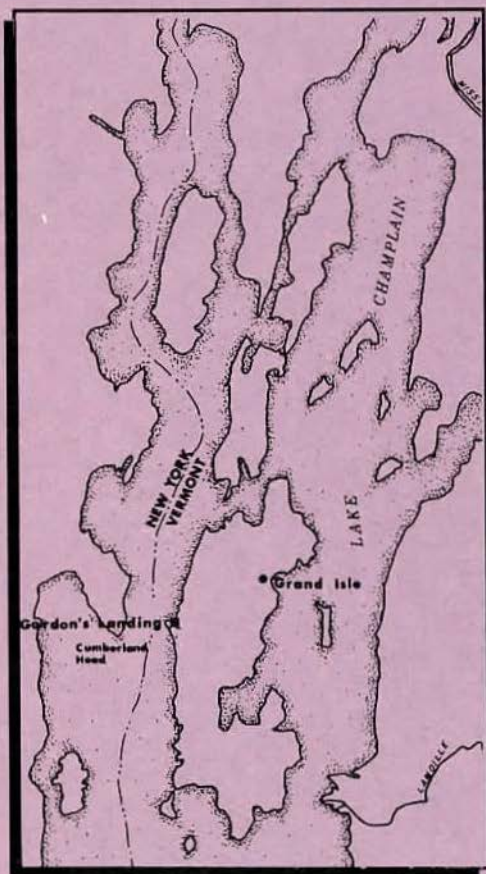


4,500 Years at Gordon's Landing

Archaeology at the Grand Isle Fish Hatchery



Consulting Archaeology Program
University of Vermont
1992

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Vermont's Grand Isle Fish Hatchery stands at the strategic location of Gordon's Landing in Grand Isle, Vermont, where the narrow distance across Lake Champlain has long provided a convenient crossing. Today people converge on the Lake Champlain Transportation Company's ferry landing for quick and scenic passage across the lake in all but the most extreme winter months. Historical records tell us that lake travelers have been coming to the area for ferry crossings since the early years of Euro-American settlement in the Lake Champlain islands. In addition, recent archaeological studies indicate that Native Americans occupied this lakeside location as many as 4,500 years ago.

The University of Vermont's Consulting Archaeology Program conducted archaeological investigations at the fish hatchery in 1988 and 1990-91 at the request of the Vermont Department of State Buildings. The studies were undertaken as part of the planning process before construction of the hatchery started. Federal laws and regulations designed to protect important cultural resources required identification, evaluation and excavation of important archaeological sites that were located within the project construction area.

Archaeological sites such as the four identified at Gordon's Landing are significant, non-renewable resources which represent Vermont's rich historical and cultural heritage. Prehistoric archaeological sites contain the only record of 400 generations of Native American life in the Champlain Valley. Archaeological sites provide unique information about Native American responses to major changes in climate and about Native American use of the region's fisheries, wildlife and forest resources.



Archaeological deposits at historic sites from the more recent past can contain invaluable information about the sites and the lives of their occupants, about changes through time, and about economic and social practices which were never recorded.

In Grand Isle, the Consulting Archaeology Program worked with archaeologists from the Vermont Division for Historic Preservation and the U.S. Army Corps of Engineers. Together, they developed an excavation plan that allowed recovery of important archaeological data in some parts of the project area and preserved other resources in place.

