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CONTACT BETWEEN NATIVE NORTH AMERICANS AND THE MEDIÆVAL NORSE: A REVIEW OF THE EVIDENCE

Robert McGhee

Historical and archaeological evidence relating to Norse activities in the New World early in the second millennium A.D. is reviewed, together with archaeological evidence relating to contemporaneous aboriginal occupations of the regions probably reached by the Norse. The Norse probably contacted Indian populations in southern Labrador and Newfoundland, Dorset Palaeoeskimos in northern Labrador, and Thule Eskimos in Greenland and perhaps in the eastern Canadian Arctic. Speculation on the nature of relationships between the Norse and these groups is presented, and it is concluded that occasional contacts involving both trade and plundering probably occurred over a period of several centuries. There is no evidence to indicate that these contacts had any major influence on aboriginal North American populations, and it is argued that such influences are unlikely to have occurred. The most important result of contact between these groups was the prevention of European colonization of the New World for half a millennium.

Approximately 1,000 years ago (the traditional date is A.D. 982), the outlawed Icelander Eirik the Red landed on the southwestern coast of Greenland. Four years later he returned with 14 ships and several hundred people, and established the colony which was to survive for approximately half a millennium. Within a generation, the Greenlandic Norse were exploring farther to the south and west, on a series of voyages which brought them to the eastern coasts of North America. Here, for the first time in their expansion across the islands of the North Atlantic, they found a non-European population in possession of the land. The purpose of this paper is to review the evidence for contact between the Norse and the aboriginal populations of North America, and to speculate on the nature and extent of contact and its impact on the native groups concerned.

In beginning this essay on a topic which has traditionally been associated with great public interest, much misunderstanding, more than a little fakery, and misrepresentation of scholarly qualifications, the author from which this review was requested would be wise to define his own qualifications to write upon the subject. He is not an expert on the historical sources dealing with the Norse adventures in the West Atlantic, and in these matters follows almost entirely the translations and opinions of what he considers the most sensible and accessible source (Jones 1964). Neither is he an authority on the many forged and mistaken pieces of evidence supporting claims for a Norse presence in the New World, and he accepts the judgement of the most knowledgeable and recent author in this field (Wallace 1982). The author is a prehistorian with a background of work in arctic and eastern Canada, and his views should be judged on the basis of this background alone.

THE REGIONS OF NORTH AMERICA REACHED BY THE NORSE

The first step in evaluating Norse-Native contacts must be a review of the historical and archaeological evidence concerning which areas in North America were reached by the Norse, and the archaeological evidence on native occupations of these areas at that time (Figure 1). Historical evidence of the early Norse explorations of the North American coast comes almost entirely from Icelandic sagas, primarily *The Greenlanders' Saga* and *Eirik the Red's Saga* (Jones 1964:143-187), committed to writing at least two centuries after the events which they relate, and in a literary form

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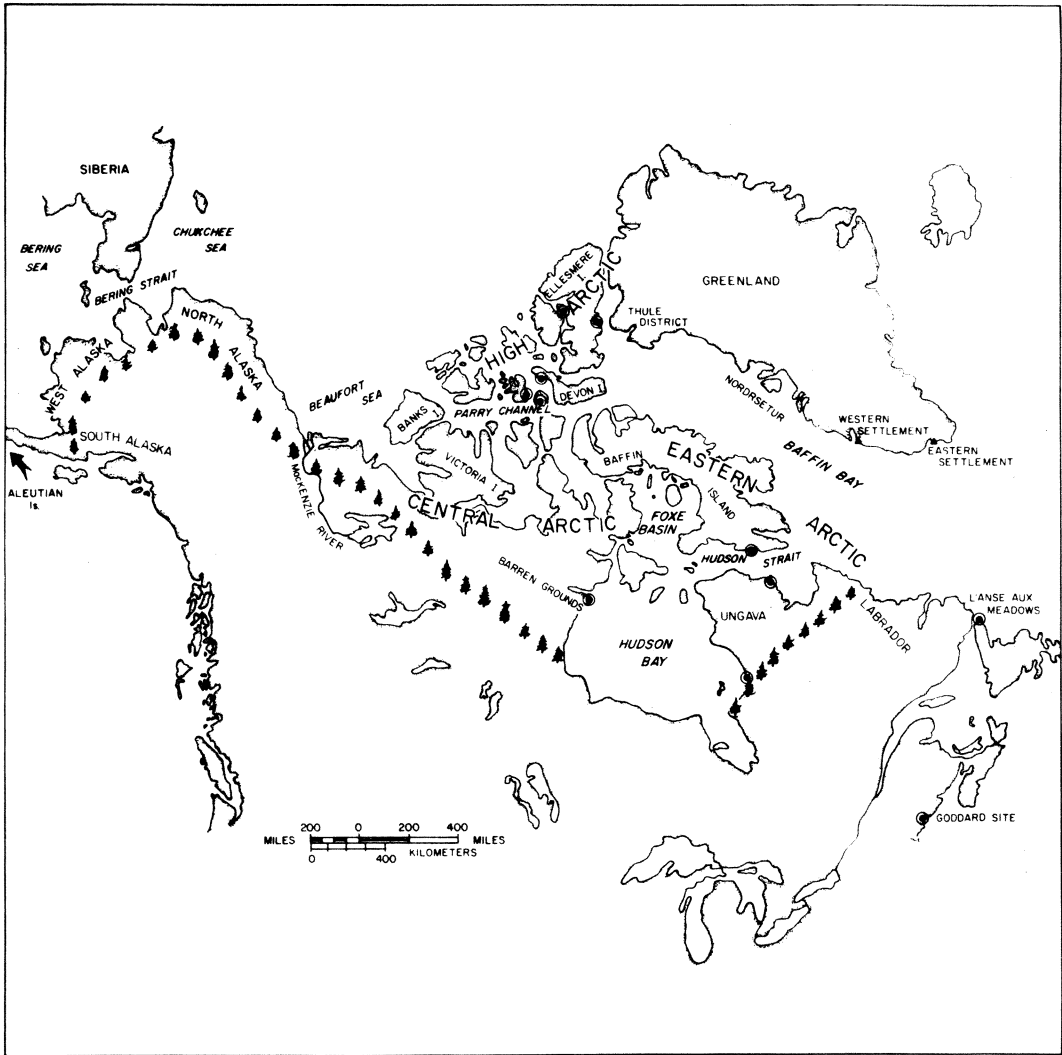


Figure 1. Map of northern North America, showing locations mentioned in text.

which has led to much disagreement regarding their historical accuracy. These sagas tell of a series of voyages of exploration and colonization during the late tenth and early eleventh centuries A.D. Three new “lands” are consistently mentioned, lying in a north to south configuration somewhere to the west of Greenland: Helluland, a mountainous and barren country; Markland, a low forested coast; and Vinland where the Norse attempted to establish settlements. The degree to which these descriptions fit the geography of northeastern North America, the fact that “Vinland” is mentioned as early as ca. A.D. 1075 in Adam of Bremen’s *Descriptio insularum aquilonis* (Jones 1964:85), and the finds at the archaeological site of L’Anse aux Meadows, strongly suggest that the Vinland voyages of the sagas actually did take place, and that the geographical descriptions of these voyages may be generally accurate.

Helluland, the barren and rocky country which seems to have been the first landfall of ships sailing westward from Greenland, is generally identified with the east coast of Baffin Island, approximately 300 km across Davis Strait from the Greenland coast; the mountainous tundra region

of northern Labrador may also have been included as part of Helluland. The description of Markland, the next land to the south, agrees well with the low and heavily forested coast of central Labrador. The final country, Vinland, is so vaguely described that scholars have placed it anywhere between Labrador and Florida. A consensus seems to have developed over the past decades, however, that Vinland was most likely located in the vicinity of Newfoundland (Ingstad 1969; Jones 1982; Meldgaard 1961; Munn 1914).

