

Known and Potential Submerged Archaeological Resources

The St. Croix River has a rich and important maritime history that is tied to pre-contact marine adaption, very early 17th century French colonial exploration and settlement, 18th century trade and settlement, and 19th-20th century logging, shipping, shipbuilding, quarrying, steamship lines, fishing, and recreational boating. Historically, the river has experienced high levels of ship and boat traffic and has the potential for significant submerged cultural resources.

Shipwrecks

Despite intense levels of vessel traffic and significant shipbuilding on the St. Croix River, there are few known or recorded shipwrecks in the vicinity of St. Croix Island. Research for this report revealed few historical accounts, scientific studies or modern-day users, such as fishermen or recreational divers, that can pinpoint known wrecks in the vicinity of St. Croix Island and very few in the St. Croix River in general.

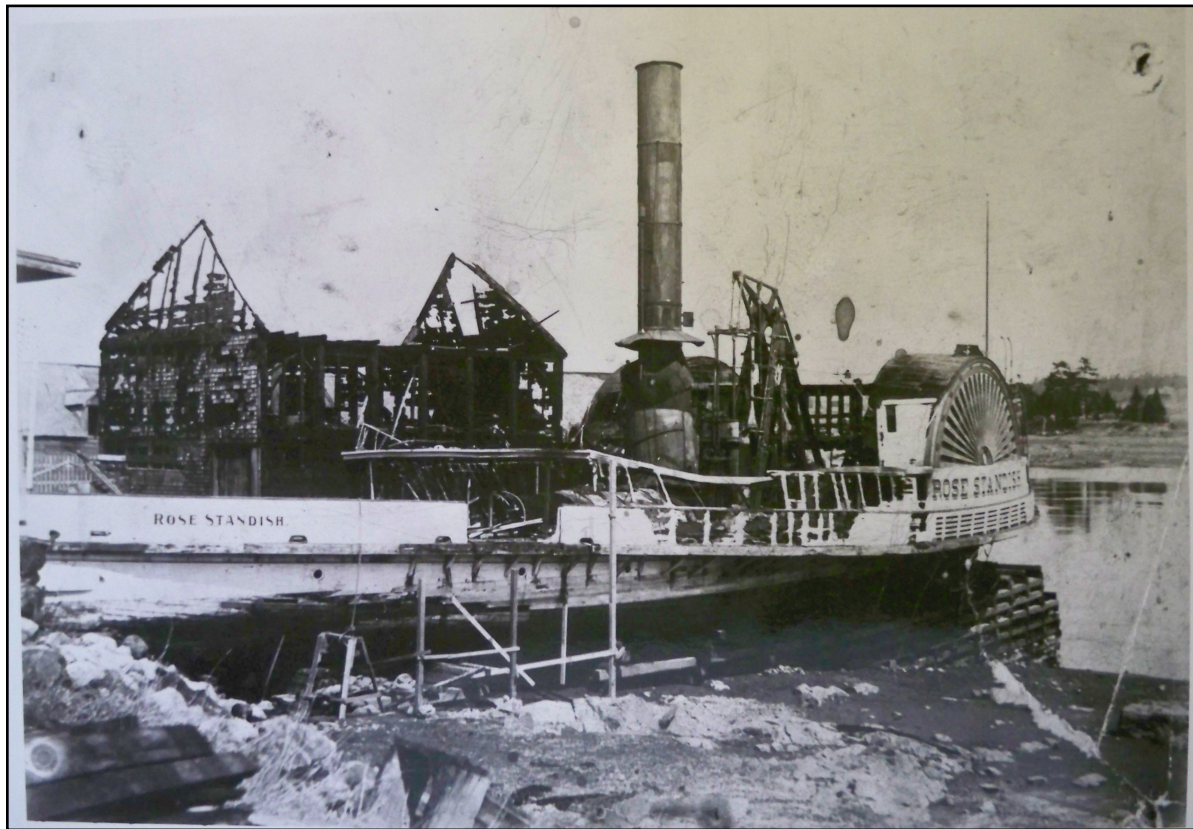


Figure 4.01. *Rose Standish* burnt in 1900

There are some records of vessels grounding in the river, but most seem to have settled on the mud flats only to be refloated on the incoming tide. The tidal range in the river is considerable, sometimes approaching 25 feet or more. As a result, ships' captains frequently opted to settle their vessels on the bottom the river during low tide and re-float them again as water levels rose. In addition, it seems likely that the remains of any ships lost in the river were washed away over time by the heavy tidal flow, strong currents, and occasional floods. The steamer *Rose Standish*

