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# Farming on the edge: Cultural Landscapes of the North



NORDLIGE  
VERDENER

**Short papers from the network  
meeting in Lerwick, Shetland  
September 7th - 10th 2010**

**Edited by Ditlev L. Mahler &  
Carina Andersen**



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## **Farming on the edge: Cultural Landscapes of the North.**

Some features of the Neolithic of Shetland.

Short papers from the network meeting in  
Lerwick, Shetland, September 7th - 10th 2010.

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Front cover:

Part of the Neolithic settlement area, Pinhouland, West Mainland. Photo by Ditlev L. Mahler, summer 2010



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**Northern Worlds  
The National Museum of Denmark  
Copenhagen 2011**





# Content

- **Northern Worlds The interdisciplinary research initiative of the National Museum** 4  
*Hans Christian Gulløv*
- **Shetland – the Border of Farming 4000-3000 BC Some Features of the Neolithic of Shetland** 6  
*Ditlev L. Mahler*
- **From Homestead Enclosure to Farm? Field Development in Shetland in the Neolithic Period** 19  
*Val Turner*
- **The Post-Glacial Colonization of Shetland – Integration or Isolation? Evidence from Lithic and Stone Assemblages** 32  
*Torben Ballin*
- **Early Agriculture at the Border** 44  
*Flemming Kaul*
- **Highlights from the Northernmost Bronze Age societies in Norway** 58  
*Preben Rønne*
- **Post-Medieval Reuse of Neolithic Sites in Shetland** 70  
*Ian Tait*
- **Three ancient cultivation tools from Shetland** 80  
*Jenny Murray*
- **Contributors** 92

# Northern Worlds

## The interdisciplinary research initiative of the National Museum

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The National Museum of Denmark has initiated its most comprehensive interdisciplinary research venture so far: Northern Worlds. Between 2009 and 2013, the programme will produce and communicate new knowledge on the relationship between people and environment over the last 15,000 years in ways relevant to the present, with its notable climatic changes.

The research initiative Northern Worlds combines and coordinates the expertise of the National Museum within the disciplines of archaeology, history, ethnography, conservation and natural science (environmental history).

Northern Worlds has 20 different sub-projects, which are led by researchers from the various research departments

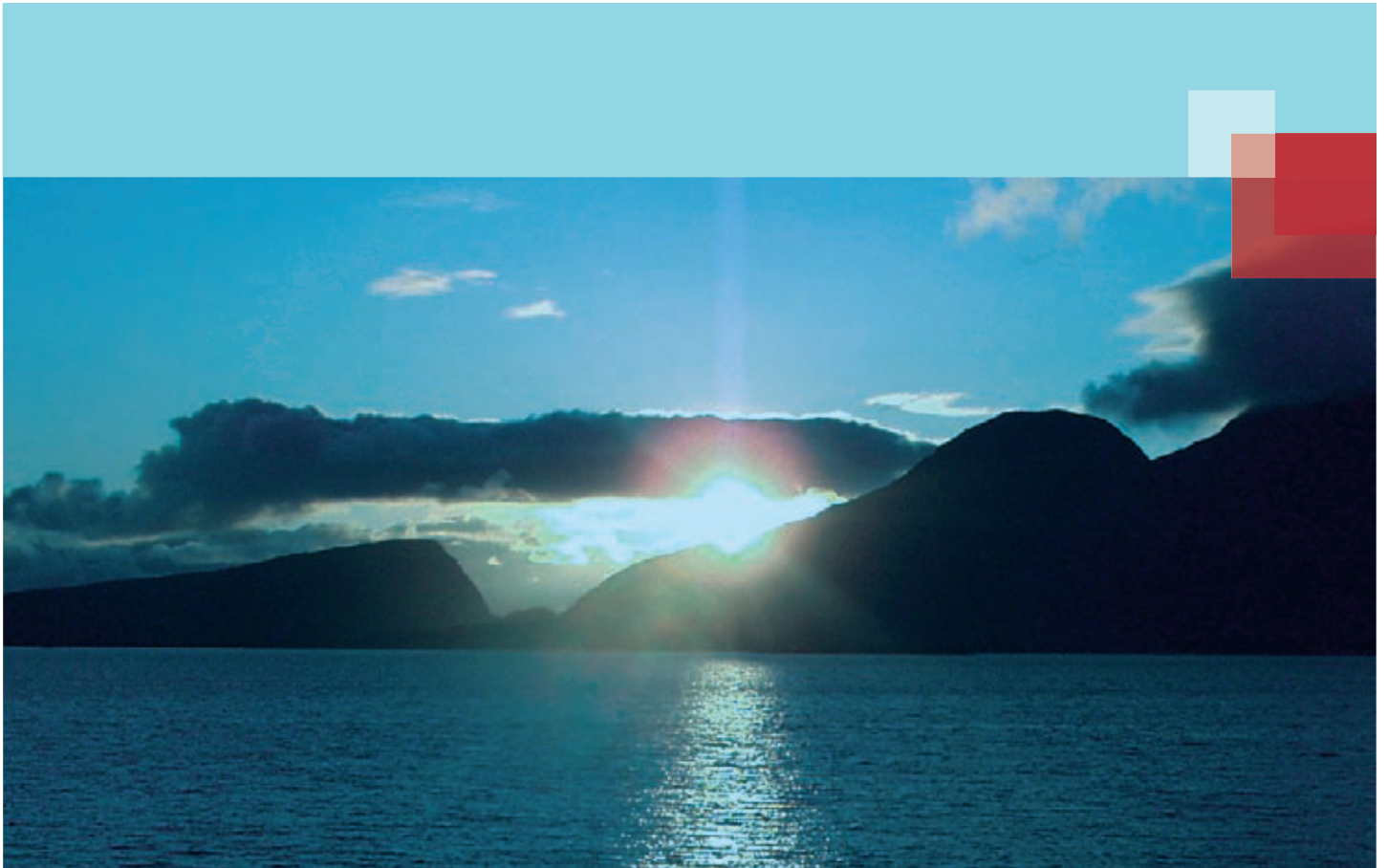
at the National Museum. The projects are organized within three main research areas defined to create sufficiently broad, dynamic and interdisciplinary research environments for the following topics:

### **Climate changes and society: When climatic boundaries move**

The focus of Climate changes and society concerns selected periods within the last 15,000 years, during which time climate changes radically affected the lives of northern prehistoric and historic peoples. This will put the influence of present-day climate changes into perspective.

### **Farming on the edge: Cultural landscapes of the North**

The expansion of agriculture into the



temperate and sub-arctic zones of the planet represents a more than 6,000 year long narrative, characterized by repeated advances followed by stagnation. Farming on the edge focuses on periods and areas with large potential for the creation of new knowledge on agricultural advances and their associated social structures and ideologies. The ultimate boundaries of farming communities in different parts of Scandinavia and the North Atlantic are explored. The project Shetland – the Border of Farming 4000-3000 BC is part of this initiative.

**Networks in the North: Communication, trade and cultural markers**

The 'marginal' northern peoples have always been organized in cultural and

trade-based networks that connect them with the wider world. Through studies of material culture, Networks in the North will allow the unique expertise of the National Museum to map and explore the geographical extent of these northern networks.

In economical terms, Northern Worlds is the National Museum's greatest research initiative ever. The Augustinus Foundation is the main funder of Northern Worlds. It is with pleasure that it is possible to present the first report from the network conference held in Lerwick, Shetland, September 7<sup>th</sup>-10<sup>th</sup> 2010 within the scientific project Shetland – the Border of Farming 4000-3000 BC.

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# Shetland: The Border of Farming 4000-3000 BC

## Features of the Neolithic Period on Shetland

*Ditlev L. Mahler*

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### Introduction

Through an examination of the various elements constituting the Neolithic Period, the research project will provide a comparative analysis involving the Neolithic communities in Shetland and Scandinavia with particular emphasis on Southern Scandinavia. The comparative elements do not merely involve farming such as grain cultivation and domesticated animals, but also ornamented ceramics, polished tools, the use of the ard, ritual depositions in wetlands as well as monumental structures including megaliths and gathering places. These diverse elements constitute the Neolithic Period in Southern Scandinavia; however, they are not all present simultaneously. Rather, some are present at an early stage whereas others appear relatively quickly after. Renewed analyses

point to a rising ritualisation of the early Neolithic communities as part of an explanation (Jensen, J. 2001: 409 ff.). It is certain though, that a Neolithisation occurs among the existing population in Southern Scandinavia shortly after 4000 BC, without disregarding a certain population displacement from the South.

Compared to Southern Scandinavia, the existing conditions on Shetland are rather different because Shetland does not have exact traces of a Mesolithic population which could turn Neolithic. In 2004-2005 though, very early dates of 4200-3600 cal BC were connected to a kitchen midden excavated at West Voe, Sumburgh (Melton 2009: 184, see also Melton 2007: 99, 2008: 23 ff.). Even though none of the West Voe finds can tie the area to a Mesolithic environ-

ment, or a Neolithic for that matter, the presence of hazel may indicate the possibility of at least Mesolithic visits on Shetland (Edwards et al. 2009: 113). In this context, hazel should probably be viewed as a cultural plant due to its vegetational development here (Jóhansen 1985: 78-79; Malmros 1994: 552-558; Turner 1998: 20). Rather than addressing why the Neolithisation happened, the research project will explore the mentioned Neolithic elements in order to assess when and how the Neolithisation occurred.

### **Why choose Shetland?**

There are several reasons to choose Shetland as one part of a comparative analysis. First of all, Shetland is considered to be the northernmost area of Europe where farming was practised as a result of the expansion around 4000 BC. After a standstill of about 1,000 years on the Continental lowlands just south of the Baltic, the farming economies expanded to the North and West. In Scandinavia, the expansion ebbed away at Svinesund on the border of present day Sweden and Norway 58,5° North, while it reached its ultimate boundary on the British Isles approximately 60° north on Shetland, and according to past marine technology further expansion was impossible. Absolute dates from Shetland are infrequent, but the dates from Scord of Brouster, 3870 cal BC (Edwards &

Whittington 1998: 14) and 4029 cal BC (Owen & Lowe 1999: appendix 7) have been confirmed as some of the oldest.

Shetland is moreover a closed unit, although it is scarcely also a closed laboratory. One of the tasks set by the research project will be to clarify possible outward relations after the islands were first colonised by the farming population. It is evident that the Neolithic cultures on Shetland were related to the rest of the Neolithic traditions in North-West Europe, and it is just as evident that the Neolithic communities developed their own cultural traits in regards to tools, building traditions, and grave monuments.

### **Shetland and the National Museum of Denmark**

The National Museum of Denmark has a certain tradition of working together with Shetland without overrating this aspect. In 1839, 'Governor' (amtmand) on the Faroe Islands Christian Pløyen (1803-1867), planned a journey to Shetland and Orkney (Pløyen 1840), a journey which caught the attention of Carl Christian Rafn. Rafn (1795-1864) was then secretary for the 14 year old Royal Society of Northern Antiquaries and in Christian Pløyen he recognised an opportunity to enrich the National Museum of Denmark with finds from Shetland. Thus, Pløyen became in charge of procuring

multiple contacts to the museum and subsequently shipped many Neolithic finds to the museum (Jensen, I. & Jensen, J. S. 1988: 211 f.) and today; as a result, the National Museum of Denmark contains a rich and varied collection of especially knives and some felsite axes. Felsite is a type of stone occurring as dykes in the granite of North Mavor on Shetland. It is a very

fine grained volcanic rock primarily consisting of feldspar and quartz (Lund et al. 1996: 259; see also Ballin this vol.). Pløyen actually also provided the comparative collection of the National Museum of Denmark with a fragment of a Viking bone comb (Hansen 2008: 178). Later, further finds of a coarser sort of rock, presumably recovered by a certain Dr. James Hunt during a visit in 1841 in Sefster, Mainland were later brought to the National Museum of Denmark. The finds in question are so-called 'rude stone implements' with a relatively wide dating (Clarke 2006: 109 f.).

Fig.1: One of the felsite axes in the collection of the Danish National Museum.



### Axes and knives

Of the several felsite tools in the collection of the National Museum of Denmark is a felsite axe (fig. 1) which will be used as a representation of Shetland felsite tools as well as to illustrate the division of felsite axes and knives into a type classification system. Specifically, it is a point butted axe with a length of 22.5 centimetres which derives from Mainland, Shetland according to the only information of find details in our possession. It is completely polished with the exception of a single area on the one narrow side, and the small hacks in the edge are presumably recent. A careful examination of the axe reveals no traces after hafting or of wear on the edge. The axe is Neolithic and though its point butted shape allows for a wide



Mahler photo

Fig. 2: Some Shetland Knives in the collection of the Danish National Museum.

dating, it quite possibly dates back to the Early Neolithic Period on Shetland.

In order to classify this particular felsite axe, it was compared extensively to similar felsite tools in the stores of Shetland Museum in Lerwick during the summer of 2010. After exploring the collection of felsite axes and other felsite tools it became clear that the axe from the National Museum of Denmark could be tied to a large group of around 55 felsite axes in the possession of Lerwick Museum. All of the axes are large, up to 36 centimetres in length as well as completely polished and contrary to other

felsite axes in the care of Lerwick Museum they reveal no traces of wear, re-sharpening or hafting. These common traits as well as formation, size, cross section etc. allow for a temporary type classification of the 55 axes into six types of which the point butted axes without traces of wear etc. have been categorised as type 1. After classifying the axes by type it has also been possible to arrange the axes chronologically: The type 3 axes are then quite possibly Middle Neolithic and the axes from the type 6 category are probably from the Late Neolithic Period or Early Bronze Age (see also Murray this volume fig. 5).

The unclear and sparse find circumstances of the type 1 felsite axes make it rather difficult to affirm what these axes were intended for. There appears, however, to be an apparent connection of these axes to the wetlands or peat deposits on Shetland, even though the type 1 axes usually are stray finds. It is possible then that the axes were intended for ritual deposition; similar to the deposition of the large, completely polished point and thin butted flint axes in Southern Scandinavia (Jensen, J. 2001: 421; Mahler 2002: 4 f.). Both the Southern Scandinavian flint axes as well as the type 1 felsite axes from Shetland may very well have been intended for ritual deposition as a socio-economic activity in the Early Neolithic "big-man" society (Sahlins 1968: 96 f.).

As part of the collections of the National Museum of Denmark are also numerous felsite knives and knife fragments and compared to the felsite axes, the Shetland felsite knives appear to be a more complex group of objects. After exploring the larger collection of felsite knives from Lerwick Museum, it became clear that the felsite knives can be divided into perhaps six different types. Among the types are the type 1 knives which also go by the name Shetland Knives. These knives are oval, 2-3 millimetres thick and measure approximately 15 x 12 centimetres. They occur in ritual

deposits in collections of up to 19 specimens (Fojut 2006: 35) and are characterised by a completely polished appearance without retouch, facets, or traces of hafting. Similar to the type 1 felsite axes, the Shetland Knives must also have been produced for ritual purposes. Fojut suggests that the type Shetland Knives date to the Late Neolithic Period (idem 2006: 37) whereas the types of knives with no retouch or traces of re-sharpening probably could have a wider dating in the Neolithic.

The type 1 axes, Shetland Knives, and the Southern Scandinavian thin butted axes from the large ritual deposits are especially interesting, as their common aesthetic characteristics cannot be random. As part Early Neolithic, part Late Neolithic objects, their aesthetic qualities still apply today as well as in the early years of archaeology where they caught the attention of both national and international collectors. At the time of production, the objects were also almost definitely regarded as unique and valued for their intended aesthetic features. The technique and shape are closely linked together as the technique was continually perfected so the objects would please the human sense of beauty. Such careful control of both technique and shape conveys a signal of excess and luxury (Boas 1955: 20, 22). Though it is unnecessary to polish a certain axe to



Fig. 3: The view from Beorgs of Uyea where huge amounts of felsites has been quarried.

perfection, it is probably through this aspect we discover its aesthetic qualities. To illustrate this careful control of technique and shape, Boas chose a Late Neolithic fishtail dagger from Southern Scandinavia (Boas 1955: 41).

### **The Quarries**

Even the quarries, of which the raw material derives from, emphasize the unique

aesthetic qualities of these objects. One of the earliest known quarries is Boergs of Uyea near North Roe on the Northern Mainland (Scott & Calder 1953: 171 f.) where the bluish felsite runs as deep dykes in the reddish granite. An overwhelming amount of flakes are scattered around the area, and unfinished or discarded rough outs are not unusual here, evidence that vast amounts of felsite must have been quarried during the Neolithic Period (fig. 3). Especially Bo-

ergs of Uyea was primarily used for extraction of the material used for these particular felsite axes and the rough outs must have been moved and polished elsewhere. The quarry has actually been called a factory (Turner 1998: 49), although one may wonder why the number of known axes in the museum stores today does not correspond with the activity traces here. Boergs of Uyea is impressively situated and can boast of a spectacular view. Also, the quarries are visible from the sea and were most likely accessed from the sea in the Neolithic Period.

In comparison, the felsite quarries on Mid Field are not visible from the sea, but while the area is overflowing with flakes, it is largely recognised for its individual knapping places. Mid Field is located near Grut Wells on the highest point of Shetland, Ronas Hill (388 m.a.s.l.) and the area was primarily used for cutting rough outs for knives, especially Shetland Knives. Depressions in the terrain clearly show how the quarries follow the single dykes of felsite and if the areas with geologically occurring felsite were systematically explored, it would surely result in the acknowledgement of a great many quarries. Clusters of small knapping places are actually scattered across the entire area from Mid Field all the way down to Roe Water. Although not visible from the sea, the Mid Field

quarry is just as impressively situated as Boergs of Uyea and the phenomenal aspects of both quarries are certainly astonishing (compare Hamilton & Whitehouse 2006: 31).

### **Monumental grave structures**

Shetland is a finding place of many Neolithic grave monuments and although their dimensions usually are rather small, they are still of monumental quality. The Shetland grave monuments consist of cairns, some without chambers and others with chambers that are more or less clearly connected with a passage. The condition of the cairns does, however, present problems of dating as only a few of the graves have been professionally excavated while others are dilapidated because they were used as quarries in the 19th and 20th Century. Those graves which are quite similar to passage graves are most likely Neolithic due to the characteristically trefoil shaped ground plans of their chambers (Henshall 1963, vol I: 135; Calder 1964: 37f.), although some of the cairns also contain stone cists probably dating to the Bronze Age. Although skeletal material from the Shetland Neolithic Period is rare, a stone cist containing the remains of 18 individuals was recovered at Sumburgh, Mainland and later <sup>14</sup>C dated to 3315 cal BC (Turner 1998: 41; Owen & Lowe 1999: appendix 7).

