

Life in Medieval Shetland: An archaeological Perspective

By Gerald F. Bigelow

1. Introduction

When the Norse Vikings began long distance voyaging in the late 8th and 9th centuries A.D., Britain was a prominent target. In the three centuries which followed various regions of the British Isles were affected unequally by Viking raiding, trading and landtaking. The Shetland Islands, Britain's northernmost territory, were probably raided very early, for they are only 340 kilometres from the Norwegian coast. However, the Scandinavians' greatest influence in Shetland was achieved through intensive colonization. Even today, after five hundred years of British rule and cultural diffusion from Scotland and England, Shetland lifeways still reflect a Norse heritage.

Like Greenland and Iceland, Shetland offers archaeologists the opportunity to study the economic, social and biological adaptations that were made by a complex society in a northern island environment. Unlike those western colonies, Shetland also reveals the effects of close proximity to Continental Europe and the large-scale economic and political systems that grew there during the Middle Ages.

2. The Shetland Environment

The adaptations made by the islands' early Norwegian colonizers are best understood in the context of Shetland's local ecology and its geographical setting in the

Eastern North Atlantic (fig. 1 and 2). Shetland is an archipelago of over one hundred islands and islets which rise from the edge of the Continental Shelf, forming a terrestrial pivot around which ocean currents from the Western Atlantic and the Polar regions meet and mingle with North Sea waters. The resulting diverse conditions of water temperature, salinity and depth form excellent habitats for large concentrations of plankton, which in turn support immense populations of fish and seabirds.

The Atlantic waters moderate the climate, providing cool, damp summers, and relatively mild winters. Oceanic control of the weather also brings frequent precipitation borne on some of the most persistent and violent winds in Northwestern Europe.

Although small areas of the hilly islands are mantled in fertile shell sand, or have rich soils derived from limestone bedrock, many places are underlain by metamorphic and igneous rocks, and the generally cool, humid climate encourages the growth of peat blanket bog on these acidic substrates. Virtually worthless for cultivation, this land is used as grazings, and as a source of peat which has always been the only abundant fuel for heating and cooking fires; apart from a few modern plantations protected by walls, Shetland is treeless.

Unlike many Norse settlement regions in Norway and Greenland, Shetland lacked large populations of