was burned at the wharf in Calais in 1900, but her remains were subsequently removed (Figure 4.01). A schooner named *Repeat*, transiting the River in 1916, certainly experienced difficulties, but the evidence suggests she made it to port (Figure 4.03). Further north, in Big Lake, the remains of one of the early steamboats operating in the region, the *Princeton* (Figure 4.04), can be found, and further south, at Broad Cove, Eastport, there are the remains of 5 historic shipwrecks from the Civil War, all of which were burned during the first 20 years of the 20th century for scrap iron. These include the *USS Minnesota*; Admiral Dupont's flagship the *USS Wabash*; the *USS Voymon* (the last 74 gun ship of the line ever built by the US Navy); Admiral Farragut's Flagship the *USS Franklin* (Figure 4.02); and the *USS Richmond*. "Clark Ledge" off Eastport has long been recognized as a hazard to navigation and reportedly the sight of shipwrecks. Further off shore, there are at least 13 known wrecks around Grand Mahan Island in the Bay of Fundy. Yet, significant as these resources are, none are reported to be close to St. Croix Island.



Figure 4.02. *USS Franklin* being prepared for burning at Broad Cove, Eastport in 1916. Courtesy of the Calais Free Library.



Figure 4.03. Schooner *Repeat* in trouble near St. Croix Island in 1916.



Figure 4.04. The steam tug *Princeton*, reportedly lost in Big Lake, Maine

In his Historic Structure Report for the St. Croix River Light Station, Snell (1975) claims that there is historical evidence for a large number of shipwrecks in the St. Croix River. Further investigation of this reveals that Snell was referring to a single letter dated 23 September 1853 from Theo. Cary, Master of the Steamer *Pequasset* out of Eastport. Cary's letter was submitted to Congress as part of a package of material designed to make the case for a navigational beacons on St. Croix Island and at the "ledge," four miles south of Calais. Congress appropriated \$9000 for these beacons the following year. Cary does indeed mention, "many vessels wrecked" at St. Croix Island, but there is little other evidence to substantiate the claim. While not completely dismissing the reference, we suspect it was part of the political maneuvering necessary to get the federal government to pay for a navigational beacon on the island, which would assist the steamship companies with their Eastport to Calais operations.

While wrecks in the St. Croix are few and far between, the sinking of *Barge No. 4* in 1912 was a notable exception. At 11 pm on June 26, 1912, on St. Croix River just up stream of "The Narrows," the Steamer *Grand Manan* collided with a barge owned and operated by the Bay State Dredging Company. The barge sank shortly thereafter killing three of its 8-man crew, including the vessel's captain. (United States, Circuit Court of Appeals, Ninth District 1914)

In the resulting lawsuit the Honorable Clarence Hale, exonerated the Bay State Dredging Company of any culpability and placed the blame solely on the Grand Manan Steamship Company.

If the remains of *Barge No. 4* were to be found, they would be located a significant distance from NPS property. While the barge could be construed as illustrative of early 20th century maritime and industrial activity on the St. Croix, there is little reason to think the NPS would have an interest in it.

There is historical evidence, however, for a shipwreck that is closely tied to early French colonization of St. Croix. The vessel would be highly significant both in its own terms and in its association with de Mont's expedition 1604-1607. Unfortunately, it is a considerable distance away, at the Digby Strait, the entrance to the Annapolis basin, Nova Scotia. It was there, on April 9, 1606, that Champlain and Pont Grave lost one of their coasting barques. The NPS and Parks Canada could, at some point in the future, consider a joint field expedition to see if any archaeological material associated with the barque remains.

Archaeological Material off St. Croix Island

While evidence of shipwrecks in the vicinity of St. Croix Island appears to be minimal, the presence of other cultural materials in water around the island seems more certain. In September 1977, a group of divers lead by Ralph Smith, a "Toronto businessman with an interest in history," conducted two days of reconnaissance dives around Treats Cove, Chapel Nubble, Wrights Nubble and the point of land to the north of the island (Figure 4.05). They recovered ceramics of various types (Figure 4.06). Unfortunately, it has not been possible to get any tighter provenience information for these finds, but the amateur investigations in 1977 certainly indicate that that the waters around St. Croix Island may possess a retrievable archaeological record (Smith 1978; Frace 1995).