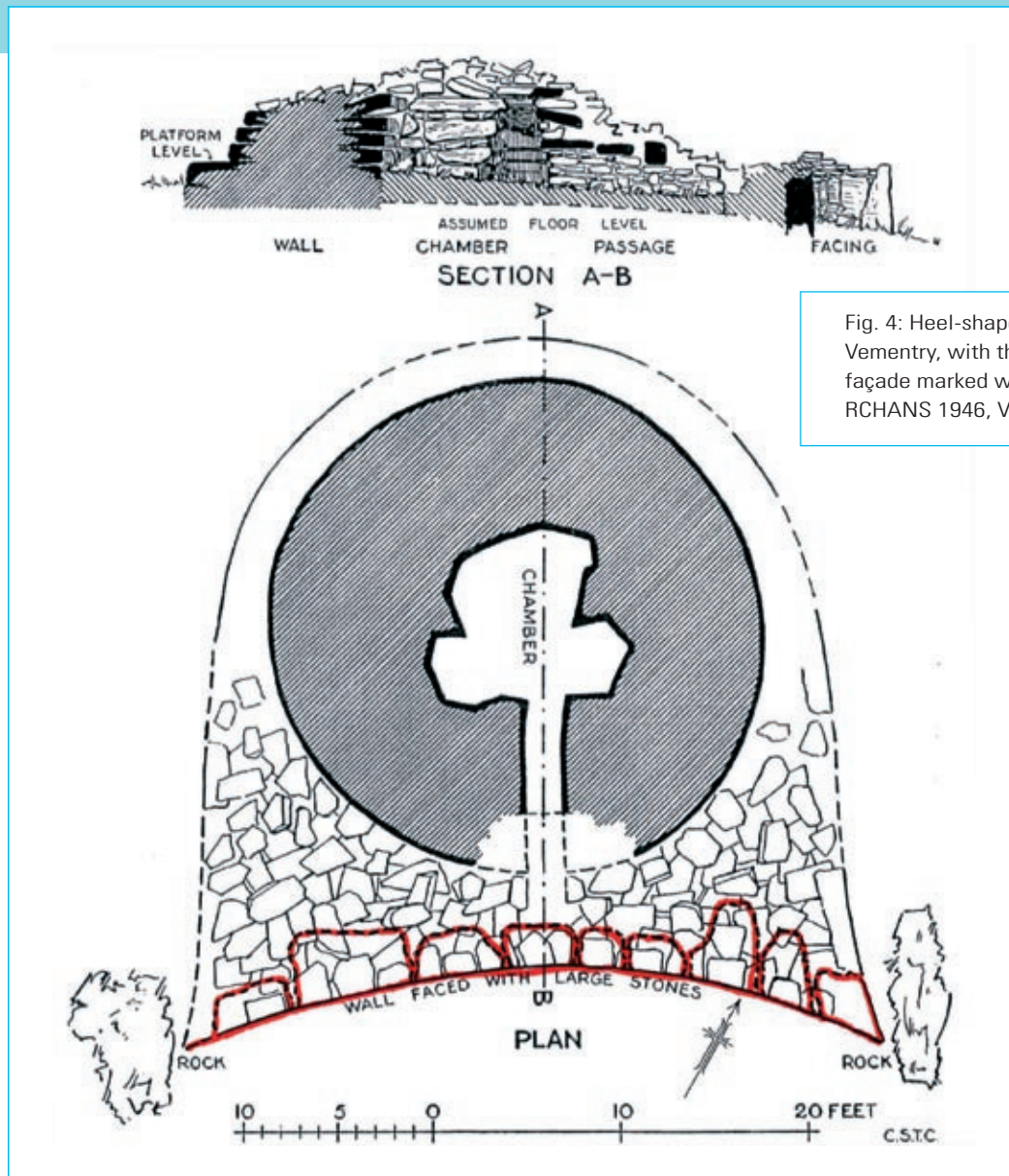


Fig. 4: Heel-shaped cairn, Vementry, with the secondary façade marked with red. After RCHANS 1946, Vol. III: 115.

One of the well-preserved passage graves is located on the Isle of Vementry at the northern coast of Walls-Sandsting in a spectacular setting (Turner 1998: 65). It is evident that the structure contains several phases (fig. 4) when observing the original outline and section plan measured by Calder in RCAHMS

(1946, Vol. III: 115). Representing the oldest phase is the cairn of 6.3 metres in diameter enclosing an approximately 2.3 x 2 metres large trefoil shaped chamber out of which a 2 metres long passage leads south-east. In this case the heel shaped front, one of the characteristic standard features of Shetland grave

monuments, was later lengthened by 7.3 metres and several stones were affixed to the cairn making the mid axis 7.7 metres in length. The heel shaped front actually blocks the passage from the chamber, thus the front must be younger than the construction of the chamber (see also Fojut 2006: 25).

As mentioned in the introduction, Shetland is the northernmost location impacted by the farming expansion about 4000 BC. Shetland is also the location of the northernmost megalithic tomb of Europe and several candidates apply. On Saxa Vord is one which is composed of five dilapidated cairns, and with its height of 270 m.a.s.l., it is the highest point on Unst. When these cairns were visited in 1930, it was considered possible that one of the cairns was once chambered, but due to the lack of evidence it cannot be affirmed (RCAHMS 1946: 135). Back then, the cairns were already heavily damaged as a consequence of the construction of modern land marks and today the cairns no longer exist.

Another possibility is the passage grave on Hill of Caldback, Unst which is an obvious candidate from Henshall's perspective (1963: 162). Originally, it was 12.5 metres in diameter containing a small chamber of 1.5 metres in diameter as a centre. A passageway leading

south-east from the chamber was originally 4 metres long. We may possibly never obtain clarification of its original appearance and must content ourselves with evidence of the northernmost existing passage graves. This site is part of the 2011 field work plan.

### **Gathering place?**

When Stanydale was excavated by Charles Calder in 1949 (Calder 1951), he initially described it as a temple, but Calder's interpretation as well as the placing of Stanydale in a Mediterranean context were later revised. It is no wonder though, as archaeology as science is still developing and making progress over time. Still, Stanydale hall is nevertheless an archaeological challenge (fig. 5). The two ailed hall measures 13 metres in length and 6 metres in width and with its two large post-holes in the centre, 3 metres thick walls and six built-in niches it is an unusual structure. It could either be conceived as a great residential structure or as a hall with a separate function. It is certain, however, that Stanydale's present appearance is a result of its reconstruction after Calder's excavation. Taking a closer look at the outline of the hall, the structure clearly consists of several phases of which two at first stand out from the others due to an asymmetrical appearance (Calder 1951: 187). The mid axis which is indicated by the two strongly built post-

holes is the only evidence revealing the original structure. Later the structure's mid axis is turned 14 degrees in an easterly direction and the heel shaped front with the attached symmetrically positioned entrance was constructed. Although the Late Neolithic pottery shards found in the area indicate a late dating, it is still not clear when Stanydale was constructed. Neolithic structures can, as we know, have a very long life expectancy (Fojut 2006: 27).

Stanydale is situated in a rare location on Shetland as it is one of the few Neolithic structures from where the sea is not visible - a location which cannot be random. The hall is surrounded by a distinct cultural landscape consisting of standing stones, stone dykes, smaller structures both of Neolithic and Bronze Age character as well as six cairns. Also,

stones have been placed in a stream located to the southeast of the hall (Bradley 2000: 97 f.; Bender 2000: 23 f.) leading us to believe that all these features cannot possibly be random and several questions arise: How is the view from the hall and how is the view to the hall from the standing stones as well as from the cairns? Is there any indication of a connection between the various features of the hall and its surrounding structures which may be able to elucidate the unique qualities of Stanydale? If these questions are answered perhaps then will the function of the hall in the ritualised Neolithic society become clearer (compare Ingold 2000: 77)

### Buildings

The Shetland landscapes are awash with settlement structures and unmistakable activity traces in the shape of

Mahler photo



Fig. 5: Stanydale seen from Southeast as it appeared during fieldwork 2010.

stone dykes and clearance cairns. West Mainland in particular is a significant location in this regard due to the widespread peat growth which has sealed most of the Neolithic relics in this area since the (Late) Bronze Age (Calder 1964: 37f). In comparison, evidence shows that the East Coast had greater potential for grain cultivation, leading scientists to consider West Mainland as a more pastoral landscape whereas the east and south supplied the grain on Mainland (Edwards & Whittington 1998: 16). Settlement archaeology especially owes much to Charles Calder who undertook a series of important investigations at the end of the 1940s and 1950s (see also Whittle 1986: 1-3).

The latest recovered Neolithic locality, Scord of Brouster, was excavated by Alistair Whittle in 1979 and consists of four buildings of which House 2 is the oldest. It is located on a south-east facing slope and is enclosed by field dykes and cairns. As mentioned previously, the oldest activity traces found here place Scord of Brouster shortly after 4000 BC. Evidence indicates that the domesticated animals raised here were primarily livestock, although bones from sheep and occasional game such as deer have also been found. All mammals on Shetland, though, must have been brought here by humans (Noddle in Whittle 1986: 132). Traces of charred grain found in

the area suggest a cultivation of barley, but traces of threshing waste are scarce (Milles in Whittle 1986: 119) and the few wheat grains found here are regarded as weeds in the barley field. This picture, however, is supplemented by Ness of Gruting (Calder 1957) which, though, is dated to 2301 cal BC (Owen & Lowe 1999: appendix 7).

### Conclusion

At this stage in the development of the research project, it is clear that the mentioned elements give the impression of a functioning Neolithic community. A comparison of the Neolithic features of Shetland with those of Southern Scandinavia shows that many, if not all the elements constituting the Neolithic communities are present during the Neolithic Period. Furthermore, it is actually possible to draw many parallels between the Neolithic communities on the continent (especially North West Europe) and Shetland. It will be interesting to see what 2011 will reveal.

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### Bibliography

Bender, B., 2000. Investigating Landscape and Identity in the Neolithic. *Neolithic Orkney in its European context*. Ritchie, A. ed.: 23-30.

- Boas, F., 1955. *Primitive Art*. New York.
- Bradley, R., 2000. *An Archaeology of Natural Places*. London.
- Calder, C.S.T., 1951. Report on the Excavation of a Neolithic Temple at Stanydale in the Parish of Sandsting, Shetland. *Proceedings of the Society of Antiquaries of Scotland*. (1949-50): 185-205.
- Calder, C.S.T. 1957. Report on the discovery of numerous Stone Age house-sites in Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 89: 340-97.
- Calder, C.S.T., 1964. Cairns, Neolithic houses and burnt mounds in Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 98 (1963-64): 37-86.
- Clarke, A., 2006. Stone Tools and the Prehistory of the Northern Isles. *BAR British Series* 406.
- Edwards, K.J., Schofield, J.E., Whittington, G. and Melton, N.D., 2009. Palynology "On the Edge" and the Archaeological Vindication of a Mesolithic Presence? The case of Shetland. *From Bann Flakes to Bushmills, papers in honour of Professor Peter Woodman*, Finlay, N., McCartan, S., Milner, N. and Wickham-Jones, C. eds.: 113-123.
- Edwards, K.J. & Whittington, G. 1998. Landscape and environment in prehistoric West Mainland, Shetland. *Landscape History*. Vol. 20: 5-17.
- Fojut, N., 2006. *A Guide to Prehistoric and Viking Shetland*. Lerwick.
- Hamilton, S. & Whitehouse, R., 2006. Phenomenology in Practice: Towards a Methodology for a "Subjective" Approach. *European Journal of Archaeology*. Vol. 9 (1): 31-71.
- Hansen, S.S., 2008. A Shetland Viking Comb in Copenhagen. *Proceedings of the Society of Antiquaries of Scotland*. 138: 177-183.
- Henshall, A.S., 1963. *The Chambered Tombs of Scotland*. Vol. 1 & 2, Edinburgh.
- Ingold, T., 2000. The Perception of the Environment. *Essays on Livelihood, dwelling and skill*. London.
- Jensen, J., 2001. *Danmarks Oldtid*. København.
- Jensen, I. & Jensen J.S., 1988. Det kongelige Nordiske Oldskriftselskabs breve 1825-1864. *Aarbøger for Nordisk Oldkydighed og Historie*. (1987): 211-273.

- Jóhansen, J., 1985. *Studies in the vegetational history of the Faroe and Shetland Islands*, (Annales Societatis Scientiarum Færoensis Supplementum, XI), Tórshavn.
- Lund, J. et al., 1996. *Den store danske encyklopædi*. Vol. 6.
- Mahler, D.L., 2002. Efterskrift. Maglehøjsvange ti tyndnakkede flintøkser - et nyt offerfund fra Sørup Rende. *Ledøje-Smørum Historiske Forenings Årsskrift*. 4-17.
- Malmros, C., 1994. Exploitation of Local, Drifted and Imported Wood by the Vikings on the Faroe Islands. *Archaeobotany. Botanical Journal of Scotland*. 46, part 4: 552-558.
- Melton, N.D. 2009. Shells, seals and ceramics: an evaluation of a midden at West Voe, Sumburgh, Shetland, 2004-5. *Mesolithic Horizons, Papers presented at the Seventh International Conference on the Mesolithic in Europe*, Belfast 2005. McCartan, S., Schulting, R., Warren, G. and Woodman, P. eds., Vol. 1: 184-189.
- Melton, D.N. & Hicholson, E.A., 2007. A Late Mesolithic – Early Neolithic midden at West Voe, Shetland. *Shell Middens in Atlantic Europe*. Milner, N., Craig, O. E. and Baily, G. N. eds.
- Owen, O. & Lowe, C., 1999. *Kebister: The Four-thousand-year-old Story of One Shetland Township*. Society of Antiquaries of Scotland Monograph Series Number 14. Edinburgh.
- Pløyen, C., 1840. *Erindringer fra en Reise til Shetlandsøerne, Ørkenøerne og Skotland i Sommeren 1839*. Kjøbenhavn 1840.
- RCAHMS, 1946. Twelfth Report with an Inventory of the Ancient Monuments of Orkney & Shetland. Vol. III. *Inventory of Shetland*. Edinburgh, His Majesty's Stationary Office.
- Sahlins, D., 1968. *Tribesmen*. Foundation of Modern Anthropology Series.
- Scott, L.G. & Calder, C.S.T., 1953. Notes on a Chambered Cairn, and a Working Gallery on the Beorgs of Uyea, Northmaven, Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 86, (1951-1952): 171-177.
- Turner, V., 1998. *Ancient Shetland*. Historic Scotland. London.
- Whittle, A., Keith-Lucas, M., Miles, A., Noddle, B., Rees, S. and Romans, J.C.C., 1986. *Scord of Brouster. An Early Agricultural Settlement on Shetland*. Oxford University Committee for Archaeology, monograph no. 9.

# From Homestead Enclosure to Farm?

## Field Development in Shetland in the Neolithic Period

*Val Turner*

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### Introduction

In Shetland there are two types of settlement patterns which are generally ascribed to the Neolithic/Bronze Age periods. These take the form of single Enclosures and Multiple Field Systems. The discussion of these sites which follows is part of a wider study into the form and function of prehistoric to Norse field systems within Shetland, which focuses on Shape Analysis, Boundary Analysis and Soil Micromorphology.

The purpose of this paper is to explore whether there are geographical reasons which might explain why some Enclosure sites show evidence of developing into Multiple Field Systems whilst others appear not to have done. Issues relating to possible differing functions between the sites will be explored in the wider study (Turner, forthcoming) and this determined the selection of the

principle sites in the study. These were selected from the Shetland Sites and Monuments Record because they each have clear complete or near-complete enclosure boundaries.

### Enclosure Sites and the Multiple Field Systems

The defining characteristics of the Enclosure sites are that they comprise a boundary which is sub-circular and include a house site which is situated either within, or at the edge of, the enclosure. These sites were originally termed "Homestead Sites" by the Ordnance Survey and appeared on their mapping as such. Their simple appearance may indicate that they are of an early, and therefore Neolithic, date but excavated examples are few and the excavations which have taken place largely predate the raft of more sophisticated dating techniques which are becoming increasingly avail-

able to even modest archaeological projects. It is therefore difficult to date the Enclosure sites with any certainty, although approaches have been proposed based on typology (Turner, 1998; Downes and Lamb, 2000: 119-123). Ballin-Smith (2005: 75) suggested that the excavated example at Catpund is Bronze Age on the basis of the artefact assemblage, which she compared with that from the Scord of Brouster, House 1, which was radiocarbon dated to between  $2510 \pm 70$  BP and  $1715 \pm 75$  BP (Whittle 1986: 75). This comparison is interesting in itself because it suggests that the sites are contemporary. It is possible that an Enclosure may have originally been part of a more extensive pattern of land use which included boundaries which are no longer visible. Alternatively, the lack of other visible boundaries may arise because such boundaries were never needed, for example if stock were tethered, and therefore cleared, cultivated, areas of land did not need enclosing. Alternatively, boundaries may have been constructed of wood and therefore no longer be readily identifiable in the present day landscape.

The Multiple Field Systems comprise several small, irregularly shaped fields, described by Noel Fojut as tear-drop shaped (pers. comm.), and which are usually, but not necessarily, contiguous. Each field system contains one or more

visible prehistoric house sites and many of them also contain mounds of stones cleared from the fields during the course of agriculture. Whittle excavated two clearance cairns at the Scord of Brouster (1986) and established that they contained larger stone at the bottom than they did at the top. Whittle interpreted this as being due to the size of stone removed from the field diminishing over time.

The majority of the Multiple Field Systems which are known to survive today are located on the West Side of Shetland. Four of these were included in this study. A site of broadly similar appearance was identified in the South Mainland and was also selected in order to increase the geographical spread. Many of the field systems on the West Side have lengths of substantial prehistoric dykes between them. Some of these appear to be aligned on hill tops or Neolithic chambered cairns, and some follow ridges or shoulders of hills. These often disappear into areas of deeper peat between the sites. Fojut (2006) suggests that these might define early "estate boundaries" and indicate that the division of the hill was sufficiently important to justify the considerable labour which would have been required to undertake it.

The Multiple Field Systems appear to be more complex than the Homestead En-

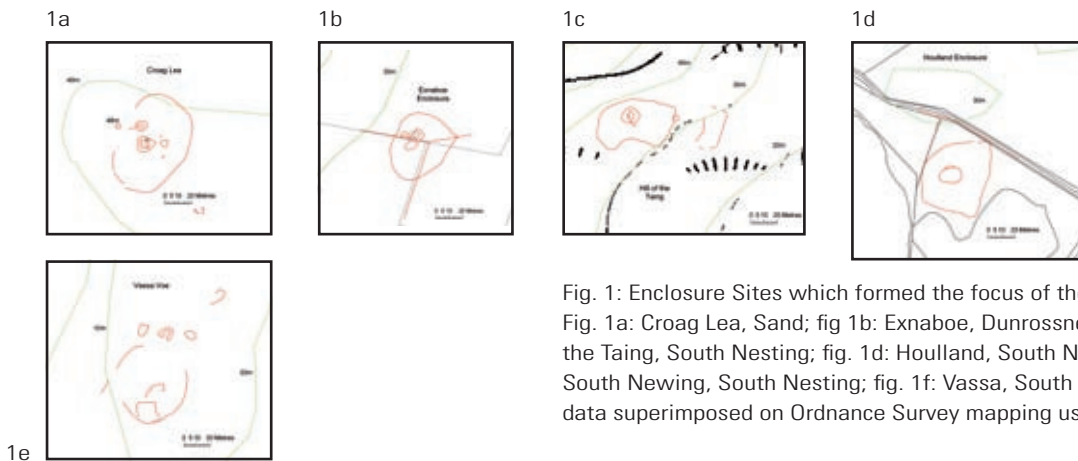
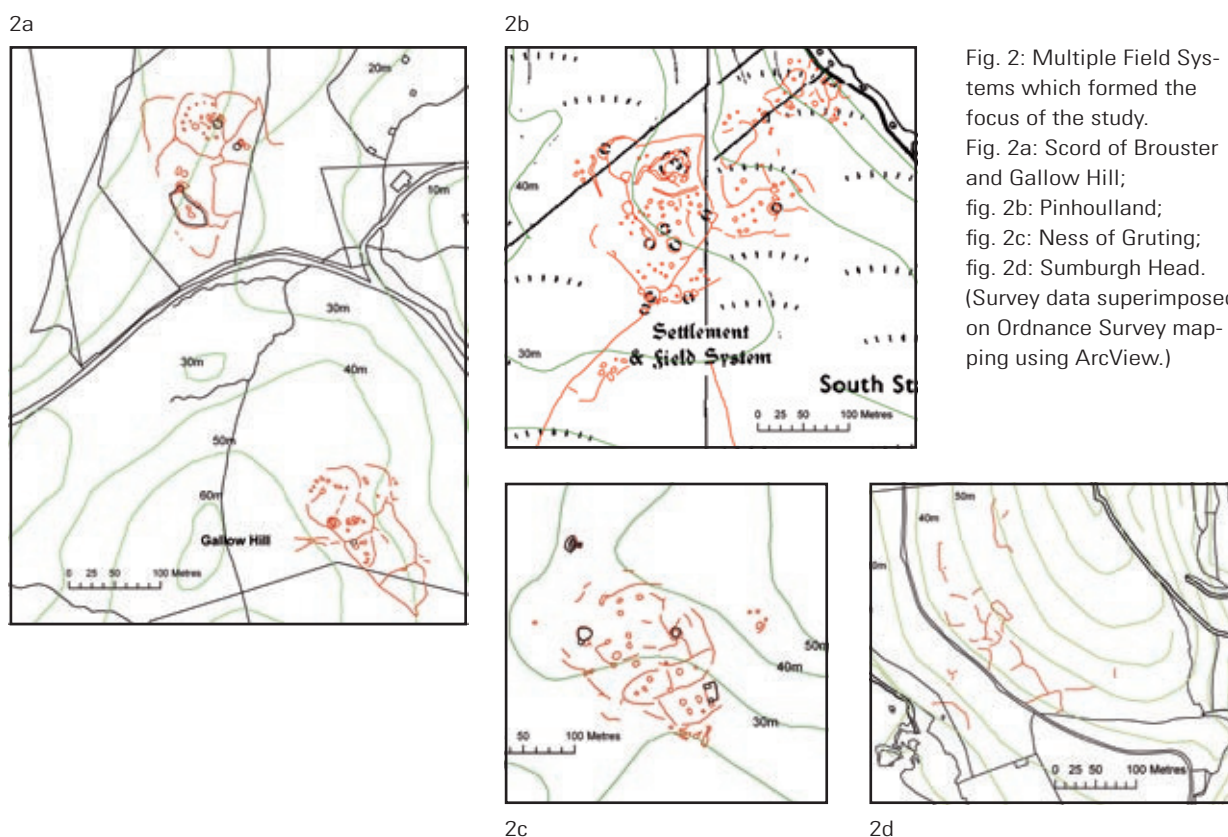


Fig. 1: Enclosure Sites which formed the focus of the study.  
 Fig. 1a: Croag Lea, Sand; fig 1b: Exnaboe, Dunrossness; fig. 1c: Hill of the Taing, South Nesting; fig. 1d: Houlland, South Nesting; fig. 1e: South Newing, South Nesting; fig. 1f: Vassa, South Nesting. (Survey data superimposed on Ordnance Survey mapping using ArcView.)

closures, but, as already demonstrated, were not necessarily any later in date. Whittle's excavations (1986) demonstrated that the Scord of Brouster was of long duration, spanning the Neolithic/Bronze Age, with the earliest occupation of the site being dated to around 2500 BC. He suggests that the end of the occupation may have coincided with the start of the peat growth around 1500 BC. Whittle also established that the field system was something which developed over time, although elements of both the inner and outer field systems may have been in place early on in the life of the settlement.

