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SITKA NATIONAL HISTORICAL PARK
THE ARCHEOLOGY OF THE FORT UNIT
VOLUME I: RESULTS OF THE 2005-2008 INVENTORY

BY
WILLIAM J. HUNT, JR.

Midwest Archeological Center
Occasional Studies No. 35
Volume 1

NATIONAL PARK SERVICE
Midwest Archeological Center

**United States Department of the Interior
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Midwest Archeological Center
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This report has been reviewed against the criteria contained in 43CFR Part 7, Subpart A, Section 7.18 (a) (i) and, upon recommendation of the Midwest Regional Office and the Midwest Archeological Center, has been classified as

Available

Making the report available meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a) (i).



ABSTRACT

In 2005, SITK invited the National Park Service's (NPS) Midwest Archeological Center (MWAC) to conduct a Systemwide Archeological Inventory Program (SAIP) parkwide inventory at the park's Fort Site Unit. This unit incorporates 57 acres of rainforest and nearly 55 acres of wetlands, Indian River channel, and tidal flats. The SAIP's (and the SITK project's) goals are to conduct systematic, scientific research to locate, evaluate, and document archeological resources on National Park system lands. Its objectives are to: 1) determine the nature and extent of archeological resources in park areas; 2) record and evaluate those resources in the Archeological Sites Management Information System (ASMIS) database; 3) include nominating eligible properties for listing in the National Register of Historic Places; and 4) recommend appropriate strategies for conserving, protecting, preserving in situ, managing, and interpreting those resources.

Four years of inventory were projected to complete the inventory. The first year, 2005, was scheduled for metal detecting, geophysical, and hand-excavated shovel testing surveys. The second field season, in 2006, focused on shovel testing with the goal of completing archeological inventory over as much of the Fort Unit as possible. In 2007, shovel testing was completed and limited test excavations were conducted at select locations where prehistoric and historic features had been previously identified. The final year, 2008, saw additional test excavations at the Fort Clearing, presentations about the project in a regional conference, and preparation of a final report to the park. Seventeen new sites were recorded, one previously recorded site was updated, with 1787 artifacts and 49 soil, charcoal, and other samples recovered and cataloged.

Locating the 1804 Kiks.adi fort, *Shis'ki-Noow* and its associated 1804 battleground has been of primary importance to the park and this inventory. Metal detection and geophysical inventories were able to eliminate one proposed location for the fort. None of the inventory methods were able to confirm the fort's location at its traditionally acknowledged site in the Fort Clearing largely due to massive disturbances there by the National Park Service itself. The metal detection inventory, however, successfully identified the battlefield as at the Fort Clearing and areas northwest of the clearing. This, along with the data from the 1958 excavations by Hadleigh-West, points to the Fort Clearing as the most likely location for the Kiks.adi fort.

In addition, this project has accomplished one of the few 100% archeological inventories for a park in the National Park system and the first such 100% inventory in the Alaska Region. This report provides an overview of the environment, history, and archeology of the Fort Unit. It details the methodology of the work undertaken, reviews the data derived from that work, and provides an interpretation of the data within the framework of the culture history of the Sitka Tlingit and Southeast Alaska region. Sites were evaluated with regard to condition, disturbance levels, and threats. Eligibility for nomination to the National Register of Historic Places was determined through an examination of appropriate eligibility criterion, temporal association, physical integrity, data potential and determination of significance. Finally, recommendations are made with regard to the park's future scheduling of site condition assessments and possible interpretive options.

ACKNOWLEDGEMENTS

The Sitka National Historical Park (SITK) Parkwide Inventory was successfully completed due to the efforts of a lot of people from all walks of life. Without their help, the project would not have even gotten off the ground, let alone been successfully completed. Given the four year long life of the project, the list of persons making this accomplishment possible is long.

First of all, and most importantly, I want to acknowledge that this project would not have been accomplished without the vision and guidance of SITK Chief of Resource Management Gene Griffin. This project marks the successful conclusion of Gene's nearly 30 year initiative to thoroughly document SITK cultural resources. The process of documentation began in 1985 when Gene served as an archeologist at the Alaska Regional Office. Preparing for routine compliance-related investigations at SITK, he noticed that archeological excavation data did not conform with historic information for the 1804 Kiks.ádi fort site. Returning to the park in 1992, Gene began visionary and long-term investigation of park resources. This effort ultimately involved at least 24 historians, oral historians, geologists, geophysicists, ecologists, soils scientists, archeologists, cultural landscape architects, and botanists from at least 12 tribal, federal, state, and private organizations. Ultimately, these investigations have led to a broad understanding of the park's physical history and land use from circa 4500 years ago when the park lands emerged from the sea through the 20th century. Gene retired shortly after the fieldwork was completed in 2008 but his legacy has been great and will be of importance in park planning, interpretation, and future research for decades to come.

An important means of opening this project to a broader segment of society beyond the archeological profession and employees of the National Park Service has been the National Park Service's Volunteers in Parks (VIP) program. The Volunteers In Parks program proved to be a major element of this project with 16 people participating as part of the archeological crew in 2005 and 2007. Eleven VIPs participated in 2005 including three professional archeologists (Nebraska Wesleyan University Assistant Professor Dr. Melissa Connor, NPS [Intermountain Regional Office, Santa Fe] Archeologist Charles Haecker and Gila National Forest [New Mexico] Archeologist Chris Adams). Non-archeologists serving as VIPs in the project in 2005 were Sitka residents Israel Ginn, Deirdre LaBounty, Aaron Didrickson, Shane Mitchell, Blaine Scouller, and Sandra Vent. In 2007, project VIPs included John Banks (Red Cloud, MN), Jennifer Williams (Norwalk, OH), Laura Crawford (Lincoln, NE), Katie Griffin (Sitka, AK), and Kay Sargent (Bellevue, WA). These individuals worked long days digging and screening dirt (actually mud, since it rained most of the time) as part of the shovel test team with occasional assignments to the geophysical team moving lines or operating instruments. Altogether, the volunteers contributed 952 hours of labor to the project worth an estimated \$15,137.00.

Gene and I were also ably assisted by a dedicated corps of park personnel. Among those who made this thing work were SITK Superintendents Greg Dudgeon (2005-2007) and Mary Miller (2008), Chiefs of Administration Liz Roberts (2005-2007) and Julia Rosborough (2007-2008), Historian Kristen Griffin, Chief of Maintenance Randy Rogers, Museum Curator Sue Thorsen, Museum Specialist Ramona East, Education

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Specialist Lisa Matlock, Biologist Geoffrey Smith, Chief Ranger Clair Roberts, Park Ranger Clarence Wadkins, Maintenance Workers Michal Johnson and Loren Peterson, and Information Technology Specialist Bonnie Brewer. I thank you all.

Thanks are also extended to Forest Service Archeologist Jeremy Karchut and Forest Service Education Specialist Jim Case for providing background information on Baranof archeological sites. Jeremy also set aside time to show my crew archeological materials from the Starrigavan and Hidden Falls sites. This was a wonderful learning exercise for all of us and had a very positive affect on the overall accomplishments of the project.

Every year, the archeological crew at Sitka National Historical Park was composed of a corps of dedicated professional archeological technicians and non-professional local hires. They included:



2005 (left to right) - VIPs Israel Ginn and Shane Mitchell, SITK Laborer James Craig, VIPs Charlie Haecker and Chris Adams, NPS Archeologist William Hunt, VIP Melissa Connor, NPS Archeologist Douglas Scott, Youth Employment Program and Sitka Works Project employee Alan Carper, NPS Archeologist Steve De Vore, and SITK Laborers Sean Griffin and Jesse Marquez-Hopson.



2006 (left to right) - MWAC Archeological Technician Mike Hammons, MWAC Archeologist William Hunt, SITK Laborer Anne Pollnow, MWAC Archeological Technicians Amanda Davey and John Gapp; SITK Laborers Israel Ginn and Mikile Fager, MWAC Archeologist Anne Vawser, and SITK Laborers Josh Meabon and Ricky Goodall (Angel McCutcheon not shown).



2007 (left to right) - SITK Laborer Fawn Abt, VIPs Katie Griffin and Jennifer Williams, MWAC Archeologist William Hunt, MWAC Archeological Technician Arlo McKee, SITK Laborer Sean Griffin, MWAC Archeological Technician Erin Dempsey, SITK Laborer Mike Howard, MWAC Archeological Technician Callie Unverzagt; and VIPs John Banks and Laura Crawford.



2008 (left to right) - SITK Laborer Sean Griffin, MWAC Archeologist William Hunt, MWAC Archeological Technician Dempsey, SITK Laborer Fawn Abt, and MWAC Archeological Technician Dustin Gonzales.

Although all these crews did an excellent job, special acknowledgement should be given to the 2006 crew which worked in April and May of that year through very difficult conditions of cold generally accompanied by rain, snow, and sleet. Despite their daily discomfort, crew members continued to work hard and thoughtfully, completing an amazing number of shovel tests that year.

Lands encompassing Sitka National Historical Park lie within the heart of Tlingit territories known to the Sitka Tribe of Alaska as the *Sheey At'ika* or *Sheetka'ká Kwaan*. In English, this roughly translates to “Outside Edge” denoting the Sitka Tribe’s geographical position on the westward, Pacific Ocean edge of traditional Tlingit territory. The Kwaan encompasses all of Baranof Island (*Shee*) and the southern and western half of Chichagof Island in the Alexander Archipelago of Southeastern Alaska. The Tlingit, unlike many tribes in the mainland United States, were not eradicated or removed from their traditional homelands. In fact, the Sitka Tribe of Alaska lists over 3100 tribal members, the overwhelming majority of whom live in the Sitka, Alaska, area. Sitka National Historical Park lies within the traditional lands of the Tlingit *Kiks.ádi* clan. Within the boundaries of the park are resources and sites which are claimed and were used by the *Kiks.ádi* for perhaps 5000 years or more. Based on this, it is likely that many if not most archeological sites within the park are associated with the Tlingit and particularly with ancestors of the *Kiks.ádi*. There is considerable Sitka Tlingit oral history relating to the park and surrounding environs beyond the Russian conflicts. For these reasons, it was considered important to include the Sitka Tribe of Alaska and *Kiks*.

ádi clan members in the project. It is their traditional homeland, it contains sites where their ancestors lived and worked, and tribe and clan have much to contribute with regard to identifying sites, site functions, artifacts, and site histories. The archeology project, in turn, has the potential to offer the tribe and clan specific information about sites within the park, the objects and features they may contain, time of occupation, and function, all of which can supplement the rich oral history already in place. The project in many ways was a partnership between the tribe, the clan, the park, and the archeological team.

Among the Sitka Tribe of Alaska partners were Tribal Chairman Woodward “Woody” Widmark, Resources Protection Director Jessica Perkins, Administrative Officer Lisa Gassman. The tribal and *Kiks.ádi* clan archeological liaison was Steve Johnson, Jr., who was employed at the onset of the project with the tribe’s Resources Protection Division. Chairman Widmark also leads an organization known as the S.C.O.R.E. (Student Conservation, Outdoor Recreation, and Education). An element of the Sitka Community Schools special summer programs, S.C.O.R.E has been a tradition since 1993 for Sitka youth aged 8-14. Together, Woody and his kids have built trails, gone on hikes, cleaned parks, gone swimming, and participated in overnight camping trips. Woody and his kids assisted our field team in 2005 by clearing brush over fairly large tracts in the park in anticipation of geophysical inventories. They returned in 2008 helping us in a very big way with the onerous task of backfilling some of our test excavation units.



The tribal and *Kiks.ádi* clan’s archeological liaison was Steve Johnson, Jr. (left) shown here speaking with Kaxatja Hit (Shattering House) Housemaster “Duck” Didrickson.

Tlingit elders generously assisted the project through their observations, based on both personal and traditional knowledge, providing much-needed information on tribal and clan histories, park history, artifact identification and use, etc. Among the *Kaagwaantaan* clan elders assisting us were clan leader Herman Kitka (Housemaster of *Kook Hit*, Box House), Nels Lawson, Sr. (*Kook Hit*, Box House), and Dan Moreno. The park lies within the traditional area of the *Kiks.ádi* clan. For this reason, the project director and park staff often met with elders of this clan to report on discoveries and receive any feedback they might have to offer. Most prominent among the *Kiks.ádi* participants were clan leader Ray Wilson (Housemaster of *Gagaan Hit*, Sun House), “Duck” Didrickson (Housemaster of *Kaxatja Hit*, Shattering House), and Irene Jimmy (*Shdéen Hit*, Steel House).

Staff at the Southeast Alaska Indian Cultural Center (SEAICC) also assisted in a number of ways. Executive Director Gail Peterson helped the team with housing the first year of the project and often provided introductions to people we needed to know. Tlingit artist and weaver Teri Rofkar and Tlingit woodcarver Tommy Joseph helped identify objects recovered during the shovel test phase of the project and provided a much needed basic instruction about Tlingit art and history to the archeological crew. Tlingit copper and silversmith Charlie Skulta, Jr., made the unique copper “plaques” for archeological data established at Shis’ki-Noow Fortified Village and Battlefield (49SIT751) and *Aas Gutú Hit* or “In the Forest House” site (49SIT752).

From a personal perspective, I really enjoyed my interaction with the Tlingit people. They taught me a great deal and established a firm footing upon which the archeology could be interpreted and understood.



Harry and Irene Jimmy visiting Aas Gutu’ Hit or “In the Forest House” site (49SIT752).

I want to express my gratitude to my supervisor, MWAC Archeologist Ralph Hartley, for putting me in charge of this interesting project. He was always there when I needed advice and could be counted on to provide alternative perspectives. MWAC Archeologists Doug Scott and Steve De Vore expertly conducted the metal detection and geophysical inventories during the first year in the field and wrote synopses of that work from which I have liberally plagiarized in Chapter 4 of this report. MWAC Archeologist Karin Roberts led the curation effort at MWAC and worked closely with SITK Museum Curator Sue Thorsen to make sure that aspect of the project was completed properly and to the satisfaction of SITK park management. MWAC VIP Program Coordinators Bruce Jones and Dawn Bringelson also assisted by providing support for persons in the VIP program working with the Sitka archeology crews.

Finally, a big thank you goes out to the reviewers of my draft manuscript, Alaska Regional Office Cultural Resources Team Manager Ted Birkedal, Alaska Region Support Office Archeologist Becky Saleeby, and Jeremy Karcut who is the Denali National Park and Preserve Archeologist. Their input has resulted in my modifying this report in a number of important ways. In particular, I am grateful to Ted for pointing out information provided in Frederica de Laguna’s masterpiece, *Under Mount St. Elias: The History and Culture of Yakutat Tlingit* which is pertinent to the interpretation of a number of archeological features seen at Sitka National Historical Park. The errors and

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failures of this report are solely mine, however, and should not reflect on my reviewers or other researchers which have provided a variety of data incorporated in this document.

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CHAPTER 1

INTRODUCTION

Sitka National Historical Park is Alaska's oldest federally designated park and was established to commemorate the 1804 Battle of Sitka fought between native Tlingit and Russian forces. Sitka National Historical Park is located in Sitka, Alaska, on the Pacific Ocean side of Baranof Island at the outer margin of the Alexander Archipelago in Southeast Alaska, also known as the Alaskan Panhandle (Figures 1-1, 1-2). Originally established as Sitka National Monument in 1910, these lands were redesignated Sitka National Historical Park by Congress in 1972. The park is located about 580 airline miles southeast of Anchorage, Alaska, and about 850 miles northwest of Seattle, Washington. A trip to Sitka requires one to travel long hours by airplane, ship, or boat for there are no roads to Baranof Island. The sometimes tedious trip is found to be more than worthwhile once the visitor sees the rugged snow-capped mountain terrain, fjords, and island-dotted expanse of ocean. Sitka is the only community in Southeast Alaska that fronts the open ocean and the view is spectacular.



Figure 1-1. Location of Sitka in the Southeast Alaska panhandle.

The park incorporates 113 acres and is divided spatially and thematically into two units (Figure 1-3). At the east edge of downtown Sitka, one finds the 1842 Russian Bishop's House. This park unit comprises 1.15 acres of land with exhibits in the restored log building commemorating the history and culture of 19th century Russian America. Sitka served as the capital of Russian American from 1804 through 1867 and, throughout that time, was the headquarters of the Russian American Fur Company. The Russian Bishop's House is only one of two original structures remaining in Sitka with perhaps

only three or four such buildings surviving from the Russian American Colonial period. The building was the home of the Bishop of the Alaskan Russian Orthodox Church and served as the center of church authority for over 125 years in a diocese that stretched from California to Siberian Kamchatka.

Located about one-half mile further east of the Russian Bishop's House, the Fort Site Unit encompasses 57 acres of rainforest and nearly 55 acres of wetlands, Indian River channel, and tidal flats. Park interpretation in this unit focuses on Northwest Coast Native American culture with an emphasis on the Sitka Tlingit, the original occupants of the park lands, and the 1804 battle which allowed the Russians to establish a permanent



Figure 1-2. Google Earth map showing location of Sitka on Baranof Island.

colony on Baranof Island. Native American arts are prominent at the Visitor Center and along Totem Trail through the display of eighteen totem and house poles. Also housed in the Visitor Center is the Southeast Alaska Indian Cultural Center. This independent, non-profit Native organization was established in 1969 to instruct students and visitors about Southeast Alaska Native cultural values. It is a place where the Sitka Tlingit can learn more about their own culture by offering courses in such traditional Tlingit arts as beadwork, weaving, bentwood box making, box drum making, as well as silver and



Figure 1-3. Sitka National Historical Park is divided spatially and thematically into two units: the Fort Unit on either side of the Indian River and the Bishop's House Unit.

copper working. The Southeast Alaska Indian Cultural Center also guides visitors toward an understanding of the Native people's history, their crafts and culture, by providing access to the artists as they work.

Sitka National Historical Park is situated within the Pacific Northwest Temperate Rainforest, the largest temperate rainforest in the world. Extending from northern California to mid-Alaska, the region continues to be lightly inhabited to this day with many considering it the last true wilderness region in the United States and the Pacific Coast. A temperate rain forest, for those who have never experienced one, is a very wet, cool forest in the mid-latitudes. Characteristically, a rain forest must receive more than 55 inches of rainfall a year with ten percent or more occurring in the summer. It has a dormant season caused by low temperatures and, as might be expected given the level of precipitation it experiences, the rain forest has very few fires. The Sitka area, in the northerly end of this region, certainly meets the rainfall requirement receiving an average of 96 inches (8 feet!) of precipitation each year with an average snowfall of over 40 inches. The wettest months of the year are September and October and the driest are June and July although, even at that time of the year, it is a rare summer day when rain fails to appear. The expanse of water surrounding Baranof Island has the effect of producing a very mild climate with a mean winter temperature of 38° F and a mean summer temperature around 62° F. The coldest months are December and January with temperatures as low as 0° F but can reach, more rarely, as high as 60°. The warmest months are July and August which can have extreme high and low temperatures of 41° to 86° F.

Baranof Island has one of the most beautiful landscapes in the world, a land where magnificent, mist-shrouded, and impenetrable rugged mountains plunge into the ocean depths (Figure 1-4). The island has been sculpted by tectonic forces and glacial action which have brought with them eons of uplift, subsidence, and erosion. In fact, there is evidence for almost continuous interaction between Pacific and Alaskan crust



Figure 1-4. View of Silver Bay, located just south of the City of Sitka.

for millions of years. Models of global plate motion imply that since earliest Jurassic time (around 210 million years ago) as much as 15,000 km of northward-moving Pacific crust have been forced beneath Alaska, an amount perhaps not equaled elsewhere in the world.¹ This grinding of these tectonic plates has lifted Baranof Island from the ocean creating the captivating cragged mountain system seen today.

Tectonic activity has also brought considerable volcanic activity to the area. Across the bay from Sitka on the south end of Kruzov Island, is Mount Edgecumbe, a striking cone-shaped volcano many call the “Mt. *Fuji* of Alaska.” Snow-capped for all but a couple of months each year, Mount Edgecumbe rises 3,182 ft (970 m) above the ocean. Its peak is the most prominent feature of the Mount Edgecumbe volcanic field which extends over 260 sq km of Kruzov Island and includes the large composite cones of Mount Edgecumbe, Crater Ridge, and Shell Mountain. Although volcanic activity originated here about 600,000 years ago, the island witnessed a more recent series of major explosive eruptions about 9000-13,000 radiocarbon years ago. The latest dated eruptions (about 4,500 years ago) were “pyroclastic” in that they produced avalanches of superheated flows of muddy ash, pumice, rocks, and gas.² Ash and pumice remnants of this eruption occur in many areas of the park.

Ice was the third major actor in sculpting the face of Baranof Island. Glaciers covered the Alexander Archipelago during the last glacial epoch (known as the Wisconsin or Last Glacial Maximum) reaching their maximum extent sometime before 14,000-16,000 years ago. Flowing ice fields dramatically changed the landscape of the island cutting deep gouges which can still be seen today as fjords on the island perimeter

and in the mountainsides as U-shaped depressions called cirques. Unimaginable tons of stone, dirt, and other debris were moved down the face of the slopes then redeposited along the shorelines. The Indian River, which flows through Sitka National Historical Park, has its headwaters in steep-sided valleys created by glaciers and drains a twelve square mile glacially sculpted area incorporating a C-shaped formation of mountains incorporating Mount Verstovia, Arrowhead Peak, The Sisters, and Gavan Hill. As glaciers melted around 14,000 years ago, the sea rose over the land. In some areas, particularly the inner fjords of Southeast Alaska, sea levels rose over 650 ft (200 m). A short term glacial advance, known as the Neoglacial Period, occurred sometime between 9,000 and 13,000 years ago. In the immediate post-glacial period, the land mass in today's Sitka National Historical Park actually lay under water. With combined actions of the tectonic plates and isostatic rebound (land rising due to the decreased weight of the melted glaciers), the land has risen approximately 40 feet (12 m) in the last 10,000 years. In fact, the land continues to rise. Based on tidal gauge measurements from 1938 to 1972, the park area is rising at a rate of 1.4 inches (3.4 cm) every ten years!³

Baranof Island's geological history combined with its climate has created a series of unique soils in the park area. Soils are related to the relative ages of each of the landforms in the park. Upland terrace and lowlands have soils with the greatest development, suggesting they are the oldest landforms (Spodosols). Typically these are well drained, though shallow, and have a well developed subsurface layer of iron and/or humus accumulation (called a B horizon). One of the other soils found in the lowlands was formed in volcanic ash (Andisols) and a third soil type, found in the lowlands is basically organic material less than 20 inches thick over bedrock (Histosol). Next in relative age are the uplifted beaches, stream terraces (old floodplain), and the current floodplain. Soils in these areas belong to the soil order Inceptisols, a name which implies a soil at its inception or beginning. They are less developed than the upland terrace and lowland Spodosols. The youngest landforms are the park's estuary and the beach meadow. The beach meadow is actually part of the uplifted beach, but is still influenced by high tides during storm and extreme tidal activity. Soils in these landforms belong to the soil order Entisols. They are the most recent soils in development and usually have surface layers enriched with organic matter (A horizon) and overlying layers of parent material (C horizons). At Sitka National Historical Park, the C horizons typically consist of layers of sand and/or gravel reworked by stream and tidal influences.⁴

The developmental history of Baranof Island, as can be seen, is very complex and this in turn has created a high degree of environmental diversity. One can experience a full range of environments in many places within less than a mile of one another; everything from snow-capped alpine tundra through marine depths up to 300 feet (100 m) or greater. This diversity is expressed through a wealth of environmental niches which support a very broad range of plant life when compared to non-rain forests. They contain fewer species of plants than the rainforests of the tropics, but the total amount of plant life is about the same within a given area. The variety of large mammalian species, however, is very small due to the island being isolated from other land masses for so long. At present, the only native large mammal species on Baranof are brown (grizzly) bears and Sitka deer, both of which occur in large numbers. Mountain goats were introduced to the island in 1923 as a game animal. Below the treeless tundras, the cool, wet weather has produced lush, thick forests and muskegs (peat bogs).⁵

Similarly, the developmental terrestrial history of Sitka National Historical Park though much shorter than that of the island as a whole is a complicated story of lands rising from the ocean and subsequently shaped by flowing water and wave action. Evidence for the relative youthfulness of park land forms and their development has been provided through vulcanological and geomorphological investigations of the park and surrounding areas. Geologists have observed a former high tide line above the 40 foot elevation contour of the Sitka area and, prior to 5,600 years ago, the Indian River delta was probably about 1½ miles northwest of where it is now situated, at the south end of the park.⁶ The first area of the park to emerge from the ocean was likely a bedrock island projecting southward from the delta (Figure 1-5). This former island, now 41 feet above mean sea level, forms a small hill in the north end of the park west of the modern-day Indian River. The geological estimate for the emergence of this island, similar to the array of islands off the modern shore, is around 5,500 years ago.⁷ This timeframe, therefore, represents the earliest possible date for a human occupation within the park boundaries. With the passage of time, regional tectonic activity pushed the Sitka area upward with the lands (and thus the maximum potential age of archeological sites) decreasing in age as one moves from the north end of the park toward the toe of the peninsula. The first expanse of habitable land south of the former island was in place by 4,500 years ago. This narrow spit bore a mature forest and jutted southeast from the former island which was now securely attached to terra firma. Over time, the spit broadened and lengthened until around 800 years ago, the spit started accruing soils on its east (Indian River) side, slowly transforming itself into the boot-shaped peninsula we see today. By AD 1250, the “boot” was in place and had largely achieved its present shape and size by AD 1500. Thus, the lands below about 15 feet are predicted to have no sites older than 500 years. Areas on the east side of the park, for the most part, are relatively young and represent river channel alluvium and ephemeral stream drainages created perhaps only within the last 500 years. An exception to the generally youthful face of the land here occurs in two locations where the elevations are above 15 feet. One of these, near the Russian Memorial in the southeast quarter of the park, retains volcanic ash and may be up to 2500 years old. The north end of the park was not studied as intensively by geomorphologists but, based on work in other areas of the park, it was proposed that there is a potential for older sites where elevations are between 15 and 26 feet.⁸

Even though it is quite small and relatively young in age, Sitka National Historical Park contains a variety of habitat types including temperate rainforest, open meadow, estuary, anadromous river, and semi-protected marine intertidal shoreline. The park's vegetation is dominated by the coastal temperate rainforest typical of southeastern Alaska and is characterized by a Sitka spruce/western hemlock closed-canopy forest. The northeastern corner of the park exhibits old-growth characteristics such as multiple canopy layers, trees of varying diameters, snags, and woody debris. Typical trees include Alaska cedar (also known as Yellow cedar), western hemlock, mountain hemlock, Sitka spruce, and alder.⁹ Numerous species of shrubs, including devil's club, skunk cabbage, salmonberry, huckleberry, elderberry, and blueberry, grow in the forest and on its fringes, often creating an impenetrable dense understory. Mammals in the Sitka area include the diminutive Sitka deer, brown bear, and smaller mammals such as mice, voles, red squirrels (introduced in 1930), marten (introduced in 1934), mink, and river otters. Numerous songbirds occur in the park along with giant terrestrial banana slugs, snails,



Figure 1-5. Geomorphological map and landform chronology of Sitka National Historical Park (adapted from Chaney et al. 1995: Map 1).

and the occasional salamander. Bald eagles, ravens, spotted owls, and great horned owls are important predators and scavengers.¹⁰

Natural non-forested areas in the park include the Indian River estuary, associated wetlands, and the beach fringe. The Indian River and estuary is an anadromous river (in which fish enter from the ocean to spawn). This part of the park, along with the extensive marine intertidal area, is unusually diverse and productive. Pink and chum salmon enter the intertidal and lower floodplain channel segments of the Indian River to spawn from mid-July through September with coho and chinook salmon, Dolly Varden char, and steelhead trout migrating through the park in small numbers. The park's marine shoreline areas support a variety of migratory waterfowl and shorebirds during spring and fall. Bald eagles, gulls, crows, and ravens scavenge along the tidal flats and the river, especially during the spring herring spawn and fall salmon runs. Tidal flats are home for a diverse array of clams, sea snails, starfish, anemones, barnacles, limpets, octopus, and other invertebrates. Plant life includes a variety of seaweed, kelp (brown algae), and red algae. In the surrounding deeper waters are such marine animals as humpback whales, orcas, porpoises, seals, sea lions, and sea otters with important fish including cod, halibut, salmon, and herring.¹¹

Sitka National Historical Park is equally fascinating from a cultural and historical perspective. The history of the region is one where prehistoric Native Americans, who through time, became the Sitka Tlingit. They have occupied the island for thousands of years and remain here to this day. Only in the last two hundred years have others come here to live. The first were the Russians (1798-1867) in their search for fur riches and, finally, the United States of America (1867 to present).

In June, 2005, I found myself traveling to Sitka, Alaska, along with three other National Park Service archeologists specializing in battlefield archeology, geophysical inventory, and museum curation to become acquainted with Sitka National Historical Park. This team of experts were from the Service's Midwest Archeological Center in Lincoln, Nebraska, and had over 100 years of archeological experience between them. Based on our expertise, the park managers selected the Center to undertake an archeological inventory of the park's Fort Unit. Fieldwork began this same year and continued for the following three years through 2008. I was fortunate to be the project's director, the person who would guide the field and laboratory work through their various stages from the first year's field surveys to preparation of the final report at project's end.

Funding for this important archeological project came through the National Park Service's Systemwide Archeological Inventory Program also known by its acronym "SAIP." This program reflects the unique role the National Park Service plays in our governmental system. It is the only agency whose primary goal is to preserve and protect *unimpaired* the natural and cultural resources (including archeological sites) within its system of parks for the enjoyment, education, and inspiration of this and future generations. The program was created in response to a determination that, by the early 1990s, only about 10% of the archeological sites in the parks had been identified. It was clear that the Service lacked even the most rudimentary information about site locations, characteristics, and their significance to local, regional, and national history. Without

this kind of basic information it is impossible for park managers, planners, interpreters, and other specialists to carry out their mission of preserving, protecting, researching, and interpreting our nation's prehistory. The SAIP was therefore established in 1992 with the goals of conducting systematic scientific research focused on locating, evaluating, and documenting archeological resources on National Park system lands. Its objectives are to: 1) determine the nature and extent of archeological resources in park areas; 2) record and evaluate those resources in the Archeological Sites Management Information System (also called "ASMIS") database; 3) nominate eligible properties for listing in the National Register of Historic Places; and 4) recommend appropriate strategies for conserving, protecting, preserving in situ, managing, and interpreting those resources.¹²

Working with the park staff, and based on an archeological overview and assessment completed in 1999 by Idaho archeologist Robert Betts,¹³ I developed a list of four general issues upon which the project would focus and specific goals that could allow the issues to be successfully addressed.

The first, General Issue 1, focused on protection of archeological resources and two goals were set for the Sitka project. The first of these goals was to provide guidelines for periodic monitoring of natural and human threats to cultural resources. Since this monitoring would be carried out by park personnel, the team's contribution to the park's completing and implementing this goal would be to identify all archeological resources in the park and identification of current and potential threats to each resource. Using this data and with the assistance of the Midwest Archeological Center, the park can then design an effective monitoring plan to protect and preserve its resources.

The second goal was based on the understanding that the public will assist in the preservation and protection of a resource if it understands and appreciates it. Thus, this goal was simply to improve public knowledge, understanding, and appreciation of archeological resources. This goal ties directly to one of the main missions of the National Park Service; that is, to make available to the public, and preserve for the future, the valuable resources found within units of the National Park system. As an office within the National Park Service, the Midwest Archeological Center has always been committed to this mission although with greater focus on National Park archeological resources. The process by which the public achieves this knowledge, understanding and appreciation is through education ranging from such things as meeting with elementary school groups to working with interested volunteers at archeological sites or in the laboratory.

With this goal in mind, I identified several public education efforts that would be directed to archeologists, historians and the lay public, and this would be accomplished through:

- Professional papers or poster presentations at regional archeological conferences (e.g., Alaska Anthropological Association);
- Development of temporary work site posters to aid in interpretation of the project to the park's visiting public;

- Presentation of one or more papers at an international conference (e.g., Conference on Historical and Underwater Archaeology);
- Development of one or more articles for juried regional and/or international archeological journals (e.g., *Alaska Journal Of Anthropology*, *Arctic Anthropology*, or *Historical Archaeology*);
- Preparing archeological reports for Sitka National Historical Park; and
- Developing web-site components in MWAC's "Featured Projects" page.

Other possible means of public outreach identified at the beginning of the project included documentation of the project via digital video; articles in public-oriented history and archeology magazines; designing trailside interpretive panels and museum exhibits; involving students in the project through field and laboratory work and providing opportunities to use project data in Masters theses or doctoral dissertations; and perhaps writing a book about the history, archeology, and cultures of Sitka National Historical Park.

General Issue 2 for the project, "to provide full documentation for all archeological research, surveys, and testing," was based on an apparent failure of past archeological endeavors to develop and maintain such documentation. The project therefore had two goals designed to improve this situation. The first of these goals, simply stated, was to improve documentation of NPS archeological projects. To this end, the Midwest Archeological Center (MWAC) pledged all archeological sites and materials encountered and investigated in the field would be documented using standardized forms and procedures. Sites would be documented using NPS-MWAC as well as Alaska site forms. Basic documentation for sites would include prominent landmarks, site boundary (if determinable), position of diagnostic or collected artifacts, as well as the positions and sizes of any features and artifact concentrations that may be encountered. All fieldwork would be documented using standardized MWAC shovel test, excavation, and continuation forms. In addition, project archeologists would maintain daily logs of crew activity and descriptions of inventoried areas. A log of photographs would be created and maintained to identify documentary black and white film, color film, and digital photographs taken during the course of the project and positions of sites, features, site boundaries, etc., would be recorded using a 12-channel Trimble GPS Pathfinder Power receiver or equivalent equipment to insure the greatest accuracy of point location within the park's forested environment.

At the end of the project, site forms would be filed at Sitka National Historical Park and the Alaska Archaeological Survey Unit of the State Office of History and Archaeology. The Alaska Archaeological Survey form would be used with supplements that complied with the National Park Service's database (Archeological Sites Management Information System or ASMIS) for the basic registration and management of park prehistoric and historic archeological resources. In the event that new sites were discovered, site numbers would be obtained from the Alaska Archaeological Survey and ASMIS numbers from MWAC at the close of the fieldwork. The archeological team

might also incorporate supplemental site forms into the recordation process for each archeological site encountered where key data fields required by ASMIS do not occur on state site forms. Site Condition Assessment forms would be completed for all sites visited and/or recorded. The completion of these forms allows for clear and consistent documentation of site condition for archeological sites in care of the National Park Service and facilitate data entry and recording for programs such as ASMIS.

Thorough documentation of the project would also occur through a systematic process of reporting with information and data collected through the course of this project provided to park managers through three types of documents. Within two weeks after the end of each field season, an overview of the fieldwork would be prepared as a trip report by the archeologist(s) engaged in that fieldwork.¹⁴ This would present a general review of the dates of work, activities, and results. Each season's work would be followed within 3-6 months after leaving the field by a more in-depth annual archeological report printed in very small numbers since these were strictly interim reports.¹⁵ Finally, at the end of the project, an archeological report would be prepared addressing the project overall. A draft of this report would be completed and submitted for park review. Comments from the park would be addressed in a final project report.

A second way to ensure documentation of the project was thorough and complete was by returning artifacts collected or excavated within the park to the park for curation and possible display. This would be accomplished by cataloging all artifacts, field records, and laboratory records in the Lincoln, Nebraska, laboratory using the National Park Service's ANCS+ software, a version of Visual Re:discovery collections management software. Upon completion of cataloging and analysis, these materials would be returned to Sitka National Historical Park for curation and exhibition.

General Issue 3 was to involve other agencies, disciplines, and native people in historic preservation planning and this would be accomplished through two goals. The first goal was to supplement data from archeological contexts with a broad range of multidisciplinary environmental, historical, ethnographic, and oral history research to provide a comprehensive understanding of the people and events that have shaped the cultural landscape of Sitka National Historical Park. The park's Chief of Resource Management, Gene Griffin, had already set the stage for this goal long before the archeological team arrived in the park. Over his tenure, he had contracted for, and had in hand, reports on the park's landscape history (geomorphology), cultural landscape, traditional land use, regional and local histories, and oral history projects. These documents would provide an invaluable wealth of data useful for insights into the nature of park archeological resources not only with respect to Native Americans, but also to Euroamerican histories and cultural changes in the Sitka area and the larger region within which it lies.

The second goal was to involve other governmental, tribal, educational organizations to participate in the project. Primary ways for the various publics to participate are through research, employment, and volunteer opportunities. Some of these would certainly overlap in scope. Certainly, contributory research by specialists in faunal analysis, geophysical survey, material culture, and other arenas of investigation

would be utilized throughout the course of this project. A Tlingit tribal consultant would be on hand during fieldwork to assist communications between field archeologists and tribal members. Employment opportunities utilizing Alaska's special hiring authorities would allow greater local participation in the project. Where possible, archeological crews would be drawn in part from the local employment pool with special emphasis on engaging Tlingit workers. Finally, a means of opening the project to a broad segment of society is available through the National Park Service's Volunteers in Parks program. The Midwest Archeological Center has been engaged in this program in a major way for over twenty years with volunteers working alongside professional staff through all aspects of project research from metal detecting and geophysical surveys, site testing, major excavations, and laboratory analysis. This project would be an excellent opportunity for public participation in a major National Park Service archeological project.

General Issue 4 was to develop a procedural plan for surveying and testing the Fort Site Unit. In part, this goal would be accomplished via standardization of survey and site data as described earlier for General Issue 2. Usually, an archeological plan focuses on locating a representative sample of prehistoric and early historic sites within a park. In this case, however, since the area of study is less than 112 acres, it was feasible to set the goal at locating all archeological resources in the unit. With location of each site, the archeologist would attempt to identify its cultural and temporal associations, the site's significance, and make a condition assessment. Methods to be initially utilized to locate sites would include systematic metal detecting and shovel testing. Areas of bare ground and rootwads would be inspected during the course of this work. Selected sites would then be identified for limited subsurface test excavations with the purpose of identifying each site's cultural/temporal components, their depths, and horizontal extents. This would be followed, if time allowed, by more extensive excavations whose goal would be to distinguish site function(s), intrasite relationships, and intersite associations. Of primary importance in these efforts would be the identification of the *Kiks.ádi* fort and the 1804 battleground locations.

