ARCTIC
VOL. 76, NO. 4 (DECEMBER 2023) P. 414–425
https://doi.org/10.14430/arctic78992

Integrating Oral History and Archaeology of the 1845 Franklin Expedition: The Case From Kungearkbeearu

Douglas R. Stenton[1, 2] and Robert W. Park[1]

(Received 8 May 2023; accepted in revised form 1 August 2023)

ABSTRACT. Attempts to accurately reconstruct events that occurred during the final phases of the 1845 Franklin Northwest Passage expedition face a key challenge: how to address inconsistencies and, in some cases, contradictions between historical descriptions of sites and the archaeological evidence they contain. This paper examines the case of site NcLa-1 at Kungearkbeearu, on the Simpson Strait coast of King William Island, for which the Inuit oral history seems incompatible with archaeological interpretations. New archaeological data from the site provide an enhanced framework within which to evaluate both the oral history and archaeology of NcLa-1.

Keywords: 1845 Franklin expedition; King William Island; Simpson Strait; oral history; archaeology; burial; artifacts

RÉSUMÉ. Les tentatives de reconstruction précise des événements qui se sont produits pendant les dernières étapes de l'expédition de Franklin dans le passage du Nord-Ouest en 1845 font face à un important défi, c'est-à-dire comment résoudre les incohérences et, dans certains cas, les contradictions entre les descriptions historiques des sites et les preuves archéologiques qu'ils renferment. Cet article examine le cas du site NcLa-1 à Kungearkbeearu, sur la côte de l'île King William dans le détroit de Simpson, pour lequel l'histoire orale inuite semble incompatible avec les interprétations archéologiques. De nouvelles données archéologiques provenant du site ont donné lieu à un cadre de référence amélioré pour évaluer tant l'histoire orale que l'archéologie de NcLa-1.

Mots-clés : expédition de Franklin en 1845; île King William; détroit de Simpson; histoire orale; archéologie; sépulture; artefacts

Traduit pour la revue *Arctic* par Nicole Giguère.

INTRODUCTION

Interpretations of the archaeological record left behind by the 1845 Franklin expedition have, for more than a century and a half, provided much of what we know about its fate, supplemented by Inuit testimony and by very few written documents. Until the 1980s, however, those archaeological interpretations were made by non-archaeologists and based on incomplete observations of the sites, or sometimes on second-hand accounts of the archaeological finds. The most intensive investigations of the archaeological record, including systematic excavations and the application of new techniques such as DNA analysis, mostly date to just the past decade. These new investigations have culminated in a wealth of new data from sites on land that may shed light on long-standing questions about events that contributed to the expedition's disastrous outcome.

Several of the most revealing sites relate to the failed attempt, in the spring of 1848, by the 105 surviving men to reach the Back River and follow its course to an inland trading post to obtain aid. An area of particular interest to that pivotal event is Simpson Strait, the body of water separating King William Island and Adelaide Peninsula (Fig. 1). This area was the setting for several of the final scenes of the 1845 Northwest Passage expedition. Evidence of the expedition's presence in the area has been found along a 140 km stretch of the south shore of King William Island between Terror Bay and Booth Point, and along a 20 km strip on the northern shore of Adelaide Peninsula between Thunder Cove and Richardson Point. Except for a brief encounter between a small group of Inuit and Franklin expedition members at Washington Bay (Hall, 1869), all the discoveries along Simpson Strait were places where fatalities of expedition personnel occurred. Investigations have confirmed that at least 25 of the 105 men still alive in April 1848 died along the west coast of King William Island, to which can be added Inuit reports of one body on the wreck of HMS *Erebus* and tracks seen of four others presumed to have died on the mainland nearby. The number of deaths that occurred along the shores of Simpson Strait is unknown and difficult to estimate, but the available evidence suggests that a majority of the remaining men died in this area, and that few survived to reach Chantrey Inlet or the mouth of the Back River (Stenton, 2018).

Few of the Franklin sites reported in the nineteenth and early twentieth centuries along Simpson Strait have

[1] Department of Anthropology, University of Waterloo, 200 University Avenue West, Waterloo, N2L 3G1 Ontario, Canada
[2] Corresponding author: dstenton@uwaterloo.ca

been examined by archaeologists because, in most cases, their precise locations are unknown. As a result, current understanding of them remains largely and in some cases entirely based on narratives of historical searches, which are inextricably entwined with Inuit oral history. Many of the major discoveries were the direct result of both the sharing of information preserved in Inuit oral history and the active participation of Inuit in Euro-American search expeditions (McClintock, 1859; Hall, 1869; Schwatka, 1965).

However, one of the Simpson Strait sites that archaeologists have been able to investigate is located at Kungearkbeearu (Kun-ne-ark-be-ar-u). Inuit discovered the site in 1849, as indicated by their statements that it was discovered the year after the encounter with a group of Franklin's men at Washington Bay, which is generally accepted as having occurred in the summer of 1848 (Hall, 1869: Journal 31, Journal 38). As described to Hall, at Kungearkbeearu, Inuit found an undisturbed grave of a white man, which they opened and investigated. The site was first studied archaeologically approximately 130 years later, in 1981, when the partial skeleton of a member of the Franklin expedition and four artifacts were found in or near a feature identified as a tent ring or shelter (Beattie, 1982, 1983). Nothing indicated a deliberate burial, however, and the 1869 description of a grave was attributed to a possible error in translation. Kungearkbeearu was interpreted instead as the site of a temporary camp where one member of a group of men enroute to the Back River perished. The specific circumstances of the man's death were unknown, but the nature, distribution, and condition of the skeletal assemblage suggested the possibility that his body had been cannibalized (Beattie and Savelle, 1983).

Inuit oral history about the 1845 Franklin expedition is an indispensable resource for archaeologists, but for a number of good reasons, archaeological evidence does not necessarily closely coincide with oral historical descriptions of sites. Nevertheless, in the case of NcLa-1, pronounced differences between the oral historical and archaeological descriptions and interpretations raise interesting questions about their roles in the reconstruction and understanding of the archaeology of the Franklin expedition.

In this paper, we present the results of new investigations at NcLa-1 framed within the context of the seemingly incompatible oral historical description and archaeological interpretation. We summarize the 1869 and 1981 accounts and use the results of recent investigations to explore the basis for the contradictory explanations. The study highlights the complexities associated with the integration of oral historical and archaeological data in the interpretation of the archaeological record of the 1845 Franklin expedition.

ORAL HISTORY OF KUNGEARKBEEARU

A Franklin expedition presence at Kungearkbeearu was first discovered by Inuit. In May 1869, Charles Francis Hall, who devoted the years 1864–69 to searching for evidence of the 1845 Franklin expedition, was taken by Inuit to two locations on the south coast of King William Land (KWL; King William Island) where 20 years earlier they had found graves of members of the Franklin expedition. One of the locations was Kungearkbeearu, a narrow, low spit of land 2 km west of Booth Point and 3 km due north of Todd Island (Fig. 1).

