

**Report on Dates of Prehistoric Occupation at the Cedar Rock Preserve (45-SJ-251),
Shaw Island, Washington, and the Willows site (45-SJ-407), San Juan Island,
Washington**

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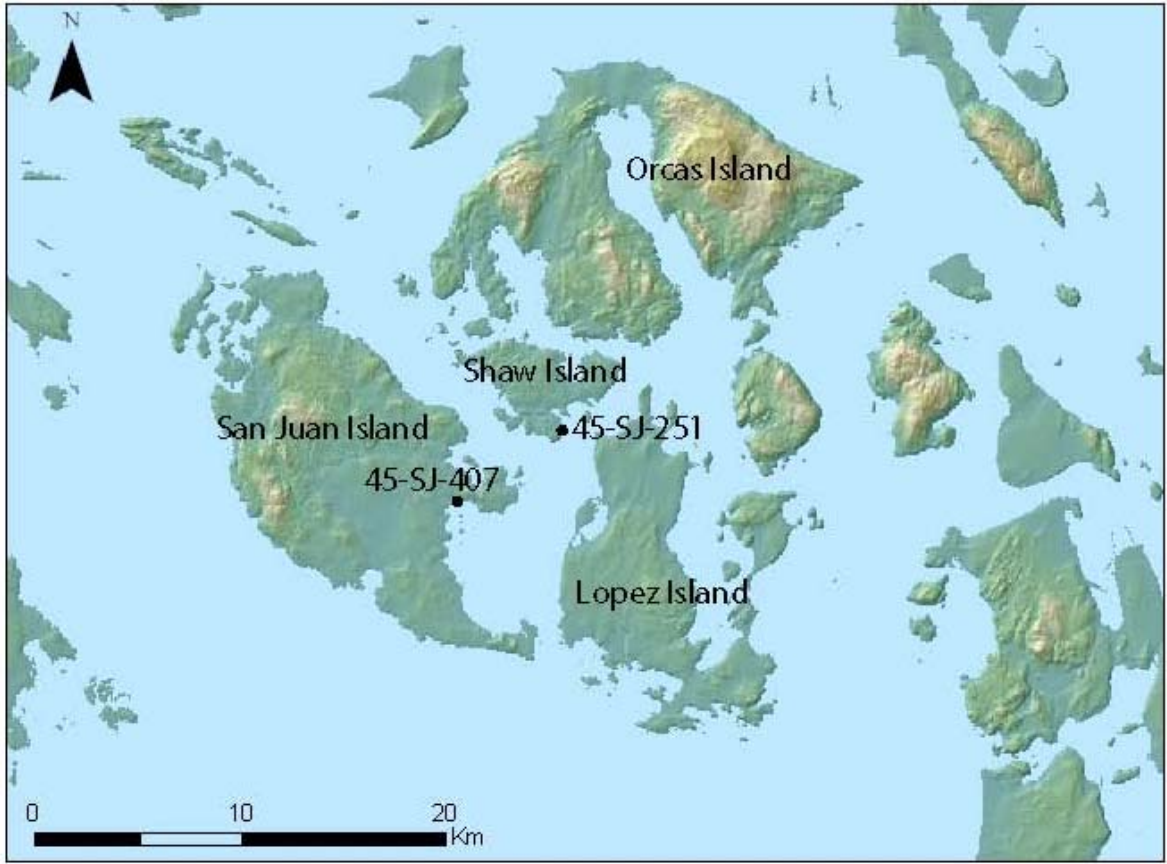
“Native Americans and the Pacific Northwest Environment: An Interdisciplinary Study”

Introduction

On July 17-22, 2005, University of Washington archaeologists conducted archaeological investigations at two archaeological sites in prairie contexts to refine archaeological interpretations of the chronology and nature of the prehistoric occupations of prairies of the Pacific Northwest. This work is part of a Pacific Northwest Cooperative Ecosystem Studies Unit (CESU) task agreement between the National Park Service and the University of Washington. The co-Principal Investigators for the project are Linda Brubaker and Julie Stein. The primary goal of this work is to study the management of the environment of native peoples of the Pacific Northwest through agriculture and other practices.