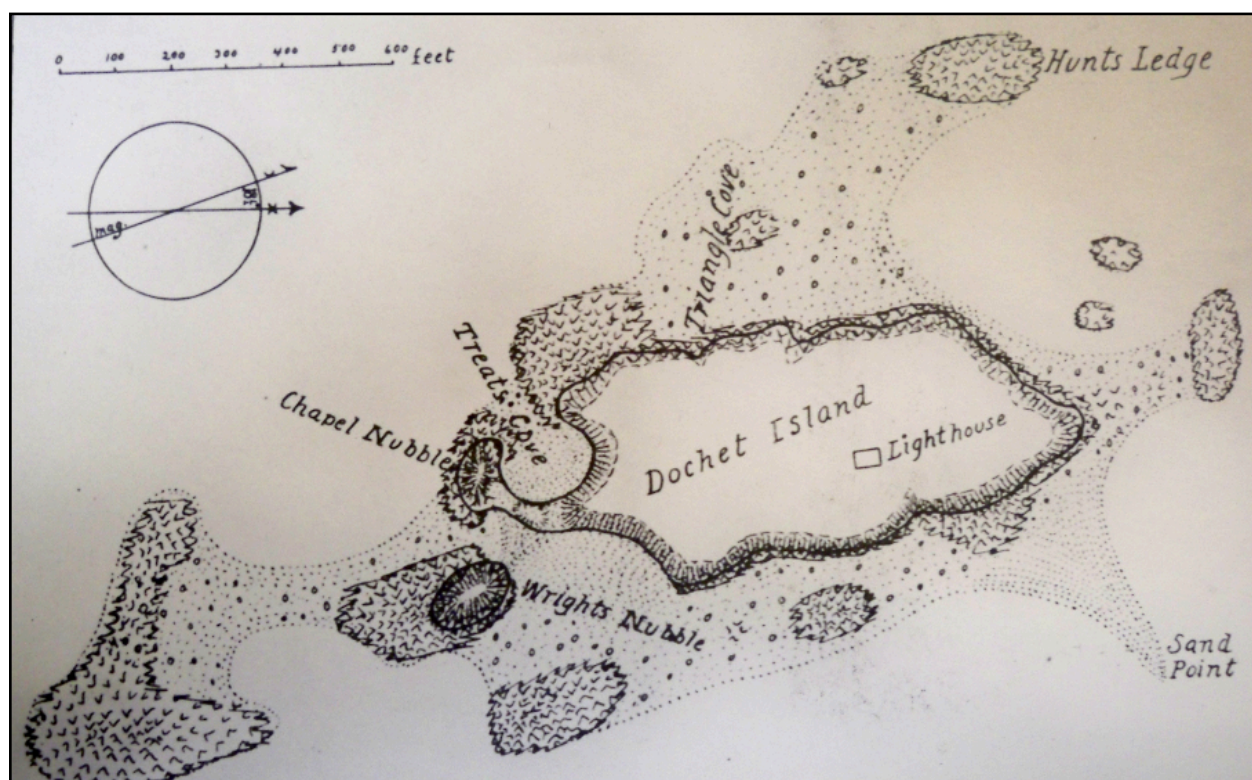


Figure 4.05. Map showing location of Treats Cove, Chapel Nubble, Wright Nubble (Acadia Archives)

The riverbed around the point of land on the north end of St. Croix Island is interesting (Figure 4.07). Scholars have suggested that this location may have been important to Champlain and de Monts in 1604 and 1605 as an area for accessing local natural resources (Pendery pers. com.). It is unclear the extent to which the reconnaissance dives in 1977 investigated this area or whether any of the recovered artifacts came from there, but it is certainly worth further field investigations.



Figure 4.06. Artifacts recovered from waters off the Southeast of St. Croix Island in 1977



Figure 4.07. Northern Part of St. Croix Island (Mather 2010).