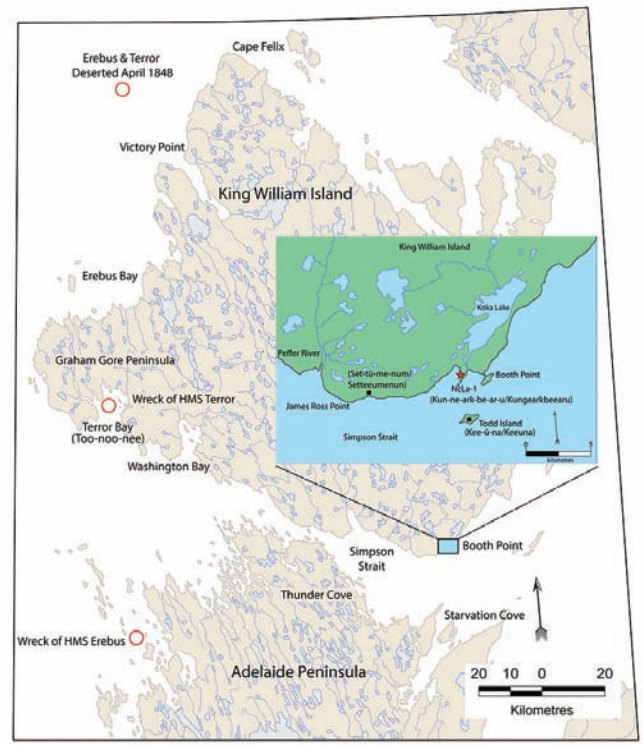

FIG. 1. Map of King William Island with inset showing the locations of Kungearkbeearu, NcLa-1, and other locations discussed.

Hall learned about Kungearkbeearu from several conversations held over a period of two weeks in May 1869. During those conversations, Inuit also referenced other places in the region for which various spellings are used, including Keeuna (Kee-ŭ-na, Todd Island), Setteeumenun (Set-tū-me-num, east of the Peffer River), and Toonoonee (Too-noo-nee, Terror Bay), and understanding precisely what was found at Kungearkbeearu requires reviewing some of what was said about all the sites.

On 11 May 1869, Inookpoozhejook relayed to Hall the first detailed account concerning Kungearkbeearu, in what would be a prelude to Hall's visit to the site on 13 May. Inookpoozhejook is a well-known figure in the oral history of the Franklin expedition. He was not present when the grave was found but his sources were—his mother-in-law, Adlark, and his brother-in-law Teekeeta (Woodman, 1991). Hall recorded the conversation as follows:

> Name of the place where the one white man is buried: Kung-e-ark-bee-ar-u. Either Tet-kee-ta or his father 1st found this grave. The grave & remains same perfect methodical state when found as the 2 at mouth of Peffer

> River. This grave on KWL about due N of Kee-u-na. The body dug up and left unburied by the Innuits. This white man very large & tall & by the state of gums of lower teeth in terrible sick (bad) state as In-nook-poozhe-jook described. He said that one man, a large tall man, was seen by Ow-wer & other Innuits when they met Ag-loo-ka and this man presented a terrible sight about his lower gums & from the observation made at grave of the one white man, the Innuits concluded he must be the same man.
>
> Hall, 1869: Journal 31

Hall attempted to locate the grave at Kungearkbeearu two days later but was unsuccessful because of deep snow cover, coupled with the fact that the Inuit who accompanied him, including Inookpoozhejook, had never previously been there. The grave's location was approximated using information provided by other Inuit prior to Hall's site visit, and he erected a commemorative stone monument at that spot (Hall, 1869: Journal 33). On the map of Hall's travel to King William Island, the monument is shown as having been constructed near the southern tip of Kungearkbeearu (Nourse, 1879).

On May 17, Hall spoke with Adlark about her recollections of the Franklin camp that Inuit had discovered in 1849 at Too-noo-nee (Terror Bay). During the conversation, she also shared details about her experience at Kungearkbeearu:

> The old lady says no spyglass was found in the tent but she found one on Kee-u-na (Todd's Island). A correction by Jack on conversing more with the old lady—it was not on Kee-u-na but near the island the place called Kun-ne-ark-be-ar-u a long low point that she says is nearly N. of Kee-u-na. This the very point where In-nook-poo-zhe-jook took us to & where we sought the grave of the one man who died there. Found the telescope near where we erected the monument—a bag with two tin cups same kind as one she has with handle to it wh[ich] Pa-pa has given to her & 3 small cans & blanket & a jacket she found there too. Saw close by the grave—that is stones placed very regularly in order the length of a long man & width of a large man.
>
> Hall, 1869: Journal 37

Adlark's initial confusion about where she had found the telescope echoes that given to Hall on May 5 by her son Teekeeta. When Hall asked him if any telescopes had been found at the Franklin site at Too-noo-nee, Teekeeta replied that none had been found there, but that:

> His (Tee-ka-ta) mother once found a spy glass & 2 tea spoons wrapped up in a blanket & all under a large stone. Found those things in the winter. No dead body found at this spot but 5 whites had been buried on same small island where these things were found. He says the island is the one I am going to soon Kee-u-na [one of the Todd Islets].
>
> Hall, 1869: Journal 24

On May 18, Hall obtained additional details about Kungearkbeearu from Teekeeta who, with another Inuk named Pooyetta, discovered it:

> Tŭt-ke-ta says he was with Poo-yet-ta when they together found the graves of the two men at Set-tū-me-num [the very place I visited May 12th] & the one grave at Kun-ne-ar-be-ar-ū. He says the hands of those buried at these 2 places were crossed or folded over the breast, the bodies lying face upward. The stones forming the graves were all very methodically placed. He was not with Poo-yet-ta when he found the 5 dead white on Kee-ŭ-na.
>
> Tŭt-ke-ta describes where on the spit at Kun-ne-ar-be-ar-ū he & Poo-yet-ta found the grave of the one white man. Says it was a little farther to the northward than where we erected the monument. Does not think the snow lies over the grave at the present time for it was on the higher part of the point. The clothes all on the dead at both places. Found these graves soon after he (Tŭt-ke-ta) his brother and another man had found the big tent near Too-noo-nee, that is the next summer after seeing Ag-loo-ka & men. The bodies not much decayed.
>
> Hall, 1869: Journal 38

Despite the misstatements about the site at which the telescope had been found, the 1869 descriptions of Kungearkbeearu are consistent in terms of their key details, including its geographic location, the presence and condition of a specific feature type, the condition of the body, and anecdotal observations concerning the physical stature and health of the man buried there. The testimony contains limited information about artifacts, but Teekeeta's statement reveals that the site was located north of where Hall had erected the commemorative cairn. According to Inookpoozhejook, the search of the grave at Kungearkbeearu involved the exhumation of the body, which was not reinterred, although neither Adlark nor Teekeeta commented on this, despite being Inookpoozhejook's sources of information about the site and having participated in its discovery. None of the informants indicated whether Kungearkbeearu had been visited more than once or whether any other structures at the site indicated activities other than an interment. Inuit descriptions of other Franklin expedition sites (e.g., Erebus Bay, Terror Bay, Setteeumenun) often included details about the number or types of features observed. The Kungearkbeearu site area was undoubtedly searched; the absence of references to features other than the grave, if any were present, is noteworthy. Nevertheless, the consistency of the Inuit testimony, much of which was obtained directly from eyewitnesses, suggests no reason to doubt the oral historical description of the site as consisting, at a minimum, of an undisturbed grave of a member of the Franklin expedition that was opened and examined by Inuit.

