Community-Based Heritage Education, Training and Research:
Preliminary Report On The Tungatsivvik Archaeological Project

DOUGLAS R. STENTON\(^1\) and BRUCE G. RIGBY\(^2\)

(Received 23 February 1994; accepted in revised form 31 October 1994)

ABSTRACT. Despite an immediate need for northerners trained in cultural resource management and the strong desire of many northern communities to direct historical research, there continue to be few opportunities for students to receive formal training in heritage research. A promising new approach is the Tungatsivvik Archaeological Project, which since 1991 has been part of the Environmental Technology Program offered through Arctic College’s Nunatta Campus in cooperation with the community of Iqaluit. Integrating lectures, field exercises, lab analyses, and community reporting, the program allows students and community members alike to acquire technical knowledge and skills they can use to develop community-based heritage programs. The more than 100 features identified at the site, where excavations in the first two seasons have yielded more than 2000 artifacts and 7000 animal bones, include late prehistoric (Thule culture) dwellings, food caches, kayak stands, and burials. Results of the project are being actively integrated into local educational and interpretive structures, as community members from elders to school children participate in “making history come alive.”

Key words: Baffin Island, archaeology, Arctic College, community-based research, cultural resource management, heritage training, Nunavut

INTRODUCTION

While the research in the Canadian Arctic has intensified considerably during the last decade and shows no signs of letting up, the Inuit in the meantime have been little more than casual observers wondering what is happening in their back yard or waterfront (Weetaluktuk, 1993, p. 95)

In 1982, a five-member special committee of the Legislative Assembly of the Northwest Territories (N.W.T.) released a report entitled *Learning: Tradition and Change in the North-west Territories* (Special Committee on Education, 1982). The document readily received support across the N.W.T., and became the blueprint for the redesign of the territorial education system. One aspect of the report that has had significant ramifications within the North is the position put forward that Northerners should strive to increase their involvement in the education system and, in particular, should develop mechanisms for evolving curricula to reflect the needs and aspirations of local residents. Also contained in this report was the recommendation to develop Arctic College, a pan-territorial college system with the mandate to coordinate and deliver all post-secondary adult education and training.

In developing the strategic plan for Arctic College, it became clear that an environmental and renewable resource

---

\(^1\) Environmental Technology Program, Arctic College, Iqaluit, Northwest Territories X0A 0H0, Canada

\(^2\) Department of Canadian Heritage, Iqaluit, Northwest Territories X0A 0H0, Canada

© The Arctic Institute of North America
training program was needed in Nunavut, to provide residents with the skills required to successfully implement the Tunngavik Federation of Nunavut land claim. As a result, the Environmental Technology Program, a three-year diploma program, was started at the Nunatta Campus in Iqaluit. The goal of this program is to marry the rigour of southern academic learning with northern needs, interests, and cultural knowledge.

Since its inception in 1986, the Environmental Technology Program has attracted both Native and non-Native students, and has recognized explicitly the importance of the cross-cultural context within which it operates. The involvement of local and regional elders continues to be critical both to ensure a balance between learning styles and to effectively integrate local knowledge into the curriculum. This recognition has found expression in several forms, including classroom, field, and laboratory courses designed to introduce students to a range of subjects related to arctic prehistory and history.

The centerpiece of the program’s heritage training component is the Tungatsivvik site, a large archaeological site located west of Iqaluit. Because of its size, complexity, and accessibility from Iqaluit, Tungatsivvik provides an ideal setting for heritage training purposes. Many Environmental Technology courses have field components that allow participants to learn by doing, and participation in archaeological field excavations provides links between different cultures, and also among the present, the near past, and the prehistoric. Archaeological field training has been conducted at the site since 1991. This paper provides an overview of the project and summarizes the results to date.

PROJECT HISTORY

The first attempt to integrate archaeology into the Environmental Technology Program curriculum took place in 1988 at Cormack Bay, site of a former Hudson's Bay Company post located approximately 80 km southeast of Iqaluit. The foci of the two-week camp were to examine how best to begin the process of integrating local knowledge within the course content, to determine the appropriate teaching techniques, to assess the potential for the involvement of elders and local resource people, and to fine-tune the logistics of running a field teaching site. The enthusiastic response of the students and the community to that initial season led the way to the development of a longer-term heritage training program. The result of this initiative was the Tungatsivvik Archaeological Project. The principles that guided the development of the Tungatsivvik Project have been discussed elsewhere (Rigby and Stenton, 1992). Our primary interest was to ensure that the community would be involved in the project and that the information collected would serve community needs and interests.

