

# UNDERWATER ARCHAEOLOGY AT L'ANSE AUX MEADOWS NATIONAL HISTORIC SITE OF CANADA IN 2009

Charles Dagneau and Jonathan Moore

Underwater Archaeology Service, Parks Canada

In 2008-2009 Parks Canada's Underwater Archaeology Service (UAS) completed a submerged cultural resource inventory of the marine component of L'Anse aux Meadows National Historic Site of Canada (hereafter NHS). The study area was 49km<sup>2</sup> and encompassed Sacred Bay and the adjacent minor inlets as well as numerous islands, shoals and reefs (Figure 1). Some work was also conducted in nearby Quirpon Harbour. This inventory was carried out to locate and evaluate a range of archaeological site types representing all chronological periods of regional history and prehistory. The main reason for the creation of the marine component of L'Anse aux Meadows NHS was to ensure the protection of the surrounding landscape and potential marine cultural remains associated with the terrestrial Norse site (EjAv-1). Although at the outset chances of finding marine sites related to this period were considered small, it was taken for granted that a full chronological range of sites could be found during the inventory. The following summary focuses on the 2009 fieldwork results. Information on 2008 fieldwork

can be found in last year's PAO Bulletin (Dagneau and Moore 2009).

## *Archaeological Background*

Prior to this inventory, Parks Canada underwater archaeologists conducted limited diving searches in Épaves Bay near the Norse site in the mid-1970s and another off Wreck Island in 2005. Although no sites were located in both cases, oral and written histories of wrecks from the local community guided the UAS team in new research avenues. Several interesting sites were investigated in 2008, namely the Warrens Island Wreck (73M2A1), the Wreck Island Boat (73M1A2) and the Bell Shoals Wreck (73M1A1). It was believed that more sites would be discovered in 2009 since the previous year's fieldwork had been impaired by bad weather and technical problems (Dagneau and Moore 2009).

## *Objectives*

This project aimed to gather information on the number and distribution of underwater archaeological sites within the marine component of the NHS in support of cultural resource management (Parks Canada 2003: 28-

