Preliminary Report of the Activities of the RAPID: Endangered Archaeology at Iita Project, 2016

Report to Nunatta Katersugaasivia Allagaateqarfialu (The Greenland National Museum)

John Darwent (University of California, Davis)
Genevieve M. LeMoine (The Peary-MacMillan Arctic Museum at Bowdoin College)

February 2017

Introduction

The following is a preliminary report of the investigations of the RAPID: Endangered Archaeology at Iita Project (EAIP) at the site of Iita in 2016. Iita is located on an alluvial fan that juts into the north shore of Foulke Fjord in northwestern Greenland (Figure 1). Historically, the site is known as the base for a number of exploration expeditons, and served as the home for Inughuit families until the 1930s. Previous investigations at the site undertaken by the Inglefield Land Archaeology Project (ILAP) (LeMoine and Darwent 2011, 2016) focused on examining the extensive remains left behind by both the Inughuit and EuroAmerican explorers at the site to understand the interaction between these groups during the tumultuous times of early contact. To this end, the project excavated two semisubterranean winter houses at the site in 2006. During these excavations it was discovered that Iita, in addition to numerous (n=+180; see Figure 2) recognizable surface features, also possessed buried Early Thule winter houses and stratigraphic deposits related to Paleoeskimo occupations of the region (Figure 3). However, only a small section of the stratigraphic deposits were encountered during the 2006 excavations, and thus we returned to the site returned to explicitly investigate these deposits in 2012 (Darwent 2013). This work confirmed the existence of discrete buried soil associated with the Late Dorset culture underneath stratified Thule and historical layers. Discovery of such deposits in a high Arctic setting is rare and offers a unique opportunity to study the nature of various occupations of the region without the mixing that often occurs in the usual surface-based deposits in the area. The investigation also determined that significant erosion is occurring at the site, with the stratified deposits being the most threatened.