Although not the first project designed to provide archaeological training for Eastern Arctic Inuit and non-Inuit (e.g., Bielawski, 1984), the Tungatsivvik Project differs from earlier programs in two ways. First, the training is provided as part of the Environmental Technology Program’s core curriculum, making it the only post-secondary archaeological training presently offered in Nunavut. Second, the materials recovered remain in the North, where they are used in a variety of educational settings. The training offered is designed to complement skills acquired through other courses and to prepare graduates for employment with territorial and federal government agencies (e.g., Economic Development and Tourism, Parks Canada, Department of Indian Affairs and Northern Development, Inuit Heritage Trust) that have present and future needs for staff with experience in dealing with heritage resources.

The training program integrates classroom and field lectures, field exercises, lab analyses, and community reporting. Preparations for the field course begin in the first year of study. Students attend an introductory field camp where they learn the basics of establishing and maintaining a field research camp. This is followed by classroom instruction in introductory anthropology and related courses on northern topics. The second academic year begins with a three-week archaeological field camp that combines lectures on arctic culture history, techniques of archaeological data recovery, and basic principles of field conservation with a field practicum involving archaeological site surveys and excavations at Tungatsivvik (Fig. 1). Community elders are invited to visit the camp each year, and in 1994 assisted with the excavations (Fig. 2).

FIG. 1. Arctic College Environmental Technology Program staff and students excavating Thule winter house, Tungatsivvik site.

The field course is followed by a laboratory methods course in Iqaluit, in which students sort, clean, and catalogue artifacts and faunal remains, and conduct preliminary analyses on these materials. When this work is completed, students present the results of the field work to the community. Presentations are given at Iqaluit’s elementary and secondary schools and at the Elders’ Centre, and information about the project is reported in the local news media. The information also serves as a resource for other college programs including Academic Studies, Eastern Arctic Teacher Education Program, and Fine Arts and Crafts, and for the Nunatta Sunakkutangit Museum, where many of the artifacts recovered will eventually be displayed.
FIELD SETTING

The Tungatsivvik site (Borden Designation KkDo-3) is located along the north shore of Peterhead Inlet, approximately 10 km west of Iqaluit (Fig. 3). It is situated on a slope lying between low bedrock hills, and the most distinctive topographic feature of the surrounding landscape is a large solifluction lobe, flowing downslope from a point of origin northwest of the main site area. The leading edge of the turfbanked lobe sits at 20 m above sea level (asl).

Approximately 100 features have been identified at the site (Fig. 4), and others are undoubtedly concealed beneath the lush vegetation cover. Included in the range of feature types recorded are the remains of summer and winter dwellings, stone meat caches, kayak stands, and burials. The number and diversity of features at Tungatsivvik reflect both its general cultural importance for hunter-gatherers in the Frobisher Bay area and its specific value as a residential and logistical location in both summer and winter.

The most prominent habitation features at the site are Thule culture (Mathiassen, 1927) semisubterranean winter houses. These are of typical Thule design constructed of stone, sod, and bowhead whale bone, with circular living areas entered by a narrow passage, and having from one to three rooms. A total of 17 winter house ruins have been identified. The majority are located in the central part of the site, where they cluster into three groups. Elevation of the structures ranges from 4 to 16 m asl, but most are situated between 10 and 12 m asl. The central interiors of many of these features contain large concentrations of boulders originally used in the construction of the walls. Others are completely covered by vegetation and only a shallow, circular depression is visible from the surface. Bones (e.g., ribs, mandible fragments, vertebrae, crania) of the large bowhead whale (Balaena mysticetus), which were important construction materials, are present in most of the houses, and a number of cranial fragments are scattered about the surface of the site.

Evidence of site occupation during the summer and fall seasons is abundant. The site contains a total of 21 tent rings of various sizes and complexity. The size, shape, and artifacts associated with a small proportion of these features indicate they are of recent vintage; but characteristics of vegetation overgrowth indicate that most of the tent rings are of considerable age.