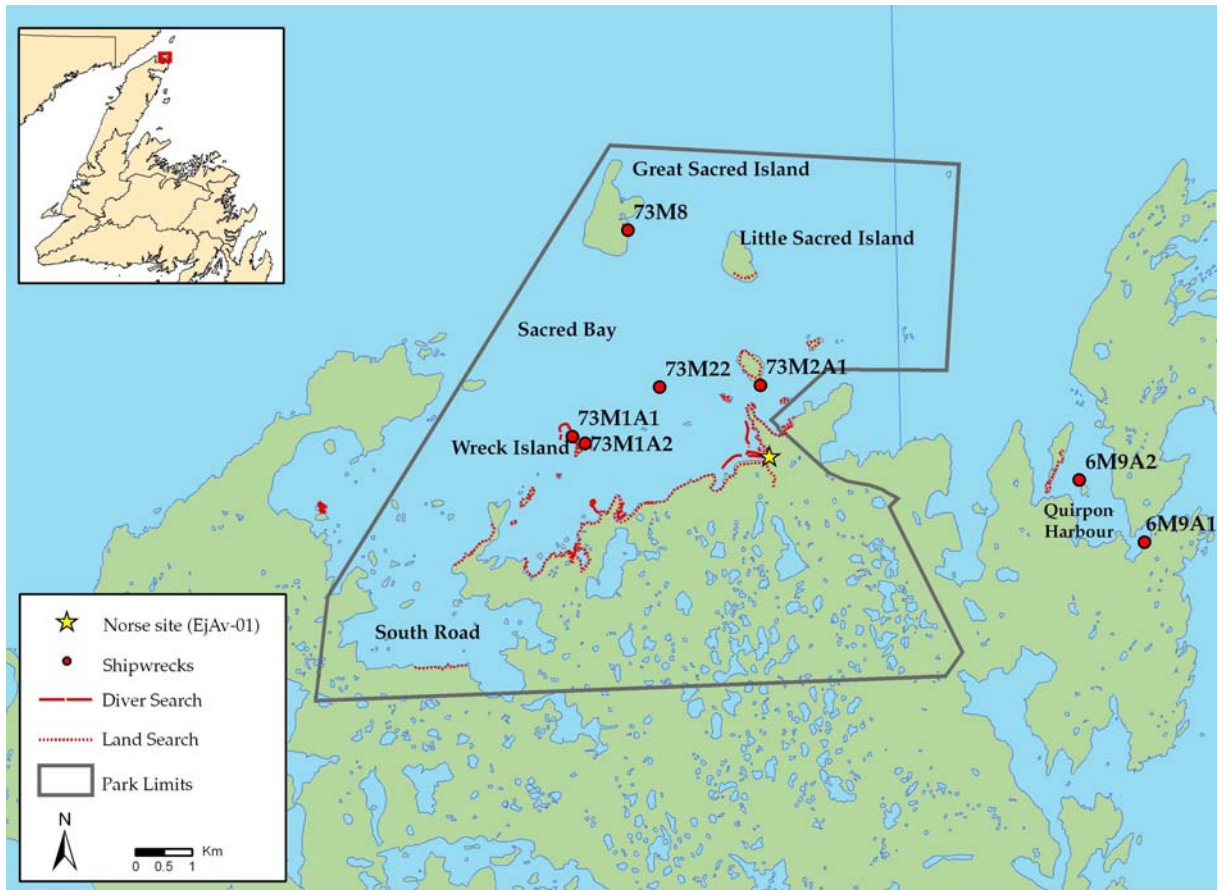


Figure 1 Map of the study area (Dagneau)

31, 36-37). The specific objectives of the 2009 survey were as follows:

- Complete a comprehensive side-scan sonar survey of the marine component of L'Anse aux Meadows NHS to meet requirements of its management plan, 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; and
- Work with local stakeholders and Parks Canada staff to gather local information and develop outreach products.

### **Methodology**

This inventory combined several means of archaeological field investigation, including side-scan sonar paired with a magnetometer, shoreline field-walking searches, shoreline dive

searches and target or site inspection and recording. Search areas were determined based on previous archaeological work, other known site locations, historical information, local topography and information from local fishermen (i.e.: fishing gear snag spots).

Most of the 2009 survey work was done with a side-scan sonar system for fast and effective coverage of large areas of the seabed. The UAS employed a Klein 3000 sonar paired with a Marine Magnetics SeaspY magnetometer that was towed by its diving and survey boat *Red Bay*; it in turn was equipped with accurate DGPS equipment. A great portion of the NHS marine component and all targeted zones were effectively covered by sonar. Work was also conducted outside the NHS boundary in Quirpon Harbour, an area that has seen European presence from the 16th century onward.

The diving operations for survey and

target verification were made from the *Red Bay* and a rigid-hull inflatable boat. Dive searches were conducted in front of the Norse settlement in *Épaves Bay* (73M6A1), as well as in other locations in the NHS, namely Bell Shoals (Wreck Island, 73M1), Black Duck and Skin Ponds (73M11, 73M12) and Franche Point (West Road, 73M23). Some selected dive searches were also carried out in Quirpon Harbour (6M9).

In all cases, a team of two underwater archaeologists usually covered an area following specific depth contours or compass bearings. While searching for cultural remains, divers noted bottom type and depths to the surface. Waypoints were taken from the surface with a handheld GPS to record the search tracks, and relevant observations or discoveries. In addition to the underwater survey, most tidal flats and shorelines between L'Anse aux Meadows and Curlew Point were covered by field walking at low tide, including many islands and shoals.

A total of 40 working days were spent in L'Anse aux Meadows NHS in 2008-2009, including 35 hours of diving at depths ranging from 1 to 35 meters. Team members included Jonathan Moore (permit holder), Charles Dagneau, Ryan Harris, Filippo Ronca, Thierry Boyer and Chriss Ludin.

#### ***Table of Diving Statistics***

	Days	Dives	Bottom time (hours)
2008	10	9	10
2009	30	37	25
Total	40	46	35

#### ***Site Descriptions***

##### ***Langleecrag (73M8A1)***

Half of the hull of the *Langleecrag* stands high on Great Sacred Island's east 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. Local residents report that divers removed a bronze propeller in the 1970s as well as many other

things. Reportedly, the wreck was broken in half in 1948 and then moved and partly destroyed by subsequent storms around 1985-1990.

