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# The Tuvaaluk and Torngat archaeological projects: Review and assessment
# Les projets archéologiques Tuvaaluk et Torngat: description et bilan

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Résumé de l'article

À la fin des années 1970, deux grands programmes multidisciplinaires devant durer plusieurs années ont été lancés le long des côtes du nord du Labrador et de l'Ungava au nord du Québec. Tous deux envisageaient un nouveau modèle d'archéologie arctique alliant l'archéologie, l'ethnographie, les études environnementales, les sciences de la Terre et l'informatique. Le programme de recherche Tuvaaluk était dirigé par Patrick Plumet de l'Université du Québec à Montréal, et le projet archéologique Torngat, par William Fitzhugh de la Smithsonian Institution et Richard Jordan du Bryn Mawr College. Ces projets ont duré approximativement cinq ans et ont rassemblé des chercheurs et des étudiants de plusieurs institutions. Le projet Tuvaaluk se concentrait sur les cultures thuléennes et paléoesquimaudes, tandis que le projet archéologique Torngat incluait des recherches sur les cultures amérindiennes de l'Archaïque maritime et celles qui ont suivi, en plus des cultures paléoesquimaudes et inuit. Cet article passe en revue les projets Tuvaaluk et Torngat, et compare leurs objectifs, leurs méthodes, leurs résultats, les leçons qui en ont été tirées et l'influence qu'ils ont eue.

# The Tuvaaluk and Torngat archaeological projects: Review and assessment

**William W. Fitzhugh***

**Résumé:** Les projets archéologiques Tuvaaluk et Torngat: description et bilan

À la fin des années 1970, deux grands programmes multidisciplinaires devant durer plusieurs années ont été lancés le long des côtes du nord du Labrador et de l'Ungava au nord du Québec. Tous deux envisageaient un nouveau modèle d'archéologie arctique alliant l'archéologie, l'ethnographie, les études environnementales, les sciences de la Terre et l'informatique. Le programme de recherche Tuvaaluk était dirigé par Patrick Plumet de l'Université du Québec à Montréal, et le projet archéologique Torngat, par William Fitzhugh de la Smithsonian Institution et Richard Jordan du Bryn Mawr College. Ces projets ont duré approximativement cinq ans et ont rassemblé des chercheurs et des étudiants de plusieurs institutions. Le projet Tuvaaluk se concentrait sur les cultures thuléennes et paléoesquimaudes, tandis que le projet archéologique Torngat incluait des recherches sur les cultures amérindiennes de l'Archaïque maritime et celles qui ont suivi, en plus des cultures paléoesquimaudes et inuit. Cet article passe en revue les projets Tuvaaluk et Torngat, et compare leurs objectifs, leurs méthodes, leurs résultats, les leçons qui en ont été tirées et l'influence qu'ils ont eue.

**Abstract:** The Tuvaaluk and Torngat archaeological projects: Review and assessment

In the late 1970s, two large, multi-disciplinary, multi-year archaeological programs were initiated along the coasts of northern Labrador and Ungava in northern Quebec. Both envisioned a new model for Arctic archaeology that integrated archaeology, ethnography, environmental studies, earth sciences, and informatics. The Tuvaaluk research program was directed by Patrick Plumet at the Université du Québec à Montréal, and the Torngat Archaeological Project (TAP) by William Fitzhugh at the Smithsonian Institution and Richard Jordan at Bryn Mawr College. Project periods lasted roughly five years and included researchers and students from several institutions. The Tuvaaluk project concentrated on Paleoeskimo and Thule cultures, while TAP included research on Maritime Archaic and later Indian cultures as well as Paleoeskimo and Inuit cultures. This paper reviews and compares Tuvaaluk and TAP goals, methods, results, lessons learned, and legacies.

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## Introduction

My first communication from Patrick Plumet was a letter in March 1970, sent to me at Harvard University's Peabody Museum, where I was writing my Ph.D. thesis on the archaeology of Hamilton Inlet, Labrador. Patrick was inviting me to visit when I would pass through Montreal in June on my way to Goose Bay. For the next 40 years, we kept in touch, sharing ideas and publications as we developed parallel careers. We were both non-Canadians working in nearby regions of Canada—Patrick in northern Quebec and I in central and northern Labrador—and for short periods our field projects overlapped along the Torngat coast and the Quebec Lower North Shore (Figure 1). In later years we pursued wider perspectives in Siberia and Chukotka, researching the history of circumpolar peoples and sharing some of the same Russian partners. Like my mentor, Elmer Harp, Patrick was a consummate gentleman; his letters always ended with a felicitous greeting to my wife, and while we disagreed about some things archaeological, we never felt slighted or annoyed with each other. Even when Patrick was writing or speaking at conferences about contentious issues like ethnic relations or archaeological politics, his views were couched in intellectual terms.

Our projects had more in common with each other than with projects by other northern researchers, quite apart from adjacent geography. We conducted broad-scale surveys and utilized ethnography, history, and multi-disciplinary methods; we believed in integrative and systemic approaches and valued regional as well as site-specific approaches; and we chose research areas that had seen little previous archaeological research and were considered peripheral to centres of Eskimo[1] culture development in Alaska and the central Canadian Arctic. Both projects had datasets composed of settlement patterns and chipped stone tools, and the lithic assemblages of Paleoeskimo peoples were central to our work. I had studied lithics with Hallam Movius and his Harvard University Les Eyzies team working in the Dordogne, and Patrick's mentorship was with Palaeolithic archaeologist Annette Laming-Emperaire and with André Leroi-Gourhan, famous for his work at the Magdalenian reindeer-hunter' camp at Pincevent, near Paris, and for his monograph, *Archéologie du Pacifique Nord*. Both of us were strongly influenced by Knud Rasmussen's Danish Fifth Thule Expedition (1921-1924) and saw our work as broadly anthropological.

In the 1970s and early 1980s the archaeology of the North American Arctic was dominated by culture history studies based on radiocarbon dating, artifact technology, and typology. While the Tuvaaluk and Torngat projects contributed to these reconstructions, we hoped to create systems approaches and models useful for comparative studies and broader application in the Arctic and elsewhere. Toward the latter part of our careers we found circumpolar themes useful for understanding the origin and spread of northern peoples and contributed regional data that helped fill chronological gaps involving the peopling of the easternmost fringe of the circumpolar world, the *Drang nach Osten*, as Elmer Harp liked to describe it to students. Our later

1 Editor's note: The author unequivocally uses the word Eskimo to include two cultural periods of Arctic prehistory: the Paleoeskimo and Neoeskimo cultures (see Plumet 1996).

research explored the origins of Eskimo culture in the North Pacific and northeastern Asia. Patrick collaborated with Mikhail Bronshtein to interpret and publicize recent decades of Russian research on the Old Bering Sea cultures, and he offered a two-volume grand synthesis of circumpolar archaeology (Plumet 2004a, 2004b), while my circumpolar work explored north Eurasian and Mongolian connections in the formation of Eskimo cultures (Fitzhugh 2002).

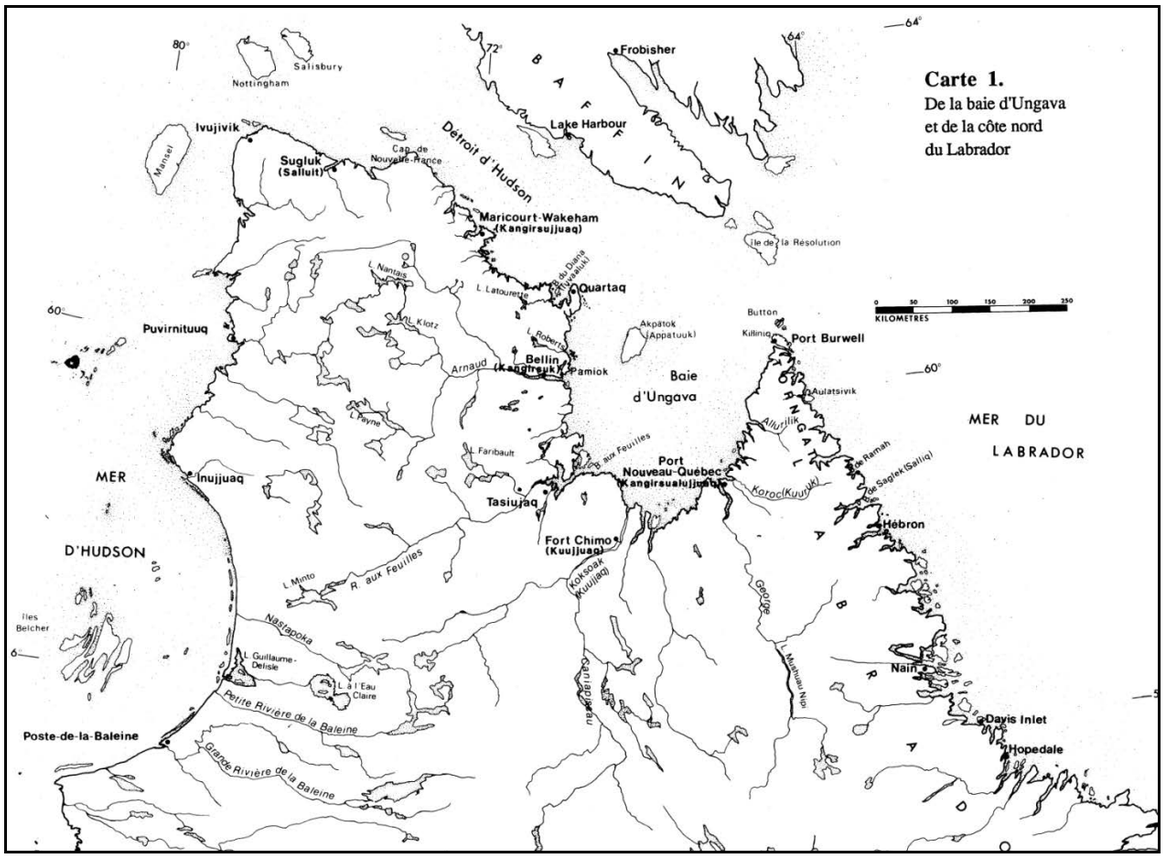


Figure 1. Map of Ungava and northern Labrador. Source: Plumet and Gangloff (1991: 2, map 1).

