Archaeology in the Torngats Mountains National Park and the Ramah Bay Mission Site (231A)

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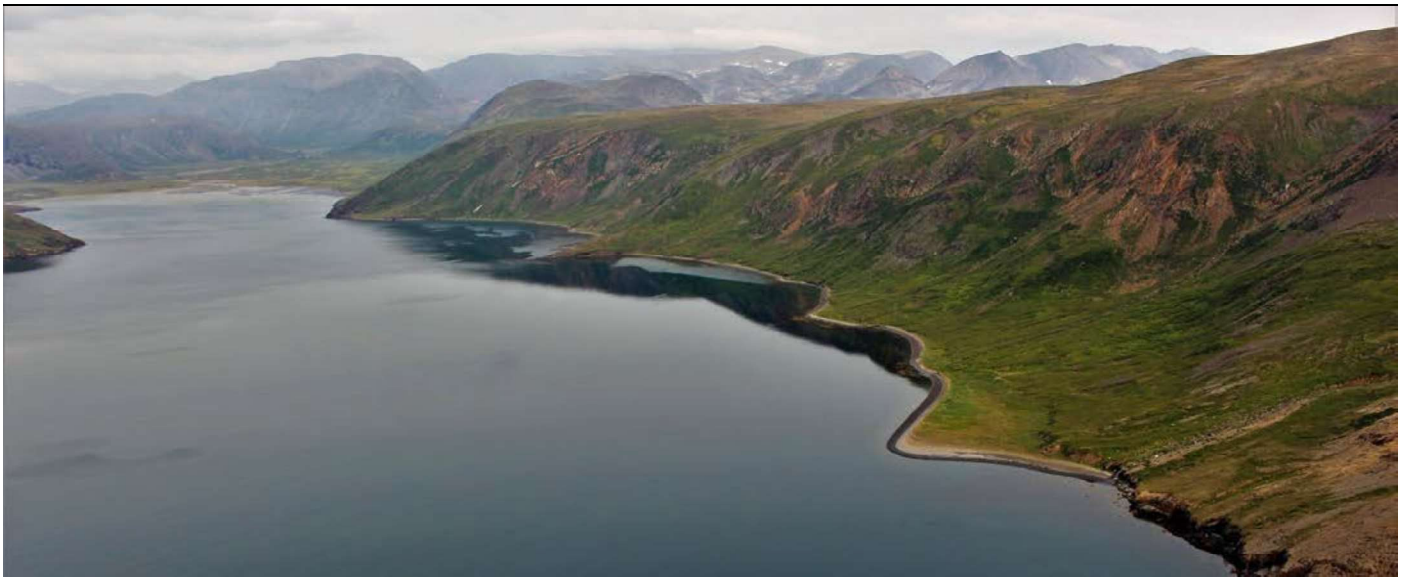


Figure 1: The Ramah Bay Mission site is located on the broad flat terrace in the bottom right of the image. Facing west toward the mouth of Ramah Bay (Weatherbee 2017).

Introduction

Located in northern Labrador, Torngat Mountains National Park became a park reserve in 2005, with the implementation of the Labrador Inuit Land Claims Agreement and officially obtained national park status with the ratification of the Nunavik Inuit Land Claims Agreement in 2008. From the Inuktitut word Torngait, meaning "place of the spirits", this area has been home to Inuit and their predecessors for thousands of years. This rich cultural heritage is reflected in oral and written histories, as well as by the 414 known archaeological sites documented throughout the park.

New visitor experience programs are currently being developed to showcase the cultural and natural richness of the park. As such, archaeological impact assessments were conducted to ensure that these resources are protected for Nunatsiavut and Nunavik beneficiaries, as well as visitors, for generations to come. The two projects assessed in August 2017 include: an archaeological survey of Ramah Moravian Mission Site (231A) and archaeological impact assessments of five satellite camp locations. Located in the mountains between Ramah Bay and Saglek Fiord along planned hiking routes, the principle goal is to develop a network of hiking routes to open up the interior of the park to visitors and researchers alike.