The following chapters detail the results of four years of fieldwork at Sitka National Historical Park. Chapter 2 provides an overview of the regional prehistory and the history of the Sitka area. Chapter 3 outlines the archeology that took place in the Fort Unit preceding the 2005-2008 Parkwide Inventory Project and archeology on Baranof Island that is likely to be related to potential park resources. Chapters 5-6 describe the 2005-2008 Parkwide Inventory Project, field methods used, observations, analyses, and interpretations of the collected data. Public outreach efforts and accomplishments are described in Chapter 7. Chapter 8 presents an overview of the park's prehistory as indicated by data collected during the 2005-2008 Parkwide Inventory Project and Chapter 9 does the same for the park's history and historic sites. Finally, Chapter 10 provides information about the discovered archeological resources of the park and assesses their threats, significance, and other information useful for successful park management.

It should be pointed out that upon completion of artifact analysis and preparation of this report, all artifacts and field records were transferred to Sitka National Historical Park for curation. The park accession numbers for the objects collected and records generated in 2005 and 2006 is 497. For artifacts and records from

2007 and 2008, the park accession is SITK 595. For further information about these materials, please contact Sitka National Historical Park Curation by phone at 907-747-0141 or by regular mail at Sitka National Historical Park, 103 Monastery Street, Sitka, AK 99835.

¹Scholl and. Cooper 1977, p. 468.

²Smithsonian National Museum of Natural History 2008; Chaney et al. 1995, p. 72.

³Kriekhaus, et al. 1993.

⁴Kriekhaus, et al. 1993, pp. 4-5.

⁵Kriekhaus, et al. 1993, pp. 4-5; McNab and Avers 1994.

⁶Yehle 1974, p. 25.

⁷Chaney et al. 1995. Coincidentally, this is about the same time that salmon runs begun stabilizing, a circumstance that set the stage for the fully developed Northwest Coast ethnographic pattern. According to John Pohl (2008), "Somewhere between 5,000 and 4,000 years ago, the climate shifted towards the cool, wet maritime regime seen today. This change enabled true forests to grow, ultimately leading to old growth stands surrounding stable, clear watered, well-shaded streams. The life and death cycle of the forest produced plenty of downed snags in river channels, creating pools and side channels and diversifying the habitat. Salmon populations once again grew. Salmon-run nutrient flow from the sea to the rivers resumed, first in a trickle, then in a flood. Eventually, the complex, relationship between old growth forest and Pacific salmon stabilized and flourished." See also Beechie et al. 2001.

⁸Chaney et al. 1995, Chapter 6, Map 1, pp. 144-146.

⁹There is no Yellow cedar in the park, however.

¹⁰Sitka National Historical Park 2008; McNab and Avers 1994; Dice 1943, pp. 30-31; Whitney 1985, pp. 48-50, 57-61; Shelford 1974, pp. 229-233; McConnaughey and McConnaughey 1985.

¹¹Sitka National Historical Park 2008; Sitka Tribe of Alaska Kayaani Commission 2006a; Thornton and Hope 1998.

¹²Aubrey et al. 1992.

¹³Betts 1999.

¹⁴Trip reports prepared for the Sitka National Historical Park Parkwide Inventory are by Hunt 2005a, 2005b, 2006, 2007b, and 2008c.

¹⁵Annual reports describing each year's work and tentative interpretations are by Hunt et al. 2006 for the end of the 2005 field season, by Hunt 2007a for the end of the 2006 field season, and Hunt 2008a for the end of the 2007 field season. No annual report was prepared at the end of the 2008 field season as this data was incorporated into this final report.

SITKA

CHAPTER 2

SHEEY AT'IKÁ THROUGH TIME

Sitka National Historical Park lies on the west edge of Baranof Island, a name derived from Aleksandr Baranov, the man who established the capital of the Russian American colony and headquarters of the Russian-American Company at Nuovo Archanglesk, later called Sitka, through force of arms against the native Tlingit peoples. The Tlingit name for their land is Sheey At'iká Kwáan or Sheet'ká Kwáan, a descriptive name meaning “outside edge of the tribe.” Rather than an island, this name designates an area of territory that incorporated the western side of Baranof Island, the greater reaches of Peril Strait, southwestern portions of Chichagof Island, and the myriad islands and bodies of water between these locations (Figure 2-1).

REGIONAL PREHISTORY

The cultural sequence of this region may be most easily understood by dividing it into blocks of time or periods. University of Oregon archeologist Dr. Madonna Moss has divided the northern Northwest Coast cultural sequence into three periods: Early (10,000-5,000 years ago), Middle (5,000-1,500 years ago), and Late (1,500 years ago to AD 1741). Throughout the prehistoric period, boat travel is inferred from the earliest sites scattered through the islands. People focused their food gathering efforts on intertidal and near shore environments with fishing and shellfish harvests being the mainstay of subsistence. Salmon were increasingly harvested with the introduction of fish weirs sometime prior to 3000 years ago. While sea hunting of mammals and birds appears to have been more common through time, these animals but were never a subsistence mainstay. Whales do not appear to have been hunted but may have been salvaged when beached.¹

The Early Period, also known as the “Paleomarine” Period,² falls within the greater Siberian-American Paleo-Arctic cultural tradition. According to Brian Fagan,

The Paleo-Arctic tradition is still a shadowy entity, a patchwork of local Early Holocene cultural traditions that flourished over an enormous area of extreme northwestern North America for at least 4000 years, and longer in many places. Other terms such as the Northwest Microblade tradition, Denali Complex, and Beringian tradition have been used to describe these same general adaptations, but Paleo-Arctic is the most appropriate because it is the kind of general label that reflects a great variety of different human adaptations during a period of increasing environmental diversity and change.”³

Evidence for human occupation in the Northwest Coast region approaches 10,000 years in age. Microblade industries are diagnostic of this period with over 90% of artifacts from sites of this era produced using microblade/core manufacturing techniques. Stone tools from these sites typically include heavy cores and choppers, split cobble and pebble tools, microblades, microblade and flake cores, hammerstones, scrapers, and burins with tools produced on argillite, chert, and obsidian. Bifacial tools

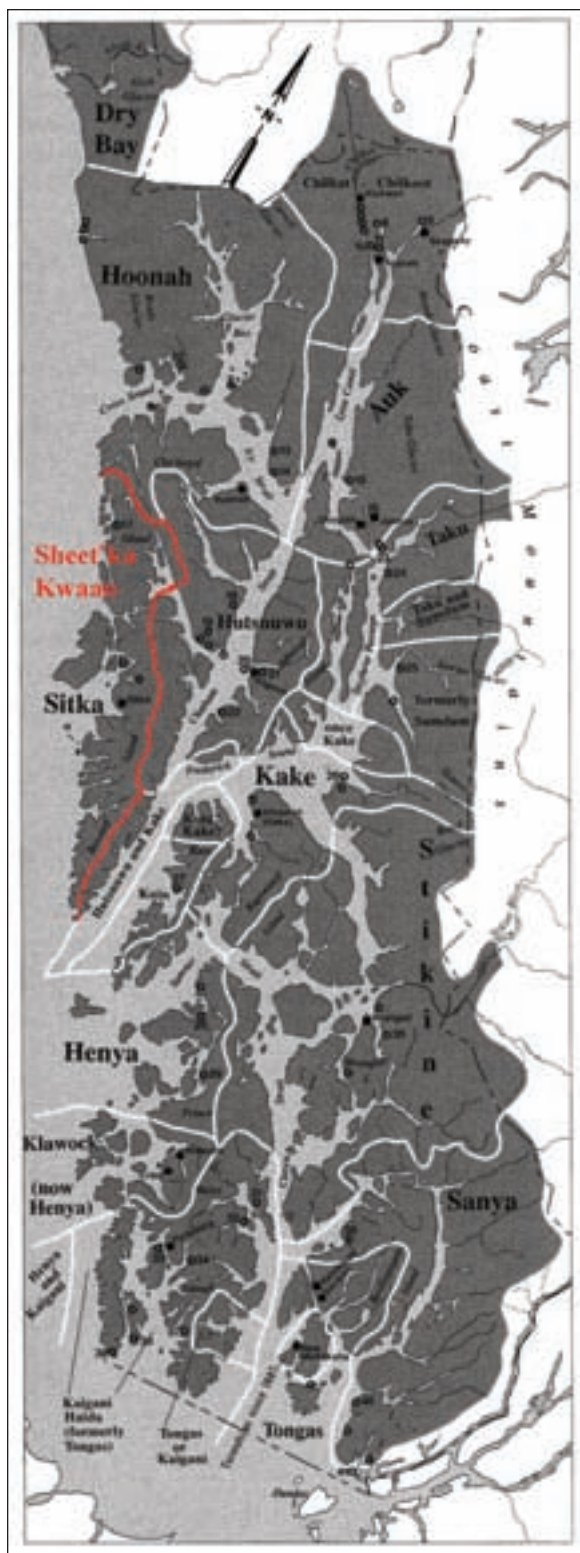


Figure 2-1. Location of Sitka Tlingit territory within the Tlingit-occupied region (adapted from de Laguna 1990:204).

are rare during this period. A unilaterally barbed bone point or harpoon head is known (these barbed bone or antler points are fairly common within the tradition in central Alaska and the Yukon Territory). R.G. Matson and Gary Coupland call this the North Coast Microblade Tradition, noting its affinities to Denali complex sites in the interiors of British Columbia, Yukon, and Alaska.⁴ This tradition is distinct from that contemporaneous occupations in southern Northwest Coast below the north end of Vancouver Island. In this southern area, the tradition is referred to as “Old Cordilleran” and, rather than having associations with the arctic north, this southern tradition has ancestral associations with the big game hunting Clovis hunters of the middle continent.

Site locations and faunal assemblages during the Early Period indicate an adaptation to marine and coastal resources. Obsidian from Mount Edziza in interior British Columbia and Suemez Island located just west of Prince of Wales Island (see Figure 1-2) occurs in all known sites of this period.⁵ This clearly indicates marine travel over great distances and/or trade as well as extensive geographic knowledge.⁶ Matson and Coupland note that while there are strong north-south cultural differences within the Northwest Coast region, coastal and inland components in each area are similar. This has led them to conclude there is little coastal specialization during the Early Period. Instead, there is long term cultural continuity with only minor technological changes over 4000 years. They conclude that people were living in small, highly mobile groups scattered widely across the archipelago and living a foraging lifestyle through seasonal use of coastal and inland resources. Since the Microblade Tradition is found within territories historically inhabited by the

Tlingit, Haida, and Athabascan-Eyak languages, some have hypothesized that this was the material culture of the ancestors of those peoples who introduced microblade technology into the New World from Siberia.⁷

In the Sitka vicinity, the earliest occupation at the Hidden Falls site (49SIT119) is associated with the Early Period. Located on the northeast shore of the island at the head of Kasnyku Bay about 18 miles (30 km) northeast of Sitka (Figure 2-2), the site was discovered in 1978 after an access road for a new salmon hatchery was cut through a saddle connecting two hills. Although a massive area in the site center had been removed, there was enough of the site remaining to allow Forest Service Archeologist Stanley Davis to recognize at least eight stratigraphic layers in the road cut. Geological investigations suggested the area was covered by glacial ice with glacial retreat starting around 13,000 years ago. By 10,500 years ago, the location had an established Mountain hemlock-Sitka spruce forest with an understory incorporating alder and ferns, evidence for a cool, moist climate. The glaciers advanced once more about 8,600 years ago scouring away all but the deepest pockets of soil. It was in these soil pockets that evidence was found for the oldest human occupation of the site.⁸



Figure 2-2. Google Earth map showing general locations of prehistoric sites discussed in this report.

Subsequent investigations revealed three occupations with the oldest dating to around 9,500 years ago (according to Davis) or at the end of the deglaciation around 8,600 years ago (according to archeologists R.G. Matson and Gary Coupland). Although no bone or shell was recovered from this component, the position of the site indicates water navigation and suggests an economy based on coastal marine resources. Artifacts from this early component include microblades and microcores, burins on flakes, unifacially flaked tools (gravers, side scrapers, notched scrapers, and a scraper plane), and a variety of cobble and split pebble tools. There were no bifacial tools which could be unquestionably associated with the occupation although a leaf-shaped unifacial projectile point or blade was recovered. The occupants of the Hidden Falls site utilized a variety of raw materials in the manufacture of stone tools. Cobble and split pebble tools were produced using water-worn stones from the water's edge. Similarly, blades of quartzite and diorite were likely made from stone recovered from outcrops at the south margin of the site. Blades of chert and obsidian are from sources considerably further away, however. The chert may be derived from limestone outcrops located 55 miles (92 km) north of the site on Chichagof Island. Analysis of two obsidian blades indicates one was from the Mount Edziza flows located about 130 miles to the east in the mountains of British Columbia. The other specimen was from Sumez Island located about 120 miles (200 km) south of Hidden Falls. These exotic resources suggest the people at the Hidden Falls site pursued long distance marine navigation and possibly trade.⁹

In sum, the Hidden Falls site clearly shows that people were moving on the waterways around Baranof Island as early as 8,600 years ago if not before. It also tells us that people who could have been ancestors to the Tlingit were living on Baranof Island either between glaciations or immediately after the last glaciation at that locality.

The Middle Period (5,000-1,500 years ago) marks the first appearance of the Developmental Stage of Northwest Coast culture.¹⁰ Other archeologists divide this and Moss' Late Period into the Early (approximately 5,000 to 3,500 years ago), Middle (from around 3,500 to 1,500 years ago), and Late (1,500 years ago to historic contact) substages of the Northwest Coast Developmental Stage.¹¹ The number and size of archeological sites associated with this period increases after 5,500 years ago, especially with regard to shell middens. While the previous period was characterized by a more-or-less uniform material culture at interior (non-coastal) and coastal sites, coastal sites associated with the Middle Period have a markedly different material culture when compared to interior sites of the same period. A new assemblage of artifacts manifests itself through a rapid disappearance of microblades and burins (except on the mainland coast) and the corresponding appearance of ground slate tools. There is a high percentage of ground stone tools other than slate and the number and diversity of bone tools increases sharply. There is evidence for year-around adaptation to coastal resources and large numbers of dense shell middens appear along the coastlines as a broad range of shellfish, fish, birds, and mammals were taken for consumption. Shellfish harvests steadily increase after 5,000 years ago and emphasized blue clams (*Mytilus* sp.), butter clams (*Saxidomus* sp.), and littleneck clams (*Protothaca* sp.). Fish species taken included salmon, halibut, Pacific cod, rockfish, and herring among others. Dog and whale were also eaten upon occasion with sea mammals increasing in importance as a food source through this period. There is no strong evidence for winter villages composed of large multifamily plank houses¹²

In the second half of the Middle Period, the Developed Northwest Coast Pattern is fully achieved. Elements of the pattern began to appear 3500 years ago and were fully in place by 1500 years ago. During this time frame, people shifted their subsistence away from a diversified marine-intertidal resource base to specialized, large-scale collection and storage of salmon. The earliest known wood stake fish weirs date to the latter half of the Middle Period. The weirs are believed to be a technological innovation of the period and, as a result, from the middle of this period, salmon are increasingly important to subsistence. At about this same time, the first Northwest Coast style villages began to appear. Social status in historic Northwest Coast cultures was ascribed in that one was one born into a ranked system and took the social rank of the parents. Evidence for the development of social inequality appears between 2,500 and 2,000 years ago in the form of disparate burial items and remnants of large multifamily plank houses.¹³

Three sites with components dating to the Middle Period have been tested or excavated in the Sitka region (Figure 2-2). These are Hidden Falls, Lake Eva, and Mud Bay Shell Midden. The Hidden Falls site's (49SIT119) Components II and III to this period. About 50% of the cultural objects from Component II are flakes and debitage with 39% of the assemblage being ground stone objects and by-products of their manufacture. Hammerstones and abraders represent about 4% of the recovered objects. Ground stone objects include slate points, adzes, beads, and labrets. Three small unilaterally barbed bone points may have been elements of fishing spears. Component III was similar to Component II in its proportions of tools and range of objects except that its ground stone tool assemblage is expanded with the addition of large knives (ulus), chisels, and mauls. The range of bone tools is also greater with the addition of larger points (barbed and unbarbed), toggling harpoon valves, bone tubes, drilled ribs (slat armor?), beaver incisor chisels, shell beads, and tooth ornaments.

The Lake Eva site (49SIT238) is located on the northwest corner of Baranof Island at the north margin of a lake nearly two miles inland from Peril Strait. The site was discovered in 1982 during excavation of a privy pit for a new recreational cabin on the lake. Subsequent testing by Forest Service archeologists revealed that prehistoric people had occupied the site at least twice. Lake levels were slightly higher at the time and the occupations were originally on a low island shore. The earliest component, represented by two hearths and associated fire-cracked rock, was about 1-1.3 m (about 3¼-4¼ ft) deep. Charcoal from the two features dated to 5780 ± 90 and 5500 ± 70 years ago. A third hearth, represented solely by charcoal, was found at a depth of 0.5 m (about 1½ ft). This dated to 3720 ± 75 years ago. Unfortunately, there were no artifacts associated with the hearths other than an obsidian flake core from the earliest level. Although no animal or fish bone was recovered,¹⁴ the position of the site naturally leads to the assumption that people were fishing. Analysis of pollen from the earliest component of the site found high pollen counts for berry bushes (*Ericaceae*) indicate that gathering these summer season plant foods may have been an important activity here.¹⁵

In 1983-1984, the Mud Bay Shell Midden site (49SIT240), located about 13 miles northwest of Sitka on Kruzof Island (Figure 2-2), was discovered and subsequently tested by Forest Service archeologists. Nearby is 49SIT061, a petroglyph site featuring rock art made by pecking a figure or design into stone. Three shell lenses and recent historic materials on the surface indicated that Mud Bay Shell Midden had four occupations.

Although the uppermost and lowest deposits were not dated, charcoal recovered from the two middle occupations returned dates of 180 ± 50 (from 40 cm/16 in below surface) and $2,490 \pm 70$ (from 1.40-1.45 m/55-57 in below surface) years ago. Artifacts recovered during testing included worked deer bone (from 30-40 cm/9-12 inches below surface); a ground stone maul shaped and incised with an eye and “zipper mouth” to form an unidentified animal (from 49 cm/20 in below surface); a flake core and worked flake (from 60-70 cm/24-28 inches below surface); and a worked sea mammal bone (from 1.10-1.20 m/44-48 in below surface). Faunal (animal) remains from the upper 50 cm of the site were predominantly deer, fish, and small mammals. Remains of fish and sea mammals predominated in lower levels. The common or blue mussel (*Mytilus edulis*) and heart cockle (*Clinocardium nuttallii*) were the overwhelmingly dominant species represented in the shell lenses. Kruzof Island was claimed by the Sitka Tlingit. Traditionally, they gathered shellfish in the late winter and early spring months.¹⁶

The Late Period (1,500 years ago to AD 1741) is represented by sites which are often known to modern Native Americans through oral histories. Many of the sites were seasonally occupied during the historic period and some even remain in use today. Small houses were still common as late as 1,500 years ago and continued in use through contact. The Tlingit village at Yakutat, for instance, had a mixture of large lineage houses and smaller houses to very late in prehistoric times. Subsistence orientation and tool technology are nearly identical to the earlier period. By the time of European contact, the Developed Northwest Coast Pattern was fully in place and marked by permanent or semi-permanent village life, intensive resource production and storage, and hereditary social inequality. Many artifact types from these sites are known ethnographically. This period saw the introduction of the bow and arrow. Copper, probably originating from the Copper River area, was used extensively for utilitarian and more esoteric objects such as arrowheads, knife and ulu blades, pins, hooks, bracelets, rings, and beads. Defensive sites (forts) are evidence for extensive warfare and raiding and wood stake fishing weirs were in use throughout this period. Chipped stone tools and by-products of their manufacture are much rarer than in preceding periods. Ground stone predominates the stone tool assemblage and includes abraders, whetstones, ulus and other knives, blades, splitting adzes, chisels, incised stone tablets, clubs, lamps, shale pencils, mortars and pestles, and labrets. Bone objects include bi-pointed pins, toggling harpoon parts, large unbarbed points and daggers, unilaterally barbed fixed points with single and double line holes, awls, and large barbs for gaff hooks. The high frequency of sites throughout Southeast Alaska indicates a large population and some researchers have suggested that villages did not appear until this period. Although a broad range of fish, shellfish, birds, and mammals were taken for food, the most important food species during this period were salmon and butterclams (*Saxidomus*). Sea mammals were taken at some sites with the heaviest exploitation being near the northern boundary with the Pacific Eskimo.¹⁷

Two sites in the immediate Sitka area associated with the Late period have been tested or excavated. An unnamed fort site (49SIT288) is located on a small rocky knob at the north shore of Jamestown Bay about three-quarters of a mile east of Sitka National Historical Park (Figure 2-2). This is probably the same site as a fort known in oral histories as *Dukcha Noow*. Two shell samples collected from a midden deposit here in 1983 were submitted for radiocarbon dating. These yielded uncorrected dates of 930 ± 65 BP and 1315 ± 82 BP. Calibration of these dates suggests an AD 1200-1400 occupation

of the site. The only artifact recovered in very limited testing at the site was a shell tool, possibly a knife, manufactured from a California mussel (*Mytilus californianus*) shell. Fish and shellfish prominently represented in the midden included salmon, herring, butter or Washington clam (*Saxidomus giganteus*), and blue mussel (*Mytilus edulis*). Three fragments of unidentified sea mammal bone were also recovered.¹⁸

The Starrigavan site (49SIT229), located about 7 miles north of Sitka on Baranof Island (Figure 2-2), was identified in 1982 within an existing Forest Service campground. The site is located about 1 m (3 ft) above the mean high tide level near Starrigavan Creek, an important spawning area for Coho and pink salmon as well as steelhead trout. Excavations were undertaken in 1984 in anticipation of campground expansion and improvement with archeologists concentrating their work on the north end of the site in and around a shell midden. This effort determined that Starrigavan had been occupied at least four times during the last 1000 years. Nine hearths and concentrations of charcoal and fire-cracked rock were recorded along with six postholes (possibly the remains of one or more structures). Radiocarbon dates were 220 ± 50 years ago (from 30-40 cm/12-16 in below surface) for the uppermost shell layer and 660 ± 50 years ago (from 91 cm/36 in below surface) for one of the lowest occupation levels. Stone artifacts from the site include a gunflint, utilized flakes, hammerstones, abraders, a ground stone knife fragment, slate projectile points and blades, a ground stone bowl or mortar, and a variety of ground stone tool fragments.¹⁹

One of the attractive features of excavating a shell mound is that the calcium carbonate of the shell increases soil alkalinity, neutralizing the normally acidic soils characteristic of the forest in this region. With better preservation of bone and other organic materials, archeologists are more likely to recover bone tools and information relating to subsistence. At Starrigavan, bone tools included a harpoon head, projectile points, awls, a ground bone ornament, a shell tube, and a variety of worked and cut bone.

As might be expected for people living on the ocean shore, the people at Starrigavan harvested a broad variety of seafood. Invertebrate species eaten most commonly consumed included acorn barnacles (*Belanus crenatus* and *B. cariosus*), green sea urchins (*Strongylocentrotus drobachiensis*), musk limpets (*Acmaea persona*), intertidal Sitka periwinkle snails (*Littonina sitkana*), Nuttall's cockles (*Clinocardium nattalli*), gaper or horse clams (*Tresus nattalli capax*), smooth Washington clam (*Saxidomus giganteus*), Pacific littleneck clams (*Protothaea staminea*), and blue or bay mussel (*Mytilus edulis*) as well as the occasional chiton and barnacle species. The small amount of bone recovered represented a surprisingly diverse array of animals. Fish made up over 80% of the bone recovered from the site. Among the species represented were pink or coho salmon, herring, halibut, Pacific cod, arrowtooth flounder, sculpin, and black cod. About 14% of the bone from the site was from mammals with Sitka deer, harbor seal, brown bear, sea otter, moose, marmot, and porcupine in the collection. The presence of moose, marmot and porcupine is unusual because these species do not occupy the outer islands of southeast Alaska. Their presence here can only be a by-product of trade, local hunters traveling to the mainland, or visitors from distant mainland areas that brought food with them.

Finally, an early historic occupation of the site is indicated by recovery of a gunflint and also by an area of raised garden beds. Potatoes were an important subsistence and trade crop for the Tlingit, having acquired this crop (along with turnips) from the Russians in the first half of the 19th century.²⁰

In sum, there is a general consensus that two different cultural traditions were in operation through time on the Northwest Coast. The first of these, dating from around 10,000 years ago to around 4500 years ago focused on human colonization of the archipelago and long-term adaptation to the coastal environments. The second, beginning about 4500 years ago marks an emergence of a Northwest Coast cultural pattern. By around 2000 years ago, this pattern had evolved into a widespread, integrated cultural system that continued to the historic present.²¹

THE SITKA TLINGIT

The Tlingit are a coastal people composed of three groups of tribes, the Coastal, Northern, and Southern Tlingit, each of which has a distinctive subdialect and exhibit minor cultural differences from the other two. The Sitka²² are a tribe of the Northern Tlingit occupying the western half of Baranof Island, the greater portion of Chichagof Island, and smaller islands to seaward (Figure 2-1).

Tlingit origins are sketchy at best. There has been speculation that Tlingit origins lie at least in part in the Orient. Sixty years of archeology in the Northwest Coast region has demonstrated that Northwest Culture developed in place over a very long time and this is supported by Sitka Tlingit oral history which tells us they have lived in the vicinity of Sitka National Historical Park for thousands of years. The Sitka Tlingit acknowledge, however, that Baranof Island and vicinity is not their original home. Stories passed down through generations tell of a foreign people, *Wish-shun-a-de* (something very old, either human or animal), who arrived from over the sea, settling on Dall Island at the southwest corner of the Alaska panhandle. Could the *Wish-shun-a-de* have been from Japan or China? Chinese tradition tells of a junk that set out from China in 219 BC, probably for Japan, but was driven eastward for months by gales to a foreign land called "Fu-sang" or "Fousang." The latter shows up on maps up to the mid-18th century in a location approximating the Northwest Coast. There are several documented historical oriental wrecks from an Aleutian Island in 1782 to as far south as Cape Flattery, Washington, and Clatsop, Oregon. A junk was even stranded near Sitka in 1805. And so the door to an oriental ancestry, at least in part, is open and has led to much speculation about Japanese/Chinese intermixture with peoples of the Northwest Coast.²³

The Tlingit legends go on to say that, over time, the *Wish-shun-a-de*, the old ones, were joined by people from the Canadian interior forming the nucleus of a group from which the Tlingit, Haida, and Tsimshian were derived. Tlingit elders identify their ancestral home as the mouth of the Skeena River on the west coast of British Columbia. This area, about 50 miles south of the southeastern Alaska archipelago and about 300 miles southeast of modern Sitka, is now occupied by the Tsimshian people. With the passage of time, the Tlingit wended their way north past Prince of Wales Island, and up the Alaska panhandle through the magnificent rainforested peaks of the Alexander Archipelago.²⁴

The Sitka Tlingit tell of their ancestors' arrival at Sitka Sound at the end of the Ice Age, their entrance coinciding with a monumental natural event -- the fiery eruption of Mt. Edgecumbe, a cone-shaped stratovolcano rising 3,201 feet (976 m) above Sitka Sound. Herman Kitka (whose Tlingit name is *Koosa.sa.as*), leader of the *Kaagwaantaan* clan's Box House (*Kook Hit*), told of this eventful entrance:

Seeking evergreen trees suitable for building houses, a canoe party went north from Tongass along the outside coast. Ice flows still blocked the inside passages, and the land they found was thick with grass and alder, but no evergreens for timber. Soon, large smoke plumes twenty miles to the northwest became visible. The party made camp and sent a canoe to investigate the sources of the smoke. As they approached Sitka Sound, the scouting party saw a mountain upon an island, spouting fire and smoke, the one they call *L'úx*, "Blinking Top," Mt. Edgecumbe. They named it that on account of that volcano. And the prevailing winds were coming from the northwest, blowing the smoke toward Sitka. That's how come there were no trees there. They decided to circle the island [Kruzof] and on the north side, at Sinitizen Cove, they found there was no smoke and there was plenty of big spruce for making houses. so they started to cut and split the trees when a woman appeared to them dressed in white. She demanded that they leave her island in peace. The medicine man, dressed for battle, was sent to meet the volcano woman, who called herself *Shee*. As they spoke, she notices the jewelry of the Tlingit women. *Shee* agreed that in return for earrings, bracelets, and other gifts, the Tlingit could remain on her island. Later, they settled on the main island, Baranof Island, which was named *Shee*, after the Volcano Woman.²⁵

Today, volcanic ash or *tephra* from Mount Edgecumbe eruptions can be found throughout the Sitka National Historical Park and the surrounding region as far away as Juneau. Volcanologists have found the oldest evidence for an Edgecumbe eruption in the Sitka area 40 feet above sea level. Here, ash deposits bearing dark minerals average 5 feet (about 1½ meters) in thickness. Radiocarbon dating of organic material above this ash layer suggests the volcano erupted sometime before 6870-6270 BC. This ash layer is not found at lower elevations and this is taken as evidence for regional uplift.²⁶

A team researching the park's geomorphology (the study of the evolution of landforms) identified extensive deposits of light gray tephra in many locations across Sitka National Historical Park. All of these deposits occur above 15 feet (4½ m) above sea level with the heaviest concentrations at and above 19 feet (5¾ m). Radiocarbon dates from organic materials above and below this ash layer indicate an eruption between 4500 and 4900 years ago (2500-2900 BC).²⁷ So, based on the Tlingit oral histories and archeological evidence at the Hidden Falls site, the Tlingit migration out of the Skeena River area may have begun at the end of the Ice Age as glaciers were retreating from what eventually became the Inside Passage. Whether the Sitka Tlingit arrived at Sitka Sound 4500-4900 years ago or 1700 years earlier is not clear although there are clues in the regional archeology as noted earlier.

The park area is only a small element of a more extensive portion of Baranov Island traditionally claimed by the Tlingit *Kiks.ádi* clan. A very early memory of the

Kiks.ádi living in the park is told through a story of their meeting with the Frog People on the Indian River:

There used to be three smokehouses beside the river [Indian River] where the Kiks.ádi stayed. Coming in from the bay (Jamestown Bay) with the tide they saw a little dugout canoe coming up the river with people in it. And from the three smokehouses that were alongside the river the Kiks.ádi came out. One of them hollered, “I wonder who you are and where are you from.” And one of the persons who stood up in the canoe, one of them stood up in the small canoe, and said, “We are moving from Sockeye River (*Gathéeni*) in Frog Bay (*Xixch’ Geeyí*, a.k.a. Silver Bay) to our River, *Kaasdahéen*.” And as soon as the person said this, it went down into the water and what floated up in its place was a boom log on which three frogs were sitting. Because of this vision, the Kiks.ádi people to this day still call this place *Kaasdahéen*, the name that the frog people gave it.²⁸

Thornton and Hope in their report *Traditional Tlingit Use of Sitka National Historical Park* note that Alaska Natives, including the Sitka Tlingit, traditionally defined themselves according to “the customs and traditions they followed in obtaining, processing, and distributing wild resources.” This collection of activities formed an annual cycle with subsistence being the foundation of customs and ritual. More than seventy plants and animals from terrestrial and marine environments were harvested in and around the park. In general, spring found the people in their winter village. From there, the people hunted brown bear and small fur-bearing mammals with halibut, cod, red snapper, and king salmon taken in deeper waters. Herring eggs were collected at this time using hemlock branches (*Haaw*) to sweep them from the water as the herring spawned. Although shellfish and seaweed are mentioned by some as harvested in the spring, the Sitka Tlingit note that fish spawn make shellfish poisonous at this time of the year. The importance of shellfish to the Tlingit can not be overestimated as can be inferred from their saying *Tlein da kwa goot*, or “When the tide is out, the table is set.” The roots of alpine French honeysuckle (*Hedysarum hedysaroides*), called *tseit* by the Tlingit, were dug and the inner bark of alder (*keishish*) was harvested. Yellow cedar bark (*Teey hoodí*) and spruce roots (*Seet sheiyí*) were collected for weaving. By late spring, the people were harvesting greens, salmonberry shoots (*K’eit*), and abalone (*gúnxaa*).²⁹

With the onset of summer, clan and house groups moved away from the winter village at Sitka to their fishing camps throughout Sheet’ká Kwáan. They stayed in these summer encampments until about September catching and curing salmon, gathering a wide variety of berries and other plants as they became available. This traditionally was also the season of travel, trade, warfare, and slave raids.³⁰

Fall was the time for returning to the winter village. The people focused on drying fish, harvesting rosehips (*k’incheyí*), low bush cranberries (*daxw*), and coho salmon. Some, before going to the winter village, went to the mountains to hunt bear and deer, this being the time these animals were at their fattest. In historic times, potatoes were harvested in the fall. As hunting and gathering was completed, the people returned to their winter village. The wealth of the summer and fall harvests made this an ideal season for holding the traditional potlatch with potlatching continuing through the

winter months. Clams were dug in the depth of winter and winter seaweed (*taakw laak'ásk*) was also collected.³¹

The historic settlement pattern for the Tlingit incorporated a principal winter village and numerous communities of one or more very small family structures. At contact, this village was *Shee Atik'ä* on Crescent Bay in modern day downtown Sitka. As was the case with other Tlingit winter villages, *Shee Atik'ä* was located on a sheltered bay with a beach suitable for landing canoes. Similarly, it had good access to salmon streams, hunting areas, berry patches, clam beds, fresh water, good timber, and halibut deeps. Houses were aligned on the beach and the graveyard was on a rise behind the village. In front of the houses were mat-covered boats and fish racks. In between the houses and behind them were smokehouses for curing fish, caches of one kind or another, steam bath huts, and menstrual or birthing huts.³²

The traditional house was rectangular with a low pitched gabled roof supported by four massive posts. This building housed up to 40-50 persons including up to six families, a few unmarried adults and slaves. A square excavation was dug at the center for the communal fireplace around which cooking, socializing, and many rituals took place. The raised area around the margin of the house was the living area, partitioned off for family sleeping places. The house owner (house master) and his family usually resided behind a screened area opposite the entrance. The owner's family and honored guests sat on the platform in front of this screen. Ordinary people sat on the sides and slaves occupied the walls on either side of the doorway along with firewood, buckets of water or urine, and fresh game. An opening in the roof allowed the smoke to escape from the building. Palisades were often erected around single structures or the village as a whole for protection. The summer smokehouses often served as dwellings as well. These were temporary rectangular structures constructed from planks removed from the winter house until the family returned to the winter village whereupon the planks were returned to the original structure.³³

Tlingit society is divided into two parts or moieties called the Raven and the Eagle (also sometimes called the Wolf or Wolf/Eagle). The only function of the moiety was to arrange marriages (one was required to marry into the opposite moiety). Each of these units are subdivided into thirty or more clans which, in turn, are divided into house groups or lineages. Membership in each of these social units is matrilineal with ancestry traced through the mother's side of the family. Social rank was important and traditional Tlingit society was stratified into three levels. The highest was the nobility (headmen of clans or lineages) and their immediate family. Below them were the commoners who were considered more distant relatives of the nobility. At the bottom of this tier and completely outside the social system were the slaves (slavery was abolished in the Northwest Coast by the U.S. Government in the 1880s).³⁴

The clan and houses were the units that possessed territories, including rights to all game, fish, berries, timber, drinking water, and trade routes, house sites, as well as songs, dances, stories, totemic crests, and all the privileges and authority that went with them. The clan and house leaders could assign fishing spots, open and close hunting seasons, adjudicate the laws, and oversee ceremonies.³⁵

The Indian River and area immediately surrounding it was and continues to be recognized as Kiks.ádi land and Kiks.ádi *at.óow*, which is the concept of both tangible and intangible property. *At.óow* is the single most important spiritual and cultural concept of Tlingit world view. *At.óow* is literally translated as “an owned or purchased thing,” which can refer to actual objects, such as a piece of land or an artistic creation, as well as spirits, or the right to use a particular name.³⁶

Thus, *Kiks.ádi* oral histories place salmon fishing camps within the park from the time of their arrival through the late nineteenth century at which time there were three or four smokehouses and adjacent buildings on the Indian River’s east bank (Figure 2-3). If the historic pattern reflects prehistoric usage of the park area, one would expect prehistoric sites to be seasonal (summer) encampments associated with the collection and processing of fish and other foods from Sitka Sound and Indian River. These encampments may have been similar to those known for the Tlingit historically; i.e., small, temporary structures similar to those described and illustrated by George T. Emmons in his book *The Tlingit Indians*. These were smaller than the winter houses, more roughly constructed, and built directly on the ground surface without flooring. Extended families commonly lived in these structures and the same building could serve as both smokehouse and dwelling or the smokehouse might be built on a river bank in front of the dwelling. An historical note by Frederica de Laguna in Emmons’ book suggests that these buildings could be 25 feet long and 15-20 feet wide and housed up to 18-20 persons.³⁷ Apparently, these summer encampments ranged in size from a single structure to a small village. A Sitka Tlingit summer house is shown on the cover of this report. An image on file at the Alaska State Library - Historical Collections shows a village of Tlingit wooden structures mixed with tents and drying racks on a gravel shore somewhere in Southeast Alaska (Figure 2-4).