Another important class of features identified at the site is food caches. A total of 47 caches have been recorded, the majority of which are of the freestanding type constructed of boulders. Also present are boulder caches built around large erratics, as well as a few that incorporate crevices in outcropping bedrock. Most caches were found empty, although a few contained pieces of bowhead whale bone and one contained a deposit of mica fragments.

Of the four burials identified at the site, two contain human skeletal remains. Interestingly, the skeletal remains in one of the burials appear to have been displaced, and the bones subsequently piled on top of one another at one end of the feature. All burial features were measured and photographed but were not otherwise disturbed. No associated grave goods were observed.

EXCAVATIONS

To date, excavations at the site have focused on the late prehistoric (Thule culture) and post-contact periods. We have found that students benefit more from the initial experience if they can establish links between their own culture and that of past societies. The direct connection between Thule and Inuit cultures is reflected in many aspects of contemporary material culture, and students can not only identify instantly many of the artifacts recovered, but are able to appreciate their long tradition and the context(s) associated with their
houses) we presently have a limited understanding of the earliest occupations of Tungatsivvik. The assemblages include identifiable Pre-Dorset and Dorset artifacts, but otherwise consist of detritus, a variety of ‘expediency tools,’ and biface fragments for which accurate cultural affiliations cannot be determined. The principal raw materials used in the manufacture of lithic artifacts are chert, slate, and quartz, with the assemblages dominated by beige and grey cherts similar to those recovered from the nearby Shaymark (Maxwell, 1972), Crystal II (Collins, 1950) and Peale Point (Stenton, 1987) sites.

Evidence for a Pre-Dorset occupation of the site is suggested by the recovery of a few spalled chert burins and spalls (Fig. 5a, b). The burins display stylistic attributes associated with various stages of the Pre-Dorset sequence, dating between circa 4000 and 2500 B.P. (Maxwell, 1985), suggesting a long history of site use by Pre-Dorset groups.

Dorset period artifacts are more numerous and include a variety of stemmed, side-notched and triangular endblades, flared endscrapers, and asymmetrical scrapers or ‘knives’ (Fig. 5c–i). These forms are typical of Late Dorset assemblages (circa A.D. 500–1000) in the eastern Arctic, and the Tungatsivvik Dorset artifacts are very similar to specimens found by Collins (1950) and Maxwell (1972) at the Crystal II site. A Late Dorset occupation is also indicated by the recovery of a broken Type J harpoon head which first appears

![FIG. 4. Plan view of Tungatsivvik site (KkDo-3), Baffin Island, N.W.T.](image-url)
FIG. 5. Selection of Palaeoeskimo artifacts from KkDo-3: a–b: burins (Pre-Dorset); c, d, f, g: endblades; h: endscraper; e, i: asymmetrical knives/scrapers; j: harpoon head (Dorset).

in the Late Dorset period (Fig. 5j) (cf. Collins, 1950: Plate V; Maxwell, 1985: Fig. 7.30), and the tip of a quartz ‘burin-like tool’ usually associated with the Dorset period (cf. Maxwell, 1985:94–95).

Neoeskimo Period

Excavations in four Thule winter house ruins and one Inuit tent ring have yielded a wealth of information concerning the Neoeskimo occupation of the site. Artifacts representative of a wide range of hunting, traveling, and domestic activities have been recovered (Fig. 6), together with several thousand animal bones.

The temporal framework for the Neoeskimo period has been developed by combining radiocarbon assays with analysis of the stylistic attributes of harpoon heads and other artifacts. These data are used to assign house occupations to one or more of three Thule cultural phases variously referred to as Classic (circa A.D. 1000–1200), Developed (circa A.D. 1200–1600), and Historic or Post-Contact Thule (circa A.D. 1600–1850) Thule (e.g., Schledermann, 1975; Maxwell, 1985; Sabo, 1991). More recent site components are assigned to the Inuit phase (Table 1).

Classic Phase

The initial occupation dates from the early or Classic Thule phase of circa A.D. 1000–1200. Bone and wood samples from House 6 and the early components of Houses 11 and 16 yielded radiocarbon dates spanning the tenth to fourteenth centuries A.D., or contained harpoon head assemblages that include specimens with stylistic attributes generally considered to date to the Classic Thule period (Fig. 7b, d, e).