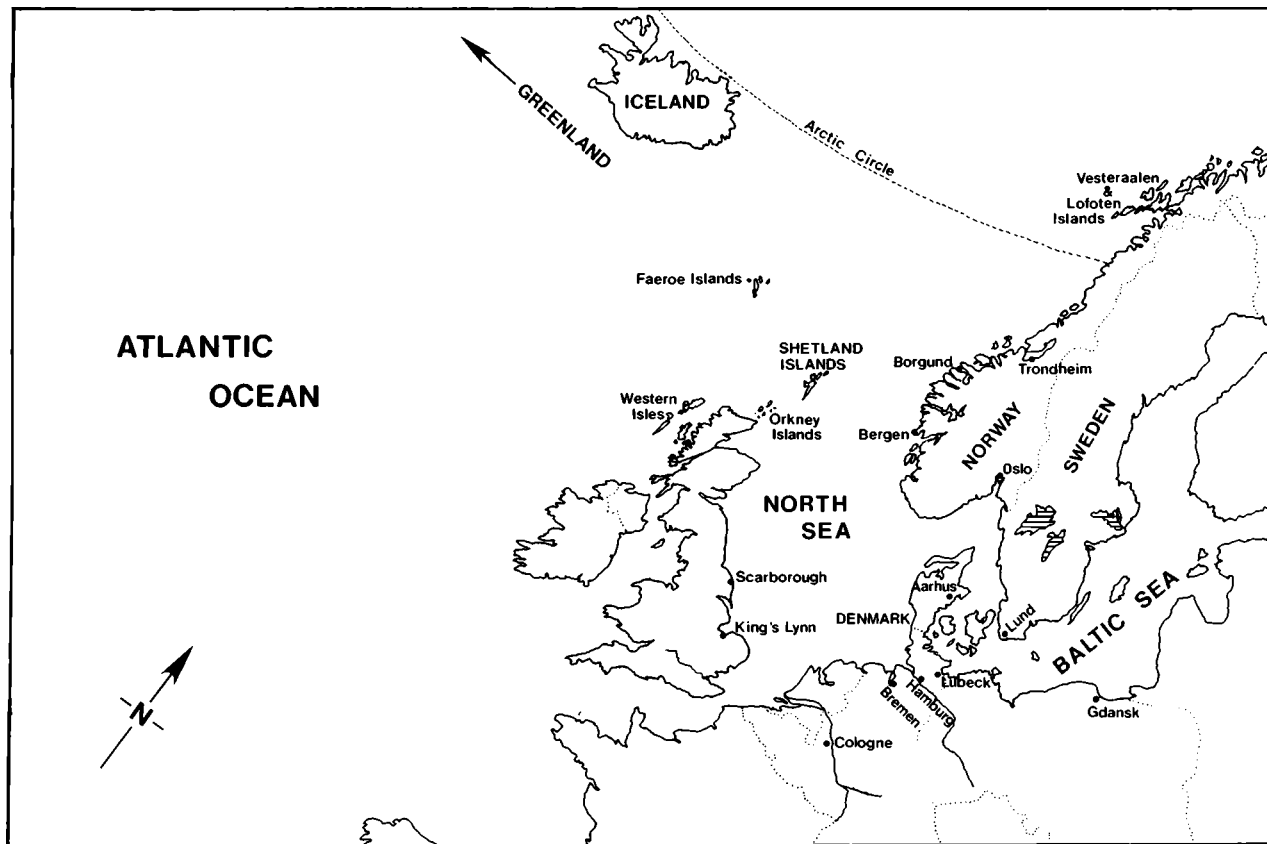


Fig. 1. Shetland's geographical setting.

wild terrestrial mammals when the Scandinavians arrived (1). However, both grey seals (*Halichoerus grypus*) and common seals (*Phoca vitulina*) were probably dispersed around the islands in populations relatively large by modern European standards, but small by comparison with the large migratory herds which were accessible to the settlers of Greenland (2).

Thus the first Viking settlers of Shetland laid claim to a cold archipelago with very limited arable land, a short growing season, negligible wild terrestrial faunal resources, but good pastures and a surrounding marine ecosystem teeming with large populations of fish and seabirds, and smaller concentrations of sea mammals.

3. The Viking Settlement

Linguistic and biological evidence indicate that the islands' Scandinavian colonizers came mainly from Southwest Norway (3). The date of the landnam, or initial landtaking, has not been determined, but the islands' close proximity to Norway suggests that colonization would have occurred early in the Westward Expansion, i.e. c 800 A.D.

In contrast with Faeroe, Iceland and Greenland, Shetland was the home of a Celtic Pictish population (4). It is likely that the Shetland Picts were few in number at the time of the Norse landnam, because they seem to have had very little impact on the succeeding island culture, which was almost wholly Scandinavian in character.

Placename evidence indicates that the earliest Viking settlers established farms in locations with good arable and grazing land, nearby sources of peat, and beaches where boats could be landed safely and pulled above the high tide line (5). Such areas are relatively uncommon in the islands, and later settlers based themselves on less desirable lands. Changes in placenames suggest that most of the economically useful land was settled and exploited through cultivation and grazing by 900-1000 A.D., a pattern of rapid population growth and expanding land use which also seems to have occurred in early Iceland and Greenland (6).