Shape Analysis was carried out on the Enclosures and the individual fields within the Multiple Field Systems (Turner, forthcoming). The results demonstrated that each of the Neolithic/Bronze Age Multiple Field Systems in the study included a field where the Shape Factor and Convexity were commensurate with it

having originated as a homestead Enclosure. Not all of these included the visible remains of a house and so the results might be considered ambiguous, although, as survey at Vassa demonstrates, a house site was not always located within the Enclosure. It would appear however that there is some degree of boundary inheritance and reuse or continuity of use of the land from the Homestead Enclosure to the Neolithic/Bronze Age multi-field systems. This might include the re-use of land which was previously farmed although unenclosed, or enclosed with fences rather than stone. Soils work, carried out at South Nesting by Simpson in 1994, and developed in Turner (forthcoming), demonstrates that apparently unenclosed fields were cultivated and associated with single unenclosed house sites during the Bronze Age (Dockrill et al, 1988) although they have no visible boundaries associated with them.



### Geology and Soils

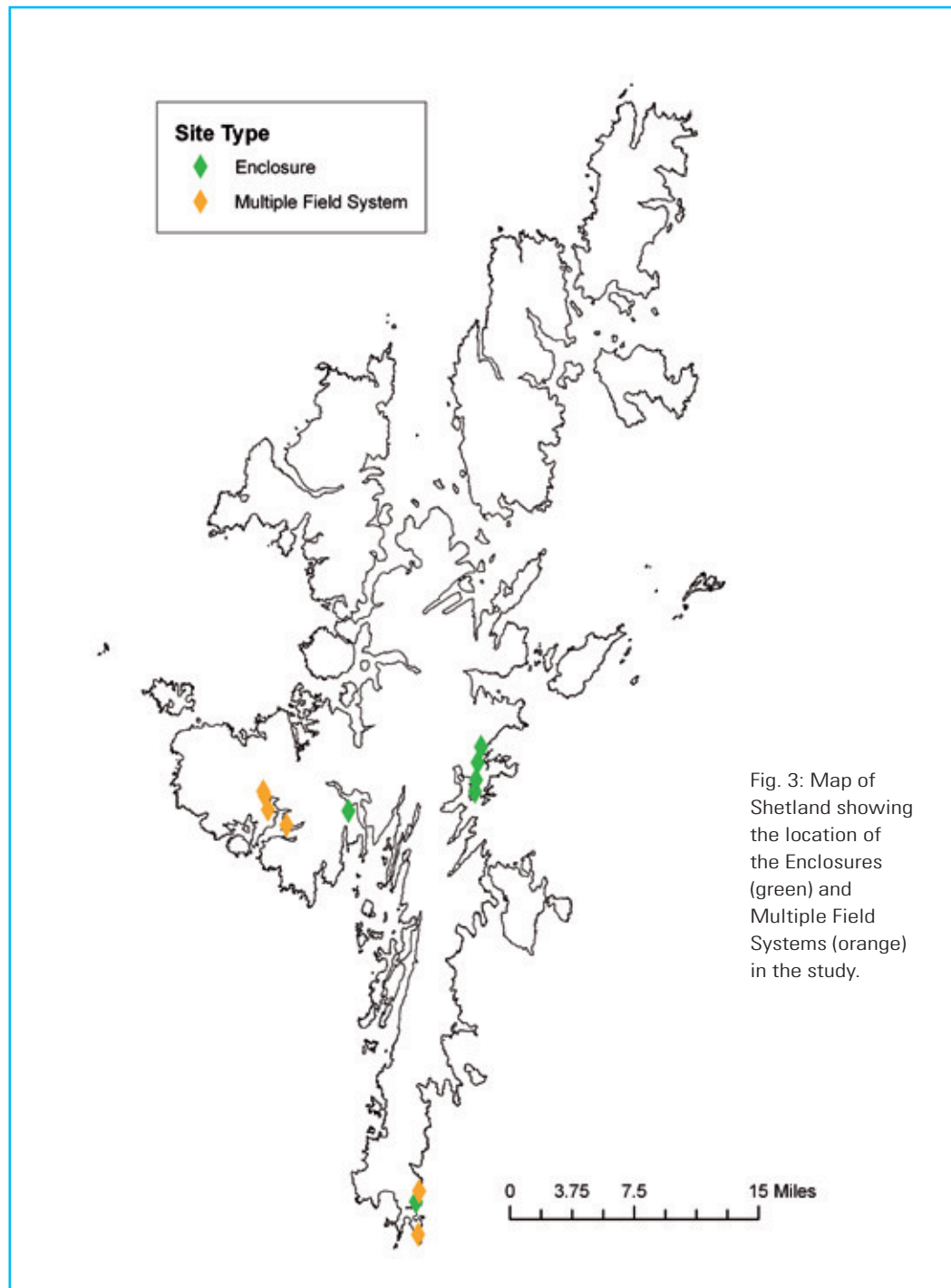
The six Enclosure sites considered in the study are located on three different types of solid geology. Three (Hill of the Taing, Houlland and Vassa) are on calc schist, a metamorphism of calcareous silt or mud (J. Swale, pers. comm.), which would have produced a reasonable agricultural soil. Exnaboe was situated in a fairly favourable location geologically: at the junction of fish beds, which are also calcareous silt occasionally with thin limestones, (J. Swale, pers. comm.) and which would have added some calcium and therefore a degree of fertility to the

soil, and flaggy sandstone, which although soft is good building stone. Croag Lea, however, is situated on granitic gneiss which would only ever have produced a thin, stony, acidic soil. The drift geology may have gone some way to redeeming this, as it includes till and moraine. The granitic gneiss would potentially have provided good building stone, depending on the localised jointing. South Newing is also on granitic gneiss, but a limestone band runs through the area and the drift geology includes lake alluvium; both of these would be likely to have contributed to the fertility of the area.

The Soil Survey of Scotland “Land Capability for Agriculture” 1:250.000 map ranks three of the Enclosure sites (Hill of the Taing, Vassa and South Newing) as having a value of 6.3. This is classified as land capable of use only rough grazings, dominated by heather moor, bog heather moor and blanket bog. Croag Lea is on the border of this land and land with a value of 5.2 (land capable of use as improved grassland). Land at Exnaboe is valued as 6.1 (land capable of use only as rough grazings, with a high proportion of palatable herbage). Although none of these appear particularly promising for agriculture, the best land in Shetland is only rated at 4, land producing a narrow range of crops. Areas, such as the South Mainland of Shetland, which are known to have produced crops of barley and oats in the post medieval period (see for example Shetland Museum and Archives’ photographic collection) are rated as only 5.2.

The geology suggests that all six sites would have had some agricultural potential, particularly if the soils were amended in order to maintain and enhance fertility. It is possible that the geology was therefore a factor which influenced the choice of location. This is not, however, immediately apparent from the condition of their soils or their ratings in these areas today.

Four of the six Multiple Field Systems are located on the West Side of Shetland, and all are situated on Old Red Sandstone. Soils derived from sandstone are likely to be free draining, less prone to water-logging and easily worked although there are exceptions. The disadvantage of free draining soils is that nutrients would leach out rapidly and so the inherent fertility of the soils might need to be maintained. Today these sites are all in acidic, peaty, land. The drift geology is described as peat and/or bedrock at or near the surface and so would not have contributed much additional nutrition. However, if managed, these soils could have been made to be productive and the longevity of use identified by Whittle at the Scord of Brouster indicates that they were (Whittle, 1986). Work on the soils at Old Scatness (e.g. Guttman et al. 2008; Turner et al. 2010; Turner et al. in press) demonstrates that Old Red Sandstone, which produces quartz sands, can provide a good foundation for productive soils. The Sumburgh Head site is located on fish beds, close to the flaggy sandstone. As at Exnaboe, the fish beds would have provided a degree of natural fertility, whilst the nearby sandstone also provided good building stone. The correlation between the Multiple Field Systems and sandstone suggests that Neolithic/Bronze Age people knew how to enhance the soils in order to make them productive.



This will be tested by soil micromorphology (Turner, forthcoming), which has the potential to demonstrate anthropogenic activity which can be set in the context of natural pedogenic and sedimentary processes (Dockrill and Simpson, 1994).

Archaeologists are just beginning to understand the degree to which the sandstone in the West Mainland was important for the manufacture of the stone tools, including ard points, which were found to be so abundant at the Scord of Brouster (Whittle, 1986). Shallow quarry pits and associated chipping floors have recently been identified both at Sumburgh Head (Turner, forthcoming) and in the hill land in the West Mainland (observation by Turner and Cowley). The manufacture of stone tools, particularly ard points and “spades” was fundamental to the effectiveness of the Multiple Field Systems and their hinterland, defined perhaps by the boundaries which extend beyond the field systems (for example as mapped during the survey at Pinhoulland and at Gallow Hill), may have been just as important to the economy of the sites as the cultivated land itself. Thus the geology of the sites may have influenced the location of successful field systems beyond its contribution to the makeup of the soils.

Each of the sites at Gruting, Pinhoulland, Gallow Hill and the Scord of

Brouster has a Land capability value of 5.2, land capable of use as improved grassland with high growth rates and satisfactory stocking values. Sumburgh Head is on land valued as 6.1, land capable of use only as rough grazings having high proportions of palatable herbage.

Overall, the Multiple Field Systems are land which is rated as having a higher value for Land Capability than that occupied by the Homestead Enclosures. The underlying geology and the resultant capacity of the land do therefore seem to have influenced the locations of the Multiple Field Systems, although Sumburgh Head is an exception.

### **Height Above Ordnance Datum**

The height Above Ordnance Datum (aod) may have had significance in the location of the site types under consideration, not least because height could potentially impact on climate, the nature of the soils and the length of the growing season. The heights of the Enclosures in the study range between Vassa (3-13 metres aod) to Croag Lea (38-42 metres aod). The Multiple Field Systems have an even wider range: Pinhoulland starts close to sea level (3 metres aod) but the core area of the site rises to 39 metres aod. The field systems at Gallow Hill and the Scord of Brouster rise to heights of 50 and 51 metres aod respectively.

It is generally believed that the upland sites were inhabited at times when the climate was better and when there was also pressure on the amount of land available. Whittle (1989) argues that one of the major factors in the abandonment of the Scord of Brouster was the increasing peat-growth, which may have been climatically induced. Rising sea level and upland peat encroaching would certainly have increased the pressure on the land (Fojut 1993: 32-33). Complex societies are thought to have some resilience to inter-annual or even inter-decadal climatic variation, but they respond to stresses which occur over multiple decades and centuries (deMenocal 2001). A community might be able to withstand the occasional bad year, particularly in terms of subsistence, by broadening their resource base and falling back on seafood, however constantly declining yields would inevitably eventually lead to abandonment. The higher the altitude of the site, the greater the risk of crop failure would be in any given year.

### **Site Alignment**

The Enclosure sites are small and sub-circular and cannot therefore be considered to have an alignment in terms of relationship to the hillslope. The field boundaries associated with them broadly follow the contours of the hill.

In contrast, the Multiple Field Systems are elongated and therefore do have identifiable alignments. In five out of the six sites within this study, the field systems are clearly aligned along the slope. The steepness and extent of slope varies in each case. The Scord of Brouster has a height difference of 24 metres across the width of the site but, nevertheless, on the ground it feels locally flat. At Sumburgh Head, the field system has a very strong relationship with the contours, following the curvature of the hill. The height differences at Gallow Hill, the Ness of Gruting and the core of the field system at Sumburgh Head, are 15 metres across the widths of the field systems. At Gallow Hill, the field system is located on flatter land than that immediately below it. Pinhoulland is the one exception, but even here the compact central area of the Multiple Field System at Pinhoulland has a similar height range, fits the same pattern and, locally, the fields within it appear relatively flat. However, the Pinhoulland field system also includes additional fields lower down the slope, to the northeast: these extend the lower limit of the site to 3 metres aod and also change the overall alignment of the site. These fields, which are detached from the core area, were largely omitted during Whittle's survey (1986).

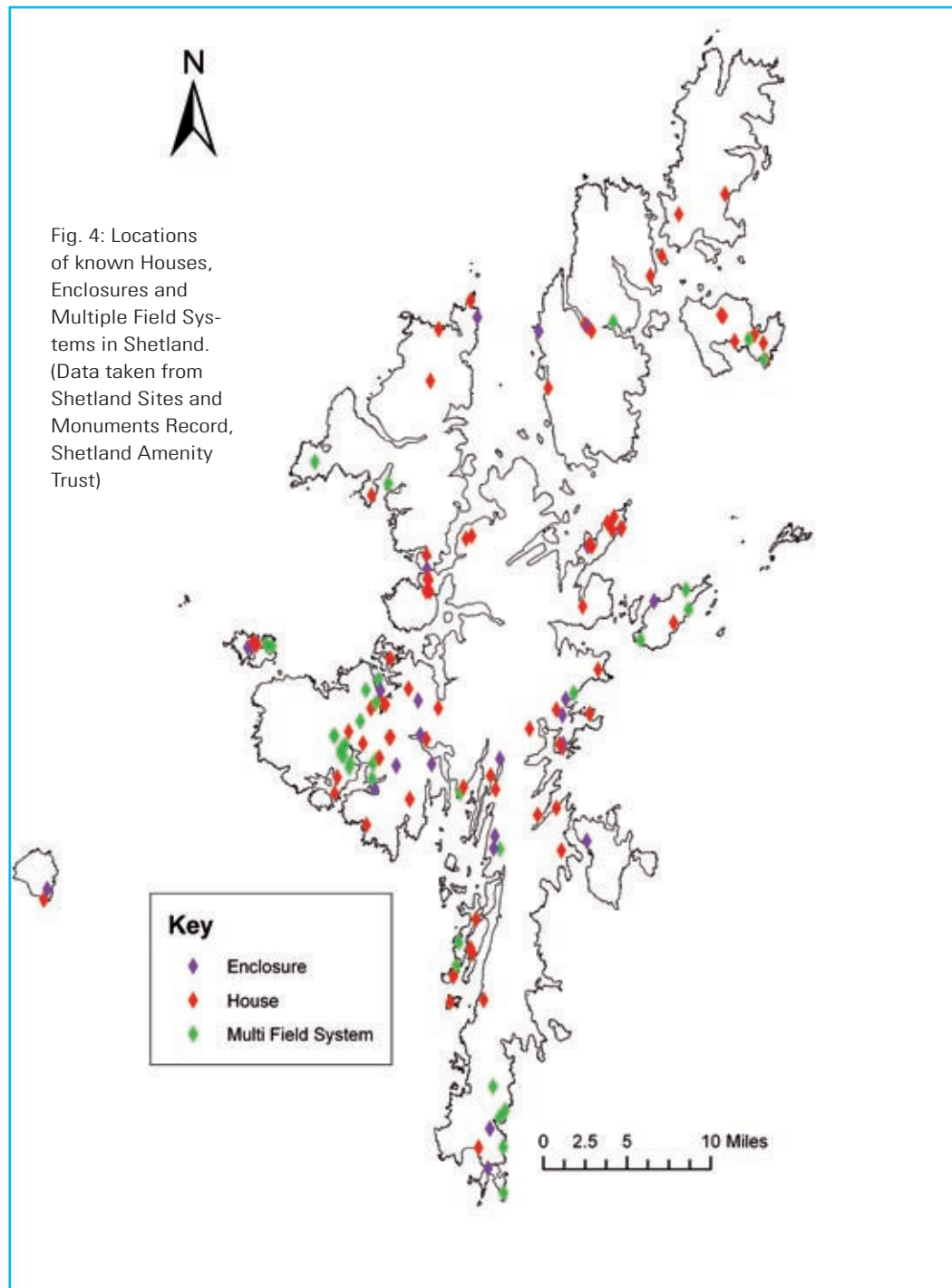
Assuming that the Multiple Field Systems accreted over time rather than be-

ing created as part of a single event, a hypothesis supported by Whittle's excavations at the Scord of Brouster (1986), it would appear that as a Multiple Field System expanded, or the focus relocated, it took in land at a similar height, further along the slope, rather than up or down it. This is borne out by the excavated evidence from the Scord of Brouster (Whittle 1986), where the first and second house sites both fall on the 40 metre contour. The final house at the Scord of Brouster was located slightly lower down the slope. Whether the lower land was already in use, thereby preventing a downward expansion, or whether expansion along the slope was a positive choice cannot be determined with any certainty. Individual fields would be easier to work if they were aligned along the slope, particularly if they were being ploughed. Cultivation down the slope would exacerbate the migration of soil down the hill. At Sumburgh Head, the land below the field system is significantly flatter and today appears much more attractive for cultivation, which would suggest that the lower land was already occupied. However at the other upland sites, where the soils had potential, and if the growing season was not significantly impaired by a slight increase of altitude, the acquisition of the flattest neighbouring land could be seen as having advantages over trying to cultivate steeper, but lower, slopes.

### **Site Aspect/Sunshine**

Five of the six Enclosure sites have a site aspect of between south and east. The exception is Houlland where the local aspect of the site is north, although it is on a hill slope which faces south. A southerly aspect would maximise the amount of sun which a site received, which would be important to agriculture and may determine the success or failure of a site. Today, the prevailing wind in Shetland comes from between the west and the south-east (Windroses for Sumburgh 1986-1995; Scatsta 1991-2000, UK Met Office Data, 2010). Three of the Multiple Field Systems share broadly similar aspects, with the other two sites facing southeast.

Anecdotally, today the West Side of Shetland is considered to be sunnier than the east, which is more prone to fog. This is supported by comparing the Cloud-base Occurrence Data and the Visibility Percentage Charts relating to Sumburgh 1986-1995 and Scatsta 1991-2000 (UK Met Office Data, 2010). Scatsta, in the North Mainland, has weather systems which correspond with the west side of Shetland, in contrast to Sumburgh Head which shares its weather systems with the east side (Dave Wheeler, North Isles Weather, pers. comm.). The amount of sun which a field receives becomes increasingly significant with latitude. By the 17th Century



AD (but probably considerably before this) the Faroese had developed a system where strips three metres broad, known as “teigar”, were usually half a metre higher on one long side than the other, in order to both improve drainage and maximise the amount of heat available from the sun (Arge, 2005: 29).

Five of the six enclosures under consideration are located on the east side of Shetland, Croag Lea being the exception. By contrast, four of the six Multiple Field Systems are located on the West Side, the other two being in the South Mainland. If the amount of sun, represented by a high cloud base and good visibility, followed a similar pattern in the prehistoric period as in the present, this may have been a factor in determining why the Multiple Field Systems developed on the West Side and the single enclosures are located on the east.

