Archaeological Investigations Along the West-Central Coast of Prince of Wales Island: Early Holocene to Contact
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Abstract

In 2019 and 2020, Forest Service archaeologists surveyed the west-central coast of Prince of Wales Island in support of a land exchange between the State of Alaska Mental Health Trust and USDA Forest Service, Tongass National Forest. A total of fifteen new cultural resources were identified and evaluated for significance, and two known sites were reevaluated. This poster summarizes the discoveries and discusses how changing Holocene sea levels have resulted in once-coastal sites of different ages being found at varied elevations today.

Background

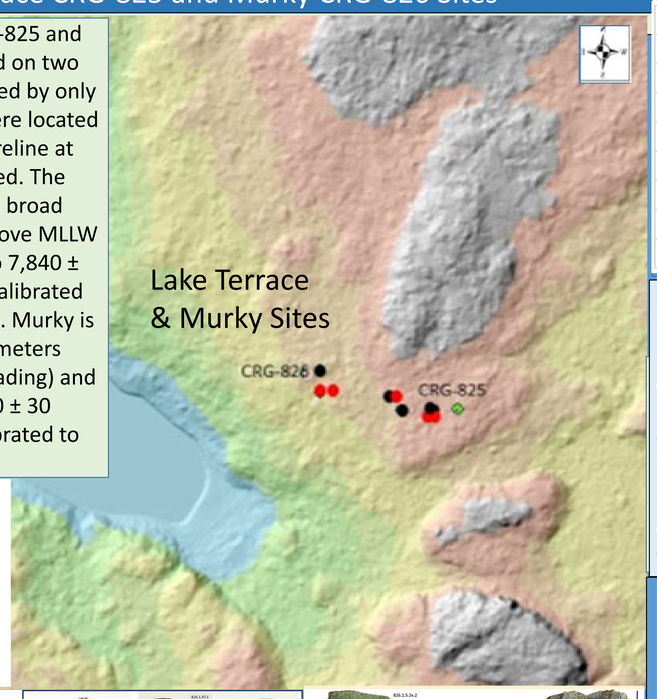
Survey was conducted following the 2009 Carlson & Baichtal Predictive Model, developed specifically to detect early Holocene archaeological sites on Prince of Wales Island. The combination of a forebulge and melting glacial ice resulted in a changing shoreline which left early Holocene shell beds stranded inland. A hypothetical shoreline was created based on the elevation and age of *Saxidomus giganteus* butter clams in the ancient raised marine deposits. Survey above the old shoreline was effective for locating early Holocene sites and providing estimates for the age and elevation of middle and late Holocene sites. Used with an understanding of where resources for subsistence and shelter would have been available, high probability areas could be targeted for survey with consistent success in locating new sites. The Predictive Model, coupled with LiDAR, allowed for further refinement of high probability locals.

Early Holocene Sites

Six early Holocene sites were identified during the combined phases of the AMHT Project: CRG-387, CRG-813, CRG-814, CRG-825, CRG-826, and CRG-832. The sites terraces were at elevations of 15.5-20 meters above Mean Lower Low Water (MLLW) and contained microblades and unifacial flake tools. CRG-387 was reevaluated in 2019, adding an early Holocene component.

Lake Terrace CRG-825 and Murky CRG-826 Sites

The sites Lake Terrace CRG-825 and Murky CRG-826 are located on two adjacent terraces, separated by only a meter elevation. Both were located on the early Holocene shoreline at the time they were occupied. The Lake Terrace Site rests on a broad terrace at 18-20 meters above MLLW (pink shading) and dates to 7,840 ± 30 RCYBP (Beta-566211); calibrated to 8616 calendar years ago. Murky is at an elevation of 15.5-17 meters above MLLW (light pink shading) and radiocarbon dated to 6,510 ± 30 RCYBP (Beta-566212); calibrated to 7,402 calendar years ago.



CRG-826 is the youngest early Holocene site in Southeast Alaska to date. It produced microblades, small flake tools, and larger blades.

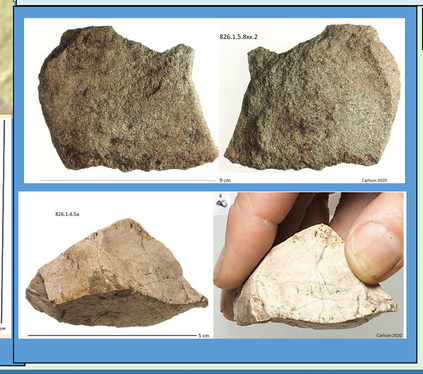
Early Holocene Site Elevation and Radiocarbon Age

Site Number	Elevation meters above MLLW	Radiocarbon Years Conventional Age	OxCal 4.4 Cal BP Median Probability
CRG-826	15.5-17	6510 ± 30 (Beta-566212)	7402
CRG-832	15-17	6930 ± 30 (Beta-567668)	7751
CRG-814	16.38	7360 ± 30 (Beta-543511)	8140
CRG-813	16.46	7830 ± 30 (Beta-543510)	8603
CRG-387	17-18	8150 ± 30 (Beta-537766)	9079
CRG-825	18-20	7840 ± 30 (Beta-566211)	8616

Early Holocene sites in southern Southeast Alaska are characterized by dense lithic deposits in and around carbonaceous hearths that include microblades, microblade and flake cores, small unifacial tools of curated materials, large expedient unifacial flake tools, utilized flakes, burins, biface thinning flakes, and rare bifaces. Microblades and simple unifacial tools are modified in multiple ways to perform a variety of tasks. A small component of fauna has also been identified and includes burnt and calcined bone, worked sea mammal bone, marine shell, and fish and bird bone. The six new sites found during this project expand on traditional characterizations of artifact assemblages and material types used for tool production during the early Holocene in Southeast Alaska.