The main 50 m long hull section standing on shore represents the fairly intact rear half of the ship, with a mast and the stern castle still in place. A stem piece and two smaller ship sections are found on land within a debris field more than 200 m long, 50 m wide. The engine, a boiler and three anchors are also associated with this wreckage on land. An intensive side-scan sonar and magnetometer survey conducted directly off the east side of the island has mapped scattered metal hull remains and debris as far as 180 m offshore on an underwater slope to a depth of 35 m. Although no diving was carried out on site, at least a second boiler and part of a deck cabin are recognizable in sonar and magnetometer mosaics.

##### ***Benegal Shoal Wreck (73M22A1)***

Local fishermen have reported snagging fishing gear and hauling out from the water ship's timbers in the past around Benegal Shoal, off Warrens Island. A schooner named the *Nelson* was lost in that area in 1939. At the time, "Canadian authorities" based at Cape Bauld had to dynamite a projecting spar as it posed a hazard to navigation.

A shipwreck believed to be the *Nelson* was located by side-scan sonar off Benegal Shoal by the UAS. This discovery was followed-up by two episodes of diving inspection and recording. The wreck consists of the remains of a wooden hull about 27 m long and 9 m wide exposed at both ends. An anchor, the windlass and a few wooden remains are visible in the aft section of the shipwreck. Eroded frames emerge from the sediment; deck planking and transom remains are also observable in the aft section, including the wheel and steering mechanism. Several early 20th-century artefacts are scattered over the site, including a navigation speed log, a navigation light's lens, tools, coils of steel cable and two old automobile tires possibly used as bumpers. Approxi-