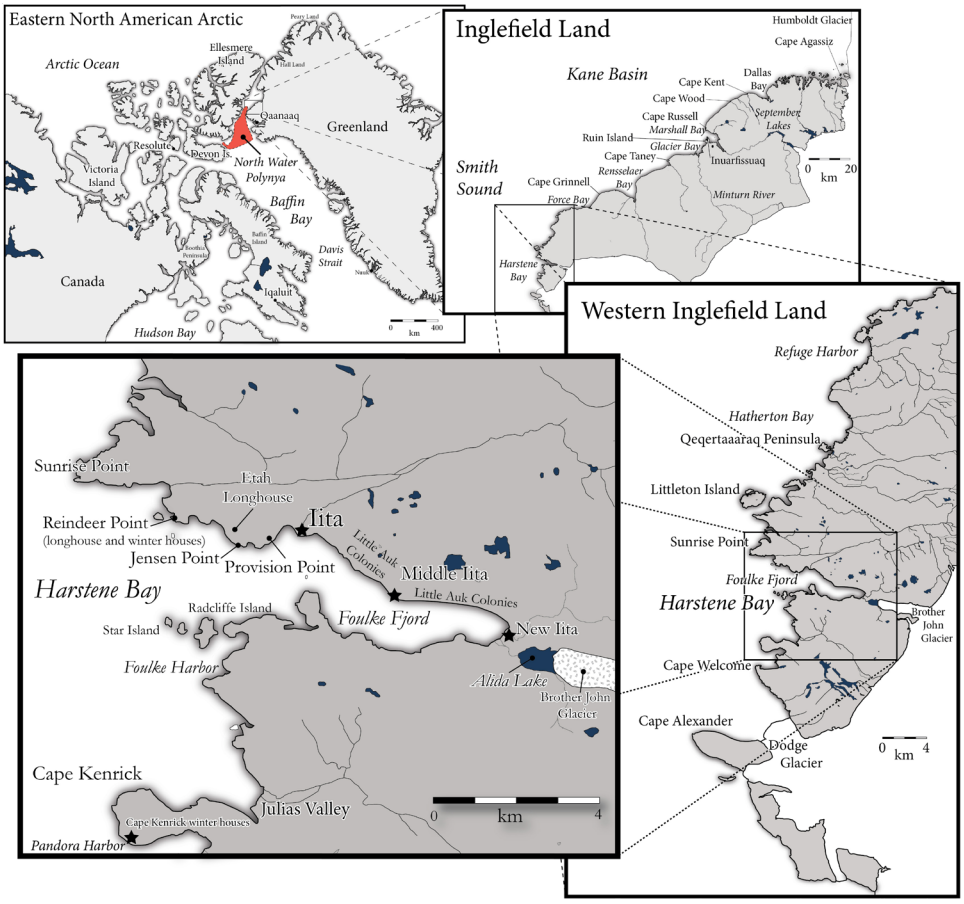

Figure 1. Location of Iita in Northwestern Greenland

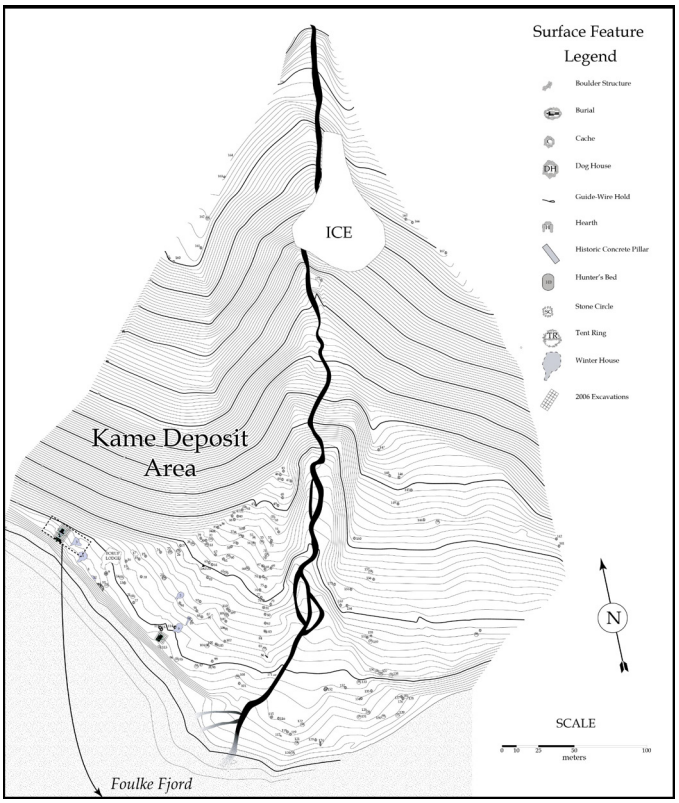

Figure 2. Site map of Iita showing the location of archaeological features.

Thus the EAIP returned to Iita with funding from NSF Polar Programs (#1623802) with two major goals in 2016:

1) assess the condition of the site and evaluate the extent of recent erosion of the site, and, equally important;

2) begin excavations on the most vulnerable areas of the Late Dorset stratified deposits so that we can mitigate their loss before their destruction.

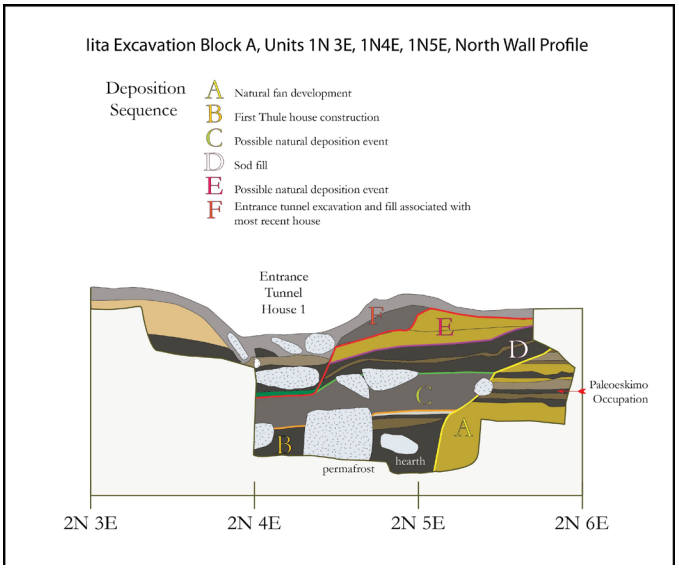

Figure 3. Stratigraphic profile of buried early Thule house and Paleoeskimo deposits discovered in 2006.