CRG-813 Trio and CRG-814 Limestone Point Sites

The Trio Site CRG-813 and Limestone Point CRG-814 sites are located near each other on former beach terraces at approximately 15.5 and 16.5 meters above MLLW, respectively. Limited testing at CRG-813 produced a large, retouched rhyolite expedient tool and obsidian and rhyolite microblades, and a radiocarbon date of 7,830 ± 30 RCYBP (Beta-543510). An obsidian microblade and flakes of rhyolite, basalt, and chert were found in a single test pit at CRG-814. Charcoal was dated to 7,360 ± 30 RCYBP (Beta-543511).

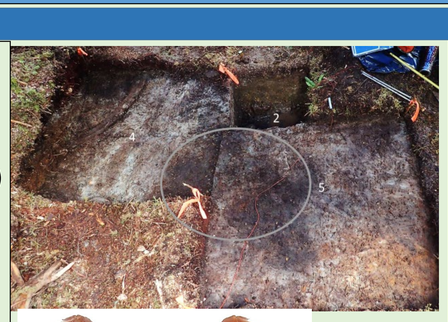


Cove Terrace CRG-832 Site

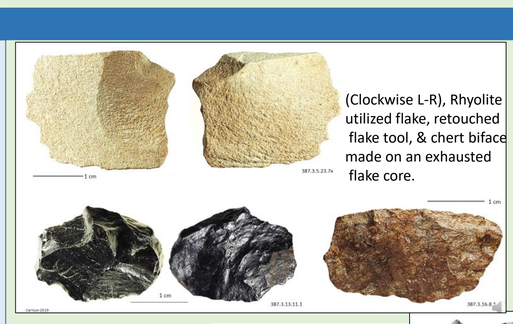
The Cove Terrace CRG-832 Site rests on a level terrace with a southern exposure and is split by a stream at an elevation of 15-17 meters above MLLW (right). Charcoal from the cultural component (35 cmbd, TP2; far right), returned a conventional date of 6,930 ± 30 BP (Beta-567668). A large limestone utilized flake and small flakes of quartz, obsidian, rhyolite, and black chert were found at the site.

The Reevaluation of the Jewel Site CRG-387

Under a layer of oil-soaked sand (right), in Test Pits 4 and 5, microtools of carnelian agate (lower right) and black translucent obsidian (far right) were found *in situ* at 29 cmbd and 28 cmbd, respectively. Charcoal associated with the agate tool returned a date of 2,520 ± 30 RCYBP (Beta-537646), and the obsidian tool, 2,470 ± 30 RCYBP (Beta-543509), confirming an intrusion of younger material into the early Holocene terrace.



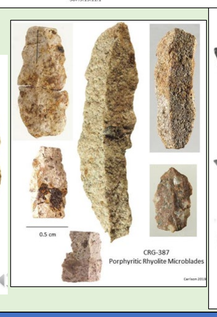
In 1992, Forest Service archaeologists identified the Dargun Point Site, renamed the Jewel Site, on the west coast of Prince of Wales Island. They recorded 12 culturally modified trees (CMTs), 11 fish weir stakes, and a shell midden exposed in the roots of a fallen tree. Shell from the midden was dated to 1,230 ± 60 RCYBP after correction for Carbon-13, placing the site in the late Holocene. The original site boundaries were relatively large, reaching up the hillside to include CMTs. During the 2019 re-investigation of the site using the 2009 Predictive Model, it quickly became evident that there were subsurface cultural deposits at multiple elevations. The features reflected different human utilizations over time as sea level fluctuated during the Holocene. At an elevation of 18 meters above Mean Lower Low Water (MLLW) an early Holocene site was discovered within the original site boundaries.



(Clockwise L-R), Rhyolite utilized flake, retouched flake tool, & chert biface made on an exhausted flake core.

Chert cortical flake core (above). Chert microblade core with microblades (below).

Agate and obsidian microblades (left). Proximal rhyolite microblades (right). Porphyritic rhyolite microblades (far right).



Three conventional radiocarbon dates of 7,950 ± 30 RCYBP (Beta 543508), 8,050 ± 30 RCYBP (Beta- 537647), and 8,150 ± 30 RCYBP (Beta-537766), along with the appropriate lithic tool kit consisting of flake and microblade cores, microblades, utilized and retouched flakes, and a biface, placed the 18-meter terrace firmly in the early Holocene.