ARCHAEOLOGICAL INVESTIGATIONS

1981 Investigations

No record has been found of Kungearkbeearu having been revisited by later nineteenth- or twentieth-century search expeditions, despite a number of them having been in the general area (e.g., Burwash, 1930, 1931; Gibson, 1932, 1937; Learmonth, 1948; Larsen, 1949; Schwatka, 1965). It was first documented archaeologically in 1981 as site NcLa-1 during an archaeological survey conducted by Owen Beattie and James Savelle (Beattie, 1982, 1983; Beattie and Savelle, 1983). Several hundred metres north of the southern tip of the spit, they found four artifacts and thirty-one fragmented human bones. These were scattered over an area of approximately 145 m^2 surrounding what was inferred to be a poorly defined and atypical (i.e., of those constructed by Inuit) tent ring, possibly the remains of a makeshift tent or similar structure (Beattie and Savelle, 1983). It measured approximately 5 m x 3 m and appeared to be oriented north-south, with the entrance on the north side.

The four artifacts recovered were surface finds: a brass screw, a mother-of-pearl button, and two pieces from a clay pipe stem. A description of the brass screw was not given, but the button was found within the tent ring and the pipe stem 6 m north of the feature. Their general attributes were consistent with the period of the Franklin expedition. None of the human bones were complete, and nearly half of the assemblage consisted of cranial fragments. No axial skeletal elements were found, and all of the long bones had been damaged extensively by animals, with the proximal and distal ends completely chewed off (Beattie and Savelle, 1983). The lack of duplication of skeletal elements indicated a single individual was represented, and the morphology of the cranial fragments was consistent with an adult male of European ancestry between 20 and 30 years of age at the time of his death (Beattie, 1983; Beattie and Savelle, 1983). Subperiosteal lesions characteristic of scurvy were present on the femur and tibia shafts. The cranial fragments exhibited attributes consistent with the cranium having been forcibly broken, and three transverse marks on the posterior surface of the femur shaft were provisionally interpreted and have since been generally accepted as cut marks and evidence of probable cannibalistic activity at the site (Beattie, 1983; Beattie and Savelle, 1983; Keenleyside et al., 1997; Mays and Beattie, 2016).

The oral historical account of Kungearkbeearu provided an interpretive context for the 1981 archaeological findings at NcLa-1, which corroborated the nineteenth-century Inuit account of the corpse of a member of the Franklin expedition at the location. The button and pipe stem, and even the screw, could have been part of an individual's clothing or the contents of pockets, and so might have originated from a burial, but no evidence was found to indicate that the man had ever been buried. Beattie and Savelle cited the narrative of Hall's 1864–69 expedition posthumously published in 1879 from his journals (Nourse, 1879) and attributed the apparent disagreement between the archaeological findings and the 1869 Inuit testimony concerning the presence of a grave at Kungearkbeearu to a possible translation error (Beattie and Savelle, 1983). This made it possible for them to reconceive NcLa-1 as a temporary camp used by a small group of Franklin expedition survivors who were en route to the Back River. Their suggested explanations for the partial skeleton included: the individual dying at the camp and left unburied; being left behind by his companions because of infirmity and dying after that; or his death at the site or possibly at another location, and under desperate circumstances, his body serving as a portable source of food for starving men (Beattie and Savelle, 1983; Beattie and Geiger, 1987).

2016 Investigations

No further archaeological research was conducted at NcLa-1 for the next 35 years, when it was re-examined in 2016 as part of multi-year archaeological investigations of the Franklin expedition, which included studying previously documented sites to assess their condition and to obtain new data for interpretative purposes.

Site Description

Kungearkbeearu (Fig. 2) is generally low and flat and consists of coarse, gravelly sand and discontinuous vegetation. Rocks and boulders are scattered along the full length of the point, with concentrations along its slightly raised longitudinal axis. A tent ring and a dismantled stone cache containing seal bones and pieces of a weathered plywood box are situated near the southern tip of the point, and small amounts of other contemporary debris (e.g., plastic, metal) are present throughout the general area. A modern cabin sits northeast of the site, a short distance from the mouth of the river that drains the southern end of Koka Lake. NcLa-1 is situated approximately 750 m north of the southernmost tip of Kungearkbeearu, near the midpoint of the spit, where it widens to about 140 m. Investigations were conducted at NcLa-1 in 2016, with a brief revisit in 2018. The stone feature was mapped, and additional artifacts were recovered.

The descriptions and interpretations of the stone feature and the human remains are central to both the Inuit oral historical account of Kungearkbeearu and the 1981 archaeological study.

Stone Feature

Inuit were familiar with stone graves, which formed part of their funerary tradition, and nothing about the description of the feature at Kungearkbeearu, as conveyed to Hall, suggests ambiguity about what Inuit had seen at the site. Thus the absence, at NcLa-1 in 1981, of a feature recognizable as a disturbed grave cannot easily be

FIG. 2. View of Kungearkbeearu looking south. NcLa-1 is located approximately in the middle of the photograph. Keeuna (Todd Island) is the thin, dark area seen on the horizon on the left side of the photo.

attributed to misinterpretation arising from a translation error. This assessment is supported by the fact that in 1981, investigators relied on Nourse's generic synopsis of Hall's journal entries, which omitted crucial details about the grave and the body it contained:

> After traveling about a half hour, the party halted on a long low spit, called by the natives Kung-e-ark-le-ar-u, on which the men last named "knew that a white man had been buried." This, however, was chiefly from the accounts which they had had from their people; only one of these had ever seen the grave. The spot was pointed out, but the snow covered all from view. A monument was erected, and its bearings from Kee-u-na carefully noted.
>
> Nourse, 1879:401

The 1981 investigation found no evidence to indicate that the individual had ever been buried, but the nature of the missing evidence was not specified. The inference might have been based principally on the discovery of the cut marks on the femur, which would not suggest a burial. Presumably, it was also based on a lack of correspondence between the arrangement of the rocks near the skeletal remains and a feature structurally consistent with, or plausibly identifiable as a disturbed grave. In 2016 the feature identified as a tent ring or shelter was mapped using LiDAR, which produced detailed imagery that allowed its possible functional classification to be evaluated. The feature is bisected by a shallow frost crack and is located within an area containing numerous rocks and boulders, of which few, if any, appear to have any obvious purposeful configuration (Fig. 3). Accordingly, we question the interpretation of the rocks as a Franklin expedition tent ring. The positions of many of the smaller rocks shown in the feature plan drawing appear to be natural. We note that if the spatial association between the skeletal remains and the rocks was not coincidental (e.g., the result of carnivore

