CURRENT RESEARCH: EARLY SITES IN OREGON

LOCATING SITES OF THE PLEISTOCENE-HOLOCENE TRANSITION ON OREGON'S SOUTHERN COAST
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Early in November, 2002, newspaper articles and radio reports about our research team’s 10,430 in situ radiocarbon date at an Oregon coast site brought more publicity to our research program than 26 years of cooperative research with the Coquille Indian Tribe and other agencies of the south coast had done. The unsuspected attention, which brought e-mails and phone calls from foreign as well as local researchers and curious individuals, made us aware of the great interest of the general public in the initial settlement of the Americas. It also reminded us of the romanticism attributed to archaeological work. Many people seemed to assume that finding an ancient occupation was accomplished by good luck alone, and others assumed that with this discovery we would be working full-time on additional excavations at the site. We therefore welcomed the request from CAHO editor Guy Tasa to provide an article concerning the find, and we hoped that the story of the total project, including some of its background, might be of interest to readers. Following is an abbreviated version of our coastal research, the full story of which involves many people from many institutions. We believe that coastal archaeological research has implications and applications not only for archaeologists and coastal tribal members but for all people who appreciate and are concerned about the history and health of the coastal ecosystem and about coastal resources.

Background

Early coastal research, which preceded our history, includes surveys and excavations by U of O’s Luther Cressman, Joel Berreman, and Lloyd Collins. In the 1970s OSU’s coastal archaeologist Richard Ross surveyed and excavated a number of coastal sites. Among his projects was an excavation conducted in 1974 on behalf of Oregon State Parks at Bullards Beach State Park, north of Bandon. There a village site (35CS2/3) on the right bank of the Coquille River was being eroded due in part to changes in river forces following development in Bandon on the left bank (Vogel 1992; Hall 1995). This salvage took place very near where U of O archaeologists Leatherman and Krieger (1940) had excavated an important house-pit site four decades previously. Just east of the location where Ross excavated but on private land, a similar erosional process affecting the river bank was noticed by members of the Coquille Tribe in 1976. After obtaining permission to excavate and salvage burial remains at the site, they called OSU’s anthropology department for help. Together with archaeology graduate student Brian Harrison, Hall organized a work party that conducted a salvage at the site in September and October of 1976. In doing so, the OSU team began a cooperative relationship with Coquille tribal members that led to projects that helped the tribe reconstruct its cultural history, an important step toward the tribe’s ultimate restoration of its legal status, i.e., federal recognition. Our team conducted two extensive oral history projects funded by Earthwatch in 1978 and in 1980. A shorter project funded by the Oregon Arts Commission in 1979 resulted in an audio tape of legends and stories. The book Yesterday, Today and Tomorrow: The Coquille Indians summarized components of the oral histories that tribal members provided (Hall 1984).

In 1978 Richard Ross, aided by OSU graduate students John Draper and Isaac Barner, directed a project to test a number of possible archaeological sites in Coos County. In September of 1978 Draper gave a talk on their findings at 35CS1, just a few miles upriver from the Bullards 35CS3 site, and on findings from the Nah-so-mah Village and Old Town Bandon Site (35CS43), to the OSU-Coquille-Earthwatch oral history team. Ultimately, Draper developed his work at 35CS1 into a master’s thesis and he secured the site’s nomination as a historic archaeological site—the first on the coast. This site has subsequently been restudied by teams including then U of O graduate students Scott Byram and Mark Tveskov; additional nearby sites have also been identified and studied.

In 1986, the first of three salvage excavations took place at 35CS43 following the city’s excavation of a utility trench through the site. Tribal members asked Hall to organize a salvage, and Ross agreed to supervise the excavation while Hall
supervised analysis; Lee Lyman helped student Lee Lindsay with faunal identification. Graduate student Betty Vogel began a reconstruction of the historic component of the site with interviews that led to an extensive archival-based thesis (Vogel 1992). Many volunteers, including Guy Tasa, made the salvage a success. Lee and Sylvia Lindsay, Betty Vogel, and Hall worked with the Coquille Indian Tribe, the Port of Bandon, the City of Bandon, and the Bandon Historical Society to plan and carry out a test excavation of a section 35CS43 in 1988. Reg Pullen facilitated permissions and, along with Richard Ross, offered advice and help. Jerry Running Foxe, tribal elder, camped at the site and excavated, in addition to serving as the tribal interpreter for many visitors. A tribal salmon bake was offered to the public on the first day of the excavation and an estimated 1,000 visitors bought meals, watched Klamath Indian dancers and other visitors perform, and heard Senator Mark Hatfield express his interest in tribal restoration, in addition to taking part in other activities that included observing the test excavation units being opened up and helping to screen for artifacts. The project was reported in CAHO the following year (Lindsay, Lindsay, and Hall 1989) and plans were made for a larger project in 1990. That four-week project, the most extensive excavation at the site, uncovered two unfired clay vessels, likely used for cooking, 1.5 meters below surface, and dating to approximately 2,000 years ago. Having been preserved by a thick sand deposit, these vessels confirmed 1998 tests that indicated rapid depositional processes. These finds led to further studies that U of O’s Stefan Radosевич helped Hall plan and carry out at 35CS43 in 1993 (Hall and Radosевич 1995). Five cores made with a Gidding’s probe, along with re-opening and analysis of a previously excavated unit, provided a geoarchaeological and a human settlement perspective on earthquake activity that oceanographer Pad KOMAR and geologist Curt Peterson had been studying at the mouth of the Coquille. Several years later the earthquake history at the mouth of the Coquille was studied in detail by Robert Witter (Komar et al. 1991; Losey 2000; and Witter 1999).