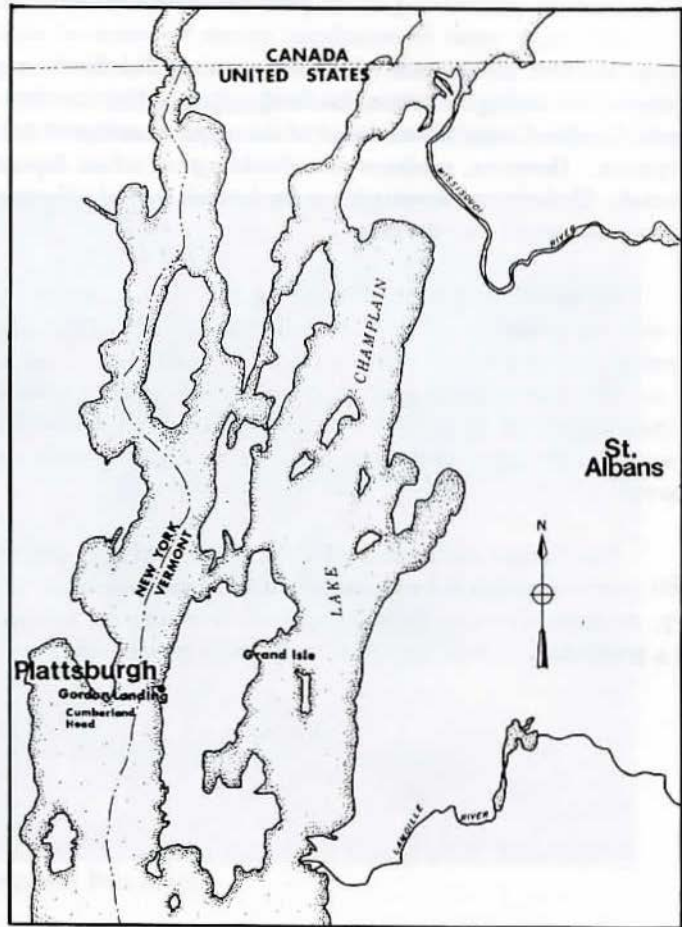


Students from local schools were invited to view the archaeological excavations in progress. Above, archaeologist Scott McLaughlin describes the kinds of artifacts that are found at prehistoric sites in Vermont. On previous page, students help look for artifacts while Kate Kenny demonstrates excavation techniques.

Setting

A variety of natural resources have drawn people to the Champlain Islands during the past 10,000 years. Lake Champlain provides a natural corridor for transportation both north-south and east-west. Vessels ranging from dugout canoes to horse-powered ferries to cabin cruisers have carried people and goods. The lake also helps create a gentler climate, permitting a longer growing season for native and domesticated plants. Native Americans and early historic period settlers gathered plentiful plant and animal resources from the lake and along the shore.

Specific characteristics of the 36-acre hatchery project and the surrounding land influenced where people actually settled and the activities they undertook. The project area is located at the head of a shallow bay that leads into the deeper waters of the main channel. The east-west crossing here is one of the narrowest, encouraging the ferry operations that started in the late eighteenth century. The project area is relatively flat, providing a convenient setting for prehistoric residential camps and nineteenth-century agricultural activities. A 10,000-year-old beach of the saltwater Champlain Sea is located on a small hill in the northeastern corner. From the hill, people hunting, fishing and camping by the water would



have had a clear view up and down the valley. An unnamed brook which originates at springs in the southeastern portion of the area and flows west into the lake could have provided clean drinking water.

Site Identification

In 1988, seven areas within the proposed fish hatchery complex were chosen for archaeological testing. Because the design plans called for little disturbance to areas near the historic Gordon-Center house, most of the areas were tested for evidence of prehistoric occupation. However, evidence of outbuildings or refuse deposits related to the house were expected. Underwater investigations for historic period shipwrecks were planned where intake pipes would extend into the lake.

Three different methods were used to identify archaeological sites. Subsurface test pits were excavated in the northern and western parts of the project area. The test pits were placed at 26-foot intervals to make sure that small sites would be located. Soil excavated from 377 test pits was screened through 1/4-inch mesh screens to recover any artifacts. In the southern portion of the project area, the surface of a 9.5-acre plowed field was systematically inspected. The underwater survey was conducted using both remote sensing and diver observation.

The limited testing identified the remains of four archaeological sites. They represent 4,500 years of human activity, and include the remains of an early twentieth-century lake ferry, deposits related to the early nineteenth-century occupation of the Gordon-Center house, and a prehistoric Native American camp and hunting area.

50 to 200 Years Ago ...

The Cumberland

A survey was carried out in the cove near the ferry landing to identify the remains of any submerged vessels which might be destroyed during installation of water pipes. The investigation involved a walking evaluation of the shoreline and a diver survey out to a depth of 15 feet. The remains of the steam ferry Cumberland, which ran between Grand Isle and Cumberland Head, were identified along the shore between the Gordon-Center house and the



Remains of Cumberland, looking west from shore.

ferry docks which dominate Gordon's Landing today. The remains include an approximately 50-foot long lower portion of a burned wooden hull. Approximately 20% of the hull appears to remain on the shore. Through hull fittings, presumably for steam machinery pipes, are still visible at low water, protruding from the lake bottom.