231A – Ramah Bay Mission (IfCt-03) Survey

Located on a broad, flat terrace on the north side of Ramah Bay (Figures 1, 2 & 3), Ramah Bay Mission Site was in operation from 1871 to 1908. Lack of archaeological evidence and available marine and terrestrial resources suggest that the area may not have been used prior to the founding of the mission (Curtis 2012:8, Kaplan 1983: 280, 651). Established to "attract the last bands of heathen Inuit out of their abodes in the Torngat Mountains" (Cabak and Loring 2000: 15), there are numerous cultural resources / features still visible at the site, these include: a number of old foundations from the Moravian and Inuit house structures, countless tent rings, a graveyard, a large boulder with Inuit names etched into it from the

Figure 2: Aerial view of Ramah Bay Mission site (231A), facing northwest.

Figure 3: Black and white photograph of mission station, steamboat and surrounding bay at Ramah, Labrador, circa 1900 (Moravian Archives 2000b). Note the heavily used path ways in the foreground and the Inuit house foundations in the center right of the images.

Figure 4: Parks Staff, Nancy Kooktook, Jobie Unatweenuk and author, Wesley Weatherbee recording feature location using GPS/ GNSS receiver and Android tablet. Facing east (Parks Canada 2017).

late 1800s to present, and numerous unidentified features and spot finds. With increasing interest in the park, the Ramah Bay Moravian Mission site is quickly becoming a popular visitor destination.

Methodology

Building off previous archaeological surveys of the area (Curtis 2012 & 2011, Fitzhugh 1980 & Kaplan 1983) an archaeological impact assessment of the Ramah Bay Mission site was conducted in late August 2017. Aerial and terrestrial surveys were undertaken at the Ramah Bay Mission (321A) to identify and assess potential impacts on cultural resources as well as helping to inform interpretation of the site. Terrestrial surveys included walking five metre transects of the survey area, noting the location, extent and features associated with new and previously recorded archaeological sites. Features were flagged during the survey, were then recorded digitally using photography, a Juniper Geode GPS/GNSS receiver wirelessly connected to an Android tablet using a mobile GIS application (MapIt Pro) (Figures 4 & 5); and the use of a UAV to produce a high-resolution digital elevation model (DEM), and orthomosaic of the site (Figure 6). This method facilitated a thorough and expedient collection, organization, and aggregation of data collected in the field by automating production of a CSV spreadsheet with many attributes, and sub-metre accuracy for each recorded point. Use of the mobile GIS application allowed for the data to be collected as point, line, or polygon each with many associated attributes (Figures 6 & 7). To collect comparable datasets, each polygon and line also had an associated point feature, which permitted the collection of a point class that held attributes for every feature or artifact flagged.