Fieldwork

EAIP undertook fieldwork at Iita between June 26 and August 3, 2016. The crew consisted of six people: two from The Peary-MacMillan Arctic Museum, Dr. Genevieve LeMoine (PI) and Lara Bluhm (undergraduate student); two from the University of California-Davis, Dr. John Darwent (PI) and Jason Miszaniec (graduate student); one from the Greenland National Museum, Hans Lange (curator); and the University of Greenland Nuka Larsen (undergraduate) (Figure 4). CH2M Hill Polar Services provided logistical support, and Air Greenland supplied helicopter charters from the Thule Air Force base to Foulke Fjord.

Figure 4. 2016 field crew: (left to right) Nuka Larsen, Hans Lange, Lara Blum, Genevieve LeMoine, Jason Miszaniec, and John Darwent

Methods

Much of the focus of the project was directed at accessing the buried Late Dorset deposits at the site; however, care was also given to the overlying deposits. Therefore, excavation proceeded in 1x1 m units with hand trowels in order to delineate natural/culture stratigraphic levels and recover artifacts in situ, while at the same time providing organic and more fragile artifacts more protection (Figure 5). Attempts were made to excavate in natural stratigraphic levels, but in some instances, this was not possible, and arbitrary levels were used. Recording of depths was accomplished through the use of datum points established on the most elevated corner of the unit.

Figure 5. Hans Lange trowelling in Unit 4N 9E.

All formed artifacts were recorded to a three-point provenience when recovered in situ. Collection of bulk artifacts, including faunal materials, wood fragments, stone-tool debitage, and certain historical items (e.g., nails, glass, metal fragments, and ceramic sherds) was by 50x50 cm quadrant by level. All excavated soils were screened through 0.125 inch (3.175 mm) mesh (Figure 6), excluding sod preserved for replanting. We chose this size of mesh to facilitate recovery of small pieces of stone-tool manufacturing debris and other small artifacts.

At the completion of excavations, the stratigraphy of representative unit walls was drawn. Subsequently, all units were refilled with the excavated soils. All units were situated on a preexisting grid established for the excavations undertaken by the ILAP project in 2006.

Figure 6. Nuka Larsen screening. Note that the screen is nested, with a 0.25 inch (6.35 mm) meshed box on top and a 0.125 inch (3.175 mm) meshed box on the bottom.

After the fieldwork, the excavated materials were transported to the University of California-Davis for cataloging, analysis, and curation. These activities are now underway. Organic artifacts recovered from permafrost contexts are being slowly dried in a refrigerator; certain select artifacts (e.g., carvings, harpoons) will be professionally conserved.

Preliminary Results

EIAP opened 12 1x1 m excavation units during the 2012 season (Figure 7). Of these, ten were excavated to sterile soils; the remaining two could not be completed due to adverse weather conditions. The units were situated in locations where the 2012 investigations indicated the presence of substantial Late Dorset deposits and a minimum of overlying deposits from house construction. In two locations (the two most easterly blocks) additional units were expanded from initial productive units.

Block A (3N 7E, 4N 7E)

Block A consists of two 1x1 m units placed next to a previous unit (3N 6E; see Darwent 2013) situated adjacent to the initial find of the stratified deposits at the site. It was excavated to depth of 80 cm BS into sterile sands and gravel in the northern but was approximately 20 cm shallower in the south.

The stratigraphy of this unit is very complex, consisting of interleaved bands of buried soil, sand, and pebbles. Many of these layers were discontinuous across the extent of the unit, tending to disappear in submeter distances. However, six larger groups of darker and lighter strata could be identified (Figure 8). The top 35 cm of the profile contained artifacts from both the historical and Thule periods, with most of the historical artifacts being confined to the top layer (analysis is still underway). However, the strata below approximately 35 cm are associated with the Late Dorset and included microblades and lithic debitage. The bottom 10 cm of the block, which is lighter-colored sandy gravel, contained no artifacts.

Block B (4N 9E, 5N 9E)

Block B consists of two 1x1 m units. The northern unit, 4N 8E, was excavated to a depth of about 75 cm BS and likely reached sterile soils. The southern unit (5N 8E)1 reached approximately 50 cm BS but

