



HMS EREBUS UNDERWATER ARCHAEOLOGICAL SURVEY 2017

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1. PROJECT DESCRIPTION

This short report describes the activities and results of underwater archaeological survey work conducted by Parks Canada's Underwater Archaeology Team (UAT) on the wreck of HMS *Erebus*, between August 27 and September 1, 2017. The non-intrusive operation was part of a larger multi-year project undertaken by Parks Canada and various partners since 2008, involving the search for and study of Sir John Franklin's 1845 expedition vessels, HMS *Erebus* and HMS *Terror*. This year's survey focused solely on HMS *Erebus*. No further survey was carried out in the summer of 2017 on HMS *Terror*, following the most recent inspection work conducted in April 2017 (Dagneau and Moore 2017).

The wreck of HMS *Erebus* is located within the Wrecks of HMS *Erebus* and HMS *Terror* National Historic Site of Canada, in Wilmot and Crampton Bay within the Kitikmeot (Qitikiut) Region of Nunavut, Canada. The site is approximately 125 km from Gjoa Haven and 275 km from Cambridge Bay, the two nearest communities in Nunavut, and lies some 70 km south of the wreck of HMS *Terror* (Figures 1.1 and 1.2).



Figure 1.1: Locations of the wrecks of HMS *Erebus* and HMS *Terror*, Nunavut (Map: C. Dagneau, Parks Canada; Imagery: Esri World Imagery / Earthstar Geographics, TerraColor).

2. OBJECTIVES

This project carried out at the HMS *Erebus* wreck site aimed to continue its documentation and study. The archaeological objectives were as follows:

1. Continue artefact and feature mapping;
2. Explore interior spaces using inspection cameras and a remotely operated vehicle;
3. Continue video and photo documentation of the site; and
4. Establish additional 3D fiducial reference points and integrate them with an existing baseline.

Non-archaeological objectives were as follows:

1. Support the Nunavut Field Unit's creation of the Guardian site monitoring program, to involve communities members from Gjoa Haven in the protection and monitoring of the wreck sites and further integrate Inuit knowledge into site operations;
2. Support Guardians in surveying the islands around HMS *Erebus* for a future permanent camp; and
3. Support media and visitor activities at the camp site and in Gjoa Haven.

3. HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

Considering the limited scope of this report, it was decided not to include a detailed historical account of the Franklin expedition. For more information, please refer to Cyriax (1939) and Woodman (1991) or summaries provided within UAT's previous reports (Dagneau and Moore 2017; Moore et al. 2017). For more information on recent archaeological investigations, including a re-interpretation of the traditional narratives cited