In order to test the extent to which this is true throughout Shetland, all prehistoric house sites, Homestead Enclosures and Multiple Field Systems have been mapped using data from the Shetland Sites and Monuments Record. Where the SMR record is ambiguous, sites were also investigated using vertical aerial photographs. The results demonstrate a clear concentration of Multiple Field Systems located in the west of Shetland, particularly on the West Side

where recent field work (by Cowley et al, RCAHMS) suggests this is likely to be an under-recording. The majority of the examples which occur to the South and East either correspond with areas which are today still fertile (e.g. Fetlar and Whalsay) or are located in the South Mainland. They are largely coastal and most are close to stretches of water which face south. All this adds to a picture of trying to maximise the amount of sun available. Sun being reflected off the sea would have a small impact in increasing the temperature locally. In contrast, the single house sites, with or without surviving Enclosures around them, appear to be spread more uniformly throughout the islands. The amount of sun therefore appears to have been a significant factor in determining which Enclosure sites developed into Multiple Field Systems.

### Conclusions

Today, the majority of the Enclosures and Multiple Field Systems survive in land which is acidic and peaty, however this does not necessarily reflect the condition of the soils 3-4000 years ago. The Enclosures in the study were all constructed on land which could have been productive if the soil was maintained. However, the majority of the Multiple Field Systems are located on land which today has a higher Land Capability value than that occupied by the Homestead

Enclosures. It is therefore possible that geology and the related soil had an impact on whether or not an Enclosure developed into a Multiple Field System.

The Multiple Field Systems at Gallow Hill and the Scord of Brouster rise to approximately 50 metres and therefore height and did not determine which Enclosures developed into Multiple Field Systems. This is supported by the site alignments which demonstrate that the availability of flat land was more important to site development than steeper land at a lower altitude.

House sites, with or without surviving Enclosures, have been identified throughout the islands. The Multiple Field Systems have been shown to have a more restricted geographical range, being restricted to the West of Shetland, the South Mainland or having a location close to a south-facing coast. The warmth of the sun therefore would appear to be the most important geographical factor in determining which Enclosure sites developed into Multiple Field Systems.

Further research is required in order to explore the functions of the fields and enclosures in this study, and this is being progressed using micromorphology.

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### Bibliography

Arge, S.V., 2005. Cultural Landscapes and Cultural Environmental Issues in the Faroes. *Viking and Norse in the North Atlantic*. Mortensen, A. and Arge, S.V. eds. Torshavn: 22-38.

Ballin Smith, B., 2005. *Catpund: a prehistoric house in Shetland*, Scottish Archaeological Internet Report 7, Society of Antiquaries of Scotland.

deMenocal, P.B., 2001. *Cultural responses to climatic change during the Late Holocene*. Science 292: 667-673.

Dockrill, S., Bond, J. and O'Connor, T., 1998. Beyond the Burnt Mound: The South Nesting Palaeolandscape Project. *The Shaping of Shetland. Developments on Shetland Landscape Archaeology*. Turner, V. ed. Shetland Times, Lerwick: 61-82.

Dockrill, S. and Simpson I. A., 1994. The identification of prehistoric anthropogenic soils in the Northern Isles using

an integrated sampling methodology. *Archaeological Prospection* 1: 75-92.

Downes, J. and Lamb, R. 2000. *Prehistoric Houses at Sumburgh in Shetland. Excavations at Sumburgh Airport 1967-74*. Oxford.

Fojut, N., 1993 *A Guide to Prehistoric and Viking Shetland*. Shetland Times, Lerwick.

Fojut, N., 1983, 2005. Towards a Geography of Shetland Brochs. *Glasgow Archaeological Journal*, Vol. 9, 1983: 38-59. Reprinted in *Tall Stories: 2 millennia of Brochs*. Turner, V.E., Nicholson, R., Dockrill, S.J. and Bond, J. M. eds. 2005. Lerwick: 144-168.

Fojut, N., 2006. *Prehistoric and Viking Shetland*. Fifth edition. Shetland Times, Lerwick.

Guttmann, E. B., Simpson, I. A., Nielsen, N., and Dockrill, S.J., 2008. Anthrosols in Iron Age Shetland: Implications for Arable and economic Activity. *Geoarchaeology: An International Journal*, Vol. 23, No 6: 799-823.

Turner, V. E., 1998. *Ancient Shetland*. London.

Turner, V. E, forthcoming, PhD Thesis, University of Stirling.

Turner, V. E., Guttmann-Bond, E. B. A, Burbidge, C. I. and Simpson, I. A., 2010. Old Scatness: the Viking and Norse anthrosols. *Excavations at Old Scatness, Shetland. Volume 1: The Pictish Village and Viking Settlement*, Dockrill, S. J., Bond, J. M., Turner, V. E., Brown, L. D., Bashford, D. J., Cussans, J. E., Nicholson, R. A. Lerwick.

Turner, V. E., Guttmann-Bond, E. B. A, Burbidge, C. I., and Simpson, I. A., in press. Old Scatness: the Iron Age anthrosols. *Excavations at Old Scatness, Shetland. Volume 2: The Iron Age Broch and Village*. Dockrill, S. J., Bond, J. M., Turner, V. E., Brown, L. D., Bashford, D. J., Cussans, J. E., Nicholson, R. A. Eds. Lerwick.

Whittle A., 1989. Islands of history: second millennium change in the north of Scotland. *Transactions of the British-Scandinavian Colloquium in Stockholm, May 10-11, 1985*. Bronze Age Studies 6, Nordström, H-Å and Knappe A. Stockholm: 163-172.

Whittle A., Keith-Lucas M., Millies A., Noddle B., Rees S., and Romans J. C. C., 1986. *Scord of Brouster: An Early Agricultural Settlement on Shetland*, Oxford University Committee for Archaeology Monograph 9, Oxford.

# The Post-Glacial Colonization of Shetland – Integration or Isolation?

## Evidence from Lithic and Stone Assemblages

*Torben Bjarke Ballin*

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### Introduction

In terms of post-glacial colonization, Shetland is most relevantly compared to other island groups north and west of the British mainland, such as the Western Isles towards the south-west, the Orkney Islands towards the south, and the Faroe Islands towards the north. In all these cases, the time and character of the initial colonization has been, and still is, an important issue.

Although, at Northton on Harris, a number of burnt hazelnut shells were dated to c. 7-6000 cal BC (AA-50332-6; Simpson et al. 2006: 22), no diagnostic lithic artefacts were recovered from this site (ibid. 2006: 23), and diagnostic Mesolithic artefacts have not been found anywhere else within the Western Isles. Relatively numerically large Early and

Late Neolithic lithic assemblages have been recovered (e.g. Armit 1992; Simpson et al. 2006; Ashmore forthcoming), but the fact that the Western Isles are visible from the Scottish mainland at most times makes it highly likely that the island group was colonized earlier, and that the undiagnostic lithic assemblage from Northton's basal layers is actually Mesolithic.

Like the Western Isles, Orkney is visible from the Scottish mainland, but until recently Mesolithic indicators were scarce. Lacaille (1954; fig. 119) identified a number of small flints as possibly of Mesolithic date, and Saville (2000) characterized these and other stray finds from Orkney as almost certainly Mesolithic. Recently, a large lithic assemblage including diagnostic Mesolithic pieces

(e.g. true microliths) was excavated on Stronsay (Pitts 2007; Naomi Woodward pers. comm.). Numerous Early and Late Neolithic lithic collections are available from excavated settlement sites, as well as from prehistoric houses and chambered cairns (Ritchie 2000).

Although Shetland is situated more than 80 km from the Orkney Islands, it is possible from this island group – on a clear day – to see Fair Isle (midway between Orkney and Shetland) and, from Fair Isle, the southern end of Shetland Mainland (Johnston 1999). Therefore, although no definite Mesolithic types have yet been retrieved from Shetland, it is highly likely that the northernmost island group in Britain was colonized, or at least visited, in the Mesolithic, as the Stronsay finds clearly prove Orkney was.

### **The Earliest Finds from Shetland**

No diagnostic Mesolithic artefacts have been recovered from Shetland, with the assemblage from West Voe near Sumburgh presently being the island group's oldest settlement. In 2004 and 2005, Bradford University carried out excavations at this site, with the archaeological investigation focusing on two shell middens which had been exposed by coastal erosion (Melton 2008). The lower midden consisted largely of oysters, whereas the upper midden consisted entirely of cockles. The two main anthropogenic



Fig. 1: Kite-shaped flint arrowhead from 'Lerwick'. Courtesy of Beverley Ballin Smith.

layers were separated by sterile sand, and they both contained animal bones and lithic material, although the vast majority of bones and lithics were associated with the early midden. The early activities were radiocarbon dated to 4320-4030 cal BC (SUERC-572) and 3750-3520 cal BC (SUERC-573), respectively (ibid. 2008).

The undiagnostic lithic assemblage (289 pieces) is entirely in quartz, with flint being absent (Ballin 2006). Approximately 83% of the lithics were recovered from Phase I, and the remainder from later phases. The dimensions of the individual pieces, as well as technological data, support an early date. Al-

Fig. 2. Felsite  
Shetland  
knife.  
Courtesy of  
Ian Tait,  
Shetland  
Museum.



though the earliest radiocarbon date from West Voe was initially perceived by the excavator as an indication of Mesolithic settlement, re-interpretation of this date now suggests settlement at the location in the earliest stages of the Early Neolithic Period (Nigel Melton personal comment).

Lithic assemblages have been recovered from many Neolithic house sites, but only from a small number of Neolithic burials, and a very small proportion of these assemblages are associated with radiocarbon dates.

A large quartz assemblage from Scord of Brouster, West Mainland, includes two approximately kite-shaped arrowheads, a relatively large number of bifacial curved knives, as well as many less

spectacular implements; stone artefacts include a number of sandstone arrow points and a burnt scraper based on a fragment of a polished felsite axehead (Ballin 2005). The oldest dwelling, House 2, was dated to c. 3700-3100 cal BC (the later part of the Early Neolithic Period) and the later House 1 to c. 3000-2700 cal BC (the Late Neolithic Period), whereas the smaller House 3 appears to be a Bronze Age structure (CAR-242-53; CAR-477-9; HAR-2413).

A cist burial at Sumburgh, near Shetland's southern tip, was radiocarbon dated to c. 3500-2700 cal BC (the Early/Late Neolithic transition; GU-1075). The cist contained the remains of several individuals, as well as three plain bowls, five stone beads, a polished stone axehead, and a number of lithics in jasper

(Hedges et al. 1980). Unfortunately, almost no other lithic finds have been retrieved from Shetland's many chambered cairns, unlike the more richly furnished Orcadian cairns (e.g. Henshall 1963: 247-253).

Lithic artefacts from the houses at Stanydale, Gruting School and Ness of Gruting were summarily listed by Henshall (1956): The assemblage from Stanydale includes, among other things, 22 quartz scrapers, three scrapers in other materials, one leaf-shaped arrowhead in quartz, and one fragment of a polished stone axehead; that of Gruting School includes, inter alia, 13 quartz scrapers, 3 scrapers of stone, and 'one box of quartz cores and flakes'; and that of Ness of Gruting includes, inter alia, 45 quartz scrapers, five stone scrapers, nine whole or fragmented polished felsite axeheads, three fragments of polished Shetland knives (felsite), two 'rude axe-shaped' tools (possibly axehead rough-outs), c. 600 'rough stone implements' (probably largely sandstone ard points), and two stone balls. Half a Shetland knife was retrieved from the so-called 'temple' at Stanydale. Some larger stone scrapers are in felsite, one of which is from a partially polished object.

Generally, the quartz artefacts from Calder's (1956) house sites correspond to those recovered from Scord of Brouster,

with other similarities being the inclusion of sandstone ard points, felsite axeheads and knives, as well as smaller objects based on cannibalized felsite axeheads. No radiocarbon dates are available from these sites.

The most spectacular lithic artefacts from Shetland are the island group's felsite axeheads and Shetland knives. The axeheads are characterized and discussed in Ritchie (1992) and Ritchie & Scott (1988), and felsite artefacts in general are dealt with in Ritchie (1968; 1992) and Ballin (forthcoming b, c).

The felsite objects (and thereby the felsite quarrying in North Roe) were traditionally dated to the later part of the Neolithic Period (e.g. based on finds from Modesty, West Mainland: axeheads and knives together, associated with Late Neolithic pottery; Fojut 2006: 38), with some (e.g. splayed axeheads and maceheads; *ibid.*) possibly dating to the Early Bronze Age. This general date of felsite exploitation is now challenged by typological evidence, as several of the island group's leaf-shaped arrowheads are in felsite (e.g. Scott & Calder 1952: 176). These arrowheads are usually associated with the Early Neolithic Period, but unfortunately few of the common leaf-shaped sub-types are diagnostic (within the Early Neolithic Period).

However, several of the Shetland pieces are kite-shaped, such as those from 'Lerwick' (Fig. 1) and Semblester in Sandsting. These points are usually associated with the later part of the Early Neolithic Period and the earliest part of the Late Neolithic, and with artefacts such as Seamer/Duggleby axeheads and polished flint knives. As typical Shetland knives (Fig. 2) resemble later Neolithic discoidal flint knives of Clark's Type IV closely (Clark 1932: 44), and as felsite maceheads are exceptionally rare, the main period of felsite exploitation most likely spans the later part of the Early Neolithic and the earlier part of the Late Neolithic.

Although most of the quarrying operations in the North Roe area may be concentrated around the Early/Late Neolithic transition, the production of several distinct stone axehead types (for example with plain rounded edges and with splayed edges; Figs 3 and 4) indicates that at least the manufacture of stone axeheads spanned a considerable length of time, although it is presently impossible to pinpoint this time-span precisely.

A distinct slate industry from the lower levels at Jarlshof, Sumburgh (Hamilton 1956: 14), is clearly stratigraphically pre-Bronze Age, but otherwise no precise dates exist for this group of artefacts. It

may be, however, that the finds' association with oyster-free shell middens (Fojut 2006: 10) indicates a date after the deposition of the oyster shell layers at the lower levels at West Voe.

### **Contact or Isolation?**

- Find categories characterised by "trade" restrictions
- 'Imports' – the presence and absence of exotic lithics in Shetland

A small number of lithic categories indicate that Shetland was not entirely isolated in Neolithic times, such as one axehead in Cumbrian tuff and two in Northern Irish porcellanite. However, compared to the relatively common appearance of such axeheads throughout mainland Scotland, they are exceedingly rare on Shetland (Ritchie & Scott 1988: 87; Ritchie 1992: 216; Fojut 2006: 37).

Carved stone balls (Fig. 5), which are particularly common in North-East Mainland Scotland, and probably date to the later Neolithic, have been found in relatively high numbers on Orkney (e.g. Skara Brae; Marshall 1977), but although plainer polished stone balls are known from Shetland, carved stone balls are entirely absent (*ibid.*).

Arran pitchstone (Fig. 6) was exchanged throughout northern Britain in the Neolithic Period, from Arran to Orkney in the North, Lewis and North Uist in the West,



and Ireland, Isle of Man, Cumbria and Northumberland in the South (Ballin 2009). The only area in Scotland from which Arran pitchstone is still entirely absent is Shetland. This form of dark volcanic glass was generally exchanged in northern Britain during the first half of the Early Neolithic Period, with a trickle of pieces recovered from as late as the Early/Late Neolithic transition. In Argyll

Figs. 3 and 4: Felsite axeheads; 3) with a plain rounded edge and almost parallel lateral sides, and 4) with a splayed edge and diverging lateral sides. Courtesy of Ian Tait, Shetland Museum.

& Bute, the Southern Hebrides and Orkney, the exchange of pitchstone continued through the Late Neolithic Period and into the Early Bronze Age, or as long as this raw material was quarried and used on Arran itself.

In Scotland, the Late Neolithic Period is generally characterized by extensive exchange in so-called Yorkshire flint, and on for example Orkney, immediately south of Shetland, lithic assemblages from the island group's high-status sites (Barnhouse and Ness of Brodgar; Richards 2005) are characterized by high proportions of Yorkshire flint. The author exposed the unpublished collection from Ness of Brodgar to cursory examination in early 2010 (kindly permitted by the excavator, Nick Card, Orkney Research Centre for Archaeology), and he estimates that possibly as much as half of this assemblages of several thousand pieces is in this form of exotic flint. In comparison, no Yorkshire flint has been reported from Shetland, where all known lithic assemblages are heavily dominated by local quartz, with flint making up between one per cent and one per mille of the lithics. Had Shetland followed the pattern of Scotland in general, probably all the lithic assemblages from the well-known house-sites would have included substantial proportions of Yorkshire flint.

In the South, later Neolithic assemblages in Yorkshire flint are usually associated with the so-called Levallois-like technique and its distinct cores and types of debitage (Ballin forthcoming a). With flint being as rare as it is on Shetland, the Levallois-like technique was never adopted, and the local industries are

based on more traditional lithic techniques suitable for the reduction of quartz.

### **'Exports' – Felsite Objects Recovered Outside Shetland**

Being as spectacular as they are – in terms of size, colour and patterning – one would have expected Shetland's felsite axeheads and Shetland knives to have been favoured as exchange objects. This, however, does not seem to be the case.

The archaeological literature mentions one knife found outside Shetland, namely a specimen from Lanarkshire. However, Fojut (2006: 35) inspected the piece in Kelvingrove Museum in Glasgow, and apparently the old Victorian label on the artefact had been misread: 'rather than "Lanark", it clearly said "Lerwick"'. Basically, according to Dr Fojut, no Shetland knives have been recovered outside the island group.

A number of axeheads recovered outside Shetland are claimed to be in riebeckite felsite (Ritchie 1968: 136; 1992: 216; Fojut 2006: 37), including pieces from North-East Scotland, the Central Belt, and the Scottish Borders. At present, only one axehead found outside Shetland has been thin-sectioned and identified as certainly riebeckite felsite, namely that of Pencaitland in East

Lothian (Ritchie & Scott 1988: 88). Presently, all the above pieces are specimens which individual archaeologists or geologists thought 'looked a bit like' riebeckite felsite, but they need to be thin-sectioned (or analysed in other less destructive ways) to have this assumption confirmed.

Another problem, which has not yet been touched upon in the archaeological literature, is the fact that riebeckite felsite – no matter how exotic the term may sound – is not restricted to locations in the far north, but also occurs in Southern Scotland, such as at several locations (e.g. Eildon Hill) in the Scottish Borders (Irving 1930). Could some of the small number of felsite axeheads recovered outside Shetland actually be in local forms of this rock? Again, thin-sectioning or other analysis (such as XRF) of all likely riebeckite felsite axeheads from non-Shetland locations is crucial, followed by comparison with samples from southern outcrops of felsite.

Nevertheless: even if all the above axeheads are in riebeckite felsite from Shetland, it is clear that the number of such axeheads 'exported' to the Scottish mainland is very small indeed, both compared to the number of axeheads produced in North Roe (cf. Ritchie 1992), and compared to the number of, for example, axeheads in Cumbrian tuff 'im-

ported' into Scotland from the south. Ritchie & Scott (1988: 87) list 186 thin-sectioned Scottish axeheads in this material, but many hundreds of likely tuff axeheads are known from locations throughout Scotland.



Fig. 5: Carved stone ball from Towie, Aberdeenshire (Evans 1897: 421).

A small number of maceheads from mainland Scotland have been claimed to be in this raw material, but Ritchie (1968: 136) '... feels that the really distinctive diagnostic characteristics are not present and that sectioning is essential ...'.

### Conclusion

Although the relative closeness of Shetland to the Scottish mainland, and definitely Orkney, makes it likely that the island group was colonized, or at least visited, relatively early in the Holocene Period, the oldest lithic assemblage from Shetland is presently that of West Voe, Sumburgh, dating to the Mesolithic/Neolithic transition. Few Early Neolithic assemblages are known, with finds becoming more numerous towards the Early/Late Neolithic transition, with Scord of Brouster, probably most of Calder's house sites, and the assemblage from the Sumburgh cist dating to this period.

The lithic finds indicate that, although some signs of contact with the Scottish

mainland have been recorded (a small number of axeheads in Cumbrian tuff and Northern Irish porcellanite), other groups of finds are entirely absent, such as Arran pitchstone (which was mostly

exchanged in the Early Neolithic Period) and Yorkshire flint (which was mostly exchanged in the Late Neolithic Period). The 'export' of riebeckite felsite from Shetland seems to have been restricted



– no Shetland knives are known from the mainland, and very few axeheads.