The latter opinion is based on three types of evidence. First, the sailing directions and geographical descriptions given of Vinland in the sagas are consistent with a Newfoundland location, the first habitable land which the Norse would have encountered on their southern explorations. The only major inconsistency lies in the vines for which the land was named. It has been variously but rather unconvincingly suggested either that wild grapes could have grown in northern Newfoundland during the Medieval Warm Period when the Vinland voyages occurred, or that the Norse were referring to one of the several varieties of berries which are abundant in Newfoundland and from which Newfoundlanders still make palatable wine. It seems more likely, however, that Leif Eiriksson may simply have followed the practice of his father, the namer of Greenland, of giving a country a good name in order to encourage men to go there. The best witness on the matter of the grapes may be Thorhall the Hunter, a disgruntled member of one of the later Vinland expeditions, who composed a poem comparing the legendary wine of Vinland with the water which was all that he had drunk there (Jones 1964:181). The second piece of evidence in support of a Newfoundland location of Vinland comes from the "Skalholt Map," a late sixteenth-century Icelandic chart of the North Atlantic region which is presumed to have been copied from an older source (Figure 2). This map shows Helluland and Markland on the east coast of a continent to the southwest of Greenland, and to the south of Markland the "Promontorium Winlandiae." The latter configuration, in both its form, its position relative to Greenland, and its latitudinal position relative to the British Isles, is strikingly similar to the Great Northern Peninsula of Newfoundland (Jones 1964:79). Finally, the archaeological site of L'Anse aux Meadows, located at the northern tip of this peninsula, has yielded evidence consistent with a brief Precolumbian European occupation (Ingstad 1977). Although the Vinland voyagers may have made brief explorations farther south, perhaps in the Gulf of St. Lawrence area, it seems unlikely that they could have rounded Cape Breton and explored the eastern shores of Nova Scotia and New England; if they had done so, the 100-km width of Cabot Strait and the markedly different geography of the area to the south would, we might expect, have resulted in an additional "land" name.

The Vinland journeys were not, however, the only explorations of the Greenlandic Norse. Ships occasionally reached the ice-bound eastern coast of Greenland, usually having been storm-driven to the area. More important were the northern explorations along the west coast of Greenland which led to the discovery of the *Nordrsetur*, the region around Disko Bay to which summer expeditions journeyed in order to hunt walrus, bear and other animals not available in the vicinity of the Norse colonies. These voyages reached at least to the Upernavik District (73°N), and perhaps farther north into the wastes of Melville Bay. It was in the *Nordrsetur* that the Norse first came into contact with the Eskimos with whom they were to share Greenland for several centuries.

In summary, the Norse explored much of the coastal area of Greenland, and most likely reached the regions of North America closest to and most closely resembling their North Atlantic homelands: Baffin Island, Labrador and Newfoundland. It is in these regions that we are most likely to find evidence of contact between the Norse and the native inhabitants of North America.

NATIVE OCCUPATIONS OF THESE REGIONS DURING THE NORSE PERIOD

The archaeology of Greenland and northeastern North America shows that these areas were occupied by three distinct groups of aboriginal peoples at the time of the Norse Greenlandic colonies. Newfoundland and the forested regions of southern and central Labrador appear to have been occupied by Indians. This occupation is best known from the central Labrador coast, where it has been named the Point Revenge complex (Fitzhugh 1978). This complex is characterized by small coastal sites consisting of tent rings and cobblestone hearth features, and assemblages containing



Figure 2. The 1590 Skalholt map of Sigurdur Stefansson. (Reproduced by permission of the Royal Library, Copenhagen; Gl. kgl. Saml. 2881, 4^o, f. 10v.)

small notched points, triangular bifaces, triangular endscrapers, flake scrapers and utilized flakes, a large proportion of which are manufactured from Ramah chert obtained from northern Labrador. Eight radiocarbon dates on Point Revenge sites yield ages ranging from 1580 ± 70 years (A.D. 370) to 325 ± 80 years (A.D. 1625) with the majority of dates between A.D. 700 and A.D. 1500 (Fitzhugh 1978:166). Point Revenge sites are known primarily from the coastal regions between Hamilton Inlet (54°N) and Nain (56°30'N), with a few scattered finds in the tundra regions to the

north. The Labrador coast to the south of Hamilton Inlet is poorly known (Fitzhugh 1982), and the only evidence of Point Revenge occupation comes from Blanc Sablon on the west coast of the Strait of Belle Isle (51°30'N). Fitzhugh (1978) characterizes the Point Revenge people as hunters who made at least seasonal use of coastal resources including fish and seals; during the summers they occupied small camps on the outer headlands, while in winter they retreated to the heads of bays and to the interior. They may have been ancestral to the historic Montagnais and Naskapi of the region, or perhaps to more maritime-oriented Indian groups who disappeared during the early Historic period and who may have been more closely related to the Beothuck Indians of Newfoundland. A brief description of Indians encountered around the mouth of Hamilton Inlet by Dutch whalers in 1718 may refer to the descendants of Point Revenge people; these Indians travelled in bark canoes, were armed with iron-tipped arrows, and plaited red cloth in their hair (Kupp and Hart 1976). Elements of this description find faint echoes in the saga accounts of encounters with the native "Skraelings" of Vinland and Markland, as shown later in this essay.

The earliest European descriptions of the natives of the Labrador coast are of those encountered in the Strait of Belle Isle region. The people whom Cartier met in this area in 1534 hunted seals from birchbark canoes, and Cartier was informed that "their home is not at this place but that they come from warmer countries to catch these seals and to get other food for their sustenance" (Biggar 1924:22). Eight years later, Indians trading with a Spanish fishing vessel in the same region reported that the previous year they had attacked Cartier's colony near the present location of Quebec city (Hoffman 1961:146). It is generally assumed that these people were Iroquoians who made seasonal journeys to the Strait of Belle Isle to hunt and, probably more importantly, to trade with the European fishermen who began to frequent the area during the early sixteenth century (Hoffman 1961:208). It seems unlikely that this seasonal use of the area by Iroquoians, whose home base was at least 1,000 km to the west, occurred for long, if at all, prior to the presence of Europeans in the area. It is thought that the St. Lawrence Iroquoians did not expand eastward into the Quebec city region until approximately A.D. 1400 (Wright 1979:69), so that it is unlikely that Iroquoian groups would have visited southern Labrador at the time of the Vinland voyages. The natives met in the area by the Norse were almost certainly Algonkian-speaking groups, represented archaeologically by the Point Revenge complex.

The archaeology of Newfoundland is not as well known as that of Labrador for this time period, but recent work indicates that during the "Recent Indian" period the island was occupied by groups with stone tool assemblages resembling those of the Point Revenge complex, and probably living a similar way of life (Carignan 1977; Evans 1982; Penney 1981; Robbins 1982; Tuck 1982). Radiocarbon dates on this occupation give ages ranging from 1255 ± 65 years (A.D. 695) to 360 ± 100 years (A.D. 1590) (Carignan 1977:214-216), and it seems certain that these assemblages relate to the ancestors of the Beothuck Indians of the Historic period. The Beothuck were an Algonkian-speaking group who occupied most or all of the coastal regions of Newfoundland during the summer, fishing and hunting sea mammals and birds from birchbark canoes, retreating to the interior forests during the winter. Sixteenth-century accounts describe them as extremely hostile and intractable, perhaps a result of the fact that they were the first North American Indians to experience continued contact with Europeans, and as early as 1501 were being kidnapped and taken to Europe as slaves (Hoffman 1961:29). Hostile relations between the Beothucks and Europeans continued until the extinction of the former group during the early nineteenth century.

During most or all of the Norse period of occupation of Greenland, the mountainous tundra regions of northern Labrador, as well as the Ungava coast of Hudson Strait and Hudson Bay to the west, was occupied by Dorset Palaeoeskimos. These were the descendants of Arctic Small Tool tradition people who had moved eastward from Alaska around 2000 B.C., reaching northern Labrador soon after that date. During the following millennium they expanded southward along the Labrador coast, replacing the previous Indian occupants of the area (Cox 1978). During the first millennium B.C. they reached Newfoundland, and were the primary, if not the only inhabitants of the island until approximately A.D. 500. After this date the Dorset people appear to have abandoned their southern regions of occupation, which were taken over by Indians. The most recent radiocarbon age on a Newfoundland Dorset site is 1090 ± 90 years (A.D. 860) and the associated assemblage

is identical to those from sites dated earlier than A.D. 500 (Linnamae 1975:73). It seems certain that the Dorset people had abandoned Newfoundland and southern Labrador by the time of the Norse explorations.

The history of the late Dorset people in Greenland and Arctic Canada is poorly known. When Eirik the Red arrived in Greenland, he is reported to have found the remains of houses, stone tools and boats; the author of the *Islendingabok*, in which this account occurs, interpreted this to mean that Greenland had once been occupied by the same "Skraelings" whom the Norse had later met in Vinland. These remains must have been those of a Dorset occupation of southwestern Greenland, but the Dorset people seem to have abandoned the area by the time the Norse arrived. Across most of Arctic Canada, Dorset occupation is not known after the eleventh century A.D., disappearing at the same time that Thule culture Eskimos were moving into the area from Alaska. In northern Labrador (north of approximately 57°N) and the adjacent Ungava regions, however, Dorset occupation continued until at least the fifteenth century, with one site dated as recently as 430 ± 90 years (A.D. 1520) (Cox 1978; Plumet 1979).