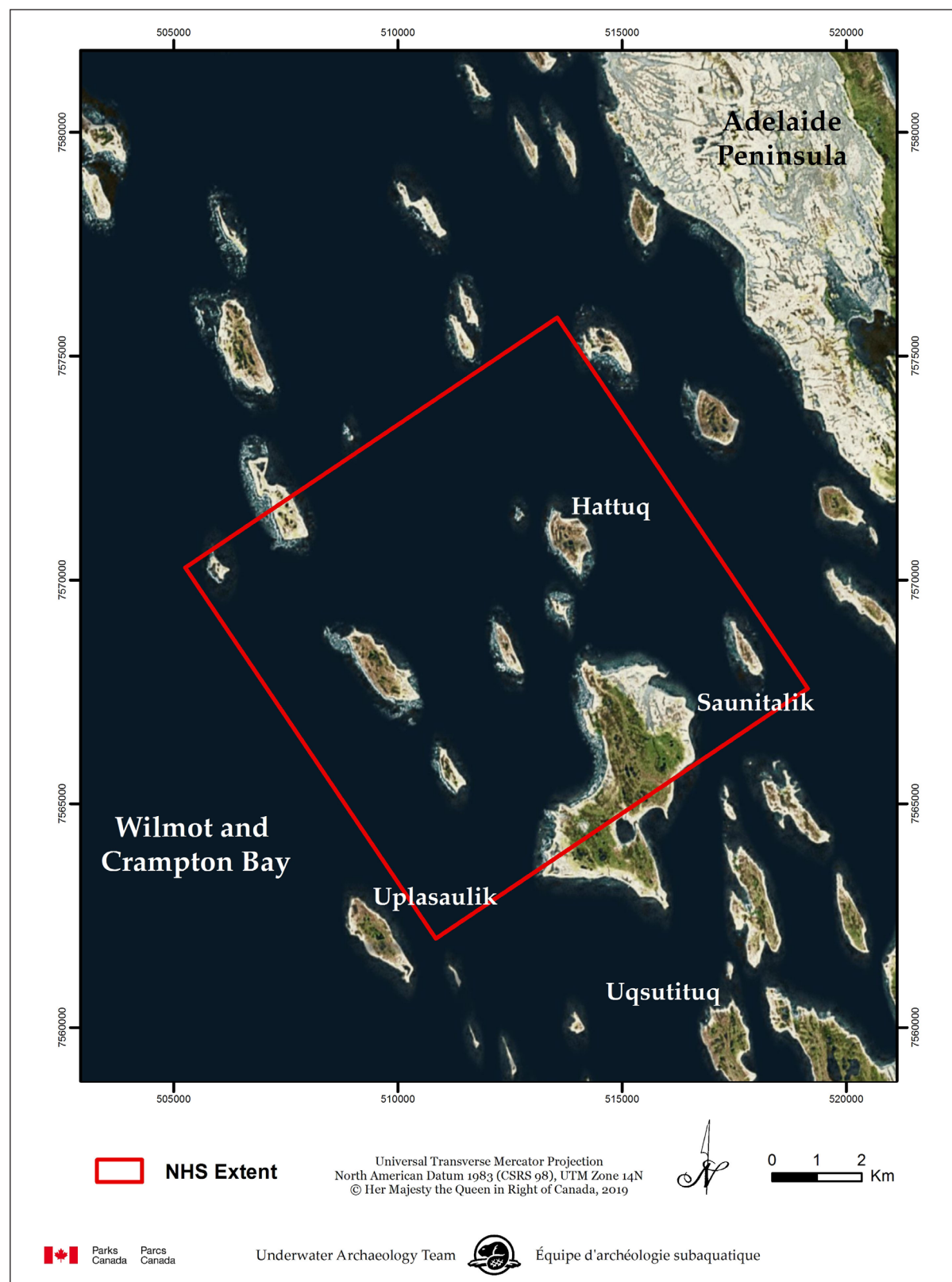


Figure 1.2: Camp site location on Saunitalik Island in Wilmot and Crampton Bay, Nunavut, 2017. The red border denotes the boundary of the national historic site (Map: C. Dagneau, Parks Canada; Imagery: Esri World Imagery / Earthstar Geographics, TerraColor).

above, also refer to the latest reports and articles by the UAT (Dagneau and Moore 2017; Harris and Boyer 2016; Moore and Dagneau 2017; Moore et al. 2017), Stenton 2014, and Stenton et al. 2015.

4. FIELDWORK DESCRIPTION

An initial fieldwork plan was premised on the use of two new UAT platforms: the research vessel (RV) *David Thompson* and barge *Qiniqtiryuaq*. Unfortunately, due to delays in the refit of the RV *David Thompson*, the vessel and the barge could not be deployed. Thus, the entire project had to be scaled down and adapted to a land-based operation, using aircraft to transport personnel and equipment to an island near to the wreck and employing inflatable boats to reach the wreck itself. The project was staged from Cambridge Bay and Gjoa Haven using Twin Otter aircraft on multiple sorties.

A camp site was established at the northern end of Hauniqtaalik Island—informally known as “Davit Island”—approximately 5 km to the southeast of the wreck site (Figures 1.2 and 4.1). This was not the preferred option in terms of wreck site accessibility, but it provided a good landing spot for the Twin Otters. It also provided a shallow but accessible landing beach for loading and unloading gear from the inflatable boats. The camp site consisted of three large dome tents that were used respectively for: 1) equipment storage/work space; 2) kitchen/meeting area; and 3) sleeping quarters. The Guardians used two two-person tents as sleeping and living areas (Figure 4.2). A small latrine tent was also installed at some distance away from the main camp.



Figure 4.1: The camp site was located on a sandy beach at the northern tip of Hauniqtaalik Island, ideal for landing with Twin Otters (Photo: T. Boyer, Parks Canada; 89Mo8929EF).



Figure 4.2: Camp site on Hauniqtaalik Island (Photo: T. Boyer, Parks Canada; 89Mo9096EF).

Six UAT staff members travelled from Cambridge Bay to the site on August 27, along with most of the equipment and supplies. Four members of the Guardian program travelled from Gjoa Haven on the same day. All team members worked on setting up the camp on August 27 and 28. Due to windy and inclement weather conditions as well as concurrent non-archaeological objectives, it was only possible to conduct three archaeological dives (2.5 hours total duration) at the wreck; all took place in the early hours of August 31 (Figure 4.3). This short period of survey work only allowed for general observations and limited photo documentation. The underwater work was conducted using UAT’s standard scuba diving gear. These operations were supported by two small inflatable boats with outboard engines.