Developed Phase

Several components have been assigned to the Developed Thule phase. The upper occupation levels of Houses 6 and 11 yielded stylistically later harpoon heads (Fig. 7a, c, f), and testing in House 5 produced a small, nondiagnostic artifact assemblage and a radiocarbon date falling between the 13th and 15th centuries A.D.

Post-Contact Phase

For the Frobisher Bay region, the post-contact era can be divided into early and late contact periods (Stenton, 1987). The early period begins in the late sixteenth century and relates to the A.D. 1576–78 expeditions of Martin Frobisher in the outer bay region. The late period, also linked
(Gaimster, 1988, pers. comm. 1992), and the decorative motif links the specimen with a mould series portraying the Seven Liberal Arts and the Seven Virtues (Gaimster, 1988). Comparison of the tile fragments with samples from Kodlunarn Island suggests the tile recovered from Tungatsivvik originally formed part of expedition supplies brought to the New World by Martin Frobisher between 1576 and 1578.

Although detailed artifact and related analyses can be expected to refine these general subdivisions, the types and quantities of European materials introduced during each broad interval differ in many respects, and can be used as temporal ‘signatures’ that permit initial classification of sites or components to one or the other contact period.

**Early Post-Contact:** Material dating from the earlier stage is particularly interesting, and consists of two iron spikes and approximately 45 fragments of moulded stove tile recovered from the upper occupation floor of House 16. The in situ arrangement of the tile fragments suggested they originally formed a single piece, and the largest fragments were refitted to form a single specimen measuring approximately 129 mm in length, 45 mm in width, and 20 mm in thickness (Fig. 8).

Preliminary analyses indicated the reconstructed specimen originally formed the medial section of the left side of a stove tile depicting a caryatid with arms folded across the chest. Stylistically, the fragment correlates closely with stove-tile designs manufactured in Cologne during the 1560s and 1570s (Gaimster, 1988, pers. comm. 1992), and the decorative motif links the specimen with a mould series portraying the Seven Liberal Arts and the Seven Virtues (Gaimster, 1988). Comparison of the tile fragments with samples from Kodlunarn Island suggests the tile recovered from Tungatsivvik originally formed part of expedition supplies brought to the New World by Martin Frobisher between 1576 and 1578.

The historical significance of the tile lies in the fact that it represents the furthest known geographical distribution of European post-medieval ceramic stove tiles (D. Gaimster, pers. comm. 1991), and is among the largest and best preserved specimens of its kind yet discovered from an early contact period Thule site. An interesting question surrounding the discovery of stove-tile fragments is whether their intended function was for purposes of domestic heating, or as ‘trinkets’ to be traded or given to the Inuit. It is well known that Frobisher intended to establish a 100-man colony on Kodlunarn Island in 1578, but was unable to do so largely by the loss of ships carrying the building materials. There can be no question that provision had been made for heating the various structures, and the inventory lists for Frobisher’s third voyage include both stoves and tiles. However, the type of stove is not specified and, by context, most (if not all) of the stoves are believed to have been iron (D. Hogarth, pers. comm. 1992). Moreover, the tiles purchased for the expedition numbered some 2000, suggesting they may have been roofing rather than stove tiles.

Archaeologically, the discovery of the tile contributes to our understanding of regional settlement patterns during the late prehistoric period. Brick, tile, and other goods known to have been introduced during the Frobisher expeditions provide a means of establishing a temporal boundary or terminus post quem for sites occupied during the latter part of the Thule period. Moreover, they corroborate Best’s 1577 description of the use of sod/stone/whale bone winter houses in the late 16th century, suggesting that in Frobisher Bay a ‘traditional’
pattern of winter settlement persisted at least until this period, if not longer. Thus, the suggested date of circa A.D. 1500 for the replacement of these structures by snow houses in the eastern Arctic (Schledermann, 1976; McCartney, 1977; Savelle, 1984; Park, 1988; Stenton, 1991) is clearly too early in Frobisher Bay. Finally, these types of materials may provide valuable insight concerning cultural site formation processes in the eastern Arctic (Schiffer, 1987) in terms of salvage, curation, and reuse processes in the context of early Inuit-European contact. In this regard, it is interesting to note that these materials have not been reported (or identified) from sites located in either Cumberland Sound (Schledermann, 1975, pers. comm. 1992) or along the Hudson Strait coast of Baffin Island (Sabo, 1991). Thus, while brick and tile fragments appear to be common elements of late Thule assemblages in Frobisher Bay, it will be interesting to see how their apparently ‘localized’ distribution compares with the diffusion of other (more valuable?) materials introduced during the post-Frobisher and later periods.