Using funds provided by the National Park Service, researchers obtained three radiocarbon dates for two sites in prairie contexts on the San Juan Islands, Washington. These sites included the Cedar Rock site (45-SJ-251) on Shaw Island, WA, and the Willows site (45-SJ-407) on San Juan Island, WA (Figure 1). At 45-SJ-251 dates were taken shell samples from Core 5 at 0-22 cmbs and 20-37 cmbs. At 45-SJ-407 one date was obtained from core 1 at 30-40 cmbs. These dates provided us with a chronology for these sites, and with more information with which to determine regional settlement patterns.

Figure 1. Location of sites 45-SJ-251 and 45-SJ-407.



Archaeological Field Methods

The main method that we used during the summer 2005 fieldwork was augering. This allowed us to obtain samples of shell and charcoal for dating purposes more quickly than digging so we could get to more sites and sample from more areas within sites. Also, because we were on private property, a less destructive technique helped us to gain permission for access to the sites.

In our fieldwork we used a device called a Dutch Auger (Eijkelkamp). This type of auger works more effectively in shell middens than other types of augers because it has open sides. It is a portable rod with a 4-inch diameter bit. We manually twist the auger into the ground in approximately 20 cm punches at a time, extracting it as the bit fills with deposits and saving the material recovered (Figure 2). We add extensions to the auger if the midden is thick but can rarely penetrate deeper than 3 meters (10 feet). The midden material caught in the bit will be broken to some extent, and some at the margins will be mixed as the twisting and extraction takes place. However, charcoal and shellfish can be retrieved in sufficient amounts to provide comparisons from location to location and depth to depth. If the auger cannot penetrate through the entire depth of the midden, a piston-head corer may be used. These, however, have trouble penetrating through rock (Stein 1986, 1991). Because we often extracted gunge (material that fell into the auger hole from the sides as the last punch was extracted), we often noted an overlap of about 5 cm between punches. In some cases, the sediments were loose and we had to scoop out the samples by hand. Where sediments were very dry, we added water to help the sediments stick together. At sites that were present in eroding banks we sampled from the face of the bank rather than augering because the stratigraphy is visible this way, and there is less likelihood of destabilizing the bank.

Before the coring began, an initial assessment of each site was conducted to determine an appropriate sampling strategy. The number of cores taken at each site depended on site size and configuration. We used a GPS (Global Positioning System) and total station to map the sites and the locations of the auger extractions with a high level of accuracy.

For each auger sample, all information was recorded on forms and in a field notebook, including stratigraphic information, samples taken, observations, and the depth to which the auger penetrated. Samples of site matrix (shell as well as sediment) provide datable materials, sediments, cultural materials, shellfish, fish, and other faunal remains for later analyses. Upon completing each auger sample, the auger hole was refilled with sand from the beach adjacent to the site and the sod or duff was replaced. We did not expect to find nor did we find human remains during our augering. Had this occurred, we planned to immediately stop coring. Any human bone found in the auger would be returned to the hole and the hole would be filled in. Landowners and local tribes would be notified of the discovery.