Archaeological evidence provides most of the information on the lifeways of the Shetland Vikings, and much of the available information is from the excavated site of Jarlshof, in Dunrossness, the southernmost parish (see fig. 2). Jarlshof is located near fine arable and grazing lands, and the southern tip of Dunrossness would have been a natural staging point for Viking navigation to the Orkney Islands and Caith-

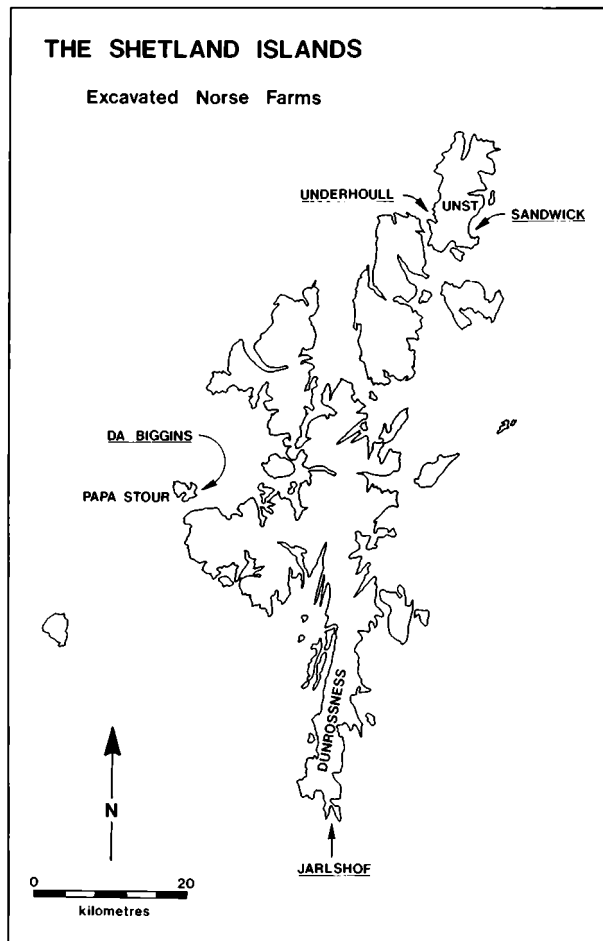


Fig. 2. Locations of excavated Norse farms in Shetland.

ness. Thus it is not surprising that a farm was established there early, and later grew to become a large estate (7).

Viking Economy

Studies of artifacts and animal bones from Jarlshof suggest that the Viking economy was based on the cultivation of *bere*, a hardy form of barley, and on the herding of sheep, cattle and horses. The contribution of cereals agriculture to the overall economy, though, would have varied with the quality of soil in different parts of the archipelago; Dunrossness is an especially fertile district, while the peat-covered isle of Yell is proportionately much less attractive for cultivation. Domestic animals, particularly sheep and cattle, were undoubtedly important on all farms. Cattle provided dairy foods, meat and hides; sheep were the source of wool for clothing, and also contributed meat to the diet; and horses were probably used for transporting peat, seaweed fertilizer for the crops, and for overland travel.

The early medieval Shetlanders also utilized finely built wooden boats for transportation around and between the islands, and for obtaining fish from the sea and seals from outer island beaches where the animals hauled out in the pupping season. However, heavy linesinkers which would have been required for the capture of large fish were relatively scarce finds in Jarlshof's Viking levels (8).

Seabirds were probably also taken from nesting cliffs, but their importance in the general economy is difficult to estimate. The relative contribution of shell-fish in the diet is also ambiguous; concentrations of molluscs appear in Viking Period refuse deposits, but true shell middens have not been observed.

Viking Artefacts

The main types of imported goods used in Viking Shetland included combs made from deer antler, and bronze metalwork, including jewellery of Celtic design,

possibly obtained through raiding. Domestically produced technology included cooking vessels, weights for upright looms, and spindle whorls, all made from soapstone; bone pins and needles of many forms; and no doubt a variety of wooden implements and ornaments which have not been preserved. The Shetland Vikings apparently did not make ceramics, although contemporary Anglo-Norse and Hiberno-Norse Vikings were assimilated by pottery-making cultures, and probably conveyed knowledge of the tradition to the rest of the Norse world.