Basically, the Neolithic Shetlanders appear to have been aware of the existence of people towards the South, but contact was highly restricted. This situation finds a parallel in Southern Scandinavia, where Scandinavian hunter-gatherers clearly knew of Neolithic people, economy and habits towards the South, but chose not to adopt the full Neolithic package. A small number of elements, like pottery (Prangsgaard 1992), were adopted fully in the later Mesolithic Period, whereas other elements, like Schueleistenkeile (Fischer 1982), were only ‘imported’ occasionally as high-prestige exotica. The Neolithic economy as such seems to have been deliberately ‘shunned’. In the same way, decisions must have been made on Shetland in Neolithic times as to what level of contact and outside influence should be accepted.

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### Bibliography

- Armit, I., 1992. The Hebridean Neolithic. *Vessels for the Ancestors. Essays on the Neolithic of Britain and Ireland in honour of Audrey Henshall*. Sharples, N. & Sheridan, A. eds. Edinburgh: 307-322.
- Ashmore, P., forthcoming. Calanais, Isle of Lewis, Western Isles. *Scottish Archaeological Internet Reports (SAIR)*.
- Ballin, T.B., 2005. Re-Examination of the Quartz Artefacts from Scord of Brouster. A lithic assemblage from Shetland and its Neolithic context. *Scottish Archaeological Internet Reports (SAIR)* 17: [http://www.sair.org.uk/sair17/index.html].
- Ballin, T.B., 2006. The lithic assemblage from West Voe, Sumburgh, Shetland. Unpublished report.
- Ballin, T.B., 2009. *Archaeological Pitchstone in Northern Britain. Characterization and interpretation of an important prehistoric source*. British Archaeological Reports, British Series 476, Oxford.
- Ballin, T.B., forthcoming a. The British Late Neolithic ‘Levalloisian’, and other operational schemas from the later prehistoric period. A discussion based on finds from the Stoneyhill Project, Aberdeenshire. *Proceedings of Conference*

held by the British Neolithic Studies Group, at the British Museum 2005.

Ballin, T.B., forthcoming b. The Felsite Quarries of North Roe – an overview. *Proceedings of a Conference held by the Implement Petrology Group, at York University 2007*.

Ballin, T.B., forthcoming c. The Felsite Quarry Complex of Northmaven. Observations from a fact-finding mission to Shetland. *Proceedings of Conference held by the British Neolithic Studies Group, at the British Museum 2005*.

Calder, C.S.T., 1956. Report on the Discovery of Numerous Stone Age House-Sites in Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 89: 340-397.

Clark, J.G.D., 1932. Discoidal Polished Flint Knives - Their Typology and Distribution. *Proceedings of the Prehistoric Society*. VI: 40-54.

Evans, S.J., 1897. *The Ancient Stone Implements, Weapons and Ornaments of Great Britain*. London.

Fischer, A., 1982. Trade in Danubian Shaft-Hole Axes and the Introduction of Neolithic Economy in Denmark. *Journal of Danish Archaeology*. 1: 7-12.

Fojut, N., 2006. *Prehistoric and Viking Shetland*. Shetland Times. Lerwick.

Hamilton, J.R.C., 1956. *Excavations at Jarlshof, Shetland*. Ministry of Works, Archaeological Reports I, Edinburgh.

Hedges, J.W. & Parry, G.W., 1980. 'A Neolithic multiple burial at Sumburgh Airport, Shetland'. *Glasgow Archaeological Journal*. 7: 15-26.

Henshall, A.S., 1956. Appendix II: Pottery and Stone Implements from Ness of Gruting. In: Calder, C.S.T.: Report on the Discovery of Numerous Stone Age House-Sites in Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 89: 381-397.

Henshall, A.S., 1963. *The Chambered Tombs of Scotland*. Vol. one. Edinburgh

Irving, J., 1930. Four 'Felstone' Intrusions in Central Berwickshire. *Geological Magazine*. 67: 529-541.

Johnston, J.L., 1999. *A Naturalist's Shetland*. Poyser Natural History, London.

Lacaille, A.D., 1954. *The Stone Age in Scotland*. London.

Marshall, D.N., 1977. Carved stone balls. *Proceedings of the Society of Antiquaries of Scotland*. 108: 40-72.

- Melton, N.D., 2008. West Voe: A Mesolithic-Neolithic transition site in Shetland. *Scottish odysseys: the archaeology of islands*. Noble, G., Poller, T., Raven J. and Verril, L. eds., Stroud: 23-36.
- Pitts, M., 2007. Orkney finds confirm early Scottish colonisation. *British Archaeology*. (Nov/Dec 2007), 9.
- Prangsgaard, K., 1992. Introduktion af keramik i den Yngre Ertebøllekultur i Sydsandinavien. *LAG*. 3: 29-52.
- Richards, C. ed., 2005. *Dwelling among the monuments. The Neolithic village of Barnhouse, Maeshowe passage grave and surrounding monuments at Stenness, Orkney*. McDonald Institute Monographs, Cambridge.
- Ritchie, A., ed., 2000. *Neolithic Orkney in its European context*. McDonald Institute Monographs, Cambridge.
- Ritchie, P.R., 1968. The Stone Implement Trade in Third-millennium Scotland. *Studies in Ancient Europe. Essays presented to Stuart Piggott*. Coles, J.M. & Simpson, D.D.A. eds., Leicester: 119-136.
- Ritchie, R., 1992. Stone Axeheads and Cushion Maceheads from Orkney and Shetland: Some Similarities and Contrasts. *Vessels for the Ancestors. Essays on the Neolithic of Britain and Ireland in honour of Audrey Henshall*. Sharples, N. & Sheridan, A., eds., Edinburgh: 213-220.
- Ritchie, P.R., & Scott, J.G., 1988. The petrological identification of stone axes from Scotland. *Stone Axe Studies, 2. The Petrology of Prehistoric Stone Implements from the British Isles*. Clough, T.H.M. & Cummins, W.A., eds., CBA Research Reports 67, London: 85-91.
- Saville, A., 2000. Orkney and Shetland before the Neolithic period. *Neolithic Orkney in its European context*. Ritchie, A. ed., McDonald Institute Monographs, Cambridge.
- Schei, L.K. & Moberg, G., 1991. *The Faroe Islands*. London.
- Scott, L.G. & Calder, C.S.T., 1952. Notes on a Chambered Cairn, and a Working Gallery, on the Beorgs of Uyea, Northmaven, Shetland. *Proceedings of the Society of Antiquaries of Scotland*. 86: 171-177.
- Simpson, D.D.A., Murphy, E.M. and Gregory, R.A., 2006. *Excavations at Northton, Isle of Harris*. BAR British Series 408, Oxford.

# Early Agriculture at the Border

*Flemming Kaul*

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## Introduction

As mentioned in the foreword one of the projects under the National Museum's research initiative Northern Worlds has as its main topic the expansion of agrarian economy in the North. The focus areas include Denmark, South West Sweden and Norway. The coastal zone facing the Atlantic represents an important part of the research area.

The Neolithization – also in a broad European sense – did not advance slowly like a constantly moving wave from South to North. The progress of agrarian economy and the related 'cultural packages' look like swift and large-scale 'leaps' separated by interludes where a border zone remained stable for centuries until yet another swift expansion phase proceeded.

Around 4000 BC the Neolithization took place in Southern Scandinavia. Within a short span of time most parts of Southern Scandinavia were encompassed by the Neolithic Funnel Beaker Culture.

Soon afterwards the first monumental burial architecture appeared as non-megalithic earthen long barrows, while the large-scale work-consuming construction of megalithic tombs – first dolmens, then passage graves – began around 3500 BC.

In South-western Scandinavia, the Neolithic expansion halted close to what is now the Swedish-Norwegian border at Svinesund. Just north of this border we find the northernmost dolmens and a pottery material clearly related to the Funnel Beaker Culture. But the dolmens are few and small (Østmo 2007; Glørstad 2009). As soon as we move into Swedish Bohuslän south of Svinesund, we find more megalithic tombs including a number of large passage graves.

For centuries the border-zone at Svinesund remained stable. In most parts of Southern, South-Western and Western Norway there was seemingly only a very limited Neolithic or agricultural impact (Prescott 1996; Glørstad



Fig. 1: Bronze Age cairn at Skjeggesness, Nordland. F. Kaul photo.

2005; Prescott 2009). Although axes of the Battle-Axe Culture are found all the way along the Norwegian west coast far up in Northern Norway the economy mainly seems to be that of hunter-gatherers, even though some early agricultural production is indicated for this period (T. Bruen Olsen 2009).

Then, with the transition to the Nordic Late Neolithic, approximately 2350 BC, a new agricultural expansion took place along the Norwegian coast, accompanied by a wide distribution of flint daggers and sickles, some of the flint probably ultimately coming from flint mines of Northern Jutland (Apel 2001: 279 ff.;

Prescott 2009). Together with the introduction of agrarian economy a new South-North contact net opened along the West coast of Norway. During the Late Neolithic and the Early Bronze Age the establishment of agro-pastoral systems of production was followed by the full package of cultural elements related to that economy. During the Bronze Age a border-zone seems to have been established and stabilised in the areas at the Polar Circle.

### **Shetland and Norway – some comparisons**

Regarding at the development in Norway, it is puzzling to realise that there is

almost no Neolithic in Norway, apart from the southernmost landscapes at the Oslo Fjord. Questions should be posed such as: Why are there no real Neolithic and megalithic tombs in South West Norway – or for that matter in Trøndelag, areas with rich agricultural potentials? Why did the Neolithic expansion come to a standstill for almost 2000 years, close to what is now the border between Norway and Sweden? -- Why did people in most of Norway 'choose' not to be included in the 'Neolithic world', when they must have had at least some knowledge of what was going on further south? – Why, then at around 2000 BC, did a huge leap for agrarian economy take place?

Fig. 2: Ripening barley, Alstahaug, Nordland.  
F. Kaul photo.



When comparing with the Shetland evidence, further questions arise: Why are there no megalithic tombs in South West Norway, for instance at Stavanger, while on Shetland far out in the Atlantic we find a full Neolithic package including megalithic tombs? -- Were the conditions so much better on Shetland? At any rate Shetland became part of the primary neolithization process of Britain, while most of Norway remained outside the Neolithic 'family'. At the same time as a true Neolithic culture was flourishing in Shetland (with a relatively high density of megalithic tombs), the economy in most of Norway remained Mesolithic. First around 2000 BC we see a new boom of movement of the border-zone of agrarian economy.

It is astonishing to realise, that at the very time when this expansion boom took place in Norway, we see a regression in Shetland. There seems to be no bronzes from the early and middle Bronze Age, and it looks like Shetland was more or less cut off from the chain of contacts giving the possibilities of acquiring prestige bronzes or other items of prestige. Here, there are certainly no 'counterparts' or reflections of the Wessex Culture, as seen in mainland Scotland (G. & A. Ritchie 1985: 75 ff.), and even in Orkney (A. Ritchie 1995: 89-90).

It seems as though Shetland had be-

come insulated, not being part of the wider European ideological community of the Bronze Age, where acquiring and deposition of Bronze objects were of great importance. First quite late in the Bronze Age, around 700 BC, at the beginning of the Iron Age, an opening for contacts and Bronze production appear, relating Shetland to the Bronze Age world. In Norway on the contrary we find a rich coast-bound Bronze Age culture – and it is quite clear that also Northern Norway – including the areas at the Polar Circle – became an integrated part of the Nordic Bronze Age system, also including iconographic elements, clearly demonstrating that this integration involved ideological and religious matters.

To put it bluntly, there was a rich Neolithic ‘full package’ culture in Shetland, but no Neolithic in Norway. There was no Bronze Age in Shetland, while a rich Bronze Age culture related to the Bronze Age of Southern Scandinavia and further South was prospering in Norway. In the Bronze Age, Norway was an integrated part of a large scale European network of communication, while Shetland was more or less cut off from that network.

However, matters are not quite that simple. In some aspects of culture Shetland follows the general trends of Britain. Among other things, cremation was in-



Fig. 3: Large grass field at Våg, Dønna, Nordland.  
F. Kaul photo.

troduced. This practise was not the most obvious custom to introduce when considering the severe loss of woodland on Shetland at this time (Turner 1998: 52). The people of Shetland must somehow have chosen to follow Britain. The almost total lack of bronze grave goods is another trait that characterises the Middle and Late Bronze Age of Britain as a whole. A special urn type appeared in Shetland, namely an urn made of local steatite. Some of these steatite urns have been found in Orkney – presumably carved in Shetland (Ritchie 1995: 92), so some exchange must have taken place. But still, the general impression of the Bronze Age of Shetland is that of isolation – and it could be argued that Shetland never experienced an Early or Middle Bronze Age. Crude stone arte-

facts appear reflecting isolated 'developments'. The Bronze Age was a time of regression, where Shetland was constantly facing an agricultural crisis with reduction of arable land due to peat growth and rising sea level (Turner 1998: 51-52). When times were at hardest, we can imagine that some people were waiting for a ship to arrive, to carry them away from these islands of depleted and overgrazed soils at the margins for agriculture.

### **Northern Norway**

When returning to Bronze Age Norway there is – as mentioned above -- nothing here that indicates isolation or recession during the Bronze Age. North Trøndelag – c. 400 kilometres south of the Polar Circle – is rich in finds of all categories. Here we meet the full agricultural package of the Nordic Bronze Age Culture: Houses, farmsteads, burial cairns, votive offerings, and iconography on rock carvings and portable objects. North Trøndelag, however – also today a rich agricultural area – dotted with barley fields – was not at the borderline of agriculture.

Further north, in Helgeland, in the coastal areas at Alstahaug near Sandnessjøen (c. 50 kilometres south of the Polar Circle) we find the northernmost evidence of the full cultural package of the Nordic Bronze Age Culture (Binns

1985). There is evidence of agriculture and cattle breeding, burials with typical Nordic Bronze Age objects, votive offerings of bronze objects (also in bogs), and rock carving iconography of Nordic Bronze Age tradition. The landscapes of Helgeland are rich in contrasts. With a background of snow-covered mountains, patches of nicely sheltered arable land can be observed.

### **Recent barley and grass fields and Bronze Age sites in Northern Norway**

At Skjeggnes near Alstahaug, Helgeland, Nordland a stone cist in a cairn has been excavated.

It contained the skeletal remains of two human beings, a pottery vessel, a bronze pin and a bronze razor with a horse headed handle (Binns 1985: 165-168; Kaul & Rønne 2008: 26; Rønne: this volume). The burial can be dated to per. III of the Nordic Bronze Age, 1300-1100 BC. The razor with the handle in the shape of a horse head should be regarded as being an emblem of the Nordic Bronze Age Culture known from a large amount of relatively rich grave finds, particularly from Southern Scandinavia. Here we are dealing with the northernmost finds of this type.

The cairn is part of a larger cemetery of cairns, more than 16, most of them situated on a low ridge close to the coast.



Fig. 4: Pier and byre, the fields being behind the byre – part of a farm on Dønna, Nordland. F. Kaul photo.

Even though this cairn is the only one that has been excavated, it is presumed that the others should be dated to the Bronze Age as well. This cairn cemetery in its landscape setting can easily be compared with similar sites further south. From most of the cairns there is a fine view over the sea, and on the inland side the best agricultural land can be seen. The fields are found in a sheltered position between the low ridges dotted with cairns, just south of the mountains known as the Seven Sisters.

The farmer of the Skjeggesnes farm has kindly informed me that the fields are well suited for growing barley, but grass for hay harvest was preferred. With almost no darknights, two hay (some years three) harvests can be produced each

summer. The hay is used for winter provisions for milk-producing cattle. On another field belonging to the farm a mixed crop consisting of barley, peas and vetch was growing, excellent for silage cattle fodder.

Not far away, at Alstahaug Church, in August, a rich ripening barley field was observed. The fine 12th century romanesque church at Alstahaug bears witness to the economical potential of the area in later periods. The results of archaeological excavations at Alstahaug vicarage (Medieval Period) as well as the testimony of written sources from 18th century document the importance of cereal growing (including barley) and cattle breeding here. Also fishing was of great importance (Berglund 2007).

Fig. 5. Rock carving ship from the island of Tro, Nordland. Rubbing by G. Milstreu.



Fig. 7. Rock carving ship with stems in the shape of stylised horse heads, Flatøy, Nordland. Kaul & Milstreu photo-graphic.

The votive finds (objects deposited in fields or bogs) represent another category of finds belonging to the Nordic Bronze Age Culture. Here, the bronze sword found in a bog at Våg on the island of Dønna west of Sandnessjøen should be highlighted (Kaul & Rønne 2008, 27; Rønne: this volume). The blade of the Våg sword is decorated with ship motifs with stylized animal headed stems of typical Nordic Late Bronze style (Kaul 1998, 164). The Våg sword can be dated to per. VI of the Nordic Bronze

Age, around 600 BC, even though a late per. V date should not be excluded. The exact find spot of the Våg sword cannot be determined.

Today, the area appears as rich farmland with grass fields for hay harvest, pastureland for cattle grazing with scattered old deciduous trees, all giving an impression of being somewhere further south. Furthermore a couple of barley fields could be observed on Dønna. It should be noted that local fishing is also part of the economy of Dønna and neighbouring islands.

On two small islands south of Alstahaug we find some of the northernmost rock-carving sites of the Nordic Bronze Age tradition (Sognnes 1985; Sognnes 1989). On Tro, a rock carving field includes more than 16 ships, three horses and a complicated spiral pattern. Most of the ships are equipped with highly raised keel extensions fore, and some carry stems in the shape of stylized bird's heads. The shape of the ships indicates a dating to the Late Bronze Age, probably per. IV and/or V (1100-700 BC). The ships are typical Bronze Age ships, and they clearly manifest themselves as part of a common Nordic tradition. For instance, similar ships are found in Trøndelag, in Bohuslän, and they could for that sake have been made on the Baltic island of Bornholm far south.

The rock carvings are facing a field of the best agricultural land. The field forms an almost 1 kilometres long gentle slope facing south being a well sheltered 'basin' between ridges of higher land. The field ends at a sandy beach with good landing possibilities. Today grass for hay harvest is the main crop giving high yields, but part of the field is used for cattle pasture.

On Flatøy, separated from Tro by a narrow strait, another rock carving field of evidently Nordic Bronze Age tradition

can be observed with ships, horses and footprints (Sognnes 1985; Sognnes 1989). The shape of the ships and the horses indicates rock carving activity both during the middle of the Early Nordic Bronze Age and during the Late Bronze Age. When approaching the island of Flatøy by boat the coastal setting of the rock-carving site is indisputable. However, when landed, and walking a few meters up behind the rock carvings, then suddenly an open, agricultural landscape emerges, with pastures, grass fields, and with scattered



Fig. 6: Grass field close to the rock carvings on Tro, Nordland.  
F. Kaul photo.



Fig. 8: Two horses from the rock carving on Flatøy, Nordland. Rubbing by G. Milstreu.

deciduous trees. For a brief moment, one might imagine oneself being in Southern Scandinavia, but the snow-covered mountains in the background reveal our position close to the Polar Circle.

When going further North we do not find the same variability of find categories as in Helgeland. The finds belonging to the Nordic Bronze Age culture become more and more scattered. However, there are still finds which seem related to a landscape with agricultural potentials (Rønne: this volume).

Around 300 kilometres north of the Polar Circle, in Northern Nordland, from the farm Bø on the small island Engeløya the northernmost burial find related to the Nordic Bronze Age culture has been found: a cairn with a cremation burial with a pair of tweezers and a button with star shaped pattern as a stylized sun decoration. The grave is from an early part of the Nordic Bronze Age per. IV, around 1100 BC. It is quite astonishing, that here, far up in the North, close to Lofoten, it is still possible to find patches of arable land suitable for hay harvest, and today the Steigen area is a rich milk-producing area.

When going further north, to Troms and Finnmark, there are still finds of objects belonging to the Nordic Bronze Age Culture, and it should not be excluded that some of the un-excavated cairns may prove to be of Bronze Age date. The finds themselves are very scattered. At Trondenes at Harstad in Troms, two Bronze Age neck-collars have been found. Recently a very similar neck-collar has been found together with a celt placed underneath a rock shelter named Hellenen in the same area.

Of special importance is the find of a soapstone mould for a socketed bronze

celt. It was found at Grøtavær in Trondenes parish. It may demonstrate that bronze celts were casted here north of the Polar Circle.

The Bronze neck collars from Trondenes should probably be dated to per. V of the Bronze Age (900-700 BC). The celt and the mould belong to per. V or perhaps per. VI. Once again some remarkable finds belonging to the Nordic Bronze Age can be related to a landscape with farming potentials.