Figure 2. Augering Methods



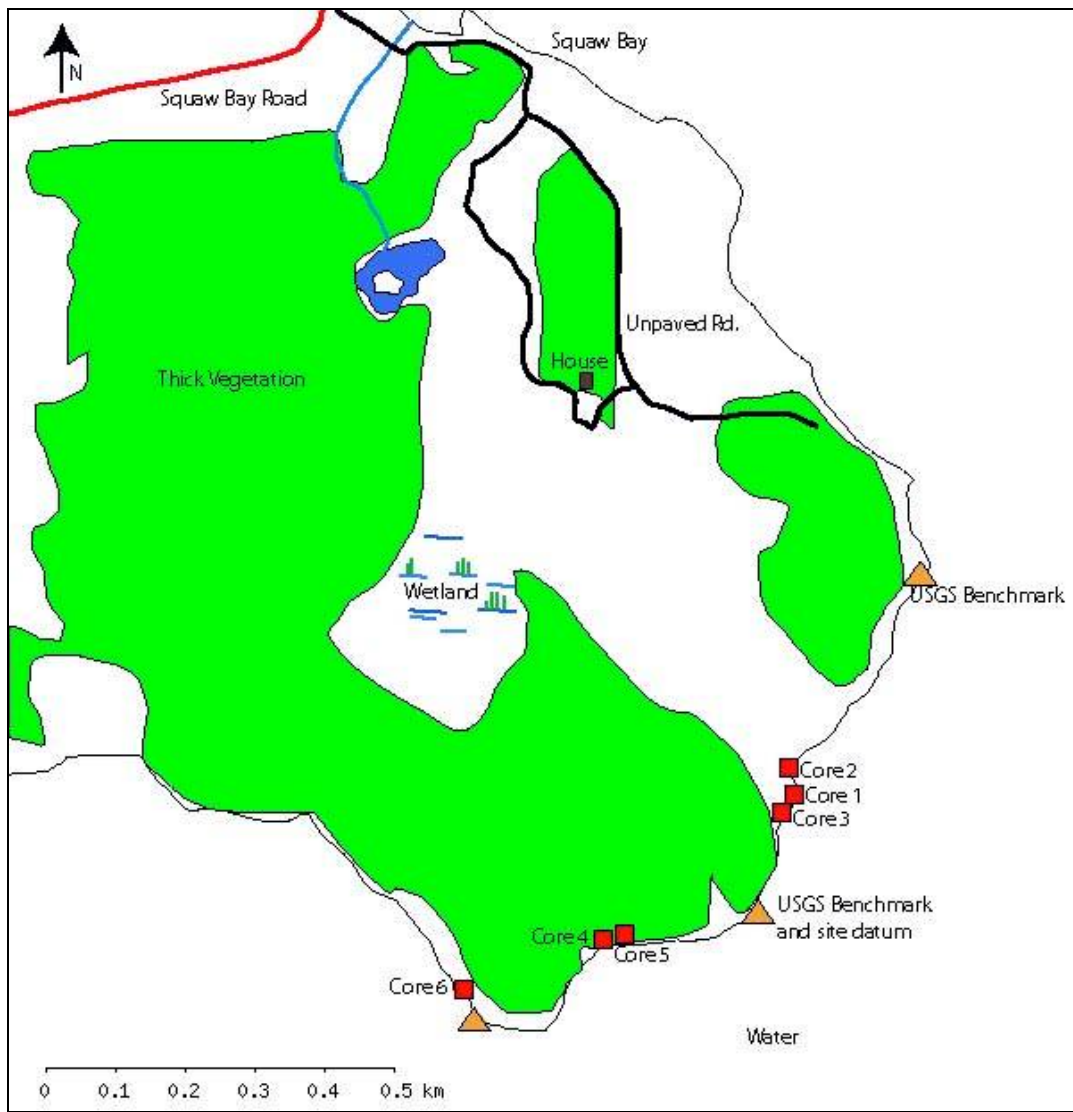


RESULTS

Cedar Rock site (45-SJ-251)

The site 45-SJ-251 is a previously recorded shell midden site located on the University of Washington Friday Harbor Laboratories Biological Preserve on the southern tip of Shaw Island, Washington. It consists of several localities where thin shell-bearing deposits are eroding out of the wave-cut bank (Figure 3). These areas may have been continuous at one time, but they have been heavily eroded. We sampled from the wavecut banks and/or augered at 6 locations, as shown below. Fieldwork was conducted on July 17, 2005.