## Plumet's early years

Patrick was born on 4 November 1934, in Paris. As noted in a brief obituary (Labrèche 2011), in biographical material in his Dartmouth Elders Conference publication (Plumet 2002), and in notes written by his wife, Nicole, shortly after his death (pers. comm. 2015), Plumet received his bachelor of science from the Université de Paris in 1955 and a certificate in literary studies from the Sorbonne in 1957. From the start, Plumet was a scholarly wanderer, especially of "barren lands, whether hot or cold" (Plumet 2002: 190). He spent four years studying and teaching at French institutes in Greece and Crete before moving on to Turkey, where he began a lifetime infatuation with Byzantine art and culture. For two years (1960-1962) he did military service in Algeria, discovering Arab culture and much about himself. In 1962 he became associated with Samivel (Paul Gayet-Tancrède), an illustrator and writer who was producing a Viking film, and together they explored and wrote about Viking

voyages from Iceland to Greenland and Labrador. He went to Quebec from Labrador in December 1962, and remained there during 1963-1965, teaching literature and history at Collège Saint-Vallier in Quebec City.

Meanwhile, in 1961, Louis-Edmond Hamelin had founded the Centre d'études nordiques at Université Laval and hired the eminent botanist and ethnographer, Jacques Rousseau, who had recently left the directorship of the National Museum of Canada in Ottawa and brought with him to Quebec a young archaeologist protégé named Thomas Lee. Hamelin, Rousseau, and Lee began working in Arctic Quebec, where Lee discovered longhouse foundations and megalithic monuments he claimed were Viking sites (Lee 1974; Plumet 2002). Plumet, who had participated in archaeological fieldwork in Abitibi (Quebec) in 1963, completed a certificate in archaeology at Université Laval in 1966 and served as Lee's assistant in Ungava the same year. In 1969, he became a professor at the newly created Université du Québec à Montréal (UQAM), where he was given responsibility for developing an archaeological program and laboratory. He began his own research in Ungava in 1967 and completed in 1975 a doctorate at Université de Paris 1 (Panthéon-Sorbonne) on Paleoeskimo habitations at Poste-de-la Baleine (now Kuujjuarapik) (Plumet 1976). At the Sorbonne, he also earned a doctorat d'État in 1984 with a dissertation proving Lee's Ungava longhouses were Dorset, not Viking (Plumet 1985a). At UQAM, Plumet directed the Tuvaaluk research program from 1975-1981, receiving a five-year million dollar grant from the Arts Council of Canada (now the Social Sciences and Humanities Research Council of Canada), and founded its Paléo-Québec monograph series in 1974 to report results. Plumet remained at UQAM as a research professor and Ph.D. mentor until his retirement in 1999.

## The Tuvaaluk project

Soon after arriving at UQAM, Patrick Plumet wrote me saying he hoped to establish a well-funded, long-term project using a rigorous systematic approach to fieldwork and collection analysis. Tuvaaluk ('The Great Ice') is the Inuit name for Diana Bay, located at the northwestern corner of Ungava Bay. Patrick chose it as the focus for the Tuvaaluk research program after finding a large archaeological site DIA.4, (JfEl-4) on Diana Island. As the project took shape in 1975, the research questions included 1) defining the earliest settlers of the Ungava coast, 2) relationships to other regions, 3) reconstruction of paleo-landscapes and Dorset domestic space, and 4) Paleoeskimo links to oral history and the modern Inuit. Building on previous research by Jean Michéa, Jacques Rousseau, and William Taylor, it was clear that the program would focus on Paleoeskimo, Thule, and Inuit cultures rather than on Lee's "Norse" longhouses, or on Indian archaeology, which, in contrast to Labrador, had not been found on the Ungava coast. The research team (Figure 2) included professionals in archaeology (Plumet, Jean-Paul Salaün, Ian Badgley), ethnology and ethnohistory (Monique Vézinet), geomorphology (Pierre Gangloff), petrography (Bernard de Boutray), earth sciences (Claude Hillaire-Marcel), palynology (Pierre Richard), and zooarchaeology (Jean Piérard). Data systems and computer analyses were the

responsibility of André Gosselin. Among the students involved were Marie-France Archambault, Pierre Bibeau, Pierre Desrosiers, Hélène Gauvin, Michèle Julien, Yves Labrèche, and Jean-François Moreau. Some of these would complete M.A. theses linked to the Tuvaaluk project (Desrosiers 1982; Gauvin 1990; Labrèche 1984).

Figure 2. The 1979 Tuvaaluk team on Diana Island. Left to right: Marie-Hélène Provençal, Hélène Gauvin, Luc Dubé, Pierre Desrosiers, Françoise Duguay, Françoise Lebrun, Martha Johnson, Lyne Pinel, Yves Labrèche, Jean-Guy Brossard, Réginald Auger, André Bergeron, Jean-Luc Pilon, Pierre Bibeau, unidentified helicopter pilot. Front row on the right: Pierre Gangoff, Claude Pinard, André Gagnon, Ian Badgley (in the back). Photo: Patrick Plumet.

Plumet thought archaeology as practised at that time in Arctic Canada lacked a theoretical framework and utilized idiosyncratic approaches that restricted the possibility of making systematic chronological and regional comparisons. His solution involved applying standardized ways to collect and analyze site and artifact data in the field and the laboratory (Plumet 1980a; Plumet and Badgley 1980). Tuvaaluk settlement patterns would be described by a 3-tiered geographic hierarchy: macro-space, meso-space, and micro-space. On 1 March 1973 he wrote me, saying, “it is necessary to study artifacts in a more standardized and systematic way to make comparisons on the basis of almost mathematical terms between collections from different sites.” Lithics would be analyzed by rigorous measurements and angles taken from grids overlain upon the tools (Figure 3). Raw materials (most of which were quartz, Diana quartzite, Labrador Ramah chert,[2] or steatite) would be identified petrographically and chemically linked to sources. He adopted a useful histogram approach for displaying percentages of raw material usage and assemblage composition (Figure 4). Lithic and settlement data would be analyzed using newly-developed

2 Also called “Ramah quartzite” and “Ramah metachert” by francophone archaeologists, The difference in nomenclature stemmed from different geological opinions about its origin, some seeing Ramah as “recrystallized” chert.

computer programs, and paleoenvironments would be reconstructed using principles of geomorphology, ecology, and palynology. Place names, history, and oral history would be linked to archaeological sites and regions (Figure 5), and chronologies would be developed using radiocarbon, relative elevation above sea level, and, where possible, ethnographic methods. To facilitate comparisons, he developed a standardized list of archaeology terms and cultural units (Plumet 1979a). Field data were gathered from 1975 to 1979 and appeared in journal articles and in the Paléo-Québec series. A synthesis of the Paleoeskimo occupations of Diana Bay was also published (Plumet 1994a).

One of Patrick's special interests was the technology of the Dorset tip-fluted point (Plumet and Lebel 1997), a technology first described by Jorgen Meldgaard (1962). Plumet and Lebel considered Dorset tip-fluting a "second revolutionary American technology" after Paleoindian basal fluting. As we later learned, the evolution of the Dorset fluting technique began in Early Dorset somewhere in the South Baffin-northern Hudson Strait region with two tiny flutes removed from the distal end of a point's convex (dorsal) surface. Toward the end of Early Dorset, fluting shifted to the flat ventral face of the point. I disagreed with Plumet's and Lebel's idea that unifacial harpoon points found in Late Dorset were produced by a fluting process that in a single blow split a Dorset point blank down the middle from tip to base. Such a technique would have left "another half," and we have never found such a piece. Rather, Late Dorset points were probably prepared by working only the dorsal side of a unifacial flake. Patrick and I debated the issue several times, but we never convinced one another.

On 28-29 March 1976 Patrick and I arranged a workshop at Harvard University's Peabody Museum that brought our teams together for two days of papers and discussion. The purpose of the seminar was "to increase contacts between researchers so that information may be more easily and rapidly exchanged; to provide an informal setting for discussing recent field data, identifying problems, and coordinating future research efforts; and to consider the need for standardized nomenclature, chronologies, and approaches to typology. Through such interchange it may be possible to minimize the effects of published confusion and misunderstandings" (Fitzhugh letter to Plumet, January 1976). This meeting was highly successful and led in April 1977 to a follow-up in Montreal at UQAM where we discussed regional chronologies, climate change, petrography and geographic patterns in lithic raw material distribution (especially to distinguish Ramah chert from Diana quartzite), and lithic typology. In order to demonstrate the usefulness of metrics, we presented data on Ramah chert triangular harpoon points from five radiocarbon-dated Labrador Dorset sites that revealed a trend toward increasing basal concavity through time. Moreau Maxwell and Elmer Harp attended this meeting, and we learned much from their South Baffin and Newfoundland Dorset studies. These seminars benefited both groups and led to sharing of logistics, methods of lithic analysis, and exchanges of lithic raw materials for chemical and petrographic studies.