Initial Survey Results

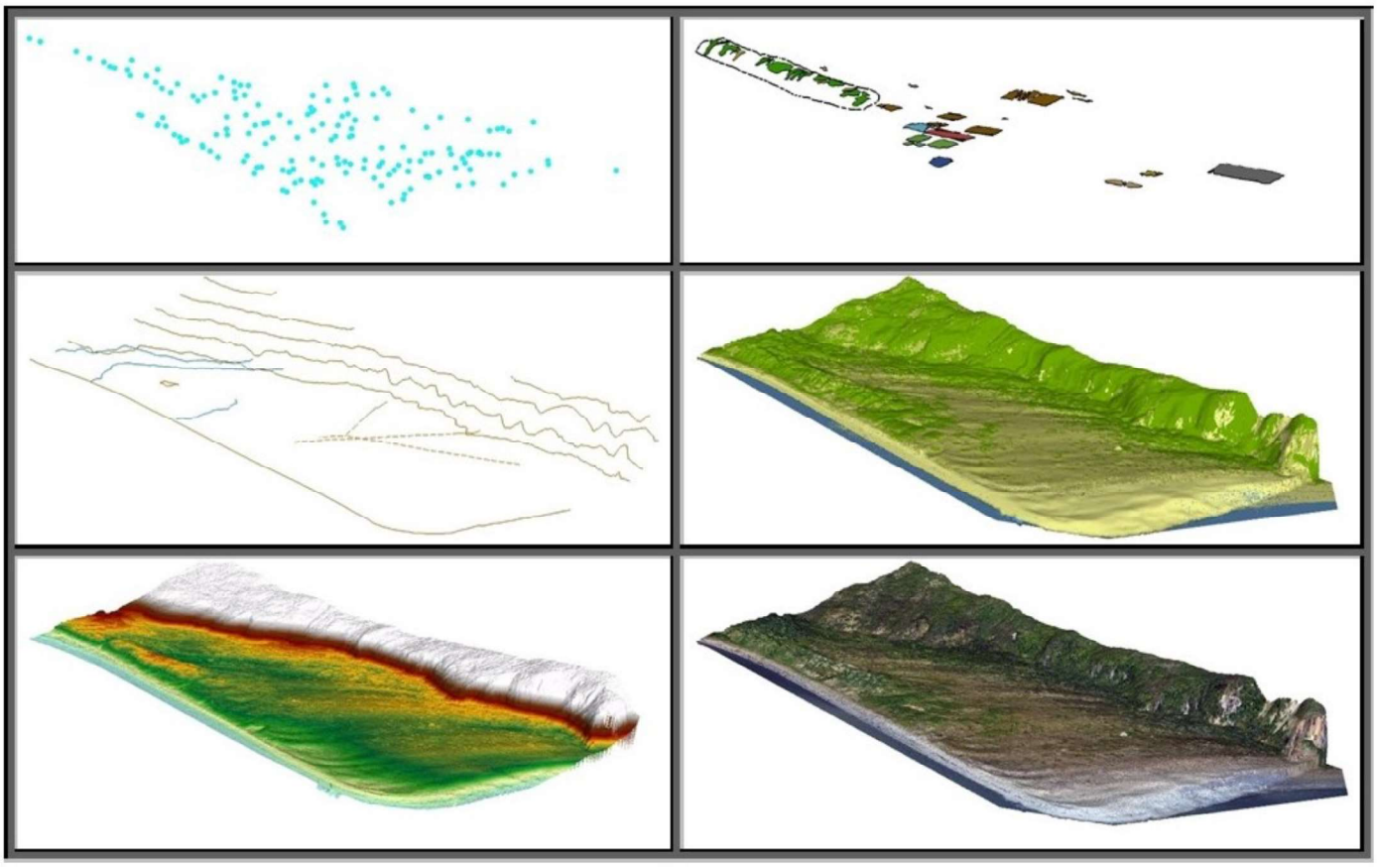
The survey began at the eastern edge of the site using five metre transect lines with a team of 3 – 4. Upon completion, a series of high-resolution static maps were produced of the area as reference for future researchers. The terrestrial surveys recorded at total of 210 features (Table 1) each with 26 recorded attributes (Figure 7).

Table 1: Table showing the count of point feature types recorded at Ramah Bay Mission site.

Feature Type	Total
Point	168
Polygon	38
Line	4
Total	**210**

Figure 5: Surveying Inuit house foundations with GPS/GNSS and MapIt GIS running on an Android tablet at Ramah Bay Mission site. The perimeter of the feature is walked and recorded in real time in the GIS application.

Figure 6: The above images depict some of the vector and raster format data that was expediently produced from the surveys performed at the Ramah Bay Mission site. From the top, left to right, the data displayed are: point features; polygon features; line features; ground surface classification; digital elevation model; and, orthomosaic. These products will supply future researchers of and visitors to this site with an essential set of data to enhance interpretation of the area.