Captain Merritt Carpenter, retired ferry captain and lake historian, recalls that after the double-ended steam ferry was taken out of service, her engines and boilers were used in the construction of one of the new Grand Isle ferry landing piers. According to Carpenter, "As was the custom of the times, when they wanted to make a new pier they usually sank a barge and filled it with stone. Then, when they were going to put the concrete on top of it, they threw in the engines and boilers of the Cumberland to stiffen it up."

Despite the importance of lake traffic, there are few records about the construction of the vessels that carried passengers and freight on Lake Champlain. The remains of the Cumberland provide one source of information.

The Gordon-Center House

The fish hatchery complex includes a Federal-style stone house and associated outbuildings. The house reportedly was completed in 1824, although construction may have started earlier. By the middle 1850s, Norman Gordon had purchased the property and operated the ferry and lighthouse at "Gordon's Landing". The steamboats that plied Lake Champlain touched there regularly. After Gordon's death his daughter and her husband, Jennie and Derastus Center, operated the ferry and ran a prosperous farm and apple orchard. For a time, they opened their home as a guest house. Although the ferry passed to other owners around 1941, members of the Center family continued to live in the stone house until 1974.

Subsurface testing southwest of the Gordon-Center house revealed a discard area for general refuse. All seven test pits excavated contained historic period artifacts, including structural items (brick fragments, nails, plaster/mortar, roof slate, window glass), and domestic items (animal bone and teeth, ceramic fragments, coal, pieces of container glass, pipe stems).

The artifacts recovered from this dump date from the first half of the nineteenth century, and may represent a variety of activities undertaken during a fairly limited period. The wide range of artifact types suggests that dumping occurred in separate episodes. Brick and plaster could have been discarded during a period of remodeling. Broken dishes and food remains may have been discarded at a different time, and possibly on a more regular basis. This deposit may have considerable research potential for providing information about changes in site structures and the kinds of items owned and used during a relatively short period.

1,000 to 4,500 Years Ago ...

Two prehistoric sites were identified within the hatchery project area. One was a large camp and the other was part of an extensive hunting territory. The two sites provide important information about how and when prehistoric people exploited the island's plentiful resources.

The Camp Site

VT-GI-18 is a prehistoric site located on the level terrace above the lakeshore. The results of extensive subsurface excavation confirmed that the site was a relatively large residential camp. It covers the full length of the terrace, extending from the hatchery's pump house north for 350 feet. At the time of excavation, the site was 80 to 125 feet wide. It may originally have been wider, before road construction narrowed the eastern section and erosion reduced the western side.



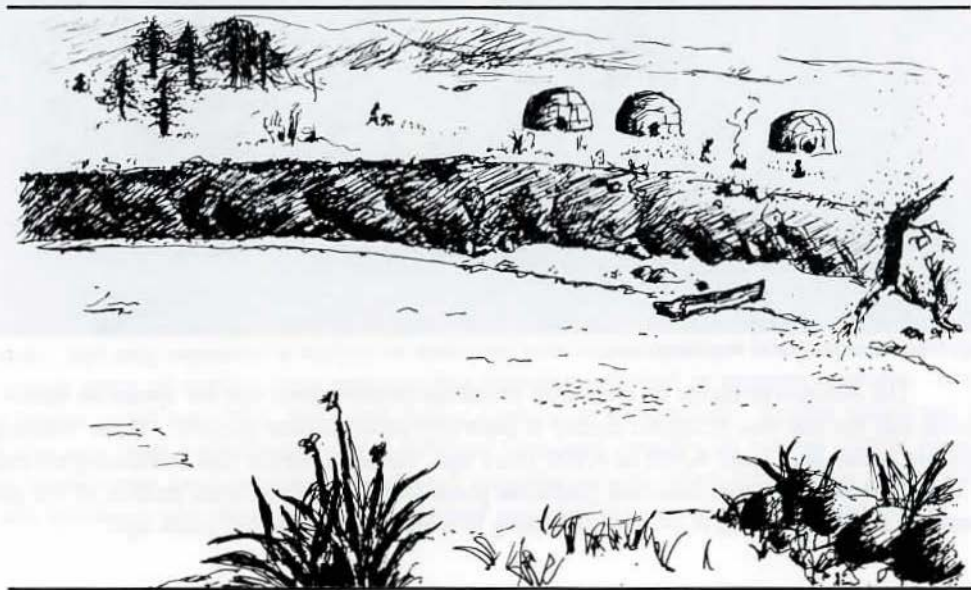
Large block excavation at the camp site.