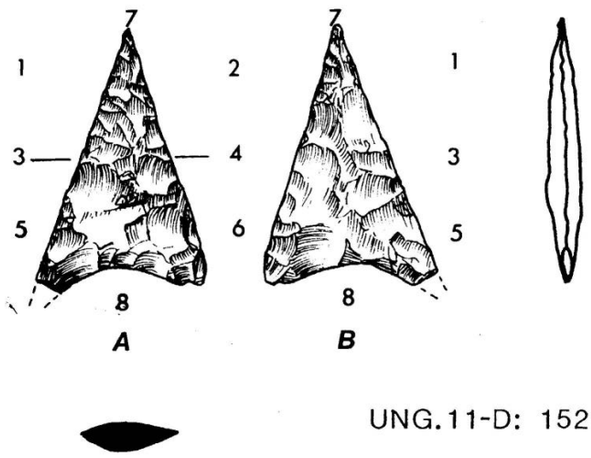


Figure 3. Late Dorset point morphometrics. Source: Plumet (1985a: 269), drawn by Richard Wilson.

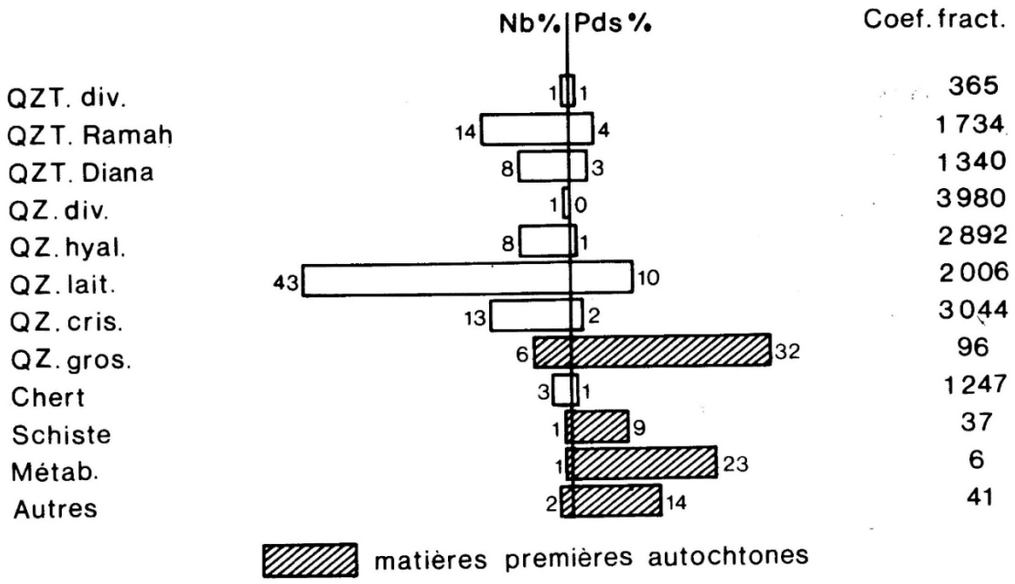


Figure 4. Tuvaaluk assemblage histogram of raw material frequencies. Source: Plumet (1985a: 146, fig. 15).

Somewhat surprisingly, we found the Paleoeskimo archaeology of Labrador and Ungava to be quite different, apart from the absence of Indian prehistory on the Ungava coast. Ramah chert, which dominated most of the chipped lithic industries in Labrador, was present in considerable quantity at the Ungava sites, where quartz and quartzite were also common, as well as minor amounts of Hudson Strait chert (Plumet 1981, 1985a: fig. 18). This raised an interesting question: since Ramah chert was used extensively by Dorset groups in northern and central Labrador and could be accessed from Ungava through valleys in the Torngats, why was it not the dominant Dorset lithic material as it was in Labrador? These and other distinctions suggested that the Ungava and Labrador groups were somewhat culturally distinct. The common use of quartz in

Ungava Dorset was a major factor in the difficulties we experienced in comparing tool types, culture stages, and chronology between the two regions.

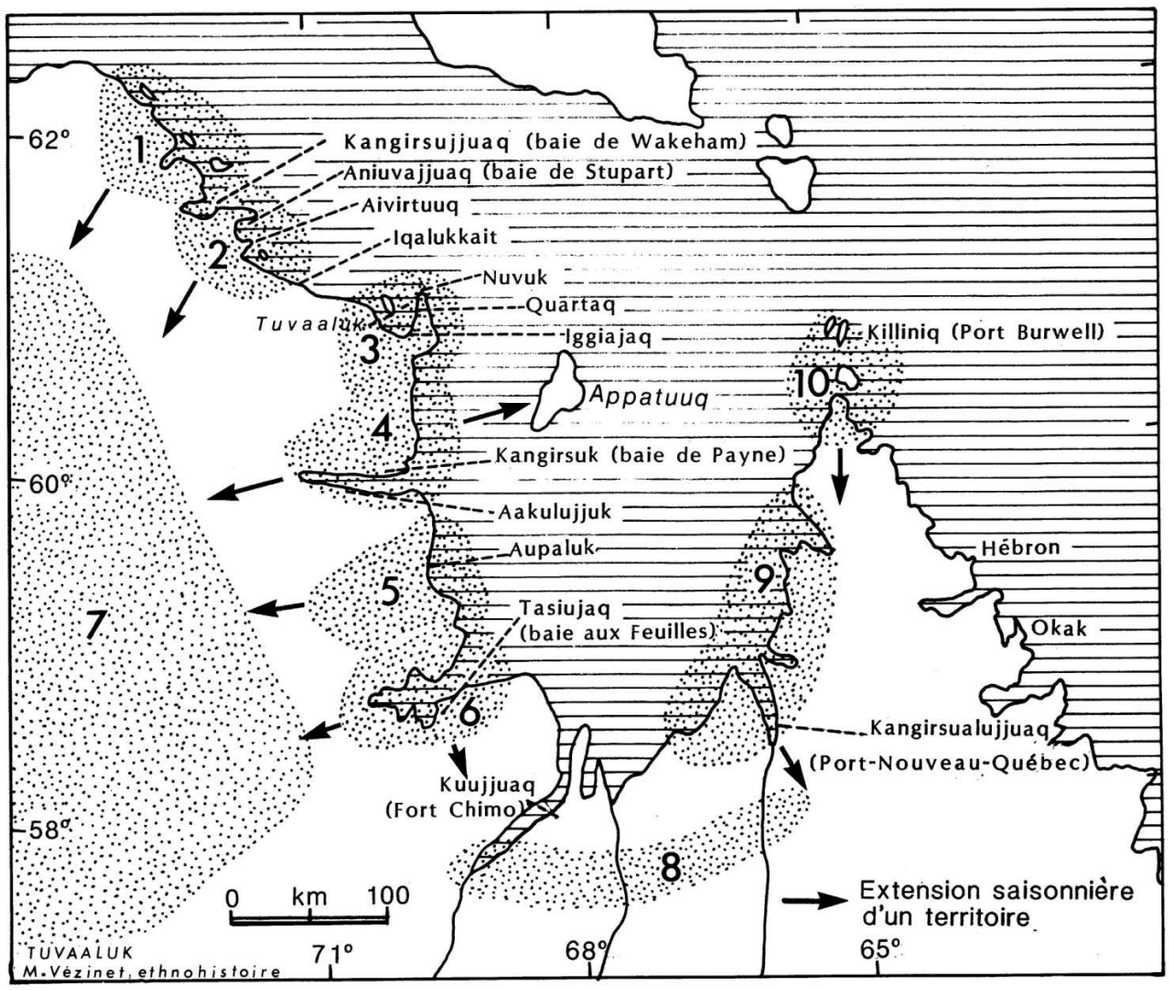


Figure 5. Ungava Inuit regional group territories. Source: Plumet (1985a: 63), after Vézinet (1982: 16).

Some results of the Tuvaaluk project may be briefly enumerated: 1) a broad-scale survey of Ungava Bay and northernmost Labrador with hundreds of sites identified; 2) detailed meso- and micro-scale studies of the most important sites; 3) excavations and radiocarbon dating of middle and late Dorset sod houses; 4) use of micro-stratigraphy to sort out re-occupation episodes in sod houses and middens; 5) intensive studies of lithic samples; 6) a comprehensive publication record, including monographs on all of the related scientific and ethnographic studies; 7) training and professionalization of a large group of students, many of whom later became important figures in Quebec archaeology and heritage management; and 8) demonstration of the utility (and high cost) of multi-disciplinary, long-term, regionally-focused research.

Areas where the Tuvaaluk project was less successful were the lack of training provided to Inuit students and uneven community relations (Martijn 2002: 207). There

was also the fact that many aspects of this project remained unknown to anglophone Canadian and American archaeologists. Notwithstanding the point study above, one may also question whether potential advances were hindered by adherence to formal analytical methods rather than to the more subjective but practical typological methods employed for years in Alaska, Canada, and Greenland.