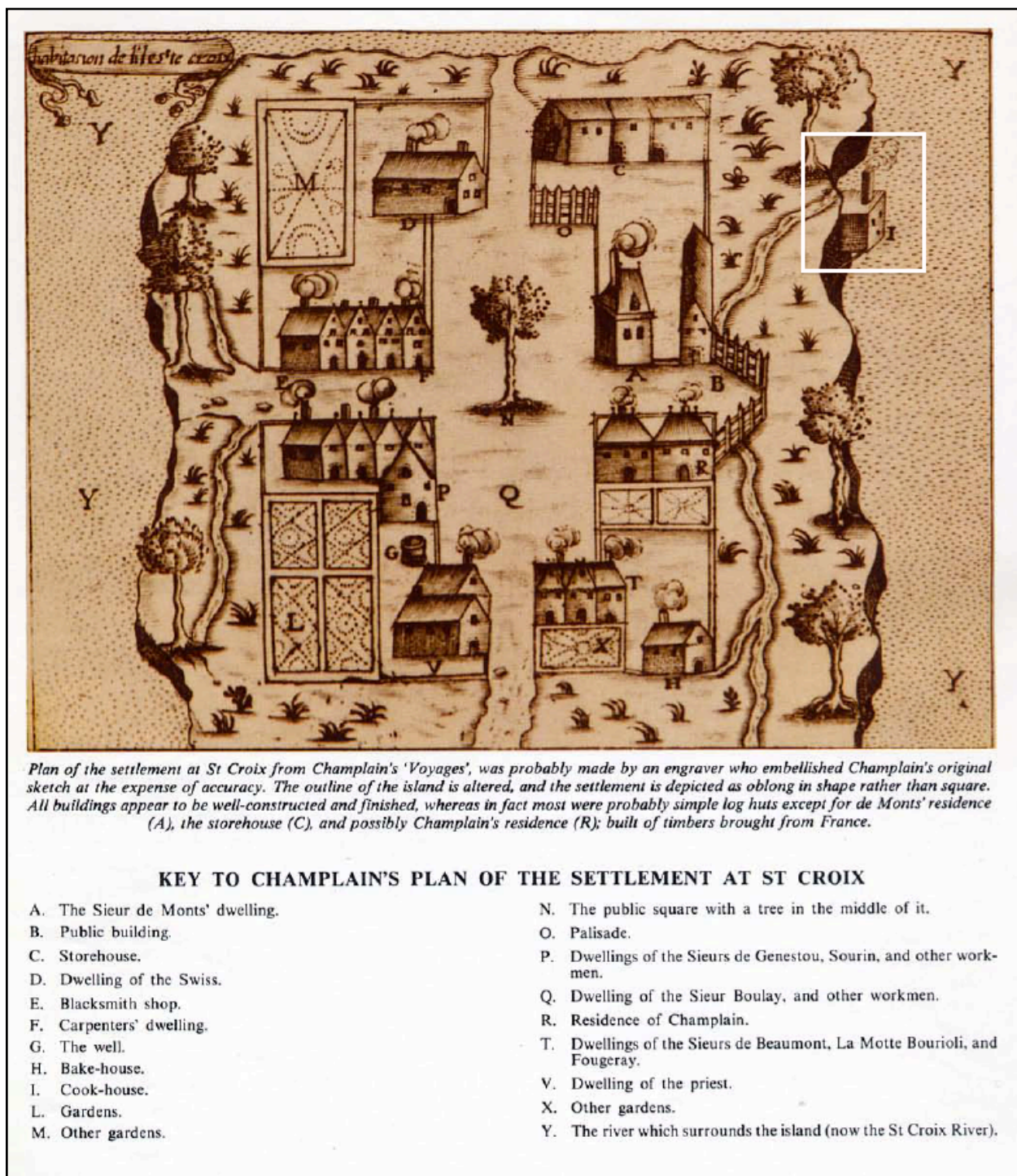


Figure 4.08. Champlain's Plan of the Settlement at St. Croix, 1604-1605, with the cookhouse highlighted. (From Ganong 1902)

The east side of St. Croix Island also warrants special attention. The coastal bluff there runs parallel to the navigation channel and has experienced considerable erosion. Increased vessel traffic on the river would be likely to further destabilize the shore. Concerns for this area are compounded by historical evidence that early French colonial structures were once located in on this part of the island. Champlain's "Plan of the Settlement on St. Croix" identifies a "cook-

house” on the edge of the bluff, supported by what appears to be bracing. The same part of the settlement may also have been used as a refuse dump (Figure 4.08). This historic usage, combined with the natural and anthropogenic forces destabilizing the shore, make the area particularly sensitive. It is possible that 17th century cultural material was either deposited or washed into the river on the northeast side of St. Croix Island and that the associated riverbed contains a significant archaeological record (Figure 4.09).



Figure 4.09. Northeast side of St. Croix Island in the vicinity of the supposed early 17th century cook-house (Mather 2010)

To the south of St. Croix Island is the smaller island upon which de Monts place defensive barricades and ordnance in 1604. That island and its surrounding waters might also hold significant archaeological resources. During conversations with local residents in Calais, URI researchers were told of reports of 17th century cannon shot being found on the Canadian side of the river a little downstream of St. Croix Island. While it has not been possible to verify these reports, its certainly feasible that an assemblage associated with de Monts defenses might be found in the St. Croix River. This too warrants further investigation.