The third group encountered by the Norse were Thule culture Eskimos, who began to expand rapidly eastward from Alaska during the eleventh century. By the early twelfth century they had reached northwestern Greenland, and by the thirteenth century had arrived in Ungava and northern Labrador; in the latter areas they appear to have coexisted with their Dorset predecessors for approximately two centuries (Fitzhugh 1980; Plumet 1979). By the thirteenth century they had also expanded southward down the west coast of Greenland to at least the Disko Bay region, and during the following century colonized the outer fiords of the Norse settlement area in southwestern Greenland, where a site at Kangeq near Godthaab has been dated to 620 ± 70 years (A.D. 1330) and 490 ± 60 years (A.D. 1460) (Gulløv 1982:234). The Thule people brought with them from Alaska a rich maritime hunting way of life and a technology (sinew-backed bows, float harpoons, skin boats including single-man kayaks and umiaks capable of transporting a camp or hunting large whales) considerably more sophisticated than that of their Dorset predecessors, whom they appear to have rapidly displaced from most Arctic regions.

In summary, the Norse most likely came into contact with three major groups of native American peoples: Point Revenge Indians of southern Labrador and the probably closely related ancestral Beothuck Indians of Newfoundland; Dorset Palaeoeskimos in northern Labrador; and Thule Eskimos in Greenland and perhaps in eastern Arctic Canada.

NORSE ACCOUNTS OF CONTACTS WITH NATIVE NORTH AMERICANS

Norse accounts of contacts with North American natives are few and vague. They divide into two groups: the accounts of earliest contact come from the saga literature and tell of eleventh-century encounters in Markland and Vinland; the second set of accounts, from later records and annals, tell of encounters in Greenland during the thirteenth and fourteenth centuries.

Practically all of our knowledge of the Vinland voyages, and of encounters with natives, come from two sagas which tell considerably different versions of what appears to be the same story. The relevant sections may be summarized as follows:

The Greenlanders' Saga:

1. In the year that Eirik the Red colonized Greenland, an Icelander named Bjarni Herjolfsson was driven off course and discovered three lands to the southwest of Greenland, but did not go ashore and saw no inhabitants.

2. Several years later, probably around A.D. 1000, Leif Eiriksson bought Bjarni's ship and went in search of the new lands. He named Helluland, Markland and Vinland, built "booths" and wintered at the latter location, but met no inhabitants.

3. Leif's brother Thorvald decided to explore further, and wintered at the location where Leif had built shelters the year before. The following summer they travelled southward, met no people but found a "wooden grainholder" on an island. The next summer they travelled northwards, probably along the Markland coast. Here they encountered nine men sleeping under three skin boats, and killed all but one; they saw "mounds" further up the fiord, which they took to be human

habitations. In apparent reprisal, they were attacked by a fleet of men in skin boats, and Thorvald was killed by an arrow; the crew returned to Vinland, and to Greenland the following spring.

4. Thorstein Eiriksson made an abortive journey to recover his brother's body, but was storm-tossed all summer and never sighted land.

5. An Icelander named Thorfinn Karlsefni led an expedition to colonize Vinland, and wintered at Leif's booths. The following summer they were visited by a large group of men who appeared from the forest and offered to trade furs for weapons. Karlsefni would not allow this, so they traded for milk. They returned the following spring and again traded, but one native was killed while attempting to steal weapons. The natives later attacked from the forest, and Karlsefni decided to abandon his colony and return to Greenland.

6. A second attempt at colonization of the same area, led by Freydis Eiriksdottir, encountered no natives but fought among themselves and abandoned Vinland after one winter.

Eirik the Red's Saga:

1. Leif Eiriksson, on a voyage from Norway to Greenland around A.D. 1000, was driven off course and discovered a new land to the southwest of Greenland.

2. Thorstein Eiriksson set out to find the new land, but was storm-tossed and returned without sighting land.

3. Thorfinn Karlsefni led a colonizing expedition, accompanied by Thorvald Eiriksson. He named Helluland, Markland and Vinland, and at the latter locality built houses at a place known as Straumfiord. He then explored southwards and reached a bay named Hop. Natives arrived and traded furs for strips of red cloth, which they wound about their heads. Three weeks later the natives returned in skin boats and attacked the settlement, after which Karlsefni decided to abandon the area. On their way north to Straumfiord they encountered and killed five natives. While exploring northwards from Straumfiord, Thorvald Eiriksson was killed by an arrow shot by a "uniped," a one-legged human. While returning to Greenland, Karlsefni's crew encountered five natives on the Markland coast, and captured two boys whom they brought to Greenland for baptism.

All of these accounts relate to early eleventh-century encounters with natives in Markland and Vinland, areas which we are assuming to be identified with Labrador and Newfoundland or the Gulf of St. Lawrence region. Over the past century there has been considerable controversy as to the identity of the "Skraelings" met by the Norse, with opinion rather evenly divided between Indians and Eskimos or Palaeoeskimos. From our archaeological knowledge of the regions, it now seems very likely that the "Skraelings" of Vinland, and most or all of those of Markland (probably including the uniped), were Indians. The only discordant feature of this identification is the "skin boats" which the Norse consistently describe the natives as using, whereas it is likely that the Indian inhabitants of the region would have used birchbark canoes. Perhaps in their first brief encounters with this distinctive item of North American technology, the Norse may have mistaken the bark covering of these light vessels for skin. This hypothesis is supported by the account of three skin boats under each of which three men were sleeping, which accords more with the size of Indian bark canoes than with that of known Eskimos skin boats.

Another possible hint at the ethnic identity of the "Skraelings" may be found in the four "Skraeling" words recorded in *Eirik the Red's Saga*. These words were elicited from the boys captured by Karlsefni, who gave the names of their parents as *Vaetilldi* and *Uvaegi*, and those of two kings of their country as *Avalldamon* and *Valldidida*. Thalbitzer (1913) interprets these as transcriptions of Eskimo words, the former two meaning "wait a little" and the latter two referring to the headlands or outer islands of a coast. To a non-linguist such as the present author, the argument is anything but convincing, but it should be remembered that Dorset Palaeoeskimos, who probably spoke a language of the Eskimo family, occupied northern Labrador at that time and there is slight archaeological evidence that the Norse were in contact with Dorset people at the time of the Vinland voyages.

There is one saga account which might be mentioned as possibly relating to contact between the Norse and the Dorset people. This is from *Floemanna Saga*, and concerns Thorgils Orrabeinsfostre and his crew who were shipwrecked on the east coast of Greenland at some time around A.D. 1000

(Knuth 1969:14). During the three years that they were trapped by ice and gradually made their way to the Greenland settlements, they underwent many strange adventures, most or all of which are considered by scholars to have been based in the saga-makers' art rather than in reality. Two of the stories, however, may suggest contacts with aboriginal occupants of the area: once, while starving, they saw two "witches" cutting up a sea mammal beside a hole in the ice; Thorgils attacked and cut off one witch's hand, after which they ran away and the Norse claimed the sea mammal; some time later the Norsemen's small boat disappeared, and was returned by two witches. For what it is worth, this brief statement may be the only written evidence of contact between the Norse and what may have been a small relict Dorset population in eastern Greenland.

The remainder of the Norse historical accounts of contacts with natives deals with events of the thirteenth and fourteenth centuries, and all relate to contacts with the Thule Eskimo immigrants to Greenland. They may be summarized as follows:

1. A thirteenth-century account of an expedition to the *Nordrsetur* states that in A.D. 1266 the hunters travelled further north than usual, and that the Church later sent a vessel even further north, where they came across traces of "Skraeling" occupation (Gad 1971:138).

2. The *History of Norway*, which may be based on a thirteenth-century manuscript, states of the west coast of Greenland that "farther to the north, hunters have encountered small people whom they call Skraelings; when they are hit their wounds turn white and they do not bleed, but when they die there is no end to their bleeding. They possess no iron, but use walrus tusk for missiles and sharpened stones instead of knives" (Gad 1971:88).

3. In 1341 a priest named Ivar Bardarson was sent from Norway to examine the state of the Western Settlement, the more northerly group of Norse farms in the vicinity of the present Nuuk/Godthaab (64°N). His report, known only from late manuscripts in which the sense is almost certainly confused, states that "now the Skraelings have the entire West Settlement; but there are horses, goats, cows and sheep, all wild. There are no people, neither Christians nor heathens" (Gad 1971:141). During the following decades there was apparently concern in Norway over the decline and possible disappearance of Christianity in Greenland, although Eskimos are not mentioned in this connection. In 1355 the Norwegian king planned an expedition to Greenland to defend the faith, but it was never sent (Gad 1971:145).

4. An Icelandic chronicle of 1379 states that "The Skraelings assaulted the Greenlanders, killed eighteen men and captured two boys and a bondswoman" (Gad 1971:147).