TLINGIT-RUSSIAN CONTACT

The first recorded contact between the Tlingit and Europeans was in 1741 when the Russian explorer Alexei Chirikov lost men and two boats in what was likely a hostile encounter with the Tlingit. Beginning in 1775 with Spaniard Bruno de Hezeta’s exploration of Sitka Sound, the Tlingit were visited by European explorers from France, Spain, and Great Britain as well as by increasing numbers of British and American traders. Throughout this period, the Russians were expanding their fur trade enterprise moving south along the Aleutian and Alaskan coasts until arriving at *Shee Atik’ä* in 1799.³⁸ Aleksandr Baranov, representing the interests of the newly formed Russian-American Company, made contact with the Tlingit at their village *Shee Atik’ä* (now Sitka). The Russians themselves admit that Baranov was determined to establish a settlement on the island “no matter what” and through a combination of generosity and threats he secured a location for his new trading post.³⁹ This is a place the Sitka Tlingit call *Gajaa Héén* and is a traditional site where people of *At Uwaxiji Hit* (Strong House) of the Kiks.ádi clan occasionally had smokehouses or a dryfish camp.⁴⁰ The Russians named their settlement *Mikhailovsk* or Redoubt Saint Michael. The Tlingit Kiks.ádi clan initially maintained good relations with the Russians, but the situation rapidly deteriorated until they reached a point of violence. On June 15, 1802, Tlingit warriors led by K’alyáan of the *At Uwaxiji Hit* attacked Redoubt Saint Michael, burning it to the ground, killing many of the inhabitants, and capturing others. Interestingly, this was not an isolated event, for

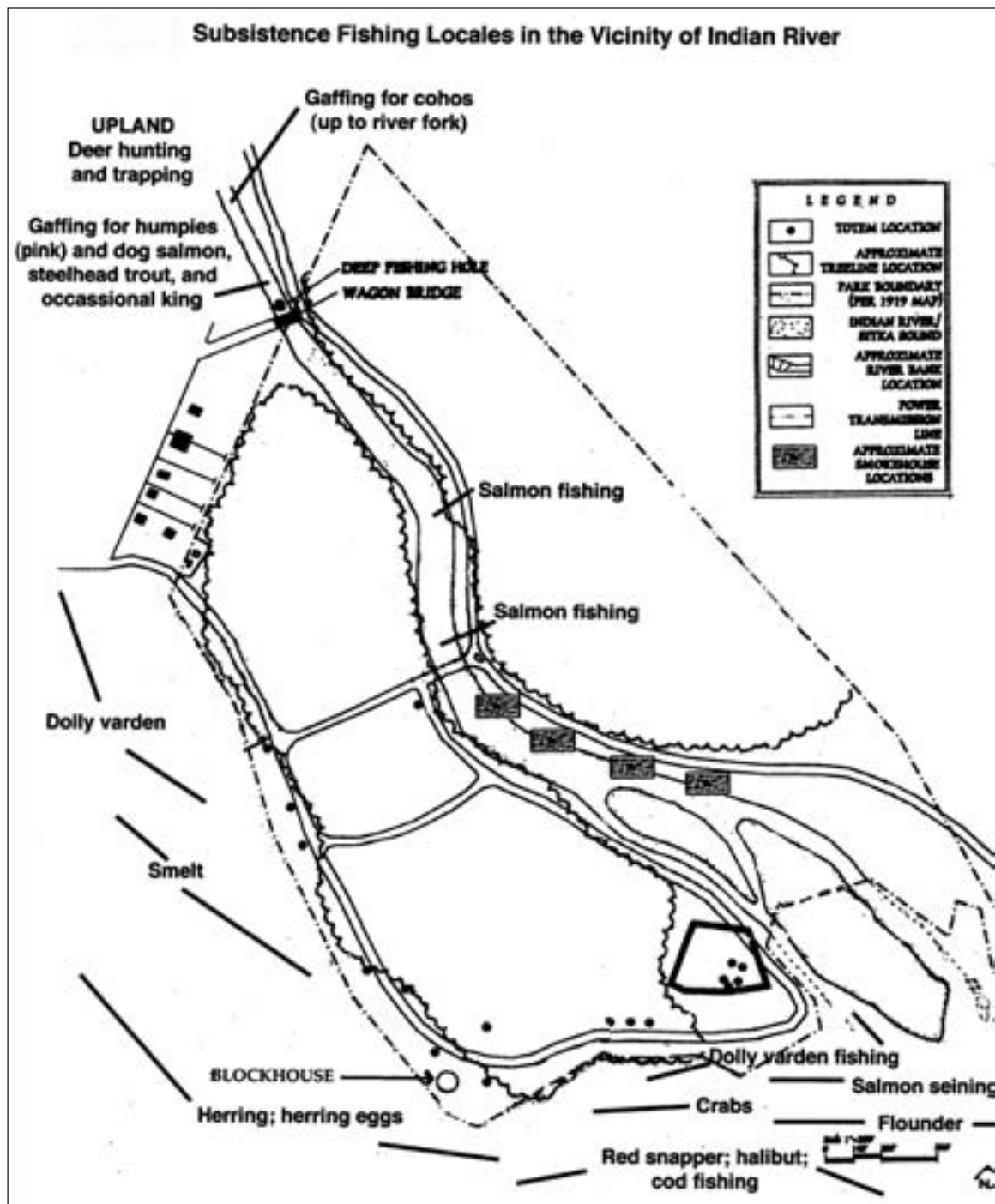


Figure 2-3. Historic Tlingit fishing locales in the vicinity of the Indian River (from Thornton and Hope 1998:Figure 8).



Figure 2-4. “Alaska native fish camp.” Late 19th century photograph of a Tlingit fish camp (William R. Norton Collection, ASL-PCA-226, identifier ASL-P226-427, courtesy Alaska State Library - Historical Collections, Juneau).

the Russians experienced almost simultaneous attacks at this time across a broad area, from Yakutat in the north to the Kaigani Haida in the south. Evidently, the Russians had spawned widespread resentment and hostility by their behavior.⁴¹

Baranov wanted to seek revenge but too many of his men were dead or wounded and the few that remained were scattered across a huge area. Further he was short of armaments and the replacement of men and materiel took some time. Nevertheless, plans were laid and Russian-American Company forces finally converged on Sitka in September, 1804, to bring the Tlingit and especially the Kiks.ádi clan under the dominion of Imperial Russia. Aleksandr Baranof led a force of 120 Russian-American Company employees supported by 800 Aleut allies. He was joined by Russian Imperial Navy officer Urey Lisianskii who captained the 350 ton, fourteen gun Russian naval ship *Neva*.⁴²

The Russians gathered for the battle from late August through September. Finding the Tlingit had abandoned their village, the Russians moved on to the Indian River where they found the Kiks.ádi were ready for them. Knowing the Russians would return and having two years to prepare, the Kiks.ádi clan had constructed a unique fortified structure to secure their protection. This fort was atypical in both its physical setting and construction and was built specifically for the anticipated battle with the Russians and to cope with the Russian heavy arms. While Tlingit defensive positions at that time were typically situated on high points of ground or rocks, the fortified village *Shis’ki-Noow* (roughly translated as “Sapling,” “Green Wood,” or “Second Growth”)

was constructed on flat ground between the Indian River and Crescent Bay. Emmons indicates that *Shis'ki-Noow* was distinctive in that it consisted of a massive palisaded enclosure incorporating at least fourteen houses. It was even more unusual because it was largest such fortification built by the Tlingit and, with one exception, the only place where the entire community could congregate. Finally, unlike traditional forts which were intended to be occupied for only a short time (for hours or a day or two), *Shis'ki-Noow* was set up to be occupied for days or weeks if necessary.⁴³

Captain Lisianskii described the fort as “an irregular square, its longest side looking towards the sea. It was constructed of wood, so thick and strong, that the shot from my guns could not penetrate it at the short distance of a cable’s length [608 feet].” Lisianskii’s rendering of the fort (Figure 2-5) is of a roughly rectangular palisaded enclosure with fourteen structures inside to shield the inhabitants from Russian attacks. The illustration depicts the palisade as about 195 feet long and 135 feet wide with a wall height of 30 feet. The palisade appears to be constructed of a series of horizontally laid logs, perhaps as many as four piled one on top of the other, next to vertically set logs which complete the wall height. The walls were angled outward and apparently braced from the exterior by timbers set on the ground and angled toward the wall. Lisianskii’s

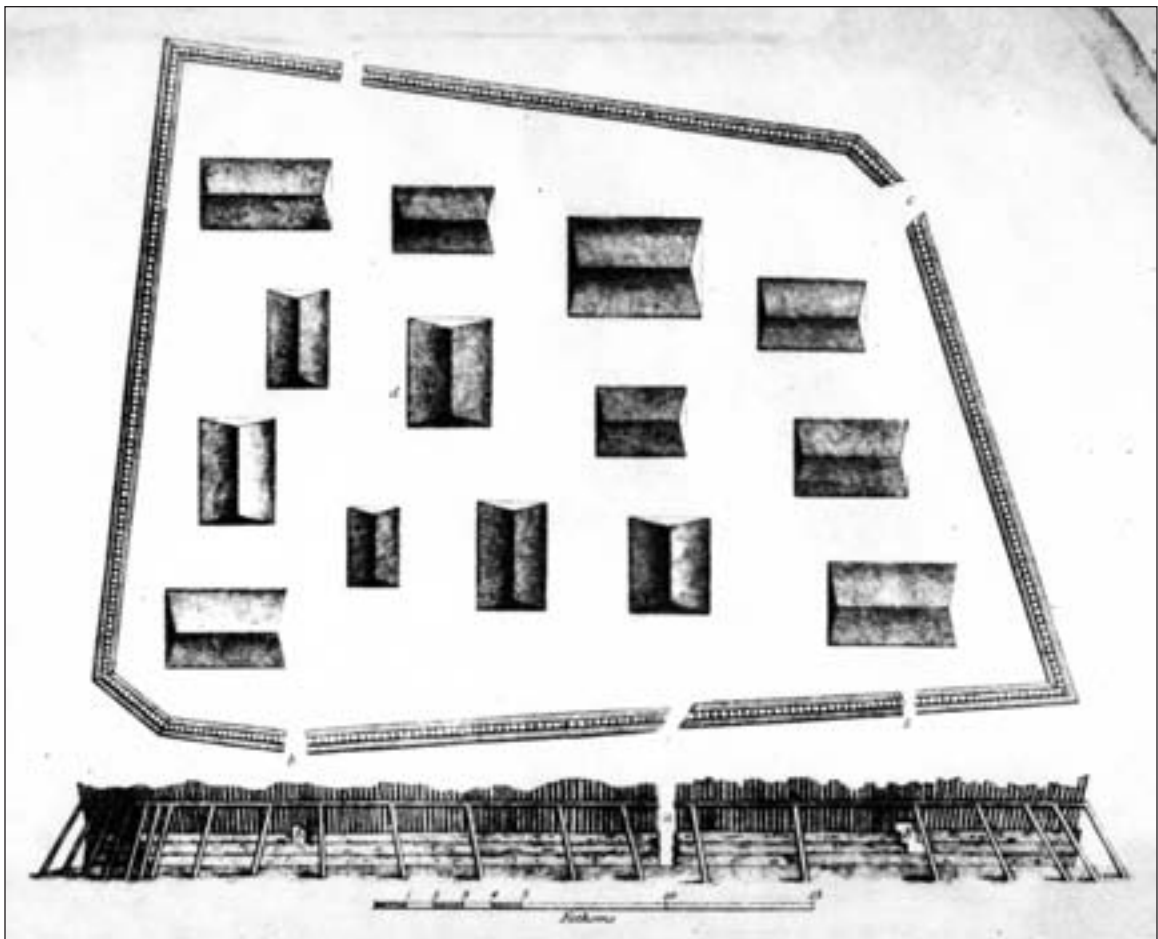


Figure 2-5. The plan of the Tlingit fortified village *Shis'ki-Noow* as drawn by Capt. Urey Lisianskii (from Emmons 1991:76).

illustration also shows two gates, one each on the shorter walls, a door in the seaward wall, and two openings on the seaward or long wall for cannon.⁴⁴

A.P. Johnson, a Kiks.ádi elder, also described the fort (in his narrative about the Russian's return to Sitka) as it is known by the Tlingit in their oral history:

By that time they had a fort at the entrance of the Indian River. The fort was built out of spruce trees. The small tree -- very small -- it has its own name -- that they use for gaffing hook. The size of spruce that they use for log houses, those are called *tlaganis*, *tlaganis*. spruce trees -- when you circle your arms in front of you, the tips of your fingers touching each other, the circle that your arms have made with the tips of your fingers touching each other -- is called *shis'k*, *shis'k*. The larger ones are called *aas*. The great big one is called *seet*, *seet*. The fort at the entrance of Indian River is called Shís'gi Noow, Shís'gi Noow, because it was made of trees of that size. They have very large trees, probably three to four inches across as the head, running all the way around where the fort is. On the outside of those logs that are on the ground they dug ditches. And in those ditches they put the butt end of those logs in the ditch. And on the inside there's a brace, a log running across, also slanting outward, and a top piece on there. On these were put these *shis'k* leaning towards inside. They have a reason for building the fort like that -- slanting. They have seen the action of the cannon balls. Anything that's upright, when the cannon ball hits it either shatters the wood or penetrated. And they also notice if the top is slanting away, when it hits the middle, the cannon ball -- it hasn't got enough force -- would slide on up and go over. And that was the reason for building the fort like that. And in order that it may not break off at the base where they bury it, they put heavy logs on there. After the fort was built, they dug down pretty deep, no doubt about eight feet down in some place, and there's a stairway leading up to the entrance of the fort. The *Kiks.ádi* clan houses -- there being quite a number of them -- they have to have several clan houses. ... And these houses were so far down, just the tops are showing.⁴⁵

Mark Jacobs, Jr. (*Dakl'aweidí*, Killerwhale House), had additional information about the fort:

... the Kiks.ádis dug in and built a makeshift fort out of saplings. It was not heavily fortified as history tells it. The site became known as Shís'gi Noow, meaning "Sapling Fort." ... The cleared area at the far end of the park was not the site of the fort. That clearing was for placing the totem poles that were borrowed for display at the world fair. The Kiks.ádi fort site is about half way through the park [a map showing Mr. Jacob's alternate fort site is illustrated in Figure 2-6]. My grandfather, George Lewis Sr., Aanaatl'éek', showed me the site. The place is sacred because of bloodshed, strife, and hardship.⁴⁶

Aleksandr Baranov described the fort as follows:

... we undertook to storm it by means of vessels, but shallow water prevented the vessels' close approach. Therefore our balls and grapeshot fired by cannons were

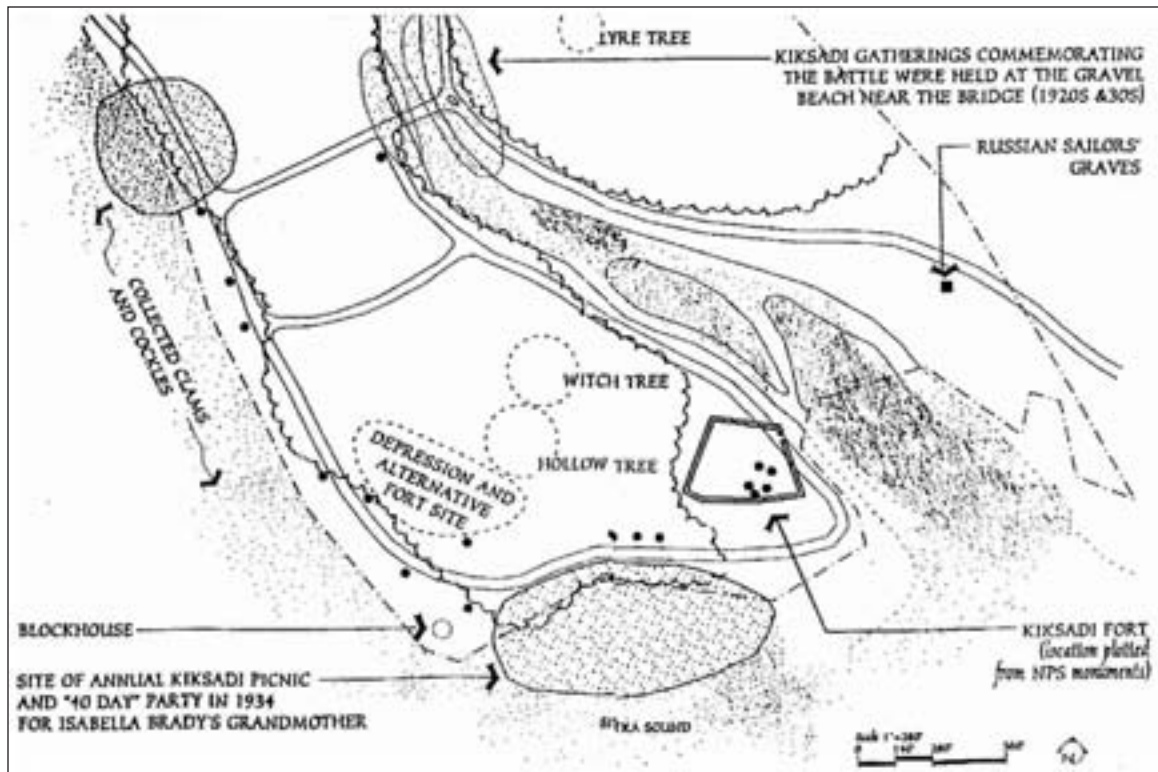


Figure 2-6. Map showing the alternate location of the fort site as indicated by A.P. Johnson (adapted from Smith-Middleton and Alanen 1999: Diagram 16).

almost useless against the enemy, as the fortress on the outside was strengthened by spruce logs about two arms' length around, placed both horizontally and vertically. It stood on a hill at the river. Inside were baraboras [houses], inside each of which were dugout pits where one could freely take shelter from cannon balls and bullets.⁴⁷

This unusual character of *Shis'ki-Noow* was a reflection of the Tlingit's complete familiarity with their Russian adversary and Russian weaponry. It was built specifically for the coming confrontation with the Russians and was a byproduct of the Russian fur trading empire expansion to the shores of North America. The story has been told by the Russians⁴⁸ and by the Tlingit themselves as a part of their oral traditions.⁴⁹ Since this conflict was the major historical event occurring in the park and the exact location of the Tlingit fortified village *Shis'ki-Noow* remains uncertain, the events surrounding the battle will be addressed in more detail than later historic events.

The two sides engaged in battle on October 1, 1804, when the *Neva* and three Russian-American Company ships arrayed themselves in a line on the seaward side of the fort. The extensive shallow gravel beach made it impossible for the ships to get in close. Lisianskii's statement of firing at cable's length, however, suggests the ships were less than 700 feet from the fort. Baranov, saw the fort to be in a "unique and unassailable location" and decided on a land attack rather than the ship cannonade advocated by Lisianskii.⁵⁰

Naval Lt. Pavel Petrovich Arbuzov and several sailors were sent ashore to destroy Tlingit canoes and a storehouse. The naval landing party proceeded on their mission but during the effort Baranof believed a general assault on the fort had begun and he rushed in to be on hand to deliver a decisive blow to the fort's inhabitants. Baranof landed his party of about 150 men with several field guns, and moved toward the fort, which was silent at first. As his attacking party closed, however, the *Kiks.ádi* in the fort raked a heavy musket fire through the Russian and Aleut attackers. *K'alyáan*, the senior *Kiks.ádi* warrior, led an almost simultaneous attack out of the fort that broke the Russian and Aleut ranks (Figure 2-7), resulting in Baranof being wounded and the cannon being temporarily abandoned. The *Neva's* landing party rallied under Lt. Arbuzov and saved the guns by removing them from the field, but at a cost of two killed and fourteen wounded of the approximately twenty who went ashore. The first day's battle ended badly for the Russians and Aleuts.

The Tlingit tell the story somewhat differently. The Russian force had landed (Lisianskii indicates on the east side of the river) and spent several days. The Tlingit hero *K'alyáan* watched them and ordered his people to dig holes in the beach in a semicircle around the Russian-Aleut fighters. In the meantime, young men went upriver and threw bushes, old logs and other debris in the water each day. At first the Aleuts were suspicious of this and were alarmed each time the debris came floating down but over several days of this, they came to accept it and paid it no more attention. *K'alyáan* then had dried dog salmon soaked and cooked. It was then cut up and put on the roofs of the houses to draw



Figure 2-7. *Battle of Sitka*. 1988 acrylic on canvas painting by Louis S. Glanzmann (courtesy Sitka National Historical Park).

the ravens inside the fort. The Kiks.ádi people were told to keep quiet and not light any fires. The quiet inside the fort and the gathering of ravens led the Russians to believe the fort was abandoned. The morning of the battle, debris was put in the Indian River once more and K'alyáan went in as well drifting down the stream with it toward the Russian force. He ran into the Russians and Aleut as they were eating, stabbing one and then using the blacksmith hammer he had captured in the 1802 battle to pound away at his enemy. As the Russians and Aleuts fled from him they ran toward the semicircle of holes now holding Tlingit warriors. The Tlingit jumped up killing and wounding many as the Russians fled to their boats and the ships offshore.⁵¹

With Baranof incapacitated by an arm wound, Capt. Lisianskii took charge of the Russian forces. He began a cannonade from his flotilla, which was returned by cannon fire from the Tlingit fort. The *Kiks.ádi* had captured cannon during their destruction of Old Sitka, along with small arms, flints, gunpowder, and projectiles and they used these against the Russian and Aleuts to good effect. However, the *Kiks.ádi* were short of ammunition and gunpowder due to a part of their supply being destroyed a few days earlier. This ammunition shortage may have prompted a negotiation on the afternoon of the second day. Negotiations continued for two more days when the Russian cannonading recommenced. By the sixth day a silent fort greeted the attackers. During the night the *Kiks.ádi* abandoned the fort and traveling inland and over the island's rugged mountainous terrain to safety. Baranof destroyed the fort, possibly by burning, but perhaps more likely by salvaging the wood for construction of his new trading post on Castle Hill. In either case, Baranof and the Russian-American Company were now the dominant force in southeast Alaska and would be so for another 63 years.

THE RUSSIAN ERA

The Sitka Kiks.ádi found a new home on the east side of the island establishing several new villages and a large fort (*Chaatlk'aanoow*) for defense. Over the winters of 1804-1805, the Russians and Tlingit spent their time scouting each other and making peace overtures. Peace was finally made in 1805 and the Kiks.ádi returned home. With the end of outright hostilities and return of the Tlingit to the new Russian community of Novo-Arkhangelsk (now Sitka) in 1806, utilization of the park by the tribe continued. The Tlingit established a new village on the north edge of Novo-Arkhangelsk in 1821 and their use of the park area probably returned to the way it had been prior to the 1804 hostilities, albeit with some Russian intrusions.⁵²

Aside from summer occupations and use of the park area by Tlingit, the location was also used by Russians. Initially, it functioned simply as a recreational park to which improvements were added over time to enhance public access and use. By 1827, a corduroy (log) footpath led to and through the park woods leading to a wooden bridge crossing the river to the Russian Memorial, a monument on the east side of the Indian River to the Russians and Aleuts killed during the 1804 battle. This same bridge and path may have still been in existence around 1843-1845 and may be the same route mentioned in 1870 in the journal of Sophia Cracroft.⁵³

By 1831, the Russians had a "spinner's shop" or rope making facility and a "kitchen garden" near the mouth of the Indian River. While their exact locations are not

known, it appears that the rope making shop may have been in operation as late as 1861. A proposal to construct a fish drying and processing shed near the river during the 1840s may or may not have been acted upon.⁵⁴

During the 1840s and 1850s, Russian homesteads were established by the Russian-American Company near the Indian River. One homestead was illustrated by I. G. Voznesenskii on the east bank of the river during his visit to Novo-Arkhangelsk in 1840 (Figure 2-8) and two homesteads appear on an 1850 map of the harbor (Figure 2-9). The homestead located on the eastern side of the river below the Memorial included a wooden, gabled residence with another small building nearby. The other homestead incorporated three clustered buildings on the west side of the river in the vicinity of the former Tlingit fortified village. This was the home of Petr Ovchinnikov, a former Russian-American Co. employee. He is known to have lived there until his death in 1853 after which his widow lived at the house for two more years. Then, in 1855, the buildings were burned during a minor Tlingit rebellion. These were the last documented habitations within the current park boundaries.⁵⁵

Throughout this time, the grounds continued to function as a public park although the Russians had begun logging the fort vicinity as soon as the battle was over. Russian-American Company official K. T. Khlebnikov estimated that at least 20,000 trees had been removed from the fort area for housing construction, firewood, making charcoal, and shipbuilding. By 1832, the tree line had been pushed back from the shore 350 to 1400 feet. In fact, the south margin of the park was little more than brush from the west bank of the river to the bay shore at the west side of the park.⁵⁶

THE PARK AS AMERICAN TERRITORY

In 1866, Russia wanted to divest itself of its far-flung colony. Its treasury was depleted and British and American settlers were pressing on the colony's southern borders. At that time, Great Britain was viewed by the Czar as a potential enemy making a sale to the United States much more palatable. After some negotiation, the treaty between Russia and the United States was approved by both sides in the spring of 1867 with funding approval for the purchase finally reached by Congress in 1868. The official transfer of Alaska to the United States of America actually took place on October 18, 1867.

After the American acquisition of Alaska, the park became known in the community as Indian River Park and a number of landscape alterations were made to increase the public's access to it and through it. A corduroy road was constructed by the U.S. Army under General Jefferson Davis, across the present-day Sheldon Jackson campus to a stretch of the river known as "the Creek." There was a ford across the river at this point as well. This route provided access to the park but also to a brewery upstream and mines further north in the Indian River Valley. A second road built by the Army is in the approximate location of the footpath leading from the Visitor Center to the Fort Clearing down the west side of the park. From the 1880s through the era of World War I, roads were constructed in the park along the east and west margins of the river. These routes are identical or closely approximate the park trails now in those locations.⁵⁷



Figure 2-8. Sketch of a Russian homestead on the Indian River drawn by I. G. Voznesenskii in 1840 (from Blomkvist 1972).

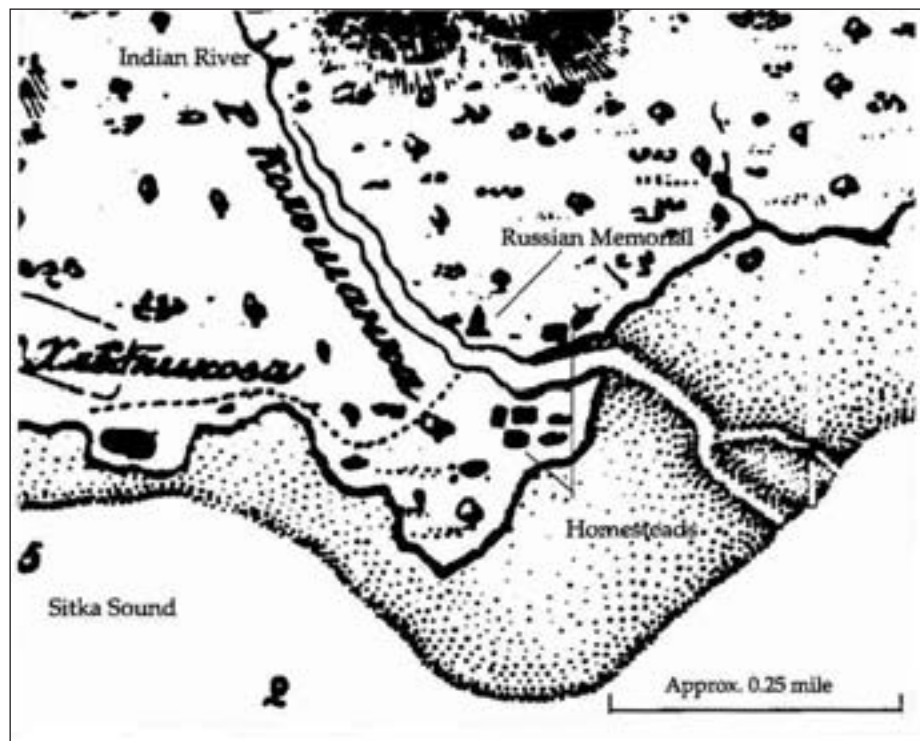


Figure 2-9. Detail from of an 1850 map of the port of Novo Arkangel'sk showing locations of two Russian homesteads on the Indian River (from Smith- Middleton and Alanen 1999: 23m Figure 23).

With arrival of the Americans, the Kiks.ádi control of the lands around the Jamestown and Crescent Bays were eroded further.⁵⁸ Along with the new roads came an expansion of housing with residences built in areas around what are now the park margins. One of these may actually have been built on or just inside the east margin of the future national monument by Nicholas Haley, a Civil War Veteran, at the site of an old Russian homestead. In 1882, Haley staked a homestead on the east side of the river at its mouth. He quickly raised a house and improved his claim by building a fence and constructing a short stretch of road to his residence. Land on the west side of the park was acquired at about the same time by Presbyterian missionaries under the leadership of Sheldon Jackson who established the Sitka Training School, a boarding school for Alaska Native children. Soon after, around 1888, Sheldon Jackson Mission/School established the Cottage Community between the school and park as a place for Presbyterian-Christianized Tlingit to maintain their new lifestyle. Cottage residents used the park for recreation, continued their traditional uses of it, and benefited from tourist-related business opportunities there. The area of today's Visitor Center and the parking lot north of the center are locations where cottages once existed (Figure 2-10). Some of the reported trash dumps in the nearby woods may be associated with those houses or the Cottage Community in general.⁵⁹

In 1890, President Benjamin A. Harrison issued a presidential proclamation establishing a 50 acre public preserve at the mouth of the Indian River. With the turn of the century, a number of "improvements" in the former Indian River Park had been introduced by state and federal agents. Totem poles were brought into the park in 1902 by Alaska governor John G. Brady with the first poles (the Saanaheit pole and four house posts from the Haida village of Kasaan) installed in the eastern portion of the current Fort Clearing, seated in massive concrete footings. Before ending up at the Sitka park, most poles made side trips to world fairs at St. Louis (Louisiana Exposition, 1904) and Portland (Lewis and Clark Exposition, 1905).⁶⁰

Both the installation and removal of the totem poles may have impacted the Tlingit fort site, the site of the reported Russian rope factory, and/or remnants of Peter Ovchinnikov's Russian homestead. Certainly, the reported clearing and leveling the site sometime between 1906 and 1910 would have impacted any archeological remnants of the Tlingit fort that may have existed there.⁶¹

In 1910, President William H. Taft designated the park as Sitka National Monument mentioning the poles as one of the park's founding elements. Within two years the park was placed under the authority of the Department of Interior's General Land Office with the mission of the new park being the commemoration of the 1804 Battle of Sitka. In 1916, the park came under the authority of the newly created National Park Service. This new agency was mandated "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."⁶² Unfortunately, continued clearing, leveling, and excavation by the National Park Service through at least 1982 and the military services during World War II have had multiple adverse impacts on the park, and particularly upon one of its primary interpretive assets, the Fort Clearing. For the most part, effects of National Park Service actions are not known because archeological resources were not considered prior to or

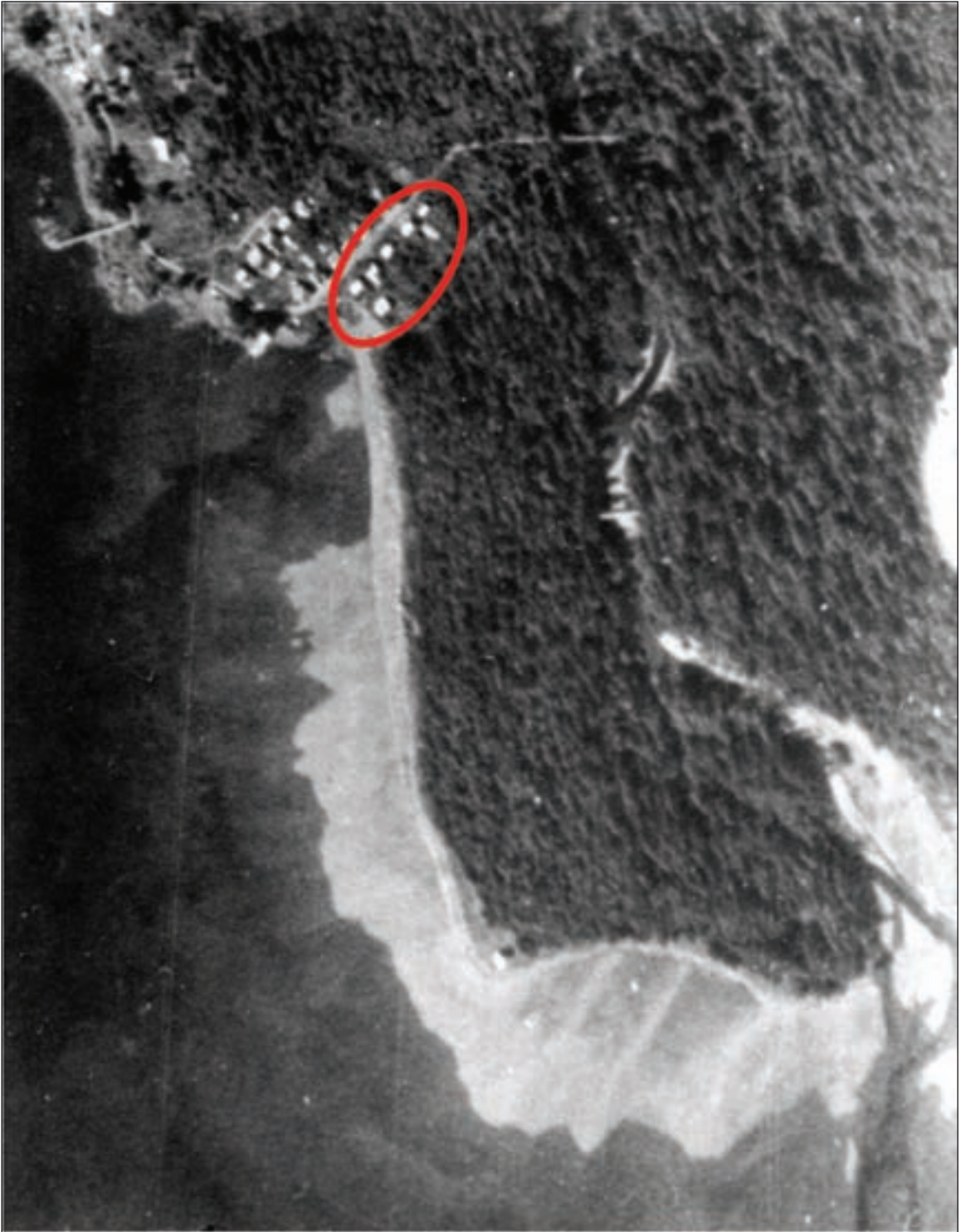


Figure 2-10. 1929 aerial photograph showing the location of former Cottage Community structures at the current location of the park Visitor Center and parking lot (courtesy Sitka National Historical Park).

during the time these activities took place. For instance, it remains uncertain whether installation of poles along the Park Road (prior to National Park Service management), now known as “Totem Trail”, or their resetting after preservation treatment in 1940 and early 1970s (described below) by the National Park Service had negative impacts on park archeological resources.⁶³

One of the more positive actions of the National Park Service was banishment of wheeled traffic through the park (in 1922) and providing an infrastructure enhancing the visitor experience. Roads and automobiles were replaced with foot trails and pedestrian traffic. A replica of a Russian blockhouse placed on the seaward coastline of the park was built in 1927 and served as a visitor center of sorts. Thirty years later, the structure had become unstable. This, and the fact that there had never been a Russian blockhouse in the park (the Russian fort site was on and around Castle Hill in downtown Sitka), led managers to bulldoze the building onto the beach in 1959 where it was burned.⁶⁴

In 1940, the NPS installed two privies for public use. In 1942, the park severely impacted the Fort Clearing when it dug several very large holes in the eastern portion of the Fort Clearing to install replicas of the Saanaheit totem pole and house poles. Judging by photographs taken at the time (Figure 2-11), the holes must have been at least 12 feet wide, 20 feet long, and well over 6 feet deep. If this is the site of *Shis'ki-Noow* fort, these excavations would have destroyed a great deal of the archeological information that may have remained here.⁶⁵



Figure 2-11. Installing the restored Saanaheit pole in the Fort Clearing, 1942 (courtesy Sitka National Historical Park).

With the onset of hostilities with Japan, the park was taken over by the U.S. Army in May, 1942. Army occupation of the park only lasted a few months. Nevertheless, the inaccessibility of military records conceals the nature and scale of most of the Army's activity in the park. The single obvious affect on the park was construction of a line of U-shaped earthen berms along the south side of the peninsula and marking a series of World War II coastal gun emplacements. Otherwise, it is unclear what effect other Army actions may have had on the park although several of its activities (two aircraft observation posts near the blockhouse, possible bunkers north of the Fort Clearing, and establishment of military communication lines) should have archeological counterparts.