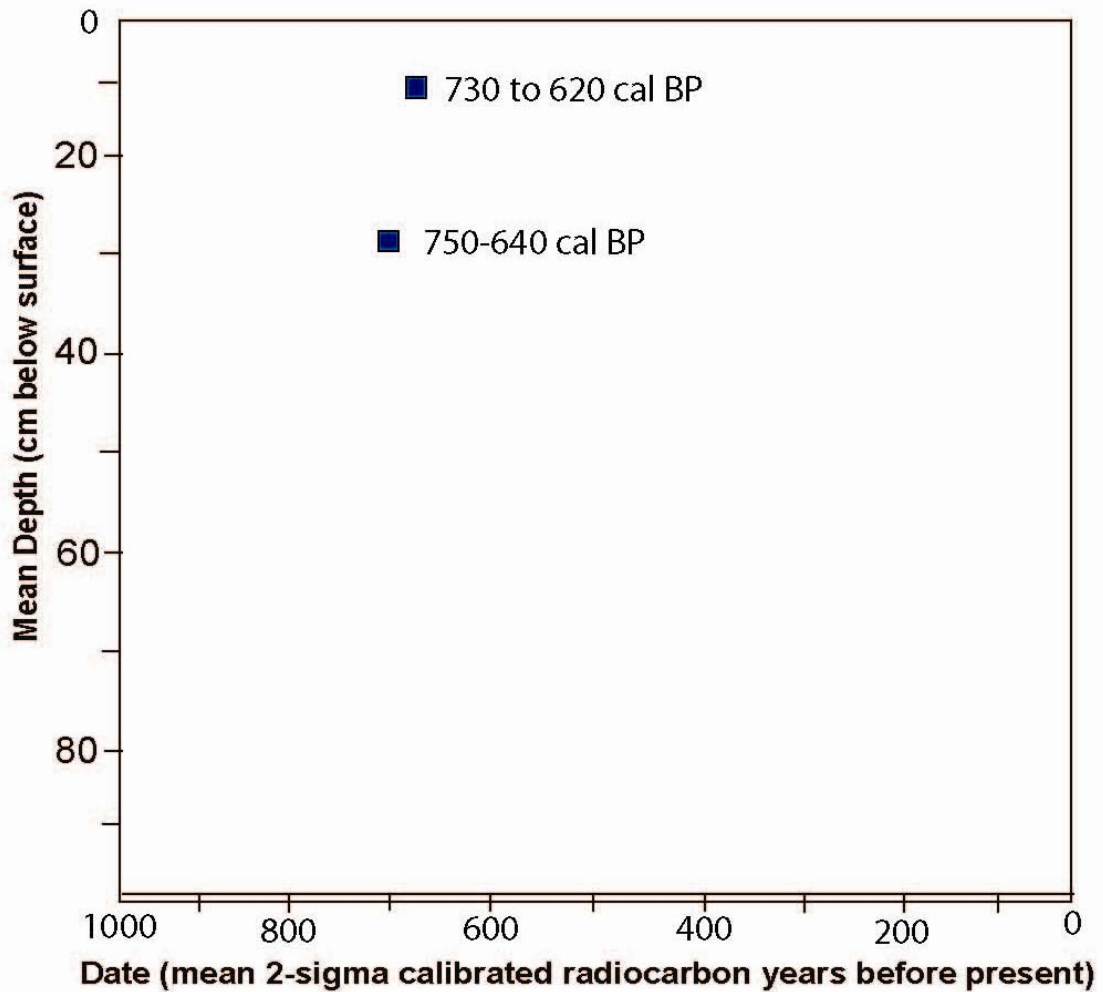
Figure 3. Map showing work at 45-SJ-251.



Cores 4 and 5 were extracted south of Core 3 from on top of a cliff because shell was visible during surface survey. Core 4 was aborted because we hit a rock and Core 5 was extracted adjacent to it. Sediment was a dry 10YR 3/2 very dark grayish brown sandy silt with shell to 35 cmbs. Below this was a lighter-colored 10YR 5/3 brown sandy silt with a “fluffy” texture. This sediment may be weathered bedrock, windblown silt, or ash.

Shell from Core 5 at 0-22 cmbs dated to 730 to 620 cal BP (Cal AD 1220 to 1330). At 20-37 cmbs a shell sample dated to 750-640 BP (Cal AD 1200-1310) (Figure 4).