Four UAT staff left the camp on September 1 to participate in the first Umiyaqtutt Festival taking place in Gjoa Haven the following week. The festival, which has become an annual event, features community feasts, cultural performances, artistic programming, artefact showings and presentations related to the two shipwrecks, Inuit knowledge and the national historic site. The remaining

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Marc-André Bernier	Manager, Parks Canada
Ryan Harris	Project Lead, Parks Canada
Jonathan Moore	Parks Canada
Charles Dagneau	Parks Canada
Thierry Boyer	Parks Canada
Joe Boucher	Parks Canada
Mark Ullikataq	Guardian Program
Brandon Qirqqut	Guardian Program
Jimmy Pauloosie Jr.	Guardian Program
Raymond Niaqunnuaq	Guardian Program

Table 4.1: List of August-September 2017 fieldwork participants and affiliations.



Figure 4.3: UAT archaeologists and Guardians getting ready to travel to the wreck of HMS *Erebus* aboard two inflatable boats. From left to right: J. Pauloosie Jr., T. Boyer, R. Harris, J. Moore, J. Boucher and C. Dagneau (Photo: M.-A. Bernier, Parks Canada; 89Mo9068EF).

two UAT staff returned to Cambridge Bay, leaving the four Guardians in charge of the camp until the former returned on September 9. The initial plan was to remobilize in order to welcome a group of visitors from Adventure Canada's cruise ship, *Ocean Endeavour*. This outreach activity was cancelled due to a storm. The camp was dismantled and the site cleared on September 9. The bulk of the equipment was flown out through Cambridge Bay, while the Guardians and some equipment were ferried back to Gjoa Haven.

5. ARCHAEOLOGICAL RESULTS

Based on the general observations and still photos gathered during the three dives on the wreck, it appears that the hull structure has not noticeably changed since 2016, apart from a few small loose timbers. There was a risk that storms could do considerable damage to exposed structures from the upper and lower decks. This was not the case and the most important result from this season's work. Archaeologists also noted that kelp started to regrow in areas that were previously cleared in 2015 and 2016. This was particularly evident on the hull's exterior planking. Smaller marine growth also recolonized most of the upper deck (Figure 5.1).

A few previously unseen artefacts were identified and photographed on the lower deck. A concentration of 10 or 11 wine bottles was located forward of the officer's mess skylight towards the port side (sub-operation 44K), partly hidden under collapsed upper deck structures. Just



5.1: Marine regrowth on the stern upper deck structure of HMS *Erebus* (Photo: T. Boyer, Parks Canada; 89Mo9140EF).

forward of the so-called "bed place" in sub-operation 40/42J, the roof of a small mercurial artificial horizon was found resting directly on the lower deck planking (Figures 5.2 and 5.3). Given that this fairly lightweight artefact was resting in plain sight and had never been previously observed, it is believed that it was moved by wave action, as has occurred with other artefacts (Moore et al. 2017: 123). Additional artefacts first observed in 2017 form a group of small finds on *Erebus'* lower deck, on the port side of the galley, in sub-operations 28/30K. This cluster includes eight or nine plain copper alloy buttons, as well as two pewter Royal Marines buttons similar to those previously recovered from this area (89M99X1-9 and 10). A few dark glass fragments, nails, and an oval brass tag with the inscription "44" are also part of this group of finds (Figure 5.4). Only the tag had been



Figure 5.2: A mercurial artificial horizon roof resting directly on the lower deck, forward of a so-called "bed place" in sub-operation 40/42J (Photo: T. Boyer, Parks Canada; 89Mo9204EF).