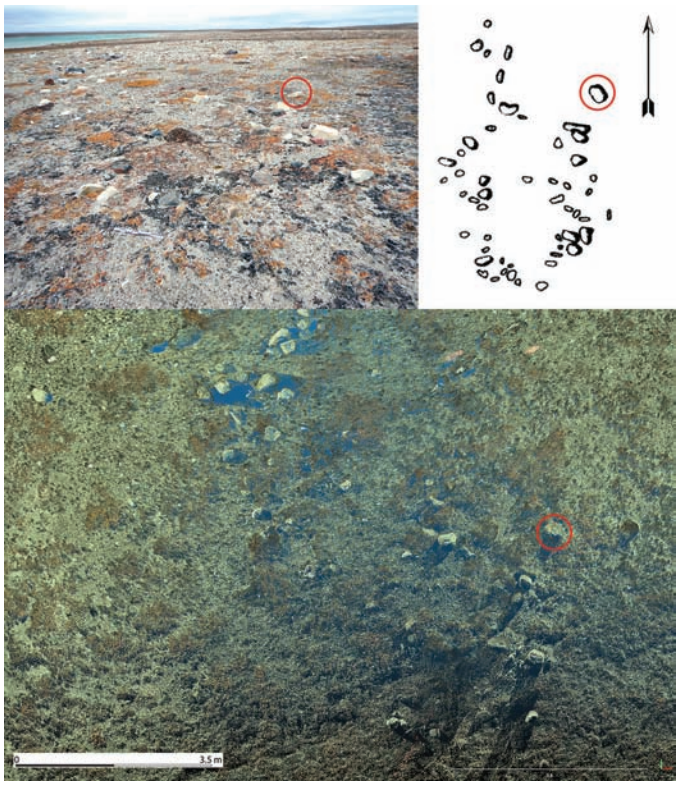

FIG. 3. Clockwise from upper left: 2016 photograph of presumed tent ring feature at NcLa-1; sketch of tent ring feature modified from Beattie and Savelle (1983: Figure 2); partial LiDAR scan showing distribution of rocks in the area surrounding the presumed feature at NcLa-1. For ease of reference, the same rock in each image has been circled in red.

activity), it is plausibly explained by the rocks having been part of the grave described and dismantled by Inuit and in or adjacent to which the exhumed body had presumably been examined and left.

Unfortunately, the oral historical record provides limited information about the grave at Kungearkbeearu, and its general form can only be inferred from its described similarity to the graves at Setteeumenun, for which details are also lacking. The nature of the substrate at Kungearkbeearu (gravelly sand) would not have presented any serious obstacle to digging a grave within which to place the body, and although Hall recorded the body as having been dug up, the Inuit testimony suggests that it had been laid on the surface with stones placed very methodically around and over it. In any case, assuming the association between the rocks and the skeletal remains at NcLa-1 is not coincidental, there is currently no structural evidence that would confirm or reject an interpretation that some of the rocks near which the human bones were found in 1981 represent the remains of a tent ring or similar structure, or an interpretation that it had been a grave as described by Inuit.

Skeletal Remains

Scurvy: Inuit described the body of the man buried at Kungearkbeearu as "very large and tall," and at the time

of his death he appeared to have been exhibiting oral symptoms (i.e., "terrible sight about his lower gums") often interpreted as suggestive of scurvy (see Taichman et al., 2017:29). Hall's informants thought that the body might have been that of a man who had exhibited similar oral symptoms at Washington Bay during their encounter with some of Franklin's men. Carnivore damage to all the appendicular skeletal elements prevented an osteological stature estimate for the individual, but subperiosteal lesions on the femoral and tibial shafts found in 1981 were specifically attributed to scurvy (Beattie, 1983; Beattie and Savelle, 1983). These findings would be consistent with the Inuit observations recorded by Hall, but the researchers did not mention them, presumably because they were relying on Nourse's incomplete summary of Hall's account rather than Hall's actual journal.

Scurvy has long been suggested as an important cause of morbidity and mortality on the Franklin expedition (e.g., Cyriax, 1939), but its role in the mass casualties that occurred is unclear. Scurvy cannot explain the extraordinary level of mortality that had already occurred prior to the desertion of HMS Erebus and HMS Terror (Park and Stenton, 2019), but it is very plausible that the survivors who reached the Simpson Strait area were suffering from it. However, the symptoms of illness described by Inuit are also attributable to several other medical conditions (Mays et al., 2015; Taichman et al., 2017), and there is currently little osteological evidence to suggest scurvy played a major role (Mays et al., 2015). A reanalysis of the femur and tibia found in 1981 concluded that porosity observed on the surface of the femur appeared to be within the bounds of normal variation and found no evidence of new bone deposition. The same study examined a histological section taken from a raised and slightly porous area on the tibia shaft, which revealed a well-remodeled ossified hematoma that did not rule out scurvy, but neither did it confirm it (Mays et al., 2015).

In 2016, additional human remains—a canine tooth, a partial adult left femur, and four bone fragments—were recovered from a test unit at NcLa-1. The proximal and distal ends of the femur had been chewed off, and other damage to the cortical surface by animals was present. DNA analyses of samples from the left tibia and right femur recovered in 1981, and from the canine tooth and left femur found in 2016, yielded matching mtDNA profiles indicating that they are from a single individual of European ancestry (Stenton et al., 2017). What appeared to be abnormal porosity and possible evidence of periostitis was observed on much of the femoral shaft, particularly on the medial and lateral surfaces. The skeletal remains were reinterred at NcLa-1 in 2018, but in 2023, at our request, photographs of the femur were examined by the curator of physical anthropology at the Canadian Museum of History (Fig. 4). In the curator's opinion, the porosity of the bone surface would not be considered within the bounds of normal variation. The surface of the femur was described as covered in various stages of integrating woven bone

FIG. 4. Anterior (l) and posterior (r) views of left femur recovered from NcLa-1 in 2016. Enlargements show areas of extensive and abnormal porosity on the lower shaft consistent with healing periostitis. Photo: A. Keenleyside.

consistent with healing periostitis (J. Young, pers. comm. 2023). This suggests that at the time of his death, the man may have been recovering from scurvy. Whether scurvy contributed to the death of the sailor at NcLa-1 is unknown, but three lower limb bones from a single individual, two of which are paired, exhibited surface pitting and in one case an ossified hematoma. We also note that the body Inuit described was found buried and thus protected from carnivore activity. Had that not been the case, it is difficult to explain how they would have been able to describe the position of the body, the man's physical stature, and the preserved soft tissue indicative of disease. The details of the description of the two bodies seen by Inuit at Setteeumenun differ materially from the description of the body at Kungearkbeearu only in that they do not include references to any observable signs of illness. Analysis in 2009 of one of the skeletons Hall removed from Setteeumenun in 1869 found no evidence of scurvy or other cause of death (Mays et al., 2011).

DNA testing of the NcLa-1 skeleton did not yield a match with any of the descendants of Franklin expedition personnel for whom DNA profiles have been obtained. The results of strontium, oxygen, and lead isotope analyses conducted on the canine tooth yielded values consistent with birth geography for many areas of Britain from which crew members originated (Keenleyside et al., 2021).