Among the many rock carvings belonging to 'the tradition of the hunters' of



Fig. 9: Farming landscape on Flatøy, Nordland. F. Kaul photo.

the World Heritage site at Hjemmeluft/Jiepmaluokta at Alta, Finmark, more than 12 ships distinguish themselves by showing remarkable similarities with rock carving ships from Southern Scandinavia (Helskog 1988, 109; Sveen 1996, 59, Helskog 2000). Most of the ships in question are asymmetrical, with a highly protruding keel extension fore and a short keel extension aft. In some cases the stems fore and aft terminate in stylized animals heads, probably horse heads, ending in short spiral curls. This scheme of ship shape with a high keel extension fore is typical of the Late Bronze Age (Kaul 1998; Ling 2008). On a number of the ships from Hjemmeluft the keel extension and the gunwale extension meet, creating a pointed loop-shaped stem.

Ships with 'closed' or loop-shaped stems occur in most of the rock carving regions

of Southern Scandinavia. It is striking to find almost identical ship images on the rock carvings at Bottna in Central Bohuslän, Western Sweden, around 1500 kilometres south of Hjemmeluft (Fredsjö, Nordbladh & Rosvall 1975). Close similarities with the Hjemmeluft ships can also be pointed out at the rock carvings at Åmøy near Stavanger, Southwestern Norway (Fett & Fett 1941).

Pollen evidence from the Alta area seems to indicate the growing of barley at the beginning of the Bronze Age. Today, at some places at the Alta Fjord a particularly mild climate enables barley to ripen during warm summers. Also, potatoes, turnips and carrots are cultivated. In sheltered inland areas a few kilometres from Hjemmeluft farms with byres for cattle can be seen today, surrounded by large grass fields. It is possible to speak of arctic agriculture, almost

Fig. 10: Rock carving ship of Nordic Bronze Age tradition – with loop shaped stem, Hjemmeluft, Alta, Finmark. F. Kaul photo.

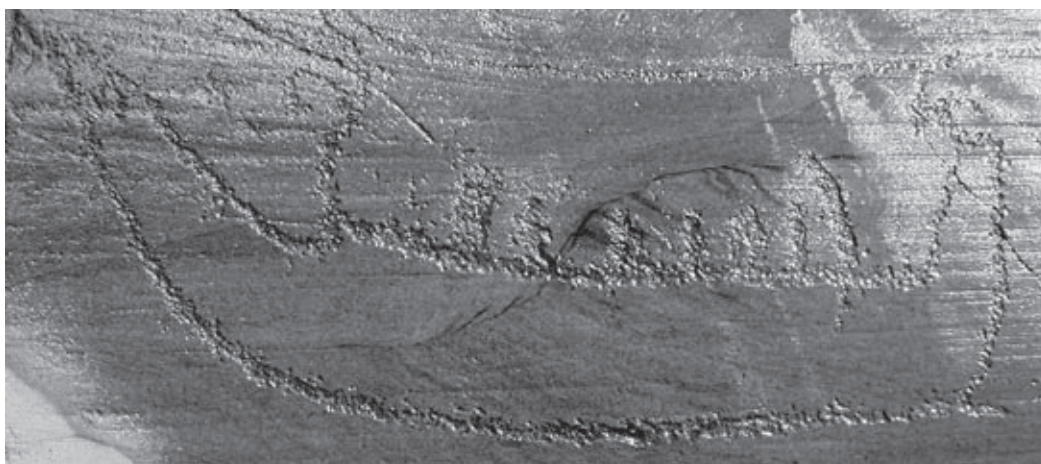




Fig. 11: Large farm at Alta, Finmark.  
F. Kaul photo.

as far north as you can get, hundreds of kilometres north of the Polar Circle, at 70 degrees north.

The evidence, though scanty, could make oneself ponder upon the possibilities of a stable population of Bronze Age farmers even here, in the ultimate north that kept regular contacts with people in the south.

All the way from Helgeland, along the coast as far north as Alta in Finmark, we find evidence of the Nordic Bronze Age Culture, and in each case the sites are situated where there are patches of land suitable for agriculture. Today these

places favoured by a mild local climate yield possibilities for farming and cattle breeding (there are not so many sheep as in Shetland).

We may envisage these patches — where agriculture was carried out at the border — as small islands of arable land surrounded by mountains and the sea (many of the sites are actually on islands), where the only possible vehicle of transport and contacts was the ship. It is evident then that the finds related to the Nordic Bronze Age Culture are related to the coastal zone.

## Bibliography

Apel, J., 2001. *Daggers, Knowledge & Power*. Uppsala.

Berglund, B., 2007. Alstahaug på Helgeland 1000-1750. *Det Kongelige Norske Videnskabers Selskab Skrifter* 2007, no. 1, Trondheim.

Binns, K.S., 1985. De første tegn til jordbruk. *Helgeland Historie*. Pettersen, K. & Wik, B. eds., vol. 1, Helgeland: 148-171.

Bruen Olsen, T., 2009. The phase of transformation in western Norway. *Mesolithic Horizons*. Papers presented at the Seventh International Conference on the Mesolithic in Europe, Belfast 2005. McCartan, S., Schulting, R., Warren, G. and Woodman, P. eds., vol. 2, London: 583-588.

Fett, E & Fett, P., 1941. *Sydvestnorske Helleristninger, Rogaland og Lista*. Stavanger Museum.

Fredsjö, Å., Nordbladh, J. & Rosvall, J., 1975. *Hällristningar Kville Härad i Bohuslän, Bottna socken*. Studier i Nordisk arkeologi 13. Göteborg.

Glørstad, H., 2005. Tangen – En neolitisk boplass fra Tangen av Barmen, Kragerø kommune, Telemark. Noen betraktninger omkring boplassens kulturmiljø og Traktbegerkulturens vestgrense. *Viking* 68: 25-54.

Glørstad, H., 2009. The Northern Province? The Neolithisation of Southern Norway. *Neolithisation as if History mattered. Processes of Neolithisation in North-Western Europe*. Glørstad, H. & Prescott, C. eds., Lindome: 135-168.

Helskog, K., 1988. *Helleristningene i Alta*. Finmarks Fylkeskomune, Icomos, Alta.

Helskog, K., 2000. Changing rock carvings – changing societies. *Adoranten*. 5-16.

Kaul, F., 1998. *Ships on Bronzes, A Study in Bronze Age Religion and Iconography*, Publications from the National Museum, vol. 3 (1 & 2), Copenhagen.

Kaul, F. & Rønne, P., 2008. Ved den ytterste grense? *Spor*. No. 2: 24-27.

Ling, J., 2008. *Elevated rock art. Towards a maritime understanding of rock art in Northern Bohuslän, Sweden*. GOTARC Serie B, Gothenburg Archaeological Thesis 49, Göteborg Universitet, Göteborg.

- Prescott, C., 1996. Was there really a Neolithic in Norway. *Antiquity*. 70: 77-87.
- Prescott, C., 2009. History in Prehistory – the later Neolithic/Early Metal Age, Norway. *Neolithisation as if History mattered. Processes of Neolithisation in North-Western Europe*. Glørstad, H. & Prescott, C. eds., Lindome: 193-215.
- Ritchie, A., 1995. *Prehistoric Orkney*. Historic Scotland. London.
- Ritchie, G. & A., 1985. *Scotland. Archaeology and Early History*. London.
- Sognnes, K., 1985. Bergkunsten. *Helgeland Historie*. Pettersen, K. & Wik, B., vol. 1, Helgeland: 133-171.
- Sognnes, K., 1989. Rock art at the Arctic Circle. *Acta Archaeologica*. 59 (1988): 67-95.
- Sognnes, K., 1999. *Helleristninger i Stjørdal*. Stjørdal Museum.
- Sveen, A., 1996. *Helleristninger Jiepmaluokta Hjemmeluft, Alta*. Utgitt i samarbeid med Alta Museum, Alta.
- Turner, V., 1998. *Ancient Shetland*. Amenity Trust, Historic Scotland, London.
- Østmo, E., 2007. The Northern periphery of the TRB. *Acta Archaeologica*. 78, 2: 111-142.

# Highlights from the Northernmost Bronze Age societies in Norway

*Preben Rønne*

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## **Introduction**

The National Museums research project Northern Worlds includes several projects, two of which have Shetland and Norway as subjects as part of the theme, Farming on the Edge: Cultural Landscapes of the North. The intention is to create a comparative study between the early farming societies in the both areas. This article is a catalogue of some bronze objects from Middle and North Norway mirroring the expansion of the farming culture see Kaul this volume.

The specific research area in Norway is 1.700 kilometers long from south to north, crossing the polar circle half way. Shetland is situated close to the 60th degree of latitude, almost the same as Bergen, which lies about 300 km south of the southern end of the research area in Norway.

Artifacts imported from South Scandi-

navia of flint and bronze are almost always found in areas where agriculture is possible, and only 3% of Norway is suitable to agriculture. The rest is mountainous or woodland. That suggests the concentration of objects is much more significant than it looks like by the first impression. The objects presented here are a very small segment from 132 localities with bronze finds in the research area.

## **Early Bronze Age Period I c. 1700 – 1500 BC**

From the beginning of the Neolithic there is clear evidence of contact between Southern Scandinavia and Middle and Northern Norway. Many finds of thin- and thick butted stone axes from along the coast show this, and especially on the outer islands there are many single finds of flint axes. In the Late Neolithic Period we have the first hoards especially in the southern part of the research area, Møre and Romsdal. The



oldest and only grave from the Late Neolithic has been found as far north as Vikdalen in Vefsn County, Nordland. In the grave was a south Scandinavian flint dagger, Type I, probably produced in Northern Jutland. Another flint object worth mentioning is a flint sickle showing traces of wear, found in the area of Sømna County, Nordland fylke.

In the earliest Bronze Age the contact continues, and there are several finds of flint daggers type VI, dated to Bronze Age Period I or as late as early Period II. In Period I we see the first bronze axes of South Scandinavian type but only in single finds. It is flanged axes and solid shaft-hole axes of Fårdrup type.



Fig. 1: Flanged Period I axe from Fevåg, 15 centimetres long. P. Frederiksen photo.

Fig. 2: Flanged axe from Heggdalsvik, 9.3 centimetres long. P. Frederiksen photo.

The flanged axe with low flanges and heavily fanned blade edge in fig. 1 was found at Fevåg, Bjugn County, Sør-Trøndelag. The edge has been sharpened, probably in modern times, and the axe is now 15 centimetres long. It was found approximately 600 meters from a small lake, in a peat bog, 1.5 meter under the surface in a layer of sandy clay, under which was more peat.

Another flanged axe with high flanges and a light brown, bog patina is 9.3 centimetres long, fig. 2. The axe was found lying openly on the underlying gravel layer where the peat had been removed on the side of the country road in Heggdalsvik, Midsund County, Møre and Romsdal.

A Solid shaft-hole axe of Fårdrup type is from the area of Sunndal district also in Møre and Romsdal. It measures 17.5 centimetres in length and is 5.7 centimetres broad at the edge. It is ornamented with lines and points on probably the upper narrow side and on both the broad sides. It is rather heavy with a weight of 1675 grams. The axe was found near a farm road in a stony grass field, approximately 350 meters north of a farm and around 50 meters east of Vi-

setbækken, near a farm road. It lay visible in a burn where the creek bed shifts in connection with flooding after strong rainfalls.

### **Early Bronze Age Period II**

#### **c. 1500 – 1300 BC**

In period II the material becomes far more varied. Normally the Bronze Age graves are found in isolated cairns, but there are examples of grave finds from one cairn cemetery. This cemetery is situated near two farms, Todnes and Holan in the County of Steinkjer, Nord-Trøndelag. Todnes and Holan is the only fully excavated Bronze Age cemetery in the research area, and it is worth having a closer look at this particular site.

From 1879–1880 and again in 1905–1906 Karl Rygh, Vitenskapsmuseet

Fig. 3: Shaft-hole axe, 17.5 centimetres long from Sunndal. P. Frederiksen photo.



Trondheim, undertook a number of excavations of the cairns in the area surrounding the farms. These excavations by Rygh more than a hundred years ago are still the only real research excavations that have been done on a Bronze Age cemetery in Central and Northern Norway. In all, Rygh excavated twenty-three cairns on these two farms.

Todnes is a small peninsula only about a kilometre wide and stretching about 1.5 kilometre out into the Beitstadvfjord in the district of Sparbu in Nord-Trøndelag. The cairns form, for the most part, two rows in smaller groups. One stretches along the beach at the northern end of the peninsula and runs south toward the Longås farm that lies somewhat south of the peninsula. The other row runs east from Todnes and also down toward Longås. Some of the excavations undertaken by Rygh were done on the fields of the Holan farm and therefore bear that name, but the farmyard at Holan, lies a good distance from the cairns. There are no drawings of either the cairns or the graves, and no photographic documentation of the excavations. Neither do Rygh's diaries contain any information not found in his publication.

I am convinced that Skjeggnes in Alstahaug County, Nordland can be compared with this place (see Kaul this volume), and I suppose that they are not

the only ones. Primarily these types of cemeteries are situated along the coast, where no modern development has taken place, which is the reason why so few have been excavated.

To be highlighted in Trøndelag are two fragments of a razor found in a cist in a cairn. Today only the outer edge of the blade is preserved. It is decorated with opposing triangular ornaments that form a zigzag motif along the back of the razor. The other fragment cannot be located today, but was sketched in 1906. It had a handle formed as a naturalistic horse head with ears turned forward and small protruded eyes. Parts of a skeleton were found in Cairn X, Todnes too.

From the same cemetery comes a sword blade with four rivet holes with two only half preserved, fig. 4. The blade is 53 centimetres long and 3, 7 centimetres wide under the rivet holes, narrowing thereafter and fanning out again a little below the middle. Along the center up



Fig. 4: Sword with loose pommel from Todnes, Period II. P. Frederiksen photo.

to the point runs a rounded, raised ridge with four grooves on each side. The sword have had rhombic pommel – now loose - with indented ornamentation of 10 concentric circles in relief. The two artefacts were found together with a 11.5 centimetres long bronze fibula with narrow hour-glass formed head and spirals at each end, with smooth head and bow, and a celt, with oval mouth, a raised ridge along the edge, and otherwise smooth, with a hexagonal cross-section with no inner casting ridge. It has a hole on one side that has been filed down.

These four bronze artefacts, along with a bronze knife that is said to be lost, were found around 1850 in the large Cairn I, Todnes.

The last find from Period II to be mentioned here is from Fiskvik, Nedre Stjørdalen in Nord-Trøndelag. The spearhead of Ullerslev type is 19.5 centimetres long and was found during roadwork, where it lay in a pile of gravel.

### **Early Bronze Age Period III c. 1300 – 1100 BC**

As in period II the materiel is rather varied in period III. We have many single finds, some votive finds and some burials. Several of the cairns at Todnes and Holan are from this period.

At Skjeggnes in the county of Alstahaug a chambered cairn with a diameter of 22 meters was excavated containing a stone cist like chamber measuring 2 x 0.8 meter. In the cist lay the skeletal remains of two persons, a man of about 50 or possible more and one of estimated 40 years of age. Besides the skeletal remains the cist also contained a 7.8 centimeters long bronze razor, fragments of a long, round bronze pin and fragments of a small asbestos tempered clay pot. The razor has a naturalistic horse head with the ears cast together. The much damaged blade is strongly curved, and along the ridge runs a row of dots surrounded by several lines.

Today the cairn is restored, and the entire area with many large and small cairns is now being cared for by the current owner. The number of cairns is still undetermined, since the area was covered with heavy growth during the time of surveying. Today the area is largely cleared and the cairns are now visible. It is very likely that we are dealing with a cairn cemetery consisting of several cairns from the Bronze Age.

Fig. 5: Razor from Skjeggnes, 7.8 centimetres long dated to Period III. P. Frederiksen photo.





Fig. 6: Razor from Nedre Holan, 6.5 centimetres long, Period III. P. Frederiksen photo.



Fig. 7: Tutulus of bronze from Cairn XVIII, Holan, Steinkjer County in Nord-Trøndelag. It is 5.8 centimeters in diameter, height is now little less than 3 cm. It was found in a row of five cairns, in a burial chamber about 1.5 meters long, 0.35 wide and 0.3 meter deep. There were no sign of bones. P. Frederiksen photo.

In Nedre Holan's outfield in Sparbu, cairn XIII, a sword and a razor were found in a chambered cairn when stones were removed for building the railroad. The 6.5

centimetres long and 1-1.2 centimetre wide razor has a horse head grip, and the ornamentation is only partially visible due to oxidation of the surface. The horse

Fig. 8: Dagger from Nedre Holan, period III. P. Frederiksen photo.

head is narrow and bent and the ears are bent back instead of pointing forward, which is a little unusual. There were no traces of bones in the chamber.

Tutulus from Cairn XVIII, 5.8 centimetres in diameter, fig. 7. It was found in a cairn covering a chamber 1, 5 meters long covered with a single large stone slab. The dagger with bronze hilt and rhombic pommel, fig. 8, was found in Cairn II. A piece of the pommel has been lost, so one can see that the hilt is cast over an internal clay core, through the middle of which runs a bronze tang. The dagger was found together with a smooth celt with a narrow roll at the socket opening. The items were found along with unburnt bones of an individual, whereof some, mainly extremities, were brought to the Museum. The cairn was rather large, 15 meters in diameter, with a chamber built of standing, flat stone and a 1.5 meter long flat stone as a lid.

#### **Late Bronze Age Period IV**

##### **c. 1100 – 900 BC**

At the Bø farm in the county of Steigen in Nordland the northernmost grave find from the Bronze Age was found. The cairn contained a pair of tweezers, 4 centimetres long, with inverted tongs, smooth and without ornamentation, fig. 9. Besides the tweezers a double button with a long rod was found, fig. 10. On the plate where the rod starts an indent-





ed star motif can be seen. Altogether the double button is 7.5 centimetres long, whereof the rod is 6.2. Both artefacts were found when the owner was clearing the cairn, and no chamber was ever recorded.

**Late Bronze Age Period V**  
**c. 900 - 700 BC**

The 58 centimeter long spearhead comes from the Hoddøy farm in North Trøndelag. It stood between two 0.6 meter high stone slabs point down and socket up. The northern end of the stone



Fig. 9: Pair of tweezers, found together with the double button, fig. 10 dated to Period IV. Tromsø Museum photo.

Fig. 10: Double button from Nordland. Tromsø Museum photo.

Fig. 11:  
Ornamented  
spearhead 58  
centimeters  
long, Period V.  
P. Frederiksen  
photo.

slabs was covered by a large stone block. It is very well preserved, fig. 11, and ornamented with meandering and concentric crescents on the 20.5 centimetre long socket.

A mould of soapstone for the casting of celts was found at Grøtavær in Troms. The mould consists of two halves of which the one is fully preserved, fig. 12. It lay under the turf c. 2 meters from a large stone; around 35 meters above sea level.

In 1875, in a mountain crevasse above Tennevik in Troms a pair of quite similar neck rings or collars, with loop ends, were found, fig. 13. They are flat, although slightly domed with three ornamental ridges along the centre. They both have wide openings; the ends are smooth and terminate in two loops. The smallest neck ring is 17 centimetres at the greatest outer diameter.

#### **Late Bronze Age Period VI c. 700 - 500 BC.**

At the edge of a former bed of the Stavåen River in Oppdal lay a deposit of 20 bronze artefacts, a little over a half meter deep in the earth, fig 14: two Wendel rings with sharp flanges and one thin Wendel ring with very low and sharp twisted flanges. Three unornamented neck-rings, one now incomplete; five band-formed arm-rings with hook fas-



tener; two spectacle-formed adornments of bronze; a piece of bronze chain; one tutulus-formed adornment plate with six concentric, raised rings of equal distance and in the center adorned with a conical-formed point; and lastly four celts with more or less fanned blade edges and two with loops below the rim.

The last artefact to be mentioned here is a Hallstatt sword of Gündlingen type, fig 15. In the flat hilt without flanges there are holes for nine rivets. The preserved sword is 65 centimetres long as the tip is missing, whereof the hilt is around 10 centimetres. The blade is ornamented with, among other things, arch ornaments and figures of ships with bow formed as seabirds at the very top of the blade toward the hilt. The ornamentation continues the entire length of the preserved sword. The sword was found in a bog on the farm Våg at Dønna in Helgeland. It lay on the sandy bottom covered by bog soil.

