

Preliminary Field Report for Wet Site 35MU4, commonly called the Sunken Village Site, Sauvie Island, Portland, Oregon

by Dale Croes, John Fagan and
Maureen Zehendner

South Puget Sound Community College (SPSCC) and Archaeological Investigations Northwest (AINW) submitted a joint proposal for archaeological work at 35MU4 to the Sauvie Island Drainage Improvement Company (SIDIC). To obtain a Section 10/404 permit from the U.S. Army Corps of Engineers, SIDIC was required to conduct an evaluation of their proposed bank protection work and we were awarded the contract for the investigations at the National Historic Landmark site 35MU4 on 8/26/06. The work was designed to provide a limited evaluation of the portion of the site that would be potentially impacted by riprap repair of 1,060 linear feet (320 metres) of earthen levee. Fieldwork was undertaken from September 5 to 20, 2006.

With time and funding limitations, and following the provisions of the scope of work, the wet site work at 35MU4 consisted of the excavation of 4 1x1 metre test units, drainage trenches 10 cm wide extending from three of the test units to the edge of the footprint (dug in 10-cm levels), the cross-sectioning of five round acorn pit features in these drainage trenches within the footprint, cross-sectioning and bulk sampling of one fairly complete acorn pit feature, surface mapping of (a) the in situ wooden stakes, (b) in situ and numerous (60 mapped) acorn pit features (following hydraulic surface cleaning and retaining any encountered cultural surface debris by pit), and (c) surface cultural materials, including lithics, animal bone, wood chips, basketry strips, and split wood. To provide better linear control along the main area of the shoreline, ten transects were established, each 25 metres wide. Test Units, trenches, surface finds, acorn pit features, and wooden stakes were all mapped using a Nikon total station DTM-A20 LG instrument in relation to these

Figure 1. Location of the Sauvie Island site (35MU4) at the confluence of the Columbia and Willamette Rivers in Portland, Oregon, USA.

25-metre-wide transects (Figure 2).

The subsurface testing at site 35MU4 was initiated with trowels in Test Units (TU) 1-3 in separate transects (T4-6) in consultation with Grand Ronde and Siletz co-managers. The test units were 1-x-1 m and excavated in 10-cm levels to depths from 40 to 90 cm. Trenches were established from each Test Unit in 1 metre intervals by 10 cm wide and excavated in 10 cm levels. These were excavated to allow water drainage from the Test Units when and if we encountered vegetal mat layers and needed to hydraulically excavate the wood and fiber materials. Each excavated drainage trench in Transect 4-6 was designed to dissect at least one acorn pit within the footprint to better record these in situ features (Figure 3). The trenches also provided a 10 cm wide transect perpendicular to the bank from the test unit down to the edge of the tide line.

To expand our perpendicular exposure and evaluation of the beach to the bank deposition, a 1-m x 50-cm deep exposure was excavated into the bank in line with Test Unit 2 and TU2 trenches in 10-cm levels. Also in line with this exposure and Test Unit 2, a series of four cores were taken to a maximum depth of 25 feet on top of the levee using a Geoprobe 6620 DT, which is a direct push corer mounted on the back of a small, track mounted rig. The cores are approximately two inches in diameter, providing enough sediment for litho-and bio-stratigraphic studies.

After consultation with the Grand Ronde and Siletz representatives, a fourth Test Unit (TU4) was initiated in the second week of limited excavation, when a distinct area of vegetal mat preservation was seen along the exposed bank in Transect 6. Aquifers flowing through these deposits vary in rate of discharge, and, in this area of the site, it was obvious that this was a location of considerable water flow and preservation. This exposure required hydraulic excavation because of the density of vegetal mat (wood and fiber) layers (Figure 4). We also initiated a cross-section of a pedestaled acorn pit found in situ in this well preserved area of the site.

The excavation units, the 10-cm wide drainage trench excavations, and the bank half test unit (HTU) were excavated in 10-cm levels, by the use of trowel, shovel, and/or water spray from fine adjustable nozzles. All excavated soils were water screened through nested 1/2-, 1/4-, and 1/8-inch metal screens. Measurements, observations, and collected items were recorded on standardized level forms, specialized in situ acorn pit forms, in situ wooden stake forms, feature forms, and unit summary forms.

The main features encountered were on the exposed surface of the beach, and included both (a) in situ circular pits averaging 80 cm in diameter and containing whole acorn remnants (Figure 3) and (b) in situ wooden stakes averaging 5 cm in diameter and driven into the beach surface. Approximately sixty pits were mapped in transects 2 through 6. These pit features were hydraulically surface cleaned, photographed and sampled. One half of one of the dissected acorn pits was excavated revealing a western hemlock bough lined basin, and remnants of whole acorns.