Post-Mortem Bone Modification: Four of the eight long bones recovered from NcLa-1 in 1981 (Beattie, 1983) (r. femur, l. tibia, l. fibula, l. humerus) had been damaged

extensively by carnivore activity, and one (r. femur #81-26) had three transverse marks medial to the linea aspera. The marks were described as V-shaped in cross-section, between 0.5 mm and 1 mm in width, with the length of the longest mark exceeding 13 mm (Beattie, 1983; Mays and Beattie, 2016). Based on their morphology, the marks were interpreted as possible cut or saw marks, which, to our knowledge, has never been questioned. However, human-induced bone surface modification would not be expected in the context of the oral historical description of Kungearkbeearu, which is very specific about the context in which the corpse was first found at the site—i.e., intact and fully clothed.

To revisit this question, we obtained photographs of the marks from the Canadian Museum of History in 2021 (Fig. 5) (J. Young, pers. comm. 2021). These were compared with photographs, SEM images, and photographs of molds made in the 1980s (O. Beattie, pers. comm. 2021) and with cut marks on bones from site NgLj-2 at Erebus Bay that were interpreted as consistent with cannibalism (A. Keenleyside, pers. comm. 2021). Review of the photographic records and informal consultations with colleagues raised questions about the classification of the marks on femur #81-26 as anthropogenic in origin. The marks appear to vary in shape, width, and depth along their lengths, and their bases appear to be predominantly rounded, rather than distinctively V-shaped. One mark is slightly curved, and there appear to be several shallow surface scratches within a centimetre of the deeper marks. None of the marks appear to have a square-bottom profile consistent with a saw blade, and they do not appear to have a smooth trough profile or facet that might be expected if they were chop marks. For these reasons, the marks cannot be confidently distinguished from animal tooth marks (e.g., those of wolves) (Haynes, 1983). The cortical surface of the femur opposite the cut marks could not be examined, as it had previously been removed for analysis.

In raising the possibility that the marks might not be of human origin, we emphasize that we are not questioning the occurrence of cannibalism on the Franklin expedition, which has been well established elsewhere (Keenleyside et al., 1997). We also recognize the possibility of sequential modification in which carnivore chewing of the bone was secondary to its previously having been cut. However, what was originally presented was a preliminary and cautious interpretation of the possibility of cannibalism having occurred at NcLa-1. Beattie (1983) recognized, for example, that the absence of axial skeletal elements at the site might be explained not as the result of selective transport of body parts for consumption but by their removal by large carnivores, and that differentiation of the presumed cut/saw marks on the femur from carnivore gnaw marks was extremely difficult because of weathering of the bone surface. Discussions with colleagues, however, supported the interpretation that the marks were probably, although not irrefutably, of human origin (Beattie 2021, personal communication).

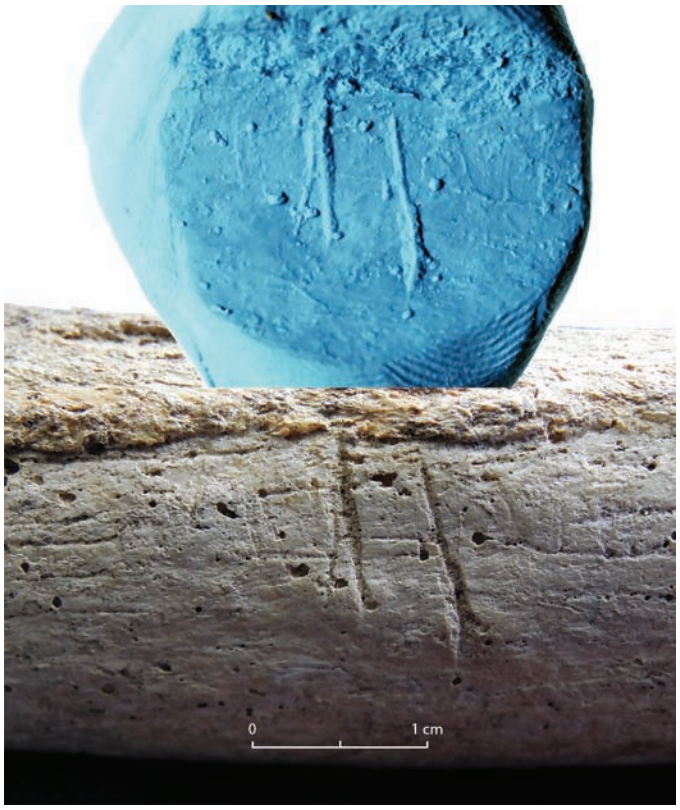

FIG. 5. Composite photograph of marks identified as cuts on right femur #81-26 from NcLa-1. Inset (upper) image is an impression taken of the marks shown in the lower photograph. Photograph of #81-26 by Janet Young, 2021, Canadian Museum of History. Photograph of mold courtesy of Owen Beattie.

It may not be possible to determine categorically whether or not the marks on femur #81-26 are of human origin, but if they are, the 1869 Inuit account of the body having been buried cannot be correct. By contrast, if the marks were the result of carnivore activity, they would be consistent with the Inuit description of the undisturbed condition of the grave when found, the context in which they had left the body, and the abundant evidence of subsequent carnivore damage found on the other bones recovered from the site.

Artifacts

If, as we suggest, important aspects of the interpretations of the feature and the skeletal evidence from NcLa-1 are open to question, does the new artifact evidence offer any insights? Hall claimed that Adlark found the telescope close to the monument, which, if correct, means that it was found several hundred metres south of the location of the grave described in 1869 and where the human skeletal remains were found in 1981. The provenance of the other artifacts that Adlark found at the site is unknown, and apart from the telescope, which might imply the presence of an officer, they fall within rather generic categories. Inuit descriptions of graves they examined included mention of artifacts found (or not found) at Too-noo-nee (Terror Bay) and at Setteeumenun (Peffer River area), but not at Kungearkbeearu, despite all the other details that

TABLE 1. Summary of artifacts recovered from NcLa-1 by category.

Category	Item	Quantity
Clothing/Personal	cloth button	1
	metal button	1
	shell button[1]	1
	leather	1
	clay pipe stem, 2 fitted fragments[1]	1
Container	metal can[2]	1
Fasteners:		
nail	copper	14
	iron	3
tack	copper	2
screw	iron	5
	brass[1]	1
Firearms:		
ammunition	lead shot, 6.5 mm diameter	74
	lead shot, 4.3 mm diameter	12
	musket ball, 17 mm diameter	7
	wire shotgun cartridge	2
	can of percussion caps (Type 11)	1
	percussion cap (fired)	2
Tools	feather spring clamp	1
Metal	iron rod	2
	naval thimble	1
	fishhook	1
	unidentified[2]	1
Inuit	trace buckle	1
	worked bird bone	1
	Total	137