Less significant, but still noteworthy, are potential archaeological resources associated with 19th and 20th century agriculture, light station activities, boating and recreation on the island. In the 19th century, the island had a boathouse and boat ramp. In addition, there are numerous photographs showing groins and erosion barriers on the south end of the island. We know that

cultural material from the 19th century survives on the island, as evidenced by the remains of one of Elison Small's (the lighthouse keeper) motor vehicles (Figure 4.10), which can still be seen on the island. In addition, the island was used as a recreation and picnic spot in the 19th and 20th centuries. All these activities could have left an archaeological record.



Figure 4.10. The axle from the lighthouse keeper's vehicle (Mather 2010)

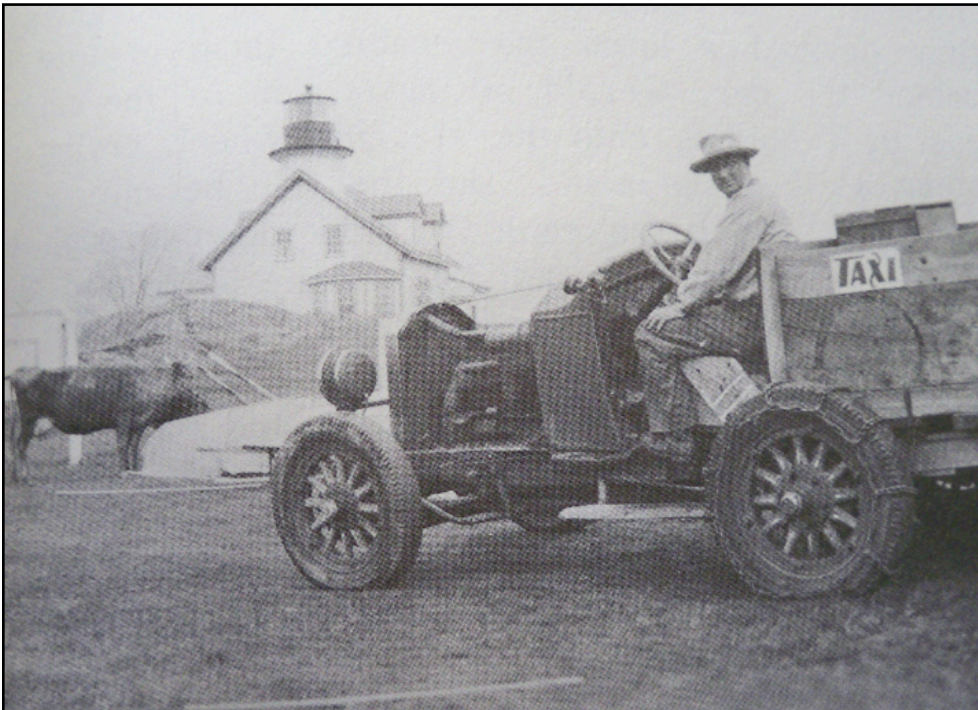


Figure 4.11. The lighthouse keeper, Elison Small's vehicle on St. Croix Island (Small 1986)

Fisheries Cultural Resources

It is also likely that the St. Croix River contains remnants of the region's historic fishing activities, including weirs, pots, boats and possibly nets. While there is more historical evidence of fishing in Passamaquoddy Bay than in the St. Croix River, the River certainly possessed significant extractable marine resources including lobster, salmon and alewives. Years of building and maintaining weirs seem likely to have left archaeological remains. Patterned fragment of stakes or pilings, as well all weights are the most likely physical remains underwater. Versions of NOAA charts 801 Calais to West Quoddy Head and 13328 Passamaquoddy Bay and St. Croix River issued between the mid 1960s and the late 1980s report ruins just south of the point at Devils Head, although not at Pettigrove Point. The 1992 version of 13328 show no ruins at Devil's Head but represent about two dozen weirs beginning at Red Beach and running south along the St. Croix River. The number of weirs on the chart increases further south.

Archaeological Material off Red Beach

Even a cursory examination of the St Croix River indicates that cultural material associated with the region's extensive 19th century lumber, granite, plaster and shipbuilding businesses are to be found in the river and along its banks. At Calais and St. Stephens the remains of docks, wharfs, cribbing, and timber products can be seen at low tide and it is likely that acoustic geophysical survey of the river area around St. Croix Island would reveal logs, timber products and other cultural material associated with the region's once extensive lumber businesses.

Perhaps more important to the NPS is the industrial complex at Red Beach Cove, which falls within the boundaries of the St. Croix International Historic Site. This area certainly has an extensive and fragile intertidal archaeological record. This includes not only the remains of wharfs and riverside buildings, but also artifacts including glass and ceramics that are easily identifiable at low tide. The Red Beach Cove intertidal archaeological record should certainly be of concern to the National Park Service.