The other in situ features were the wooden stakes, of which 32 were recorded. Two stakes were hydraulically excavated showing that they are long (approximately 1 metre), adze sharpened at their ends, and one had its bark still adhering to the pole. Many of the acorn pits had a stake on their south edge, no doubt marking

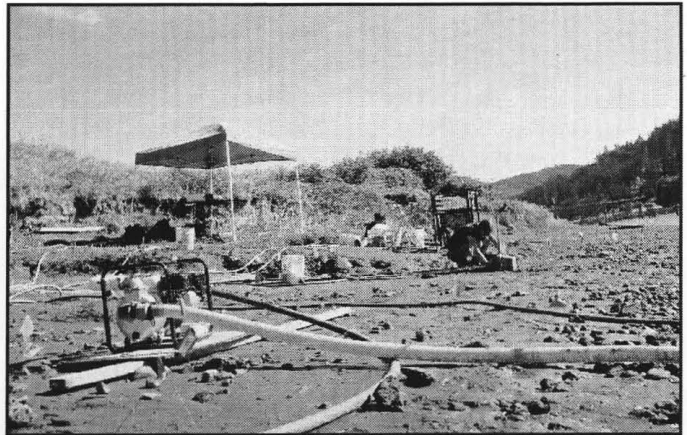


Figure 2. Hydraulic excavation and screening for a two-week, limited evaluation of the National Heritage Landmark Site on Sauvie Island (35MU4). The remaining elevated beach in this area (Transect VI, below TU 1) has the best observed remaining acorn pits and vegetal mat layers (TU 4 is in this remnant beach).

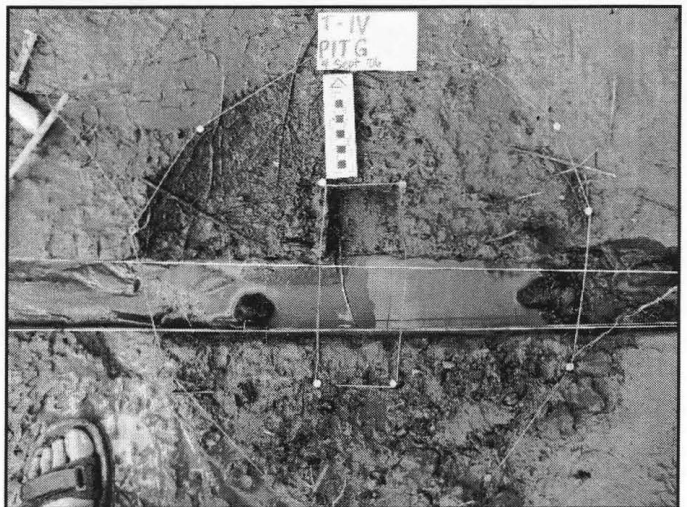


Figure 3. An example of an acorn pit lined on its base with western hemlock boughs (upper right) and containing acorns (lower right). It is being cross-sectioned and baulk sampled for analysis. This pit is in Transect IV within the footprint.



Figure 4. East to west vegetal mat layering in TU 4 south wall showing the accumulation of wood and fiber in sequential layers on the remnant ancient beaches. We were not able to reach the bottom of these deposits. They must exist here because of especially good waterlogging from aquifers coming through these layers from below the natural levee.



Figure 5. Clay Arden (Siletz) and Mel Schultz (Grand Ronde) help uncover basket found on surface of an acorn pit.

the location of a pit.

In the bank half test unit (HTU) a fire-cracked rock feature was found, mapped, and recovered for analysis. A charcoal sample from the hearth feature was collected for radiocarbon dating.

Brief Description of Site Stratigraphy, Cultural Features, and Artifacts

Stratigraphic analysis of sediments from the site revealed relatively fine-grained sands and silty loams that were emplaced over time as levee deposits on a riverine point bar. Sediment size varies across the site both vertically and horizontally, and the exact nature of these stratigraphic changes is being investigated through the analysis of sediments from test units, pit features, profile descriptions, and extracted sediment cores. Distinct changes in strata morphology and constituent sediments will be used to create a representative east-west cross section of the site. This cross section will be used to recreate original depositional conditions and to determine the nature and extent of erosion and destruction of cultural strata.