Viking Society

The existing archaeological and scant historical information thus records Viking Shetland as an island settlement in which the subsistence economy was based on pastoral and agricultural production, marine resources were of secondary importance and trade with other areas occurred, but did not result in the large-scale importation of durable goods. The Icelandic Sagas and contemporary chronicles further suggest that early medieval Shetland was inhabited by free farmers who probably pledged military allegiance to local chieftains, who in turn were frequently asked by the Earls of Orkney to supply "fighters from Shetland" for political and piratical campaigns (9).

4. Late Norse Shetland ca 1100-c 1500 A.D.

Jarlshof was occupied throughout the Middle Ages until the 17th century. John Hamilton, the main investigator and publisher of the site, observed that a sweeping change in material culture occurred there between the 11th and the 12th centuries (10). The new material culture complex has also been found on other medieval sites at Sandwick, on the island of Unst (11) (fig. 3), Da Biggins, on the island of Papa Stour (12),



Fig. 3. The bay at Sandwick, Unst. A 12th-14th century farm was excavated in the area of the beach at photo centre.

and a similar transition is thought to have occurred in Orkney and Caithness (13). Artefacts of related types recovered from a Norse farmstead at Underhoull, Unst, may have been produced in an early stage of this transition (see fig. 2) (14).

Hamilton believed that the changing material culture at Jarlshof marked an important shift in lifeways, and he coined the term "Later Norse" for the settlement's new orientation (15). As "Late Norse", this term is now commonly used to designate settlement in Shetland, Orkney and Caithness from c 1100-c 1500 A.D. Archaeological evidence demonstrates that the domestic economies of some farms were transformed

during this period, and written records suggest equally great political and ideological changes.

Late Norse Economy

New types of vernacular architecture which appeared at this time may reflect more than shifting styles. While the early Viking settlers built simple rectangular hallhouses similar to those known in other Norse settlements, (16), Shetland's Late Norse farmers increasingly adopted *longhouse* designs in which cattle were tethered or stalled in one end of the farmhouses, under the same roof as the human occupants (fig. 4) (17).

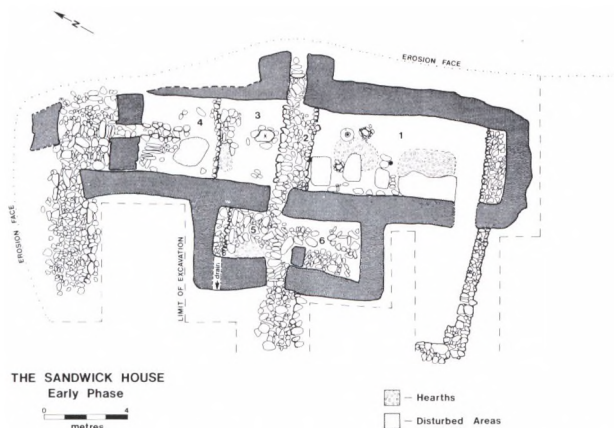


Fig. 4. The longhouse at Sandwick, Unst c 1100-1200 A.D.: 1) living room, 2) cross passage, 3) food preparation area (?), 4) cowbyre, 5) room with drain, 6) simple outshot room.

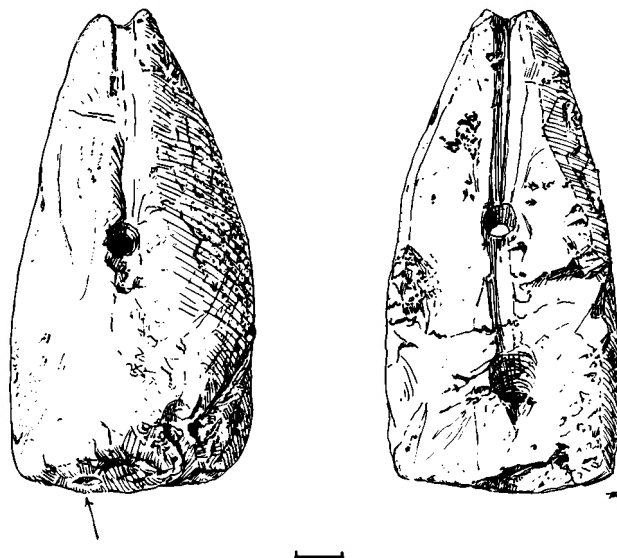


Fig. 5. A type of soapstone linesinker which was produced in Late Norse Shetland. This example was found in 13th-14th century contexts at Sandwick, Unst (scale 1 cm).