The distinctive forms of recovered projectile points--stone tips for spears or darts--indicate that the site was occupied during at least two separate time periods. Three Vosburg projectile points date from 4,400 to 4,800 years ago, during a period that archaeologists call the Late Archaic. A small-stemmed projectile point found in the northern portion of the site represents a slightly younger occupation dating to some 3,800 to 4,200 years ago.

The excavated portions of the 29,000 ft² site contained almost 1,800 stone artifacts of different types which date primarily from the earlier period of occupation. The vast majority were some 1,700 stone waste flakes produced during the manufacture of stone tools. The remainder included finished tools such as projectile points, scrapers, flake knives, hammerstones, and a stone ax, as well as artifacts from various stages in the toolmaking process. After analyzing these artifacts, archaeologists were able to describe a 4,500-year-old camp.

VT-GI-18 is one of many sites established by Native American families on an annual basis as they moved within a territory which included the Vermont and New York mainlands and the Champlain Islands. It appears to be a camp used for at least a few weeks up to several months. The camp was probably occupied between April and late October before cold winds blowing off the lake made the site inhospitable.

Several families probably occupied the camp at the same time. Their living areas were separated by 25 to 30 feet. This distance allowed some privacy and working space, but also permitted easy social interaction. Each area contained a dwelling and a hearth for cooking and heat. Mammal bone fragments, including deer, were found near several of the hearths. Family members may have broken the bones to extract marrow and then discarded them.

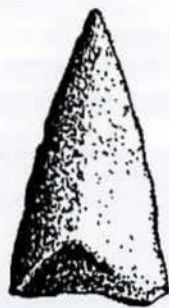




Vosburg spear point.



Small-stemmed spear
or dart point.



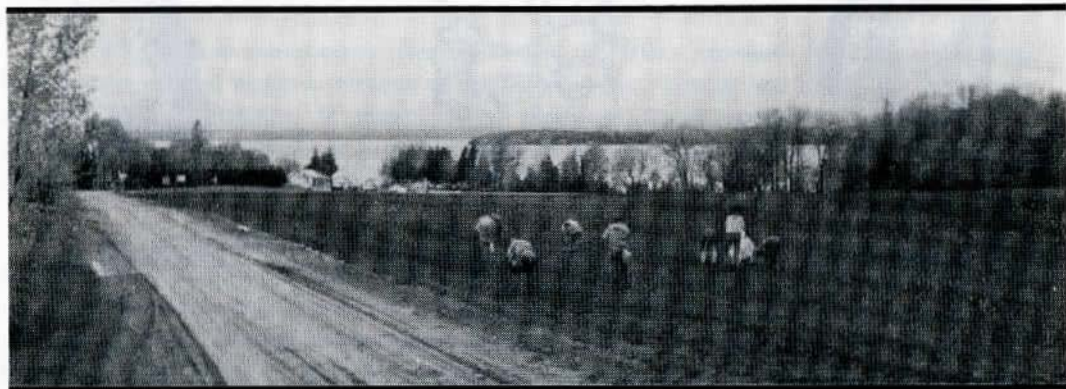
Levanna arrow point.

Much of the activity in each area centered around hunting. The recovered artifacts, especially the hundreds of stone waste flakes, indicate that individuals were producing and resharpening projectile points. Archaeologists identified five small workshops where tool manufacture took place. They also recorded 25 smaller clusters of flakes where final tool preparation or resharpening was done. Other hunting gear was made and repaired as well. Stone scrapers and large flakes with sharp edges were used to work hard objects, such as bone items or wooden spear shafts, and then discarded.

Although archaeologists are certain that the occupants moved their camps to a number of locations during the course of a year, it is difficult to know where the families at VT-GI-18 came from. The materials they used for making stone tools provide some indication of previous residences or visits. The quartzite and chert tools found at the site were made from "cores" prepared elsewhere and brought to the site. High quality chert could be found about 10 miles by water to the northeast. Prehistoric quartzite quarries have been identified about 50 miles southwest of Grand Isle. It seems likely that the site's occupants traveled to and from these locations in dugout canoes on the lake, major rivers, and smaller streams.

