceptionally well-built blackhouse, with numerous developed features (eg a window, fireplace etc), which appears for the first time on



ILLUS 15 Sites 24 and 25

the 1895 map as an extension to the reoccupied earlier blackhouse shown on the 1850 map. At site 50 a number of secondary rebuildings and partitions appear to relate to its reoccupation. A number of the surviving structures can now be given construction and/or abandonment dates relative to the map data, ie pre-1850, 1850–95 and post-1895. The sample of structures is too restricted to draw conclusions on architectural development and wider aspects of settlement pattern change, but clearly an accumulation of data from other well-surveyed areas in combination with the historical records would enable such models to be developed. Preliminary work by Colin Lofthouse at Baleshare (1990) demonstrated the potential of intensive survey on a Hebridean baile site.

MISCELLANEOUS

A number of other structures were recorded which are difficult to relate to any specific chronological periods (illus 12). These include two series of ‘Norse’ mills (28, 37) which may be medieval or later in construction (they were used probably until the 19th century). Other undated features include a boat noust (27), and a number of walls and banks on the machair (31, 32). Similarly, a cairn (34) located in a sand blow-out may be of any period, as may a small shell midden on Traigh na Berie (30).

GEOPHYSICAL RESULTS

The possibilities and the problems associated with geophysical survey in the machair environment are demonstrated in the results from Bhaltois. Full details of these results are provided in Appendix 3 (fiche) and only the more general conclusions are outlined here. On different sites magnetic and resistivity survey have been variously successful. Magnetic survey appears particularly suitable for establishing the presence of archaeological deposits suspected on the basis of surface fieldwalking. It seems, however, less able to provide detail of sub-surface deposits, possibly due to the erratic magnetic qualities of the Western Isles gneiss used as building stone. Resistivity can provide such detail (as with site 18) but appears very prone to problems associated with sand depth.

Neither technique seems suitable for initial prospecting for sites, since both require considerable background information for interpretation, and sub-surface features unsupported by surface observations would be unreliable. In the context of a co-ordinated programme, however, supported by surface mapping and coring, an appropriate use of both techniques can provide both confirmation and added detail to our knowledge of machair sites.

Further refinement of both geophysical techniques on the machair would be useful. This might take the form of further control experiments on various natural machair landforms, and of test-trenching geophysical anomalies on a known, large machair site. While the Bhaltois survey offers scope for the former type of experiment, none of the sites in the study area appears suited to the second approach for which one of the extensive Uist machair sites would appear more suitable.

DISCUSSION

The Bhaltois survey has highlighted a series of dislocations in the settlement record which relate also to wider patterns of settlement in the Western Isles. The first recognizable dislocation appears to come at the beginning of the Iron Age when, for the first time, monumental domestic buildings are constructed. Earlier settlement in Bhaltois, as elsewhere, is suggestive of more extensive and seasonally based economies in which the elaboration of the domestic base was not an important concern. This change may have been due in part to environmental factors which tended to

compress settlement onto the coastal belt and may have created tensions over land rights and resources.

The density of recorded sites of probable early prehistoric date in Bhalto – despite the destructive environmental processes, despite problems of recognition and despite intensive later settlement – points to its having been a relatively densely settled area in this period. The absence of unambiguous Neolithic sites, including chambered cairns, need not contradict this view since such sites are very few in the northern and southern extremities of the Long Island, being concentrated in North Uist. It is probable that the area was one of well-established Mesolithic settlement and that the material culture associated with farming was late in being adopted. The occurrence of ard marks under the Bronze Age kerb cairn (2) and of a redeposited polished stone axe in the Pictish levels at Berie (6) show that there was activity earlier than the first recognizable sites.

A model for early prehistoric settlement in North Uist has been proposed on the basis of excavated sites at Loch Olabhat and Eilean an Tighe and their relationship to widely distributed islet occupation sites in the interior of North Uist (Armit 1992). This suggested a virtual abandonment of the interior during the second millennium BC leading to a concentration of settlement on the coasts. The resultant social dislocation and pressure on resources led to increasing competition between groups and gave rise to the development of the Atlantic roundhouses. Bhalto was one of the richest areas of Lewis in recent centuries and would not be expected to be subject to any reduction in population in terms of the North Uist model. Instead one might expect a greater density of settlement in the first millennium BC, reflecting the decreasing viability of areas inland from Loch Roag. An implication of this model is that the poorly surveyed inland areas and lochs may well contain evidence for pre-Iron Age settlement comparable to that found away from the heavily settled coastal belt in North Uist.

The second major dislocation in the settlement pattern came with the Norse incursions. There appears to have been a deliberate avoidance of settlement sites occupied in previous centuries, despite the funerary evidence for a Norse presence. This may have been associated with a period of reorganization of land holdings associated with the new Norse élites, although more traditional interpretations might see it instead as evidence for a dramatic change in the actual population of the area. Perhaps the most important aspect of the survey has been to establish the existence and potential of the series of settlement mounds for the future study of the period from the first millennium AD through the Norse and medieval periods. The further selective study of these sites, through excavation and environmental reconstruction, could have important implications for a period of which very little is known in the Western Isles and might yet yield the ‘new’ sites that must presumably have been established in the latter part of the first millennium AD.

The final apparent dislocation came with the abandonment of the machair plain for settlement and the retreat instead to the hill-foots where all settlement concentrated on the 19th-century maps. This might well have been associated with deteriorating climatic conditions in the middle of the present millennium. It provides a potentially useful marker for the relative dating of sites such as the settlement mounds which are entirely confined to the machair plain.

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