One of the most serious impacts on the park's natural resources (and possibly its archeological resources as well) was the dredging of gravel from the mouth of the Indian River. This work began in 1939 by a private company, Sitka Service Transfer Co., and was expanded the following year by the U.S. Navy. A gravel plant was built on monument land at the mouth of the river on its east side along with privately-owned structures to store gravel. About 500-600 tons of gravel and sand were removed per day. During the war, thousands of cubic yards of gravel were removed to Japonski Island in the construction of a Naval base for the PBY "flying boat" and to build coastal defenses on nearby islands. This action removed vegetation along the river and deepened and widened the river channel causing above stream flow to increase as a consequence. With heavy rains, flooding ensued, tearing bridges from their moorings and eroding stream banks. The effects of dredging are still being felt by the park today and despite erosion control efforts two of the park's most important cultural features, the Russian Memorial and the Fort Clearing continue to be threatened by potential flooding of the Indian River. Surprisingly, dredging continued after the war for another thirty years and was not entirely brought to a halt until 1978.⁶⁶

National Park Service post-war activity continued to deleteriously impact the Fort Clearing and perhaps the remnants of the Tlingit fort. The park's totem poles had been suffering from long-term exposure to the weather and, as a consequence, the superintendent decided to begin a restoration effort. The Fort Clearing was determined to be the most convenient location for this work and, in 1971, this work was begun. Trees around the margins of the clearing were cut and laid down in the clearing as supports to keep the totem poles off the ground while they were stripped of paint. This was followed in 1972 by soaking the poles in a liquid preservative. To accomplish this task, the park excavated trenches 8 foot wide at the surface, at least 30 inches deep, and of unknown length (Figure 2-12). A 10 inch high berm was created along the trench margins and the sides and bases of the trenches were compacted. Then, to prevent the preservative from leaking into the ground, the trenches were lined (from bottom to top) with plywood, a layer of 6 mil polyethylene, fiberglass fabric, and another layer of polyethylene sheeting. Dirt was pushed up on the sheeting to hold it in place. Chain link fencing was installed around the interior margins of the clearing as a safety measure and, of course, heavy machinery was involved throughout the project disturbing the ground within most, if not all, of the clearing. Unfortunately, there was no documentation as to the number or location of the trenches and in 1974 the clearing was graded (Figure 2-13).⁶⁷

As the totem preservation project was taking place, in 1972, Sitka National Monument was redesignated Sitka National Historical Park and its interpretive focus



Figure 2-12. Dipping the park's totem poles in a Fort Clearing trench of preservative, 1972 (courtesy Sitka National Historical Park).



Figure 2-13. Cleared and leveled Fort Clearing, 1974 (courtesy Sitka National Historical Park).

expanded to include the culture history of Russian America. As a consequence, the Russian Bishop's House was added to the park and restored in subsequent years. Archeological investigations preceded and accompanied this effort. Unfortunately, even this work affected the archeology of the Fort Clearing. Park managers complained of uneven ground in the clearing after fill in the totem preservation trenches had settled. To remedy this situation, a two year landscaping project was begun. This involved clearing brush and trees from the northwest corner of the clearing and leveling depressions with the addition of topsoil fill. Unfortunately, the fill used for the leveling in 1982 was artifact-bearing soil acquired from beneath the Russian Bishop's House. At least six areas in the Fort Clearing were filled, effectively contaminating any archeological deposits that may have existed there with later materials.

¹ Moss 1998a, b.

² Davis 1990; National Park Service 2004.

³ Fagan 2000, p.164-165.

⁴ Matson and Coupland 1995, pp. 300-301.

⁵ For the archeology of Mount Edziza, see Fladmark 1984.

⁶ Moss *ibid.*; Davis 1990; Dumond 1977.

⁷ Matson and Coupland 1995, pp. 300-301; Shaw and Jameson 2002, p. 396.

⁸ Davis 1989.

⁹ Matson and Coupland 1995, pp. 82-86; Davis 1989, pp. 5-6, 159-194; Fladmark 1984.

¹⁰ Originally defined by Fladmark (1982).

¹¹ Notably Davis (1990) and Matson and Coupland (1995). See also National Park Service 2004.

¹² Moss *ibid.*; Davis, *ibid.*; Matson and Coupland, *ibid.*, pp. 301-303.

¹³ Matson and Coupland, *ibid.*, pp. 303-305.

¹⁴ The forest soils of southeast Alaska are very acidic, quickly disintegrating unburned bone and organic materials.

¹⁵ Swanson and Davis 1983.

¹⁶ Autrey and Davis 1985.

¹⁷ Moss *ibid.*; Matson and Coupland, *ibid.*, pp. 305-307.

¹⁸ Erlandson, et al. 1990; Thornton and Hope 1998, pp. 33-34.

¹⁹ Davis 1985.

²⁰ Grinev et al. 2005, pp. 210-211.

²¹ Matson and Coupland *ibid.*, 1995.

²² As distinguished from the Sitka Tribe of Alaska, based in Sitka, whose members are of Tlingit, Haida, Aleut, and Tsimpsian heritage (Sitka Tribe of Alaska 2008).

²³ Emmons 1991:10; Hayes 1999, p. 9.

²⁴ Emmons 1991, pp. 8-9.

- ²⁵ Thornton and Hope 1998, p. 13.
- ²⁶ The radiocarbon date is $8,570 \pm 300$ BP. 1950, is year 0 BP “before present” or “before physics” by convention in radiocarbon dating. 1950 was chosen to honor the publication of the first radiocarbon dates (calculated in December 1949) and the start of major aerial testing of atomic bombs which artificially skewed the atmospheric content of radioactive carbon. So when a radiocarbon date is given as 1000 ± 50 BP, for example, the organic material being dated is believed to have died some time within 50 years on either side of 950 AD; Chaney, et al. 1995, p. 15.
- ²⁷ The radiocarbon date on charcoal at the upper contact of the ash layer was 4000 ± 70 BP which calibrates to 2485 BC. A date from wood below the ash lens was 4290 ± 70 BP, calibrating to 2900 BC; Chaney et al. 1995, pp. 71-72.
- ²⁸ Synopsis of a story told by Herman Kitka, Sr., a *Kaagwaantaan*, who heard it from Alex Andrew’s father, a *Kiks.adi* in Thornton and Hope 1998, p. 22.
- ²⁹ Thornton and Hope *ibid.*, p. 62-68. 83; Sitka Tribe of Alaska Kayaani Commission 2006a and 2006b.
- ³⁰ Sitka Tribe of Alaska Kayaani Commission 2006a, 2006b; de Laguna 1990.
- ³¹ Sitka Tribe of Alaska Kayaani Commission, 2006a, 2006b; de Laguna, 1990.
- ³² de Laguna 1990; Emmons 1991.
- ³³ de Laguna 1990; Emmons 1991.
- ³⁴ de Laguna 1990; Emmons 1991.
- ³⁵ de Laguna 1990; Emmons 1991..
- ³⁶ Thornton and Hope 1998, p. 52; Dauenhauer and Dauenhauer 1990b.
- ³⁷ Thornton and Hope 1998:69-71, Figure 8; Emmons 1991, pp. 69-74.
- ³⁸ de Laguna 1990.
- ³⁹ Khlebnikov 2008.
- ⁴⁰ Johnson 2008a.
- ⁴¹ Dauenhauer et al., 2008, p. xxxiii.
- ⁴² Dauenhauer et al., 2008, p. xxxvi.
- ⁴³ Betts 1999:129; Emmons 1991, pp. 75-77.
- ⁴⁴ Lisianskii 1968, p. 163.
- ⁴⁵ Johnson 2008b, pp. 118-119.
- ⁴⁶ Jacobs 2008, p. 288.
- ⁴⁷ Baranov 2008, p. 249.
- ⁴⁸ Lisianskii 1968; Dauenhauer et al. 2008.
- ⁴⁹ Andrews 1960; Dauenhauer and Dauenhauer 1990a Dauenhauer et al. 2008; Hellickson 1992; Hope 1992; Hopkins 1958.
- ⁵⁰ Lisianskii 1968, pp. 157-163; Baranov 2008, pp. 249-250.
- ⁵¹ Johnson 2008b, pp. 257-260.

- ⁵² Dauenhauer et al. 2008, pp. xxxviii-xl; Betts 1999, p. 65; Smith-Middleton and Alanen 1999, p. 16; Lisianskii 2008.
- ⁵³ Betts 1999, pp. 70-71; Smith-Middleton and Alanen 1999, pp. 16, 18, 24, 26.
- ⁵⁴ Betts 1999, pp. 66.
- ⁵⁵ Betts 1999, pp. 66, 68, 146; Smith-Middleton and Alanen 1999, pp. 18, 23.
- ⁵⁶ Smith-Middleton and Alanen 1999, p. 18.
- ⁵⁷ Smith-Middleton and Alanen 1999, p. 24, 26, 33, 37.
- ⁵⁸ Rosita Worl (1990) provides an excellent overview of the devolution of Tlingit land rights during the American occupation.
- ⁵⁹ Smith-Middleton and Alanen 1999, p. 30; Betts 1999, pp. 152-155; Griffin 2000.
- ⁶⁰ Patrick 2002, pp. 58-61, 75-89.
- ⁶¹ Betts 1999, p. 171.
- ⁶² The National Park Service Organic Act (16 U.S.C. 1 2 3, and 4) consists of the Act of Aug. 25 1916 (39 Stat. 535) and amendments thereto. See National Park Service 2008a.
- ⁶³ Antonson and Hanable 1987, p. 45; Betts 1999, pp. 72-73, 171-174; Patrick 2002, p. 97; Smith-Middleton and Alanen 1999, pp. 38-40.
- ⁶⁴ Antonson and Hanable 1999, p. 59-60, 70, 104; Betts 1999, pp. 147-148, 155-156.
- ⁶⁵ Betts 1999, p. 71, 155; Patrick 2002, p. 117.
- ⁶⁶ Betts 1999, pp., 156-157, 169.
- ⁶⁷ Betts 1999, pp. 170-174, 178; Smith-Middleton and Alanen 1997, p. 298.

CHAPTER 3

PREVIOUS INVESTIGATIONS

As has been acknowledged in previous chapters, there is a general knowledge that Kiks.ádi Tlingit have occupied the lands in and around Sitka National Historical Park for centuries if not millennia. Despite this, the first documented prehistoric object, a ground stone hand maul, was not found until 1940 when workers were repairing the Indian River bridge. Unfortunately, the specific location and circumstances of the find are not known. This ground stone hand maul is typical Northwest Coast and of the type generally known as a “nipple top maul” (Figure 3-1), a tool used to pound wedges into a cedar log to split off planking for construction of houses. It was, of course, also a utilitarian hammer that could be used for a variety of purposes such as for driving stakes or mashing food preparation.¹ A variety of other prehistoric ground stone tools have been donated to the park but are of unknown provenience or are from vaguely described locations outside the park. Among these are fragments and complete specimens of clubs, mauls, a ribbed stone, an zoomorphic ribbed stone, a full-grooved axe, sinker, pestles, and a grooved pick.

Despite the antiquity of the Tlingit occupation of the park area, the recovery of the maul, and a general understanding that oral traditions place the 1804 fort site in the park, no archeological investigations were undertaken here until the late 1950s. In fact, the first archeological investigation in the park was a by-product of National Park Service doubts as to whether the park actually contained the Kiks.ádi fort and whether the monument to Russian sailors killed in the 1804 battle was actually a burial site. Officials had come to the conclusion that “retention of Sitka National Monument within the National Park Service would not be justified” unless it could be determined that the fort was within park boundaries.² In 1958, therefore, the park entered into a contract with the University of Alaska in Fairbanks to make such a determination. A young anthropology graduate student by the name of Frederick Hadleigh-West was assigned the task.

HADLEIGH-WEST’S 1958 EXCAVATIONS

Hadleigh-West began his work at the Russian Grave Site just above the east bank of the Indian River at its mouth. For years, the location had been marked with a Russian Orthodox cross surrounded by a picket fence. West’s excavations below the marker soon exposed a 6 ft x 7.2 ft platform of rotten timbers. Artifacts recovered during the excavation were found just below the surface and included three iron spikes, a table spoon (possibly modern), a brass finger ring, and mid-19th century ceramics. West continued his excavations to a depth of about 8 ft but located no burials. Following his work, the National Park Service renamed the location “the Russian Memorial.”³

From the memorial site, West moved to the west bank of the Indian River where he sought evidence for the 1804 Kiks.ádi fort. After testing suspicious depressions in a number of locations (the locations were not documented), West finally settled on the Fort Clearing for testing since oral history and tradition supported this location as the fort site. Trenches were excavated in the center of the clearing resulting in the collection

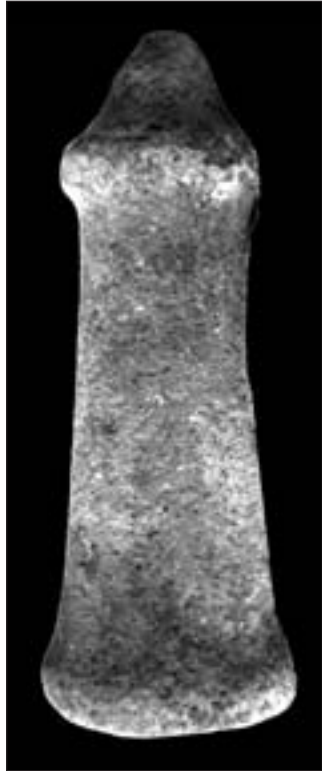


Figure 3-1. A ground stone “nipple top maul” recovered in the park during 1940 bridge repair (courtesy Sitka National Historical Park).

of numerous Euroamerican artifacts. No evidence for the fort was found, however, and no objects of obvious Native American manufacture were recovered. After an appeal to Sitka’s Native community, Tlingit elder Alex Andrews directed West to a low ridge outside the margin of the clearing which Andrews’ father had told him was a wall of the fort. At that point, West adopted the procedure of stripping the sod, exposing the rotted log remnants following the raised ridge. One of West’s earlier trenches had gotten close to the ridge and, after clearing the ridge, West confessed that he “could quite conceivably have gone through it without there being any realization that it was anything but deadfall or rotten stump wood that becomes so abundant once the cleared area ... is left.⁴ Furthermore, West found the various wall alignments to be irregular, discontinuous, and associated with rotting wood “not associated with the walls.” His work was accompanied by recovery of only a few artifacts. No indications of cutting or chopping was observed on any of the log remnants. While one surface feature was interpreted as a post hole, no evidence was found for the interior structures of the fort. Nevertheless, by the end of his fieldwork, West claimed to have uncovered virtually all of the south wall, an extensive portion of the west wall, and identified possible traces of the north and east walls (Figures 3-2 and 3-3). All artifacts associated with the south wall were of European manufacture with the only potential battle-related objects being a 3-lb cannon ball and a .40 caliber musket ball.

To this day, questions remain as to whether West actually found remnants of the Tlingit fort. Although West has no doubt even today that he found the fort, he admitted in his report that dead and rotten wood was pervasive beyond the confines of the clearing. Perhaps his alignments were simply fortuitous arrangements of deadfall? On the other hand, several lines of evidence strongly support West’s conclusions that he had, indeed, found remnants of the fort. For one thing, the location of West’s investigations is approximately the same as the location depicted for the fort on the 1818 Golovnin map of Sitka Sound compiled shortly after the battle. He also noted superficial charring on many of the logs which is consistent with Russian accounts of burning the fort and identified three possible hearths inside his walls, two associated with objects of Euroamerican manufacture. Finally, the map of wall alignments seems to match the fort plan drawn by Lisiankii and published in 1812, both in outline and dimensions (compare Figures 2-5 and 3-3). Two piles of rock on the south wall also approximate the position of two openings in the palisade from which the Tlingit fired their cannon. Finally, it is possible that activities by the Russian homesteader Peter Ovchinnikov in the late 1840s and early 1850s as well as the extensive grading and clearing of the location by the National Park Service in years prior to the excavations obscured or destroyed the internal elements of the fort.⁵

Reanalyses of the artifacts from West's excavations at the Fort Clearing were undertaken by archeologists Timothy (Ty) Dilliplane in 1993 and Charles Utermohle in 1995 at the instigation of NPS Archeologist Gene Griffin, then duty-stationed at the park. Dilliplane's investigation, available in a draft report on file at the park, concluded that most artifacts recovered during the 1958 excavations post-dated 1840 and were likely associated with the Russian homestead.⁶ Utermohle's study attempted to discern spatial relationships among the 1070 artifacts recovered by Hadleigh-West. He determined that 353 objects could potentially be contemporaneous with the battle, all but 19 of which are ceramics and continued to be produced long after the 1804 battle. The overwhelming preponderance of these items was from excavations in the interior of the fort. Utermohle's statistical analysis suggested that artifacts were not randomly distributed. Unfortunately, Hadleigh-West's large excavation units precluded Utermohle from determining functional or causation of this non-randomness. Further, other than nails from the interior of the fort, artifacts that may be associated with the fort appeared to be in a totally random spatial distribution.⁷

Aside from historic artifacts most likely associated with the Russian occupation of the Fort Clearing, Hadleigh-West recovered several objects which are associated with the prehistoric and/or historic Tlingit. These included a "Pc. possibly worked stone" from the South Wall; a sheet copper ornament from Feature 2, a burned area and possible small cannon platform of stones; a red glass bead with a white core from Feature 1, associated with the South Wall; and a stone nipple top maul, a piece of hematite with beveled edge, and a blue glass bead from Unit 1 at the center of the clearing.⁸

NPS INVESTIGATIONS IN THE 1980S

As noted earlier, graveling operations at the mouth of the Indian River resulted in severe erosion of the river banks. By the late 1970s, this had occurred to such an extent that there was fear the traditional site of the 1804 fort would be washed away. To avoid this, the National Park Service embarked on an erosion control project, stabilizing the river banks by altering the contours of about 300 m of the river's west bank and covering the exposed surfaces with rip-rap. Prior to this undertaking, in 1982, National Park Service archeologists Craig Davis and David Staley visually surveyed the river bank for archeological features and artifacts and conducted test excavations (14 shovel tests and about 12 small test units) on the river bank in the vicinity of the east wall of the fort as determined by Hadleigh-West in 1958 (Figure 3-4). This resulted in recovery of historic artifacts which appeared to be redeposited materials. The investigators noted that all of the objects were clearly much later than the 1804 fort and probably represented either fill events or fire and trash features from public meetings or picnics in the area.⁹

National Park Service archeologist Diane Rhodes came to the park in 1983 to monitor a backhoe excavation anticipating construction of the maintenance shed located north of what is now the main parking lot at the Visitor Center. This work exposed a near-surface layer of trash, including bottle glass, wood, and a cast iron stove lid, all of which appeared to be in disturbed deposits. No features or significant archeological resources were identified although the work did expose a layer of "grey and tan clay" which later proved to be a mid-Holocene volcanic tephra deposit.¹⁰

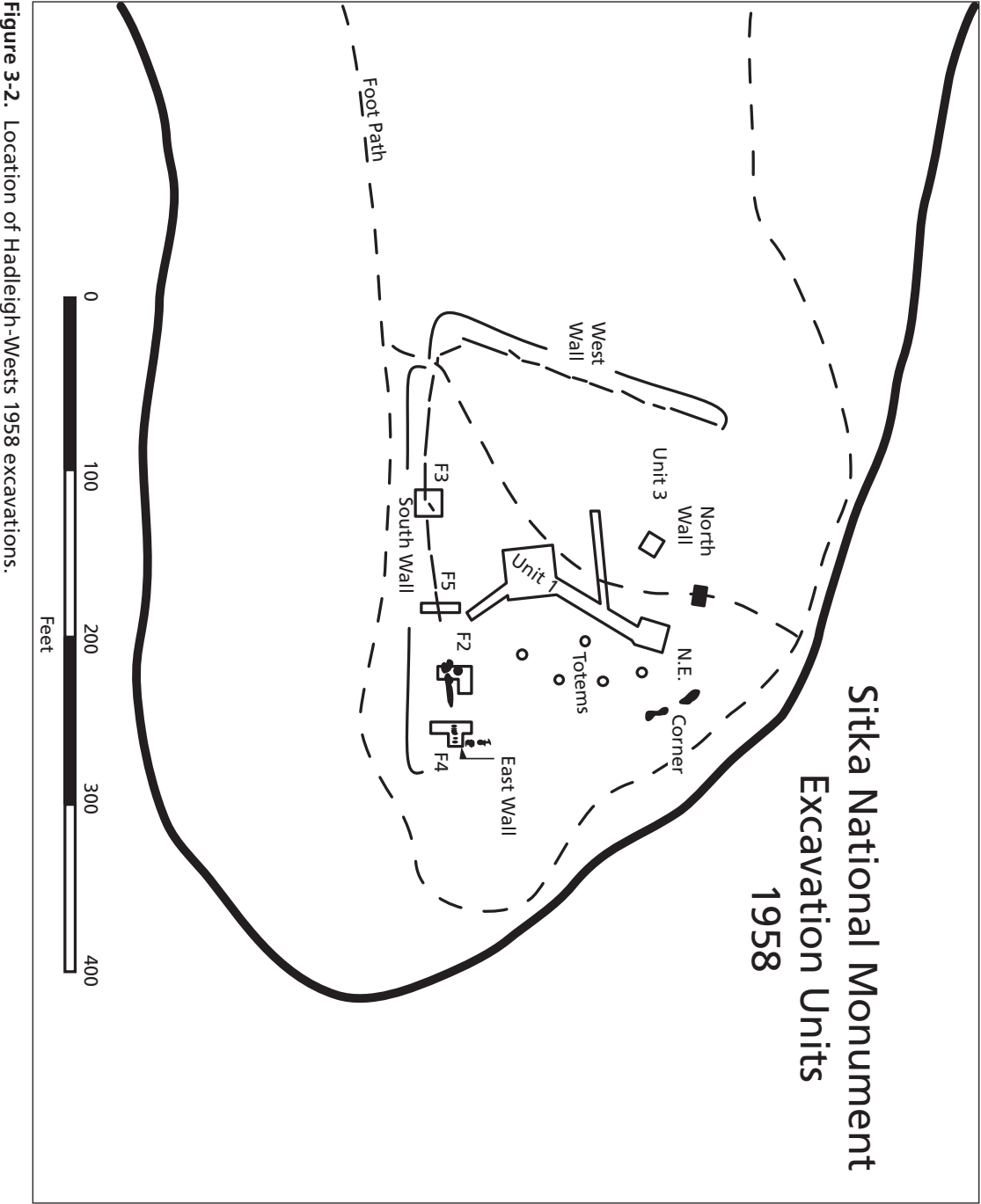


Figure 3-2. Location of Hadleigh-Wests 1958 excavations.

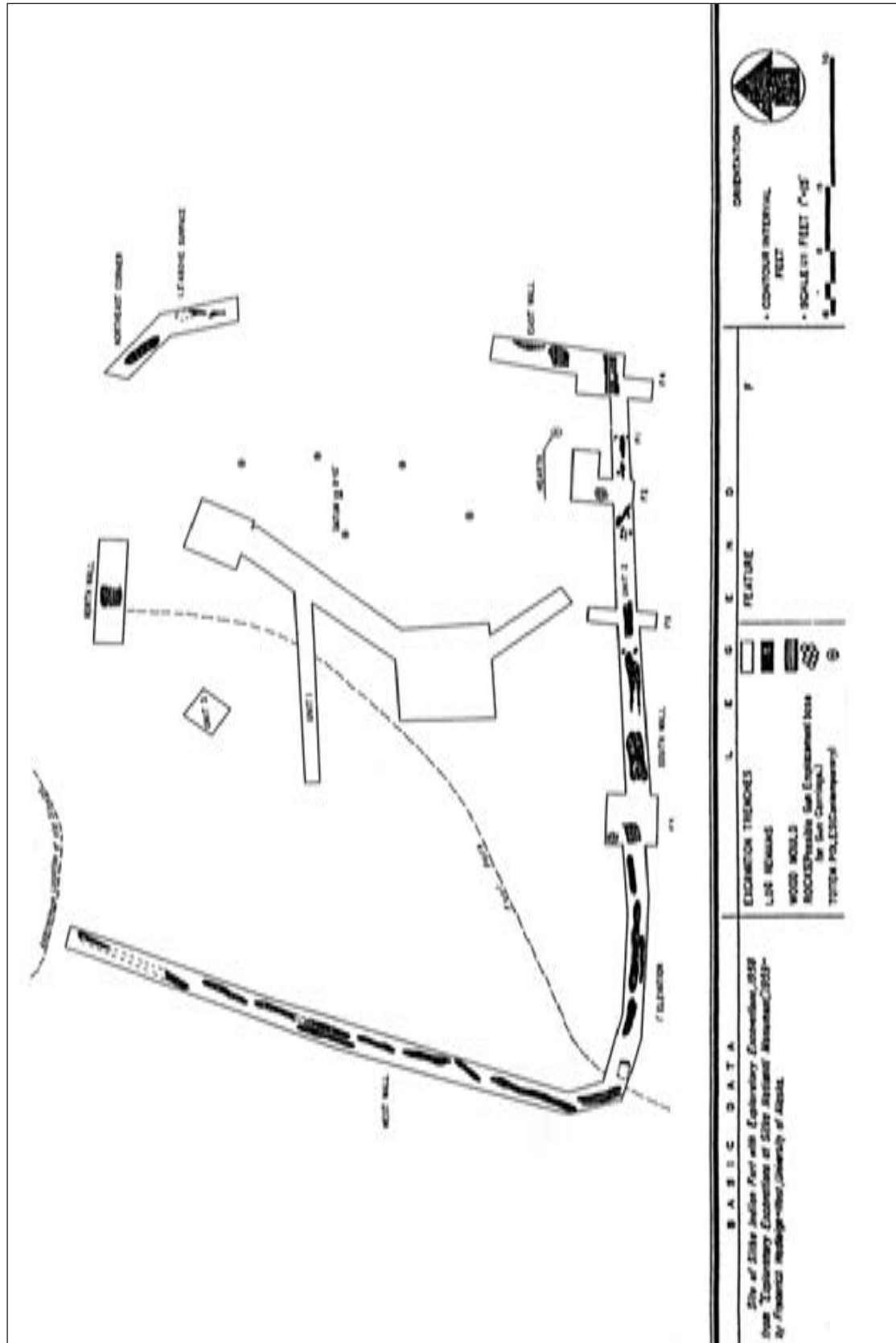


Figure 3-3. Frederick Hadleigh-West's 1958 excavation map.

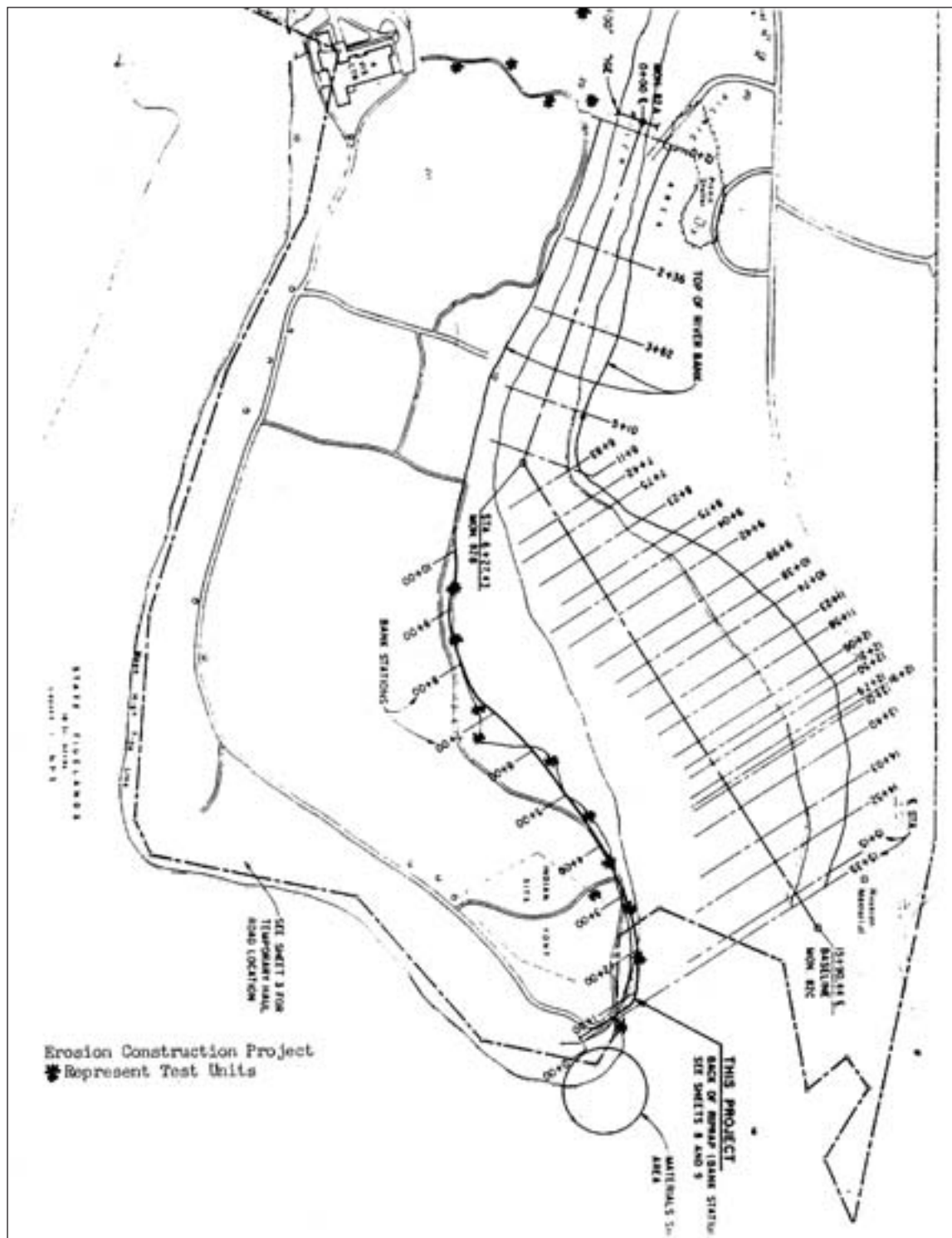


Figure 3-4. Location of shovel tests dug by NPS Archeologist Gene Griffin in 1985 north of the Fort Clearing and along the Bridge Trail (from Griffin 1985).

Three years later, in 1985, the park was still involved in erosion control projects. In addition, managers planned to construct a maintenance building 250 m north of the Visitor Center and install an electrical line along the path from the Visitor Center to the pedestrian bridge across the Indian River. To determine whether archeological resources existed in the proposed construction areas, National Park Service archeologist Gene Griffin conducted visual surveys and subsurface testing. Griffin visually examined the coastal margin of the peninsula, both banks of the Indian River, the site proposed for the maintenance building, and two alternative cable routes. Four 50 cm x 50 cm tests were dug along the primary cable route and one test of the same size was dug at the maintenance building site (Figure 3-4). No cultural materials were recovered at either of these locations. Griffin's testing in association with the erosion control project focused on the river margins immediately east and north the Fort Clearing. Eleven 50 cm x 50 cm tests were dug within the proposed impact zone with no cultural materials observed. A 50 cm x 2 m unit placed perpendicular to the projected north wall of the fort (as suggested by fort markers) resulted in the recovery of mid-19th century historic artifacts to 22 cm below the ground surface. Although this test was in the approximate location of wood exposed by Hadleigh-West, assumed at that time to be an element of the fort wall, Griffin found no wood or other evidence for the fort wall in his test.¹¹

A SERENDIPITOUS DISCOVERY

The second documented recovery of clearly prehistoric materials in the park occurred in 1992 when Dan Thorington, one of the park's maintenance employees, identified a concentration of charcoal in the east bank of the Indian River. This was located about one-eighth mile upstream from the river's mouth and immediately downstream from some large concrete blocks (the remnants of a suspension bridge's abutments) in the middle of the river. The park's Museum Curator, Sue Thorsen, is an archeologist and followed up on Thorington's discovery by documenting his find. She identified the concentration as a remnant of a firehearth 40-60 cm below the ground surface that contained fire-cracked rock and charcoal (Figure 3-5). She observed no midden, shell, bone or artifacts in association with the feature and her initial estimate was that this was a short-term historic feature. The historic nature of the feature was dispelled a few years later when a radiocarbon sample was sent to Beta Analytic, Inc. in 1997. That analysis returned a conventional radiocarbon age of 390 ± 50 BP which has a 2 σ calibration of AD 1430-1645 (median age AD 1475).¹² It now became clear this was a prehistoric feature, the first identified in the park.

A HOLISTIC APPROACH TO ARCHEOLOGY

Shortly after Thorington and Thorsen's discovery, archeologist Gene Griffin returned to the park as its Chief of Resource Management. Throughout the 1990s, he choreographed an array of studies that would lead to a parkwide archeological inventory. Griffin's goals were to determine the nature and extent of the park's archeological resources, record and evaluate those resources, and determine whether they were eligible for nomination to the National Register of Historic Places. With this data in hand, Griffin knew the park would be able to develop sound strategies for the conservation, protection, preservation, management, and interpretation of its archeological treasures.

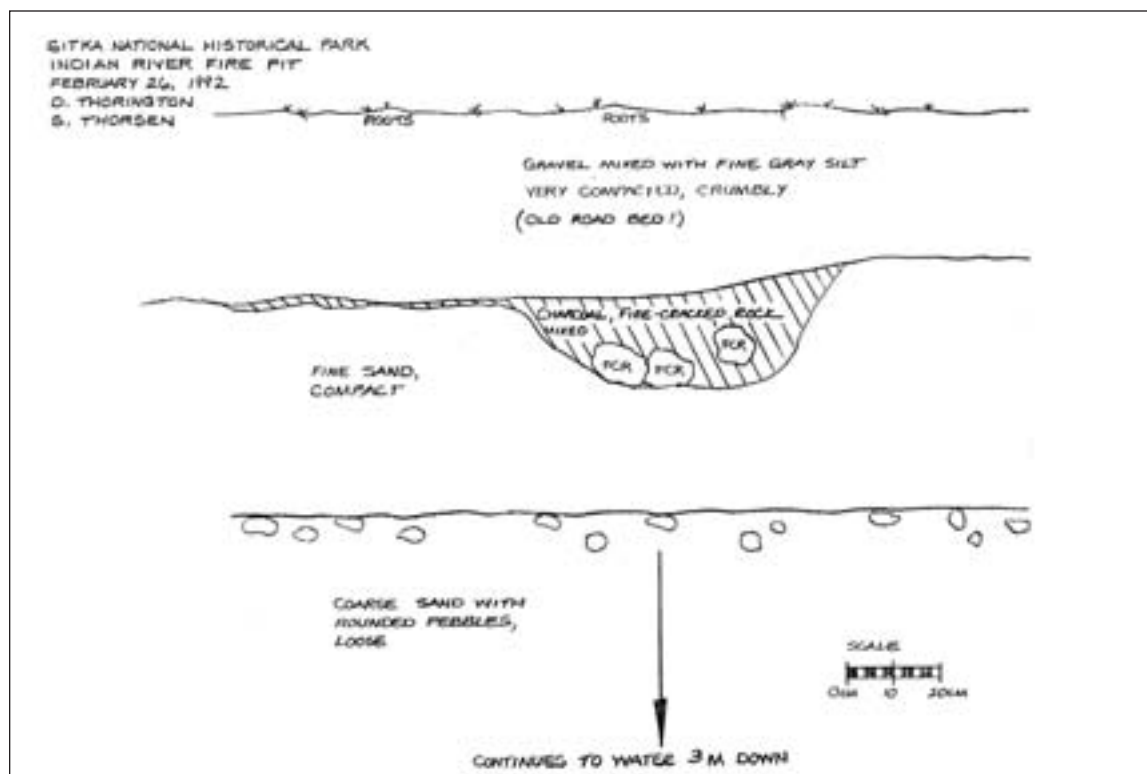


Figure 3-5. Sketch profile of firehearth discovered in 1992 in the east bank of the Indian River (courtesy Sitka National Historical Park).

Creating A Baseline Map

The first step in this process was to have a detailed topographic base-line map made of the park. In 1992, Sitka National Historical Park contracted with the Anchorage firm Aeromap U.S., Inc., and in 1995, the park was presented with a one-foot contour map produced at a scale of 1" = 100 ft. This map (used throughout this report) incorporates not only the natural topography but park trails, buildings, the Fort Clearing, as well as earthworks and depressions. All future geological and archeological inventories would now have a common detailed means of recording (and relocating) the locations of investigations.

Geophysical Inventories

In 1994, Griffin had a geophysical inventory of the Russian Memorial and Fort Clearing undertaken to provide follow-up information to West's 1958 work. This inventory was conducted by Lewis Somers incorporating magnetic field gradient and electrical resistance surveys.¹³ The surveys at the Russian Memorial examined only the immediate vicinity of the fenced enclosure. Both inventories at the Memorial were obstructed to some degree by ground cover and found no evidence for subsurface features.

In the Fort Clearing, analysis of the magnetic data resulted in Somers' identification of large clusters of iron objects "as if thrown in a pit." A major area

of magnetic disturbance occurred in the northeastern corner of the clearing. He interpreted the density and magnitude of the magnetic anomalies there as reflecting objects of modern origin and, if associated with backfill operations, “the archeological record in this area is at best disturbed and may be lost.” The report goes on to identify several strong magnetic areas, predominantly in the west half of the clearing, which Somers believed of potential archeological interest. The electrical resistance survey identified areas of very low resistance in the west and central portions of the clearing. These included an irregularly-shaped “major feature” at the center of the clearing, a “circular feature” (which actually looks somewhat squarish on the resistance map) located about 10 m west of the major feature, a modern footpath, and two adjacent linear features in the northwest portion of the clearing which Somers tentatively interpreted as a totem pole treatment pit. A number of areas of low resistance occurring throughout the clearing were suggested to be possible humus-filled pits. Neither method identified subsurface features that would suggest Kiks.ádi fort structures. If this was the actual site of the fort, Somers went on to say, the lack of evidence for walls or hearths may have been due to one of three causes: 1) the features did not survive in a form suitable to create a magnetic or resistance contrast; 2) the structures may have been too insubstantial to create such contrasts; and/or 3) the fort may have been built on the ground rather than in the ground.