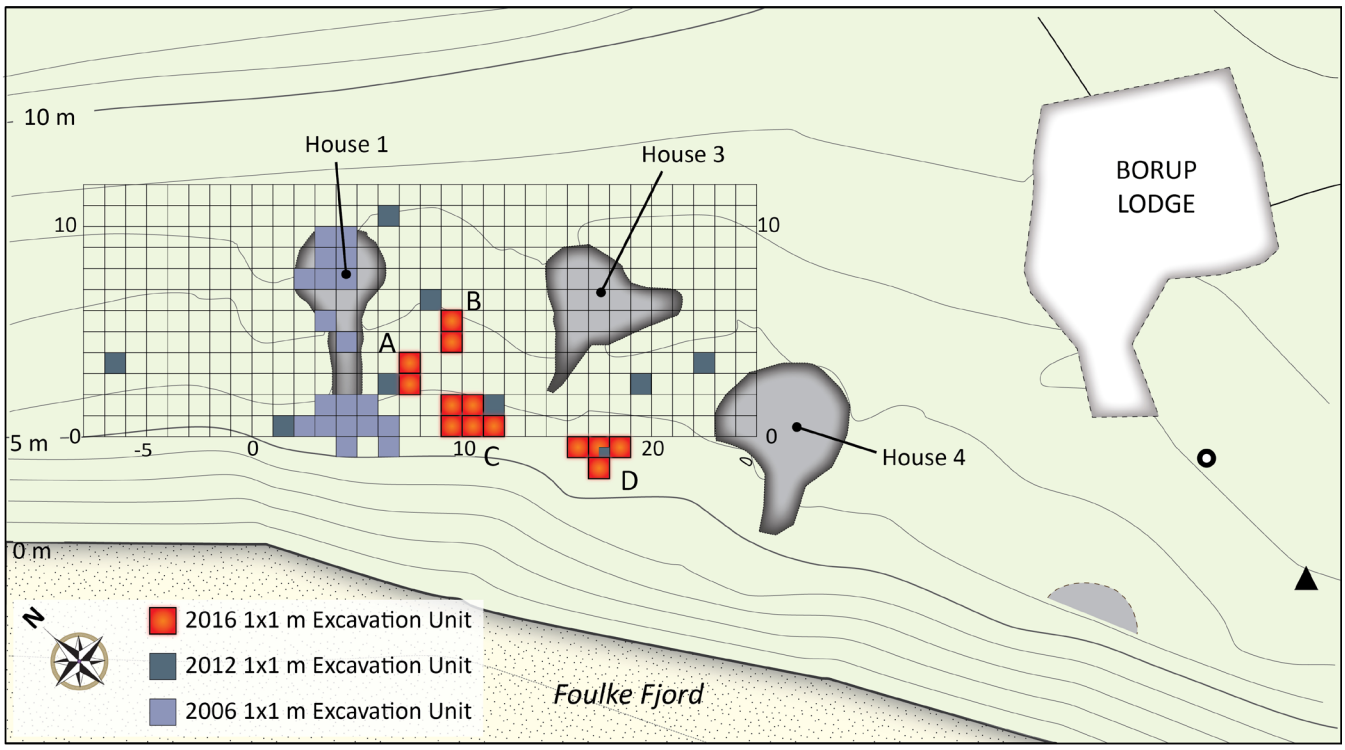

Figure 7. Areas of excavation in 2006, 2012, and 2016. The excavation blocks from 2016 are lettered.

could not be completed because of permafrost and flooding caused by inclement weather. This flooding also thwarted efforts to profile the block. However, for the most part profile of the northern end of the block mirrored the profile of the unit excavated in 2012, though the west side appears impacted by a colluvial flow of boulders from the slope behind.

Block C (0N 9E, 0N 10E, 0N 11E, 1N 10E, 1N 10E)

Block C consisted of five 1x1 m units placed adjacent to 1N 11E,2 which was excavated in 2012 and had a feature that produced two Late Dorset harpoon heads (Darwent 2013). The initial two units of the block, 0N 10E and 0N 11E both produced interesting results, and thus the block was expanded. In particular, the excavator of 0N 10E encountered an intriguing stack of large rocks in conjunction with Thule artifacts, and thus the block was expanded to the west and north (Figure 9). Based on artifacts recovered in 0N 9E, it is likely that the rock feature present in 0N 10E is a wall of an early Thule house. While cataloging of the artifacts is ongoing, the main items that support this assessment are several baleen artifacts, including the base of a Thule sewing kit, which occur in other early Thule contexts in Inglefield Land (Holtved 1944; LeMoine and Darwent 2011). Radiocarbon samples will be submitted to verify this categorization. Based on the location of this unit, there is a likelihood that the Thule remains in this unit are associated with those encountered during the excavation of the midden adjacent to House 1 in 2006.

Figure 8. East wall profile of Block A.