The OSU team also conducted cultural resource tests at Coquille estuary sites that proved not to have midden deposits; these included a spring, 1992 study of the site of the proposed Bandon wastewater treatment plant, which Davis managed; a fall, 1992 study at Heritage Place (Tupper Rock), and a summer, 1997 study at the city of Bandon’s Ferry Creek Bridge. While they did not locate occupation sites, these studies contributed information about changing landforms and the dynamism of the near-coast environment—information that helped to launch the search for sites of the Pleistocene-Holocene transition.

The Locating Pleistocene-Holocene Sites Project

Genesis

Following the 1988 field season at the Old Town Bandon site, for which he served as field foreman, Lee Lindsay became very interested in the coastal-route hypothesis for settlement of the Americas and wanted to investigate it on the southern Oregon coast. The resources and the technology to accomplish it were lacking at that time, but Lindsay’s vision persisted. More impetus was provided in the early 1990’s by geneticist Adela Baer. She had been a volunteer with our excavations and had an interest in coastal migration, related to her research concerning indigenous people of Malaysia. Providing a literature review of geological and soils studies of southwest Oregon Baer challenged the team to use geological means to predict site locations. When Davis completed his master’s degree at OSU and was about to begin Ph.D. studies at the University of Alberta in Anthropology and Earth Sciences, Hall encouraged him to consider a project on the southern Oregon coast to seek earliest settlements.

Incubation

Several developments in 1998 and 1999 led to submission of an application to apply to OSU Sea Grant for funds to seek Late Pleistocene/Early Holocene sediments and sites on the south coast: 1) The Coquille Tribe and OSU Sea Grant had co-funded analysis of faunal material from site 35CS43 (reported in Hall 2002); it was Hall’s third Sea Grant program-development project, the first being a traveling exhibit on coastal resource use and the second the coring study of potential earthquake evidence at the site. Using the efforts of a number of OSU students as well as Vivien Singer at U of O, the project went well; subsequently, Sea Grant director Robert Malouf encouraged Hall to submit a larger grant application, again involving Oregon’s southwest coast and participation of the Coquille Indian Tribe. 2) In fall of 1998 Michele Punke began an OSU anthropology graduate program aimed at using Geographic Information System data and techniques to locate early sites on Oregon’s southern coast. Working with OSU’s geosciences professors and with GIS specialists in other departments, Punke was developing a good understanding of landscape features relevant to finding sites on the southern coast; 3) A number of OSU earth scientists had helped Hall and others with previous south coast culture history projects, and expressed willingness to continue their participation; 4) In the spring of 1999, Davis, having returned to Oregon to complete his
dissertation, taught a geoarchaeology course at OSU. During his doctoral work he had done research involving early Holocene sites in Baja, California; his Ph.D. research concerned late Pleistocene/early Holocene occupations in Idaho, and he was very interested in being part of an Oregon coastal project; 5) Sea level reconstructions and archaeological research by Canadian scientists, particularly in the Haida Gwaii southern Queen Charlotte Islands region (Fedje and Josenhans 2000), showed success in locating sites of the Pleistocene-Holocene transition. Their work, following on discoveries of a similar age by University of Oregon’s Jon Erlandson (1988) in the Channel Islands of Southern California, made southern Oregon investigations seem both obvious and essential; 6) Furthermore, Canadian scientists had determined that the paleoecology of the putative Ice-Free Corridor, long held to be the route of entry, was not favorable for early migrants (Mandryk et al. 2001). All of these developments suggested that an inter-disciplinary team that first prepared computer models and then did field surveys to understand the stratigraphy and determine where sediments of the Pleistocene-Holocene transition might exist, would constitute an appropriate process; 7) Realizing that the information we sought was of potentially great value to many constituencies—resource managers as well as tribal governments—helped us decide that Sea Grant was an appropriate funding agency for this project.

**Objectives**

The long-term objective of the project, stated broadly in the proposal, is “to determine parameters affecting late Pleistocene human occupation of the southern Oregon coast.” Under this objective the project not only determined to seek possible sites of the appropriate antiquity but also to model landforms, climate, and the human ecology of the earliest coastal settlers, whether they arrived by land or sea. Although locating a particular site of great antiquity is what we knew would bring headlines and attention to the research, we were aware that other contributions could ultimately prove to be at least as significant.

