Explaining Assemblage Variability at a Small Middle Dorset Paleoeskimo Site on the Central Coast of Labrador

Kristin Lapos, Muhlenberg College Stephen Loring, NMNH, Smithsonian Institution

SUMMARY

The culture today known as Dorset existed in the eastern Arctic from approximately 1850 B.C. to 1050 A.D., when the ancestors of the modern Inuit arrived from the west (Cox 1978). The Dorset left a rich material culture behind, including a variety of small stone tools specialized for activities like harpoon hunting, hide processing, and bone working. Manufacturing these tools required access to raw materials like chert and soapstone, which were not available in every area. Acquiring these materials therefore required scheduling decisions (seasonal movements to stone quarries) and social obligations (trade and social interaction). By studying the composition of 215 stone tools and over 3,000 flakes of stone tool manufacturing debris from a single-occupation site in Labrador, Canada, we were able to determine patterns of raw material use for a Middle Dorset family living in Labrador around 300 A.D. The analysis reveals that the site's inhabitants were making tools for the full range of hunting and domestic activities, and that they worked different raw materials in different ways depending the distance the materials traveled. It also supports Nagle's (1986) hypothesis that use of a raw material in tool manufacturing drops as distance from the source increases. Finally, the discovery of two sherds of Woodland pottery suggest that interaction between Dorset peoples and Native Amerindian groups may have been more extensive than previously thought.

MATERIALS AND METHODS

In the summer of 2005, Dr. Stephen Loring and his field crew excavated the remains of a small, semi-subterranean sod-house winter dwelling on Napatalik Island in Labrador (GjCc-6). The house, designated House-2, was part of a cluster of 3 dwellings located near a bay on the north of the island. The team excavated 16 squares in House-2 proper and 8 squares from the house's midden (trash deposit) for a total of 24 1 x 1 meter squares, all of which produced cultural material. Wood charcoal samples were extracted from the dwelling's hearth for radiocarbon dating, producing uncorrected dates of 1650 +/- 60 B.P., 1580 +/- 60 BP, and 1570 +/- 50 BP., all of which fit into the Middle Dorset time period.
In the lab, Dr. Loring and I confirmed the identity of the stone tools and the raw materials previously sorted by the field crew. After cataloging the collection, we measured and weighed each artifact and bag of debitage, noting raw material, breakage patterns, and stylistic attributes. We then created charts comparing these characteristics to stone tools and debitage recovered from two other Middle Dorset sites from Labrador: Rose Island (IdCv-9) and Koliktalik (HdCg-2).

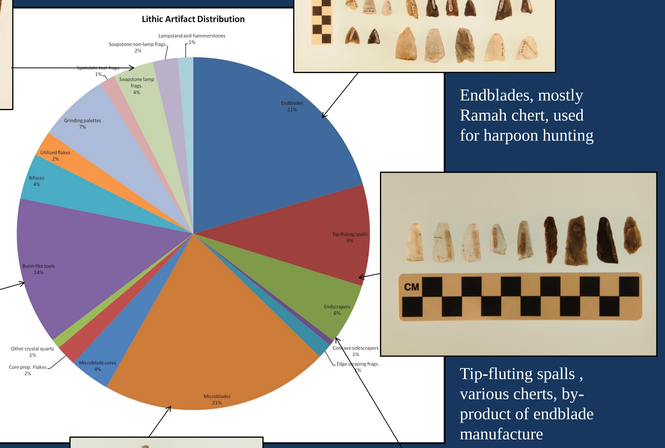
Excavating House-2 on Napatalik Island to reveal central hearth structure, 2005

Map of Labrador and Newfoundland showing Dorset sites and raw material sources. The Ramah chert quarries are located about 280 miles north of Napatalik Island, while the Newfoundland chert sources are located about 600 miles south.