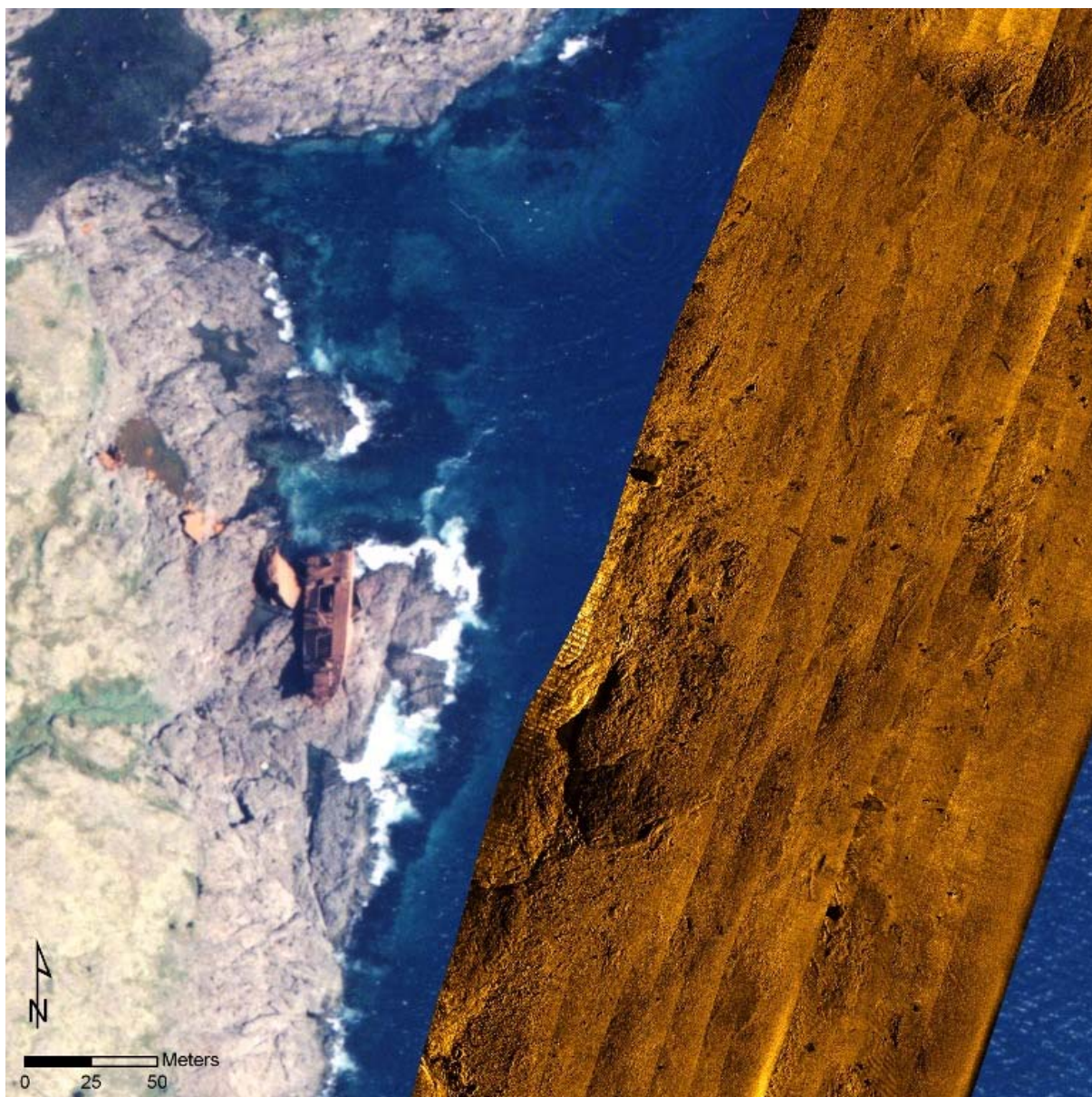


Figure 2 Air photo and sonar mosaic of the Langleecrag (Harris and Dagneau, Parks Canada; Newfoundland and Labrador Lands Surveys & Mapping Division)

mately 40 to 70 percent of the ship has not survived and structures are flattened due to ice action and a multitude of other site formation processes.

This shipwreck is believed to be the *Nelson*, a 60-ton fishing schooner built in Trinity Bay in 1906 and owned by Captain John B. Smith of South River, Conception Bay (Ship Information Database 2008; Parsons 2003). On October 18, 1939, returning from the Lab-

rador fishery, the ship struck Little Sacred Island during a storm at night and sank soon after. Captain Smith, his sons William, Clarence and Cecil, and grandson Jack were on board, with three other men. A letter from William Smith to his sister Marion Carson describes in detail the tragedy in which Cecil Smith and Tommy Bussey lost their lives (Crane 2004; Parsons 2003: 52-57). These events, and the rescue of the survivors, are still remembered in

L'Anse aux Meadows where they represent an important part of the local oral history. Further research is currently being done to confirm the identification of this shipwreck as the *Nelson*.

#### ***St. Vincent Island Wreck (6M9A2)***

The remains of a fishing schooner were located in Quirpon Harbour near St. Vincent Island (Salt Island). This wreck consists of the lower hull of a wooden ship 24 m long and 7 m wide, and is well preserved. Frames project from the bottom, and deck beams, stanchions and transom remains are visible. Features and artefacts are seen on the shipwreck itself, including a windlass, the anchor chain, and a ship stove. Approximately 20 to 40 percent of the original vessel has disappeared (mostly superstructure) and structures are flattened due to deterioration, corrosion and ice action. The ship is not yet associated with a known historical ship casualty, but it probably dates from the mid 20th century.

#### ***Quirpon Wreck 1 (6M9A1)***

Part of a wooden hull and four cannon believed to be the remains of an 18th century French vessel are located in Little Quirpon Harbour, Noble Cove (EjAu-3). Numerous early 18th-century French artefacts were collected by local divers at Herbert Point, on the south end of Quirpon Island. The site was first studied archaeologically by the Newfoundland Marine Archaeology Society in 1981 and revisited in 2009 by the UAS for monitoring purposes (Barber 1981). Two small guns less than 2 m in length were found close together, with some lead caulking material and Normandy stoneware fragments. Wooden planks and frames were observed emerging from the sand here and there, but no definite hull section was located and the site looks well covered. A third and fourth cannon reported by J.M. Barber could not be relocated.