5. The same chronicle states that in 1385 Bjorn Einarsson (Jerusalem-farer) was driven to Greenland, where he rescued a Skraeling boy and girl from a rock in the sea. The children lived with him as faithful servants, and killed themselves when he departed for Iceland two years later (Gad 1971:148).

6. A rather dubious papal letter dated 1448 states that the Greenlanders "Have been without a bishop for 30 years after the attack by the heathens, on which occasion most of the churches were destroyed and the inhabitants were taken prisoner" (Gad 1971:157). There has been much discussion regarding the authenticity of this letter, and as to whether the "heathens" referred to were Eskimos or British pirates.

Although the first mention of Eskimos in Norse accounts dates from the latter half of the thirteenth century, archaeological evidence presented below suggests that contact between the two groups had begun a century or more earlier. Rather interestingly, there is an Arabic account dating from the mid-twelfth century describing people who may have been Eskimos. This description appears in the *Nuzhat al-Mushtāq* of the geographer al-Idrīsī, and was written in Sicily about A.D. 1150. Speaking of the North Atlantic Ocean and its excellent fish resources, he states that "There are also sea animals of such enormous size that the inhabitants of the inner islands use their bones and vertebrae in place of wood in constructing houses. They also use them for making clubs, darts, lances, knives, seats, ladders and, in general, all things which elsewhere are made from wood" (translated from Jaubert 1840:346). If we interpret the large animals as whales, and the "inner islands" as those deepest into the North Atlantic, the description may refer to Eskimos. We might speculate that a description of Eskimos could have reached Europe from Greenland, and been

transferred to Sicily through the medium of the Norman occupation of the island. If so, this account would tend to confirm archaeological evidence from Arctic Canada suggesting earlier contacts between Eskimos and Norse than would be suspected from the study of Norse historical accounts.

TRADITIONAL ESKIMO ACCOUNTS OF CONTACTS WITH THE NORSE

No North American native accounts of Precolumbian contacts with Europeans are known. This is perhaps not surprising, since two and possibly three of the four groups who most probably met the Norse (Dorset Palaeoeskimos, Beothucks, perhaps Point Revenge Indians) became extinct with little or no contact with Europeans who might have recorded such traditions. No accounts are known from the Canadian Eskimos, but traditions relating to the Norse are recorded from the Eskimos of Greenland. In 1769 Niels Egede was told that when the Eskimos reached the area of the Norse colonies they wished to settle near the Norse farms. The Norse would not allow this, but were willing to trade and gradually the two groups came to be on good terms with one another. When the Norse were attacked from the sea and their settlements plundered, the Eskimos took Norse women and children to the inner fiords for their protection (Gad 1971:158).

Legends collected by Rink in the mid-nineteenth century are more complete, but more difficult to interpret. By this time, the Greenlandic Eskimos had been in contact with Europeans for over a century, and many of these Scandinavians were interested in the Greenlandic Norse and had undoubtedly passed some of their knowledge of the Norse colonies to the Eskimos. The stories had also become embedded in older legendary material; for example, the widely-known story of *Navaranak*, an Eskimo girl who is captured or adopted by Indians and later causes trouble between Eskimos and Indians (e.g., Rasmussen 1930:290, 1932:241), had been transformed by placing the girl as a servant on a Norse farm as an episode in the story of *Ungortok* (Knuth 1969:76). There are several known versions of the latter tradition, involving deteriorating relations between Eskimos and Norsemen ending in an Eskimo attack and massacre (Knuth 1969:48–84). Although all of the stories tell of violence between the Eskimos and the Norse, there are indications that relations between the groups must at times have been sufficiently good that it was at least conceivable to tell of an Eskimo girl working on a Norse farm, or of an Eskimo and a Norseman who were good friends and who participated in friendly archery contests.

Rather interestingly, what appears to be a version of the *Ungortok* story was collected in Iceland during the early nineteenth century (McGhee and Einarsson 1983). This version tells the story from the Norse point of view, and contains the Eskimo words *innuk* (man) and *kayak* (skin boat) as well as an Eskimo place name. If this is actually a parallel version of the same tradition, preserved from medieval times, it would seem more likely to result from a shared traditional story rather than from parallel memory of a specific series of events.

ARCHAEOLOGICAL EVIDENCE FOR CONTACT BETWEEN THE NORSE AND NATIVE NORTH AMERICANS

The archaeological evidence suggesting Norse-Native contact is extremely thin, consisting of isolated finds upon which varying interpretations can be placed. This evidence will be summarized in terms of the three major native groups who were probably involved in contact with the Norse.

Norse-Indian Contact

The evidence is limited to one archaeological site and two isolated finds. The site is that at L'Anse aux Meadows, located at the northern tip of the Great Northern Peninsula of Newfoundland. Discovered in 1960 by Helge Ingstad, the site was excavated between 1961 and 1968 under the direction of Anne Stine Ingstad, and between 1973 and 1976 under the direction of Bengt Schonback and Birgitta Wallace of Parks Canada. The final report on the Ingstads' work has been published (Ingstad 1977), and the Parks Canada work described in preliminary form (Schonback 1974; Schonback et al. 1976; Wallace 1977). Until the final report on the Parks Canada work appears, it would be presumptuous to make detailed comments on the site or the remains found in it. The site, which

consists of a cluster of eight sod-walled structures is, most scholars agree, most economically explained as the remains of a very brief European occupation, and most of the evidence is consistent with an eleventh-century occupation date.

Aside from the European component, small components representing occupations of the area by Archaic Indians, Dorset Palaeoeskimos, and Recent prehistoric Indians were also found. The Archaic and Dorset occupations predate the European component (Bareis and Winston 1977:104–105), and radiocarbon-dated hearths suggest that an Indian component postdates the European (Ingstad 1977: 223). A few Dorset artifacts found in apparent association with the European component are probably the result of redeposition through the construction of sod walls. A complete Dorset lamp, found directly above the culture layer of one of the sod-walled structures is more problematical, and will be dealt with later. More recent excavations suggest that the site was occupied by Indians between the times of Dorset and European occupation, and a single chert flake was found in a position suggesting that Indians had visited the site prior to the collapse of the sod-walled structure with which it was associated (Schonback et al. 1976:17, 21). There is no evidence to indicate contemporaneous occupation of the site by Indians and Europeans, or of contact between the two groups. The fact that the site exists in an area with earlier and later Indian occupations merely suggests that Norse-Indian contact could have occurred in the vicinity.

One of the isolated finds which may be interpreted as evidence of contact between the Indians and the Norse is a small chert point with expanding stem, found in 1930 on the beach below the eroding Norse graveyard at Sandnes in Greenland (Roussel 1936:106). The style of the point is not characteristic of Dorset or other Palaeoeskimo artifacts from Greenland, and it was once thought that the point had been chipped from Ramah chert, a very distinctive translucent banded grey material found only in the vicinity of Ramah Bay in northern Labrador (Meldgaard 1961:371). The specimen has recently been re-examined by Fitzhugh (1980:29), who concludes that it is probably not made from Ramah chert, but that the style is consistent with that of points used by the Indians of southern Labrador and Newfoundland in the period between A.D. 1000 and 1500. Although perhaps romantic, it seems plausible that this may be an Indian arrowhead carried to Greenland, either internally or externally, by a Norseman who had encountered Indians on the eastern coasts of Canada.

The second isolated find is the so-called “Maine Penny,” recovered by amateur archaeologists from a prehistoric Indian site on the coast of Maine near the mouth of Penobscot Bay, and originally identified as a twelfth-century English coin. Interest in this find was, for some inexplicable reason, minimal until two decades later when the coin was re-identified as a Norwegian penny minted between A.D. 1065 and 1080 (Skaare 1979). This new identification led to further excavations at the Goddard site in 1979, which produced no further Norse material but recovered evidence suggesting the probable route by which the coin had reached the site (Bourque and Cox 1981).

The largest component at the site belongs to the “late ceramic period,” dating to the first half of the second millennium A.D.; two radiocarbon dates yield ages of 770 ± 70 years (A.D. 1180) and 715 ± 110 years (A.D. 1235) suggesting an occupation during the twelfth and thirteenth centuries, and it seems likely that the Norse coin was associated with this component (Bourque and Cox 1981). Approximately 5% of the stone tools recovered from this component are made from chalcedonies originating from the Bay of Fundy region of Nova Scotia, indicating trade with Indian groups to the north. All excavation units in this component also produced small quantities of flakes and tools made from Ramah chert, the distinctive material from northern Labrador mentioned previously in connection with the Sandnes point, indicating indirect trade with regions much farther to the north. More interesting still is an endscraper which is refashioned from a ground chert artifact, which Bourque and Cox identify as a Dorset “burin-like tool”; I have examined this specimen, and agree that there is little doubt about this identification. Bourque and Cox feel that the coin, which had been perforated as if used as a pendant, most probably reached the site through trade from the north. It may have originated among the Dorset Palaeoeskimos who occupied the regions around the Ramah chert quarries at the time of the Norse voyages and the occupation of the Goddard site. On the other hand, it may suggest contact between the Norse and the Point Revenge Indians of central and southern Labrador, who also had access to Ramah chert either through trade or occasional

visits to the quarries, and who may have added the coin and the Dorset artifact to a batch of stone goods traded to the south.