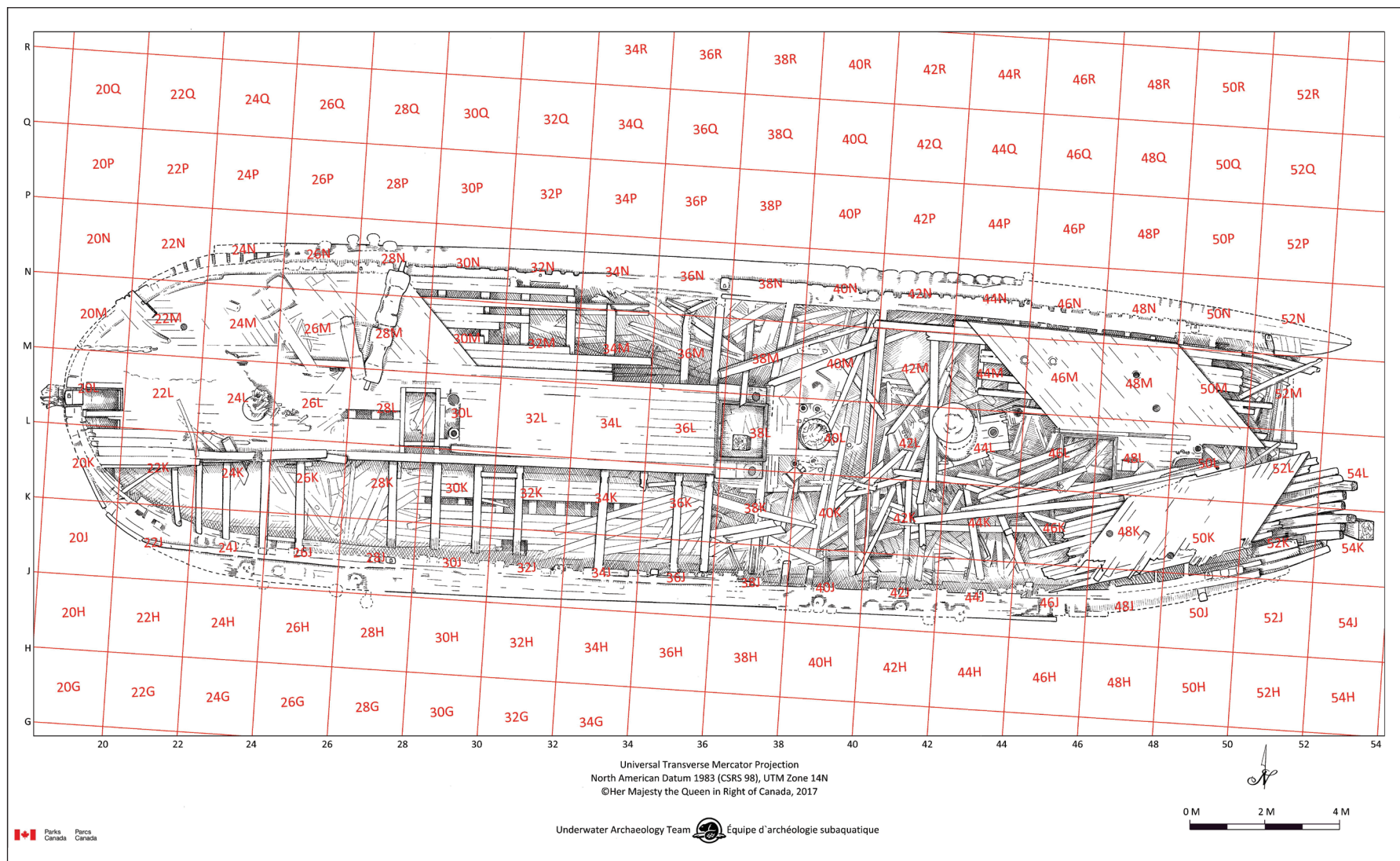


Figure 5.3: Site provenience grid superimposed over the upper deck site plan of *Erebus* (Image: B. Lockhart, Parks Canada; Drawing: C. Pillar, Parks Canada; 89M-2017-101-1).

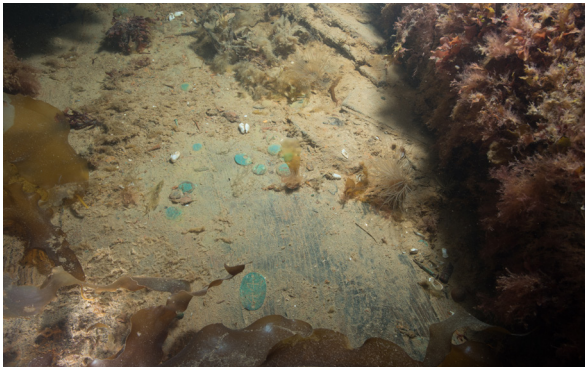


Figure 5.4: Artefact cluster, including two Royal Marines pewter buttons, a brass tag marked “44”, and other small finds in sub-operations 28/30K (Photo: T. Boyer, Parks Canada; 89M09195EF).

previously observed, but in a slightly different location, less than a metre away (Moore et al. 2017: 68). None of these artefacts were further documented, mapped or raised during this operation.

6. CONCLUSION

This report describes the UAT’s work at the wreck of HMS *Erebus* in August and September 2017. The general goal was to monitor the condition of the wreck and continue its study and documentation. Given the absence of the UAT’s main vessel and barge, as well as unfavourable weather conditions, results were limited to general observations and still photo documentation. A few previously unseen artefacts were also located and

documented with still photos. Despite significant kelp growth on areas previously cleared, the hull appears to be in a similar condition as it was in 2016, with the exception of a few small loose timbers and artefacts that have apparently moved.

It is anticipated that the study and excavation of HMS *Erebus* and HMS *Terror* will continue for multiple seasons. Next year (2018) the UAT will have the benefit of more substantial surface support infrastructure, notably Parks Canada’s newly-acquired RV *David Thompson* and the diving support barge *Qiniqtiryuaq*, enabling more intensive archaeological study and excavation work to commence.

7. ACKNOWLEDGEMENTS

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