Younger Sites

Shona's Terrace CRG-827 Site

The CRG-827 Shona's Terrace Site, located on a level terrace at an elevation of 9-10 meters above MLLW, dated to 2,600 ± 30 RCYBP (Beta-566213). A large rhyolite flake tool with a thick platform and retouched edge was found at 44-47 cmbd in Test Pit 1 (lower left). Several flake tools had serrated edges and others had been made from fire-altered rhyolite (lower right).

The remaining ten new sites are CRG-820, CRG-821, CRG-822, CRG-823, CRG-824, CRG-827, CRG-828, CRG-829, CRG-830, and CRG-831. Site features include shell middens, carbonaceous deposits, culturally modified trees, and springboard trees and iron tools left from early logging activities on the island. All the sites are located along the present shoreline, except for the East Lake CRG-830 Site, and should date to the late Holocene. Undated charcoal found at multiple locations at higher elevations within many of the sites could either represent utilization during the late Holocene or significantly earlier. Except for late Holocene resource extraction or utilization at any elevation, older sites are expected to be located at higher elevation.

CC CRG-828 Site

The CRG-828 CC Site dated to 1,810 ± 30 BP (Beta-567667) at the ANTP-1 locale at an elevation of 7.5 m above MLLW. ANTP-1 test pits produced lithic artifacts of rhyolite, sandstone and quartz; including a flake core, utilized flakes, and broken utilized macroblades (left). A second locale, High Midden, estimated at 7-8 m above MLLW dated to 2,250 ± 30 RCYBP (Beta-567666).

East Lake CRG-830 Site

The East Lake CRG-830 Site is located inland on the east shore of an unnamed lake at an elevation of 15-28 meters above MLLW. Subsurface charcoal exposed in the roots of fallen trees and CMTs were found upland, away from the marshy fluctuating edge of the lake. During the early Holocene, the lake would have been part of a saltwater channel, which leaves the age of the undated charcoal in question.

The Reevaluation of the Dargun Point Terrace CRG-640 Site

Test pits in the midden at the CRG-640 (left). Bone point of sea mammal (below).

Midden at CRG-640 (above). Perfectly preserved 2,000 year old shell (right).

The Dargun Point Terrace CRG-640 Site was first identified in 2011 by Forest Service archaeologists. The multi-component site contains a late middle Holocene terrace with lithic artifacts at 12-13 meters above MLLW and a younger late Holocene shell midden at an elevation of 9-10 meters above MLLW.

Several thousand herring bones and an equal number of shell fragments were recovered in the late Holocene midden. Shellfish species included: *Protothaca staminea, Saxidomus gigantea, Mytilus edulis, Clinocardium nuttallii, Macoma spp., Margarites spp., Lottia spp., Littorina spp., Ocinebrina spp., Nucella spp., Katharina tunicata, and Balanus spp.* Salmon *(Oncorhynchus sp*., species unknown*),* Pacific cod *(Gadus macrocephalus),* tomcod (*Microgadus proximus*), Red Irish Lord (*Hemilepidotus hemilepidotus*), a sculpin, 3-spine stickleback (*Gasterosteus aculeatus*), capelin (*Mallotus villosus*), rockfish (*Sebastes* sp., species unknown), and a flatfish that is probably rock sole or starry flounder but is not halibut (*Lepidopsetta* sp. or *Platichthys stellatus*). Dog (*Canis familiaris*) bones were found in all three 50²cm test pits in the midden and were the only mammalian species identified at the site. At least two individual dogs were represented, one of them very large. Two bird species were identified: bufflehead duck (*Bucephala albeola*) and double-crested cormorant (*Phalacrocorax auritus*).

The charcoal from TP1 dated to 2,060 ± 30 RCYBP (Bet-537649) at 63 cmbd. A second date of similar age, 2,150 ± 30 (Beta- 537767), came from a test pit at a depth of 18-24 cmbd at an elevation at 20-21 m above MLLW, suggesting expansive use of multiple terraces during the midden occupation. A drilled bone artifact (640.5.1.12.3.1) was recovered from a depth of 42.5-43.5 cmbd in TP 1. The sea mammal or antler artifact was carefully shaped and smoothed on the upper and lower edges and sides (left). A hole had been drilled through the bone for attaching a line. The right lateral side had been thinned to create the point and the distal end of the point appeared to be broken-off or eroded away over time.

The 12–13-meter terrace occupation at the site was dated to 3,150 ± 30 (Beta-537768) at 79-82 cmbd in 2020, and 3,530 ± 40 BP (Beta-283340) in 2011. Quartz crystal and obsidian flakes were found in 2011. In 2020, most artifacts from three new test pits were made of obsidian (right).

Carlson, R.J.. 2012. A Predictive Model for Early Holocene Archaeological Sites in Southeast Alaska based on Elevated Paleobeaches. PhD Dissertation, University of Cambridge.

Carlson, R.J, & J.F. Baichtal. 2015. A Predictive model for locating early Holocene archaeological sites based on raised shell-bearing strata in Southeast Alaska, USA. *Geoarchaeology: An International Journal* 30:120-138.