Late Post-Contact: The late post-contact (i.e., Inuit) occupation of Tungatsivvik is represented by materials recovered from House 4, a summer/autumn tent ring feature. The House 4 artifact assemblage consists of 117 specimens which, with the exception of a small number of nondiagnostic chert flakes, all date from the 20th century. Included in the assemblage are glass beads, rifle cartridge cases and related firearm paraphernalia, and various metal artifacts including tin can and stovepipe fragments, round nails, a hacksaw blade and a pewter spoon-bowl (Fig. 9). The glass beads and pewter spoon-bowl are typical of items used to adorn women’s clothing (Karklins, 1992).

House 4 is assigned to the period between circa A.D. 1900 and 1940. This attribution is based on a preliminary stylistic analysis of 13 glass beads recovered from the feature, which date from the late 19th to middle 20th century (Karklins, 1993). The attributes of four cartridge cases also suggest an early 20th-century occupation date for the feature. Two of the cases are .303 Savage caliber chambered for the Savage Model 1899 rifle, and two are .44-40 caliber chambered for the Winchester Model 1873 rifle. Production of both rifles began in the late nineteenth century, however, manufacture of firearms chambered for the .303 Savage ceased after World War II, and no American-made rifles have been chambered for the .44-40 since 1937 (Barnes, 1989). The headstamps indicate that all the cartridges were manufactured by the Dominion Cartridge Company (‘D. C. Co.’), and were produced prior to 1948, since after this date the headstamp was changed to ‘Dominion.’ Finally, the use of copper primer caps in all four cases dates them prior to 1928, at which time nickled primers were introduced.

SUBSISTENCE

Analysis of the faunal remains recovered from the site is ongoing, and only general observations are offered here. Faunal assemblages recovered from Thule coastal winter settlements are characteristically diverse in terms of species represented, but are dominated by the remains of small seals and caribou. Large whale (B. mysticetus) remains are also routinely found in Thule winter houses and reflect the importance of this species to the diet (Savelle and McCartney, 1988). In these respects, the faunal data from Tungatsivvik can be considered typical (Fig. 10). Ringed seal (Phoca hispida) remains account for 60% of the site assemblage, with caribou (Rangifer tarandus) accounting for 25%. All other species are represented in low frequencies, usually less than 5% of any given assemblage. The only exception to this general trend are the remains of bowhead whales, which were used as house construction materials, and are more difficult to evaluate in light of their potential for having been recycled. A similar pattern of faunal data was found at the Peale Point site, which yielded nearly 30 000 animal bones. Overall, the faunal data from Tungatsivvik confirm the results from the Peale Point site that the upper Frobisher Bay region was
productive in terms of wildlife resources, and more than adequate to sustain human populations (Stenton, 1987). In fact, four Thule winter sites (containing 35 houses) dating from both Classic and post-Classic phases are now known from the Peterhead Inlet area.

The excavations have also yielded insight concerning cultural formation processes affecting house faunal assemblages, and which influence reconstructions of prehistoric subsistence behaviour (Stenton and Park, 1994). Structural modifications in three of the houses indicate they had been reoccupied several times, in some cases apparently following extended intervals of abandonment. As a result, much of the faunal data has been recovered from secondary, disturbed contexts, and our planned analyses will include comparisons of bone assemblages from different recovery contexts.

**DISCUSSION**

The development of the Tungatsivvik site as a community-owned, heritage teaching and learning centre reflects the interest that many northern communities have in directing historical research within the North (Ittarnisalirijiit Katimajiit, 1994). The Tungatsivvik Archaeological Project is truly community-based: it has actively involved Inuit in the project design, in conducting research, and in interpreting and applying the information collected to community-directed heritage programs. The Tungatsivvik “model” is currently being used in the development of North Baffin National Park; in the development of a Nunavut Cultural Resources Management Plan by Parks Canada; in Piniaqtavut, the Baffin Divisional Board of Education’s environmental science curriculum; and in the development of courses and programs at Arctic College. In all of the above, the key factor to the success of the project has been the sense of community ownership, not frequently found in other projects.