Patrick's work was not devoted exclusively to the Tuvaaluk project; during his career he published many other seminal papers that reveal the breadth of his interests and contributions. He debunked Thomas Lee's Viking theories (1968, 1969, 1985a). He pioneered Paleoeskimo archaeology on the east coast of Hudson Bay (1976) and in Blanc Sablon in far northeastern Quebec (Plumet *et al*. 1994). He wrote a thoughtful paper on "archaeology, politics, and revisionism" relating to Kennewick Man and the Solutrean hypothesis (Plumet 2000), a few not very politically correct pieces on "ethnicity and nationalism" (e.g., Plumet 1979b, 1984), a contested article on the history of Arctic Quebec archaeology (Plumet 2002a), a paper on Arctic hearths (Plumet 1989b), a monograph on Pre-Dorset pit-houses (Plumet 1976), and articles on Arctic religion (Plumet 1997, 2006), on Eskimo origins (e.g., Plumet 1996), and on the peopling of the New World (e.g., Plumet 1994a). He also wrote syntheses on the history of Arctic archaeology (Plumet 1987a, 1996)—and of course his two-volume magnum opus *Peuples du Grand Nord* ('Peoples of the Great North') (Plumet 2004a, 2004b), the most comprehensive overview of northern archaeology ever attempted (Csonka 2007).

## The Torngat project

I use the term "project" to distinguish the Torngat Archaeological Project (TAP) research from the long-term Labrador research "program" that began in 1968 and continues today at the Smithsonian. TAP developed as an expansion of my Ph.D. research in Hamilton Inlet from 1968 to 1973 (Fitzhugh 1972) and was designed as a two-year survey rather than as an excavation program. TAP expanded the Hamilton Inlet goals: construct Indian and Eskimo culture history and territorial shifts across the Arctic-Subarctic boundary; define cultural settlement and subsistence patterns; and relate these to environmental change. The original target area expanded north to Nain in 1974-1976, as reported in *Arctic Anthropology* volumes 12(2) of 1975 and 15(2) of 1978. TAP carried the investigation to northern Labrador and Killinek in 1977-1978, where we overlapped with Plumet's survey of Killinek and northernmost Labrador. The Torngat team (Figure 6) was led by myself, Richard Jordan (co-principal investigator on our National Science Foundation grant), and Steven Cox, with Peter Johnson and Peter Clark (glacial geology), Henry Lamb (pollen and vegetation), and Arthur Spiess (archaeozoology). Graduate students included Susan Kaplan (Neoeskimo), Christopher Nagle and Colleen Lazenby (lithic raw materials), Stephen Loring (Innu and Dorset), and Bryan Hood (Maritime Archaic). Several American and Canadian undergraduates also participated.

Figure 6. The 1977 Torngat Project team in Nain on the *Pitsiulak* (larger vessel) and the *Tunuyak*. Back row, left to right: Craig Williamson (*Pitsiulak*'s Captain), Greta Hansen (conservator), Susan Kaplan, Mary Whelan, Cindy Dooman (the *Pitsiulak* cook), Robert Crowley (*Pitsiulak* First Mate), Ruth Cox, Steven Cox, Eric Loring, Charles Curtis. Front row, left to right: Christopher Nagle, Brian Hood, Stephanie Hale, William Fitzhugh. Photographer unknown, photo courtesy of William Fitzhugh.

Supported by the research vessels *Pitsiulak* and *Tunuyak*, and by auxiliary boats, canoes, and air flights, project logistics provided the mobility needed to survey the northern Labrador coast from Nain to the Button Islands. Three hundred and forty sites were discovered and documented. Maritime Archaic, Paleoeskimo, and later Indian dwellings of different culture periods were excavated, and a large number of Neoeskimo village sites were found, mapped, and tested. Scores of radiocarbon samples were obtained and dated; driftwood and archaeological wood samples were collected and processed; and baleen samples were gathered from numerous Neoeskimo contexts. Large zooarchaeological samples were collected as well as samples of soapstone and lithics from quarries as well as sites.

Geomorphology demonstrated the recent submergence of the coast and consequent losses and damage to sites north of Okak, and accounted for the few Pre-Dorset sites found north of Nachvak. No Indian sites were found north of Saglek and Ramah Bay, and Thule were identified as arriving in Killinek about AD 1350. There were several highly important finds: a large Maritime Archaic longhouse and mound burial site north of the tree line at Nulliak containing Beothuk-like engraved soapstone pendants; a frozen Middle Dorset house and midden at Avayalik rich in bone, ivory, and wood

artifacts, and artworks; and a Dorset site with remarkable soapstone carvings at Shuldham Island in Saglek (Figure 7). Settlement pattern and culture distribution data were recovered, and a detailed chronological picture of Indian and Eskimo/Inuit culture occupations was revealed. Chert and soapstone quarries were located, a preliminary search for nephrite sources was conducted, and Christopher Nagle's lithic studies (1984; Figure 11) demonstrated lithic drop-off distribution of Ramah chert, suggesting Dorset people traded Ramah chert for soapstone. The geography of culture distributions continued to support the model of Indian and Eskimo expansions and contractions linked to cooling and warming climatic phases: Indian culture borders moved north during periods of warming, and during cool periods Eskimo cultures expanded south in concert with expansions of the Arctic pack ice and associated sea mammals.

TAP was followed by preliminary syntheses in volume 33(3) of *Arctic* and articles in *Arctic Anthropology*. The project helped establish careers and trained graduate and undergraduate students. Ph.D. or M.A. theses and subsequent articles were prepared by Lamb (1984, 1985); Nagle (1984), Lazenby (1984), Kaplan (1983), and Loring (1992). The records of hundreds of sites and thousands of artifacts are available at the Smithsonian and in the Newfoundland and Labrador databases in St. John's, Newfoundland, where the collections reside. TAP results set the stage for new phases of archaeology that followed and provided information on culture history and environmental studies that contributed to the establishment of Torngat Mountains National Park and the 2015 Canadian National Historic site designation of the Ramah Bay quarries honouring the importance of that resource in the prehistory of Eastern Canada. An important legacy has been the continued involvement of Stephen Loring in Innu and Inuit community archaeology and Susan Kaplan in northern Labrador Inuit archaeology and her encouragement of research in dendrochronology, climatology, archaeoentomology, and zooarchaeology by Alison Bain, James Woollett, and others.

## Research themes

### *Overlapping Labrador-Quebec fieldwork*

In 1811, two Moravian missionaries, Kolmeister and Kmoch, explored the Labrador Torngat coast and Ungava Bay in an umiak manned by Labrador Inuit, covering virtually all of the territory later researched by the Tuvaaluk and TAP projects with the exception of the northwestern Ungava coast. Plumet covered most of the same territory during his initial canoe explorations, and in 1978-1979 surveyed Killinek, McLelan Strait, the Button Islands, and the Torngat coast as far south as Seven Islands Bay (where the Peabody Point soapstone quarry is located), gathering archaeological, environmental, ethnographic, and Inuit toponymic data (Plumet and Gangloff 1991; Vézinet 1982). Plumet's research added important information on sites and Inuit use of these territories later visited during TAP. During these projects, he identified and described the large Inuit village of Nunaingok in western McLelan Strait. TAP gathered data from this site in 1977-1978, noting a continuous 3,000-year record of occupation

(Figure 8) and the site was also investigated by the Japanese American scholar Henry Stewart (1978). Another project linking TAP and Tuvaaluk field surveys was a 1978 canoe survey of the Koroc River Valley to George River (now Kangiqsualujjuaq) led by Stephen Loring.

### *Culture history and chronology*

The Tuvaaluk project had a more restricted historical focus than the TAP, focusing primarily on the social and environmental worlds of Ungava Dorset culture from ca. A.D. 500 to 1500. TAP aimed to investigate the entire range of Indian and Eskimo occupations from the earliest time of settlement to the present. These goals necessitated different field strategies, and for this reason the two projects employed different methods and obtained different results. The Tuvaaluk project concentrated on large-scale excavations of several sites, uncovering dwellings and middens that were subjected to detailed analyses of tools, sediments, raw materials, settlement patterns, and stratigraphy in order to reconstruct the domestic and social activities of the Dorset and Thule peoples who lived there (e.g., Bibeau 1984; Desrosiers 1982, 1986; Plumet 1985a). TAP, on the other hand, focused on regional surveys of all the major fjord systems along the Torngat coast in order to identify, record, test, and sample them, but only on a few occasions to excavate a site or house completely. Torngat researchers hoped the results would produce a cultural-historical framework that could be elaborated or used for more focused research at a later time. In this sense, TAP had the easier task, since identifying, classifying, and dating sites could often be done merely by inspecting and documenting surface dwellings and collections.