Norse-Dorset Palaeoeskimo Contact

The date of issue of the coin recovered from the Goddard site indicates that it did not reach North America during the recorded Vinland voyages of the early eleventh century. There is, however, evidence that the Norse continued to make sporadic voyages to Labrador for at least three centuries after the early explorations of the area. This suggestion is based on an account in the Icelandic annals for the year 1347, which records that a small Greenlandic ship had been driven to Iceland while on a voyage to Markland (Jones 1964:96). Such journeys to Markland probably took place in order to obtain timber for construction and perhaps for boat-building. After the driftwood supplies of western Greenland had been exhausted, the Greenlanders must have been chronically short of wood, and could easily have been tempted to cross the narrows of Davis Strait and travel south along the eastern coasts of Baffin Island and Labrador to the abundant forests of central Labrador. On such voyages they would have coasted shores occupied by Dorset people, and it seems reasonable to expect that some form of contact may have occurred.

Two or more isolated finds from Dorset sites of the period, and one find from a probable Norse site, appear to confirm the existence of contact. One of these was recovered from a Dorset site at Richmond Gulf, midway up the east coast of Hudson Bay, associated with a radiocarbon date of 795 ± 120 years (A.D. 1155) (Harp 1975:39). The artifact is a small amulet in a characteristic Dorset form, made from copper containing small amounts of iron and nickel as impurities; analysis strongly suggests that this is smelted sheet copper rather than native copper, and is similar to sheet copper known from Norse sites in Greenland (Harp 1975:40–43). Harp (1975:41) quotes Jørgen Meldgaard as indicating that two similar Dorset amulets of copper occur in a collection purchased in 1922 by Knud Rasmussen from the Belcher Islands in eastern Hudson Bay.

The second find is a small piece of copper which contains iron and nickel in approximately the same amounts as the one from Richmond Gulf. This was found in the Dorset UNG.11 site in northwestern Ungava Bay, in a stone-walled Dorset “longhouse” measuring 34 m long and 6 m wide (Plumet 1982:262). As will be seen later, these structures are not adequately dated, but were probably occupied at some time within one or two centuries of A.D. 1000. The structure from which the specimen came may therefore date to approximately the same age as the Richmond Gulf site mentioned above, and as the component at the Goddard site which yielded the Norse coin.

The final specimen is a Dorset soapstone lamp, found directly above the cultural layer of one of the sod-walled structures at the site of L’Anse aux Meadows. As was mentioned earlier, the Dorset occupation of L’Anse aux Meadows predated the construction of the sod houses, while the lamp must have found its way to the site at some time after the construction. This form of small, thin-walled oval lamp is not known from Newfoundland Dorset assemblages, but is characteristic of late Dorset assemblages from more northerly regions. It has been suggested (Fitzhugh 1980:30; Ingstad 1977:217) that the lamp may have been brought to the site by the Norse, who had obtained it from Dorset people or from a Dorset archaeological site in northern Labrador. Rowlett (1982) has summarized the sparse evidence suggesting that the Greenlandic Norse excavated in Dorset sites. However, the rarity of complete specimens of such fragile lamps in Dorset archaeological deposits suggests that the Norse more likely obtained this specimen directly from Dorset people, or at least from a Dorset cache or abandoned settlement.

These finds—the fragments of copper from Ungava and Richmond Gulf, and perhaps those from the Belcher Islands, possibly the coin from Maine and the soapstone lamp from L’Anse aux Meadows—form a pattern which seems to indicate some form of contact between the Norse and the Dorset Palaeoeskimos between the eleventh and thirteenth centuries A.D. Such contacts are most likely to have occurred on the northern Labrador coast where occasional Norse vessels probably voyaged southwards to the forested regions of the continent until at least the middle of the fourteenth century. The wide distribution of the material, from Hudson Bay to New England, is most likely

explained by trade through Dorset exchange networks and perhaps through Dorset-Indian exchanges on the central coast of Labrador.

Norse-Eskimo Contact

The Thule Eskimos were, according to the historical accounts, the aboriginal people with whom the Norse interacted most vigorously and over the longest period of time. These accounts, however, all relate to contacts which occurred in Greenland rather than in Arctic North America. The archaeology of Eskimo sites in Greenland, which is not the subject of the present review, has long indicated the presence of Norse materials, and perhaps material techniques learned from the Norse, on medieval and later sites (Mathiassen 1930). Holtved's (1944) work showed that Norse material had reached the Eskimos of the Thule District, the far northwestern portion of Greenland adjacent to Arctic Canada, in a cultural period which is currently attributed to the thirteenth century or earlier (Jordan 1979).

During the past decade, similar objects of European manufacture have appeared on several Thule Eskimo sites excavated in Arctic Canada, the majority from sites which appear to date to the thirteenth or even the twelfth centuries. The first to be reported was a small piece of smelted iron recovered from the site of Silumiut on the west coast of Hudson Bay (McCartney and Mack 1973). The site is radiocarbon dated to 810 ± 70 years (A.D. 1140) and 690 ± 90 years (A.D. 1260). Two other radiocarbon dates on nearby and apparently contemporaneous sites are practically identical to the older date from Silumiut, reinforcing the assignment of these sites to the twelfth or thirteenth centuries. Three other iron fragments from Silumiut were of meteoric iron, almost certainly from the Cape York meteorite shower which scattered a number of iron meteorites in the Thule District of northwestern Greenland. Artifacts of fragments of meteoric iron are found on many Thule sites in Arctic Canada, while hafts containing blade sockets which could only fit metal blades, and bone artifacts fashioned with metal tools, occur on practically all sites. The virtual absence of stone tools for working bone and other hard organic materials, which formed the raw material for most of the Thule technology, suggests a heavy reliance on metal; Thule culture could, with little exaggeration, be called an "iron age" culture. The fact that most of this metal is of meteoric origin, almost certainly originating in the Thule District of northwestern Greenland whose inhabitants were in possession of Norse material by at least the thirteenth century, suggests that the piece of smelted iron from Hudson Bay was traded from that region.

A Thule winter village on Bathurst Island in the central High Arctic (McGhee 1981) has produced three pieces of smelted sheet copper 0.8 mm thick, several smaller fragments which are probably of the same material, a small pendant of high-antimony low-tin bronze, two knife blades and an engraving bit of meteoric iron (Laver 1979). Again, the presence of meteoric iron as well as smelted metal suggests that the objects reached the site through inter-Eskimo trade routes from northwestern Greenland. On stylistic grounds, the site appears to have been occupied earlier than Silumiut. This suggestion is reinforced by two radiocarbon ages of 870 ± 30 years: A.D. 1080 (BM-1803), and 800 ± 30 years: A.D. 1150 (BM-1804; A. Sutcliffe, personal communication 1981), suggesting most probably a twelfth-century occupation.

Two specimens of metal recovered by Collins's (1951) excavations at the M2 and Lake sites on Cornwallis Island have been recently re-examined and found to be of smelted copper (Franklin et al. 1981:16). These sites are only 100 km to the southeast of the Bathurst Island site mentioned above, and appear to be closely related culturally, and probably temporally, to that site.