Figure 4.12. Historic Structures at Red Beach Cove (Mather 2010)



Figure 4.13. Glass bottle neck, Red Beach Cove (Mather 2010)



Figure 4.14. Glass handle, Red Beach Cove (Mather 2010)

Pre-Contact Watercraft

Indian groups on the St. Croix River built different kinds of canoes for ocean and inland navigation. The former were larger, perhaps up to 20' long, while the latter were smaller and capable of being portaged around un-navigable parts of rivers. Native American canoes were made of birch bark and animal skins and certainly could have survived if fully or partially buried in river sediments.

Other Cultural Resource Considerations

While beyond the specific requirements for this study, researchers noted two additional cultural resource concerns. First, the National Park Service should consider the visual impacts of the proposed LNG facility on St. Croix Island International Historic Site. Second, the City of Calais should consider fully the potential impacts of the LNG facility on Native American archaeological sites at Devil's Head.

Conclusions and Recommendations

In response to the possible siting of an LNG receiving, storage and vaporizing facility approximately 2.5 miles north of St. Croix International Historic Site, on the St. Croix River, Maine, the National Park Service contracted URI to study of the maritime history and potential maritime heritage resources at or in the vicinity of the site. The work included park visits, a preliminary pedestrian survey, literature reviews, historical and archival research, and meetings with local experts. While this work focused on National Park Service property at both St. Croix Island and at Red Beach, it also has relevance for cultural resource managers for the State of Maine and their colleagues across the boarder in Canada.

The historical and archaeological significance of St. Croix Island has long been recognized as the fine “Overview and Assessment” by Johnson in 1996 firmly demonstrates. Perhaps the most important gap in NPS understanding of the site relates to its maritime history, underwater archaeology and potential for submerged cultural resources. This study as gone some way to addressing that need.

For several thousand years, the 75-mile St. Croix River, with its often-exposed granite bedrock, substantial tidal range, vibrant marine resources and access to the forest, has strongly influenced the way people have lived on its banks and navigated its waters. At different times, Native Americans, 17th century French colonists and 19th-century North American lumbermen each used the river, its energy and its resources. The twice-daily cyclical change from high to low water, altered conditions on the river rhythmically, and no people have successfully lived or worked there without mastering, or at least understanding, the implications of those changes. To one extent or another, people of the St. Croix River valley adapted to and altered their environment leaving cultural markers on the landscape that can still be seen today.

From the current NPS perspective, the most important historic cultural resources on St. Croix Island are those associated with attempted French settlement of the island between 1604-1605. The enterprise lead by Pierre du Gast, Sieur de Monts and Samuel de Champlain, accompanied by 77 men, was an extension of French experience and expertise in the Western Atlantic, and although ultimately short lived, it laid down the strategic maritime importance of the island as a trading post and commercial entrepot. As a geographic marker, St. Croix River persisted over time, first separating New England from New France and subsequently the United States from Canada.

Archaeological work on St. Croix Island has a long, although certainly not perfect, heritage. However, from the late 18th century work by Pagan and Wright on the island, to the excavations by Wendell Hadlock in the 1950s and Temple University in the late 1960s, one thing is clear – St. Croix Island has highly significant archaeological deposits, representing some of the earliest European archaeological sites in the United States. The extent for submerged archaeological material, however, is undetermined. It is certainly possible that the waters around St. Croix Island contain archaeological sites and at least one non-professional diving project identified ceramics and other artifacts around the northern and southern end of the island.

Potential Native American sites along the St. Croix are also important. Evidence indicates that Native Americans occupied the St. Croix River Valley for at least 3,500 years prior to European settlement and used the island as a food storage area. Coastal and marine resources certainly played an important role in life, sustenance and trade. Specialized canoes, one kind for inland navigation and the other for oceanic voyaging, provided the cornerstone of Indian transportation systems. Some of these canoes were up to 20' long. The Etchemin and Wabanaki were skilled at hunting marine mammals and catching fresh and saltwater fish using weirs, nets, hooks and lines, and spears.

Temple University excavations in the late 1960s identified Native American sites on St. Croix Island, although, of course, the focus of these archaeological investigations centered on de Morts' settlement. In subsequent years, archaeologists also identified Native American sites at Red Beach Cove and Devil's Head. In several cases these sites were located at strategic points in the river for weir fishing. It is certainly possible that the waters around St. Croix Island contain Native American archaeological deposits.