For example, the lessons learned through Tungatsivvik have been applied in a cultural resources project associated with the development of North Baffin National Park. This project consists of many interrelated segments, all of which allow for the final “product” to be greater than the sum of its parts. The key components are: archaeological survey work (Stenton, 1994), oral history documentation (Cousins, 1994), archival research related directly to local post-contact history (Chabot, 1994), documentation of local place names, development of a natural/cultural interpretation centre which meets the objectives of several groups (Southam, 1994), the development of community teaching/learning sites to be used within the school curriculum and to interpret the community to visitors, and the publication of an illustrated history of the Tunnunirmiut. In effect, the approach to the project has been to integrate study of the natural and cultural heritage of the Pond Inlet area, providing as much prominence to the “cultural ecosystem” as to traditionally researched natural resource areas.

The North Baffin project is directed by the community through the Parks Committee, the Elders Committee, and the Tourism Committee. A community-based research coordina-
Fourth, the program has been successful where other attempts at similar programs in the N.W.T. have not, or have had short-lived success, as a direct result of the interest of the people of Nunavut in the preservation and documentation of their culture, and the commitment by the community to “make history come alive.” This is reflected in programs such as the Baffin Divisional Board of Education’s Piniaqtavut program, and in the Inuktitut publishing program also run by the Board.

Finally, the project has succeeded in fostering an awareness of group identity and pride in past accomplishments at an individual and community level. Critical to this has been the development of ownership of one’s history and the ability to direct its interpretation to others.

ACKNOWLEDGEMENTS

In a project of this nature there are a great many individuals and organizations that have provided generous encouragement and support. Major funding of the initiative has been provided by Arctic College, with additional financial support provided by Parks Canada. Community support of the project has been most gratifying, and we thank the following agencies: Baffin Regional Inuit Association, Baffin Divisional Board of Education, Iqaluit Town Council, Iqaluit Elders Centre, Indian and Northern Affairs Canada, Parks Canada (Eastern Arctic District), Nunatta Sunakkutangit Museum, and the Science Institute of the Northwest Territories (Iqaluit Research Centre).

Technical advice and other assistance has been generously provided by Chuck Arnold (Prince of Wales Northern Heritage Centre), David Gaimster (British Museum), Tara Grant (Canadian Conservation Institute), Don Hogarth (University of Ottawa), Karlis Karklins (Parks Canada), Tim Neily (Arctic College), Terry Pearce (Iqaluit), Louise Renaud (Parks Canada), Bert Rose (Arctic College), Rosalie Scott (Prince of Wales Northern Heritage Centre), and Carole Stimmell (Archaeological Resource Centre). We also wish to thank Ellen Bielawski and two anonymous reviewers for their constructive comments on the original manuscript.

Finally, we extend our sincere thanks to the many students, staff, and volunteers that have worked at Tungatsivvik and who have made invaluable contributions to the success of the project: Johnny Akpaliauk, Karen Banfield, Julie Beauchesne, Eric Coleman, Hector Duval, Celestine Erkidjuk, Ron Fedorak, Robert Innuialuk, Ipeelee Itocheak, Anuga Itocheak, Andrew Keim, Kitty Kilabuk, Peter Kilabuk, Derek Kohlhaas, Pitseolak Koochijakue, Angela Legge, Trish Lewis, Lin Maus, Robert McIntosh, Johnny McPherson, Gootoolak Micheal, Paul Mikiyungiak, Sarah Onalik, Ping Ottochic, Steven Pinksen, Jayko Pitseolak, Barry Reynolds, Paul Smith, Barry Troke, Deborah Webster, Paul Wolf, and Doug Workman. This paper is dedicated to the memory of Derek Kohlhaas.

REFERENCES


———. 1993. Tungatsivvik (KkDo-3) bead analysis. Unpubl. report. Available at Arctic College Library, Nunatta Campus, Iqaluit, N.W.T. X0A 0H0, Canada.


MAXWELL, M.S. 1972. Preliminary report of excavations at the Crystal II site. Unpubl. report. Available at Archaeological Survey of Canada, Canadian Museum of Civilization, 100 Laurier Street, P.O. Box 3100, Station B, Hull, Quebec J8X 4H2, Canada.