The most prolific finds of Norse material in Arctic Canada have come from Thule villages in the Buchanan Bay region of eastern Ellesmere Island, just to the north of the 40-km narrows of Smith Sound separating Ellesmere Island from the Thule District of Greenland. Here, at sites on Skraeling Island and at Eskimobyen, Schledermann (1980) has reported finding fragments of chain mail armor, pieces of woolen cloth, knife blades of smelted iron, iron boat rivets, the base of a wooden barrel, pieces of oak wood, and fragments of smelted iron and copper. The Norse material is associated with Thule artifacts, suggesting a very early stage of Thule culture, probably earlier than that of the

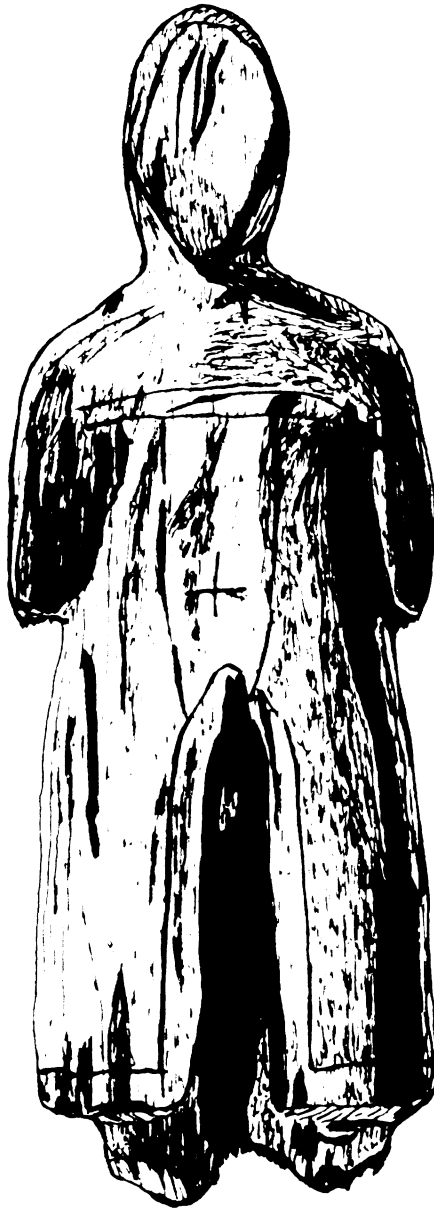


Figure 3. Thule culture carving recovered from a thirteenth-century site on southern Baffin Island, apparently showing a person in European clothing. Height of carving 5.4 cm.

Bathurst Island Thule village mentioned above. Nine radiocarbon dates on the sites range between 970 ± 120 years (A.D. 980) and 430 ± 70 years (A.D. 1520) and Schledermann (1980:461) suggests that the occupations occurred between the thirteenth and fifteenth centuries. In view of the stylistically early artifacts associated with the Norse material, however, a twelfth-century occupation would seem quite possible.

A second Ellesmere Island Thule site which has produced Norse material lies on the west coast of the island, approximately 200 km to the west of the Buchanan Bay sites. Here, Sutherland (1977)

has reported finding a portion of a bronze balance similar to specimens known to have been used by Norse traders for weighing coins and other small objects.

The final European object to come from a Thule site is from a winter village at Port Refuge, Devon Island (McGhee 1976). This site produced a fragment of smelted iron and a portion of a cast bronze bowl. Although the site has not been radiocarbon dated, the styles of the Thule artifacts suggest an occupation considerably later than those of the sites discussed previously, probably dating to approximately the fifteenth century.

Perhaps the most informative archaeological find relating to Norse-Eskimo contacts in Arctic Canada was recovered from a Thule winter house, probably occupied during the thirteenth century, near Lake Harbour on the south coast of Baffin Island (Sabo and Sabo 1978). This specimen is a wooden figurine, 5.4 cm tall, carved in the typical Thule "silhouette" style with stumpy arms and flat featureless face (Figure 3). It differs from other Thule figurines however in apparently depicting someone dressed in a long robe slit up the front, and with a cross incised on the chest. The costume resembles no known Eskimo clothing, is consistent with European clothing of the period, and most likely represents a European or at least someone dressed in European clothes.

Although the specimens described so far provide no more than hints regarding the nature of Norse-Eskimo contacts, other archaeological finds which have been claimed as evidence for Norse penetration of Arctic Canada are even more difficult to interpret. The first to make such claims was the Norwegian explorer Otto Sverdrup, who mapped the southern and western coasts of Ellesmere Island in the early twentieth century, and reported what he interpreted as Norse structures along the coasts of Jones Sound. These were primarily eider duck shelters, small boxes built of stone slabs designed to attract nesting eiders and preserve their down for collection (Sverdrup 1904). The construction of such shelters is a traditional Scandinavian technique and is not known from the Eskimos, who did not use eiderdown as clothing insulation. These features have not been seen by archaeologists, but while doing an archaeological survey in the area in 1974, Peter Schledermann and I discovered several structures similar to those described by Sverdrup; these are slab box-hearths built by Palaeoeskimo occupants of the area between approximately 4,000 and 2,000 years ago. Such features may have been misconstrued by Sverdrup as the nesting boxes with which he was familiar in Norway.

Eider nesting boxes have also been reported from the Ungava Bay coast of northern Quebec (Lee 1968:145-147). Here, however, interpretation is complicated by the fact that at some time "many years ago," probably referring to the past century, an attempt was made to introduce these shelters to the area to increase the eider population and to form the basis of an eiderdown industry (Lee 1968:146). Local Eskimos claim that many of the nesting boxes existed previous to this event, but there is evidence that eiderdown was being traded from Ungava to the Moravian mission posts of Labrador during the early nineteenth century (Vézinet 1982:18). There therefore remains the possibility that nesting boxes may have been introduced to the area by the early Moravian missionaries, and that those remaining today date from that introduction.

Eider nests, however, are among the least important pieces of evidence which have been presented over the past two decades as claims for a Norse presence in the Ungava Bay region (Lee 1966, 1967, 1968, 1969, 1971 and several smaller publications). This evidence includes large stone structures up to 35 m in length, large rock cairns or beacons, skulls with purported European characteristics from local tombs, an iron axe head, an antler object described as part of a composite bow, chipped stone artifacts, and an interior village of stone buildings complete with causeway and dam. These have been interpreted as the remains of Norse settlement of the area, both by Viking Age outlaws and by refugees from the Medieval period Western Settlement of Greenland. The proximity of Ungava Bay to the Norse Greenlandic colonies, and the fact that it lies within the general range of known Norse exploration, demands that claims of Norse occupation of the area be examined with much greater care than claims concerning more distant parts of North America. These claims have gained such notoriety, and have been discussed in such an air of controversy (McKusick 1980), that the present author feels it wise to merely summarize the arguments of the late Thomas E. Lee and his supporters, give his own personal views as an archaeologist familiar with the prehistory of Arctic Canada, and urge the reader to consult the original reports for further information. The arguments

which have been used to support the idea of a Norse presence in Ungava may be summarized as follows:

1. *Claim:* The Norse must have known of and explored Hudson Strait and Ungava Bay. The *Saga of Arrow-Odd*, which is generally considered to tell of fictional events (Plumet 1969:20), is cited in support of such knowledge on the basis that a brief part of the action occurs in a place known as Skuggifjord in which there are sinking islands; this feature is interpreted to refer to the extremely high tides (up to 15 m) of Ungava Bay.

Comment: From what we know of Norse explorations in North America, the Greenlandic Norse almost certainly knew that Hudson Strait existed, quite possibly explored it to some extent, and may have made occasional landings in the area. However the region supports neither timber, pasture land, nor other resources which might have tempted the Norse to settle there. The archaeologically indicated presence of Dorset Palaeoeskimos and Thule Eskimos in the region throughout the period of Norse exploration would have detracted from the desirability of the area, even for temporary settlers such as the fugitive Ogmund of the Arrow-Odd story. In addition, the appalling sailing conditions of Ungava Bay with its fogs, shoals and extreme tidal range, would probably have deterred any prudent mariner lacking accurate charts and tide tables from extensive exploration.

2. *Claim:* The large rectangular boulder structures found in the region, generally known as "longhouses," resemble structures from the Viking period in Scandinavia and the eastern Atlantic islands occupied by the Norse. Eskimos or Palaeoeskimos would not have had an incentive to build such structures, nor the means to roof them. Therefore the Ungava longhouses were probably built and occupied by the Norse, who imported roofing timbers by ship. Dorset artifacts recovered from these structures represent reoccupation by Dorset people after Norse abandonment, or are evidence of intermarriage between Norse men and Dorset women (Lee 1971:128).

Comment: The Ungava "longhouses" are semisubterranean or surface structures up to 35 m long and 7 m wide, with parallel side walls and slightly convex end walls constructed of large boulders which appear to have been piled to a height of up to 1 m or more (Plumet 1969, 1982). Interior features are generally limited to a line of hearth areas. No evidence of roofing has been found, and the only post molds associated with a structure represented small posts along interior walls, suggested to have supported an insulating curtain of skin (Lee 1971:22).