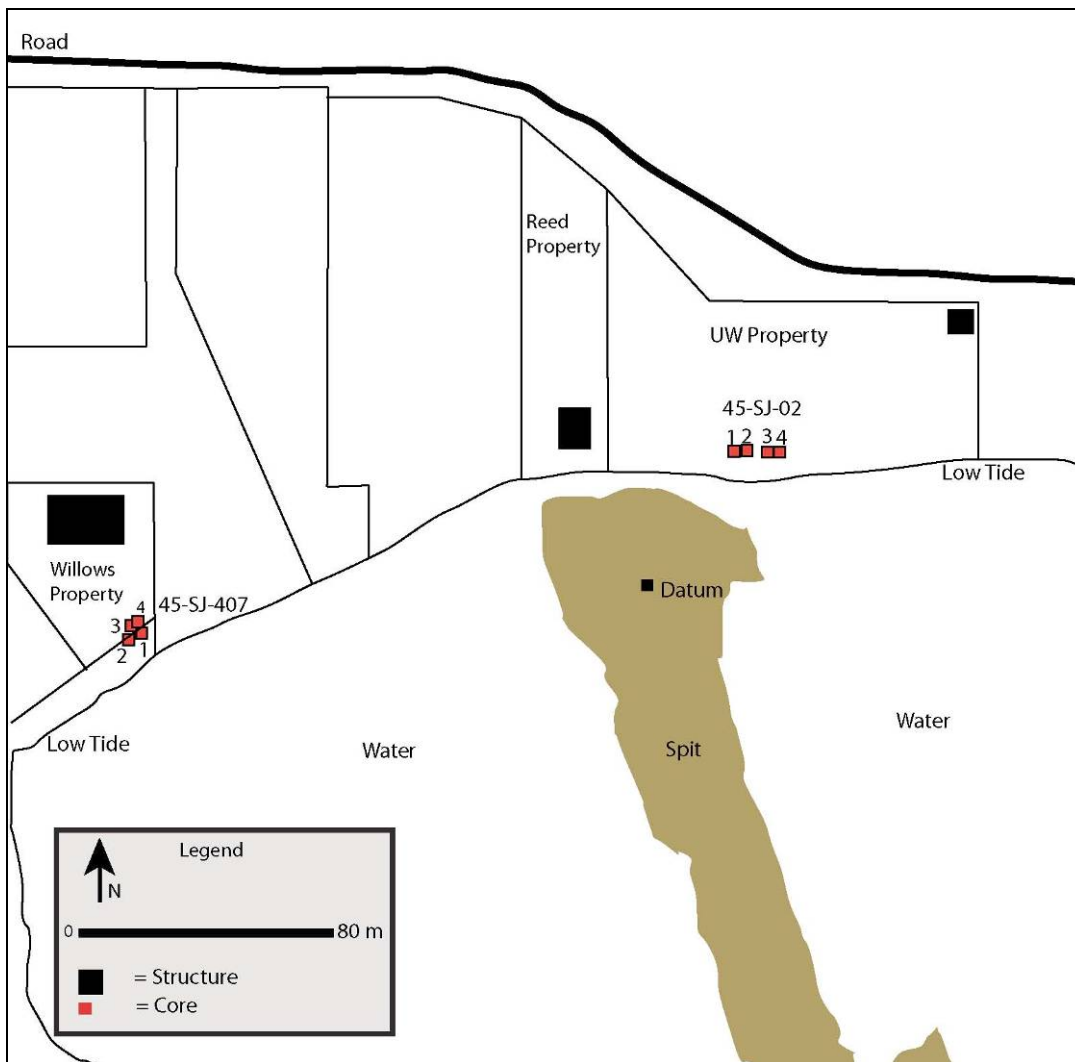
Figure 4. Dates for 45-SJ-251, Core 3.



The Willows site (45-SJ-407)

The site 45-SJ-407 (also known as West Argyle Lagoon site, referred to here as Willows site) is approximately 200m west of the UW property on Argyle Lagoon and is owned by Dennis Willows, then Director of the UW Friday Harbor Laboratories (Figure 5). The site extends onto the adjacent properties owned by Lynn Reed and James and Margaret LeBlanc.

Figure 5. Map showing locations of cores at 45-SJ-02 and 45-SJ-407.