[1] Beattie 1981 inventory

[2] Association with the 1845 Franklin expedition not confirmed

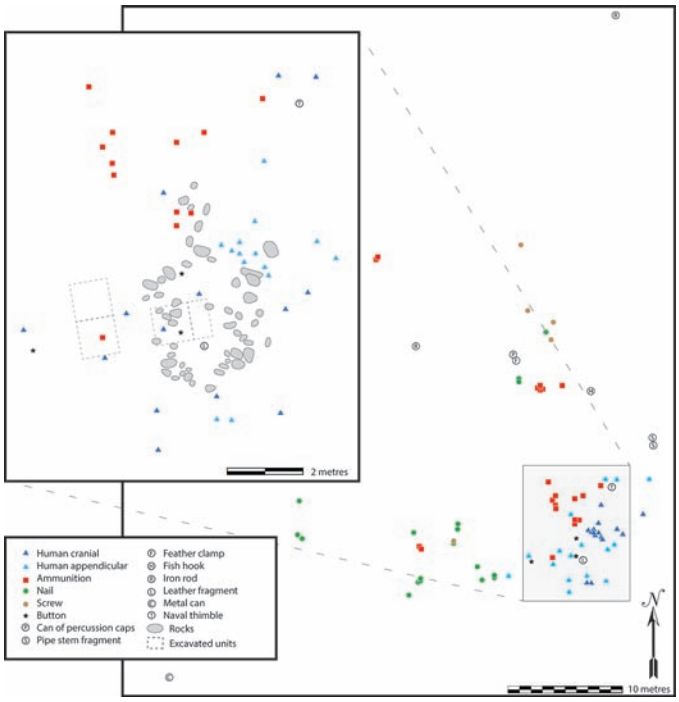

FIG. 6. Distribution of artifacts recovered from NcLa-1 in 1981 and in 2016. Inset map of stone feature and human skeletal remains adapted from Beattie and Savelle (1983:Figure 2).

were provided about the grave. The few small artifacts recovered in 1981 have no attributes that might help clarify understanding of the site beyond its attribution to the 1845 Franklin expedition, but the artifacts recovered from NcLa-1 in 2016 offer a wider lens through which to attempt to interpret the site.

Including the four 1981 finds, a total of 62 artifacts have been recovered from NcLa-1 (Table 1). The actual item count is considerably higher, at 137, but single catalogue numbers were assigned to six groups of clustered lead shot containing between 2 and 47 items. The total also reflects the fact that some items fit together, such as the two pieces of pipe stem. A bone trace buckle and a piece of worked bird bone attributed to Inuit activity at the site are not included in the discussion, and the attribution to the Franklin expedition of several other finds, including unidentified objects and extremely corroded iron screws, is tentative. Excavation of units adjacent to the presumed tent ring yielded two artifacts with the other items found through visual surveys of the ground surface and scanning the site with metal detectors. Many of the artifacts, particularly small lead shot, were partially exposed on the surface of the sand, and most finds were at shallow depths of 1–6 cm below the surface. Two isolated finds expanded the areal extent of the artifact distribution to approximately 2500 m^2, but the majority of the artifacts were recovered within a much smaller area concentrated in and around the presumed stone feature, approximately 10 m north of the feature and 10 m west of it (Fig. 6).

The NcLa-1 artifact assemblage contains items bearing the Royal Navy broad arrow mark, indubitably confirming their attribution to the 1845 Franklin expedition. The assemblage also has characteristics that bear directly on the interpretation of the site. For example, when grouped by functional category, the assemblage is dominated by objects classified as firearm related (Fig. 7). These include 93 lead shot of three sizes, including seven 17 mm musket balls (one of which appears to have been cut in half), two near-intact wire shotgun cartridges thought to be Eley Patent Wire Cartridges, two Type 11 percussion caps (both fired), and an unopened can estimated to contain about 250 Type 11 percussion caps. Also found was a spring clamp (or vise) used to disassemble the lock mechanism on muzzle-loaders for cleaning and maintenance. A small quantity of fasteners (Fig. 8) was found, including copper and iron nails, tacks, and iron screws. The screws are in very poor condition, making it difficult to confirm their attribution to the Franklin expedition. Other metal objects found include a small brass closed naval thimble, a can, two 23 cm long iron rods of unknown function, an unidentified cylindrical object with drilled holes and a flange at one end, and a fishhook. Clothing and personal items consist of three buttons (metal, fabric-covered, mother-of-pearl), an unidentified piece of leather with several small slits, and the clay pipe stem.

FIG. 7. Firearm-related artifacts from NcLa-1. Clockwise from upper left: pre- and post-conservation photos of spring clamp for muzzle-loading gun; Eley Patent Wire Cartridges; 17 mm musket balls; unopened can of Type 11 percussion caps. X-ray image © Canadian Conservation Institute.

FIG. 8. Artifacts from NcLa-1. Clockwise from upper left: naval thimble with broad arrow stamp; fishhook; unidentified metal fitting; cloth and metal buttons; leather fragment with three slits along upper edge; unidentified iron rods; copper alloy nails.

DISCUSSION

If the skeletal remains found at NcLa-1 are those described to Hall in 1869, and there is no reason to think that they are not, the 2016 artifact inventory provides important new insights about the historical and archaeological interpretations of the site.

Burial Site

A very incomplete picture currently exists of items that were left with the few Franklin expedition personnel known to have been buried. No grave goods were buried with the bodies of John Torrington, John Hartnell, or William Braine on Beechey Island (Beattie and Geiger, 1987), but it apparently was not uncommon for items to have been placed with the bodies of at least some of the men who were buried on the shores of King William Island. Schwatka found items in the grave presumed to be that of Lt. John Irving near Victory Point and in one of the graves at Two Grave Bay (Schwatka, 1965). At Simpson Strait, Inuit reported finding knives buried with the bodies in graves at both Terror Bay and Setteeumenun (Hall, 1869: Journal 31). The types of artifacts Inuit reported finding at NcLa-1, however, are not consistent with what might be expected from a burial context. Hall's informants said nothing about any objects being found in the grave at Kungearkbeearu, and that was the type of detail Hall routinely recorded. The absence of any specific references to grave goods cannot be interpreted to mean that, in fact, there were no objects in the grave; however, the items taken from the site that were described to Hall seem highly unusual for a burial context. It seems doubtful, for example, that items having utility for survivors, such as those related to firearms, would have been buried with the deceased. If they had been placed in the grave, Inuit might well have mentioned finding them, even if they had discarded them at the site. Nails are common finds at Franklin expedition sites, but unless they were in a pocket or container, they are an odd category of item to have been placed in a grave, as are the naval thimble, the two iron rods, and the empty, lidless metal can.

Adlark's and Teekeeta's statements about items found at the site are difficult to interpret because the recovery contexts are unknown and cannot be assumed, but the items listed, such as three metal cans and a bag containing two tin cups, seem unlikely to have been left in a grave. According to Teekeeta, the telescope and two teaspoons were found wrapped in a blanket that had been placed under a large stone at the site, but neither he nor his mother specifically associated those finds with the grave. Hall's notes from his conversation with Adlark state that the telescope was found near where he had erected the memorial cairn, but it is not clear from the phrasing whether Adlark had actually said that or whether Hall assumed it, based on his belief at the time that the cairn had been erected near the grave, a belief that Teekeeta later informed him was not correct.