**Synopsis of Work**

In our first year (March 2000-March 2001) we focused on GIS work, particularly in the Coquille basin, that would guide field surveys (summarized in Punke 2001). Underlying activities in the field was the concept that the actual coastline of our target era is under water, but the putative early mariners whose remnants we seek likely would have been attracted to various terrestrial and fresh water resources; we would thus be seeking evidence somewhat inland or upriver from these mariners’ first landings. In these inland locations, we reasoned, much of the evidence (assuming that it existed at one time) would be found in various geologic contexts, depending on the particular nature and timing of geomorphic processes. Since the geomorphic history of the Oregon coast was poorly understood at archaeologically-relevant time scales, we decided to employ geoarchaeological field investigations in advance of archaeological fieldwork. Thus we began by building GIS models of past coastlines based on bathymetric and marine transgression models. Early versions were rough, and we have since amended and improved them as more data have become available; this process is still continuing. Some of these images as well as results of our fieldwork are provided on our website (http://www.osu.orst.edu/dept/anthropology/SeaGrantWeb/index.html), which also lists publications as they occur, and will be updated every few months.

In the summer of 2000, the first field season, Davis, Punke, and graduate student Michael Taggart surveyed much of the publicly owned portions of the south coast, following some streams and rivers inland as well. These initial efforts helped to clarify the stratigraphy of headlands, beaches, and valleys, in order to establish the location and condition of Late Pleistocene/Early Holocene sediments, not specific archaeological evidence or sites as such. Our guiding theory was: find the sediments of the appropriate time period, and then look within them for evidence of a human occupation. With the permission of landowners, we investigated several private properties in addition to public lands. At the end of the first field season, soil and radiocarbon tests were made, following which decisions were made about field work in the next season. Results of the 2000 field work season reinforced prior ideas about the dynamism of the coast, including the immense diversity of deposition processes from site to site. All of the findings indicated that a very detailed survey and understanding of the coastal environments would be required to predict where any sediments of the appropriate era (and, following that, any possibility of archaeological evidence) might possibly be preserved.

In academic year 2000-2001 the GIS work continued. Additionally, Hall and graduate student Donna McCarthy developed a database of old sites that describes the discovery processes that led to finds (Hall, McCarthy, and Hall 2002); other students helped to build a paleoecology database to understand the climate of the target era and location, which would allow consideration of other factors affecting human settlement. In the spring of 2001, Richard Ross accompanied Davis on a
trip to visit south coast sites that Ross had surveyed and observed over the past several decades; this tour included Indian Sands (35CU67), which Davis and his team had also surveyed the previous summer. Subsequent to Berreman’s work in the 1930s and Ross’s survey in the 1970s, Rick Minor (1986) had evaluated the site, and U of O archaeologists Madonna Moss and Jon Erlandson (1999) radiocarbon dated surface-collected shell from this site (35CU67) to more than 8,000 radiocarbon years.

In the 2001 field season the team continued its bluff and riverine surveys and made a test excavation at Cape Blanco. During the following year an additional visit to Indian Sands and a number of other sites was made by Davis and U.S.D.A. soil scientist Matthiew Fillmore. At many of the survey sites they took samples for Carbon-14 and Thermoluminescence dating as well as for soils analysis (Figure 1). These visits and tests led to development of a model of site formation processes that were geared to identify locations where sediments of the Pleistocene-Holocene transition could have been preserved.

Academic year 2001-2002 involved further analysis of data and synthesis of literature. Plans were made and permissions sought for field work in August of 2002 at Indian Sands and at Bandon State Park (35CS9). At Indian Sands, thermoluminescence and radiocarbon dates had previously indicated a stratified headland with remnant sediments of the late Pleistocene through the early Holocene—this geological information, coupled with the evidence of ancient artifacts on a highly deflated and disturbed surface, made it an attractive location; the geological and soils analyses led Davis to site appropriate excavation units. Research at both 35CS9 and 35CU67 proved successful in locating datable sub-surface sites. Tests of the occupations at 35CS9 produced radiocarbon dates of 2970 and 5820. The date on charcoal from Indian Sands indicated an occupation 10,430 radiocarbon years old in a level where a number of flakes and some fragmentary tools had been deposited. Graduate student Sam Willis joined the team in September, 2002, to analyze the lithic remains from both 35CU67 and 35CS9, and Craig Skinner of Northwest Research Obsidian Studies Lab contributed by sourcing obsidian artifacts from 35CU67. Analyses of the lithics are still in process; we hope to publish details soon and will post publication references on the website along with all of the radiocarbon and TL data and will report on these analyses at the 2003 Northwest Anthropology meetings sponsored by Western Washington State University at Bellingham, Washington, in mid-March, 2003.

With more analysis to perform and many leads to investigate further, the project is far from over. We expect to continue to use the geoarchaeological method to address site formation processes on the southern Oregon coast and we intend that our work will complement a significant body of research undertaken by the Coquille Indian Tribe to reconstruct past landscapes of ancestral land shared with the many bands of the Confederated Tribes of Siletz. We believe that reconstruction of the paleoecology and of the landscape will aid land managers and coastal planners, adding to the rich understandings already achieved by the many groups of people who are concerned about preserving and restoring coastal resources as well as planning to mitigate negative impacts of the Oregon coast’s dynamism.

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