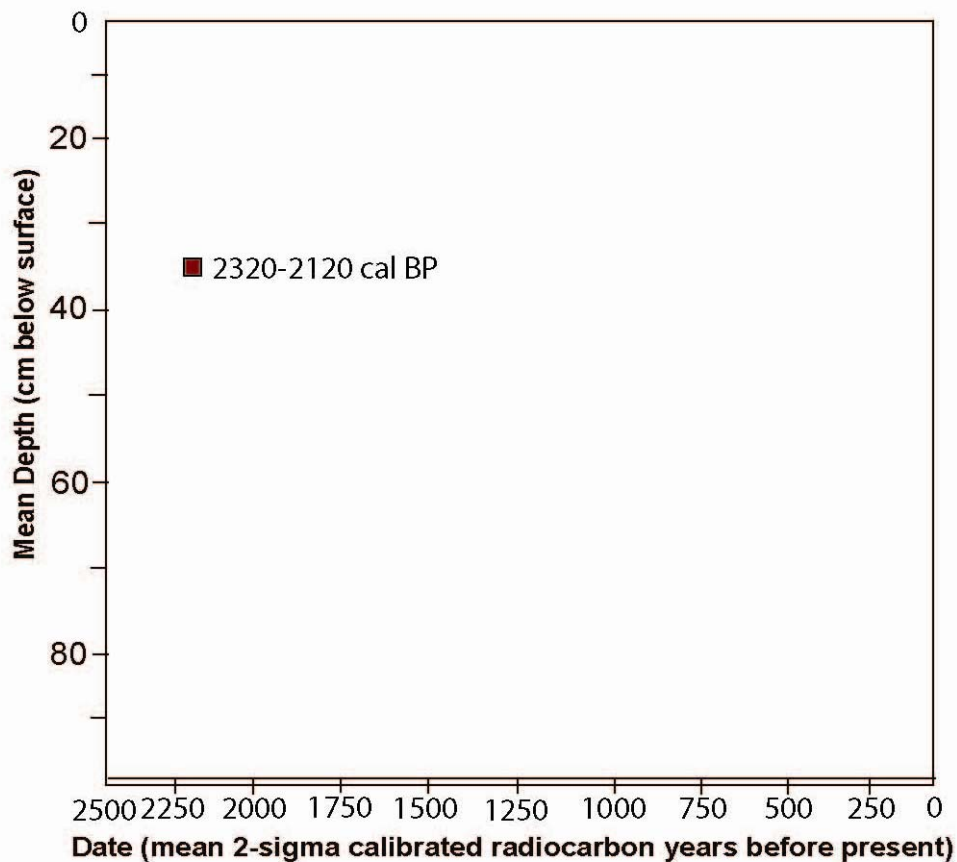


The Argyle Lagoon sites are located near unique landforms. In the lagoon, there is a tombolo formed from glacially deposited sediments that connects to a bedrock island and a natural sandspit that has been preserved by the water flowing in to the lagoon at high tide and out at low tide. This creates a sort of saltwater “river” in the narrow channel adjacent to 45-SJ-02. These features may have been altered during historic, possibly prehistoric times. They create a protected shallow-water habitat for shellfish.

Our work at 45-SJ-407 took place from July 18, 2005 through July 22, 2005. Site 45-SJ-407 is exposed by the erosion of the wave-cut bank in a few locations. We sampled in four small areas. We collected Cores 1 and 2 by sampling from the eroding bank of the site in arbitrary 10 cm levels. At both locations we found 10YR 3/1 very dark gray sandy silt throughout and dense shell deposits from approximately 20-50 cmbs. At 20-30 cmbs in Core 2 we noted a medium-sized bone with cut marks that can be most closely identified as a floating rib of a harbor seal (*Mrounga angustirostris*).

The date obtained for the site 45-SJ-407 was quite old for the San Juan Islands. For Core 1 at 30-40 cmbs shell dated to 2320-2120 BP (cal BC 370 to 170) (Figure 6).

Figure 6. Date for 45-SJ-407, Core 1.



Conclusions

A more in-depth analysis of the paleoenvironment would be necessary to determine change over time in the environmental setting for the sites investigated; however, dates obtained through National Park Service suggests that people may have inhabited prairie contexts over a long time range spanning ca. 2,000 BP – 600 BP. The content of the sites investigated suggests a marine-oriented adaptation throughout this period.