The findings in 0N 11E were intriguing as well. In the NE corner of the unit, at a depth of approximately 40 cm below surface, the excavator recovered four

Late Dorset carvings—three bear forms and one sculpin—in close association. We interpret this as a Late Dorset figurine cache, which have been identified in other areas of the Arctic (e.g. Little Cornwallis Island [Helmer et al. 1995a, 1995b; LeMoine et al 1995]) Based on the stratigraphic profile of Block C, it is clear that the builders of the early Thule house excavated into Late Dorset deposits when constructing the house.

Block D (-1N 15E, -1N 16E, -1N 17 E, -2N 16E)

Four 1x1 m units forming in a T-shaped pattern comprise Block D. We placed the row of -1N 15E–17E units to further investigate the findings in a 50x50 cm unit excavated in 2012 where numerous potential Late Dorset occupation layers were identified (-1N 16E was intentionally placed upon this previous unit) (Darwent 2013). Minimally three Late Dorset occupations, along with a potential mixed Thule-Late Dorset level, were identified in these units. These occupations, while mixed in some locations, appear distinct in the middle of the block, which is located in what appears to be the remnant of an abandoned creek channel (Figure 10). Thus, we opened Unit -2N 16E to further investigate.

While the expansion of Block D did produce more Late Dorset material, it also ran into another unexpected deposit—another Thule period house with no surface indications. Running approximately through the south half of Unit -2N 16E, the remains consist of a clearly cut depression lined with large cobbles with Thule-style artifacts present (Figure 10). Most likely, the remains are a section of the back portion of a Thule period house, which has now eroded into Foulke Fjord. At present, we are not sure when during the Thule period the house was occupied, but it is testament to the fact that the site is eroding away.

Figure 9. Block C at the completion of excavations. Note the pile flat rocks in the center of the block are associated with a an early Thule house that is located to the west of the feature. There were no surface indications of this house.

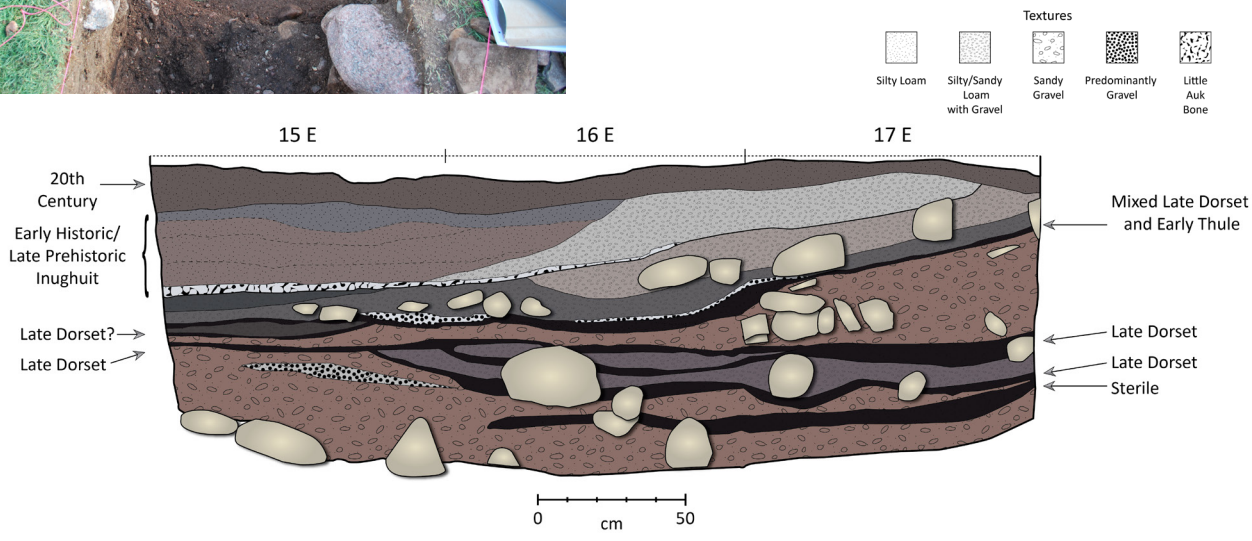

Figure 10. Photo and profile of north wall of Block D showing the various strata present and initial interpretations of cultural affiliation of the layers.

Figure 11. Eastern wall of Unit -2N 18E showing boulders associated with the remnants of a Thule winterhouse.

Figure 12. Thule-historic artifacts recovered during the excavations in 2016.