### *Social reconstruction*

Evaluation of the DIA.4 Dorset social and domestic activities required careful excavation of houses that had multiple re-occupations as well as middens whose deposits were equally complicated. Papers by Plumet (1979c) and Badgley (1980) explored the methods, the goals, and some results of their ground-breaking (for the Arctic) micro-stratigraphic approach. Work at DIA.4 and other Tuvaaluk sites documented the distribution of artifacts in houses and middens but had little success in linking these collections to Plumet's macro, meso, and micro space contexts. What happened, I believe, is that, as the project unfolded, these analyses fell prey to the mundane tasks of analyzing site and collection data, and raising funds to keep the project solvent and students employed. Likewise, the Tuvaaluk plan for establishing a characteristic social or domestic signature for Dorset dwellings so that they could be compared was never carried out. I suspect this was because the DIA.4 dwellings were complex palimpsests of different occupations—sometimes overlapping, sometimes offset—whose floors could not be traced accurately enough during the excavation process to ensure that excavation units corresponded to a single-occupation floor or midden episode.

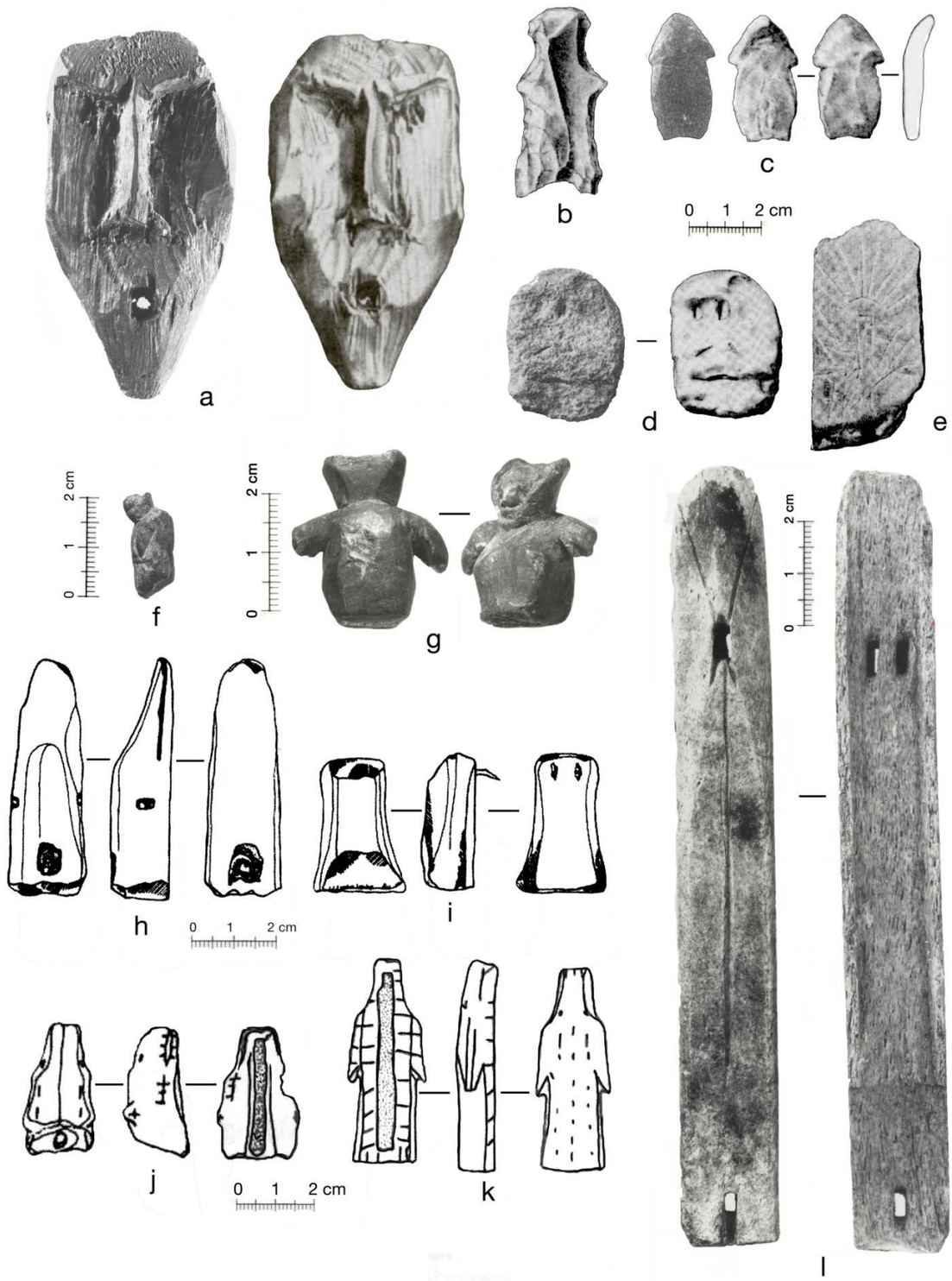


Figure 7. Dorset art from northern Labrador. Avayalik site near McLelan Strait: a, photo (left) and drawing (right) of maskette; h, duck or goose amulet; i, walrus amulet; j, polar bear amulet; k, wolf amulet. Koliktalik site near Nain: b, anthropomorphic figure of Ramah chert; c, photo (left) and drawing (right) of phallic soapstone form; d, incised schist pallet; l, whalebone sled runner with harpoon engraving. Komaktorvik site in Seven islands Bay: c, face on soapstone pallet. Shuldham Island in Saglek Bay: f, hooded human figure in soapstone; g, back (left) and front (right) views of hooded human figure in soapstone. Courtesy of Richard Jordan. Drawings by Colleen Lazenby and Constance Sheldon; photographs by Victor Krantz; and production assembly by Marcia Bakry.

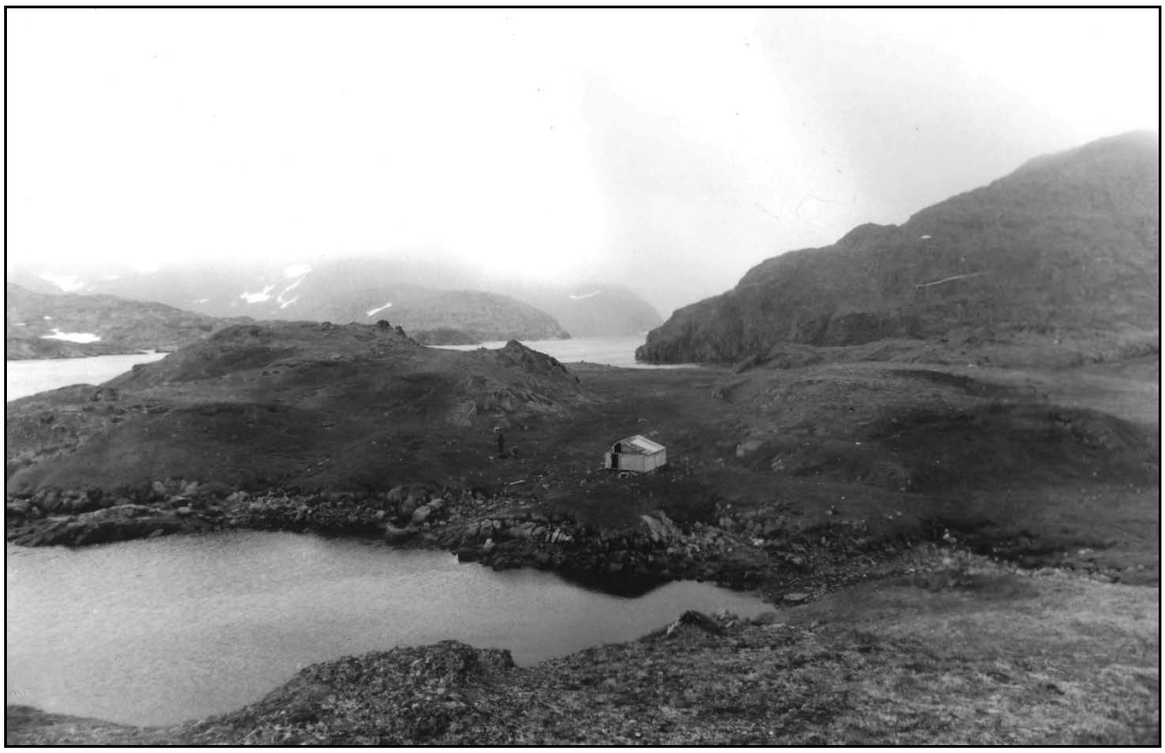

Figure 8. Nunaingok site in western McLelan Strait, 1978. Photo: William Fitzhugh.

In a sense, DIA.4 may have been the wrong site to select for social reconstruction; this part of the project might have been more successful using smaller single-component sites. Previous excavations—for instance Elmer Harp's and Priscilla Renouf's work at the Port au Choix Dorset site—were in houses that could reasonably be seen as single occupations. Finds excavated from such sites have a good chance of reflecting the activities taking place within the dwellings, e.g. cooking, tool manufacture and repair, sleeping, preparing clothing, etc. Conditions at such sites are ideal for attempts to reconstruct social and domestic life, especially when lithics, bone, and other organic materials are preserved. Even in such ideal conditions, paleo-ethnographic reconstructions have proven difficult. TAP gathered some Pre-Dorset and Dorset datasets from single-occupation dwelling excavations that would be ideal for paleo-ethnographic reconstruction but only a few have been published (e.g., Cox 2003).