TOOL ASSEMBLAGE AND RAW MATERIALS FROM HOUSE-2 AT NAPATALIK-NORTH-1

Soapstone lamp fragments

Endblades, mostly Ramah chert, used for harpoon hunting



Burin-like tools, nephrite (jade), cutting and grinding tools

Tip-fluting spalls , various cherts, by-product of endblade manufacture

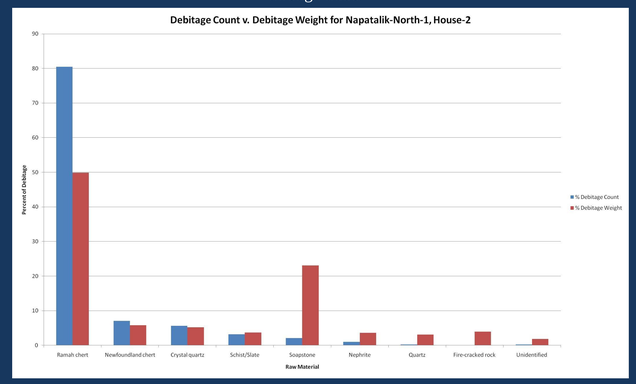
The tools discovered in the house represent hunting, skin processing, and the residues of tool manufacture. The assemblage also includes 8 fragments of 2 soapstone lamps that once burned blubber for heat and light and almost 400 fragments of seal bones.

Microblades., crystal quartz, probably for bone working

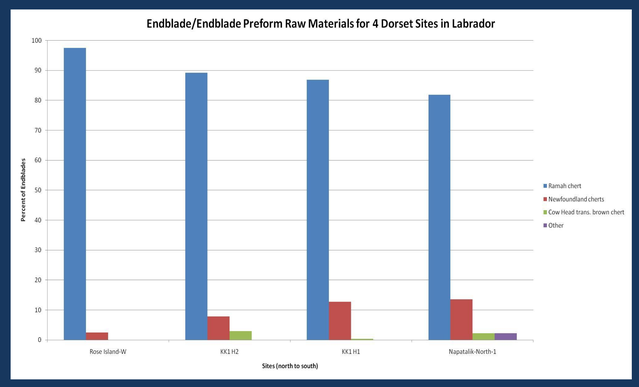
Endscrapers, various cherts, used for bone and hide working

TOOL MANUFACTURING AND TRADE

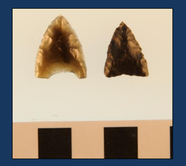
The majority of the tools and lithic debris from the Dorset site at Napatalik were made from Ramah chert, a translucent chert found to the north of Napatalik Island at Ramah Bay (see map). The site also included tools made from various fine-grained cherts sourced to south of Napatalik Island in Newfoundland. The site's inhabitants may have obtained these materials through trade.



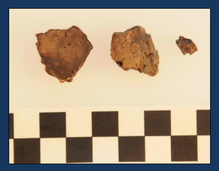
To determine which materials the site's inhabitants were working most intensively, we classified each flake of debitage (debris) into raw material classes and then counted and weighed each class. Ramah chert accounted for over 80% of the debitage count at Napatalik but only about 50% of the weight, indicating that the inhabitants were working this material more finely than other, more local materials.



Endblade raw material use appears to correlate with distance from the raw material's source. Ramah chert use is highest at the Rose Island site nearest Ramah Bay, while Newfoundland cherts are more frequent at the southernmost site of Napatalik.



Based on both stylistic evidence and raw material these two exceptionally small endblades from Napatalik evidence the movement of people between Labrador and the coast of Newfoundland



Two sherds of Woodland pottery from the Dorset house at Napatalik provide a tantalizing clue suggesting some contact between Dorset and coeval Amerindian peoples.

CONCLUSIONS

The patterns of raw material use at Napatalik suggest that the site's occupants were able to obtain non-local cherts from Ramah Bay to the north and Newfoundland to the south relatively easily, as both occur in the assemblage. Analyses of the debitage from other Middle Dorset sites in Labrador reveal that frequencies of both Ramah chert and Newfoundland chert increase as distance from their sources decreases. This tendency to avoid long-distant transport of large chunks of raw material may explain why the weight of the Ramah chert debris at Napatalik comprises a smaller percentage of the total debris than the count. The site's inhabitants may have obtained partially-finished Ramah chert artifacts through trade networks, which needed only fine, detailed working later.
Trade networks may also be responsible for the presence of the two small Newfoundland-style endblades and the small sherds of Woodland pottery. The endblades' finished condition, and the lack of Newfoundland chert preforms at the site, suggests that Dorset peoples obtained these endblades through participation in formal social networks extending along the coast Labrador. Whether these contacts were only occasional, as LeBlanc (2010) suggests, or more formalized and regularized, as suggested by the presence of Newfoundland chert lithic debris at Napatalik, Koliktalik, and Rose Island, is a subject for future study.

REFERENCES

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