Artifacts

At present, cataloging of the artifacts and other collected materials from the 2016 excavations is being undertaken at the University of California-Davis, and thus future reports will detail the quantity and description of the artifacts. Overall, the preservation of the organic artifacts is variable. Organic materials such as ivory, bone, antler, and wood are preserved better in the upper levels of the site, but there are some well-preserved organic materials in the Late Dorset deposits.

Figures 12 and 13 display some of the more interesting artifacts recovered from the excavations in 2016. In Figure 12 are items associated with the Thule/Inughuit deposits, which includes several figurines and harpoon heads. Other notable Thule/Inughuit items recovered, but not depicted here, include snow knives, sewing-kit parts, knife handles, harpoon sockets, sled runners, dog-harness components, fishing equipment, and wound pins. Likewise, Figure 13 depicts items associated with the Late Dorset: five carvings, two bifaces. In addition, excavation

Figure 13. Late Dorset artifacts recovered from the 2016 excavations at Iita. The left top three carvings are bears.

produced other stone tools, microblades, worked ivory, and meteoric iron (Figure 14).

Along with the prehistoric materials, we recovered many historical items, which mainly consisted of nails, glass, can fragments, and ceramic fragments. Two items of note, however, were a brass harpoon head with an iron endblade still mounted and a button from a US Navy dress coat, likely lost by someone from the Crocker Land expedition.

Based on field observations, an equivalent, if not greater, level of faunal remains associated with the exploitation of the little auk colonies in Fjord for the Thule period is present, and there is evidence that the Late Dorset were exploiting the colonies as well.

Erosion

The erosion of the alluvial fan at Iita into Foulke Fjord continues. Noticeable changes since the last visit to the area in 2012 are visible along the extent of entire western side of the site (Figure 15). In particular, at least 2 to 3 m of the fan has disappeared in front of excavations of House 2. The tunnel of this house is now falling over the bank. While the erosion is not as significant in the region of the stratified deposits, new blocks of sod and underlying soils have cleaved off and are now falling over the embankment. It is hoped that minimally the excavations undertaken during the 2016 adequately sampled the deposits that will be lost.

Figure 14. Knife made of meteoric iron recovered from Late Dorset contexts.

Discussion

We believe that the excavations undertaken at Iita in 2016 were successful in characterizing the stratified deposits at Iita. It is clear that this area of the site is rich with artifacts and faunal remains from the historical and Thule periods, and it contains extensive Late Dorset deposits. Unfortunately, accessing the latter deposits takes a commitment to properly excavating the overlying strata. One aspect of the 2016 excavations, which was initially discovered in 2006, is that the site has a lot to offer in terms of studying early Thule occupation of the region.

At present, we are in the early stages of analysis, and thus considerably more data will be generated from the excavation results. Within the next six months, we should be receiving radiocarbon dates and completing the process of cataloging. We will keep the Museum apprised with updates of the progress of this analysis.

Figure 10. Composite photo of the erosion face on the alluval fan at Iita. The largest amount of erosion noted between 2012 and 2016 starts approximately two thirds of the way over from the left side of the photo (just after the tent).

References

Darwent, John
2013 Investigtion of stratified archaeological deposits at Iita, Foulke Fjord, northwestern Greenland, 2012. On file with Nunatta katersugaasivia Allagaateqarfialu/ Greenland National Museum and Archives.

Helmer, James W. , Genevieve M. LeMoine, and Donald T. Hanna
1995a 'Report on Excavations at QjJx-10 (Tasiarulik), Little Cornwallis Island, Northwest Territories, 1993', (Yellowknife: Report on file with the Prince of Wales Northern Heritage Centre).

1995b 'Report on the 1994 Excavations at Arvik (QjJx-1), Little Cornwallis Island, Northwest Territories', (Yellowknife: Report on file with The Prince of Wales Northern Heritage Centre).

Holtved, Eric
1944 Archaeological Investigations in the Thule District, I-II. Meddelelser om Grønland 141(1–2).

LeMoine, Genevieve M. and Christyann M. Darwent
2010 The Inglefield Land Archaeology Project: Introduction and Overview. Danish Journal of Geography 110(2):279-296.

2016 Development of Polar Inughuit Culture in the Smith Sound region. In The Oxford Handbook of Arctic Archaeology, edited by T. Max Friesen and Owen K. Mason. Oxford University Press, Oxford.