During the Tuvaaluk project, a second theme emerged that became the focus of the project's social boundary investigation: relations between DIA.4's Dorset and Thule peoples. By the late 1970s the problem of Dorset-Thule interaction was being debated in locations where Late Dorset and Early Thule peoples might have co-existed or overlapped. In those days Thule culture was thought to have arrived in the Eastern Arctic soon after AD 1000. Plumet's work on early Thule houses at DIA.10 dated well within the occupation period of DIA.4, whose Late Dorset radiocarbon dates ran into the 15th and early 16th centuries (Plumet 1979b, 1980b: 548, 1989a). Besides overlapping radiocarbon dates, the only suggestion of Dorset-Thule contact was a

DIA.4 house with a Dorset mid-passage feature and a Thule-type entry tunnel—almost certainly from different occupations.

TAP excavations had produced a picture of Dorset-Thule overlap, with several Late Dorset and Thule sites dated to the 14th-15th centuries (Fitzhugh 1994). While the dates supported a possible contact scenario, the dates alone are insufficient evidence (Park 1993, 2000). Recent DNA research on this question (Raghavan et al. 2014) shows no Dorset signal in Thule and Inuit DNA, supporting (at least for now) Park's view of a rapid and complete replacement of Dorset people by Thule people throughout the Eastern Arctic.

### *Cultural phases and lithic raw materials*

Both projects aggressively pursued studies of lithics collected from excavated sites. The Tuvaaluk lithic analyses were focused largely on Diana quartzite and Ramah chert and were done by Bernard de Boutray (1981) using petrographic techniques. Diana quartzite and quartz were dominant at most Ungava sites, with chert and other types present as minor constituents. The Tuvaaluk project used a simple histogram system (Figure 4) to quantify the different lithic types by flake counts and weights that demonstrated at a glance the structure of lithic usage present at excavation units or whole sites and permitted easy comparison between sites. Rare earth element soapstone sourcing revealed that most of the UNG.11 Dorset soapstone was from Wakeham Bay sources while some was from Labrador (Archambault 1981, 1985; Figure 9).

The TAP lithic program was conducted by Christopher Nagle and Colleen Lazenby. Nagle's research focused on quantifying Ramah chert by flake counts and weights and artifacts by sizes and weights at excavated Early, Middle, and Late Dorset sites from central and northern Labrador to test hypothesized drop-off values as sites grew more distant from the quarries in the Saglek-Ramah Bay region (Nagle 1984). The method proved highly effective at predicting changes in tool size and debitage characteristics over space and the 1500 years of Dorset culture in Labrador. Nagle also collaborated with Ralph Allen on chemical characterization of soapstone by neutron activation, using variations in rare earth elements to define soapstone quarries that could then be linked to Dorset archaeological samples (Allen et al. 1975, 1978, 1984; Rogers et al. 1983; Figure 10). Although the rare earth method has been criticized by geologists, it successfully distinguished several Labrador soapstone quarries and artifacts and allowed Nagle (1984; Figure 11) to propose that soapstone might have been traded north in exchange for the southbound movement of Ramah chert. An offshoot of this work linked the soapstone spindle whorl (made from a Dorset cooking pot fragment) from the Norse site at L'Anse Aux Meadows to a Labrador quarry source (Allen et al. 1978), a study of the major quarry sites in Ramah Bay, and a description of quarrying procedures and production of early stage preforms (Lazenby 1980, 1984).

Many other types of chert have been found in central and northern Labrador (Figure 12), including a black Mugford chert quarried from beds in Okak's Cape

Mugford region, and a variety of multi-coloured cherts appearing in Intermediate Indian period (Saunders Complex) sites, whose origins lie between Seal Lake and Kaipokak Bay. A new raw material not present at sites on the central Labrador coast but found at Paleoeskimo sites north of Ramah Bay was given the name Ryans quartz for the northern Torngat location where it was most commonly found. Ryans quartz is slightly milky in appearance and resembles Ramah chert but is finer-grained and has dark speckles and thin black streaks. Comparing lithic distributions in Labrador and Ungava revealed interesting differences between the two regions. While Ramah chert dominated Dorset assemblages in Labrador, it was less common at Ungava sites.

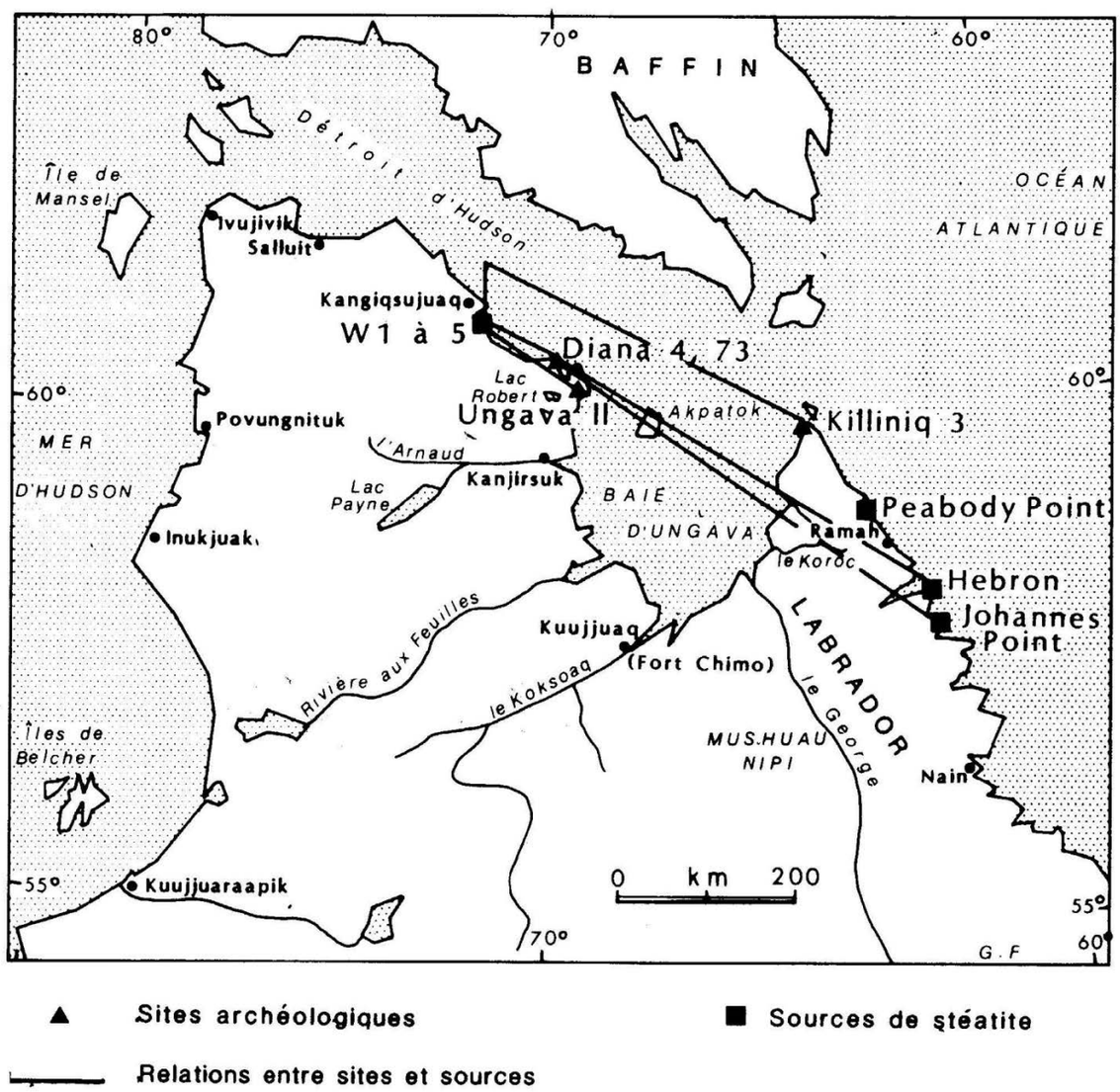


Figure 9. Steatite quarries and artifact links between Ungava and Labrador. Source: Archambault (1981: 26, fig. 12).

