

MUD BAY

Not Just a Name When it Comes to Wet-Site Archaeology



Lenore Harper

Wet sites are so interesting to the archaeological community because of the level of preservation they offer. As a student of archaeology who is fascinated by wet sites and the basketry sometimes recovered from them, I had always hoped to have the unique chance to work at a wet site and receive specialized training. Amazingly, one of the few archaeological wet sites on the Northwest Coast, Qwu?qwes, is run as a yearly field school to train new generations of wet site archaeologists. Qwu?qwes (translated as 'Gathering Place') is located at the head of Eld Inlet in an area known as Mud Bay on the Puget Sound, and is a well known food processing and harvesting site. The site, an amazing example of a large, intact shell midden, has both dry and wet site components. As a result, it is an optimal place for new archaeologists to learn. The wet component at Qwu?qwes is well preserved due to its position on the beach and the presence of a running aquifer that flows from behind the site toward the water. It is not unusual to see water dripping from the walls of the shell midden during

excavation, which is a great sign for the preservation of all perishable materials held within.

Qwu?qwes is part of the Squaxin Island Tribes traditional territory and is located on the property of Ralph Munro, former Washington Secretary of State. In 1999, a survey of the land was carried out, originally at Munro's request, due to the large amount of artifacts found on the beach. South Puget Sound Community College was contacted to carry out the work. From this project emerged a relationship between Ralph Munro, Dr. Dale Croes of South Puget Sound Community College, and Rhonda Foster, the director of the Squaxin Tribe's Cultural Resources Department. Excavations, in the form of archaeological field schools instructed by Dr. Dale Croes, have been carried out every summer thereafter in partnership with the Squaxin tribe who ensure that the work respects their cultural wishes and boundaries.

Each year, all excavated pits in the

wet and dry areas of the site are backfilled with culturally sterile sand in order to prevent any damage to stratigraphy and artifacts between seasons. Thus, each field season begins as new students get the privilege of removing backfill and preparing the site anew. The students also get to scrape rust from the specialized metal screens and repaint them in order to fight against the constantly wet environment to which they will be subjected. Screens for this excavation have been developed by the South Puget Sound Community College welding class and have proved extremely useful for wet screening. Once the excavations are opened, students are taught to excavate in both a wet and dry environment, with the goal of reaching depths of 10 cm per day. This goal is extremely optimistic for new students, yet by the end of the field season, students are comfortable and capable in both environments.

The entire site has been mapped out into a grid of 1-m x 1-m units using a

Above: Qwu?qwes wet-site area, covered in silt as the tide recedes.
(All photographs for this article were taken by the crew; courtesy of Dale Croes.)

Total Station and GPS coordinates and all new excavation units are chosen using this grid. Normally, units are chosen in close proximity to finished units so as to also be able to understand the stratigraphic layers as they change throughout the site, moving from the wet to dry area. Each unit is excavated until a sterile layer is reached, in order to achieve a full understanding of change through time. To compliment this, over the years, field school students have created comprehensive databases on things such as shell and lithic artifacts recovered from different depths and stratigraphic levels.

Excavation within the wet site is carried out using such high-tech equipment as hoses, garden nozzles with multiple spray settings, and popsicle sticks. The students must work with the tide, which fluctuates in a nearly weekly cycle. Thus students get a chance to dig in the dry site when the tide is covering the wet site units. It was quite the odd experience to witness one's excavation work submerged in about 4 feet of water. When the tide goes out, the wet site is left covered in a layer of silt that has been washed in and that must be cleaned out. The first order of each day in the wet site is clearing the drainage ditch so that drainage is re-established. At the end of the day, all excavation units within the wet site are covered with gardening

cloth weighted down with stones in order to prevent excess silt from interfering with the exposed surface. I learned to not be overly worried that artifacts embedded in the cultural layers would wash away with the tide as all layers within the shell midden are incredibly dense and compact.

Excavation techniques consist of direct water spray using the different settings of the garden nozzles and use of wooden popsicle sticks to reduce or prevent any damage to perishable materials. Large industrial-sized dust pans, placed around the 1m x 1m unit, catch water run off and collect any artifacts that float out of the matrix. I quickly noticed that although archaeological excavation is slow and sometimes tedious, digging with a trowel in the dry site area moves quite a bit more quickly and smoothly than digging with water.

At Qwu?qwes, each 1m x 1m unit is divided into quadrants; the northwest quadrant is designated as diagnostic. From this quadrant FCR (fire-cracked rock), shell, and charcoal are collected. These occur in such high concentrations at the site that it would require a warehouse to store this material if units were sampled 100 percent each year. From the sampling of the northwest quadrant, volumetric calculations are used to extrapolate the amounts of these artifacts for the unit. Fauna, all



From left to right: Olivia, Josh, Lenore, Kathleen. Wet-site excavation using water and popsicle sticks. Note the use of dustpans to catch water runoff and any artifacts floated



A nearly whole articulated salmon vertebra uncovered in the wet-site area.



The metal screens developed by the welding department of the South Puget Sound Community College. Each screen has 3 layers of differently gauged screens ranging from 1/2-inch to 1/8-inch.



From left to right: Kathleen, Garrett, Lenore, Jason and Olivia. One of the excavation groups and their discovery of a charred piece of basketry.

culturally modified materials such as cedar bark withes, basketry waste, wood chips, and macro-flora such as nutshells and moss are collected from the entire 1m x 1m unit. All perishable material recovered must be kept hydrated to fight degradation before conservation. To do this a tray with a wet paper towel is kept on hand in order to wrap any artifacts removed from the unit or from the screens. These perishable materials are later cleaned and placed in polyethylene glycol for up to a year in order to conserve them. Remarkable wet site artifacts such as woven cedar mats, clam baskets, and cherry bark curls were recovered in just this one past field season at Qwu?qwes.

Preservation within the shell midden is simply incredible. Qwu?qwes has been dated to approximately 700 years BP and yet all perishable materials uncovered look as though they might have been cut and/or braided yesterday. The anaerobic environment of the wet site, coupled with the neutralizing effects of a shell midden, make an ideal environment for preserving archaeological materials. Basketry is so well preserved that it can be used to recreate ancient techniques of weaving cedar bark. Within the site, beautiful cryptocrystalline lithics have also been discovered that aid in the interpretation and understanding of past lifeways.

All in all, Qwu?qwes is a most amazing site. The dry site and wet site areas are quite a contrast to one another and provide field school students with an amazing opportunity to learn many excavation techniques. The cultural sensitivity that is demonstrated within the site, and with regards to the Squaxin Tribe, is also a good example for students to learn from. Qwu?qwes is an amazing site and provides an amazing and memorable experience to all those involved!

Lenore Harper is a recent graduate of UBC with a BA in Political Science and Anthropology (Hon.). She is interested in wet-site and underwater archaeology, particularly on the Northwest Coast. However, she is equally interested in Mesoamerica and China. Lenore hopes to spend some time working in the field in BC before continuing her education. She plans to study perishable materials from Northwest Coast wet sites for her Master's degree.