Faunal evidence indicates that the production and early mortality of calves increased during this period, and it has been suggested that these changes in architecture and animal husbandry may be linked, and together reflect an intensification of dairying during the later Middle Ages (18).

A substantial increase in the deposition of linesinkers of diverse types on sites of the 12th and following centuries seems to mark a parallel expansion of fishing activities, and the Sandwick farm also displayed zooarchaeological evidence of this trend (fig. 5) (19). Animal bone data also suggests that the exploitation of seals for food may have varied greatly among the later medieval farms; the bones of grey and common seals were abundant in the Jarlshof middens, but were present only in traces at Sandwick (20).

Late Norse Trade

Artefact analyses reveal that the volume and variety of goods which were imported into the islands grew in the Late Norse period. Pottery from England and Germany has been found at Jarlshof, Sandwick and Da Biggins, and copper alloy sheet metal, ornaments, jewellery and keys recovered at Jarlshof and Sandwick may have originated in Germany, which became a major metals exporter in the later Middle Ages (21). Bone combs and whetstones were imported from Norway, and the English and Continental European ceramics and metals were most likely brought from there, as all of those goods were traded in great quantity to Norway starting in the 12th century (fig. 6 and 7) (22). Other aspects of Shetland Late Norse architecture and domestic technology reveal very close cultural as well as economic ties with Norway, which directly governed the islands from 1195 to 1379.

Three archaeological trends thus seem to mark changes in Shetland lifeways in the period 1100-1500 A.D.:

- a) the adoption of longhouse architecture and an increased deposition of the bones of young cattle may reflect increased dairying;
- b) expanded production and refinement of fishing technology, and progressively greater deposition of fishbone on sites suggests increased procurement of large fish; and
- c) increases in the importation of durable goods from Norway marks growth in trading activities.

5. Discussion

Written records

Fortunately, written records from this time contain information which offers several potential reasons for these shifts, and for their timing. The *Orkneyinga Saga*, for example, records the political history of the Orkney and Shetland Islands between the late 9th and early 13th centuries. Icelandic sagas in general were not written as formal histories or chronicles, but instead were early oral histories which were transcribed in the 12th or 13th centuries, and they often reveal a biased emphasis on past events which could serve as metaphors for problems or issues in the transcriber's own later medieval society. However, if read critically, sagas can be useful sources of specific forms of information, and the *Orkneyinga Saga* suggests that the levying of taxes on Orkney and Shetland farms first became systematic and consistent in the 11th and 12th centuries (23). In addition, the islands were Christianized in the 11th century, and in the early 12th century ecclesiastic tithing was instituted (24). It is probable that these political and ideological changes would have ne-

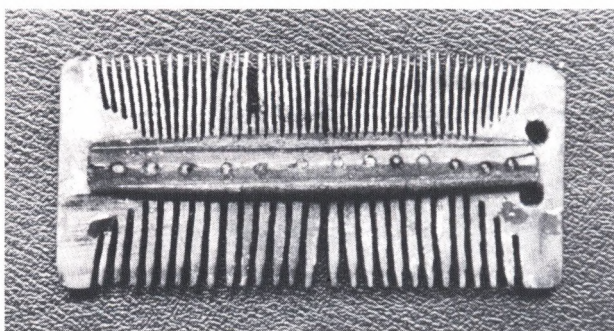
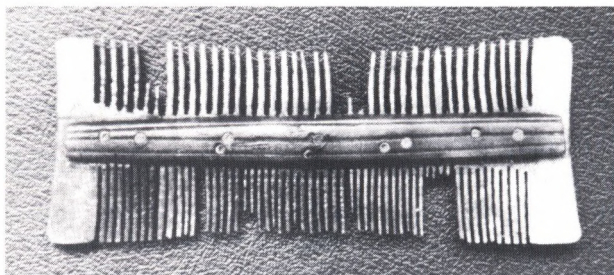
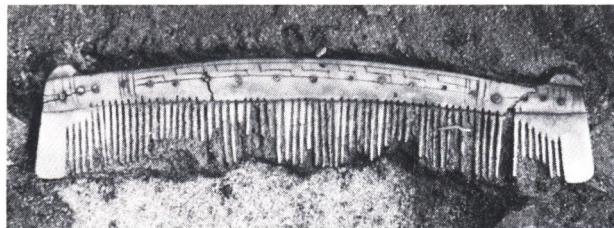