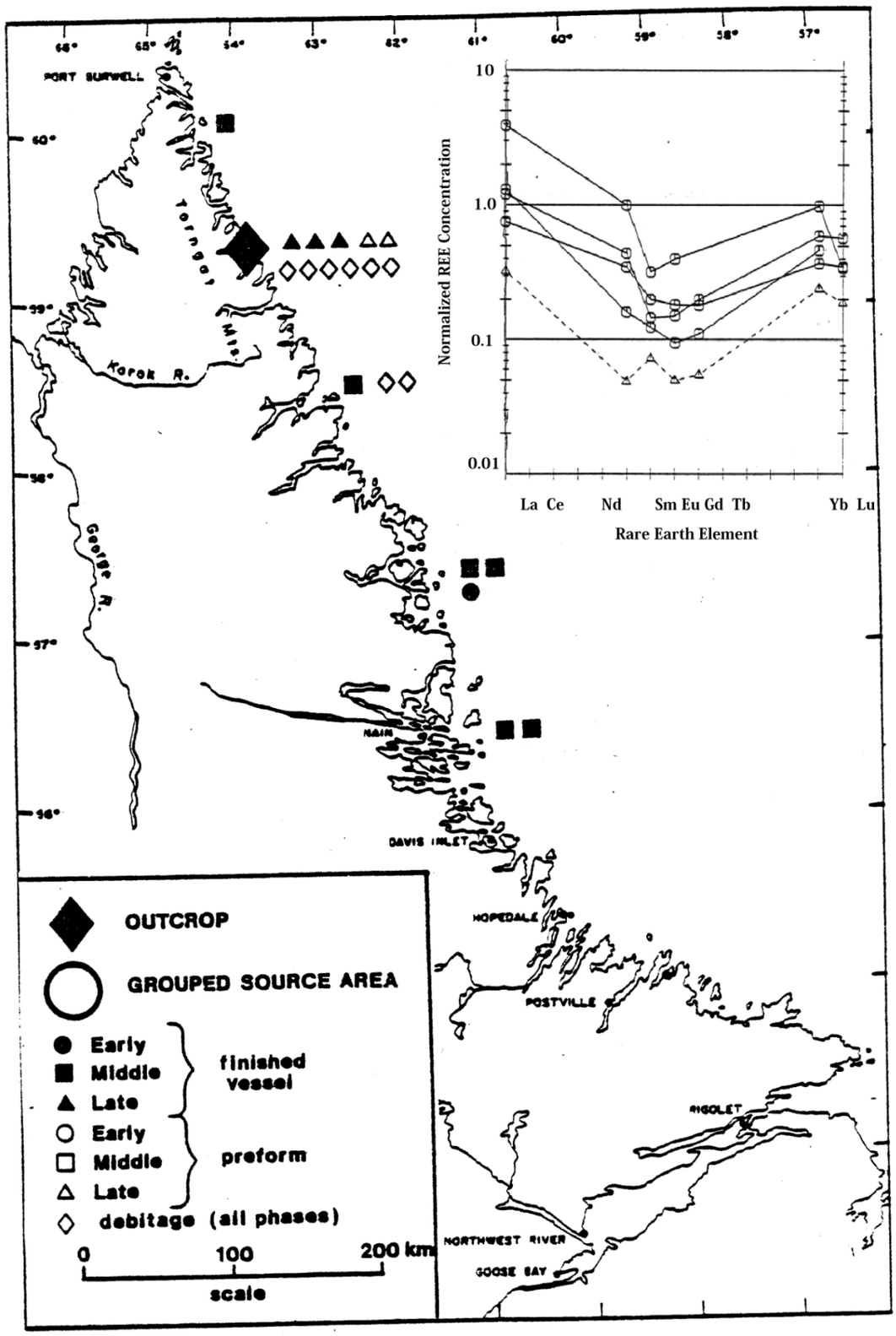


Figure 10. Peabody Point steatite movements. Source: Nagle (1984: fig. 109).


Figure 11. Ramah Bay chert quarries and Maritime Archaic point. Photo from the 1931 Alexander Forbes Expedition. S.A. Morse photo archives, Arctic Studies Center, Smithsonian Institution. Point photo: Stephen Loring.

### *Assemblage comparisons*

Tuvaaluk-TAP collaboration revealed regional differences in Dorset technology and tool typology. Tuvaaluk sites mostly produced lithic collections, as did all but a few TAP sites, and tended to have a wider range of variation in artifact classes, possibly because of different raw materials. The Labrador Dorset collection had more standardized tool templates with relatively little stylistic variation, permitting finer geographic and chronological control. Even small artifact samples could be accurately dated and assigned to phases or regions. The Tuvaaluk collections were more variable in terms of typology and raw materials. While Labrador Dorset groups from Killinek to Cape Harrison used Ramah chert and Labrador soapstone, Ungava Dorset people used lithic materials from Ungava sources, suggesting a relatively low degree of inter-communication.

One of TAP's major contributions to Eastern Arctic Dorset studies came from discovery of permafrost deposits at a Middle Dorset site on Avayalik Island. Excavations here produced, in addition to a large chipped stone inventory, large amounts of wood, bone, ivory, and rope. The environmental conditions for permafrost were unique at the northern tip of Labrador, where perennial cold, wet conditions allowed for the rapid accumulation of insulating midden that did not thaw in summer,

creating conditions for development of “cultural permafrost.” These conditions had existed for 1,500 years, but no longer exist today. Very few organic artifacts were recovered from Ungava Dorset sites because conditions were too warm along the Ungava shore (Badgley 1980: 569).

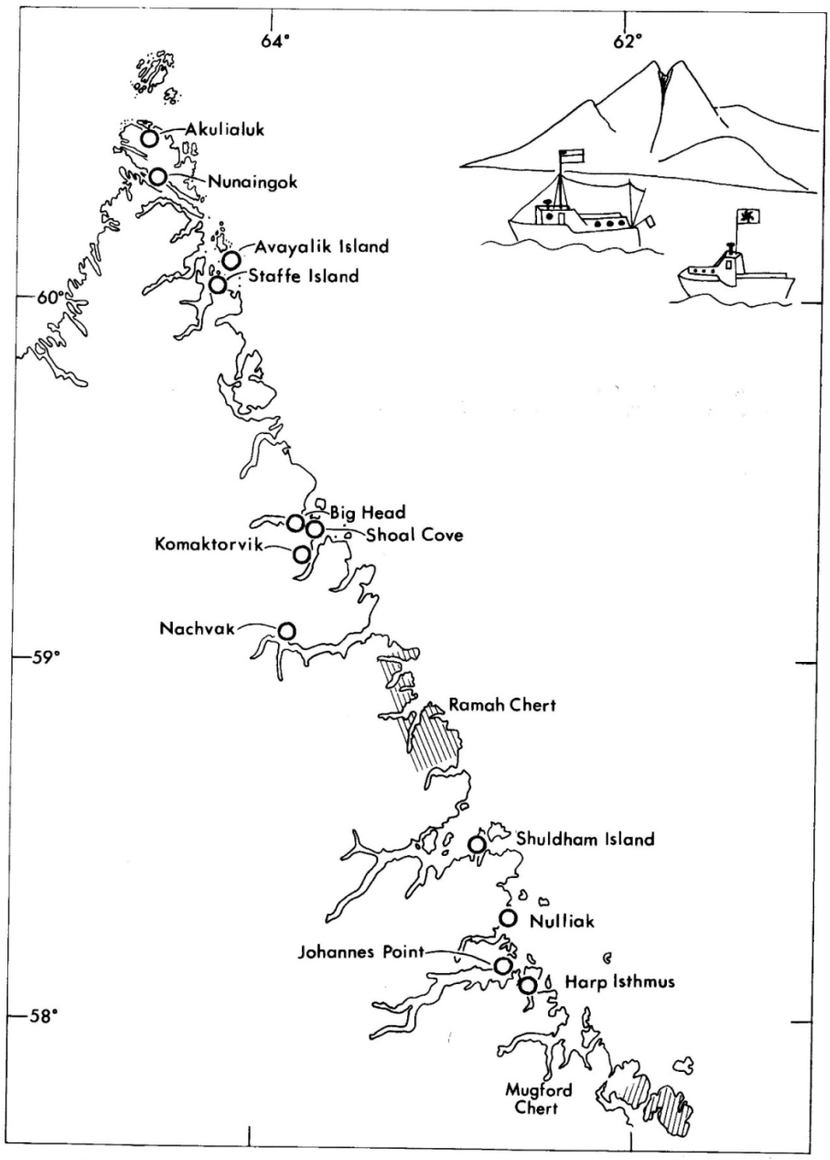


Figure 12. Lithic raw material source locations in Labrador. Source: Fitzhugh (1980b: fig. 2).

### *Ethnography, environment, and settlement patterns*

The Tuvaaluk environmental studies were keyed to the micro-space, meso-space, and macro-space concepts conforming roughly to site, local, and regional spatial frameworks. These approaches were informed initially by Inuit ethnography and toponymic studies (Vézinet 1982; Figure 5). Paleo-geographic and paleo-ecological studies of the Ungava coast were completed (Gangloff et al. 1976; Gosselin et al. 1974;

Plumet and Gangloff 1987, 1991; Richard 1981) along with zooarchaeological studies (Julien 1980; Piérard 1975, 1979). André Gosselin (1978, 1979) produced site excavation data in three-dimensional computer plots that could be used for interpreting stratigraphy and internal site chronology. This work was state-of-the-art in its day and had the potential to analyze artifact spatial distributions (Bibeau 1984; Plumet 1985a). Use of site-level data for meso-space studies resulted in maps showing site features and house pits in relation to site topography and local geomorphology. Regional applications produced site distribution maps that could be used for settlement patterns (Plumet and Gangloff 1987, 1991). On a larger scale, Claude Hillaire-Marcel's (e.g., Gangloff et al. 1976) studies of sea levels assisted the relative dating of sites and helped explain, via interpretations of sea level still-stands, why some sites of the Dorset period were superimposed. An alternative hypothesis might be that Dorset and later Thule people returned to the same site and dwelling locations in order to take advantage of existing house pits and earth that was easy to dig when making new houses.

Here again, the Tuvaaluk and Torngat projects employed different methods due to their divergent goals: site-level locality studies versus regional culture history. TAP expanded its earlier pollen-based studies from central Labrador (Short and Nichols 1977; Short 1978) into the north through new field sampling by Henry Lamb, whose climate reconstructions documented the reversal of hypsithermal conditions and the gradual cooling of subsequent climates into the present (Fitzhugh and Lamb 1984; Lamb 1980, 1984, 1985). His data showed that the northern Labrador forest limit, once established at Okak ca. 4500 BP, did not change during subsequent cooling or warming cycles, although a decline in forest productivity following 3500 BP indicated climatic cooling. Dosia Laeyendecker's studies of driftwood and archaeological charcoal (Fitzhugh 1978; Laeyendecker n.d.) proved invaluable for environmental reconstructions because they recorded the presence of trees, shrubs, or tundra in every charcoal sample we collected, producing an environmental solution for every site component with charcoal. While not revealing the ecological dynamics of a pollen core, charcoal data provided a proxy in relation to the forest edge for every cultural period from 7500 BP to the present.