The most numerous, although not necessarily the most important, historic and archaeological sites along the St. Croix River date from the 19th century. Starting in the late 18th century and accelerating during the 19th, the landscape of the St. Croix River changed dramatically. In large measure, this was based on the extraction of natural resources from the region, particularly lumber, but also fish and granite as well as the processing of plaster. It was the lumber industry, however, that stimulated and dominated development, resulting not only the exportation of lumber but also the development of commercial centers at Calais and St. Stephen, which also acted as centers for regional shipping and shipbuilding. By the mid-19th century, more than a thousand ships and 100 million feet of lumber and related products every year transited the St. Croix River. Although not the largest lumber-river in Maine, it was representative of the industry at large and illustrative of the kinds of physical changes to the environment and associated cultural markers that 19th century logging had on the State.

The physical impacts on the environment created a cultural landscape that included deforestation, shipyards, urban development, navigation corridors, docks, wharfs, mills, cut timber, and even such things as slab wood and log edgings that sank quickly to form traps for saw dust and other debris. There appear, however, to be few, if any, shipwrecks. Nevertheless, even a cursory look at the St. Croix River today reveals markers of 19th century development. While most of these markers are beyond NPS boundaries, the industrial complex at Red Beach is an exception. Here the remains of wharfs, buildings and industrial processing can be found. In addition, on St. Croix Island itself are the remains and cultural material associated with 19th century farming and the lighthouse established in 1856.

Work by Loendorf; Johnson and Wilson; and Pendery have addressed the archaeological sensitivity of the Red Beach Cove tracts. While archaeologists may have disagreed as to the importance of the archaeological material at Red Beach, they have hitherto not fully evaluated this material from the maritime perspective. Red Beach represents part of the expansive maritime and navigation history of the St. Croix River. It is an industrial entity from a period that shaped many of the human interactions with the river, and, as such, has significance to the region's environmental and human histories.

Perhaps the longest and most consistent human activity on the St. Croix River has been fishing. The remains of fishing activities from boats, to traps, weights, nets, weirs, and stakes are all possible within National Park Service waters.

Recommendations for Fieldwork

Fieldwork Recommendations for the National Parks Service, Submerged Resources Center (SRC)

Our recommendations for fieldwork by the NPS SRC at St. Croix Island International Historic Site are identified below. In recognition of potential time and budgetary constraints, these items have been listed in order of priority. We recommend that field operations be a combination of marine geophysical survey, terrestrial pedestrian survey, and diver reconnaissance. Our recommendations are that the NPS SRU should conduct:

1. Marine geophysical survey of the St. Croix Island National Historic Park bottom lands, both at St Croix Island itself and at the Red Beach parcels. The park boundary extends down to MLLW. The coastline in these areas is rocky in parts and prone to shoaling in others. In addition, there is a substantial tidal range – sometimes in the order of 25'. It is likely, therefore, that the survey vessel will be periodically located outside the park boundary but will be collecting data from inside the park boundary. The NPS should use survey quality GPS to control data acquisition and should consider side scan sonar, marine magnetometer and RoxAnn bottom type classification instrumentation.
2. Controlled pedestrian survey of the intertidal zone adjacent to de Mont's cookhouse on the northeast side of St. Croix Island as indicated on the on the Champlain map. This survey should include the use of a metal detector. (Figure 5.01)
3. Reconnaissance dives and controlled visual survey using underwater video and/or photography as well as an underwater metal detector of the waters adjacent to de Mont's cookhouse on the northeast side of St. Croix Island as indicated on the on the Champlain map. The strong tidal flow and river currents will only allow a relatively short diving window – perhaps as little as 1.5 hours. (Figure 5.01)
4. Reconnaissance dives and controlled visual survey using underwater video and/or photography as well as an underwater metal detector around the north end of St. Croix Island and the south and southwest part of St Croix Island near Treats' Cove, Chapel Nubble and Wright's Nubble. (Figure 5.01)
5. Controlled pedestrian survey of the intertidal zone off the Red Beach parcels of Park Service property at low tide. We further recommend laser imaging of the extant structures associated with the former Red Beach Industrial Complex. (Figure 5.02)



Figure 5.01. Areas at St. Croix Island Recommended for either Reconnaissance Dives and Controlled Visual Survey or Controlled Pedestrian Survey (base map – aerial photograph from Acadia National Park Archives)



Figure 5.02. Area at Red Beach Recommended for Pedestrian Survey (base map - ArcGIS Map Service, World Imagery)

Fieldwork Recommendations for the State of Maine, or the NPS in Cooperation with Parks Canada.