Within the cutbank exposure at the back edge of the present-day beach can be seen an occasional fire-cracked rock feature and charcoal deposits. The sediments immediately in front of the eroded cutbank, and where TU 1-3 were excavated, appear to be in situ riverine deposits containing little cultural

material. Originally, these deposits likely were located directly beneath the culturally occupied land surface, and this cultural deposit has since been removed through looting and/or erosion. The largest intact cultural deposit is present within the lower beach surface, where acorn pits were excavated throughout transects 2 through 6, across 125 metres of visible beach deposits. In Transect 6 the best preserved area of remnant beach was located, with the most complete acorn pits encountered (one containing a wooden wedge with a rope collar still attached). TU 4 exposed a distinct area of aquifer waterlogging, containing multiple altering layers of vegetal mat (both cultural and natural wood and fiber) deposits separated by flood-event silty sand layers (Figure 4). A braided cedar bark belt or tumpline strap, cedar bark strings, grass braided cordage, a beaver tooth chisel, bone point/awl, and bone chisel tip, along with thousands of wood chips, split wood, basketry waste elements, cherry bark curls, and other cultural materials were found in TU4.

The extensive in situ acorn pits are the most remarkable features at this landmark site. During surface exposure and mapping, all such pits contained remnants of whole acorns. Also wood and fiber artifacts were observed in and around these pits, including a shredded cedar bark cape/skirt fragment, a broken wooden wedge, wooden arrow shafts, and a well-preserved basket distinctive of the region's fine basket work. The basket piece was found with intact base and sides (no rim remained) all carefully cross-warp twined of split cedar root (identified by Bud Lane, master weaver, Siletz, and Patricia Gold, master Wasco weaver, Warm Springs; Figures 5 and 6). The style of this basket is definitely from this region and demonstrates an ancient continuity of this style of basketry. Baskets found from northern ancient wet sites are of a very different style, and themselves demonstrate at least 3,000 years of basketry cultural continuity in Salish, Makah, and Tsimshian traditional territories.

Fortunately, sixty identified pits were mapped, but it was clear from our observations that many more pits actually are scattered across, and concentrated in, transects 2 through 6. We just did not have time to expose less obvious pits throughout the beach area.

Approximately 7,828 artifacts (items that are the result of human activity) were recovered from inside the maximal footprint for the proposed bank protection rip rapping at site 35MU4. The collection included 2,550 wood chips, 1,238 pieces of lithic debitage, 950 split wood pieces, 55 basketry waste elements (both bark and bough/root splints), 275 acorns, 460 hazelnuts, 12 cherry bark curls, 6 bone artifacts, 17 stone artifacts, 20 wood or fiber artifacts, 738 faunal elements (both shell and animal bones), and 5,939 pieces of charcoal (larger than thumbnail pieces). The exact counts of the artifact types may likely change after further cleaning and analysis. The tools included wooden wedges (Figure 7), bone chisels, bone points/awls, projectile points, scrapers, knives, and flake tools. The 13 projectile points (within the footprint) recovered during the testing are in good condition and are typically made of fine grain chalcedony. However two examples of obsidian artifacts were found within the footprint, a thumbnail scraper and a knife found in the baulk sampling of acorn pit Feature 2 next to TU4.

Summary of Preliminary Findings

The TU 1-3 excavations, into primary beach deposits were basically culturally sterile. Since we started TU4 late (2nd week of