In 1998, University of Nebraska-Lincoln professor John Weymouth reanalyzed Somers’ data to determine whether additional information could be extracted by plotting the data using contour maps rather than Somers’ gray scale maps. Weymouth generally concurred with Somers’ conclusions with some additions. A linear grouping of magnetic anomalies was identified by Weymouth in the southwestern area of the clearing which probably mark filled areas but Weymouth thought it possible that these anomalies might be of archeological interest. In addition, he identified five anomalies that could be iron sources, small pits, or hearths.¹⁴

Usually, the next step after a geophysical inventory is to conduct small archeological excavations (tests) at anomalous locations with the goal of determining their origin, either natural or cultural. Unfortunately, at the time the geophysical inventory was done, no one documented precisely where the grid lines were located. This means there is not enough information available to precisely determine the locations of Somers’ anomalies, and that more-or-less precludes any follow-up archeological testing.¹⁵

Geomorphological Investigation

In 1995, Griffin provided future archeologists with a tool to determine environmental contexts and minimum potential ages for any archeological resource encountered in the park. A contract was let with Vanguard Research of Douglas, Alaska, to conduct a geomorphological survey in the park. The team was composed of geomorphologist Gregory Chaney, archeologist Robert Betts, and historian Dee Longenbaugh. The purpose of this work was to document the evolution of landforms to provide baseline data for future archeological investigations (see Figure 1-5). This work determined that the oldest landform emerged as a by-product of storm waves approximately 5500 years ago. It also suggested a 2000 year period between about 2500

years ago to around 4400 years ago during which no uplift occurred. About nine feet of uplift has occurred over the past 1700 years. Volcanic ash samples collected throughout the park were determined to be derived from Mt. Edgecumbe, a volcano across the bay from Sitka. Radiocarbon samples collected above and below the ash suggested the eruption event occurred between about 4500 and 4900 years ago. A five foot uplift appears to have accompanied the eruption event.¹⁶

Archeological monitoring of this work resulted in the recovery of two cobble choppers. After documentation, both tools were placed back in their original locations.¹⁷ One of the choppers (94-Sitka-1; Figure 3-6) was recovered 10 cm below the surface in an organic horizon. Charcoal from this horizon was radiocarbon dated at 280 ± 70 BP, or AD 1650 (2 σ calibration). This suggests the chopper was similar to or later than the dated material. Researchers engaged in the geomorphological study also noted seven culturally modified trees, concrete bridge foundations in the Indian River, a deep depression and large timber on the east bank of the river about 350 ft north of the pedestrian bridge, and a variety of historic debris on the east side of the river at its mouth where a hot asphalt plant once existed. A trial metal detector survey of four transects across the southern end of the peninsula found metal in three of the transects, with concentrations in the vicinity of the WWII gun emplacements, northwest of the Fort Clearing, and on the east side of the Indian River at sampling location Q-1 (see Figure 1-5).¹⁸

Monitoring also identified a dense concentration of charcoal on a low bench 200 ft southwest of the west end of the Indian River pedestrian bridge. A shovel test found the charcoal layer to be 10 cm thick. Soil probing indicated this charcoal layer extended outwards from the shovel test over an area 13 ft x 23 ft. Although no artifacts or faunal materials were discovered in association with the charcoal, its thickness and limited distribution suggested it was of cultural origin. Charcoal at twelve other locations was



Figure 3-6. Cobble chopper recovered by geophysical investigation crew in 1995.

submitted to a laboratory for radiocarbon dates (Figure 3-7). At least two of these were determined to be of modern derivation and one sample was not dated. Four charcoal samples were obviously of natural origin with the remaining seven of uncertain origin but likely associated with prehistoric occupations.¹⁹

Based upon the morphological study, a small knoll on the Indian River peninsula north of the current parking lot emerged from the ocean around 5500 years ago and, thus, no archeological sites in the park will pre-date this emergence. Land forms to the south of this point become increasingly younger and so does the maximum age of any potential archeological materials that may occur on them. A ridge south of this knoll above 20 ft in elevation could have cultural material as old as 4500 years. South of this ridge, below an elevation of 20 ft, any cultural materials that exist must be less than 2000 years in age. The majority of land in the vicinity of the Fort Clearing is less than 500 years old and the remaining areas are so young that they have virtually no prehistoric site potential. A poorly drained former estuary at 21 feet elevation immediately south of the knoll was considered a location where organic artifacts might be preserved.²⁰

The complexity of geomorphic processes on the east side of the river restricted the generalizations study participants were able to make with regard to archeological site potential. They predicted that the maximum potential age of any sites that may exist on this side of the Indian River would be about 4500 years old and these would occur above 20 ft in elevation. They also noted seven feet of fluvial sediments over the past 1000 years and suggested that any sites below 15 ft elevation can be no older than a few hundred years. There is some potential for older sites above 15 ft at the southeast corner of the park and in the extreme northeast corner of the park.²¹

THE 1999 K'ALYÁAN POLE EXCAVATION

In 1999, contract archeologist Charles Mobley conducted an archeological excavation in the Fort Clearing in anticipation of the Kiks.ádi clan's installation of a new totem pole commemorating war leader K'alyáan and other tribesmen who fought against the Russians and their Aleut allies in 1804. The excavation area encompassed a 5 ft x 15 ft rectangle in the north-central portion of the clearing. Artifact recovery was accomplished by passing excavated soils through ½" mesh hardware cloth. This work demonstrated a stratigraphy which incorporated a thin topsoil layer below which Mobley found a 1 ft thick disturbed layer of gravel, plywood scraps, and other trash. Below the modern trash layer were culturally sterile beach gravels. To a great extent, this work supported park management's suspicion that the landscaping and other activities in the clearing over the prior century had largely destroyed any intact deposits that may have existed. Nevertheless, Mobley discovered that some discontinuous patches of undisturbed soils continued to exist. This was demonstrated by the discovery of a 3/4-grooved granite maul (Figure 3-8) within one of the black organic soil lenses. Although this was the only prehistoric item recovered, Mobley recovered over 200 historic and modern objects including brick fragments, pieces of early to mid-19th century porcelain and earthenware, flat (window) and curved (bottle) glass, and various pieces of ferrous metal. All this material was retrieved from the first foot of deposits which incorporated the sod and disturbed gravelly soils. This material may be derived from fill brought into the clearing from the Russian Bishop's House in the early 1980s



Figure 3-7. Locations where charcoal samples were retrieved in 1995 and associated radiocarbon dates (green = modern or unknown; red = possible prehistoric occupation; black square = natural derivation) (adapted from Chaney et al. 1995: Map 1)

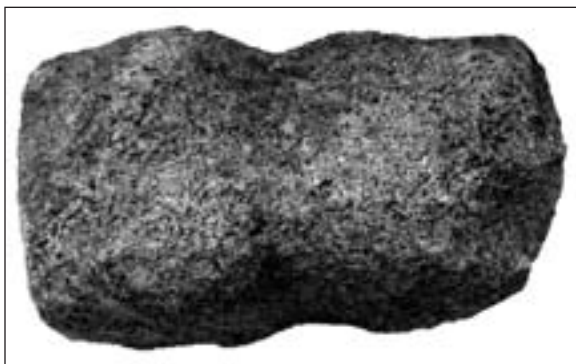


Figure 3-8. Granite maul (SITK 23867) recovered in 1999 in the Fort Clearing. Object dimensions are 14.94 cm (5.88 in) long x 7.62 cm (3.00 in) wide x 9.86 cm (3.88 in) high.

or be associated with Petr Ovchinnikov's circa 1840-1855 homestead. Subsequent monitoring of the mechanical excavation of a hole for the totem supports found only non-cultural beach gravels to 6 ft below the surface.²²

IMPORTANT COMPLIMENTARY STUDIES

two complimentary studies, a landscape study and a traditional land use study. Both documents built on Antonson and Hanable's work and, at the same time, provided new information that would allow future archeologists insight into the park's cultural history and historical development.

Prior to Griffin's arrival at Sitka National Historical Park, an administrative history of the park had been completed.²³ During the early years of his tenure, Griffin arranged for

In 1994, the landscape study was contracted to Holly Smith-Middleton and Arnold R. Alanen of the University of Wisconsin-Madison. This report provided detailed information about the historical use of the Indian River area by Russians and Americans and produced a series of maps illustrating changes in the plant community and alterations in the physical landscape through the end of the 20th century.²⁴

The study of Tlingit traditional uses of Sitka National Historical Park was undertaken by Thomas Thornton of University of Alaska Southeast assisted by Tlingit elder Fred Hope. This study drew on ethnohistorical information and oral histories to document Tlingit discovery of the area, its settlement, resources available in the park, and the range of historic and protohistoric activities at the mouth of the Indian River. It also provides information on the Cottage Community and 20th century Native activities in the park.²⁵

¹ Stewart 1973, pp. 52-53.

² Antonson and Hanable 1987, p. 114.

³ Hadleigh-West 1959, pp. 34-39; Betts 1999, pp. 86-87; Chaney et al. 1995, pp. 125-126.

⁴ Hadleigh-West 1959, pp. 39-61; Betts 1999, pp. 84-85; Chaney et al. 1995, pp. 126-131.

⁵ Hadleigh-West *ibid.*; Betts *ibid.*; Chaney et al. *ibid.*

⁶ Dilliplane 1993; Chaney et al. 1995, p. 133; Betts 1999, p. 88.

⁷ Utermohle 1995.

⁸ Hadleigh-West 1959, pp. 64, 67, 69, 75, 99.

⁹ Davis and Staley 1982.

¹⁰ Betts 1999, p. 92; Rhodes 1983.

¹¹ Griffin 1985.

¹² Thorsen and Thorington 1992.

¹³ Geoscan Research 1994; Chaney et al. 1995, pp. 133-134; Betts 1999, pp. 88-91, 205-216.

¹⁴ Weymouth 1998.

¹⁵ Betts 1999, pp. 214-216.

¹⁶ Chaney, et al. 1995.

¹⁷ In 2007, Griffin attempted to relocate these tools and was able to recover chopper 84-SITK-1 but was unable to relocate the other.

¹⁸ Chaney et al. 1995, pp. 136-142.

¹⁹ Chaney et al. 1995, pp. 137-138, Appendix B.

²⁰ Chaney et al. 1995, pp. 144-145.

²¹ Chaney et al. 1995, pp. 145-146.

²² Mobley 1999.

²³ Antonson and Hanable 1987.

²⁴ *ibid*; Smith-Middleton and Alanen 1999.

²⁵ Thornton and Hope 1998.

CHAPTER 4

2005 REMOTE SENSING: THE PARKWIDE INVENTORY BEGINS

PROJECT BACKGROUND AND GENERAL METHODOLOGY

On July 25, 2005, a small archeological team from the National Park Service's Midwest Archeological Center began the first of four expeditions to Sitka, Alaska, from Lincoln, Nebraska. The trip was 2041 miles (3285 km) one way and would prove to take twelve to fifteen hours of travel time to accomplish. Sitka National Historical Park was the goal with the purpose of this first trip to begin a four year parkwide archeological inventory of the park's Fort Unit, the first major inventory of this kind in the region. Given the diversity of the park's environments, its complex developmental history, the physical obstructions offered by the dense rain forest, and the potential diversity of the archeological resources in the park, a multi-pronged investigative approach was put in place to address the project's general issues and goals. This approach involved metal detection and geophysical survey as well as the more typical archeological methods of shovel testing and small-scale test excavations. This chapter focuses on the terminology used in the remainder of this report, the overall methods utilized by the investigators throughout the inventory, and the singular methods and results of the metal detection and geophysical inventories which took place only in 2005. Subsequent chapters will discuss the results of the 2005-2007 shovel testing inventories and 2007-2008 test excavations.

In this report, park trails are referred to using names or modifications of names customarily used by Sitka National Historical Park personnel (Figure 4-1). The trail from the Visitor Center to the Fort Clearing is the Totem Trail. The Indian River Trail runs above the west bank of the river connecting the east end of the Totem Trail and Fort Clearing to the foot bridge which crosses the Indian River at the center of the park. Two short trails southeast of the Visitor Center connecting the Totem and Indian River Trails are referred to as Cross-over Trail #1 and Cross-over Trail #2. The path running east from the Visitor Center over the foot bridge to Sawmill Creek Road is the Bridge Trail while the Westwood Trail extends from the foot bridge northward on the west side of the river to Sawmill Creek Road. The Russian Memorial Trail begins at the foot bridge on the east side of the river and more-or-less follows the river southward to the Russian Memorial. From the Memorial, the trail loops around to connect to the Old Highway Trail marking the route from the site of mid-20th century gravel mining operations northward to an old bridge (formerly Wagon Bridge) abutment in the north central area of the park.

To insure that each of the field teams covered all areas of the park and used the same terminology to describe their areas of investigation, the park was divided into six inventory units based upon selected natural features and the park's trail system (Figure 4-2). Each survey unit was designated by letter in a clockwise pattern starting with Survey Unit A at the south end of the peninsula with Survey Units A-C on the west side of the Indian River and Survey Units D-F on the east side.¹



Figure 4-1. Trail names as used in this report (Blue solid = Indian River Trail, Blue dashed = Westwood Trail, Black solid = Cross-over Trail #1, Yellow = Russian Memorial Trail, Black dashed = Cross-over Trail #2, Magenta = Old Highway Trail, Red = Bridge Trail, Green = Totem trail).

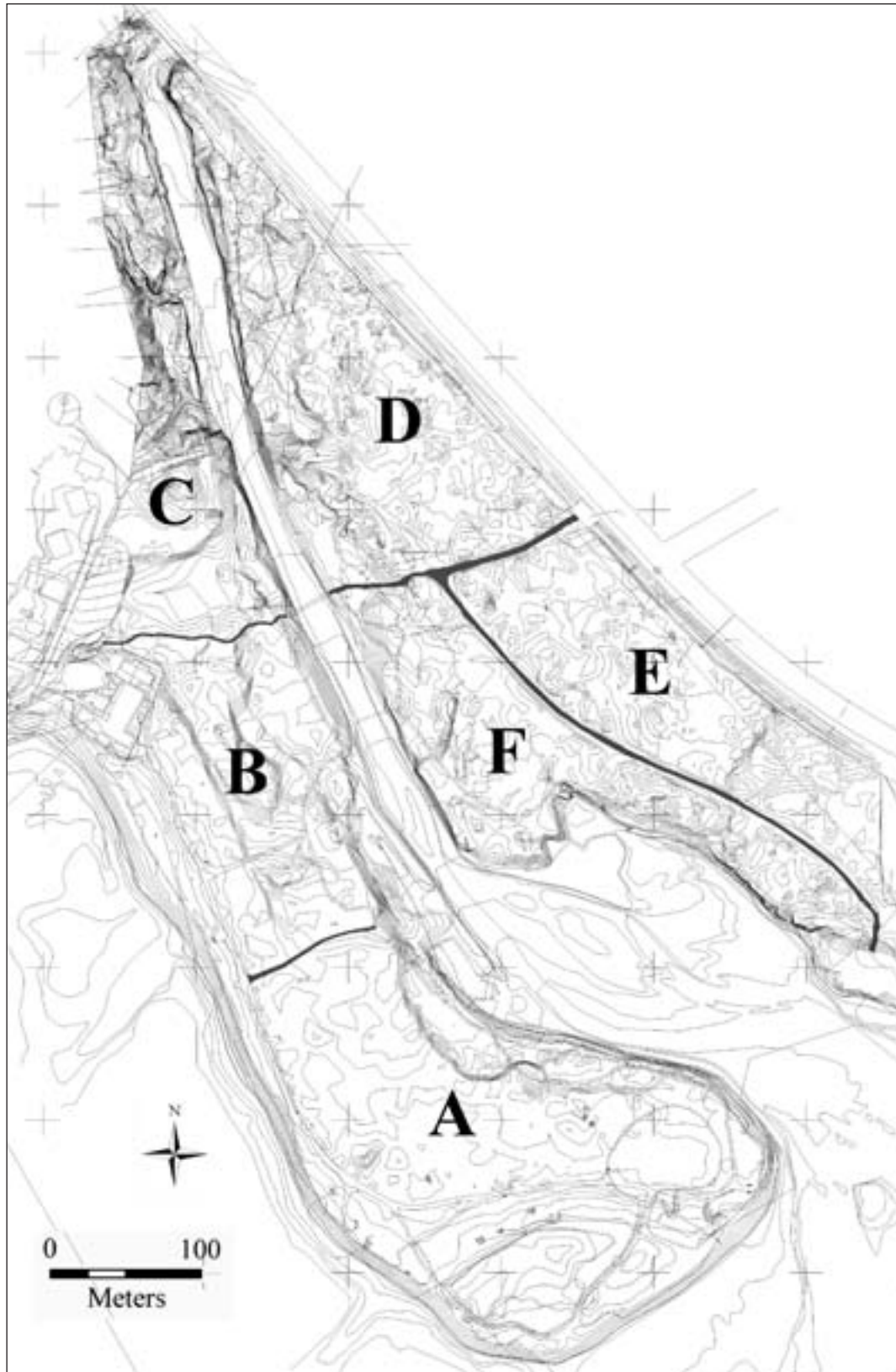


Figure 4-2. Locations and boundaries of Survey Units A-F.

Survey Unit A is located at the south end of the peninsula between the Indian River and Sitka Sound. It is bounded on the north by Cross-over Trail #2, on the east by the Indian River Trail, and on the south and west sides by the Totem Trail. This inventory area incorporates 41,736 m² or about 4.2 hectares (10.3 acres). Elevations in this unit vary from 0-5.5 m (0-18 ft) above mean seal level (AMSL). This survey unit contains four pre-modern landforms, all created after circa AD 1150 (see Figure 1-5). The oldest is a former beach located in the extreme northern end of the survey unit and bordered by Cross-over Trail #2 on the north side and Indian River Trail on the east side. Around AD 1250, an extensive area of beach was created forming the bulk of the peninsula's "foot" and the greater portion of Survey Unit A. The "heel" of the peninsula was exposed as an uplifted beach meadow circa AD 1500 and this area is bounded on its southern and western margins by the Totem Trail. South and west of the Totem Trail is a strip of land which was created around AD 1800 and was a high intertidal zone during the 1804 battle.²

Survey Unit B is the center unit on the west side of the Indian River. It is bounded on the south by Cross-over Trail #2, on the east by the Indian River Trail, on the north by the Bridge Trail, and on the west by the Totem Trail. Cross-over Trail #1 passes through this survey unit. The unit incorporates 20,594 m² (about 2.1 ha/5.1 acres) of land with elevations 1.2-7.9 m (4-26 ft) AMSL. A north-south trending ridge in the northern portion of Survey Unit B is a ca. 2500 BC remnant terrace (see Figure 1-5). Much of the northwestern portion of the inventory unit is a river terrace and flood plain created circa 1650 while the west margin of the unit is a pre-AD 1250 beach. South of the remnant beach terrace are a series of beach remnants established (from north to south) circa AD 100-300.³

The northern-most inventory unit on the west side of the Indian River is Survey Unit C which incorporates 20,140 m² (about 2 ha/5 acres) of ground. Elevations of this unit vary from 1.8 m to 3.7 m (6-12) ft AMSL at the Indian River to 14.9 m (49 ft) AMSL at the edge of the river channel about 100 m north of the maintenance shed on the park's boundary with Sheldon Jackson College. Most of the land above the river banks lies between about 20 and 40 ft AMSL. There is no geomorphological data for the north half of this inventory unit as this portion came into the park after 1995 when the landform history study took place. The southern portion of Survey Unit C, from the maintenance yard south, was intertidal to subtidal prior to 3600 BC. The small knoll immediately southeast of the maintenance shed is projected to have been a circa 3500 BC "bedrock cored island" near the shore projecting from the Indian River delta. Continued uplift raised the area immediately south of the knoll above the level of storm wave action between 2600 and 3500 BC with a later beach south of that in place sometime prior to 300 B.C. and estimated at circa 2500 B.C.⁴ This area has the potential of containing the oldest archeological resources in the park.

Survey Unit D is a triangular piece of ground occupying the north half of the park on the east side of the Indian River. It is bounded by Sawmill Road on the east, the Indian River on the west, and the Bridge Trail on the south. The north end of the Old Highway Trail intrudes into the southern portion of this survey unit. Elevations in this unit vary from 1.8 m to 3.7 m (6-12) ft AMSL at the Indian River to 9 m (30 ft) AMSL. The southern end of the survey unit sits on a high terrace created circa AD 1650 as an upland beach meadow (see Figure 1-5). Little is known about the geomorphology of

northern one-third of the inventory unit as this was not included in the 1995 study. The unit incorporates 31,533 m² (about 3.2 ha/7.8 acres) of land.⁵

Survey Unit E is located on the west side of the Indian River immediately south of Survey Unit D. Its boundaries are the Bridge Trail on the north, the trailer park on the east, and the segment of Old Highway Trail extending from the park's privies to Crescent Bay. The unit incorporates 24,861 m² or about 2.5 ha/6.1 acres of land. Elevations vary from 3.6 m (12 ft) to 6.7 m (22 ft) AMSL. The northern two-thirds of this area first emerged sometime prior to circa AD 1650 as river channel alluvium. The remaining area on the southern end of the survey unit has been characterized as pre-AD 350 and pre-AD 900 remnant bars. Tephra in the latter two areas suggest the remnant bars may have been created as a by-product of storm and tidal action perhaps as early as 2500 BC (see Figure 1-5).⁶

Survey Unit F is located on the east side of the Indian River immediately south of Survey Unit D and west of Survey Unit E. Its boundaries are the Bridge Trail on the north, the Old Highway Trail from the privies to Crescent Bay, and the Indian River on the west. The long axis of this boot-shaped survey unit is northwest to southeast and the unit incorporates 26,083 m² or about 6.4 acres of land. Elevations vary from 0.3 m (1 ft) to 3.3 m (11 ft) AMSL. The southeastern quarter of this area has been estimated as emerging sometime prior to circa AD 900, perhaps as early as circa 2500 BC, as a remnant storm tidal bar. Northeast of this area, generally following the Russian Memorial Trail, is a swath of ground estimated to have been created sometime prior to AD 1800. A somewhat triangular patch of ground intruding into this zone from the northeast has been characterized as pre-AD 1650 river channel alluvium.⁷

Throughout the course of the 2005-2008 parkwide inventory, a 12-channel Trimble PowerPro GPS unit was used to record the locations of geophysical inventory grids, metal detection find spots, and shovel tests. Archeological information was documented by team leaders directing metal detection, geophysical, and subsurface testing. As their work progressed, each team leader maintained a daily log of their team's activity, descriptions of inventoried areas, and photo documentation of their work using black and white film, color film, and digital photographs. Team leaders were required to pay close attention to such details as prominent landmarks, site boundary, position of diagnostic or collected artifacts, and the position and size of any observed features and artifact concentrations.

Artifact recovery, especially by the shovel test teams, was certainly affected to some extent by the constant wet weather. The often poor working conditions, especially during the April-May 2006 field season, exacerbated this problem considerably. Temperatures in 2006 varied from 34° F (1° C) to 45° F (7° C) in 2005 and the crews experienced nearly constant precipitation usually falling as rain but also sometimes as sleet and snow. Sunny days were always welcome every field season. Historic and modern objects were usually identified fairly easily since they were made of artificial materials. The muddy soils made identification of prehistoric lithic (stone) tools difficult at best, however, as these were manufactured from native stone which was, in most cases, similar or identical to that occurring naturally in the sub-soil gravels. For this reason, after the first field season, the crew was directed to collect all lithic objects that could conceivably

be debitage (sharp-edged waste material created as a by-product of making a stone tool), cores (a piece of stone used as a blank from which flakes or blades were removed), or tools for later review in the laboratory. For historic artifacts, crews were instructed to collect objects if they had some distinguishing characteristic that could provide information about place of manufacture, function, or time of manufacture. Objects which did not have such characteristics (such as unmarked clear or amber glass) were to be noted on the shovel test forms and replaced in the holes as they were backfilled. As it turned out, however, this practice was generally not followed with the result that many modern glass objects were returned to the laboratory and cataloged.

In 2005, objects collected in the field were placed in plastic ziplock bags for return to the laboratory at the Midwest Archeological Center in Lincoln, Nebraska. These containers were found to be unsatisfactory, however, as rain made writing labels on the bag difficult and labels were found to be prone to smudging even though waterproof markers were used. In 2006 and afterwards, the collection procedure was improved by placing objects in cloth Hubco™ soil sample bags. The recovery provenience and identification of the object(s) were written on a sewn-in label tag that is water, insect and mildew proof and guaranteed to keep pencil marks legible under any conditions. Charcoal and soil samples were first placed in a ziplock bag which was in turn put inside a cloth Hubco™ bag and the tag completed as with artifacts for transport to Lincoln.

Once the collected objects were returned to MWAC, standard laboratory and curatorial procedures were followed. Objects were cleaned with water as necessary, dried, and repackaged in transparent polyethylene bag along with MWAC artifact cards. Carbon and soil samples in plastic bags were opened, dried, and placed inside a larger polyethylene bags along with MWAC artifact cards.

The process of identification was a little more complex for lithic objects. In 2006, Forest Service Archeologist Jeremy Karchut allowed the field crew to examine lithic tools and debitage from the Hidden Falls (49 SIT 119) and Starrigavan (49 SIT 229) sites, two of the best documented prehistoric sites on Baranof Island.⁸ This review revealed that lithic artifacts, particularly igneous materials such as basalt, quartz, and quartzite, were often extremely crude and difficult to identify without close examination. Indeed, some of the objects might not be considered cultural at all by many archeologists save for the fact they had been found in a cultural context. Therefore, once lithic objects from Sitka National Historical Park were returned to the laboratory and cleaned, they were examined by a committee of three individuals to assess whether they were of cultural origin or not. The committee included the project director and author of this report, one of the archeological technicians that had served as on that year's crew, and Harold Roeker, of the MWAC laboratory staff, a man with considerable knowledge about and experience in stone tool manufacturing. An object was considered to be of cultural origin if any individual on the committee accepted it as such. If an item was rejected by all three individuals, it was discarded. The remaining objects were packaged and cataloged as described above.

Artifacts and field records were cataloged using ANCS+ software, the National Park Service version of Visual Re:discovery. These were then transferred to Sitka

National Historical Park for curation after each year's artifact analysis was completed and the annual report prepared.

METAL DETECTION INVENTORY

The metal detection inventory, undertaken in 2005, was directed by Dr. Douglas Scott, an archeologist with the National Park Service's Midwest Archeological Center. Dr. Scott is best known for his pioneering work in nineteenth century military sites archaeology and forensic archaeology.⁹ His metal detection team incorporated three dedicated volunteers who are also professional archeologists. Forest Service Archeologist Christopher Adams (Gila National Forest, Black Range Ranger District, New Mexico) and National Park Service Archeologist Charles Haecker (Santa Fe Office) are highly skilled in the use of specialized detectors in archeological inventory. GPS data was recorded for this and other teams in 2005 by a third volunteer, Dr. Melissa Connor, an archeologist and Assistant Professor of Forensic Science at Nebraska Wesleyan University.

Goals and Methods

The primary goal of the metal detection team was to identify the location of the 1804 battleground with a secondary goal of locating 19th century to World War II era sites in the park. The team's plan was to sweep as much of the park as possible using a standardized metal detecting operation developed by Dr. Scott.¹⁰ This operation incorporates three sequential tasks or operations: survey, recovery, and recording. During survey, detector operators arrange themselves in a line spaced about 3 to 5 meters apart depending on terrain and vegetation. As they walk across the survey area, the metal detectors are passed across the ground using a sweeping motion as operators conduct a visual inspection of the ground surface. When a target is located by one of the operators, a pin flag is used to mark the site.

In recovery, the marked object is excavated, carefully exposing the object while leaving it in place. Traditional archeological hand tools, such as spades, trowels, and dental picks are utilized to expose subsurface artifacts. After the object is exposed, the pin flag is left upright at the location to signal the recording crew. At that point, the recording operation begins with field identification of the object and determination as to whether the object will be collected (modern items such as aluminum pull tabs are left in the field or picked up to be disposed of later). The GPS operator records the object's precise UTM¹¹ position, assigns a field-specimen number, and collects the specimen. Finally, the recorders backfill the artifact discovery location completing the recording process. Later, in the laboratory, the location data will be added to the existing electronic maps and databases for the park to insure a comprehensive and accurate data set.

The metal detection team was able to conduct sweeps in all survey units in the park. Unfortunately, much of the park is composed of extensive areas of dense foliage and downed trees which kept the operators from sweeping the detectors over the ground and even prohibited their ability to keep the antenna coil on or near the ground surface (Figure 4-3). Thus, only about 10% of the park area was actually inventoried using metal detection.

Metal detectors employed during the field work were a Tesoro Tejon with a 9 inch diameter antenna coil and a Troy Shadow X-5 metal detector with a 7 inch diameter antenna coil. Both detectors have waterproof antennas and antenna leads. The control

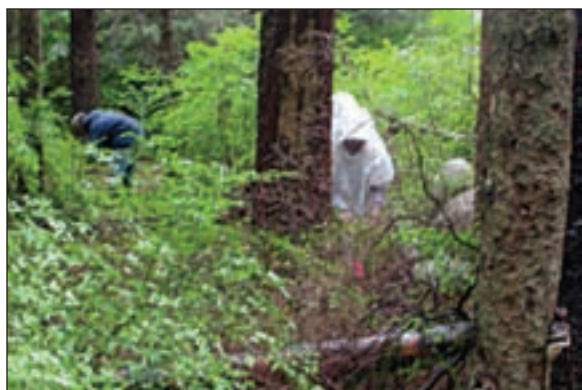


Figure 4-3. Metal detectors at work in dense foliage of Area A.



Figure 4-4. Chris Adams with his Mine Lab metal detector after discovering a grapeshot (FS32) in the Fort Clearing, Survey Unit A .

boxes and battery compartments are water resistant but not waterproof so, due to the nearly constant light rain during the two weeks the metal detector inventory was under way, operators employed plastic grocery produce bags duct taped to the detector wands to keep moisture from entering the control units under most weather conditions. On only two occasions were rains sufficiently heavy to preclude detector operation.

The detectors were set to identify all metals or “non-discrimination mode” throughout the project with one exception. When the density of iron objects was so great as to obstruct or mask other signals, the detectors were calibrated in a way such that the operator could determine whether non-ferrous objects occurred at those iron rich locales. This method of operation usually worked well throughout the park except at the Fort Clearing. There, the density and mass of metals in the Fort Clearing was so large that even the discrimination option could not be used with the Tesoro and the Troy detectors. In this case, a third specialized metal detector type, the Mine Lab Explorer XS, was brought to the clearing in an attempt to overcome this problem (Figure 4-4).

The Mine Lab uses up to 28 frequencies and can be programmed to seek specific and narrow conductive and inductive ranges; that is, it can be set to seek precise target mass and densities that have a particular electrical eddy current. Chris Adams operated the Mine Lab machine with a stock coil and employed the machine’s Advanced Learn program

to set the discrimination level. In the Advanced Learn mode he rejected everything on the metal detector screen. He then used the touch pad to accept the electrical conductive range of a cannon ball. He passed the antenna coil over a recovered cannonball several

times in order for the machine to “learn” what cannonballs looked like. Adams then employed this unique programming feature and quickly found three cannonballs in the Fort Clearing (Figure 4-4). One iron splitting wedge was also found that had the same reading as the cannonballs due to its mass. This was the first time this technique of specific conductive and inductance discrimination had been employed on an archeological investigation and it proved to be a resounding success.

Inventory of Survey Unit A

Survey Unit A yielded the majority of the metal detected artifacts collected. The area is littered with modern metal debris which was not collected or formally recorded.¹² Despite the prevalence of this debris, three historic activity areas were identified in this survey unit (Figure 4-5). The first area is associated with the Fort Clearing. The second is associated with a depression located about halfway between the clearing and the Visitor Center and the third area is located about 150 m north-northwest of the Fort Clearing and adjacent to Indian River trail.

Metal detection in the Fort Clearing and surrounding area produced twenty artifacts most of which are artillery or small arms ammunition associated with the 1804 battle (Figures 4-6, 4-7). Three artillery and firearms artifacts were found on the north-northwest side of the Fort Clearing with the remainder recovered in the woods up to 150 m west of the clearing (Figure 4-8). These include five approximately 1 inch diameter iron canister shot, three grapeshot rounds, two 12-pounder iron cannonballs, and four lead balls of various calibers. From this, it can be inferred that artillery shot used in the battle included 12-pounder solid shot, 12-pounder canister, and 12-pounder grapeshot. In 1958, Frederick Hadleigh-West reportedly recovered an iron cannonball during his excavations at the Fort Clearing. This artifact, now lost, was reported to be about 3 inches in diameter and weighed 3 pounds. If the description is accurate then this piece was probably for a 3-pounder gun. Therefore, the minimum types of artillery used in the battle were 3-pounder and 12-pounder guns. The lead balls indicate that combatants used .69-caliber muskets as well as .36-caliber and .44 or .45-caliber small arms.

Non-battle related artifacts found scattered across the survey unit were also collected by the metal detection team. These include a rusted nut, the hammer portion of a shingling axe (Figure 4-9), an iron sling shot ball, an iron washer, a splitting wedge (Figure 4-9), and a pinfire cartridge case, and a .44 caliber conical bullet. The hammer head portion of a shingling axe (Cat. 23526) is consistent in form with shingling axe types known to have been produced in the mid-to-late 19th century.¹³ The pinfire cartridge case (Cat. 23520; Figure 4-6) is .44-caliber (12mm) and indicates use of French LaFauchaux or Belgium 12mm (44 caliber) Pinfire Revolvers. Lefauchaux cartridges were in general use in the 1840s and several sizes of pinfire revolver cartridges were listed as official types by the U.S. Army in 1865. They continued to be offered in mail order catalogues until just after the turn-of-the-century.¹⁴ This specimen could have been used during either the late Russian or post-1867 American occupations. The conical bullet (Cat. 23528) is .44-caliber weighing 218.8 grains or 14.3 grams. It is a flatnosed bullet with a ring around the base. The bullet is unfired but was once part of a paper or linen pistol cartridge designed for the percussion Colt pistol, possibly the Model 1860 Army revolver.¹⁵ The other

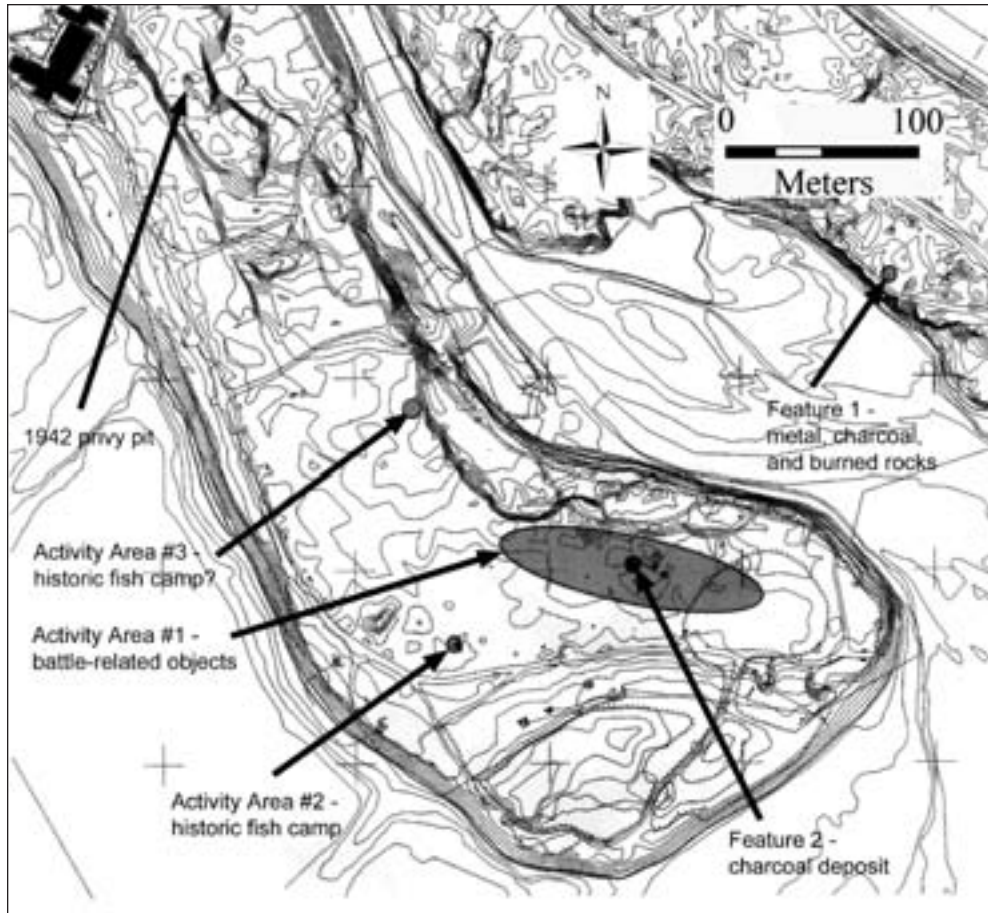


Figure 4-5. Features and activity areas identified during metal detection inventory.



Figure 4-6. Bullets and cartridge case recovered during metal detecting: Cat. 2350 = 0.46 (12 mm) diameter Lefauchaux pinfire cartridge base, Cat. 23528 = 0.44/0.45 caliber conical bullet, Cat. 23519 = 0.44- or 0.45-caliber ball (measured diameter .43 inch), Cat. 23540 and 23523 = 0.63 inch balls, Cat. 23532 = lead ball embedded in wood from fallen tree.



Figure 4-7. Cannon balls recovered during metal detecting: Cat. 23518 = 1.1 inch diameter ferrous canister shot, Cat. 23524 = 0.94 inch diameter ferrous canister shot, Cat. 23543 = 2.09 inch diameter 1-pounder cannonball, Cat. 23541 = 4.29 inch diameter 12-pounder cannonball.