Although in size and outline form, these structures bear a general resemblance to certain Norse buildings, they bear a much more specific resemblance to structures known from several regions of Arctic Canada and attributed to the later phases of the Dorset culture. One such structure, 32 m long and 7 m wide, is reported from the west coast of Victoria Island in the western Canadian Arctic (McGhee 1969:166, 1978:Plate 10), far from any possibility of Norse influence. Similar but somewhat smaller structures have been found in southern Victoria Island (Taylor 1967:227) and on Bathurst Island (Helmer 1981) where a longhouse with a central row of hearths is reminiscent of the Ungava structures. From eastern Ellesmere Island, Schledermann (1978) has described a structure measuring 45 m long and 5 m wide, as well as similar smaller features; this longhouse site has received five radiocarbon dates ranging between 1180 ± 70 years (A.D. 770) and 1080 ± 120 years (A.D. 870) (Peter Schledermann, personal communication 1982), which places it considerably earlier than the possible existence of Norse influence. All of these structures, including those from Ungava, are associated with assemblages relating to a late phase of Dorset culture. One of the Ungava buildings produced a radiocarbon date on wood charcoal of 900 years (A.D. 1050) (Lee 1971:140). Eight other dates on carbonized fat associated with Ungava longhouses range between 1680 ± 90 years (A.D. 270) and 1170 ± 110 years (A.D. 780) with a mean date of A.D. 571 (Plumet 1982:Table 1). The charred fat is almost certainly that of sea mammals, and it has been noted that dates on Arctic sea mammal material are almost invariably several centuries older than dates on associated terrestrial material (Arundale 1981; McGhee and Tuck 1976). Plumet (1982:267) considers that the Ungava structures were most likely constructed within one or two centuries of A.D. 1000, consistent with other Dorset sites in the area which are dated on charcoal to 1090 ± 90 years (A.D. 860) and 920 ± 90 years (A.D. 1030) (Plumet 1975:7). It would appear most economical to attribute the construction and occupation of longhouse structures throughout Arctic Canada to the Dorset Pa-

laoeskimos. It seems possible that the structures were not roofed, but served simply as enclosures within which individual family tents were erected; it has been suggested (McGhee 1978; Plumet 1982; Schledermann 1978) that the longhouses may have been used for temporary ceremonial purposes, perhaps as festival structures analogous to those of the Thule and Recent Eskimos of Arctic Canada. If this were the case, one need not postulate the use of ships to carry timbers for the construction of permanent roofs.

3. *Claim:* Norse artifacts have been recovered from longhouse excavations.

Comment: As mentioned above, almost all of the artifacts recovered from the Ungava Bay longhouse structures are attributed to Dorset occupation. The few finds attributed to the Norse may be dealt with individually. The great majority are chipped stone tools and flakes of a dark cherty material, reported to be cruder and of different forms than the Dorset stone tools recovered from the same houses. There is a suggestion that this material was found stratigraphically beneath the Dorset artifacts, but the separation was too poor to convince even the excavator (Lee 1971:97–99). In my opinion, and in that of other archaeologists familiar with Dorset material culture who have studied the published illustrations of these specimens (Dekin 1972), these artifacts are consistent with a Dorset attribution. The differences in workmanship between these and other Dorset specimens from the sites probably results from differences in the tractability of the raw materials, rather than from differences in the abilities of Dorset people, and newcomers who were learning the arts of stone flaking due to a shortage of the iron which they had been accustomed to using.

Other specimens which have been attributed to the Norse, but which are more likely to have derived from Dorset or Thule occupations (Wallace 1969), are an antler object identified as a ladle and a soapstone bowl fragment (Lee 1967:Figures 3, 9). Another artifact, recovered from a longhouse and associated with a Dorset assemblage, has been described as an antler facing for a Norse composite bow (Lee 1971:91). This specimen, unfortunately lost to an over-zealous cleaning lady, appears in drawings as a thin tapered plaque of antler with expanded tip; although it could have been used as a bow facing, there is no indication that it ever served that purpose, and no such objects are known from Viking or Medieval period Norse collections. Dorset sites always produce numerous functionally unidentified organic objects, and the recovery of this specimen in a Dorset context would surprise no archaeologist.

The final specimen which has been used as evidence of a Norse presence in Ungava is a fragment of what appears to be an iron axe (Lee 1971:118–123). This object was found on a tent support stone of a modern Eskimo tent ring, where it had been placed after apparently having been excavated some years earlier; Lee suspects that it had been excavated from a pit close to a nearby longhouse feature. Metallurgical examination (Winterton 1971) showed that the specimen had been formed by laminating several small pieces of iron, and the blade hardened by carburizing; the metallurgist claims that these attributes are consistent with a Norse origin, and that the specimen differs from later European trade axes which are usually formed from a single small bloom. Birgitta Wallace (personal communication 1982), however, states that the specimen is shaped like an eighteenth- or nineteenth-century trade axe rather than like a Norse axe; her studies of North American axes purported to be of Norse origin indicates that prior to about 1840 there was virtually no difference between the manufacturing techniques of medieval and later European and North American axes. Although it therefore seems likely that this is in fact a trade axe dating from the past two centuries, if it was actually associated with a longhouse then it may be of Norse origin. As mentioned previously, another longhouse site in Ungava has yielded a piece of smelted copper, and as suggested earlier such occurrences of isolated specimens would be consistent with occasional contact between Norse and the Dorset occupants of Ungava and northern Labrador.

4. *Claim:* Skulls representing a European and mixed European-Eskimo individuals have been recovered from tombs associated with longhouse sites.

Comment: This claim is based on five skeletons recovered from tombs of Thule Eskimo type, located at one of the sites which also contained longhouses. Carleton S. Coon is reported to have identified one of these skulls as “Icelandic,” and three others as representing a mixed European-Eskimo population (Lee 1981:32). However Coon never published this opinion; in a foreword to

one of Lee's publications (Lee 1971), apparently written after he had examined the skulls, Coon summarized the evidence supporting claims for a Norse presence in Ungava but made no mention of the skulls. Hartweg (1974:286), who examined the skulls in the context of Eskimo skeletons recovered from the Eastern Arctic, states that they are typical of the local prehistoric Eskimo population. Until the skeletons receive further study, it is probably wise to accept this published view.

5. *Claim:* The large cairns or beacons on the Ungava coasts, and in some interior regions, were built as navigational aids by the Norse. They can be easily distinguished from numerous Eskimo-built cairns, which are smaller and more crudely constructed.

Comment: Although cairns and other rock constructions of large size and apparent antiquity are known from most regions inhabited by Eskimos, those of Ungava Bay and eastern Hudson Bay are extraordinarily large and carefully constructed. This, however, is not a forceful argument against an Eskimo authorship of such structures. Any archaeologist who has excavated Dorset and Thule culture structures must be impressed by the stonework used in their construction. Indeed, the amount of boulder construction undertaken by the Thule Eskimos of Labrador has led Fitzhugh (1976:141) to refer to the Thule occupation of the region as "practically a geological event, surpassed only by the Wisconsin glaciation." The fact that in at least two instances large cairns are associated with longhouse sites (Plumet 1969:23) suggests that a Dorset authorship of the cairns should be suspected. Those who claim a Norse origin for the cairns have yet to demonstrate that similar structures occur in the Norse homelands, or were characteristic of Norse construction. Once again, therefore, a prehistoric Palaeoeskimo or Eskimo origin appears to be the most economical hypothesis.

In summary, the only good evidence for prehistoric European contact with the Ungava Bay region is the piece of smelted copper recovered from a longhouse ruin in the area. If the iron axe actually did originate in a similar longhouse ruin, it could be considered a second indication. Such finds are consistent with those of isolated European objects recovered from Dorset and Thule sites elsewhere in Arctic Canada, suggesting a relatively low level of communication between the Greenlandic Norse and the natives of northern North America. They may have reached Ungava by trade from Dorset people on the coast of Labrador, as was previously suggested with regard to the smelted copper from Hudson Bay and the coin from Maine. On the other hand, the Norse may occasionally have entered Ungava Bay and there encountered Dorset people with whom they fought or traded. The evidence is not consistent, however, with a long-term and significant Norse presence in the area. If Ungava Bay was ever used as a haven for Norse fugitives, or as a new homeland for refugees from the Greenlandic Western Settlement, the archaeological evidence has not yet been found.

SUMMARY: THE NATURE OF NORSE-NATIVE RELATIONS

Neither the archaeological nor the historical evidence for contacts between the Norse and the native populations of North America can do more than hint at the nature of such contacts. The sagas state that the Norse were willing to trade for furs with the Skraelings of Vinland, but otherwise tell only of skirmishing attacks. The remarkably few references to Eskimos in thirteenth- to fifteenth-century accounts, aside from the single reference to two Eskimo children who lived as devoted servants with their Norse rescuer, tell only of fighting and the presumed displacement of the Western Settlement Norse by Eskimos. Greenlandic Eskimo traditions, although dealing primarily with violent contacts between the groups, also tell of trade and relatively amicable relations.