The described timing and recovery context of the telescope and the associated items is also intriguing because it suggests the possibility of multiple visits to the site by Inuit other than Hall's informants. Unless there were plans to return to the location, it is difficult to envision why a sailor, presumably an officer, would have left a telescope behind and, if they had done so, why it would have been wrapped in a blanket together with two teaspoons and placed under a rock. There are examples, however, of Inuit

having cached items that they had removed from Franklin sites (e.g., Schwatka 1965:84). The account of the recovery of the telescope is further confused by the fact that Teekeeta said his mother had found the telescope in the winter, whereas Hall's journal entries relate to events associated with the discovery of the grave at Kungearkbeearu in the spring of 1849. In any case, if the items in question were not cached by a member of the Franklin expedition, they must have been placed there by Inuit, which would further complicate interpretation of the site.

Temporary Camp

From Inuit testimony, Hall estimated the timing of the meeting between Inuit and a group of Franklin's men at Washington Bay to have been mid- to late July of 1848 (Hall 1869, Journal 39). Thus, by the time they reached the Kungearkbeearu area, 85 km southeast of where the meeting took place, the sea ice in Simpson Strait had almost certainly broken up and survivors would have been advancing along the south shore of King William Island by boat and on foot, hunting and camping temporarily at various places. Thus, and despite uncertainty about the functional classification of the presumed feature at NcLa-1, it is conceivable that, as suggested in 1981, it could have been the site of a temporary camp. It remains unexplained, however, why Inuit would not have seen or reported evidence of a camp to Hall, which they surely would have recognized and which they reported for other locations such as Terror Bay and Setteeumenun (Hall, 1869).

Unlike the burial scenario, the artifacts from NcLa-1 do fall within categories consistent with a camp context. However, if, as was suggested, it was occupied briefly by multiple individuals, it also seems unusual for certain of the items found to have been left behind, such as the ammunition, spring clamp, and telescope. The presence of nails is also difficult to interpret. Although few, they raise the question of whether something might have been disassembled by Inuit at the site. Hundreds of nails and wood fragments have been found at Franklin expedition sites at Erebus Bay (NgLj-2, NgLj-3, NgLj-8), where two ship's boats and other objects are known to have been dismantled. Unmodified nails found at these sites were likely part of the general hardware brought for repairs, whereas the modified ones, invariably bent, broken, cut, or twisted, in some cases with wood fragments attached, reflect the dismantling processes (Thacher, 2018). At NcLa-1, the nail assemblage is small and almost equally divided between unmodified and modified specimens, the latter including two bent and one bent and twisted example. No wood has been found at the site, however, nor is there any mention in the oral history of wood objects being seen or disassembled at Kungearkbeearu.

If the sailor had died during the period the camp was occupied, his companions would presumably have buried him, which might be the grave found by Inuit, but if he was sick or incapacitated, they might not have left him there to die alone, since devastation of his body by animals was a virtual certainty. With respect to the question of possible cannibalism at NcLa-1, speculation that portions of the man's body might have been carried as a portable food supply seems questionable for several reasons, not least of which were opportunities to obtain fresh food such as caribou, fish, and waterfowl at the time of year the site would have been occupied. According to Inuit testimony, the group of Franklin's men they encountered at Washington Bay were actively and successfully hunting and fishing (Hall, 1869: Journal 24), and the ammunition and fishhook found at NcLa-1 are consistent with those activities. In addition, although none were mentioned in connection with Kungearkbeearu, supplies of preserved food evidently had not been completely exhausted. Inuit reported finding an unopened can of meat (which they consumed with no ill effect) with the bodies of five unburied sailors on Keeuna (Todd Island), just 3 km south of Kungearkbeearu (Hall, 1869: Journal 31). They also reported seeing "Much provisions in cans" in the boat they discovered at Starvation Cove (Hall, 1869: Journal 41). Collectively these factors do not preclude the possibility of cannibalism having occurred at NcLa-1, but given the available evidence, its occupational context appears to be very different from that of, for example, NgLj-2, at Erebus Bay, the only one of three sites at which Inuit reported seeing evidence of cannibalism for which there is currently physical evidence to support some of the Inuit testimony (Keenleyside et al., 1997; Stenton and Park, 2017).

CONCLUSION

The integration of historical and oral historical descriptions of sites with their archaeological evidence is one of the most interesting and challenging aspects of archaeological investigations of the 1845 Franklin expedition. The archaeological record of the expedition includes sites for which only historical or only oral historical accounts exist, and some for which both types of information exist but whose temporal attributes must be carefully considered. The Inuit oral history of the Franklin expedition on the Victoria Strait coast of King William Island, for example, postdates the published descriptions and interpretations of discoveries made by the 1857–59 McClintock search expedition (McClintock, 1859). Kungearkbeearu is an interesting case because it illustrates the complexities involved in trying to integrate these data and raises important questions about their respective roles in reconstructions of the events that shape our understanding of the fate of the Franklin expedition.

Information about Kungearkbeearu is incomplete, but the combined evidence from the site points to a range of activities broader and, in some respects, different from those suggested by the oral historical records and previous archaeological investigation. Major gaps remain in our understanding of the key events that preceded

archaeological investigation of NcLa-1, and some important details will never be known. The first event was the arrival at Kungearkbeearu of at least two sailors, possibly members of a larger group who were hunting. The identification of the stones near the human skeletal remains as a tent ring is debatable, but the artifacts recovered suggest that the group might have briefly camped at the site, perhaps as they had intended or because of the unexpected death of one of the men. For reasons that are not clear, a small number of objects, some of which had obvious utility, were left behind. The next event was the discovery and opening of the grave by Inuit who would later provide a detailed description of its construction and of the body found within it. Nothing about the oral historical records suggests that they misrepresent the Inuit description of the grave or the body, but on topics that would assist with the interpretation of the site, there are significant unexplained omissions, including information about the number of times the site was visited, about other features or objects present, and about the provenance of the artifacts removed from the site. The third key event predating archaeological investigation of NcLa-1, which may have extended over a protracted period, was the scavenging by animals of the body that Inuit stated had been left exposed at the site. In 1981, all that remained of the intact and fully clothed body described by Inuit 132 years earlier was a small portion of a disarticulated and extremely damaged skeleton.

All three of these events, and others for which we have no information, are important to understanding what occurred at NcLa-1, and it is not unusual for new information to raise more questions than it answers. For Kungearkbeearu we will never know the full details of the Inuit discovery and interventions at the site, and there are limits to the extrapolations that can be drawn from the archaeological evidence. Nevertheless, the new archaeological evidence expands our current understanding of NcLa-1 and provides an enhanced framework within which to consider and evaluate both the oral history and the archaeology of the site. As this understanding evolves, the broader context within which the death of the sailor at Kungearkbeearu occurred should not be overlooked. It was not an isolated event but was one of eleven deaths that took place in the immediate area. The unburied bodies of five men were found on Todd Island and two at Booth Point, both located within 3 km of NcLa-1 (Stenton, 2018). In addition, three men were buried at Setteeumenun, approximately 8 km west of Kungearkbeearu. The Inuit discovery of a ship's boat and the skeletons of several of Franklin's men at Starvation Cove on the north shore of Adelaide Peninsula, 25 km southwest of NcLa-1, confirms that some survivors had crossed Simpson Strait by boat. This raises interesting questions not only about the timing and circumstances of the deaths of the buried and unburied men at and near Kungearkbeearu, but also about why they may have been left behind.