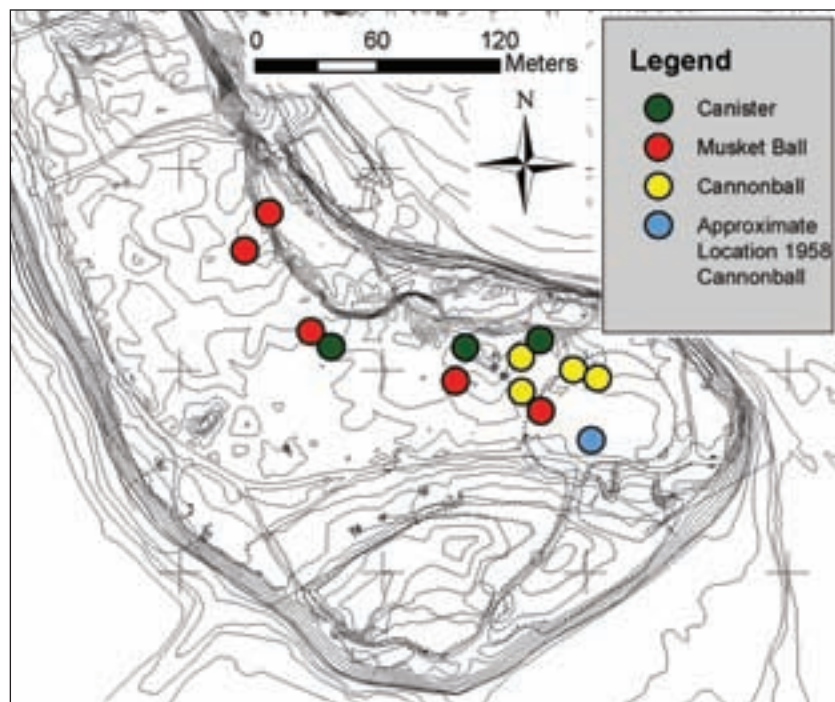


Figure 4-8. Recovery locations of 1804 battle-related artifacts.



Figure 4-9. Woodworking and fishing tools recovered during metal detecting: Cat. 23545 = splitting wedge; Cat. 23526 = head of shingling hatchet, 23506 = salmon hook/gaff.

non-firearm items are “non-diagnostic” or not indicative of a particular time and/or cultural group.

A second activity area identified during metal detection was indicated by the recovery of ten artifacts around Depression A-1 in Survey Unit A; e.g., about 150 meters west of the Fort Clearing (Figure 4-5). The depression’s size and shape is similar to basement depressions at other historic sites. Artifacts recovered here include an iron gaffing hook (Figure 4-9), six hand forged iron spikes, an iron strap, a fragment of flat copper or brass knife or ornament, and a nail head fragment. One of the nails was clenched suggesting it was used in a structure of some kind. The hand forged iron nails imply a pre-1850 date and the gaffing hook suggests the possibility that this was the location of a fish smokehouse. Of perhaps some bearing to this interpretation is a map attached to a 1993 letter from tribal elder Herbert Hope to then Superintendent Micki Hellickson in which he indicated several former fish camp structures once stood in this general vicinity just above the 1804 high water (Figure 4-10).¹⁶

The third activity area in Survey Unit A is located about 150 meters north-northwest of the Fort Clearing (Figure 4-5). This activity area was suggested through the recovery of seven metal artifacts: three lead balls, a brass button back with an omega loop shank, a forged iron nail fragment, an iron nut, and a clothing company good luck token from Tacoma, Washington. The token dates to the early 20th century while the other pieces date from the mid-to-late 19th century. The token may have been incidentally

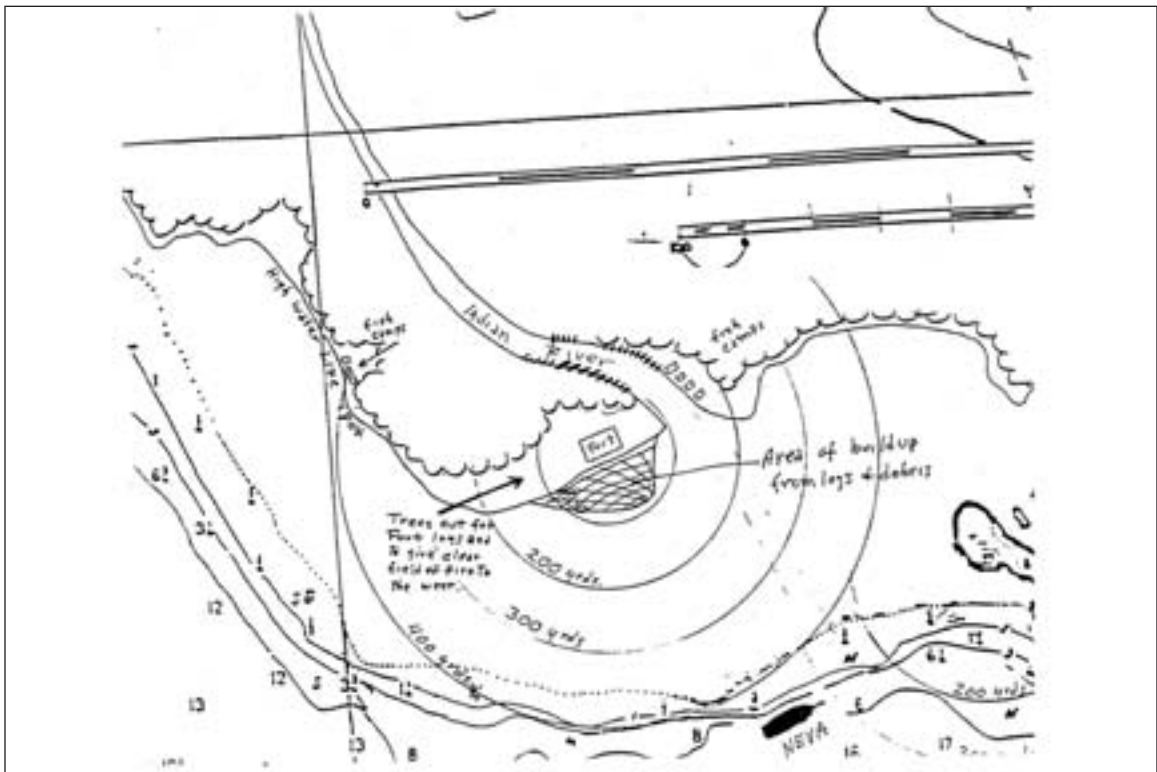


Figure 4-10. Map of historic fishing camp locations sketched by tribal elder Herbert Hope (1993).

dropped on the site and not associated with the earlier occupation. The assemblage of objects suggests short-term use of the site and it is possible this is one of the fish camps alluded to in the Tlingit traditional use study.¹⁷

Aside from these activity areas, metal detectors located a mass of charcoal about 50 meters west of the north side of the Fort Clearing. Once the charcoal mass (labeled Feature 2 by the team leader) was identified, no further excavation at this location occurred and the origin of the metal reading that led to the discovery of the charcoal was never determined. The team leader recommended this location for additional archeological investigation, however.

Inventory of Survey Units B-C



Figure 4-11. Metal sign and wooden post found about 20 meters east of the privy pit on the east edge of the remnant terrace.

its field work. A metal sign (Figure 4-11), still attached to its wooden post, was found about 20 meters east of the privy pit on the east edge of the remnant terrace. It has a white baked enamel face with a green border and, although it is corroded, two partial letters are still visible: “M E[?]...”; probably “MEN.”²⁰

Survey Unit C was extremely difficult to metal detect due to the dense tree fall and understory present. This area is littered with modern era trash, both on the surface and buried. A cast iron stove had been reported in this area²¹ but was not relocated and may have been removed when the Visitor Center upper parking lot was constructed. Regardless, the survey unit as a whole may be considered a 20th century sheet trash midden as the density of the metal debris is high across the entire area. Objects seen during the inventory included bottle glass (mostly alcohol related), plastic containers, various types of plastic snack packaging material, aluminum bottle caps and pull-tabs, as well as wire nails and other fasteners. No materials from this area were collected.

Metal detecting in Survey Unit B found modern debris scattered over most of the area with one concentration of materials that appears to date to the World War II era. The objects are in proximity of an old privy pit on a remnant terrace east of the Visitors Center and adjacent to an old interpretive trail. Estimated to be the likely remains of one of two privies built by the Civilian Conservation Corps in 1942¹⁸, the pit is nearly square, about 1 meter on a side, and has milled lumber protruding from the depression. Among the metal found around the pit were wire nails and a cast iron handle that may be part of an ash shaker for a small cast iron stove. All of the items appear to be of 20th century origin. Although two privy pits are shown on a 1953 park map,¹⁹ the metal detection team relocated only one during

Inventory of Survey Units D-F

Survey Unit D also proved to be difficult to metal detect due to the dead and fallen trees. The area, recently added to the park, is heavily disturbed and only modern materials were observed.

Survey Unit E is littered with large deadfall to such an extent that metal detecting became a random effort. This area was the least successful in terms of metal detector coverage. No historic materials were noted, but large quantities of modern and very recent trash litter the surface, especially along the highway on the east park boundary. No materials were collected in this area.

Similarly, the deadfall and dense understory in some areas frustrated much of the metal detecting efforts in Survey Unit F. Nevertheless, about 10% of the area was covered and the tidal flats from the pedestrian bridge to the mouth of the river, where accessible, were also detected. Like the other areas of the park, modern metal artifacts were found littered across the area and none were collected. One possible feature, designated Feature 1 by the team leader, was identified in this survey unit, however (Figure 4-5). The metal reading at this location proved to be a large flat piece of iron buried about 26 cm deep. Above this was a layer of charcoal and oxidized rock. One mid-19th century .44-caliber Colt percussion revolver bullet was recovered about 15 meters north northwest of this feature. Full exposure of the feature was not undertaken and the location was recommended for formal testing to determine its function and age. This feature is in the same approximate location as a concentration of subsurface metal encountered by researchers during the 1995 geomorphological study. They described the concentration to occur on the east side of the Indian River in and around their Sampling Location Q-1 (see Figure 1-5). A piece of wood with an iron spike in it was recovered and metal detecting around the sample location indicated another dozen “hits.” The geomorphological team interpreted this as an indication that a structure of some kind might have once existed at this location and Tlingit oral histories place a series of smokehouses in this approximate area.²²

The metal detection team also encountered a concentration of metal in association with fill along the northern portion of the Russian Memorial Trail. Among the items were several pieces of cuprous metal including a possible oval picture frame fragment, a piece of 1/8 inch wire, and a piece of sheet metal. Several other items were observed but not collected among which were a leather boot top with metal eyelets, a threaded pipe nipple, and pieces of non-descript tin. The material may constitute a trash dump, but it seems more likely, given its association with fill for the trail, that it was brought into the park during trail construction or maintenance. The items recovered likely date from early-to-late 20th century.

GEOPHYSICAL INVENTORY

Geophysical inventory uses relatively new technology to locate archeological features without excavation. Sometimes such inventories are referred to as “remote sensing,” “geophysical prospecting,” or “archeological prospecting.” This inventory method provides a cost-effective means of quickly acquiring detailed archeological

information within a limited area without damaging or destroying the archeological resource that traditional archeological excavation techniques would necessitate. It also allows the archeologist to focus any subsequent excavations on potential features rather than using a buckshot approach of digging many holes to find features. Since excavation is done by people, it is a labor intensive activity and thus one of the most expensive techniques used in archeology. Geophysical inventory helps the archeologist achieve equal or better results using less money. At Sitka National Historical Park, the inventory team was essentially one person, Steven L. De Vore, an archeologist with the Midwest Archeological Center. De Vore has years of extensive experience in geophysical inventory and is a recognized expert in the field.

Survey Localities

Unlike the other teams, geophysical inventory was conducted only within Survey Unit A since De Vore's primary goal at Sitka National Historical Park was to examine locations oral tradition and historic records identified sites of the 1804 Kiks.ádi Tlingit fort *Shis'ki-Noow* and later mid-19th century Russian farmsteads. Four locations were inventoried (Figure 4-12), two of which were identified by the park staff and a local Kiks.ádi Tlingit tribal member as possible locations for the 1804 fort. These areas were called the "Deep Depression" and "Fort Clearing" localities (Figures 4-12 to 4-14). A third inventory area, referred to as the "Small Depression" locality (at Depression A-1), was located southeast of and near the Deep Depression (Figures 4-12 and 4-13). This

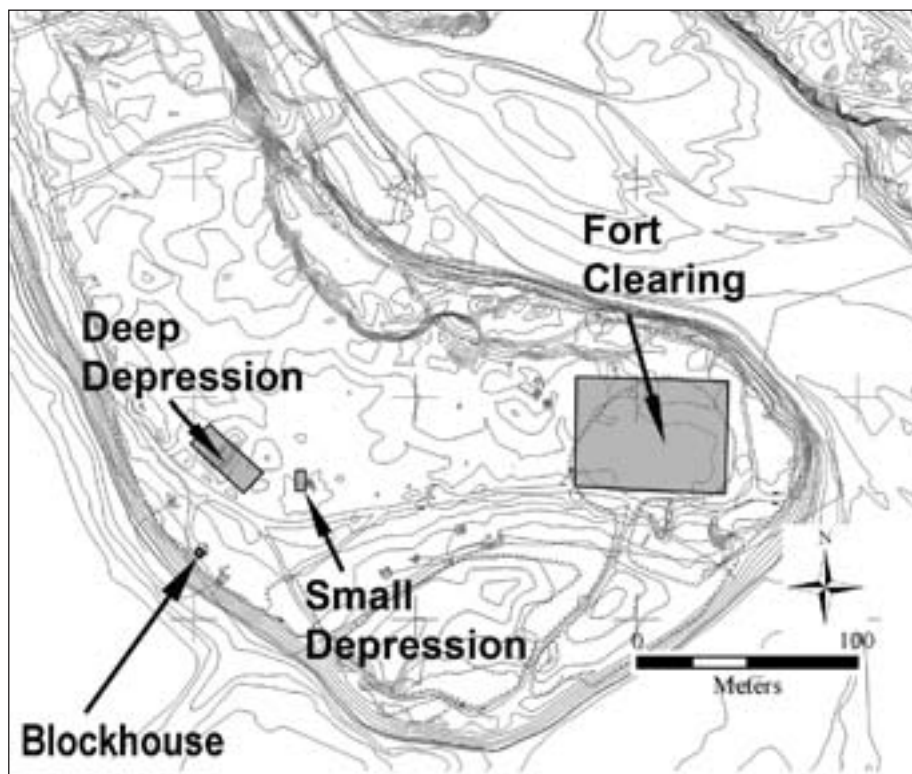


Figure 4-12. Locations of 2005 geophysical inventory areas.

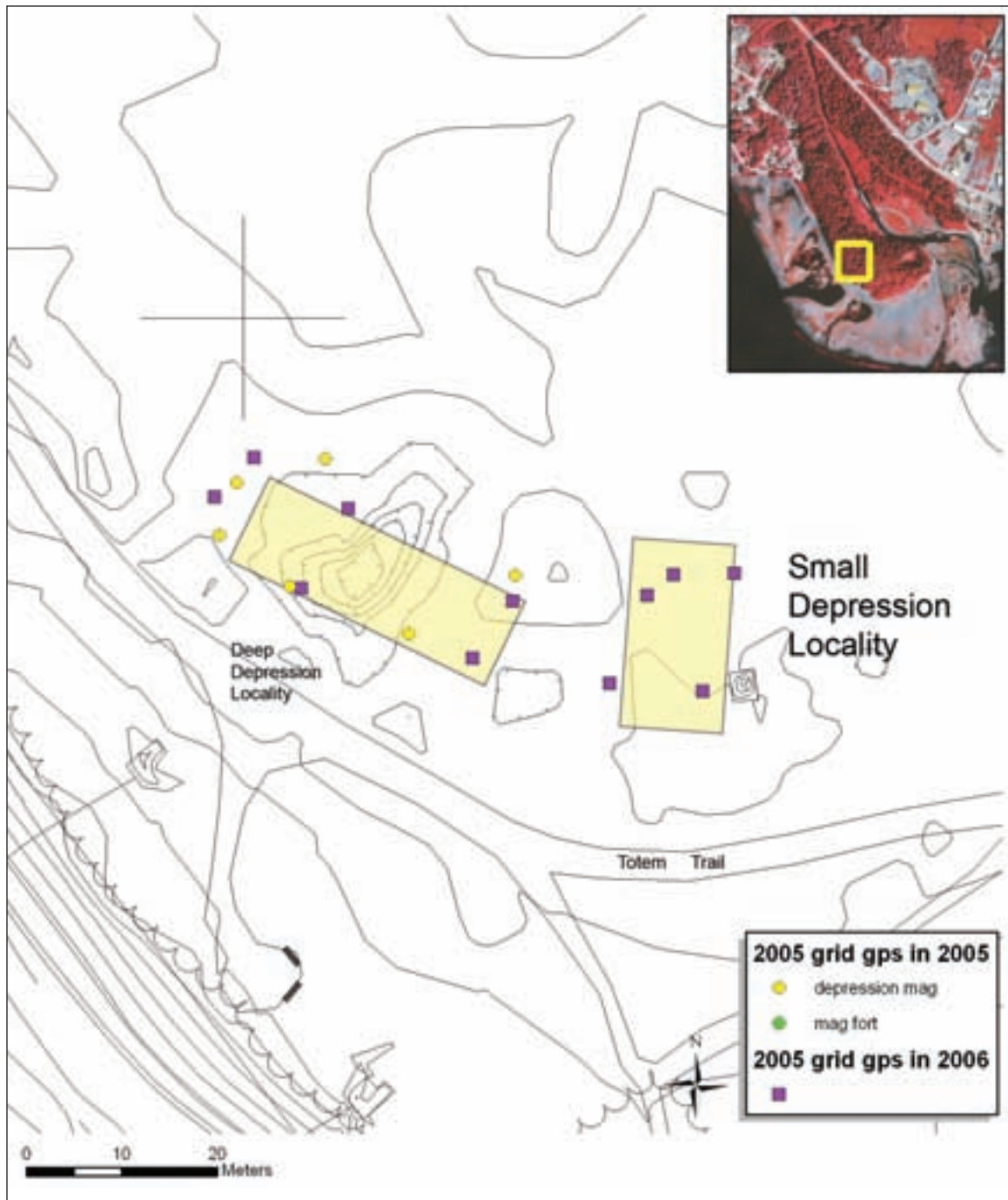


Figure 4-13. Maps of Deep Depression and Small Depression locality geophysical survey areas.



Figure 4-14. Map of Fort Clearing locality geophysical survey areas.

inventory was conducted to determine whether subsurface features existed in the vicinity of a depression and artifact concentration identified by the metal detector crew (metal detection Activity Area #2).²³ Finally, a fourth area was investigated at the request of the park. This location, referred to as the Blockhouse Inventory Locality, was located in the clearing at the edge of the tidelands (Figure 4-12) and its goal was to determine whether or not remnants of the reconstructed blockhouse remained *in situ*.

The Deep Depression locality was located in the woods on the northeastern side of the Totem Trail near the Trader Legend and Yaadaas Crest Corner poles (Figure 4-13). Here, one finds a large, deep drainage channel (the “Deep Depression”) and dense growth of trees, thick underbrush, and deadfall trees. The general inventory area incorporates landforms the geomorphological team identified as (from west to east) a ca. 1800 beach, an area of unidentified age, and a pre-AD 1250 beach (see Figure 1-5). Here, De Vore used a geophysical inventory grid 30 m (east-west) by 10 m (north-south) in size, essentially three 10 m x 10 m grid units set end-to-end. This grid was centered over the depression and oriented to magnetic north (approximately 22° east of true north). The total survey area of the Fort Clearing was 300 m² or 0.07 acres.

The Small Depression inventory grid was set up about 50 m east of the Deep Depression grid locality and measured 10 m east-west x 20 m north-south (Figure 4-13). This lies within an area identified by the geomorphological team as a pre-AD 1500 upraised beach meadow which had become a “young forest” by the turn of the 19th century. The grid was oriented 18° west of magnetic north and was placed such that the depression was adjacent to and east of the southeast corner of the grid. The total area surveyed in the Small Depression locality was 200 m² or 0.05 acres.

Geophysical inventory at the Fort Clearing utilized two complete 20-meter by 20-meter grid units and five partial grid units (Figure 4-14). This system of grids was oriented approximately 12° east of magnetic north in an attempt to replicate the orientation of the 1994 Geoscan inventory. A small extension was also placed at the northwest corner of the grid outside the clearing in the dense timber and dead fall between the northwest corner of the Fort Clearing grid and Indian River Trail. The total survey area of the Fort Clearing was 1,830 m² or 0.45 acres.

The southwest corner in each gridded area was referred to as oN oE. Each of these directional references increased incrementally as one moved north or east. For instance a point 60 m north of ON OE would be 60 N oE. A point 20 m east of this would be 60 N 20 E. A GPS unit was used to record the position of each grid corner to enable future identification of surveyed areas.

Inventory at the Blockhouse Inventory Locality utilized only a 10 m x 10 m geophysical grid. The grid was oriented 12° west of magnetic north (its south baseline roughly parallel with the beach) and incorporated 100 m² or 0.02 acres.

Geophysical Inventory Methods

De Vore typically conducted his inventories within 10 m x 10 m and 20 m x 20 m grids. Ropes marked with different color tape at half-meter and meter increments were positioned around the margin of each grid with additional (and similarly marked) ropes placed at one-meter intervals across the grid units in a north-south orientation. Together, these ropes served as guides for the instrument operator during data acquisition. A sketch map was completed for each survey location after which initiation of data collection began starting in the lower left hand (southwest) corner of each grid unit.²⁴

Three geophysical inventory techniques were used: magnetic gradient survey, resistance survey, and ground penetrating radar (GPR) survey. Each method has its strength and weaknesses with regard to identification of buried archeological features. In addition, the results from one technique can add to or support the results from another technique. The use of these three methods thus provides the potential to identify a broad spectrum of feature types.²⁵

Magnetic gradient survey is a passive geophysical survey method. Passive survey methods measure naturally occurring fields or properties of the earth. In this case, the naturally occurring fields are the earth's gravitational fields. With magnetic gradient survey, we simply measure variations in these fields across an area and attempt to infer something about the subsurface archeology from the measurements. The technique is useful anywhere the ground is free of excessive numbers of iron objects. Further, this type of inventory is useful to archeology because local variations in the soil (magnetic materials and minerals) affects the earth's magnetic field in that spot. Iron objects, for instance, strongly effect the local earth's magnetic field. Also, buried cultural features are known to have this same effect. Such features include fire hearths, kilns, and soil disturbances such as pits, mounds, wells, and dugouts. Of course, disturbances can be also caused by natural differences in the soil so the trick is to be able to distinguish between naturally versus culturally caused disturbances. Variations in the earth's magnetic field are measured in units called "nanoteslas" (nT is the symbol for nanoteslas). In North America, the earth's magnetic field strength ranges from 40,000 to 60,000 nT with the field meeting the earth's surface at an angle of about 60-70°. At Sitka, the earth's magnetic field strength is approximately 56,800 nT with a inclination of approximately 73° 45'. The difference between the expected strength of the Earth's magnetic field at a certain location and the actual measured strength of the field is called a "magnetic anomaly." Magnetic anomalies of archeological interest are often in the ± 5 nT range, especially on prehistoric sites. Target depth in magnetic surveys depends on the magnetic susceptibility of the soil and the buried features and objects. For most archeological surveys, target depth is generally confined to the upper one to two meters below the ground surface with three meters representing the maximum limit.²⁶

The magnetic inventory at Sitka used a "gradiometer," an instrument with two magnetic sensors separated from one another by a fixed vertical distance which allows one to measure the magnetic field at two separate heights (Figure 4-15). The top sensor reading is subtracted from the bottom sensor reading and the resulting difference is recorded in a data collector. This provides the "vertical gradient" or change in the

magnetic field and the data does not require correction as variations in the earth's magnetic field through the day are automatically canceled. The gradiometer provides excellent feature resolution and potentially provides data which allows the archeologist to more easily classify the magnetic anomalies encountered.

De Vore's instrument, called the fluxgate gradiometer, was equipped with a data collector allowing him to record the earth's magnetic field many times as he walked



Figure 4-15. Magnetic gradient survey in the Fort Clearing using a fluxgate gradiometer.

over the survey area. The SITK magnetic gradient survey was designed to collect 8 samples per meter along 0.5 m traverses or 16 data values per square meter at the blockhouse replica. The magnetic gradient data at the Deep Depression, the Small Depression, and the Fort Clearing was collected at 8 samples per meter along 1 m traverses. The data were collected with the surveyor walking in the same direction each time he crossed the grid. This procedure resulted in recording 6,400 measurements within each 20 x 20 m grid unit surveyed. Once an area was surveyed, the magnetic data were downloaded to a laptop computer in the field then imported into Geoscan Research's GEOPLOT software for

processing. The data were then exported as an ASCII data file into SURFER 8 contouring and 3D surface mapping program to create a map of the magnetic gradient data.²⁷

The resistance survey is an active geophysical technique. In an active geophysical survey, a signal is injected into the earth and then we measure how the earth responds to this signal. These signals could take a variety of forms such as displacement (thumping the ground or using explosives to send a shock wave), an electrical current, or an active radiometric source (such as electromagnetic or radio energy). In this case, the resistance survey used a resistance meter with twin probes that injects an electrical current into the ground and subsequently measures subtle sub-surface variations in resistance. The technique is particularly suited to the detection of buried buildings and structural remains. It also has the potential to identify cultural features that are affected by water saturation in the soil such as pits or trenches including grave shafts.

Resistance inventories were conducted at the Fort Clearing, Small Depression, and Blockhouse localities. No resistance data were collected at the Deep Depression. De Vore set his instrument, a resistance meter (Figure 4-16) to collect two values per meter with his traverses spaced across the survey area 0.5 apart (equivalent to four data values per square meter). One meter wide transects were used when surveying the Small Depression locality. Unlike the magnetic survey where De Vore collected data while moving in the same direction with each traverse, electrical resistance data were collected in a zigzag fashion with the surveyor alternating the direction of travel for each traverse across the grid. A total of 1,600 data values were collected for each complete



Figure 4-16. Resistance survey in the Fort Clearing using a resistance meter with twin probe array.

20 x 20 m grid unit surveyed. The data was then downloaded and processed as previously described for the gradiometer and processed with software to produce both image and contour maps.

Ground-penetrating radar (GPR) was the third remote sensing technique used by De Vore. This is another active geophysical technique that pulses radar energy (i.e., short electromagnetic waves) into the ground through a surface transmitting antenna. This energy, the radar wave, is reflected off buried objects, features, or soil layer boundaries. The depth of an object or soil boundary is estimated by the time it takes the radar energy to travel from the transmitting antenna and for its reflected wave to return to a receiving antenna. The depth the wave is able to penetrate into the ground is determined by the frequency of the radar wave. The lower the frequency, the deeper the radar energy can penetrate.

The negative side of this, however, is that the resulting resolution, or the ability to distinguish small objects, features, and soil boundaries decreases as radar frequency decreases. Conversely, the higher the radar wave frequency, the higher the resulting resolution but the penetration depth decreases. Since most objects of archeological interest lie within the upper meter or so of the surface, high frequency antennas are usually chosen in these kind of inventories. In addition, high frequency antennas have the advantage of allowing the archeologist to identify objects or features only a few centimeters across.

One drawback of using GPR is that its success is dependent on soil and sediment mineralogy, clay content, ground moisture, depth of the archeological resource, and surface topography and vegetation. The GPR signal can be lost or weakened in soils with high moisture content, have high electrical conductivity, contain highly magnetic materials, or have high clay contents. Dry soils and sediments, especially those with low clay content, represent the best conditions for a GPR survey. It is also best used where the ground is relatively level and even because the instrumentation is relatively large and heavy.

De Vore applied GPR at the Fort Clearing and Blockhouse Inventory localities. The radar antenna was mounted on a wheeled cart²⁸ which allowed data recordation along a grid line (Figure 4-17). GPR profiles were collected using traverses spaced 0.5 m apart with the surveyor alternating the direction of travel for each traverse across the grid. A total of 24 radar profiles were collected across the Blockhouse survey locality and 121 radar profiles across the Fort Clearing. The depth of the GPR profiles was calculated



Figure 4-17. Ground penetrating radar (GPR) survey with cart system.

to extended to 1.75 meters below the surface. The survey cart carried a data-logger with a display that allowed the results to be viewed almost immediately as they were recorded. After downloading and processing the data, time slice images of the Fort Clearing data were prepared.²⁹ Each time slice roughly corresponds to a plan view map of the site at a particular soil depth.

Interpretation of Inventory Data

Once De Vore had completed his inventories, he was able to identify a number of areas of potential archeological interest. The magnetic gradient data from the Deep Depression survey locality (Figure 4-18) was found to contain a number of mild magnetic dipoles; that is pairs of positive or south poles and negative or north magnetic poles. A few of the stronger dipoles were interpreted as possible historic period or modern artifacts. Several dipoles along the edge

of the depression were viewed as by-products of erosion. The magnitude or strength of the anomalies identified within the Deep Depression is substantially weaker than one associated with a small cannonball found in the Fort Clearing which had a magnitude of 20 nT.³⁰ Given the apparent lack of battle-related artifacts here (as indicated by the metal detector survey) along with the extremely small number of anomalies and their weak strength, the Deep Depression does not seem to be a plausible location for the 1804 fort.

Not unexpectedly, given the location's physical history, geophysical data from the magnetic gradient, resistance, and ground penetrating radar survey of the Fort Clearing indicated a highly disturbed area. Numerous strong dipole magnetic anomalies occurred throughout the clearing with the heaviest concentrations occurring on the east side (Figure 4-19). The numerous magnetic anomalies in the eastern portion of the geophysical grid in the Fort Clearing suggested the presence of numerous iron artifacts. This general area was documented in the historic record as containing a Russian homestead dating to the 1840s and it is likely that some of the magnetic anomalies are related to that occupation. Others may be related to 20th century activities of park managers, park visitors, and the military during World War II.

Electrical resistance data collected in the Fort Clearing (Figure 4-20) suggested a circular, low value resistance anomaly at the northern edge of the clearing (centered near N56/E49). Nothing in the park's documentary files or historic records suggest a possible cultural source for this anomaly. A rectangular, low resistance anomalous area approximately 10 m wide was identified in the eastern portion of the grid centered near

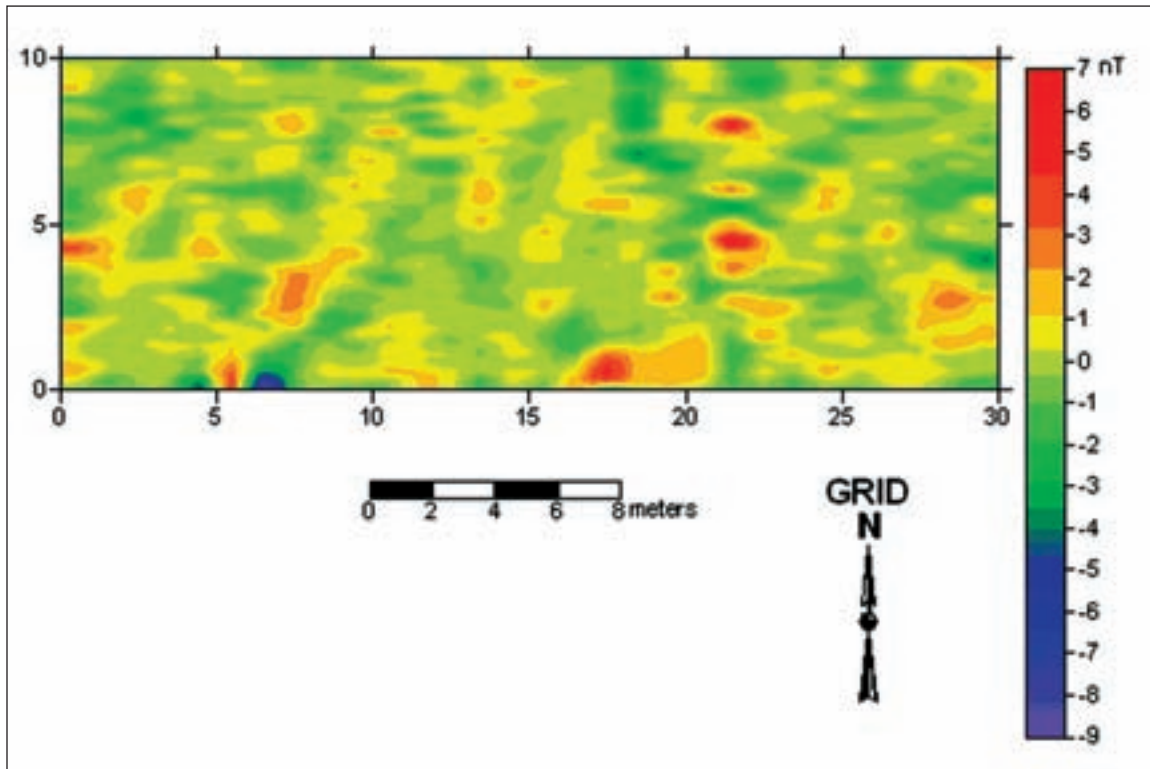


Figure 4-18. Image plot of magnetic gradient data from the Deep Depression survey area (red is strongest area of magnetic field, violet is weakest).

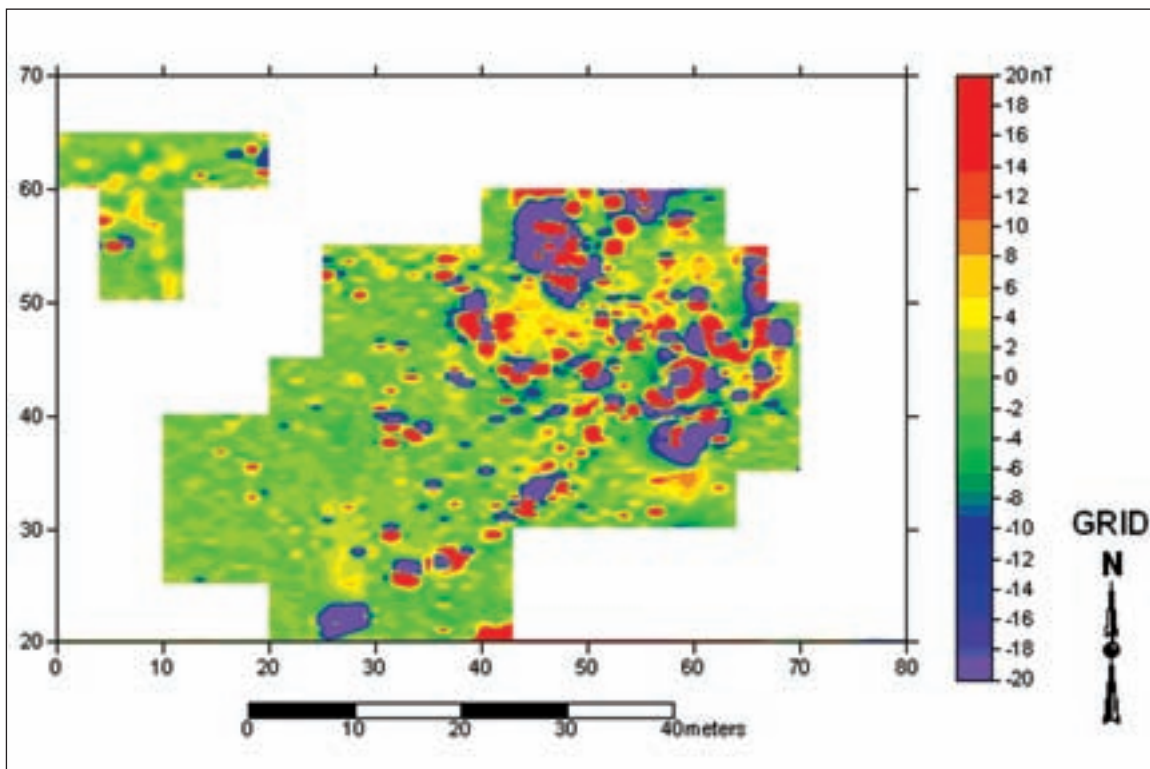


Figure 4-19. Image plot of magnetic gradient data from the Fort Clearing (red is strongest area of magnetic field, violet is weakest).

N44/E58. De Vore interpreted this area as the possible location of trenches associated with early 1970s totem pole preservation, the installation of the Saanaheit Pole and four house posts in 1901, or planting the replica pole and posts in 1942. All of these installations required a fairly massive excavation.³¹

In the western section of the Fort Clearing, De Vore noted linear concentrations of magnetic anomalies that surrounded a rectangular area approximately a 28 m (86 ft) by 42 m (129 ft) in size (Figure 4-21). This rectangular area contained relatively few magnetic anomalies and was tentatively interpreted as the possible location of the 1804 *Kiks.ádis* fortified village *Shis'ki-Noow* (the linear arrangement of magnetic anomalies was later found to be due to subsurface iron-rich beach gravels. See Chapter 6 for further information). This roughly rectangular area also appeared in the electrical resistance data recorded by De Vore (Figure 4-22). The size of the rectangle De Vore sketched on his magnetic map was approximately half the width of the 1804 *Kiks.ádis* fort. The theory was that this rectangle may represent the west half of the fort, the east half obscured by anomalies created during multiple NPS excavations associated with tree clearing, installing and removing totem and house poles, and totem pole preservation chemical treatments. Aside from the rectangular area suggested by the electrical resistance data, De Vore recognized a series of small rectangular areas within the broader rectangular outline (Figure 4-22). These were suggested by lower resistance values and interpreted as possible house structure locations within the larger palisaded area.

Radar data from the Fort Clearing indicated a series of subsurface linear features (Figure 4-23). Two relatively wide and long features in the eastern and northern portion of the clearing were interpreted as probable locations of the early 1970s totem pole preservation trenches. Less pronounced linear anomalies in the western and southern areas of the clearing were suggested to be reflections of the gravels that form the subsurface sediments. A rectangular area centered near N40/E47 was interpreted as the by-product of Hadleigh-West's 1958 archeological excavation of Unit 1, a large block-shaped unit.

The Small Depression survey locality contained a few magnetic gradient anomalies (Figure 4-24a). These tended to be slightly stronger than the anomalies identified at the Deep Depression. The metal detector survey of the locality prior to the magnetic survey identified a few historic iron artifacts. A strong magnetic gradient anomaly identified by De Vore next to the depression was interpreted as a possible historic iron artifact or a fire-related feature. Resistance data from the Small Depression area contained a few square or rectangular anomalous areas that De Vore indicated may represent archeological features (Figure 4-24b). Two were on or near the west side of the depression and one was located in the northwest corner of the survey grid. Given the occurrence of the artifacts and depression combined with the magnetic anomalies and resistance anomalies, De Vore believed this area might be a historic Russian homestead or Tlingit fish camp.

