

# **UNDERWATER ARCHAEOLOGY AT L'ANSE AUX MEADOWS NATIONAL HISTORIC SITE OF CANADA IN 2008**

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**I**n 2008 Parks Canada's Underwater Archaeology Service (UAS) began the first phase of a multi-year project at L'Anse aux Meadows. The aim is to complete a submerged cultural resource inventory of the marine component of L'Anse aux Meadows National Historic Site of Canada (NHS), a 49km<sup>2</sup> area encompassing Sacred Bay and adjacent minor inlets as well as numerous islands, shoals and reefs (Figure 1). More specifically, this project attempts to locate and evaluate a range of archaeological site types representing all chronological periods of regional history and prehistory.

The principal reason for the creation of the marine component of the NHS was to ensure the protection of potential marine cultural remains associated with the terrestrial Norse site (EjAv-1). While it is possible that there are marine sites related to this period, there is no certainty that they exist or can be detected.

It is taken for granted that a full chronological range of sites are to be found during the inventory and each site type would have a particular significance at a local, regional, provincial or national level.

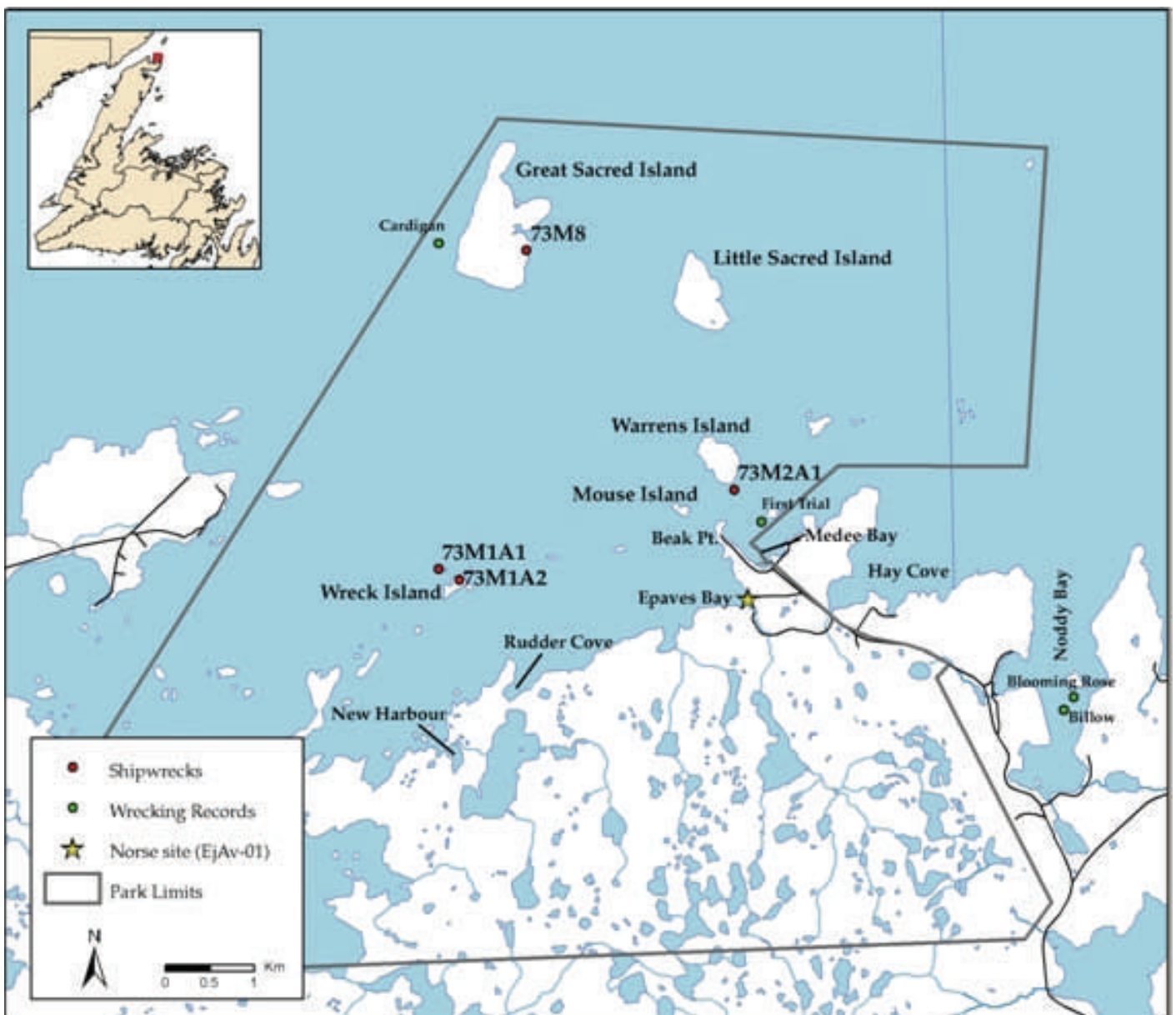
The UAS survey took place from July 19<sup>th</sup> to July 29<sup>th</sup>, 2008 and team members included Jonathan Moore (permit holder), Ryan Harris, Charles Dagneau and Chriss Ludin. Additional fieldwork will be required in 2009 and possibly 2010, each with a duration of approximately four weeks.