ACKNOWLEDGEMENTS

The authors are grateful for the support of many individuals and institutions that enabled investigations at NcLa-1, including the Government of Nunavut's Department of Culture and Heritage, the Kitikmeot Inuit Association, the Hamlet of Gjoa Haven, and the Inuit Heritage Trust. We are also grateful to the officers and crew of the CCGS Sir Wilfrid Laurier for the excellent logistical support that facilitated field investigations at NcLa-1.

Special thanks are extended to Owen Beattie for generously sharing information about the original archaeological investigation of NcLa-1 and for many thoughtful exchanges about the interpretation of the site. Sincere thanks are also extended to Janet Young for her assistance with obtaining photographs of femur #81-26 and for sharing her expertise on the subject of periostitis, and to Maria Liston for her comments on those photographs. Thanks are also extended to the Canadian Museum of History for use of the photograph of femur #81-26, and to the Canadian Conservation Institute for use of the X-ray image in Figure 7 and for providing many years of excellent conservation services in support of our Franklin expedition research. We would also like to thank David Weaver for his assistance in identifying the muzzle-loader clamp found at NcLa-1.

Finally, we would like to acknowledge the innumerable contributions to all our Franklin expedition research, including this piece, by our late friend and colleague Anne Keenleyside. Without her expertise and enthusiastic support, far less would be known about the fate of the Franklin crews.

REFERENCES

Beattie, O. 1982. The location and analysis of human skeletal material from the last Sir John Franklin expedition in search of a northwest passage. Report of the 1981 field survey. Report on file. Government of Nunavut, Department of Culture and Heritage, Igloolik.

———. 1983. A report on newly discovered human skeletal remains from the last Sir John Franklin expedition. The Muskox 33:68–77.

Beattie, O., and Geiger, J. 1987. Frozen in time: Unlocking the secrets of the Franklin expedition. Saskatoon: Western Producer Prairie Books.

Beattie, O., and Savelle, J. 1983. Discovery of human remains from Sir John Franklin's last expedition. Historical Archaeology 17(2):100–105.
https://doi.org/10.1007/BF03373469

Burwash, L.T. 1930. The Franklin search. Canadian Geographical Journal (1):587–603.

———. 1931. Canada's western Arctic, report on investigations in 1925–26, 1928–29 and 1930. Ottawa: King's Printer.

Cyriax, R.J. 1939. Sir John Franklin's last Arctic expedition. London: Methuen & Co. Ltd.
Gibson, W. 1932. Some further traces of the Franklin retreat. Geographical Journal 79(5):402–408. https://doi.org/10.2307/1783940
Gibson, W. 1937. Sir John Franklin's last voyage: A brief history of the Franklin expedition and an outline of the researches which established the facts of its tragic end. The Beaver 268(1):44–75.
Hall, C.F. 1869. Charles Francis Hall collection, 1858–1871. Washington, DC: Archives Center, National Museum of American History, Smithsonian Institution. https://www.si.edu/object/archives/sova-nmah-ac-0702
Haynes, G. 1983. A guide for differentiating mammalian carnivore taxa responsible for gnaw damage to herbivore limb bones. Paleobiology 9(2):164–172. https://doi.org/10.1017/S0094837300007545
Keenleyside, A., Bertulli, M., and Fricke, H.C. 1997. The final days of the Franklin expedition: New skeletal evidence. Arctic 50(1):36–46. https://doi.org/10.14430/arctic1089
Keenleyside, A., Stenton, D., and Newman, K. 2021. The integration of isotopic and historical data to investigate the identification of crewmembers of the 1845 Franklin expedition. Journal of Archaeological Science 40(A): 103200. https://doi.org/10.1016/j.jasrep.2021.103200
Larsen, H. 1949. Patrol report to King William Island & return. Library and Archives Canada, "King William Island, N.W.T. –Patrol Reports by Supt. H. A. Larsen". R196 BAN 2016-00063-5, Box 2, File G-567-103.
Learmonth, L. 1948. Notes on Franklin relics. Arctic (1):122–123. https://doi.org/10.14430/arctic4008
Mays, S., and Beattie, O. 2016. Evidence for end-stage cannibalism on Sir John Franklin's last expedition to the Arctic, 1845. International Journal of Osteoarchaeology 26:778-786. https://doi.org/10.1002/oa.2479
Mays, S., Ogden, A., Montgomery, J., Vincent, S., Battersby, W., and Taylor, G.M. 2011. New light on the personal identification of a skeleton of a member of Sir John Franklin's last expedition to the Arctic, 1845. Journal of Archaeological Science 38 (7):1571–1582. https://doi.org/10.1016/j.jas.2011.02.022
Mays, S., Maat, G.J.R., and DeBoer, H.H. 2015. Scurvy as a factor in the loss of the 1845 Franklin expedition to the Arctic: A reconsideration. International Journal of Osteoarchaeology 25(3):334–344. https://doi.org/10.1002/oa.2305
McClintock, F.L. 1859. The voyage of the 'Fox' in the Arctic seas. A narrative of the discovery of the fate of Sir John Franklin and his companions. London: John Murray.
Nourse, J. 1879. Narrative of the second Arctic expedition made by Charles Francis Hall: His voyage to Repulse Bay, sledge journeys to the Straits of Fury and Hecla and to King William's Land, and residence among the Eskimos during the years 1864–69. Washington DC: U.S. Naval Observatory, Government Printing Office.
Park, R.W., and Stenton, D.R. 2019. Use your best endeavours to discover a sheltered and safe harbour. Polar Record 55(6):361–372. https://doi.org/10.1017/S0032247419000573
Schwatka, F. 1965. The long Arctic search: The narrative of Lieutenant Frederick Schwatka, U.S.A., 1878–1880, seeking the records of the lost Franklin expedition. Edited by E.A. Stackpole. Mystic, Connecticut: Maine Historical Association Inc.
Stenton, D.R. 2018. Finding the dead: Bodies, bones and burials from the 1845 Franklin northwest passage Expedition. Polar Record 54:197–212. https://doi.org/10.1017/S0032247418000359
Stenton, D.R., and Park, R.W. 2017. History, oral history and archaeology: Reinterpreting the "Boat Places" of Erebus Bay. Arctic 70(2):203–218. https://doi.org/10.14430/arctic4649
Stenton, D.R., Keenleyside, A., Fratpietro, S., and Park, R.W. 2017. DNA analysis of human skeletal remains from the 1845 Franklin expedition. Journal of Archaeological Science: Reports 16:409–419. https://doi.org/10.1016/j.jasrep.2017.03.041
Taichman, R.S., Gross, T., and MacEachern, M.P. 2017. A critical assessment of the oral condition of the crew of the Franklin Expedition. Arctic 70(1):25–36. https://doi.org/10.14430/arctic4629
Thacher, D. 2018. Salvaging on the coast of Erebus Bay, King William Island. Arctic 71(4):432–443. https://doi.org/10.14430/arctic4745
Woodman, D. 1991. Unravelling the Franklin mystery: Inuit testimony. Kingston: McGill-Queen's University Press. https://doi.org/10.1515/9780773562899