Magnetic gradient data in the Blockhouse locality indicated a number of strong dipole anomalies on the east side of the grid (Figure 4-25). Given the strength of these anomalies, it is probable that they represent historic iron artifacts and may include such items as reinforced concrete blocks used as foundation footers for the replica blockhouse

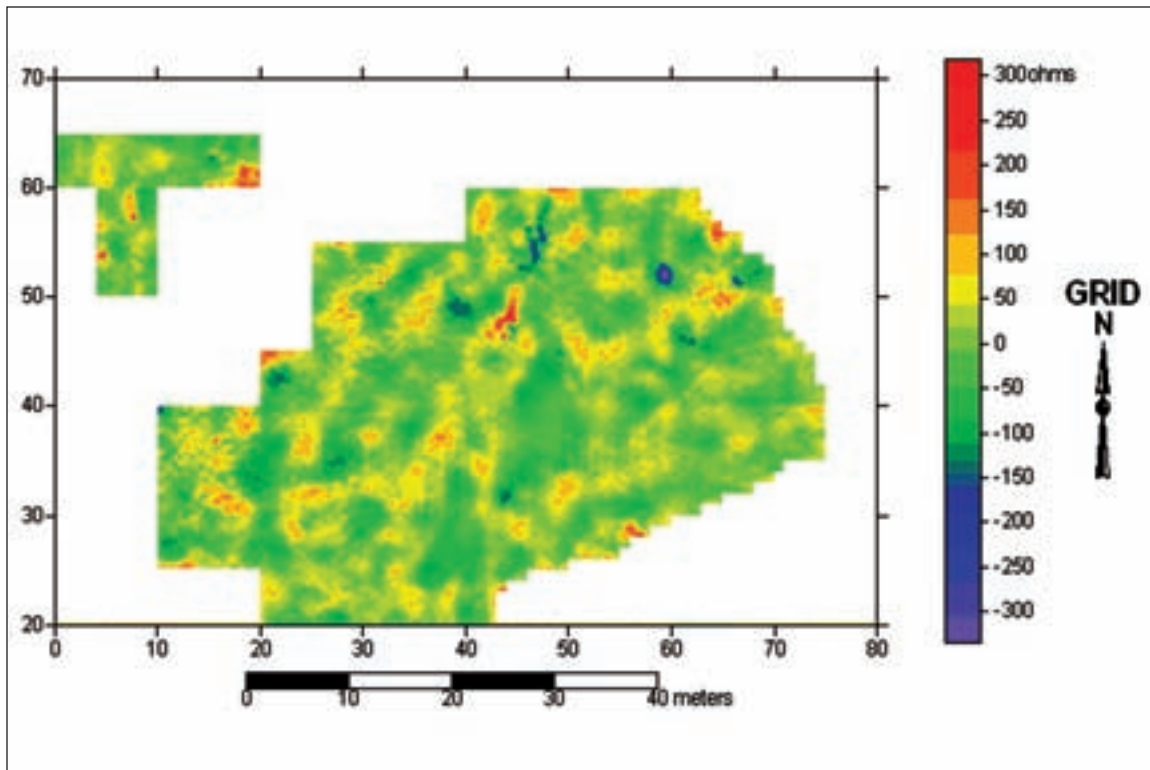


Figure 4-20. Image plot of resistance data from the Fort Clearing (red marks areas of greatest resistance, violet areas are those of least resistance).

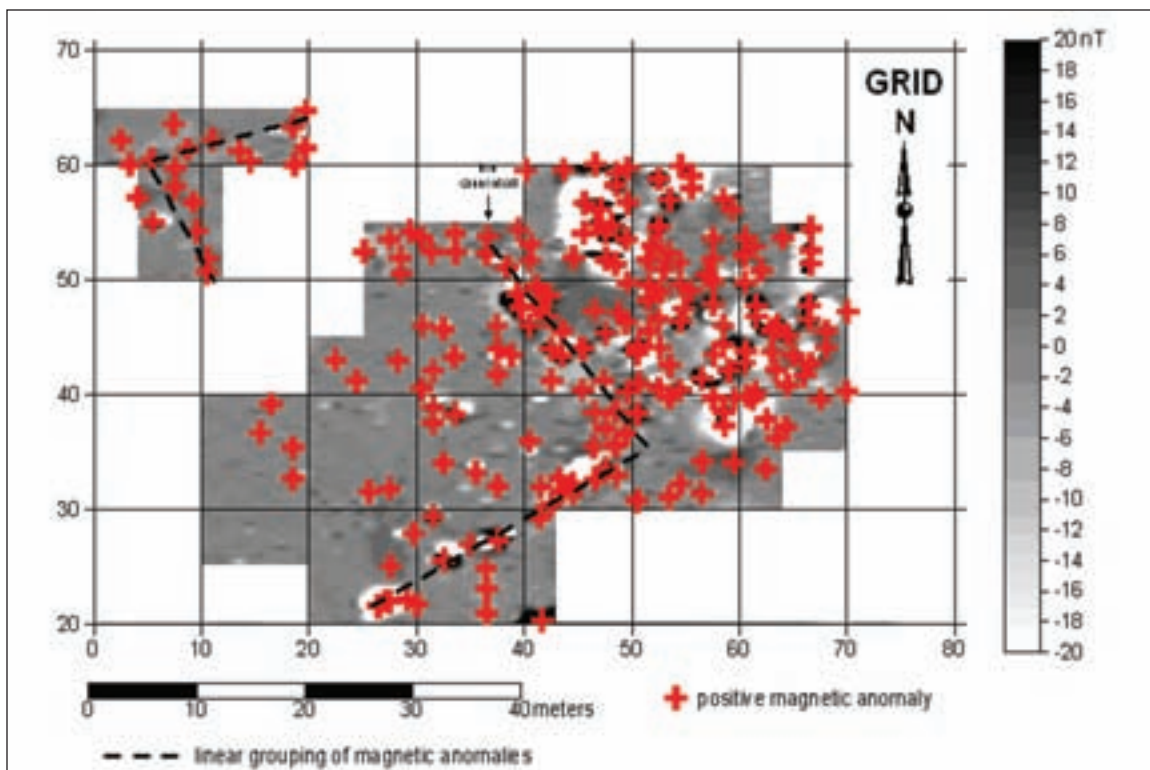


Figure 4-21. Interpretive map of magnetic gradient data from the Fort Clearing.

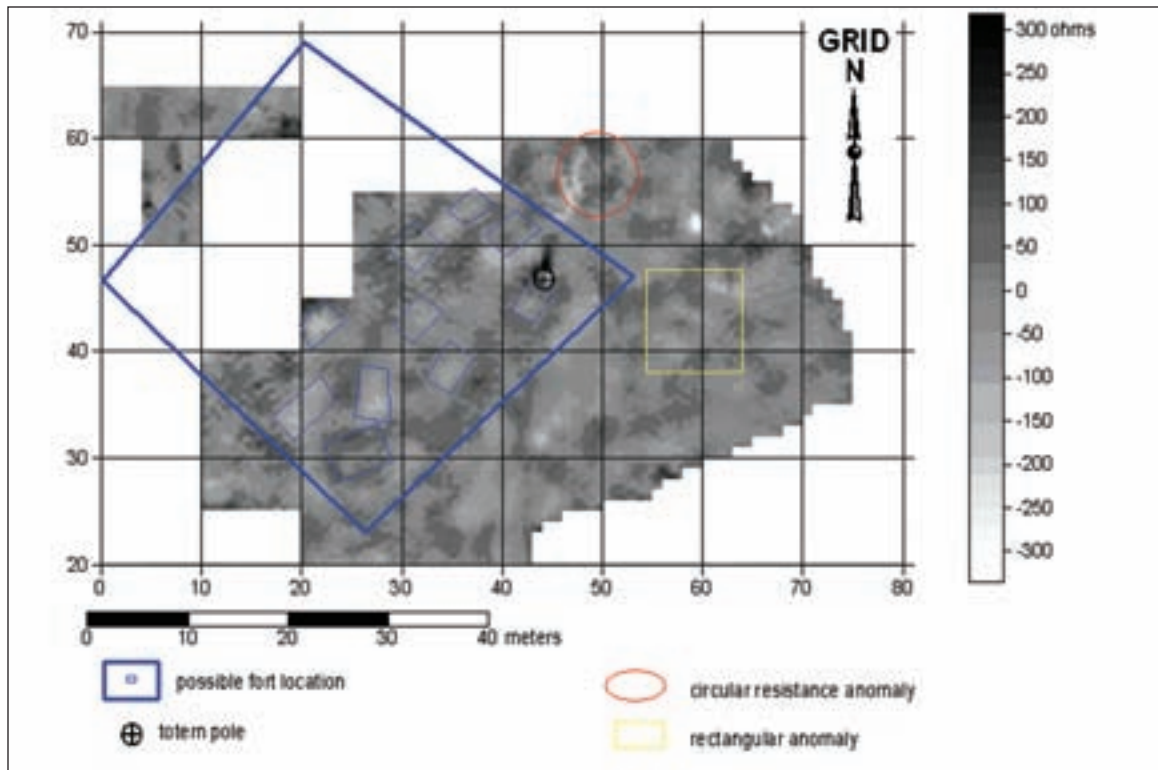


Figure 4-22. Interpretive map of resistance data from the Fort Clearing.

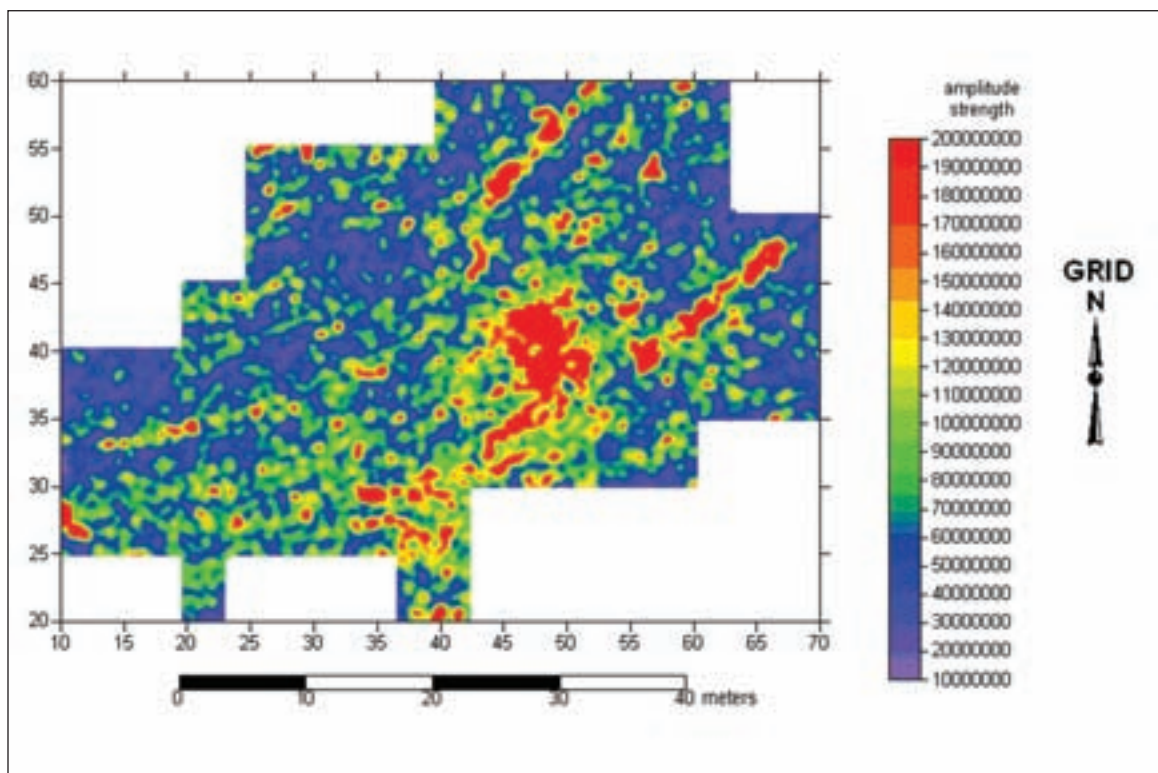
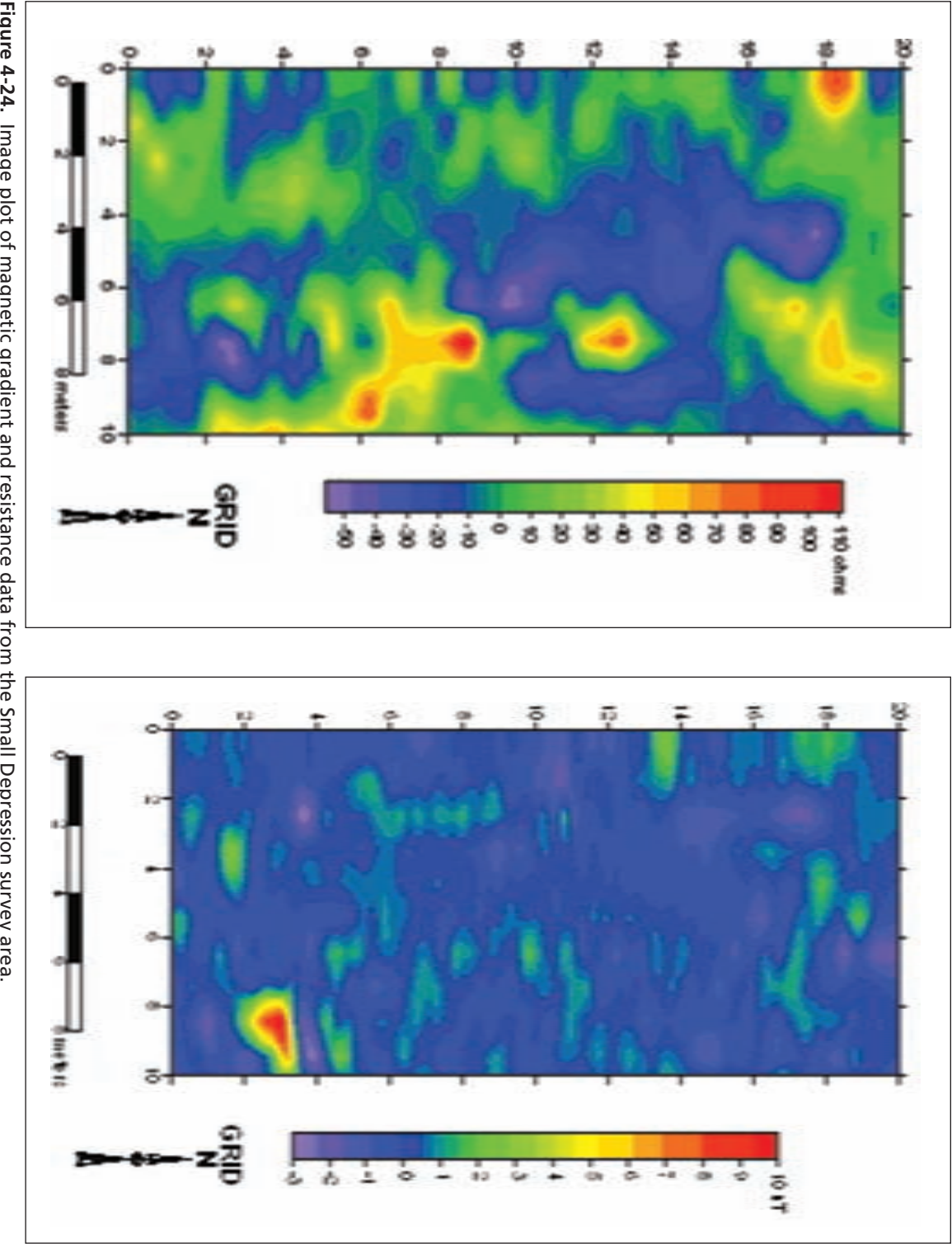


Figure 4-23. Image plot of time slice 9 (16.9-19.8 ns) GPR data with 50 ns window from the Fort Clearing.



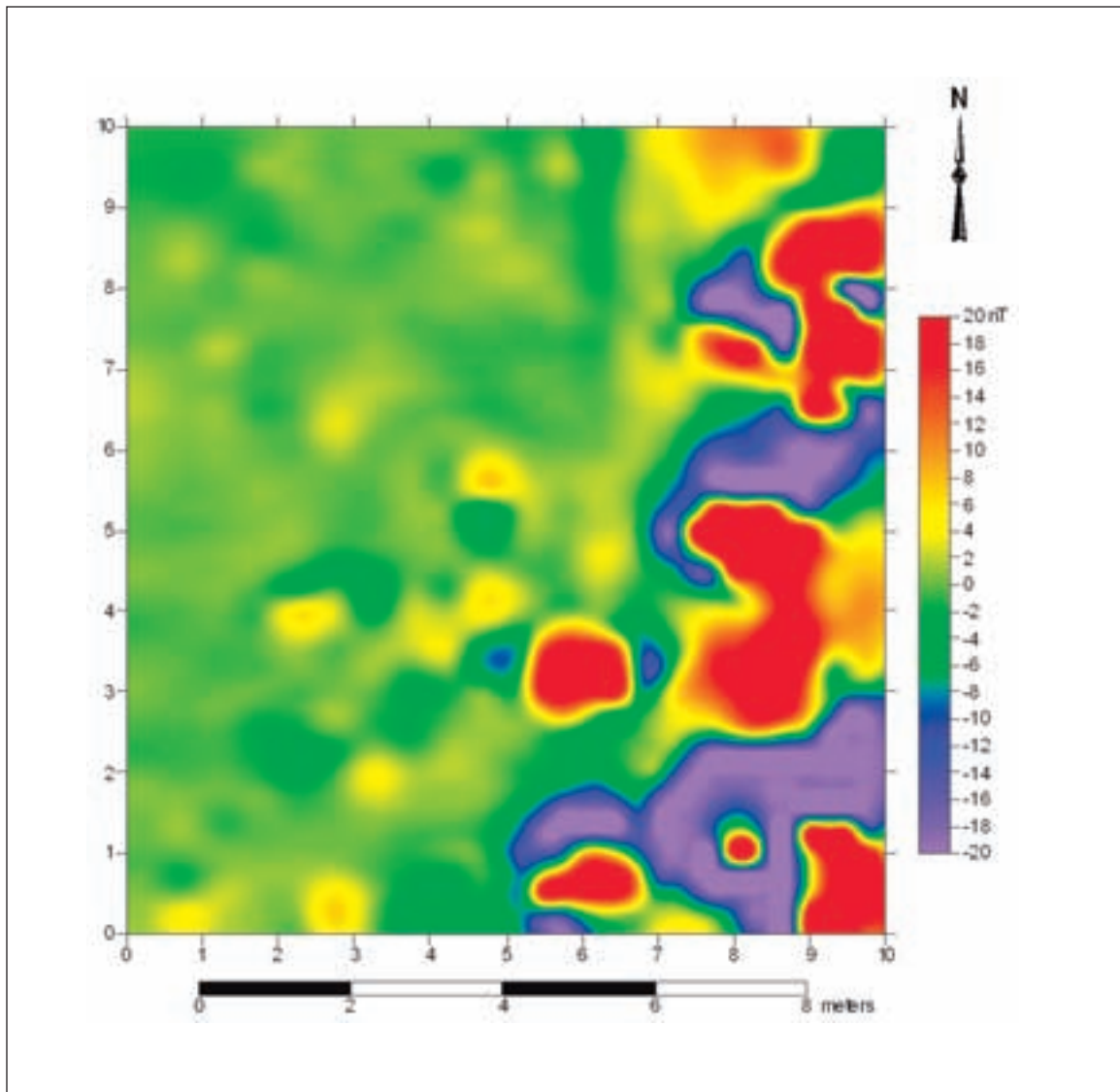


Figure 4-25. Image plot of magnetic gradient data from the Blockhouse locality.

or other iron hardware on the structure. The western half of the grid incorporates only a few weak dipole magnetic anomalies and may have not contained any material related to the replica or was removed when the blockhouse was bulldozed onto the beach.

The resistance data contains a linear anomaly in the northeast corner that is identified as the park trail (Figure 4-26). A series of medium strength resistance anomalies occur in a rectangular area in the center of the grid. Since they outline a less resistive area, it is suggested that this rectangular area may indicated the former location of the replica Russian blockhouse.

GPR data has several strong amplitude values across the grid (Figure 4-27). These strong GPR anomalies probably represent reflections of the cobbles that comprise the beach and terrace above it. There are also areas of weak amplitude strength values. One such area occurs along the park trail. A second area is rectangular and near the same location as the resistance anomaly. This also supports the assumption that the rectangular area may be the location of the replica blockhouse.

REMOTE SENSING SUMMARY

The metal detection inventory had two goals from the start with the first and most important being the location of the 1804 Tlingit-Russian battleground. Its secondary goal was to locate as many 19th century to World War II era sites as possible. Both goals were achieved. The 1804 battle area was found to extend from the Fort Clearing to 150 m west of the clearing. As per the historic accounts, combatants used both artillery and smaller firearms, the former consisting of 3-pounder guns firing solid shot and 12-pounder guns firing solid shot and canister. Lead balls indicated use of .69-caliber muskets as well as .36-caliber and .44 or .45-caliber hand and/or shoulder-fired weapons. In addition, a number of use areas and possible features were identified including a possible pre-1850 fish smokehouse, a possible late-19th century fish camps on both sides of the Indian River, two charcoal-bearing features, a middle-20th century NPS privy, and 20th century sheet trash middens on both sides of the river.

The geophysical inventory's primary goal was to examine two area oral tradition and historic records identified sites of the 1804 Kiks.ádi Tlingit fort *Shis'ki-Noow* and later mid-19th century Russian farmsteads. Secondary goals were to determine whether subsurface features existed in the vicinity of a depression and artifact concentration identified by the metal detector crew and locate possible remnants of a 1927 reconstructed Russian blockhouse. Techniques used included various combinations of magnetic gradient survey, resistance survey, and ground penetrating radar (GPR) survey.

An area about half way between the Fort Clearing and Visitors Center, referred to as the Deep Depression was found to be an unlikely location for the 1804 fort based on geophysical and metal detection data. The other location, the Fort Clearing, although highly disturbed, remains the best area for the 1804 fortified village. A rectangular area of linear magnetic and electrical resistance anomalies in the western section of the Fort Clearing was tentatively interpreted as possible elements of the 1804 *Kiks.ádi*s fortified village and small rectangular areas suggested by the electrical resistance data within the

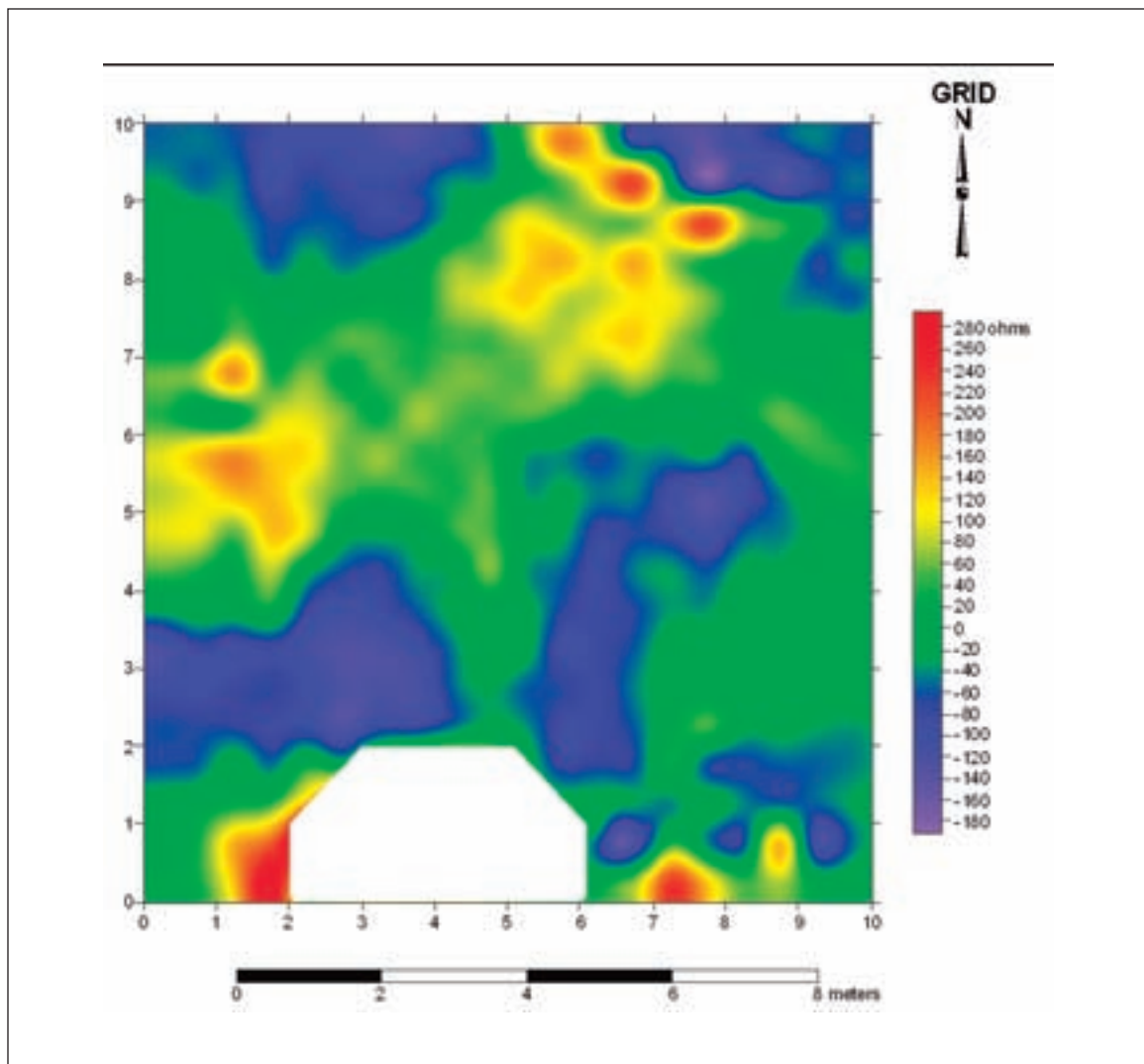


Figure 4-26. Image plot of resistance data from the Blockhouse locality.

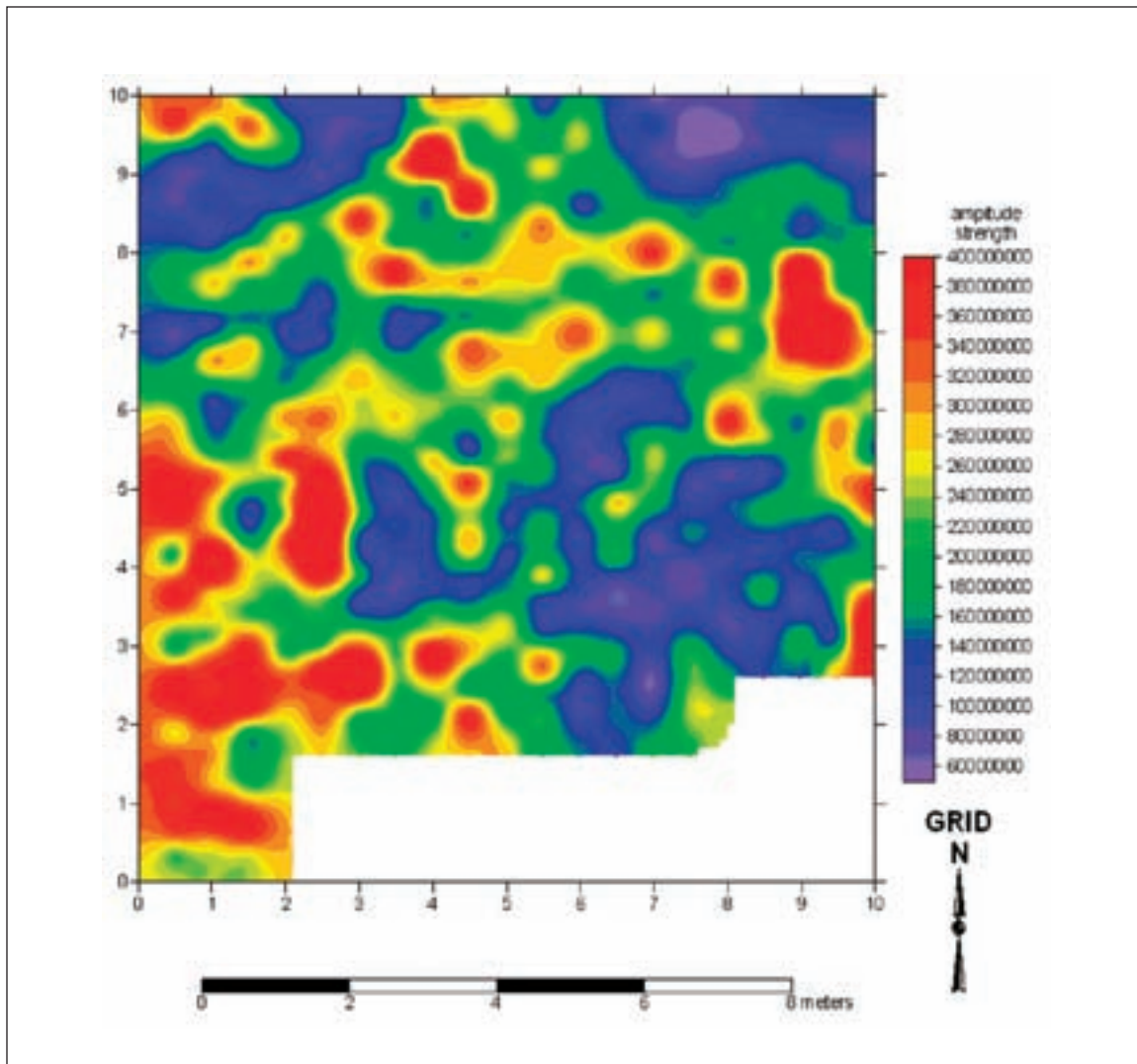


Figure 4-27. Image plot of time slice 8 (21.7-25.8 ns) ground penetrating radar data from the Blockhouse locality.

broader rectangular outline were interpreted as possible house structure locations. This could not be confirmed by subsurface testing, however (see Chapter 6).

Geophysical survey at the Small Depression area identified a possible historic iron artifact or a fire-related feature next to the depression and possible features near the west side and northwest of the depression. Finally, geophysical data in the Blockhouse locality suggested remnants of the 1927 blockhouses may continue to exist, particularly on the east side of the clearing.

¹ Investigative teams did not conduct fieldwork in modern landforms or developed areas of the park. Survey Unit A was located at the south end of the peninsula between the Indian River and Sitka Sound. It was bounded on the north by Cross-over Trail #2, on the east by the Indian River Trail, and on the south and west sides by the Totem Trail. This inventory area incorporated 41,736 m² or about 4.2 hectares (10.3 acres). Elevations in this unit vary from 0-5.5 m (0-18 ft) above mean seal level (AMSL). Altogether, 299 shovel tests were dug in Survey Unit A during the 2005 and 2006 field seasons.

² Chaney et al. 1995, Map 1.

³ *ibid.*

⁴ *ibid.*

⁵ *ibid.*

⁶ *ibid.*

⁷ *ibid.*

⁸ These sites were reported in Davis 1985 and 1989.

⁹ In 2002, the Department of the Interior bestowed its Distinguished Service Award on Scott for his innovative research in battlefield archaeology, research that began in 1983 with his investigations at Little Bighorn Battlefield National Monument.

¹⁰ This method is described in Connor and Scott 1998.

¹¹ UTM is the abbreviation for Universal Transverse Mercator. According to gpsinformation.net, which can be accessed at <http://gpsinformation.net>, UTM is a system of world coordinates like latitude and longitude, from 80 degrees south latitude to 84 degrees north latitude, except the measurements are in meters and UTM lines are orthogonal (always at right-angles to each other).

¹² Chaney et al. (1995, pp. 140-142) reported metal detecting three transects west of the Fort Clearing during their geomorphological investigations. They report finding modern metal artifacts and two modern cartridge cases. The density of their finds on their transects mimics the density of finds made during the 2005 investigations. The type of finds is also consistent between the two investigations.

¹³ Russell and Irwin 1980, p. 203.

¹⁴ Sears, Roebuck & Co. 1969, p. 324; Logan 1959, pp. 55-56; Lewis 1956, p. 132; Barnes 1980, p. 300.

¹⁵ McKee and Mason 1980.

¹⁶ Hope 1993.

¹⁷ Thornton and Hope 1998.

¹⁸ Betts 1999, p. 155.

¹⁹ Chaney et al. 1995, p. 122, Figure 7.7.

²⁰ Betts 1999, Figure 5.10.

²¹ Chaney et al. 1995, p. 142.

²² Chaney et al. 1995, p. 142; Thornton and Hope 1998, p. 69, Figure 8. An attempt to relocate the feature in 2007 was unsuccessful. All the “hits” encountered at this time proved to be modern trash.

²³ The Deep Depression and Small Depression localities were located in areas of dense forest understory. These were able to be inventoried only because it was cleared prior to the inventory by children signed up for the S.C.O.R.E. (Student Conservation, Outdoor Recreation, and Education) program led by Sitka Tribe of Alaska Tribal Chairman Woody Widmark.

DeVore also looked briefly at the former location of the Block House clearing. The goal here was to find the foundation blocks for that structure. One of the blocks is eroding from the bank at the upper edge of the beach but the others must have been removed when the replica block house was pushed over and burned in 1959 (Antonson and Hanable 1987:115).

²⁴ Geoscan Research 1987, 2003.

²⁵ Clay 2001.

²⁶ Sheriff 1973, p. 148; Milsom 2003, p. 43; Weymouth 1986, p. 341; Peddie 1992; Sharma 1997, pp. 72-73; Peddie and Zundie 1988; Clark 2000; Kvamme 2001, p.358.

²⁷ Geoscan Research 2003; Golden Software 2002.

²⁸ A TerraSIRch SIR System-3000 survey cart system (GSSI 2003) was used with an antenna with a nominal frequency of 400 megahertz (mHz). Specifics of how the system was set up and used may be found in Hunt et al. 2006:33-34.

²⁹ Specifics of how the ground penetrating radar equipment was set up and used as well as software settings and other similar considerations may be found in Hunt et al. 2006:34-35.

³⁰ During the metal detector survey, a cannon ball was identified at approximately N52/E36 in the Fort Clearing. The item was located at the same time the magnetic gradient survey was occurring allowing acquisition of the magnetic survey data over the identified artifact before it was removed.

³¹ See Patrick 2002, p. 17.

CHAPTER 5

2005-2007 SHOVEL TESTING

Shovel testing (Figure 5-1) is a relatively quick method of assessing the subsurface archeological components of an area using small informal hand-excavated holes to allow an investigator to quickly examine subsoils for cultural deposits. This proved to be an especially useful approach for exploring subsoils at Sitka National Historical Park due to the extremely shallow soil development in the park. Shovel testing in the park took place from 2005 through 2007 and was directed by the author, an archeologist with the National Park Service's Midwest Archeological Center. I have had extensive experience conducting archeological investigations at prehistoric and historic sites with special focus in the last twenty years of my career working on fur trade and 19th century tourist sites. The number of people on the shovel test teams varied from year to year and included graduate and undergraduate college students, local Tlingit non-Native youth laborers, and volunteers from Sitka and across the nation.

The goal of the shovel test teams was to maximally locate prehistoric and historic sites by non-randomly investigating as much of the park as possible. Weather conditions at Sitka often made this task physically uncomfortable and the work could sometimes be unrewarding as well when few or no artifacts were recovered. Nevertheless, this field method was the primary means used to locate archeological sites and materials throughout the park. When archeologists use this method, they dig small holes across an area to be investigated, the number and distance between the holes (the sampling strategy) often differing according to whether a location is known to contain an archeological site or not. In the Fort Clearing, where previous archeology demonstrated that artifacts occur, lines of shovel tests (test transects) and the shovel tests within the lines were spaced every 5 m in an attempt to identify occupations and define their boundaries. In the remainder of the park, however, which had not been previously inventoried, test transects and the shovel tests within them were spaced approximately 10 m apart as topography, vegetation, downed trees, and other obstructions allowed. Locations to be tested were marked with wire surveyor flags with the survey unit designation (A to F) and the appropriate shovel test number marked on it. This allowed easy identification for the archeological crew that followed. The crew leader recorded positions of shovel tests on sketch maps along with trails and other pertinent information in the project director's field logbook. Tree falls or standing trees sometimes caused excavators to slightly reposition the actual shovel test location from a few centimeters to 2 m from the original flagged site. The actual positions of shovel tests, surface artifact finds, and archeological features were digitally recorded using a GPS unit.

Shovel test holes were approximately 50 cm diameter and generally excavated to at least 60 cm below ground surface (bs). At locations where the water table was high or where large rocks or massive tree roots prevented excavating the hole to greater depth, test excavation were halted above 60 cm bs. The shovel test methodology required excavation of each test in 20 cm levels. The fill from each level was then passed through ¼ inch hardware cloth to effect artifact recovery. MWAC Shovel Test Forms were completed for each tested location. Data recorded on these forms for each 20 cm level

included Survey Unit designation, shovel test (ST) number, depth of the individual level as measured from the surface, soil characteristics, a brief description of any artifacts that may have been recovered or samples taken, and other information as necessary. In addition to shovel tests, subsoils were explored by inspecting the massive root balls of downed trees followed by shovel-sampling and screening loose fill below the root balls (Figure 5-2).¹ Over the course of three field seasons, 1205 shovel tests were dug with 122 in the Fort Clearing, 331 in Survey Unit A, 183 in B, 78 in C, 217 in D, 130 in E, and 144 in Survey Unit F (Figure 5-3). Of these, only 88 (55 or 16.6% of shovel tests in Survey Unit A; 15 or 8.2% of tests in Survey Unit B; 5 or 6.4% in Survey Unit C; 4 or 1.8% in Survey Unit D; 3 or 2.3% in Survey Unit E; and 7 or 4.9% of tests in Survey Unit F) were positive; i.e., they contained pre-modern historic or prehistoric artifacts.