*Archaeological Background*

No comprehensive underwater archaeological

survey of the study area has been undertaken in the past, although the 2008 UAS project was certainly not the first time the area has been searched. Indeed, in the mid-1970s, Parks Canada underwater archaeologist Walter Zacharchuk conducted a limited diving search of Épaves Bay near the Norse site. Over the last several decades recreational diving has taken place in the area, and a number of shipwreck sites are known. In 2005 a UAS team conducted a reconnaissance of the region and made a single dive off Wreck Island. No archaeological finds were observed during this short visit. Information on known or suspected wreck sites

Figure 1: General map of the study area (Dagneau & Moore)



was collected and initial contacts were made with the diving community.

#### *Objectives*

The overall objective of this project is to provide information on the number and distribution of underwater archaeological sites to allow informed cultural resource management (CRM) decisions regarding the marine component of the NHS (Parks Canada 2003: 28-31, 36-37). The specific objectives of the 2008 survey were as follows:

- Begin a comprehensive side-scan sonar survey of the marine component of L'Anse aux Meadows NHS, with particular emphasis on areas bordering the terrestrial archaeological site as well as known underwater sites;
- Conduct selected target diving, shoreline searches and other reconnaissance work when weather and wind conditions preclude sonar surveying; and
- Meet local stakeholders and Parks Canada staff to provide an introduction to the UAS and the pro-

ject and to gather local information.

#### *Methodology*

This inventory combines several means of archaeological field investigation, including side-scan sonar, shoreline fieldwalking searches, shoreline dive searches and target or site diving, inspection and recording. Search areas are determined based on previous archaeological work, other known site locations, historical information including oral tradition, local topography and information from local fishermen (such as fishing gear snag spots).

Most of the planned survey work was to be done with the side-scan sonar system for fast and effective coverage of large areas of the seabed. The UAS employs a Klein 3000 side-scan sonar that is towed by its diving and survey boat *Red Bay* equipped with accurate differential GPS equipment. Unfortunately, the *Red Bay's* trailer was damaged on the highway while en route to L'Anse aux Meadows, so the boat was not available for the entire operation. Only limited sonar

Figure 2: Divers conducting an underwater survey in front of the Norse site, EjaV-1 (Moore)



trials with a rented boat could be accomplished.

In the absence of the side-scan sonar gear, the UAS team focused on diving searches and investigations. The diving operations were made from a UAS inflatable boat and a rented speed boat. In addition, shoreline fieldwalking searches were made at low tide. Relatively large areas of the tidal flats and shorelines were covered in this way. Three archaeological sites were discovered and partly studied in 2008 using these two methods, and include the Warrens Island Wreck, Bell Shoals Wreck and the Wreck Island Boat.

#### *Survey Areas and Site Descriptions*

##### *Side-scan Sonar Survey*

During one half-day when side-scan surveying could be deployed, a remote survey was conducted in an area northwest of Beak Point, around Mouse Island. Local fishermen had reported snagging fishing gear there and hauling out from the water a ship's timber in the past. Reportedly a schooner named the *Nelson* was lost in that area sometime during World War II. At the time, "Canadian authorities" based at Cape Bauld had to dynamite a projecting spar as it posed a hazard to navigation. No shipwreck was located during that brief survey. Some official accounts of this wrecking and the clearance work still remain to be found.

##### *Dive Searches*

Dive searches were conducted in front of the Norse settlement in Épaves Bay (73M6A1), as well as other locations through the park, namely New Harbour (Pond Cove, 73M4), Rudder Cove (Duck Pond Cove, 73M7), Atlantic Shoal (Lower Wreck Cove, 73M5) and Bell Shoals (Wreck Island, 73M1). A total of nearly 10 hours was spent underwater, mostly at shallow depths ranging from 1 to 8 meters.

In all cases, a team of two divers usually cover an area following specific depth lines or compass bearings. While searching for cultural remains, divers specify bottom type and depths to the surface using an underwater communication system. Waypoints are taken in the meantime with a handheld GPS to accurately record the diver search tracks, and relevant observations or discoveries. While conducting these searches, invaluable information was gathered on the sea bottom nature in order to guide future survey. Only one site was discovered during dive search survey. It constitutes the remains of a shipwreck lost on Bell shoals, North of Wreck Island, that will be addressed later.