### Conclusion

The bronze objects from the districts Møre and Romsdal, Sør-Trøndelag,

Fig. 12: Mould of steatite for casting celts, Period V. P. Frederiksen photo.



Nord-Trøndelag, Nordland, Troms and Finnmark have not yet been fully published. When looking at some surveys of the Norwegian Prehistory, the Bronze Age of Central and Northern Norway seems to be virtually absent. It is my aim – as part of my contribution to the research initiative Northern Worlds – to work out a full, commented catalogue of Bronze Age bronze objects, so that this solid evidence of material culture can be used for future research.

The material is obviously larger in Southern and South-western Norway than in Central and Northern Norway. On the other hand, even in Northern Norway, different find categories are represented, such as burials and votive depositions – where the sites are always related to environments of high agricultural potential – including the finds highlighted here. Particularly in Helgeland the full Bronze Age 'cultural package' is present. It is quite clear that Northern Norway with its coast bound Bronze Age culture was an integrated part of the Nordic Bronze Age system.



Fig. 15:  
Upper part  
of a Hallstat  
sword. The hilt is  
10 centimeters long.  
Period VI. Oldsakesamlingen photo.



Fig. 13: One of the neck-ring of a pair. Diameter 17 centimeters.  
Period V. Tromsø Museum photo.

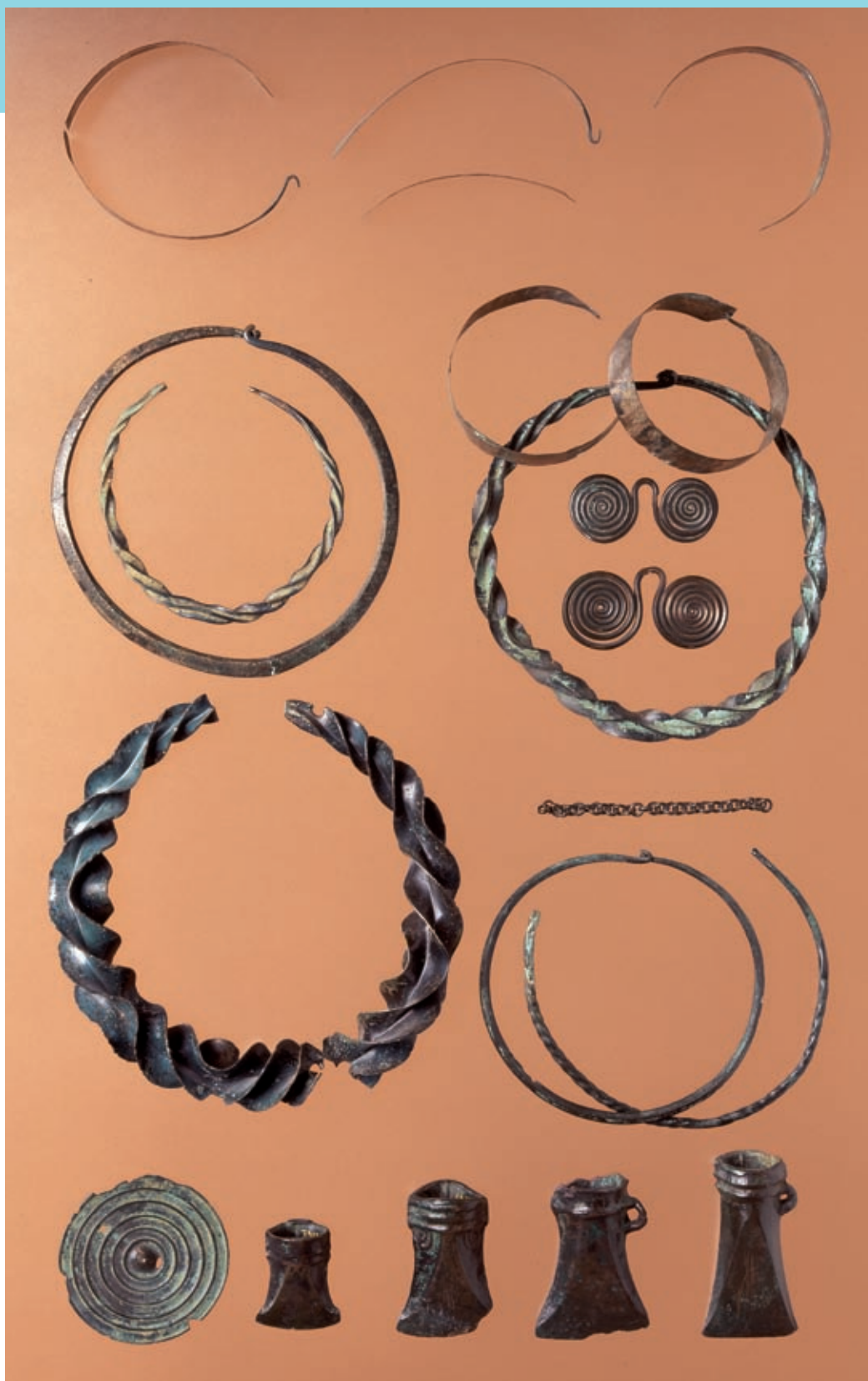


Fig. 14: Various bronzes all from the same deposition, Period VI. P. Frederiksen photo.

# Post-Medieval Reuse of Neolithic Sites in Shetland

*Ian Tait*

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## **Introduction**

Centuries of climatic stability facilitated an unchanging pattern of settlement in Shetland, with populations distributed all over the islands, on high and low ground alike. Only the most exposed hilltops, or those districts with scant soil cover, were unsuitable for habitation. However, from around 1000 BC the climate in the North Atlantic region gradually changed, bringing with it cooler temperatures, harder winters, and more rainfall. Geology permitting, this led to encroachment of heather, and eventually peat deposits formed over much of the hills. In turn, islanders had to abandon farmlands there, and upland settlements were lost from memory.

This is relevant because it gave rise to structures that were left undisturbed in the landscape, and which sometimes found a secondary use centuries, or millennia, after their abandonment. After the Stone Age, people continued to inhabit lower-lying terrain, and any such Neolithic structures as existed there

were destroyed through continual re-modelling. But on the hills hundreds, probably thousands, of prehistoric structures were left as they were in the landscape, sometimes clear to view, sometimes obscured by peat bog.

That there was re-use in prehistoric times is certain, as can be seen in such adaptations as the later insertion of a burial cist in a Neolithic cairn at Pettigarth, Whalsay, and it is also true that a great many sites were left just as they were since the Stone Age because we have many today that show no obvious sign of alteration beyond displacement of rubble. Only if an ancient site was near to some agricultural process requiring building stone was it to be of any use. This paper is concerned with this re-use from Medieval times onward until the 19th century – a period of great stability in subsistence agriculture that ended only with the move to a cash economy, and the old way of doing things altered forever.



Fig. 1: The most frequent re-use of Neolithic sites was the erection of a krob (kale nursery) on a house site, as here at Duri, Cunningsburgh. Shetland Museum.

Whereas classification of Neolithic buildings divides by building type, with the later use being a secondary consideration, we need to look at things the other way around – from the point of view of Early Modern Shetlanders, who could not know what the structures were originally for, but who knew exactly what kind of building they themselves needed to construct.

### **Township and Commons**

Since the Middle Ages, Shetland was divided between township and common lands. Where ancient buildings lay on lower terrain, this was often in township land, and the sites were liable to be quarried into to obtain building rubble. This generally did not involve purposeful destruction of a recognisable ancient

building, because continuous settlement on the lowlands meant there was intensive reuse of rubble, and by medieval times huge numbers of Neolithic dwellings had disappeared already. However, Neolithic artefacts can be found in buildings that point to Neolithic dwellings having originally existed on-site. In the case of any structure built from a Stone Age house, the wall of the Early Modern building will contain stone artefacts unwittingly included in the masonry, typically hammerstones or ploughshares. For example, at Vevoe, Whalsay, a field dyke contains a Neolithic quern, and there is a quern on-site at Islesburgh, Northmavine. Another instance is the deposition of polished axes in walls as talismen to ward off strike by lightning. These so-called “thunderbolts” were



Fig. 2: Remnants of Stone Age house visible under foundations of krobbs at Skellister, Nesting. Shetland Amenity Trust.

set above a hearth or door lintel to provide a sort of lucky charm protection.

Further from the township area, in the common grazings, Neolithic sites were more numerous, and it was in this zone that most characteristic re-use patterns can be seen. All three main types of Stone Age building in Shetland – homesteads, tombs, dykes - were re-used. The pre-existence of these ancient structures was often the determinant in erecting a structure in the first place; if the rubble was there, it was a convenient site.

### **Kale Nurseries**

A krobbs was an enclosure used to rear kale seedlings over winter before they

were transplanted to the farmstead in spring, to be matured to full-grown plants. Such structures were always sited in the common grazings, to obtain the optimum soil conditions, and krobbs tended to be clustered in groups where ideal conditions had been determined through time. This was the type of terrain where Neolithic houses could be found, and the commonest type of re-use on Neolithic sites in Shetland was undoubtedly the siting of a krobbs on a homestead. The krobbs was either circular or square, and typically the ancient building was plundered for any handleable stones, and only the large perimeter stones of the house wall and those larger blocks delineating the wall cells are left. Most often the kale enclosure was built on top of the ancient homestead, as was the case of krobbs each at: Duri, Cunningsburgh; Skellister, Nesting; Loch of Vara, Aithsting. This pattern has been encountered by the Northern Worlds network already south of Islesburgh, Northmavine, where there is an intact Neolithic homestead comprising a field dyke and a house, surmounted by a krobbs which has belonged to either Islesburgh or to Culster, to the south across the bay.

The remodelling of tombs for the construction of krobbs was altogether less common, because chambered cairns were generally erected on hilltops, and



Fig. 3: Toppled orthostats are all that remain from a tomb at the Hill of Olligarth, Whiteness, that was converted to a krobbs. I. Tait.

such exposed locations were unsuitable for rearing kale, because of wind damage to the crop. There were exceptions, such as one at the Hill of Olligarth, Whiteness. This tomb has been entirely denuded, leaving only two exceptionally large stones, which are doubtless toppled monoliths from the outer edges of the tomb facade. It is most irregular for a krobbs to be erected whilst still leaving rocks in the interior, but these two stones were more of a challenge to later Shetlanders than they had been to Neolithic farmers, and the kale nursery has been built around the site of the tomb. Krobbs were typically sited in multiples, and single examples created from one Neolithic building were somewhat atypical, the situation having arisen from there being a convenient supply of stone. The situation at the Hill of Burravoe,

Delting, equates with the more usual situation; here the rubble has been removed from two tombs and taken off-site to build four krobbs.

### Stock Enclosures

Pens were used in township land, and more especially the hill land, and farmers penned sheep, cattle, and horses, in these enclosures during times when crops were growing. These pens, or retts, required large quantities of rubble, and large ancient structures were invaluable sources of rocks in erecting them. Examples exist which have been constructed from all types of Neolithic buildings: near the Dutch Loch, Papa Stour, a prehistoric dyke was dismantled to erect an enclosure; at Hjokland, Sandsting, a dyke was constructed using rubble plundered from a Stone Age homestead; and

Fig. 4: Sometimes secondary structures were sited adjacent to the Neolithic monument, rather than on top. At the Hill of Burravoe, Delting, two tombs were dismantled to erect four krobbs nearby. Shetland Amenity Trust.



a rett was constructed from a chambered cairn at the Vordeld, Fetlar.

### Shelters

Sheep and horses spent all year outdoors in subsistence agriculture, and although they could gain shelter from farmstead buildings in the township during winter, they had to endure all weathers on the hills for more than half the year. A bøl was a shelter of stone built on the moorlands to allow livestock, primarily sheep, to shelter from blizzards, and these simple structures were located off the hilltops, to avoid the harshest weather. Each comprised a short dyke,

and was typically “L” or “T” in plan. The site requirements of a bøl favoured reuse of Neolithic homesteads, because they avoided the hilltops, and examples include ones at: Starapund, Sandness; Truggleswater, Weisdale; Sulmawater, Aithsting. An example of a chambered tomb being used as a bøl is at the Gallow Hill, Walls, where only a few rocks in the cairn’s interior needed to be moved create a shelter.

### Sea Marks and Lookouts

People in boats used landmarks as a means of guiding themselves to fishing grounds. Fishermen took notice of the

relative positions of natural and man-made features when they were at a good fishing area, so that they could be sure to find the same place on future trips. Besides pre-existing buildings being used, special cairns called meids were erected to provide markers. Hill-tops were the most useful land features, and such areas often had a Neolithic cairn in any case, so there was available rubble to build a marker cairn. Examples existed at Rønisfell, Northmavine, and at Husavord, Unst. Not all the heaps of stones we see today on top of ruinous tombs are sea-marks; some are virdeks (marker cairns), which were simply set up as distinctive landmarks to aid people walking over the moors. Today, in the era of road travel, it is hard to realise just how vital virdeks were to Shetlanders over 150 years ago. Two examples are one each at chambered cairns at the Hill of Crookster, Delting, and Forswater, Aithsting.

The hilltop sites that ancient cairns occupied, and the ruins of the tombs themselves, were made use of as lookout posts from medieval times up to the 18th century. These were places where islanders mounted a watch to guard against attacks by pirates, and some chambered tombs were converted into a wakhus (watch hut), as at Eshaness, Northmavine, and the Wart of Bruland, Sandsting.

### Peripheral Settlements

From Medieval times, Norway and its colonies were periodically ravaged by leprosy, and this disease still affected Shetland into the early 18th Century. The afflicted were isolated from the rest of the community in little hovels in faraway places, to prevent their infecting the general populace. Huts were tiny, and the neighbouring farmers who had the task of setting up the shack didn't require large resources of stone and turf to do it. The occupant depended on charity, and arable land was not even a necessity. Because Neolithic homesteads were situated in the hills, it is not surprising that some of the heaps of rubble on the moorlands that were used to erect a spilt hus (leper hut) were originally Stone Age dwellings. An example

Fig. 5: Large uprights survive from a prehistoric dyke demolished to build a stock pen near the Dutch Loch, Papa Stour. Shetland Amenity Trust.



was one south-west of Laxo, Lunnasting. Such a conversion of a homestead into a dwelling after some four thousand years is remarkable, and leper huts were the only instances of domestic re-use, in fact, a reversion to the building's original use.

From the late 18th century Shetland's population soared, as the islands' landowners sought larger families to work as fishermen, and this, in turn, pushed indigent people out to the margins of the long-established settlement area. For centuries settlement had remained within the traditional township dykes,

but now new farms were created in open hill land, sometimes as an extension from the original dyke, and at other times as isolated farms created where no settlement had existed before. The availability of cultivable land was a determinant in their siting, but especially in the case of the isolated farms a supply of stone almost as vital, and some dwellings took use of supplies of stone that had lain untouched for thousands of years, in the form of Neolithic homesteads. An example is Hogapund, Northmavine, where a Stone Age house provided ample rubble for a house, byre, and dyke.

Fig. 6:  
Neolithic site  
comprehensively  
plundered to build  
enclosure  
near the Loch  
of Hjokland,  
Sandsting.  
I. Tait.





Fig. 7: A large chambered cairn at the Vordeld, Fetlar, was the source of stone to construct a rett (stock pen). Much of the Neolithic tomb survives, including the lintels over the entrance passage. I. Tait.

Fig. 8: Just as the prominent Wart of Bruland was a site for a chambered cairn in the Stone Age, the ruined monument was later used as a wakhus (watch hut), then the hut ruin accommodated a 20th-Century government trigonometry pedestal. I. Tait.



### Governmental Re-use

Up to the 19th Century most impact on Neolithic structures had come through the requirements of Shetlanders themselves, for agricultural and other uses. However, the latter-day interventions on Stone Age buildings, before the days of rigorous site protection, came through outside forces. Firstly, the Ordnance Survey, the government department responsible for mapping Britain, undertook its first survey of Shetland in 1878. As part of the project, triangulation points — places where theodolites could be set up to confirm altitudes — were set up on all the highest hills. These places were already occupied in many instances by Neolithic chambered tombs. In the mid 20th Century the O.S. had concrete ped-



Fig. 9: This Neolithic homestead near Laxo, Lunnasting, was latterly used as a spilt hus (leper hut). I. Tait.

estals erected as trigonometry points at these places, and these otherwise unobtrusive structures make an unsightly addition to some tombs, such as that at the Wart of Bruland, Sandsting.

Fig. 10: A Neolithic house was used as a quarry in the mid-19th Century to create the marginal farm of Hogapund, North-mavine. I. Tait.

Warfare even affected a few of Shetland's Stone Age buildings. During the 1914-18 war, the Admiralty instituted a system of coastal reconnaissance to guard against the actions of enemy shipping, primarily submarines. Sailors kept lookouts from a network of watch huts

on hilltops offering good fields of view over the ocean, so inevitably in a few instances an ancient building was there already, providing a quarry of rubble to construct the Naval watch hut. A good example of this exists at Virdafield, Papa Stour, where little of the ancient building





survives. However, this damage was nowhere near as drastic as the effect that national defence had on a Neolithic interment site in Unst during the 1960s. This remarkable site, Saxavord, was evidently an important place in Stone Age Shetland society, for there were no fewer than five tombs on this prominent hill, but all these were eradicated to accommodate an air force base during the Cold War.

### Conclusion

Neolithic sites are remarkably numerous in Shetland, and although many ancient structures have Early Modern buildings superimposed, such later sites

are usually regarded with somewhat less esteem than the prehistoric originals. In survey, the post-Medieval structures are frequently dismissed as 'recent', they need to be removed first to allow an excavation to proceed, and reuse of Neolithic sites has received scant study up to now. The Northern Worlds project is addressing this issue for the first time.

### Acknowledgement

I am grateful to Chris Dyer at Shetland Amenity Trust for helpfully retrieving database site records and photographs.

Fig. 11: Virdafield, Papa Stour, provided an imposing site for a Neolithic tomb, and the usefulness of this vantage point meant the monument was destroyed to make a Naval watch hut in the 1910s. Shetland Amenity Trust.

# Three Ancient Cultivation Tools from Shetland

*Jenny Murray*

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## **Introduction**

When we consider prehistoric society, archaeological evidence may be the only means of gaining a deeper understanding of people's daily lives and belief systems. Excavation offers many such insights but it is often the stray archaeological find that presents us with a fascinating glimmer of the everyday life of our ancestors. Some items may be accidental losses but others were purposefully deposited for varying reasons, and it is these that can offer hints about the beliefs of prehistoric societies. This study seeks to show that these were shared philosophies and practices between communities around the northern world, including the Shetland Isles and Scandinavia. I will look at some of these remarkable finds and discuss how they can highlight these cultural links.

Much of the landscape in Shetland is covered by a blanket of deep moorland. This has not always been the case, but the formation of peat has continued since environmental changes and cli-

matic deterioration noted in the Bronze Age (Owen and Lowe 1999: 5-7; Edwards and Whittington 1998: 12). While this spread of heathland may have caused headaches for our prehistoric ancestors, over the following millennia peat has become an important source of fuel in the Islands and it is during the cutting of peat that many archaeological finds are made. The Shetland Museum houses many of these finds including cultivation tools perfectly preserved in the anaerobic conditions that peat offers. This paper will concentrate on three such items from within the collection: a wooden ard (plough), ox yoke and foot-spade.

## **The Shetland Ard and Yoke**

Evidence for early cultivation by Neolithic and Bronze Age farmers in the islands is found in abundance. Confirmation of ard use is evident from the broken stone ard points or shares which have been found in numerous deposits recovered from the walls of prehistoric buildings, rønies (clearance cairns) and dykes.

75 of these stone shares were found at the early agricultural settlement at the Scord of Brouster and 187 at a Bronze Age site in Sumburgh to give just two examples (Whittle et al. 1986: 75-76; Downes & Lamb 2000: 91). Ard marks or plough furrows have also been discovered in the subsoil during excavations including those at Sumburgh; these were found under the earliest layers where wooden structures had later been erected. Radiocarbon analysis of domestic refuse found down the post-holes of these buildings gave dates of 1679 and 1550 BC. Lamb concludes these dates suggest ard cultivation was well under way by 2000 BC cal (Lamb & Rees 1981: 117). Further evidence for early cultivation in the Islands includes carbonised barley found in excavation; a deposit of 28 pounds was recovered with half of a broken quern within the walls of a Neolithic house at the Ness

Fig. 1. Wooden ard and ox yoke on display in Shetland Museum.