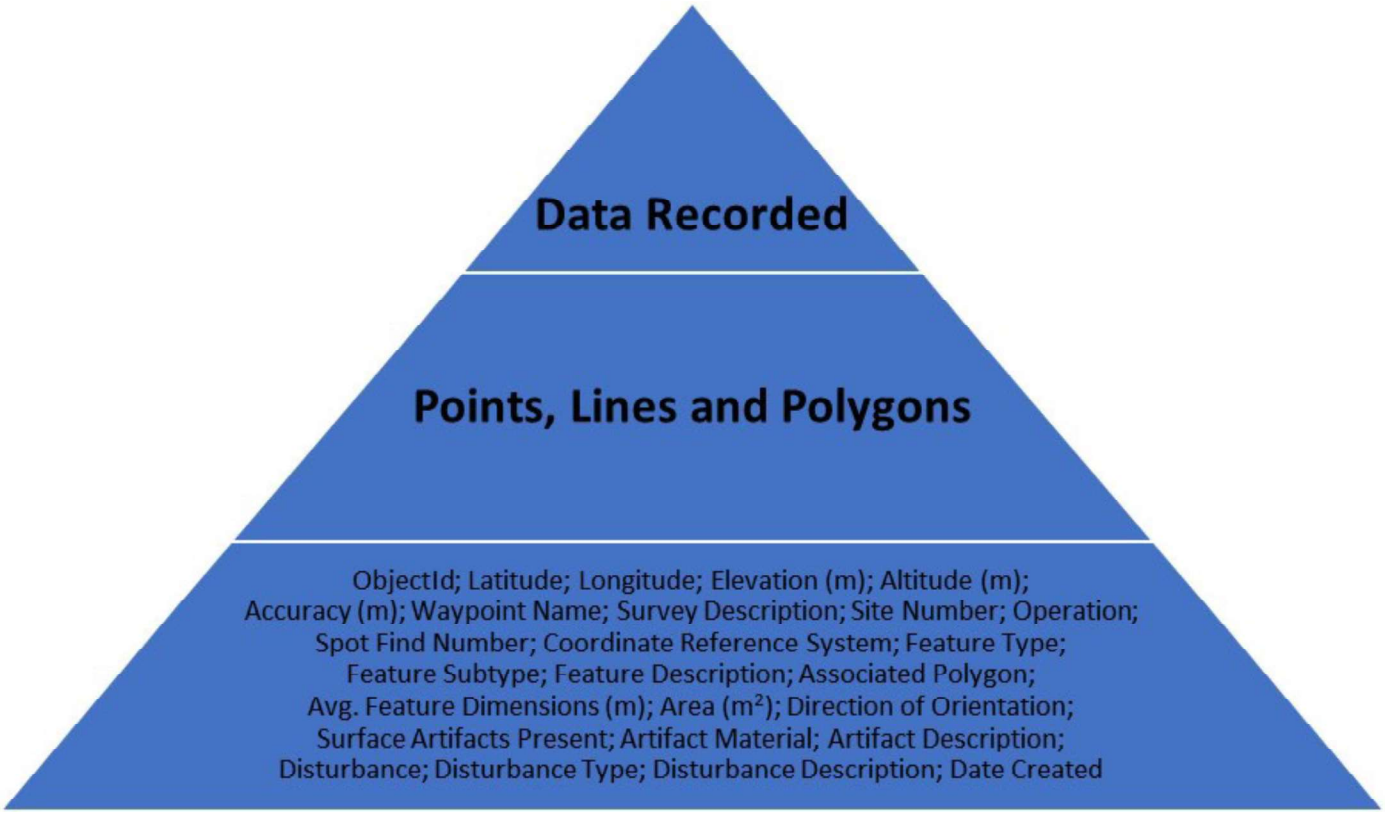


Figure 7: Pyramid hierarchical diagram showing the relationship between attributes and recorded data types.

Table 2: Totals of data types of features recorded. This total is larger than the total in Table 1, as there was one point recorded for each polygon and line feature. Limitations of the application required joining attributes from associated point and polygon/ line classes to retain consistency between data types.

Feature Type	Total
Object	55
Other	22
Scatter	23
Structure	68
Grand Total	**168**

Data Collected and Products

The survey methodology applied facilitates the creation of datasets that can be used to enhance interpretation of the Ramah Bay Mission site for researchers and visitors alike. This methodology was adopted in order to efficiently collect high resolution data of the site, both geographical and cultural as high resolution geographical data is integral to archaeological analyses for research and impact assessments. The aerial survey efficiently collected much of the physical landform and terrain data using grid-patterned geolocated photos and 11 ground control points (GCPs) located on the ground and recorded with GPS/GNSS. Each GCP was constructed of two, one metre long sections of highly visible orange ribbon that intersected each other at the centre point. These GCPs were also used as one metre scale bars to check the accuracy of the products in post-field processing using Agisoft Photoscan and ArcGIS.