Fig. 6. Antler combs which were probably imported from Mainland Scandinavia (all were recovered at Sandwick, Unst).

cessitated increased milk production on all farms, because butter was a principal tax commodity in medieval and post-medieval Shetland. In 1665 Shetland farmers were expected to submit approximately 19,500 kg of butter for taxes. (25)

Restriction of Land Resources

Two factors may have discouraged the exploitation of other land resources during this time of politically induced economic stress. First, the islands' pastures have a distinct sheep carrying capacity, which when exceeded, results in the rapid degradation of moorland plant communities through the spread of nutritionally inferior mat grass (*Nardus stricta*) (26). Given the available evidence of Viking Period settlement density, it is likely that the optimal sheep carrying capacity of the islands was already achieved in the 10th or early 11th centuries.

Second, the right to harvest wild animal resources on lands in medieval Norway and her smaller colonies was generally restricted to the proprietors of the lands (27). Thus the exploitation of seabirds, sea mammals and even shellfish was a perquisite of the owners of bird cliffs, seal rookery beaches and tidal zone shellfish beds. Many farmers therefore could not increase their dependence on land-accessible wild fauna (28).

Fishing and Trade

The intensified harvesting of fish – a virtually inexhaustible and legally unregulated resource – would have been a natural response to the growing need for more food, and the archaeological record suggests that this occurred. It also appears that fish were soon caught for exchange as well as for domestic consumption; the increasing quantity of imported goods in Shetland during the 12th and later centuries clearly indicates an expanded exportation of some island product, and in the context of medieval North Sea trade, dried fish was the most likely local commodity to be exchanged in bulk. In Norway at this time a lively circular trade in dried fish for grain developed between the North Norwegian Lofoten and Vesteraalen Islands

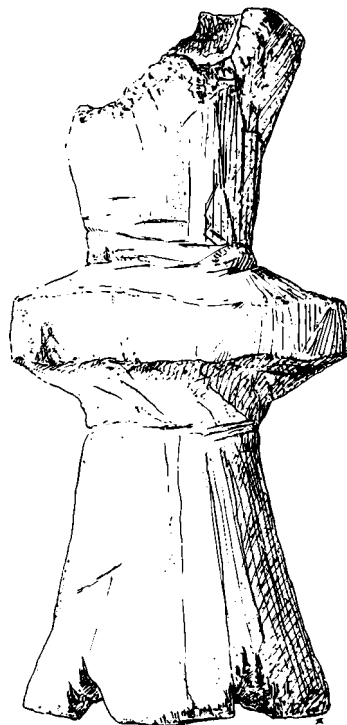


Fig. 7. An "hour-glass" type soapstone oil lamp from Sandwick, Unst. Lamps of this unusual type have also been found in medieval Bergen and Oslo (see Grieg 1933, pp. 96) (Scale 1 cm).

and Southwest Norway (29). It is almost certain that Shetland would have participated in this trade, as Shetland is three times closer to Bergen – the main medieval entrepot for northern products – than the Lofotens or Vesteraalens.