### *Publications*

The Tuvaaluk's most important infrastructure contribution was the establishment of the UQAM's Paléo-Québec monograph series. Over the lifetime of the project, 11 Paléo-Québec volumes and 40 separate papers were published on Tuvaaluk data. All aspects of the project were documented in detail, beginning with formulation of methods and theory and with publication of field reports and monographs, site syntheses, and numerous technical papers by project staff and students. Summaries were published in Inuktitut to make research results accessible to northern communities. These volumes were supplemented by journal articles that discussed the most important findings, presented syntheses, and examined issues of broader concern. Unfortunately the French language Paléo-Québec readership was not as broad as it should have been. Plumet's general articles had a much broader appeal but still were

not widely read or cited, partly due to language issues in North America and because some of Plumet's most important articles were published in France.

The Torngat project lagged far behind the Tuvaaluk publication record. While it produced summaries and journal syntheses (Cox and Spiess 1980; Fitzhugh 1976, 1977a, 1977b, 1978, 1979, 1980a, 1980b, 1980c, 1981, 1984, 1985, 1987; Kaplan 1980; Jordan 1980, Lazenby 1980; Tuck and Fitzhugh 1986), Ph.D. dissertations on Labrador Neoeskimo culture (Kaplan 1983), on lithic technology (Nagle 1984), on Innu prehistory (Loring 1992), and on paleoclimatology (Lamb 1984, 1985), and an M.A. thesis on Ramah chert (Lazenby 1984), no monograph synthesizing Torngat archaeological data has appeared. Partial fulfillment came with the Ph.D. studies, but the long-range plan to incorporate Torngat data into a series of Labrador-wide volumes on Maritime Archaic, Paleoeskimo, and Recent Indian cultures has not yet been accomplished.

### *Archaeology and the Inuit*

During the 1970s and early 1980s, archaeologists were appearing regularly in Inuit communities throughout the North, and concern was being expressed about disturbance of old sites and removal of artifacts. By this time, most researchers were no longer excavating Inuit burials, and Dorset remains had been found at only a few locations, one of which was the Imaha site on Sugluk Island in Payne Bay, Ungava (Laughlin and Taylor 1960). Plumet had surveyed much of the Ungava coast before the beginning of the Tuvaaluk project, knew the communities, and had local support (Figure 13).

The Torngat project was organized out of Nain, the northernmost village in Labrador and one that had a large Inuit population, including Inuit from the former settlements at Okak and Hebron on the Torngat coast. Previous Smithsonian research in the Nain area in 1974-1976 and Steven Cox's Harvard University dissertation research in Okak Bay (Cox 1977) had been well-received, and young Inuit participated in some of these projects. Town elders—both White and Inuit—were aware of and helped facilitate the project. In 1977-1978 the Torngat project was planned and conducted in similar fashion, with formal permission from the Newfoundland, Quebec, and Northwest Territories governments and informal agreement with Nain. At the time, Nain, Okak, and Hebron Inuit were still fishing salmon and char as far north as Saglek, Ramah, and Seven Islands Bay. The situation was different when we returned to work in Hebron and Saglek in 1980. By this time, land claims were beginning to be discussed, and archaeology was being drawn into the political arena. Inuit leaders like William Anderson questioned the absence of Inuit involvement in permitting archaeological fieldwork and the removal of collections. Labrador Inuit had become aware of Duncan Strong's 1929 excavations at Inuit cemeteries and Memorial University's collection of Inuit skeletal remains and grave goods from Saglek in the early 1970s; all human remains have since been returned for reburial.

Throughout the duration of the Torngat project and its immediate aftermath, we maintained close relationships with both White and Inuit residents of Nain, and several young Inuit were included as field assistants and later worked closely with projects run by Stephen Loring, Susan Kaplan, and Bryan Hood. During these projects, we offered talks describing our work, forwarded copies of research papers to individuals and organizations, and in 1979 hosted a museum studies workshop at the Smithsonian for Labrador and other Arctic residents. Reflections on the relationship with archaeological researchers in northern Labrador were later presented by Gary Baikie at a conference documenting the history of Eastern Arctic archaeology held at Dartmouth College in 1993 (Fitzhugh et al. 2002).

Figure 13. Ittuk Nuvvukat, who was Patrick Plumet's guide during his research in the Quaqtaq region, showing Cyrille Plumet the Tuvaaluk site, 1974. Photo: Patrick Plumet.

During the 1980s-1990s the structure of archaeological work in Ungava and Labrador diverged with the establishment of Nunavik and creation of the Avataq Cultural Institute (the cultural arm of the Kativik Regional Government), and Makivik Corporation—all structures of the new Inuit government created by the James Bay and Northern Quebec Agreement. Thenceforth, these bodies granted permits for archaeological fieldwork in collaboration with the Department of Culture and Communications of Quebec. In Labrador, the informal local structure continued, with the granting of permits being handled by the Provincial Archaeology Office of the Government of Newfoundland and Labrador, with informal input from local communities, until an Inuit land claims settlement was reached in 2005. Thereafter, permits fell within the purview of the Newfoundland and Labrador Provincial Archaeology Office (for provincial lands), Parks Canada (for territories within Torngat Mountains National Park), or the Nunatsiavut Government (for lands it controlled).

A number of difficulties emerged toward the end of the Tuvaaluk project, as Inuit began to take greater interest in archaeology and in how it should be conducted, and as new government bodies and employees became involved. Some of this history was presented at the Dartmouth Elders Conference in 1993. At that conference, Patrick Plumet (2002a) presented a paper on the history of archaeology in Quebec that included autobiographical perspectives, remarks on the Tuvaaluk project, and views about the conduct of archaeology in Quebec and Canada. His thoughts evoked a strong rebuttal by Canadian "Anglo" archaeologists as well as Charles Martijn, archaeologist at the Ministère de la Culture et des Communications du Québec, who was highly critical of Plumet's characterization of Quebec history and wrote a rebuttal (answered by Plumet) in the published proceedings (Martijn 2002; Plumet 2002a, 2002b). Plumet included a short summary of the Tuvaaluk project but concentrated mostly on the broader picture of Quebec archaeology, including post-Tuvaaluk developments. By arguing that archaeology as a scientific discipline should be free of political constraints and that archaeological data should be free and open to the public, Plumet found himself embroiled in controversies that were also unfolding at institutions like the Smithsonian and the Society for American Archaeology that also tried—unsuccessfully—to defend a professional standard that had fallen out of step with political reality in Aboriginal communities and the larger society. The Elders Conference exchange aired but did not resolve issues that still influence the conduct of archaeology in Labrador and northern Quebec today—relations with communities and provincial governments; the Quebec-Ottawa nationalism debate; cultural and intellectual property; archaeological ethics; and others. Some of these issues are discussed in the introduction to the Elders Conference proceedings (Fitzhugh et al. 2002).

## Conclusion

Plumet's early research and the Tuvaaluk project took place in a region that had seen almost no archaeological research except for Jean Michéa's and Thomas Lee's surveys and excavations, and William Taylor's excavations in the region of Mansel and Sugluk Islands (Plumet 2002). Plumet pioneered a program of regional survey and

multidisciplinary study of selected sites over a period of two decades during which rising political awareness led eventually to a Nunavik settlement with the Quebec government. Although not part of the political discussions, the Tuvaaluk project, as the only major research program in Ungava, brought history and archaeology into the public debate and in this way helped create a place for archaeology as a component of the heritage issues embodied in regional and cultural organizations like Makivik Corporation and Avataq Cultural Institute. Tuvaalak thus helped lay the foundation for policies in practice today. To a lesser extent, this is also true for the Torngat project and Smithsonian research in Labrador generally. The knowledge created, people trained, and research conducted helped the Labrador Inuit government establish a well-planned, forward-looking educational and research program for the future in close consultation with the Newfoundland and Labrador government and Parks Canada, which established Torngat Mountains National Park in 2005.

History will judge to what extent the Torngat and Tuvaaluk projects met their goals, where they did not, and what legacies remain. Such projects are always subject to unforeseen events logistical, political, financial, and personal. Overall, both made important contributions to Inuit and First Nations history and heritage and multi-disciplinary archaeology, brought new understanding of these little-known regions of the Far Northeast, created large archaeological and environmental databases, trained a new generation of professionals, and laid the foundation of today's more educational, heritage-themed, and Indigenous-directed research programs. Their legacies enriched local resident communities, and their shortcomings are instructive for the future. Such large single-institution projects are probably a relic of the past. Today, with many more stakeholders and much better-informed local populations, archaeology will likely be done as collaborations between governments, multiple scholarly institutions, Aboriginal communities and organizations, and industry. Both TAP and the Tuvaaluk project served as models for a new kind of multi-disciplinary archaeology that had been missing from the earlier pioneering generation of research and led the way toward today's more social and politically relevant archaeology.

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