Features of Nuance and Historical Photos

The Ramah Bay Mission site holds very well preserved features. Throughout the survey, historical photos were referenced to identify subtle features which may not be readily visible. Examples of these types of features were the divergent paths fanning out from the east side of the mission, the water collection area, and the fenced in gardens behind the mission house (Figures 3, 8 & 9). The paths were roughly delineated on site with the help of historical photos, then post-field correction was applied with the assistance of the DEM of the site (Figure 6). Along the path to the water collection area, the DEM displayed slight linear relief in which the soil had been built up to provide a flat surface to drag barrels of water by means of komatik to the occupants of the site (Figure 8). In the gardens, historic photos were used to gain

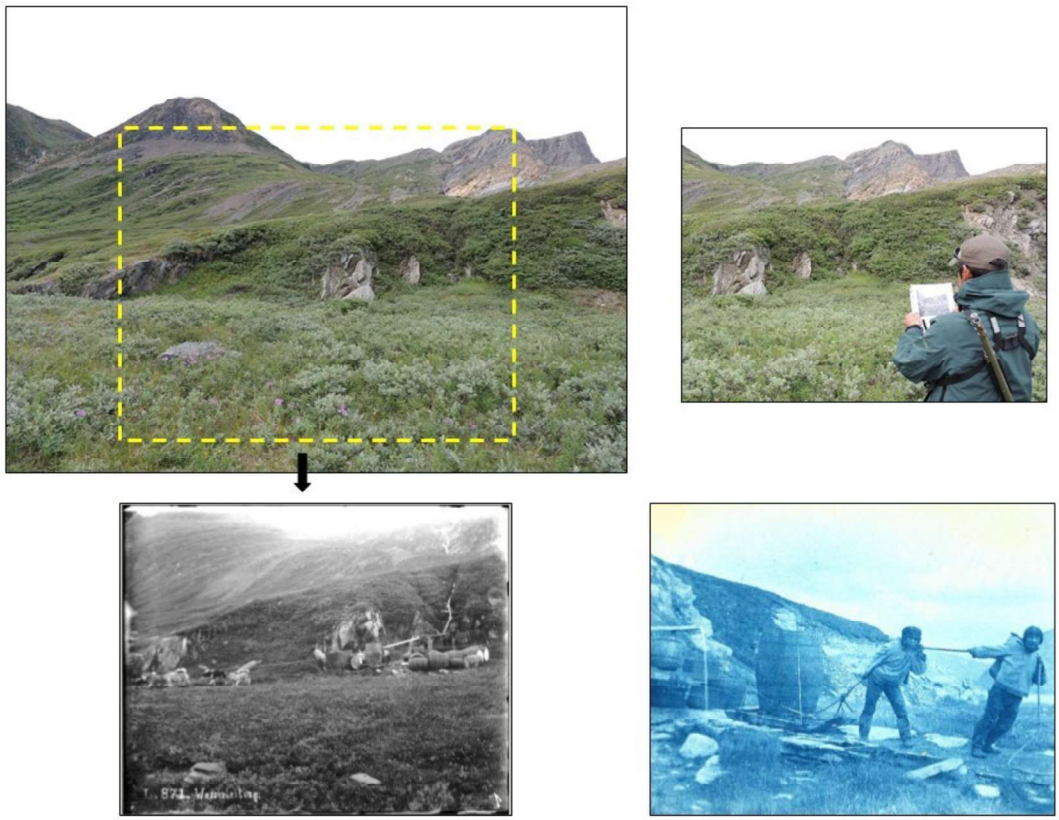


Figure 8: Relocating the water collection area. From top to bottom, left to right. 2017 Image of water collection area; Jobie Unatweenuk matching up the historical photo with features on the landscape; ca. 1900 historic photo showing intricate water storage system with pipes bring water from the stream to barrels (Moravian Archives 1900d); ca. 1900 historic photo showing two Inuit hauling a barrel on a small komatik, note the built up pathway (Moravian Archives 1900a).

Figure 9: Ramah Bay Mission house and church (Moravian Archives 1900c).

Figure 10: Aerial view of eastern extent of Ramah Bay Mission site with house and church foundations and rectangular vegetation plots in southeast corner, cemetery in top right corner and vegetation / tent rings throughout.

insight into the spatial arrangement of the features. The garden features were visible on the surface as rectangular areas of healthier vegetation than the surrounding areas, while a chicken coop or shed was placed in between two of these features (Figures 9 and 10). Historical photos were a valuable resource for the interpretation of these features.