The NPS SRC is restricted to working within the NPS park boundaries. There are strong arguments, however, for allowing the SRC to survey in waters immediately adjacent to the park, particularly with a site as historically significant as St. Croix. It is possible, for example, that some of the earliest French colonial archaeological remains in the New World are in the waters adjacent to the park. Given this, the following additional survey recommendations are made either for the NPS, if circumstances change such that the SRU can work just outside the park boundaries, or for the State of Maine which owns the bottomlands within US jurisdiction on the St. Croix River.

1. Geophysical survey of as much of the width of the St. Croix River as safe navigation permits for a distance of 1.0 nautical miles north (upstream) of the radio tower/navigation beacon on St. Croix Island to 1.5 nautical miles south (downstream) of the radio tower/navigation beacon on St. Croix Island. This should include side scan sonar, and if possible multibeam bathymetry and marine magnetometer surveys (Figure 5.03).
2. Reconnaissance dives and controlled visual survey using underwater video and/or photography around the eastern side of Little Dochet Island. If possible this survey should also include the use of a metal detector (Figure 5.04).



Figure 5.03. Map showing recommended northwest and southeast extents of marine geophysical survey (base map ArcGIS Map Service, World Imagery).

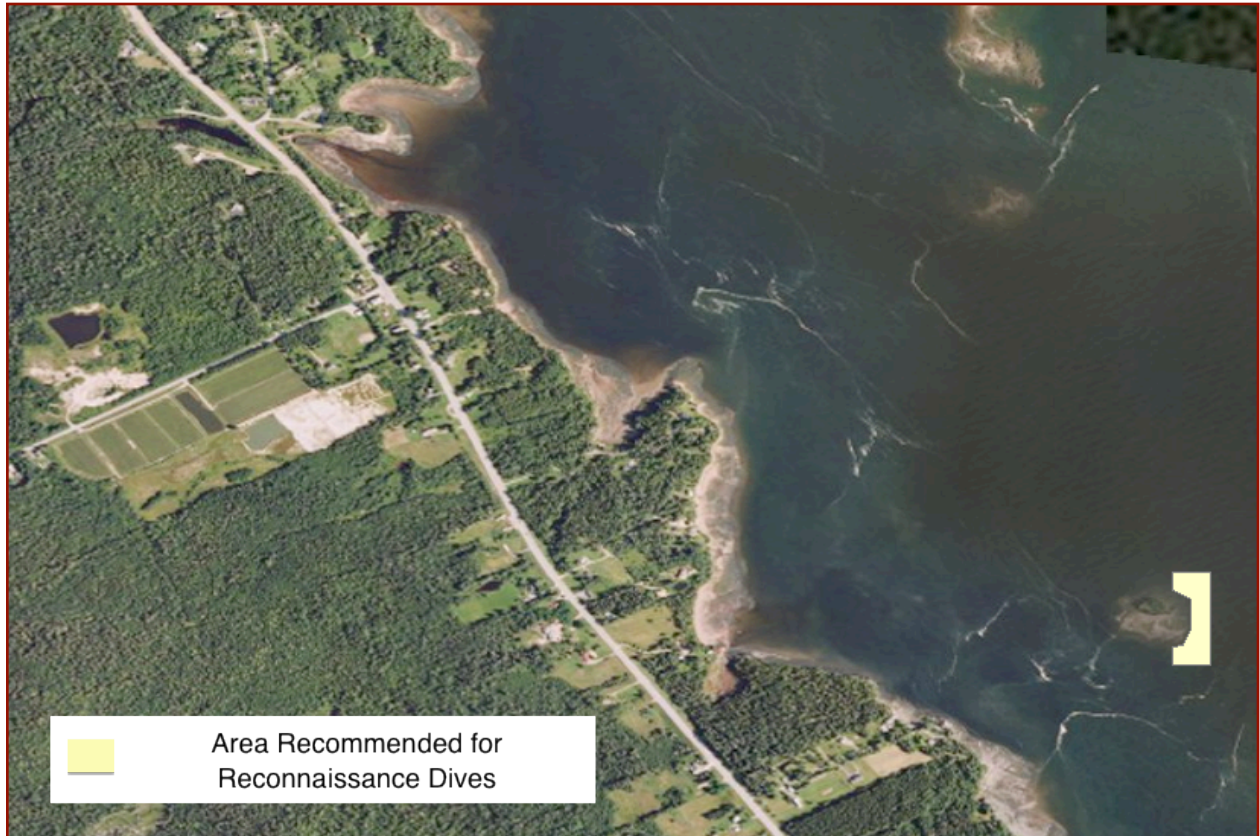


Figure 5.04. Area at Little Docket Island Recommended for Reconnaissance Dives and Controlled Visual Survey (base map - ArcGIS Map Service, World Imagery)

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