Beyond the Camp

The second prehistoric site located in the project area, VT-GI-19, represents a broad area outside the camp where prehistoric people hunted and gathered plant foods. Hunting activities are represented by 23 artifacts found scattered across the 9.5-acre plowed field in the southern part of the project area.



Surface collection at VT-GI-19.

The presence of three different styles of projectile points confirms that people were hunting in this area during at least three periods in the past. A Vosburg point dates to approximately 4,400 to 4,800 years ago, while a small-stemmed point dates to roughly 3,800 to 4,200 years ago. Both points may actually have been lost by people living in the camp along the lakeshore when they hunted in the nearby forest. The presence of a Levanna point which was made some 3,600 years later suggests that people continued to be drawn to the resources in the area for many years.

Speculation suggests that if this field were plowed and inspected repeatedly, as many as 30 to 50 additional projectile points might be recovered. All these points appear to represent random losses of hunting implements. To leave such a number of tools in a relatively small area, a significant number of people must have hunted here frequently for a very long period of time.

A Most Fascinating and Confusing Period

The two prehistoric sites shed light on life during the Late Archaic period, which has been called "one of our most fascinating and confusing periods" in prehistory. Archaeologists find the Late Archaic fascinating because it represents a time when people throughout New England adapted to changing environmental conditions. A more favorable climate encouraged greater plant productivity. This in turn permitted greater flexibility in site location and exploitation of plant and animal foods. New, complex settlement patterns developed and changed over time as people used a wide range of environments, from the shores of Lake Champlain to high mountain ponds.

Archaeologists in Vermont find the Late Archaic particularly confusing because they have so little information about it. Few sites have been examined, so site types and distributions are poorly understood. Certain categories of information are missing entirely--such as the seasons when sites were occupied or what shelters looked like.

VT-GI-18 is the only excavated site in Vermont which contains discrete occupation areas dating to the period between 4,400 and 4,800 years ago. Similarities in the style and types of artifacts recovered here with those recovered at sites in the upper Hudson and Lake George drainages suggest that people living throughout the Hudson River-Lake Champlain corridor had close contacts at this time.

Much remains to be learned about the types of activities undertaken at sites dating to this part of the Late Archaic period, about how various types of sites were integrated into larger settlement systems, and how those systems changed through time. However, information recovered from the excavations at VT-GI-18 and from the surface collections at VT-GI-19 provide a significant starting point for addressing important topics. The two sites have provided the first, close glimpse at how people lived on South Hero Island some 4,500 years ago.

Suggestions for Additional Reading:

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Acknowledgments

Many people contributed to the successful completion of the archaeological studies at the Grand Isle Fish Hatchery. CAP staff members who worked on the project include: Peter Thomas (Principal Investigator), Geraldine Kochan and R. Scott Dillon (Program Archaeologists), Prudence Doherty, Karen Porter, Robert Austin, Peter Becker, Christopher Clement, Thomas Dillon, Elizabeth Dubreuil, Jane Godfrey, John Groves, Bret Hamilton, Wallace Haviland, Martha Hull, Kevin Kelly, Kate Kenny, Deanna Kiser, Ernie Kovacs, Scott McLaughlin, Geoffrey Mandel, Mark Reese, Kirsten Schutz, Nora Sheehan, Robert Sloma, Johnna Thackston, Johanna Thomas, Ted Wimpy, and Margaret Wise.

Local Grand Isle residents, Jason R. Billings and Zachary Zitterfope, volunteered to work with the field team. Richard Adams also volunteered for several days.

A number of individuals assisted with specific aspects of the project. Arthur B. Cohn directed the underwater reconnaissance survey. Alan Beiber provided the side scan sonar equipment and interpreted the readouts. Captain Merritt Carpenter supplied valuable information about the ferry Cumberland. Jan Harford and his family supplied valuable information about recent land use practices around the Gordon-Center house. Francis Dubuque plowed the field where one of the prehistoric sites was located. Marie Bourassa, U.S. Army Corps of Engineers, and Giovanna Peebles, State Archaeologist, ably assisted the Department of State Buildings through the complex federal review process.