Vegetation Rings and Tent Rings?

Patches of vegetation were noted to be in circular formations ranging in diameter from approximately 1.5 – 4 metres with some occurrences of two vegetation rings overlapping at their edges (Figures 10 & 11). These features were initially recorded as vegetation patches, noting in the features description they may be tent rings. However, upon aiding in the closing of the basecamp the same patches of vegetation were clearly visible under the footprint of our tents (Figure 12). These features have been tenatively designated as evidence of more recent camping in the area. A date for these activities have not yet been estimated though the similarities between vegetation circles at the Ramah Bay Mission and TNMP basecamp suggest a waterproof footprint may have been used to line the underside of the tent. Due to time constraints and the abundance of vegetated tent rings in the area, these features were not all recorded with points, yet a classification of the vegetation types performed on the newly created orthomosaic in ArcMap, allowed for a polygon feature to be created which outlines the area of tent ring concentrations on the site (Figure 6). The ability for these features to be identified and numbered remotely is a possibility facilitated by the data collected on site. We present this information as

Figure 11: Close up of possible tent ring with vegetation, comparable to the base of the tent shown in Figure 12 and foot print similar to tent in Figure 13.

Figure 12: Vegetation associated with tent rings at Torngat Mountains Base Camp and Research Station.

Figure 13: Black and white photograph of an Inuit summer camp at the base of a mountain near Ramah. In the center of the photograph fish are being dried on wooden racks next to animal skin tents. A group of people sit posed in front of tents (Moravian Archives n.d.).

it may be useful to help reconstruct temporal use patterns in future archaeological impact assessments.

Satellite Camp Survey

Satellite camp surveys began with an aerial survey of the proposed camp site area. Park staff members, Martin Lougheed, Andrew Andersen, Jacko Merkeratsuk and Eli Merkeratsuk were then consulted to determine the best place for the camp, namely in areas next to water with good visibility. With the camps located at regular intervals to allow hikers to travel between camps in one day, it was also imperative that the domes be located in places to limit possible damage from wind, ice, water and rock slides. With this, potential camp sites were then surveyed by walking five metre transects, to ensure that cultural resources would not be negatively impacted by visitor activity. Due to time constraints and the nature of the survey, areas of interests were recorded with photos and GPS coordinates and not with the Juniper Geode and tablet.

Of the five satellite camps surveyed, only one site had to be relocated due to the presence of cultural resources. With the proposed campsite slated to be built adjacent to a previously undocumented Ramah chert outcrop and possible working area (570A-IdCt-05), we worked closely with park staff to find a new location. The new camp was subsequently relocated next to a large lake and low-grade vein of unworked Ramah chert (Figure14). While visitors can camp in the area, they will not be permitted to disturb the cultural resources in the area. Due to the expedient nature of the survey, the new site was recorded quickly with GPS coordinates and images, so that we could return to the site, as time permitted. Unfortunately, time didn't allow for a more in-depth survey of the site. A more in-depth survey of the site and area is required before visitors will be able to camp in the area.

Acknowledgements

During the course of the 2017 fieldwork, we were accompanied by Parks Canada's Martin Lougheed, Andrew Andersen, Jacko Merkeratsuk, Jobie Unatweenuk, Nancy Kooktook, Lindsey Moorehouse; and Nunatsiavut Group of Companies Bear Monitor's, Herman Merkeratsuk, Ryan Merkeratsuk and Eli Merkeratsuk. This project was made possible by the support of park Superintendent, Gary Baikie, Visitor Experience Manager, Martin Lougheed, and Administration Assistant, Rosie Lyall. Thanks also to the staff of the Torngat Mountains Base Camp and Research Station (https://thetorngats.com/) who kept us safe and well fed. Co-author, Wesley Weatherbee participated in the fieldwork as a Parks Canada Archaeological Field Technician hired through the Federal Student Work Experience Program (FSWEP).

Aerial footage of the Ramah Moravian Mission survey was posted on the Parks Canada Archaeology Twitter Page in October 2017 (https://twitter.com/PCArchaeology/status/921938050137186304).

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Figure 14: Aerial view of satellite campsite 2 with low quality vein of Ramah chert in foreground and potential quarry site in the background.