##### *Shoreline Searches*

Terrestrial surveys are intended to be carried out along the shores at selected locations inside L'Anse aux Meadows NHS. The 2008 fieldwork included land searches in Médée Bay shores and Wreck Island. The first area, in Médée Bay, ranged from the government wharf to Beak Point traveling westward. It was chosen mainly for its easy access and a known history of occupation. The remains of a presumed "French Oven" are apparently located in the village of L'Anse aux Meadows, not far off the shore. Among a host of later and more modern artefacts on the foreshore, a number of finds of ceramics from the eighteenth or nineteenth centuries were found, probably of French and British origin.

A land search was also conducted around the circumference of Wreck Island, following a local custom stating that a vessel carrying a large bronze bell en route for England was wrecked on Bell Shoals. Flint stones supposedly from a British ship's ballast have also been collected by local fishermen for many years and can still be found on the north shore of Wreck Island. Whether or not these two lines of evidence are related is not known at present. Interestingly, flint samples collected by the UAS and later analyzed by a geologist were found not to be indigenous to North-eastern America. The sampled chert in fact would correspond most probably to ship ballast originating from the Strait of Dover, separating France and England (Desrochers 2008).

##### *Bell Shoals Wreck (73M1A1)*

A few diagnostic shipwreck remains were discovered during a dive search around Bell Shoals, off Wreck Island. Divers encountered a brass gudgeon fragment, most probably from a ship's rudder, next to an iron knee and a nail. Meaningless for some, these small pieces of artefacts may indicate that a ship was stranded on the Bell Shoals before sinking in the deeper surrounding waters. These remains might relate to the ballast stones found on nearby Wreck Island or they may represent another navigation accident.

##### *Wreck Island Boat (73M1A2)*

A small, late 20th-century wooden boat was discovered on the rocks at the Northwestern end of Wreck Island. The site, named the Wreck Island Boat (73M1A2), consists of a small keeled lighter partly disassembled and with a broken sternpost.

*Warrens Island Wreck (73M2A1)*

This site consists of a portion of ship's hull preserved on the rocky sea bottom of the "Boat Channel", between Warrens Island and Beak Point on the mainland (Figure 3). The wreck was reported to the UAS by a local diver as well as a Parks Canada staff member, Clayton Colbourne. He graciously placed a marker buoy on the wreck prior to a UAS diving inspection.

ber on the remains. No evidence of sheeting was found either. A concentration of small stones (10-30 cm) situated on one side of the wreck could be considered as part of the ship's ballast and could also cover more structure. From these observations, this shipwreck most likely dates from the 19<sup>th</sup> century. Local residents refer to the wreck as the "Carrigan" (spelled variably) but there is no evidence supporting such identification for now.

Figure 3: Underwater site inspection on Warrens Island Wreck (Harris)



The highly eroded hull structure section is approximately 7 meters long and 2.5 meters wide. It includes 15 relatively flat and parallel futtocks, forming 8 to 9 assembled frames. Ceiling is not preserved, but the external planking is visible under and around the framing. These are fastened to the frames mostly with wooden treenails, even though a few copper alloy pins were also found. Many loose copper pins from lateral frame fastening are exposed here and there on the site. There is no evidence of a keel or other main axial tim-

*Beached Ship Timber (73M99X-001)*

A ship timber fragment found ashore in Médée Bay after a storm is believed to come from the Warrens Island Wreck. Since the construction type, dimensions and appearance of the timber are similar to the ones observed on the Warrens Island Wreck, it is very likely it is associated with the ship remains. Wood analysis conducted by Louis Laflèche at Parks Canada Ontario Service Center reveals the timber is made out of Birch (*Betula* sp.).

### *Langleycraag (73M8)*

The wreck of the *Langleycraag* stands high on Great Sacred Island's south shore where it was stranded on November 15, 1947. It is a highly visible and distinctive maritime archaeological site that attracts considerable interest from visitors to L'Anse aux Meadows. Despite the fact that most of the wreck lies on shore, it is possible that a debris field exists underwater. Indeed, local residents report that divers removed a bronze propeller in the 1970s. The wreck was apparently moved and tipped by a subsequent storm, around 1985-1990. Historical research on the ship and its loss remain to be completed. No archaeological investigation was carried out at the wreck site.

### *Conclusion*

These preliminary results are promising for the coming years. Now the UAS team has a better idea of L'Anse aux Meadows' operational environment and marine component. A few interesting sites were discovered and it is hoped more will be found in the study area with the use of a side-scan sonar in 2009. Excellent contacts were established with the local community, especially with fishermen and many Parks Canada local staff. The UAS team also benefited from

the use of the local Parks Canada facilities for the survey. An update on the project's progress will be provided in next year's PAO Archaeology Review.

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