Fig 2. Shetland ard showing positioning of stone share on wooden stilt. Shetland Museum

of Gruting (Calder 1955: 353). Numerous quern stones have been found during excavations in Shetland confirming the grinding of meal at all settlements (Turner 1998: 32). A man cutting peat at Viridifield, Dunrossness in 1965 discovered a complete ard at a depth of 1.83 metres. Its components along with another stilt from a similar ard were laid side by side, indicating deliberate deposit in the moor. The ard is of the composite type very similar to the Døstrup ard which

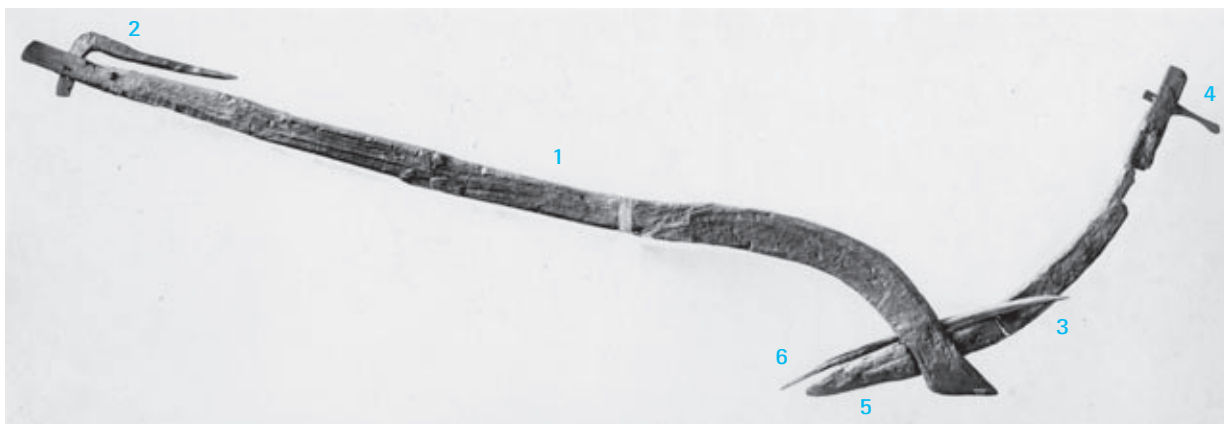


Fig 3. The Døstrupard (Glob 1951:37, Fig. 37). Professor Glob's diagram shows the ard consists of the long beam (1) on to which the oxen were yoked by the means of a hook (2); at the other end is a mortise through which a single wooden stilt passes (3); the ard head (5) is seen underneath the share or fore-share (6) as it is sometimes called. Number (4) depicts the handle for the user to steer (Lerche1994:11). Courtesy of the National Museum of Denmark.

was recovered from a bog in Jutland in 1884, which has been radiocarbon dated with a calibrated date given as 810 BC (610 BC) placing it in the Danish Younger Bronze Age (Lerche 1969: 128). There are around ten similar finds from the Danish bogs such as the Donneruplund ard found in three metres of peat, also in Jutland (see Glob 1945: 93). These are all believed to be deliberate deposits, including the Nørre Smedeby plough which was discovered in a bog with a number of wooden dishes and earthenware pots, very typical of votive finds (Glob 1945: 107-8).

Similar Scottish finds include a rudimentary ard from the Pict's Knowe in Dumfries; of the crook type, it is similar to the Danish Bronze Age ard from Hvorster (Thomas 2007: 117).<sup>1</sup> This too may have been placed in the ground deliberately as it was found in a ditch with numerous fragments of broken quernstones (Thomas 2007: 152). Likewise a wooden ard stilt and head were uncovered from the floor level of an Iron Age crannog in Milton Loch, Kirkcudbrightshire. Radiocarbon dating of the wood gave a date of 400±100 cal BC (K1394) (Dixon 2004: 53). Piggott, excavator in the early 1950s suggested this may have been a ritual deposit as it was placed in the fabric of the buildings foundation layer (Piggott 1952: 143-144). Also suggestive of a votive deposition, an alder plough beam of the Døstrup type was found deep in the

<sup>1</sup> Pict's Knowe is a deceiving name as the excavation revealed a multi-period site dating from Neolithic to Roman-Iron Age (see Thomas 2007).

peat moor in Lochmaben, Dumfriesshire. Similar finds of this kind include an Iron Age wooden share recovered in Dundarg in Aberdeenshire (see Rees 1983) and further south in England a Bronze Age ard was uncovered in a prehistoric channel of the River Thames dated to 900-760 BC.<sup>2</sup>

These ancient ploughs may have been worked by people themselves, but early yokes suggest that draught animals were also being used. A head yoke shown in figure 1 was found in the 1920s deep in a peat bank. Measuring 1.43 metres the Shetland yoke has three horizontal openings, presumably used to lash the harness straps either to the horns or neck of the beasts driving the plough (Fenton 1986: 34). Traditionally, in Shetland, oxen and horses were used to pull the plough but prehistoric evidence would suggest the draught animal of choice was oxen. This is supported by cattle bones found during archaeological excavations such as those at the Ness of Gruting and Scord of Brouster (Calder 1955: 358, 380; Whittle et al. 1986: 132). The Shetland yoke is almost identical to the Bronze Age example found in the peat moor at Loch Nell, Argyll which has been dated to 3430 ± 85 (OxA-3541), calibrated to 1950-1525 BC (PSAS 1889-90: 143; Cowie & Shepherd 2005: 164).

Using typological evidence we can date the Shetland cultivation implements by referring to similar items that have been securely dated from the archaeological context such as the Milton Loch ard but further research is required to establish securer dates for the Shetland items so that cultural links can be ascertained between finds from Denmark and Scotland. For example, were these implements being deposited as ritual offerings at the same time in both these regions, suggesting a shared cultural tradition? To help in this process we need to look at the area where they were deposited to see if there are other clues found in the vicinity.

A field survey of the Virdifield area where the ard was discovered revealed a prehistoric field boundary, a Neolithic/Bronze Age house (in Shetland we had a rather elongated Neolithic period so structures in themselves are difficult to date precisely) and a cist of probable Bronze Age date. The area where the ard was found lay approximately 500 metres inland from the house within a dip in the boggy landscape (HU4035 1920). This area, below the surrounding hills, may have previously been arable but later came under threat from the encroaching heathland. Was the deposition of the ard a gift to appease the weather gods to help slow the formation of peat and water logged soils (see

<sup>2</sup> See <http://www.britarch.ac.uk/ba/ba26/BA26NEWS.HTML>

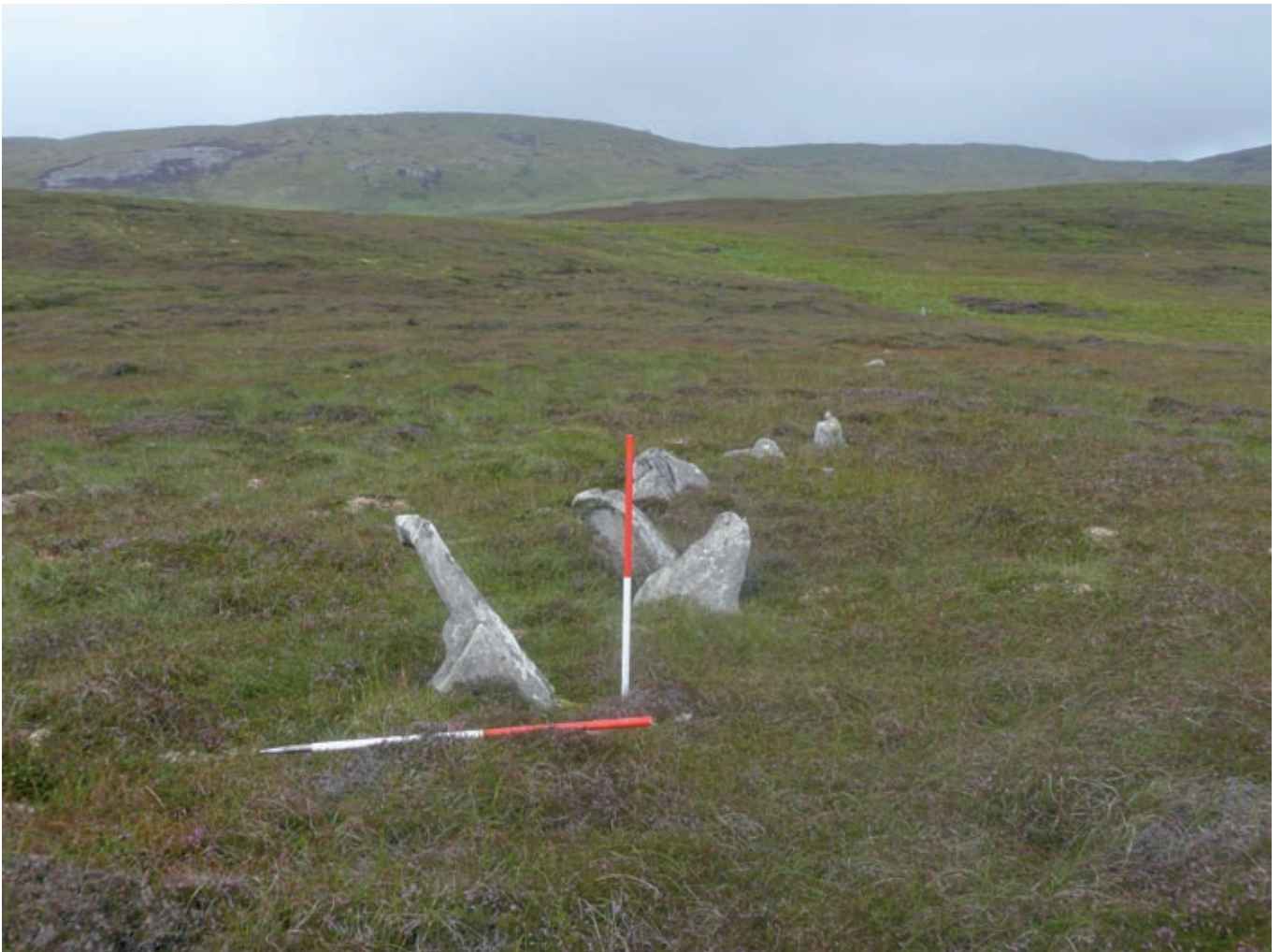
Bradley 1998: 170)? Glob suggests the Jutland ploughs may have been an offering to higher powers, perhaps after the first cultivation in spring, in order to ensure fertility and happiness (Glob 1945: 108).

Fig. 4. Field boundry at Virdiefield. J. Murray photo.

Further evidence of ritual in the landscape was required, and a simple search

for other items relating to the Virdiefield area on the Shetland Museum database offered an exciting discovery.

Half way between the house and the location where the ard was found another peat cutter in 1999 uncovered one of Shetland's finest polished Felsite axes (HU4070 1930). Since there was no evi-



dence of wear this may have been a ceremonial axe, never intended for use but rather as a ritual offering. Votive offerings of polished stone are well known in Shetland, with numerous similar finds in the museum collection of felsite axes and a unique assemblage of highly polished Shetland knives. Likewise, votive deposits of this kind are found in Denmark and appear also to correspond with the deposition of ploughs; Glob suggests the Trollerup and Donneruplund ards are contemporary with fully polished flint axes, and also the Døstrup and Nørre Smedeby examples with chopped axes and axe-shaped flints of the Stone Age (Glob 1945: 1-6). While these comparisons with Denmark offer a suggested date for ritual depositions, radiocarbon dating of the Shetland wooden implements would establish a more reliable date, and this is hoped to be achieved within the time constraints of the Northern Worlds Project before 2012. Cultural parallels could then be determined between the two regions.

### **The Shetland Foot-spade**

The third cultivation tool to be discussed in this paper is an unusual wooden object referred to as a foot-spade or foot-plough. Two such items have been found buried deep in the moor of Shetland's northern islands of Yell and Unst. Quite unique, these implements are constructed entirely of wood with no evidence of

metal attachment. They share similarities to the Scandinavian Nabbspade and hælspad (see Digitaltmuseum.no - ID numbers SUM.02595 and NFL.00313).

The Unst example was found buried with a wooden møldinklubb (mattock), suggesting that these implements were used together to first break up the sods before cultivation. The Shetland Museum records (AGR 6536 and AGR 65121) suggest these spades are of medieval date as they are similar in shape and style to the Gaelic cas-chrom used in the Western Highlands and Islands (see Fenton 1974). It was previously assumed that spades were brought in by the Vikings after the 9th Century, as a new tillage practice, but recent excavations at Old Scatness in the south of Shetland revealed marks in the sub-soil which differ from ard marks, being shorter and less sharp in profile - suggesting spade marks in an Early/Middle Iron Age context (Dockrill et al. forthcoming). This evidence opens the argument that the Shetland spades may be much earlier than first presumed, and may possibly prove to be the predecessor of the cas-chrom, as suggested by Professor Alexander Fenton (Fenton 1974: 145). Radiocarbon dating will hopefully offer a secure date for the spade and mattock, suggesting further evidence for the evolution of cultivation tools in the Shetland Isles.



Fig. 5. Felsite axe of exceptional quality from Virdifield. J. Murray photo.

If the Shetland spades are proven to date from the Iron Age, ritual deposition into the peat would be a possibility. Richard Bradley suggests this practice continues well into the Iron Age and later periods throughout Europe, with depositions including weaponry and from southern Scandinavia offerings of pots containing food (1998: 160-161). If however they are found to be later, a more practical reason for their burial may be assumed. Were they tools left behind after a day's work but never retrieved, or were they placed in the peat to keep them wet during the summer months?

This practice is suggested in warmer climates recorded by Gorecki in the New Guinea Highlands, where a wooden prehistoric digging stick was placed in a drain. Local inhabitants believed its owner must have moved somewhere else and forgotten to retrieve it from where it was soaking (Gorecki 1978: 187). It may be the acidity of the peat works in the same biological way as tannic acid as an inhibitor of decay (Earwood 1993: 17). When discussing the Danish ard deposits Glob disputes the argument that these objects were buried to preserve them, stating that wood

that had been soaked all summer would be far less resistant to the abrasion of the soil during ploughing than wood that was completely dry (Glob 1945: 107).

Both scenarios seem doubtful in the Shetland environment. Firstly a wooden implement would be an expensive commodity in Shetland's treeless landscape. It is therefore unlikely that the owner would be so careless. Wood was becoming scarce by the Iron Age (Owen & Lowe 1999: 280-282; Edwards et al. 1998: 11-12); driftwood was now being utilised, as is evident in the burrows of

the Teredo worm (shipworm) in many of the Shetland Museum's wooden artefacts, including the foot spade from Yell. Secondly, the climate within Shetland is quite humid due to its island nature, and the temperature never gets very hot during the summer months. Also, why would the owners of these valuable items go to the bother of taking them up on the hillside to bury them, where they could most certainly get lost, instead of placing them nearer to home? These spades and mattock would appear to have been deliberately buried in the peat as the wood has not been weath-

Fig. 6a. Shetland foot-spade from Yell. J. Murray photo.

Fig. 6b. there are no traces of metal fittings on the wooden blade. J. Murray photo.



ered. Had they been left lying in the hill it would have taken years for the peat to have covered them, causing some drying and warping of the wood. Hopefully radiocarbon dating will help answer these varied questions.

### Conclusion

It is anticipated that by having these wooden cultivation tools scientifically dated we will gain a better understanding not just of the cultivation practices, but also the belief systems of the people who used them. Ritual deposition is well known throughout the prehistory of Northern Europe, and it is fascinating to think that these farmers living as far apart as Shetland and Denmark may have been sharing the same cultural traditions at the same time; working the land with an optimism that the fertility of the soil would be secured by their faith and ritual customs.

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### Bibliography

Bradley, R., 1998. *The Passage of Arms, an Archaeological analysis of prehistoric hoard and votive deposits*. Oxford.

Calder, C.S.T., 1955. Report on the Discovery of Numerous Stone Age House-sites in Shetland. *Proceedings of the Society of Antiquaries Scotland*. Vol. 89, 1955 - 1956.

Cowie, T.G. and Shepherd, I.A.G., 2005. *The Bronze Age. Scotland After The Ice Age*. Edwards, K.J. and Ralston, I.B.M., eds., Edinburgh.

Dixon, N., 2004. *The Crannogs of Scotland: an underwater archaeology*. Gloucestershire.

Dockrill, S.J., Bond, J.M., Turner, V.E., Brown, L.D et al. forthcoming. *Excavations at Old Scatness*. Shetland Vol. 2: The Iron Age Broch and Village. Shetland Heritage Publications, Lerwick.

Downes, J. and Lamb, R., 2000. *Prehistoric Houses at Sumburgh in Shetland, Excavations at Sumburgh Airport 1967-1974*. Oxford.

Earwood, C., 1993. *Domestic Wooden Artefacts in Britain and Ireland from Neolithic to Viking Times*. Exeter.

Edwards, K.J. and Whittington, G., 1998. Landscape and Environment in Prehistoric West Mainland, Shetland. *Landscape History*. Vol. 20, Society for Landscape Studies, Wakefield, Yorkshire: 5-17.

Fenton, A., 1974. The Cas-chrom: A Review of the Scottish Evidence. Lerche, G., Fenton, A., Steensberg, A.: *Tools and Tillage*. Vol. II: 3, National Museum of Denmark, Copenhagen.

Fenton, A., 1986. *The Shape of the Past 2: Essays in Scottish Ethnology*. Edinburgh.

Glob, P.V., 1945. Ploughs of the Døstrup Type, Found in Denmark. *Acta Archaeologica*. Vol. 13: 93-111.

Glob, P.V., 1951. *Ard og plov I Nordens oldtid*. Jysk arkæologisk Selskabs skrifter. Vol. 1, Aarhus.

Gorecki, P.P., 1978. Further Notes on Pre-historic Wooden Spades from the New Guinea Highlands. In: Lerche, G., Fenton, A., Steensberg, A.: *Tools and Tillage*. Vol. III: 3, National Museum of Denmark, Copenhagen: 185-190.

Lamb, R. and Rees, S., 1981. Ard Cultivation at Sumburgh, Shetland. In: Lerche, G., Fenton, A., Steensberg, A.: *Tools and Tillage*. Vol. IV: 2, National Museum of Denmark, Copenhagen.

Lerche, G., 1969. The Radiocarbon Dated Implements. In: Lerche, G., Fenton, A., Steensberg, A.: *Tools and Tillage*. Vol. I: 2, National Museum of Denmark, Copenhagen.

Lerche, G., 1994. *Ploughing Implements and Tillage Practices in Denmark from the Viking Period to About 1800*. Poul Kristensen, Herning.

Owen, O. & Lowe, C., 1999. *Kebister: The four-thousand-year-old story of one Shetland Township*. Stroud, Glos.

Piggott, C.M., 1952. Milton Loch Crannog 1: A Native House of the 2nd Century AD in Kirkcudbrightshire. *Proceedings of the Society of Antiquaries Scotland*. Vol. 87, 1952-1953.

*Proceedings of the Society of Antiquaries Scotland*, Vol. 24, 1889-1890: 443.

Rees, S., 1983. A Wooden Ard Share from Dunarg, Aberdeenshire, with a note on other wooden plough pieces. *Proceedings of the Society of Antiquaries Scotland*. Vol. 113, 1983.

Thomas, J., 2007. *Place and memory: Excavations at the Pict's Knowe, Holywood and Holm Farm, Dumfries and Galloway*, 1994-8. Oxford.

Turner, V., 1998. *Ancient Shetland*. London.

Whittle, A., Keith-Lucas, M., Milles, A., Noddle, B., Rees, S., Romans, J.C.C., 1986. *Scord of Brouster, An Early Agricultural Settlement on Shetland, Excavations 1977-1979*. London.





Rock carvings  
from Alta,  
Northern  
Norway.  
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photo.

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## **Farming on the edge: Cultural Landscapes of the North.**

Backcover: participants in the network meeting  
during September 2010:

From the left Val Turner, Preben Rønne, Torben  
Ballin, Flemming Kaul, Jenny Murray, Ian Tait,  
Carol Christiansen, Ditlev Mahler, Chris Dyer.



The National Museum of Denmark  
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**Farming on the edge:  
Cultural Landscapes of the North.**

**Short papers from the network  
meeting in Lerwick, Shetland  
September 7th - 10th 2010**