Thus it seems that at an early date Shetland was drawn into the growing market system of medieval Europe, exporting a locally abundant resource in exchange for durable goods, and also, perhaps more im-

portantly, for locally scarce comestibles. Thereafter, when failures in terrestrial food production occurred, Shetland's close economic integration with mainland Europe allowed the procurement of bulk food through exchange, a strategy less easily adopted in the more geographically isolated Greenlandic and Icelandic colonies. Although the Viking Period is looked upon by the modern islanders as a golden age of independence, it is probable that the transformation of the free Viking farmers into a specialized fishing society in the later Middle Ages may have permitted greater economic stability during a period when other Norse island communities suffered population declines and/or extinction.

Notes

1. Berry & Johnston 1980.
2. Bonner 1972; Andersen 1974
3. Jakobsen 1928; Brøgger 1929; Berry 1974; Nicolaisen 1976.
4. Wainright 1962.
5. Small 1968.
6. Thorarinsson 1956; Nicolaisen 1969; 1979-80; McGovern 1980-81.
7. Fenton 1978, p. 19.
8. Hamilton 1956, pp. 93-156.
9. *Orkneyinga Saga*, pp. 49, 64.
10. Hamilton 1956, pp. 156-57.
11. Bigelow 1985; in press. Excavations at Sandwick, Unst were sponsored by the Scottish Development Dept. (Ancient Buildings and Monuments Inspectorate), British Petroleum Development Ltd, and the Research Foundation of the City University of New York.
12. Crawford 1979.
13. Batey 1982.
14. Small 1964-66.
15. Hamilton 1956, pp. 93, 103, 193.
16. Vebaek 1965; Dahl 1970; Magnusson 1972; Hunter & Morris 1981.
17. Bigelow 1987.
18. *ibid.*
19. Bigelow n.d., fig. 19.
20. Platt 1956; Bigelow *op cit.*
21. Hamilton 1956, 192-93; Postan 1973, p. 155; Allen 1980; Bigelow n.d.
22. Herteig 1975a; 1975b.
23. *Orkneyinga Saga*, pp. 49, 58.
24. Cant 1975, p. 38.
25. Bigelow n.d., p. 161.
26. Fenton 1937.
27. Robberstad 1983, pp. 61-62.
28. Donaldson 1958, pp. 4, 17, 18, 49; Kristjansson 1980; Fenton 1978, p. 524.
29. Herteig 1978, p. 40.

* The author would like to thank: Karen Marie Christensen, Hans Peter Blankholm, Thomas H. McGovern, and Andrew Williamson for various contributions to the Sandwick excavations; and Thomas Amorosi and Tricia Miller for assistance with the illustrations in this paper.

Literature

- Allen, J.W.: Physical measurements as the basis for a typology of medieval pottery from Shetland. Unpublished report 1980.
- Anderson, S.S.: Seals in Shetland. in: R. Goodier ed.: *The Natural Environment of Shetland*. The Nature Conservancy Council, Edinburgh 1974.
- Batey, C.: The Late Norse site at Freswick, Caithness. in: J. R. Baldwin (ed): *Caithness: a Cultural Crossroads*. Edinburgh 1982.
- Berry, A.C.: The use of non-metrical variations of the cranium in the study of Scandinavian population movements. *American Journal of Physical Anthropology* 40. 1974.
- Berry, R.J. & J. I. Johnston: *The Natural History of Shetland*. London 1980.
- Bigelow, G.F.: Subsistence in Late Norse Shetland: An Investigation into a Northern Island Economy of the Middle Ages. Unpublished Ph.D. dissertation, University of Cambridge 1984.
- Bigelow, G.F.: Two kerbed cairns from Sandwick, Unst, Shetland. in: J. G. P. Friell & W. G. Watson (eds.): *Pictish Studies: Settlement, Burial and Art in Dark Age Northern Britain*. British Archaeological Reports, Oxford 1984.