We know of no North American archaeological site where direct contact with the Norse can be demonstrated; all of the objects of European origin recovered from native occupation sites had probably reached these sites after travelling greater or lesser distances through aboriginal trading networks. Yet the number and distribution of such finds suggests that contacts must have occurred more frequently than recorded in the Norse historical accounts. For example, the few pieces of smelted metal from Dorset sites, and perhaps the Maine coin as well, strongly suggest unrecorded contacts with the Dorset Palaeoeskimos of Labrador during the thirteenth or fourteenth centuries. The wooden figurine apparently representing a person in European clothing, recovered from a

thirteenth-century Thule site in southern Baffin Island, suggests an unrecorded contact with the Thule Eskimos of the region; this specimen was almost certainly carved locally, since the Greenlandic Eskimos depicted Norsemen in a very conventionalized carving style (Gulløv 1982; Mathiassen 1930) of which the author of this carving appears to have been ignorant. The scatter of metal objects in Canadian Arctic Thule sites which appears to date to the thirteenth or even the twelfth century appears to indicate contact at a time earlier than the first mention of Eskimos in the Norse historical accounts.

It should be remembered, as pointed out by McGovern (1979:180), that all of the European objects so far recovered from North American aboriginal archaeological sites could have originated from a single Eskimo attack on a small Norse hunting party in the *Nordrsetur*. On the other hand, the small sample of Dorset and Thule sites which have been excavated in Arctic Canada, and the relative frequency with which objects of probable Norse origin occur in excavated sites, suggests that a much larger number of such objects remains buried in High Arctic and Eastern Arctic sites. It has been argued (McGhee 1982) that the current archaeological evidence, although very limited, is more compatible with a model of wide-ranging but sporadic contact between the Norse and natives of northern North America, than with a model of long-distance trading of Norse goods obtained by one or a few raids in Greenland.

Such contacts may have been encouraged by the Norse requirements for ivory, the primary trading commodity which Greenland exchanged with Europe in return for metal, grain and luxury goods, as well as the commodity with which they paid annual tribute to Norway, and tithes and crusade taxes to Rome. For example, in 1327 the Greenland See paid tithes in the amount of approximately 400 walrus tusks (Gad 1971:136), representing a larger number of animals than the annual take from the entire west coast of Greenland (rarely more than 150 animals) during the early part of the present century (Vibe 1967:77). Since walrus do not occur in the vicinity of the Norse Greenlandic colonies today, and almost certainly did not during the relatively warm period in which the colonies existed, most of the ivory was obtained during summer hunts in the *Nordrsetur* over 400 km to the north of the colonies. McGovern (1981) has emphasized the strain which such hunts must have placed on the Greenlandic Norse economy. Dorset and Thule culture archaeological sites of the period indicate that these groups possessed quantities of ivory, and later historical accounts indicate that the descendants of the Thule people were eager to trade ivory and skins for small metal objects. Although chronically short of metal themselves, the Norse could probably have afforded to trade scraps and exhausted metal tools in return for ivory. Schledermann (1978) suggests that the amount and nature of Norse material recovered from northwestern Greenland and eastern Ellesmere Island hints at a Norse presence in the area, either as hunters or traders. The recent discovery that a Norse iron arrowhead recovered from a Western Settlement farm is made of meteoric iron, almost certainly from the Cape York meteorites in northwestern Greenland (Andreason 1982:186), either supports the view that the Norse reached this area or indicates that trade in metal was mutual between the Eskimo and Norse occupants of Greenland. The bronze balance arm from western Ellesmere Island, a characteristic trader's artifact and the only one known archaeologically from west of Iceland, again hints at possible contact between Eskimos and Norse traders. The figurine from Baffin Island suggests that the Norse came ashore in that area, and trade would seem a possible motive for such a landing.

In short, contacts between North American natives and the Norse probably occurred more frequently and over a greater area than recorded in historical accounts. Our present archaeological knowledge is too inadequate to indicate whether such contacts occurred for purposes of peaceful trade or mutual plunder. It seems likely that the two motives were generally combined, each side being willing to trade and equally willing to plunder if it could be accomplished with relative safety. It is unlikely that anything like a regular trading relationship was ever established between the two groups; if it had been, we would expect to find much greater amounts of European material in aboriginal sites of the period. Contacts were probably sporadic and opportunistic, and likely occurred most frequently during Norse voyages to Labrador in order to obtain timber. Such voyages probably occurred sporadically from the eleventh to fourteenth centuries, and could have led to encounters with Eskimos on the eastern Arctic islands, Dorset Palaeoeskimos in northern Labrador and Point Revenge Indians in central Labrador.

What effects would such contacts have had on the native groups concerned? Fitzhugh (1978:170) has suggested that the northward movement of Point Revenge Indians along the Labrador coast, apparently contemporaneously with Norse interest in the area, may have occurred in order to gain access to Norse trade goods. It is tempting to speculate that the eleventh-century Thule Eskimo expansion eastward from Alaska may have had a similar motive. The fact that the earliest known Thule sites east of Alaska occur in eastern Ellesmere Island and northwestern Greenland, and that artifacts recovered from these sites are stylistically identical to those from contemporaneous Alaskan sites (Schledermann and McCullough 1980), suggesting an extremely rapid movement across 3,000 km of Arctic Canada, is an archaeological puzzle which may hint at such a motive for Thule expansion eastward. Neither of these hypotheses, however, may be seriously considered on the basis of the present archaeological evidence.

Aside from the acquisition of small quantities of metal, no archaeologically known changes in the ways of life of the various native groups can be attributed to relations with the Norse. It seems most likely that contacts between the Norse and the Indian and Dorset populations of the eastern North American mainland were too brief and occasional to have had much influence on the aboriginal groups. The same may be true of the Eskimos of Arctic Canada, although they appear to have had much greater access to Norse materials. These materials, primarily small pieces of metal either in the form of artifacts or scrap, merely supplemented the metal supplies already available to the Eskimos. While still in Alaska, ancestral Thule people appear to have had access to Asiatic metal (McCartney and Mack 1973:328), and in Arctic Canada they made use of the native copper deposits of the Coppermine River area and the meteoritic iron of northwestern Greenland. The introduction of European metal therefore merely supplemented the supplies of a population which already used iron and copper as important elements of its material culture.

Neither is there any indication that European diseases had any major influence on the native groups concerned, as it had during more recent contacts with Europeans. Although the Point Revenge Indians and the Dorset Palaeoeskimos of Labrador and Ungava appear to have become extinct prior to later European contact, they seem to have outlasted the Norse Greenlandic colonies. Eskimo archaeological sites in Arctic Canada and Greenland have yielded no hints of epidemic disease or depopulation. Considering what must have been a low level of intimate contact between natives and Norse, and the relative isolation of the Norse Greenlanders from Europe, we should probably not expect to find evidence of European disease in North America prior to the time of regular and direct transatlantic crossings.

In a similar manner, we should perhaps not expect to find massive cultural influence on native groups through contact with the Norse. This was certainly not a case of aboriginal contact with an overwhelmingly superior technology and civilization (McGovern 1980). The Greenlandic Norse economy, based on hunting and fishing supplemented by very limited farming, must have been in the best of times only marginally more efficient than the Eskimo economy, and as the climate deteriorated during the early second millennium A.D. it seems likely that the economic advantage shifted to the Eskimos. In a country chronically short of hardwood and metal, Eskimo hunting weapons were probably as efficient in a skirmish as Norse weapons of war. For inshore hunting and travelling in pack ice, Eskimo skin boats were probably more efficient than the small Norse wooden boats. During the summer season, when the Norse would have been making extensive voyages, many Eskimo hunting and fishing camps could probably have mustered as many fighting men as could be carried in one of the small Greenlandic ships. In such a situation, relations between the Norse and the natives with whom they had the closest contacts were more likely to have been based on mutual respect or contempt rather than on the submission of one group to the other. The fact that neither group appears to have adopted any major cultural or technological elements of the other suggests that contempt probably outweighed respect in relations between the two populations.

More important to the development of world history was the influence which the North American natives had on the Norse. When Thorvald Eiriksson met and fought with the Skraelings of Markland, or in some similar encounter if we do not choose to trust the sagas as history, human populations expanding around the globe in opposite directions met for the first time. In the attempted colonization of Vinland we can detect the Norse intention of continuing their westward expansion, and of settling

the newly discovered continent. It seems clear that such intentions were discouraged primarily by the presence of a hostile non-European population. As reported in *Eirik the Red's Saga* (Jones 1964: 184–185), “It now seemed clear to Karlsefni that though the quality of the land was admirable, there would always be fear and strife dogging them on account of those who already inhabited it.” Later in the same saga, the dying Thorvald Eiriksson drew an arrow from his stomach and remarked “There is fat around my belly! We have won a fine and fruitful country, but will hardly be allowed to enjoy it.” Sentiments such as these, aroused by fear of the fighting abilities of the eastern North American natives, must have been largely responsible for preventing the expansion of Europeans into North America for the following 500 years.

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