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

A few diagnostic shipwreck remains were discovered near Bell Shoals, off Wreck Island, in 2008, namely a brass gudgeon fragment, most probably from a ship's rudder, an

iron knee and a nail. These artefacts as well as ballast stones found on nearby Wreck Island were believed to indicate the presence of shipwreck in the surrounding waters (Dagneau and Moore 2009). An intensive side-scan sonar survey of Bell Shoals and the perimeter of Wreck Island, and a few diving searches were conducted in 2009 to locate a possible shipwreck. However, no further evidence was found.

#### ***Shoreline and Inter-Tidal Field Walking***

Field walking was conducted at low tide on most of L'Anse aux Meadows NHS's shorelines and tidal flats not covered in 2008, from Medée Bay to Curlew Point. Recent boat remains and scattered ship timbers were located in Wreck Cove and South Road. A dozen boat wrecks were observed on beaches and rocks on the western side of Curlew Point specifically. These remains represent abandoned or discarded local boats of two distinctive types: long boats (shallops) and flat skiffs.

#### ***Conclusion***

A submerged cultural resource inventory of L'Anse aux Meadows NHS's marine component was completed between 2008 and 2009. It was possible to survey all of the targeted underwater and inter-tidal areas in a timely manner thanks to cooperative weather conditions and efficient remote sensing equipment and strategy.

Two shipwrecks were investigated, the first near St. Vincent Island in Quirpon Harbour and the second near the Benegal Shoal; the latter is possibly the remains of the 1939 fishing schooner *Nelson*. The wreck site and debris field of the *Langleecrag* on Great Sacred Island and its offshore components were documented and better defined. A number of recent small boat remains found by field walking searches were documented. Finally, an 18th century wreck site was revisited in Little Quirpon Harbour for monitoring purposes.

Importantly, no Norse sites, features or artefacts were found during the 2008-2009 surveys. Side-scan sonar surveying and three diving searches of Épaves Bay revealed that its



seabed consists of sand, cobbles, and exposed bedrock, thereby presenting a very poor preservation environment and low artefact potential. Selected tidal flats and eroding shorelines throughout the study area do offer site and artefact potential however.

#### Acknowledgments

The UAS wishes to express its acknowledgments to Parks Canada staff members Loretta Decker (Site Supervisor), Jeff Anderson (Field Unit Superintendent) and to all of the other Parks employees involved for the help they provided. We extend a special thanks to Donald Bartlett who served as a guide and boat operator. The UAS also thanks individuals who provided information on local history and potential archaeological sites in the study area: Clayton Colbourne, Damian Bartlett, Don Bartlett, Lloyd Decker, Loretta Decker, William Bartlett, Dennis Hedderson, Clarence Hedderson, Ed Hedderson, Leonard and Kathleen Tucker and many others.

#### References

Dagneau, C. and J. Moore  
2009 Underwater Archaeology at L'Anse aux Meadows National Historic Site of Canada in 2008. In *Provincial Archaeology Office 2008 Archaeology Review*. Government of Newfoundland and Labrador, vol. 7, pp. 25-30.

Parks Canada  
2003 *L'Anse aux Meadows National Historic Site of Canada Management Plan*. Parks Canada, Ottawa.

Barber, J.M.  
1981 *The Newfoundland Marine Archaeology Society Survey Expedition in 1981*. SAE Science Limited, Newfoundland Marine Archaeology Society, unpublished report.

Parsons, R.C.  
2003 Tragedy on Little Sacred Island, *Wind and Wave. Sea Tales From Around Our Coast*, pp. 52-57. Creative Publishing, St. John's.

Ship Information Database  
2003 *Ship Information Database*. Canadian Heritage Information Network (Available at [http://daryl.chin.gc.ca:8000/basisbwdocs/sid/\\_explain\\_e.html](http://daryl.chin.gc.ca:8000/basisbwdocs/sid/_explain_e.html), December 12, 2009).

Newfoundland and Labrador Lands Surveys & Mapping Division  
1995 Air photograph of Great Sacred Island showing the *Langleecrag*. Newfoundland and Labrador Lands Surveys & Mapping Division, ref.: 95-401/95008, scale 1:125,000.

Figure 3 A navigation speed log and a hand tool on the hull remains of Benegal Shoal Wreck, possibly the Nelson. The scale bar is graduated at 10 cm increments (Boyer, Parks Canada)