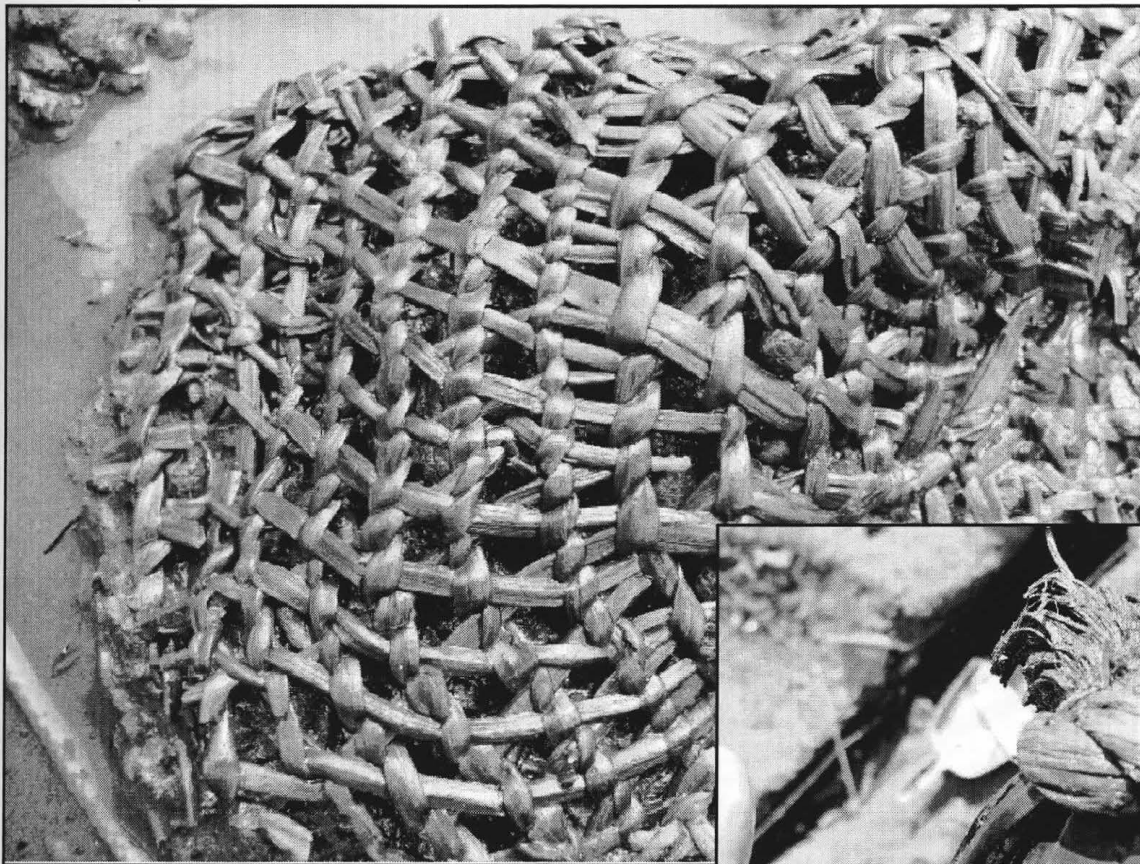


Figure 6. Close up of fine cross-warp open twined weave of cedar root (material and construction of base and body of basket identified by Bud Lane, Master Weaver, Siletz and Patricia Gold, Master Wasco Weaver, Warm Springs).



Figure 7. Large wooden wedge with rope collar found in TU 1 Trench 7 in remnant beach area. Collar thought to be of a root material (Bud Lane, Master Weaver, Siletz). The excavations produced a preliminary total of 3,555 wood and fiber debitage elements (wood chips, split wood and basketry waste elements).

explorations), the actual depth of these wood and fiber-rich vegetal mat layers could not be determined. The density of cultural materials and in situ acorn pits and stakes is highest in transects 2 through 6, or over 125 linear metres of the 320 metre levee repair area.

Our two-week limited evaluation of a very large area clearly demonstrates why this has been designated a National Historic Landmark site and considered, before any professional excavations, one of the most famous such sites in the Western United States. The site appears to have progressively eroded away, as is often mentioned by persons who have visited the site through the past forty years, so what's left becomes increasingly more important as a landmark cultural resource. We found a few large remnant areas that are better preserved (Transect 6 below TU 1) and remain fairly intact. We plan to update readers of *The Midden* on our research as it progresses in future reports.

Dale R. Croes (dcroes@spscc.ctc.edu) received his B.A. in anthropology from the U.W. and his M.A. and Ph.D. in anthropology at the Washington State University. His research focus has been on Northwest Coast wet (waterlogged) archaeological sites. He did his Ph.D. dissertation research on basketry and cordage artifacts from the Ozette Village wet site, conducted post-doctoral research by directing and publishing (WSU Press) the research at the 3,000 year old Hoko River wet site, and is co-directing excavations (entering the 9th summer—see field school announcement here) of the Qwu?gwes wet site with Rhonda Foster, Director, Cultural Resource Department, Squaxin Island Tribe.

John L. Fagan (john@ainw.com) president of Archaeological Investigations Northwest, Inc. (AINW), received his B.A., M.A., and Ph.D. in anthropology at the University of Oregon. He served as the Portland District Archaeologist for the Corps of Engineers for 15 years, and established AINW 17 years ago with Jo Reese. His research focus has been on lithic analysis with an emphasis on the Pacific Northwest. He is currently analyzing the lithic debitage and tools from the Sunken Village Site.

Maureen M. Zehendner (maureen@ainw.com) received a B.S. and M.A. in Anthropology at Portland State University. For her M.A. thesis she focused on the Sunken Village Site, 35MU4, at Sauvie Island, Oregon. The thesis provides a description and management plan for the site. Part of the thesis research included preparing a National Register nomination for 35MU4 which was listed in the Register and designated a National Historic Landmark in 1989. She is currently a Senior Archaeologist and the Laboratory Director for Archaeological Investigations Northwest, Inc., in Portland Oregon, where she has worked for the past 15 years.