- Bigelow, G.F.: Sandwich, Unst and Late Norse Shetland economy. in: B. Smith (ed): Shetland Archaeology. Lerwick 1985.
- Bigelow, G.F.: Domestic architecture in medieval Shetland. Review of Scottish Culture. 3. 1987.
- Bonner, W.N.: The grey and common seal in European waters. Oceanography and Marine Biology Review 10. 1972.
- Brøgger, A.: Ancient Emigrants: A History of the Norse Settlement of Scotland. Oxford 1929.
- Cant, R. G.: The Medieval Churches and Chapels of Shetland. Lerwick 1975.
- Crawford, B.E.: A progress report on excavations at "Da Biggins", Papa Stour, Shetland, 1978. Northern Studies 13. 1979.
- Dahl, S.: The Norse settlement of the Faroe Islands. Medieval Archaeology 14. 1970.
- Diplomatarium: Diplomatarium Orcadense et Hialtlendense. Kirkwall 1907 et seq.
- Donaldson, G.: Shetland Life under Earl Patrick. Oliver & Boyd, Edinburgh 1958.
- Fenton, A.: The Northern Isles. John Donald, Edinburgh 1978.
- Fenton, E.W.: The influence of sheep on the vegetation of hill-grazings in Scotland. Journal of Ecology 25. 1937.
- Grieg, S.: Middelalderske Byfund fra Bergen og Oslo. Oslo 1933.
- Hamilton, J.R.C.: Excavations at Jarlshof, Shetland. Edinburgh 1956.
- Herteig, A.E.: Borgund in Sunnmøre. in: A. E. Herteig, H. E. Liden, C. Blindheim (eds): Archaeological Contributions to the Early History of Urban Communities in Norway. Oslo 1975a.
- Herteig, A.E.: "Bryggen", the medieval wharves of Bergen. in: A. E. Herteig et al. (ed.): Archaeological Contributions to the Early History of Urban Communities in Norway. Oslo 1975b.
- Herteig, A.E.: Handbook to the Cultural History of the Middle Ages. Bergen 1978.
- Hunter, J. & Morris, C. D.: Recent excavations at the Brough of Birsay, Orkney. in: H. Bekker-Nielsen, P. Foote & O. Olsen (eds): Proceedings of the Eighth Viking Congress, Århus 1977. Odense 1981.
- Jakobsen, J.: An Etymological Dictionary of the Norn Language in Shetland. London 1928.
- Kristjánsson, L.: Íslenskir Sjavarhattir I. Reykjavik 1980.
- McGovern, T.H.: The Vinland Adventure: a North Atlantic perspective. North American Archaeologist 2 (4). 1980-81.
- Magnusson, Th.: Sogualdarbyggð i Hvítarholti. Arbok hins Íslenska Fornleifafélags 1972.
- Nicolaisen, W.F.H.: Norse settlement in the Northern and Western Isles. Scottish Historical Review 48. 1969.
- Nicolaisen, W.F.H.: Scandinavian placenames in Scotland as a source of knowledge. Northern Studies 7/8. 1976.
- Nicolaisen, W.F.H.: Early Scandinavian naming in the Western and Northern Isles. Northern Scotland 3. 1979-80.
- Orkneyinga Saga: The Orkneyinga Saga. Translated by H. Pálsson & P. Edwards. London 1978.
- Platt, M.I.: Report on the animal bones. in: J. R. C. Hamilton: Excavations at Jarlshof, Shetland. Edinburgh 1956.
- Postan, M.M.: Medieval Trade and Finance. Cambridge 1973.
- Robberstad, K.: Udal Law. in: D.J. Withrington (ed): Shetland and the Outside World 1467-1967. Oxford 1983.
- Small, A.: Excavations at Underhoull, Shetland. Proceedings of the Society of Antiquaries of Scotland 98. 1964-66.
- Small, A.: The distribution of settlement in Shetland and Faroe in Viking Times. in: B. Niclasen (ed): The Fifth Viking Congress. Torshavn 1968.
- Thorarinsson, S.: The thousand year struggle against fire and ice. Museum of Natural History Miscellaneous Paper 14. Reykjavik 1956.
- Vebaek, C.L.: An eleventh century farmhouse in the Norse colonies in Greenland. in: A. Small (ed): The Fourth Viking Congress. Edinburgh 1965.
- Wainright, F.T.: The Northern Isles. Edinburgh 1962.