In addition to shovel testing, virtually all of the park was inspected visually. The exception to this was the river itself whose vertical banks were only sporadically examined.

FORT CLEARING TESTS

The Fort Clearing was shovel tested in 2005. Prior to this, the Fort Clearing had been subjected to archeological investigation and artifacts had been recovered here. Further, historic records suggest this general area is the site of multiple occupations, both Tlingit (1804) and Russian (1840s-1850s). Both the geophysical and metal detection teams had inventoried the clearing prior to it being shovel tested. The metal detection team recovered a number of objects in the northern half of the clearing and northwest of the clearing and the geophysical inventory had revealed the presence of a much higher concentration of metal in the east half of the clearing than in the west half. Using the established geophysical inventory grid as a guide, shovel tests were spaced every 5 m across the clearing using fifteen north-south oriented transects spaced 5 m apart (Figure 5-4). Shovel tests in all transects were undertaken from south to north. Shovel test locations (STs) were enumerated (FC1 - FC117) and their geophysical grid coordinate recorded.

This work resulted in the recovery of 306 objects. Thirty of these were collected. Twenty objects from nineteen tests were associated with the modern era and thus indicated locations of modern disturbances within the clearing (Figure 5-5). Objects in this category include plastic, rubber, electrical wire, insulators, cable, wire nails, curved glass obviously from modern beer or soda bottles, canvas fabric, rubber comb and sheeting, a ferrous clamp, a 9v battery, and cellophane. In general, their distribution is in the form of an irregular open rectangle. Of some interest in this regard is an apparent line of shovel tests bearing modern materials that begins at ST 31 and bears northeast to ST 88. The observation of folded layers of canvas in ST 88 and the linear arrangement led to my suggesting that this alignment may mark the location of a 1972 totem pole preservation trench.² If so, the trench would have been at least 40 m in length. Although this length seems about twice as long as necessary, given the largest pole was 55 ft (16.7 m) long, the park's Chief of Resource Management, Gene Griffin, pointed out that one of the photographs taken at the time of the pole preservation project shows a number of poles laid end-to-end in a trench. If so, a 40 m (about 131 ft) long trench might be just about the right size to soak two to three poles.



Figure 5-1. Shovel testing in the Fort Clearing.



Figure 5-2. Shovel testing fill at the base of a tree fall.

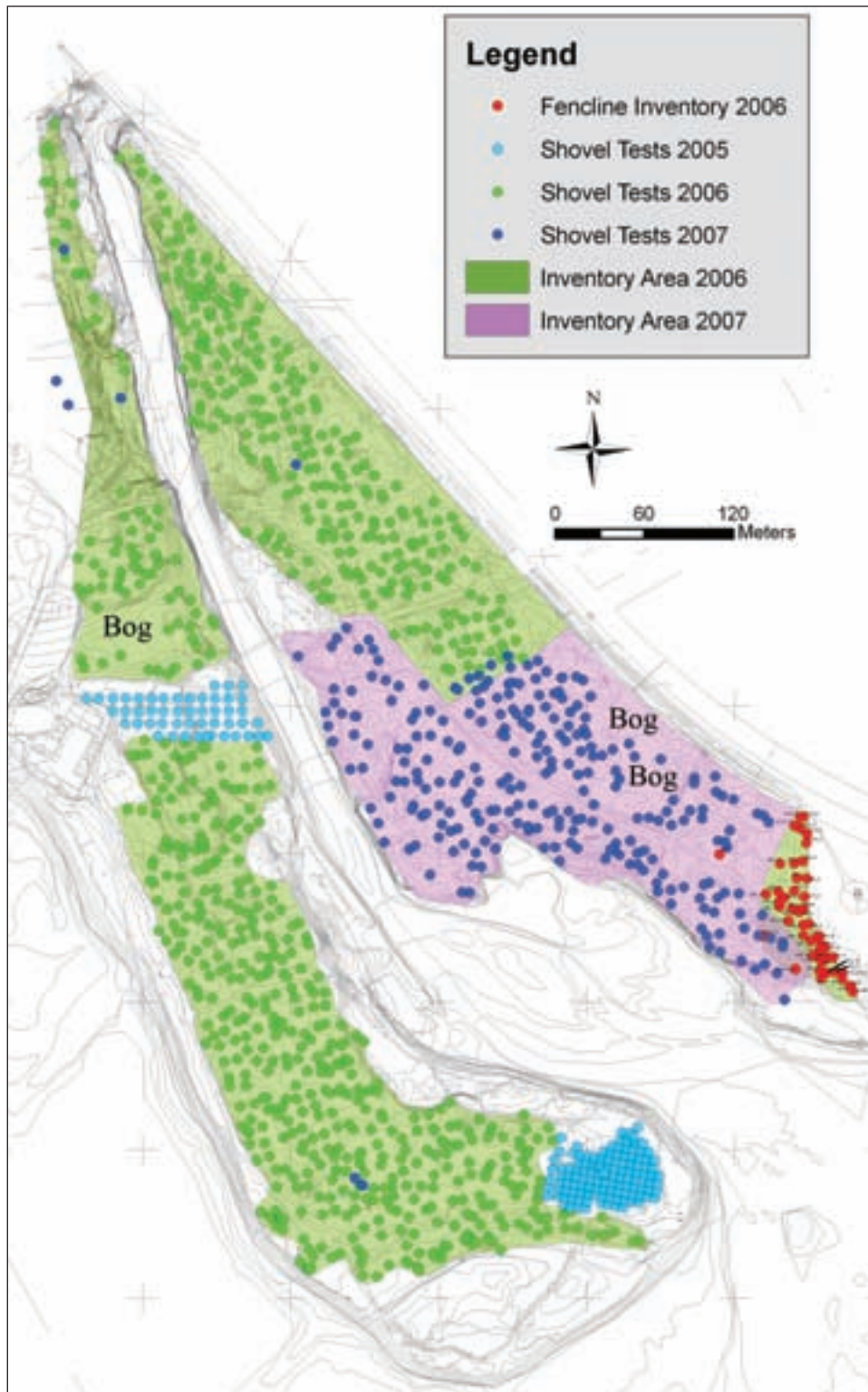


Figure 5-3. Locations of 2005-2007 shovel tests in the Fort Unit.

A review of the 1999 excavations in the clearing prior to the installation of the K'alyaan pole suggested that the north edge of the excavation trench there may have touched an edge of this same pole preservation trench.³ In addition, folded canvas layers discovered in two other shovel tests, ST 96 and ST 109, imply these points may also be within the boundaries of other totem pole preservation trenches. The relationship between the 1972 trenches and the canvas is not certain, however, as trench plans illustrate other materials (polyethylene, fiberglass, and plywood) were intended to serve as trench liners.⁴ Although a sample of the canvas was not taken at the time of the shovel tests, the exposed fabric appeared to be fiberglass cloth, a product developed by Corning Glass Co. in the 1930s. The GPR survey in the clearing revealed at least two shallow, highly reflective linear (southwest to northeast) anomalies whose eastern ends more-or-less coincide with canvas bearing ST 88 and ST 109. Combining the shovel test and GPR data, one may infer at least two and perhaps as many as four more-or-less parallel totem pole preservation trenches were dug in the Fort Clearing (Figure 5-5).

Five objects recovered during the Fort Clearing shovel test inventory were clearly prehistoric. All were found in the southwest half of the clearing (STs 16, 18, 25, 39, and 60) and included four chert flakes and one (from ST 39) retouched chert flake or small side scraper (unfortunately, none of these objects were collected and they were placed back in their holes). Three flakes were derived from the second level excavated (20-40 cm below surface) in their respective shovel test, one flake from ST 60 was from the first excavated level (0-20 cm below surface), and the retouched flake or small side scraper was recovered at about 55 cm below surface. A liberal interpretation of their distribution suggests a prehistoric occupation running northwest to southeast in a band about 20 m wide (Figure 5-6). Although none of the objects were temporally diagnostic, a geomorphological study of the park dates the establishment of the Fort Clearing's landform from post-AD 1250 to circa AD 1500.⁵ Obviously, the prehistoric component of the site would date to after the creation of the landform.

Relating to these materials was the discovery of charcoal or charcoal mixed with wood in a number of shovel tests in the Fort Clearing [Note: information on charcoal-bearing soils encountered during shovel testing is provided in Vol. II, Section 2]. These include STs 11, 19 (charcoal mixed with wood), 25 (in gravel layer), 26, 34 (with ash), 38, 43, 74, 75, 80, and 99 (ST numbers with no letter prefix are from the Fort Clearing). The charcoal noted in ST 25 must be recent since modern materials were recovered from that unit. Otherwise, all charcoal-bearing units appear to be more or less randomly distributed [At this point, it's important to note that charcoal lenses are almost certainly of cultural derivation since the precipitation here is so high that naturally caused forest fires, other than those of volcanic origin, are virtually unknown in Southeast Alaska]. The charcoal and ash layer in ST 34 stood out, however, because of its thickness (23 cm) and the fact that it was overlain by 17 cm of what appeared to be naturally deposited fill. A charcoal sample from the layer was collected and submitted to Beta Analytic Inc. at the conclusion of the fieldwork for radiocarbon dating. That analysis returned a measured radiocarbon age of 300 +/- 60 BP (see Volume II, Section 2). When this age is calibrated using the 2 sigma calibration, three associated date ranges are returned: AD 1448-1675, AD 1778-1799, and AD 1941-1951. The earliest date here occupies 95.2% of the area under the distribution suggesting this is the most likely date. If so, the charcoal is associated with the prehistoric artifacts. It may be notable that the charcoal deposit

exists at the northwest margin of the distribution of flakes reinforcing the argument that a prehistoric component occurs in this general portion of the site (Figure 5-6).

Most of the remaining objects (n=292) identified while shovel testing the Fort Clearing were associated with the 19th century. Artifacts included in this category include plain whiteware ceramics, transfer printed whiteware ceramics (Cat. 23538), yellow ware (Cat. 23551), stoneware, curved black glass (Cat. 23554a, 23554b, 23556), a lead glass tumbler base (Cat. 23555), a large wood chisel (Cat. 23536), flat glass, cut and forged nails, soft red brick fragments, a Russian 1 kopeck (Cat. 23537) typical of those coined during reign of Czar Nicholas I between 1831 and 1838,⁶ a fish vertebra, and a ball clay pipe stem fragment (Figure 5-7). While clear and amber glass sherds were also included in this category, it should be kept in mind that that these could be (and likely are) modern objects. As well, some or all of these objects may represent contamination from the dumping of artifact-bearing fill in the Fort Clearing from the Russian Bishop's House. As noted in Chapter 2, this fill was used to level totem pole preservation trench depressions in 1982.

In general, historic objects were notably sparse in the southwest corner of the clearing (Figure 5-8). They tended to occur in higher numbers, however, in the central one-third and northeast portions of the clearing. Unfortunately, these are the same general areas indicated for the 1972 totem pole preservation trenches and 1982 trench depression fill. This generally, makes it difficult to make any predictions about subsurface historic deposits based on artifact distributions. On the other hand, historic materials recovered northwest and east of the possible totem pole preservation trenches may actually represent locations where historic deposits are intact.

Historic artifacts were usually recovered in the first 20 cm below surface and always occurred in fill above the dense beach gravels, sandy gravels, and black loamy gravels. If these do indeed represent intact historic deposits, the materials (particularly those in the northwestern portion of the clearing) suggest a relationship with the homestead of retired Russian-American Co. employee Peter Ovchinnikov.

SURVEY UNIT A

Shovel testing in Survey Unit A occurred in 2006 and was actually the second area to be completely inventoried (Survey Unit B, nearer the Visitor Center, was the first). The crew excavated 331 shovel tests in this survey unit with tests labeled ST-A191 to ST-A452 and ST-GE1a to ST-GE8b. The GE-series of labels refers to shovel tests in and around the WWII gun emplacements. Where more than one test was made in the vicinity of the same gun emplacement, letter suffixes were used to discriminate between them.

Shovel testing in Survey Unit A resulted in the recovery of 12 prehistoric artifacts and 237 objects of Euroamerican manufacture. Prehistoric artifacts were recovered from twelve locations in Survey Unit A (Figure 5-9; see Vol 2, Section 1) with 16 stone fragments representing 12 objects. Tools include a basalt flake (Cat. 23568), a utilized basalt flake (Cat. 23561), a utilized chert flake (Cat. 23567), a pebble adze (Cat. 23603), split pebble tools of jasper (Cat. 23571) and basalt (Cat. 23564, 23566), a split pebble perforator (Cat. 23586), a basalt pick/chopper/core (Cat. 23560), a greywacke scraper/chopper (Cat.

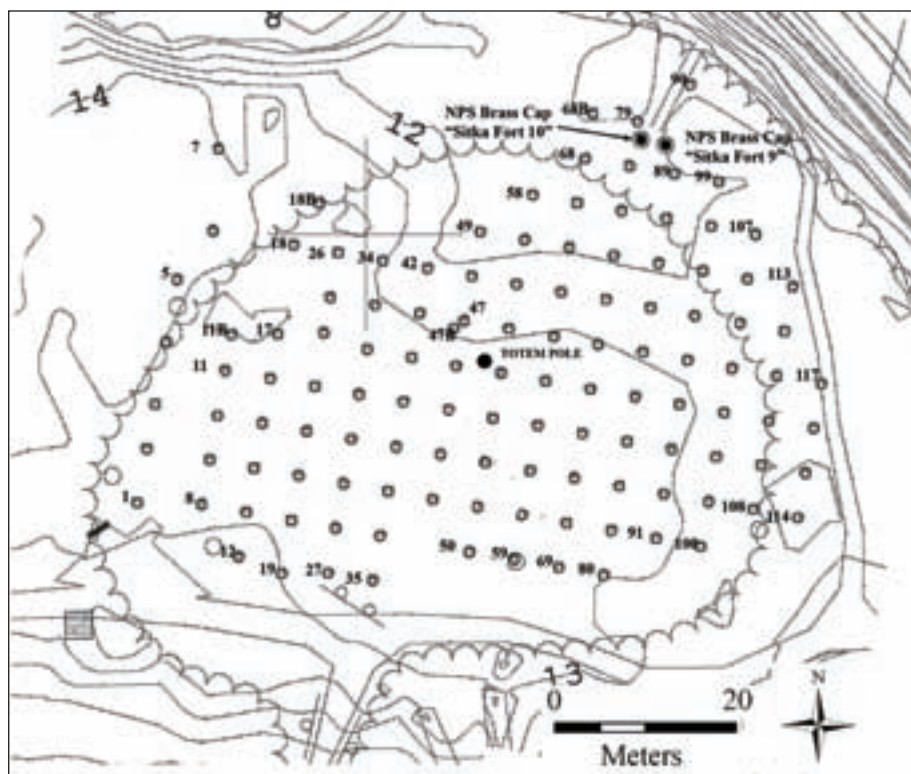


Figure 5-4. Shovel tested locations in the Fort Clearing.

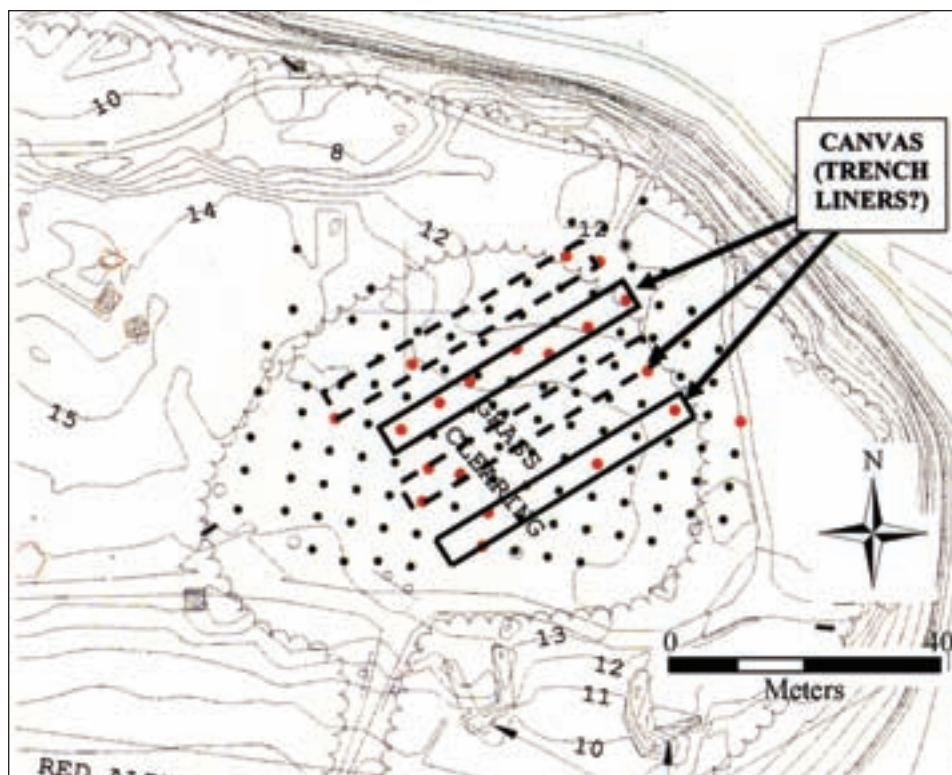


Figure 5-5. Shovel test locations (green dots) within the Fort Clearing containing modern materials (red dots) and hypothetical locations of totem pole preservation trenches. Trench locations shown with dot-dashed lines are less certain.

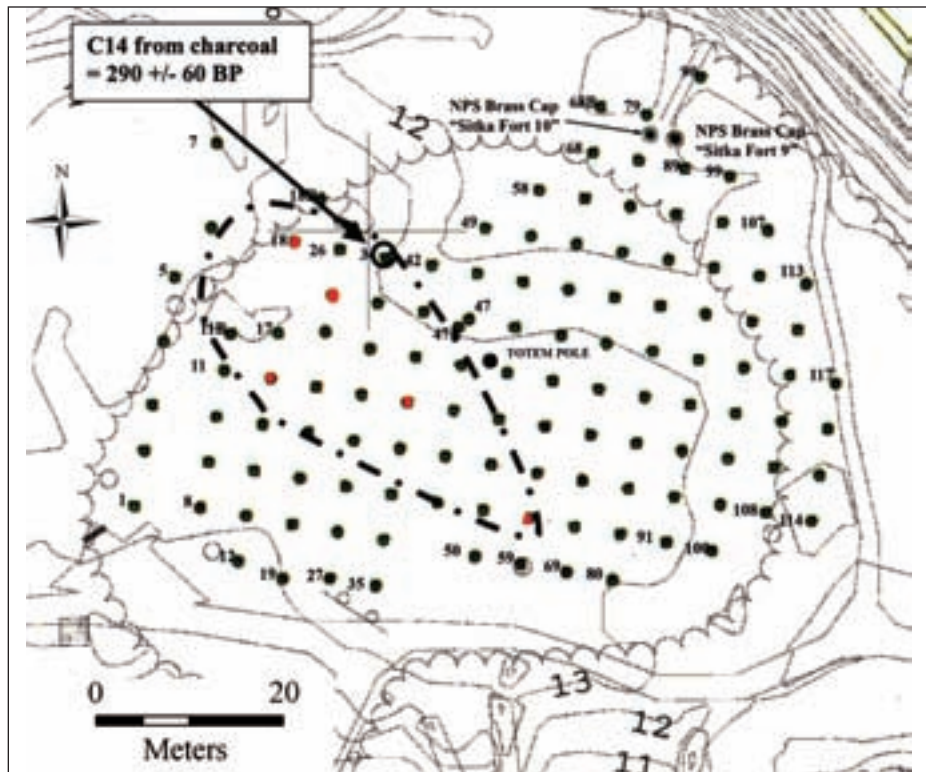


Figure 5-6. Possible prehistoric component in the Fort Clearing suggested by shovel tests containing prehistoric materials (red dots) and dated charcoal sample (black circle).

23565), a utilized granite cobble/core (Cat. 23575), and a spokeshave/scrapper (Cat. 23631) (Figures 5-10 to 5-14). While no temporally diagnostic tools were recovered, distribution of the prehistoric tools conforms for the most part to a landform characterized beach that emerged sometime pre-AD 1250.⁷

Of the Euroamerican artifacts, 154 were judged to be of unknown or modern (post-1950) derivation, 18 were associated with the first half of the 20th century, and 65 are most likely associated with the 19th century. Excluding objects of unknown or modern derivation, historic objects were recovered on the extreme southern end of the survey unit on both sides of the Totem Trail with a small number located about 15 m south of Cross-over Trail #2 (Figures 5-15 and 5-16). The pattern suggests discard of items by visitors to the park as they walked the trails.

Nineteenth-century artifacts were recovered along the east-west trail leading to the Fort Clearing and near the two western-most World War II earthwork gun emplacements (Figure 5-15). These include fragments of black curved glass (one with a push-up) at ST-A392 (Cat. 23574, 23574) and ST-A421 (Cat. 23579); elements of an aqua bottle with a fold-out bead finish at ST-A420 (Cat. 23577, 23578); a small fragment of a porcelain cup handle at ST-A375 (Cat. 23572); fragments of water-worn porcelain from ST-A445 (Cat. 23588); an aqua glass “club sauce” stopper at ST-GE1d (Cat. 23607; Figure 5-17); a bone button (Cat. 23614; Figure 5-18), clear glass fragment, and coffee cup (Cat. 23619; Figure 5-17) from ST-GE2b; and a clear glass fragment (Cat. 23630) and a .44 Henry



Figure 5-7. Some of the 19th century historic artifacts collected at the Fort Clearing: (top row, left to right) black glass bottle finishes (Cat. 23554a, 23554b, 23556) and yellow ware bottle fragment (Cat. 23551); (middle row, left to right) leaded glass tumbler base (Cat. 23555), circa 1831-1838 1 kopeck coin (Cat. 23537), porcelain transfer printed child's allegory cup rim (Cat. 23538); (third row right) hand painted whiteware (Cat. 23546); (bottom row) carpenter's slick or chisel.

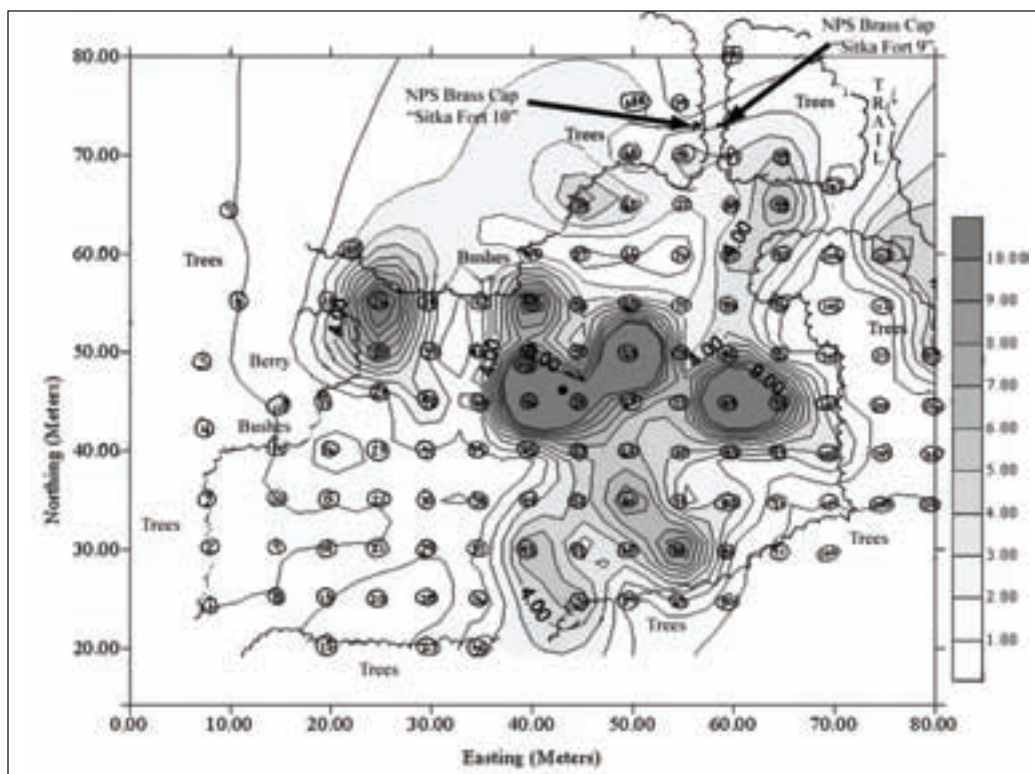


Figure 5-8. Distribution of historic artifacts recovered during Fort Clearing shovel testing.

rifle cartridge (Cat. 23629; Figure 5-18) from ST-GE7b. These locations may have been just above the beach edge in the 1800s and may represent picnic trash.

The head of the .44 Henry cartridge (Cat. 23629) bears the tell-tale double pin impressions of the Henry rifle with one impression on each side of the cartridge base. The base of the cartridge has a raised letter "H", the mark of the Winchester Repeating Arms Co., New Haven, Connecticut.⁸ The Henry rifle design was patented in 1860 and introduced into manufacture that same year. It was replaced by the Winchester Model 1866 chambered for the same .44 rimfire cartridge. The manufacture of the .44 Henry rimfire cartridge was discontinued by the big ammunition companies in 1934 during the Great Depression.⁹

Objects judged to be associated with the first half of the 20th century were found immediately south of the 19th century find spots, in and around the earthen gun emplacements (compare discovery locations in Figure 5-16 with locations of gun emplacements in Figure 5-26 below). This suggests an association with the activities of soldiers during World War II. Some or all of the objects of unknown temporal association in this same area may also belong to the era of military occupation in the park. Artifacts judged to be associated with this era include curved glass with straw-colored tint from ST-A435 (Cat. 23583), a .30-40 Krag rifle cartridge from ST-A437 (Cat. 23585), a .22 Long rifle cartridge from ST-A440 (Cat. 23587), curved glass fragments and bottle bases from ST-GE1a (Cat. 23604) and ST-GE1f (Cat. 23610, 23611, 23612), a fragment of cobalt blue curved glass from ST-GE2b (Cat. 23617), a glass marble from ST-GE5b (Cat. 23625; Figure 5-18), a whiskey bottle fragment and cap from ST-GE6b (Cat. 23626),

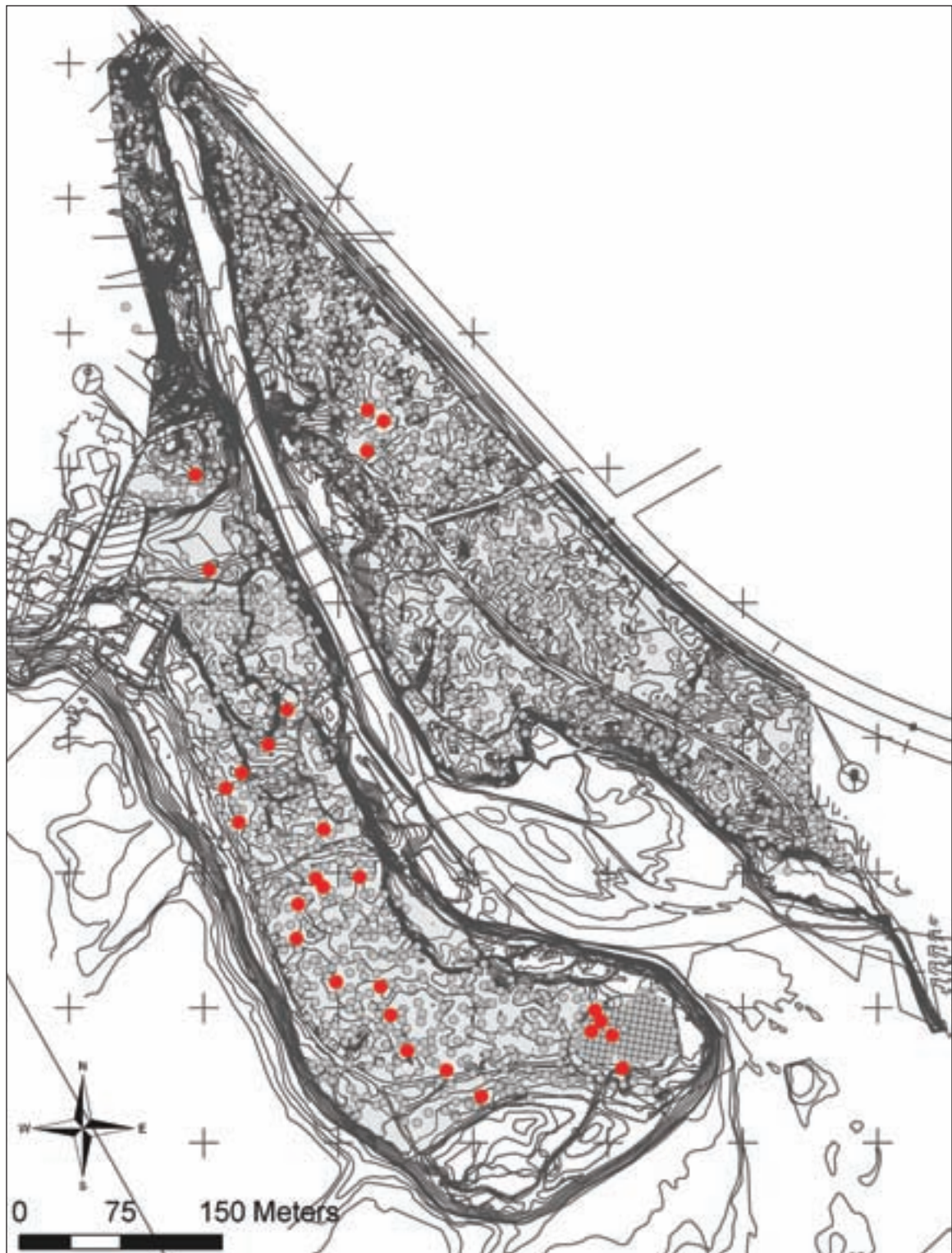


Figure 5-9. Distribution of prehistoric artifacts recovered during shovel testing.



Figure 5-10. Dorsal (d) and ventral (v) sides of crude prehistoric stone flake tools (Cat. 23568, 23640, 23649) and utilized flake tools (Cat. 23561, 23567, 23636) collected in 2006.



Figure 5-11. Dorsal (d) and ventral (v) faces of selected crude prehistoric split pebble adze (Cat. 23603) and pebble choppers (Cat. 23639, 23651) collected in 2006.

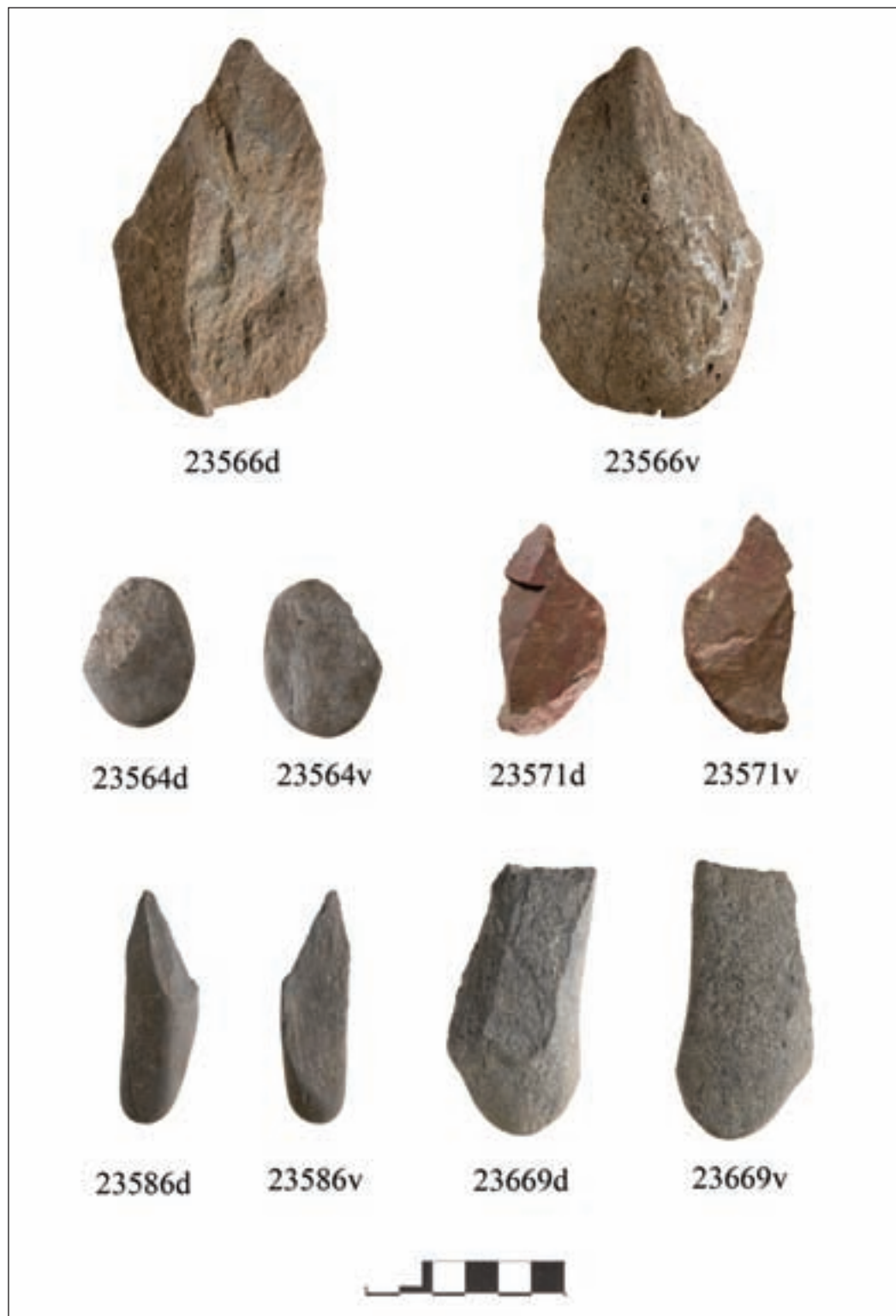


Figure 5-12. Dorsal (d) and ventral (v) sides of miscellaneous crude split pebble tools (Cat. 23566, 23564, 23571, 23586, 23669) collected in 2006.



Figure 5-13. Dorsal (left) and ventral (right) sides of selected crude prehistoric stone cobble pick/chopper/core (Cat. 23560) and cores (Cat. 23671, 23672, 23650) collected in 2006.



Figure 5-14. Dorsal (d) and ventral (v) sides of selected crude prehistoric stone tools collected in 2006: side scraper or chopping tool (Cat. 23565), end scraper (Cat. 23645), spokeshave/scraper (Cat. 23631), and utilized cobble (Cat. 23575).

a .30-06 cartridge from ST-GE7a (Cat. 23627), and a shotgun shell base from ST-GE7d (Cat. 23633; Figure 5-18).

There is a large field of debris between the third and seventh earthwork gun emplacements (counting from the west) along an old beach line. Most prominent among the objects noted here were iron cables, massive bolts, and cable clamps embedded in the ground and in and around logs. The debris field may be remains of a log raft washed up on shore sometime after World War II or it may be the remnants of a defensive barricade constructed at about the same time as the World War II earthworks. Vestiges of a two-track road occurs on the north edge (landward side) of this debris line.

A 20th century plank platform was identified at ST-A227 below two 10" diameter logs with sawed ends. While the platform was not fully exposed, excavators cleared fill from at least six 1" x 5" boards laid side by side (lengths were not determined) with their long axes oriented northeast to southwest, several bearing wire nails. A cellophane and foil fragment recovered from above the boards was printed with "Barbecue Sauce" over a blue rectangular field. The position of the platform, about 35 m inside the northern boundary of the Army-occupied portion of the park and near a probable military-era communications line suggested the feature may be associated with the 1942 U.S. Army occupation. The Army had established an aircraft observation post near the blockhouse location in January 1942. A few months later, as this post was removed, two pyramid tents were set up and a temporary building constructed to serve the soldiers as mess hall and barracks. The Army moved out of the park by August 1943 and the temporary building was removed in May of the following year.¹⁰ The hypothesis that was developed after this test was that the wooden floor identified at ST-A227 may have been an element of one of the barracks or mess hall (Unfortunately, test excavations in 2006 demonstrated that this was a secondary deposit of boards and did not represent a structure. See Chapter 6).

Excavators noted the presence of charcoal on their forms for eleven shovel tests in Survey Unit A (Figure 5-19). Three of these (STs A197b, A204, A380 and DB11 [an area on the flood plain at the north end of Area A referred to in 2005 as Devil's Bend due to the dense growth of Devil's Club]) were not considered extensive or concentrated enough to suggest the possibility of association with a feature. An extensive area of charcoal-bearing soils, however, was inferred from a line of five tests (STs A316, A319, A347, A348, and A349) located 25m (east end) to 70 m (west end) west of the north end of the Fort Clearing and about 10-15 m south of the Indian River trail. In 2005, the metal detection team had identified a mass of charcoal, which they designated Feature 2, in this vicinity. This may be one the same as the mass of charcoal identified at ST-A319 which was also interpreted as a possible charcoal and cobble feature. A charcoal sample from level one (0-20 cm bs) of this test returned a date of 220 +/- 70 BP with 2 σ calibration dates of AD 1498-1504, AD 1512-1601, AD 1616-1892, AD 1907-1953 (see Volume II, Section 2). The 2 σ date range most likely to be correct is AD 1616-1892 as it occupies 72.3% of the distribution curve. Together, the possible feature(s) and extensive distribution of charcoal in their vicinity suggest the possibility of a terminal Late Period or early historic occupation in this area of the park. While no prehistoric artifacts were recovered, it should probably be noted that this extensive area of charcoal occurs at the center of the known

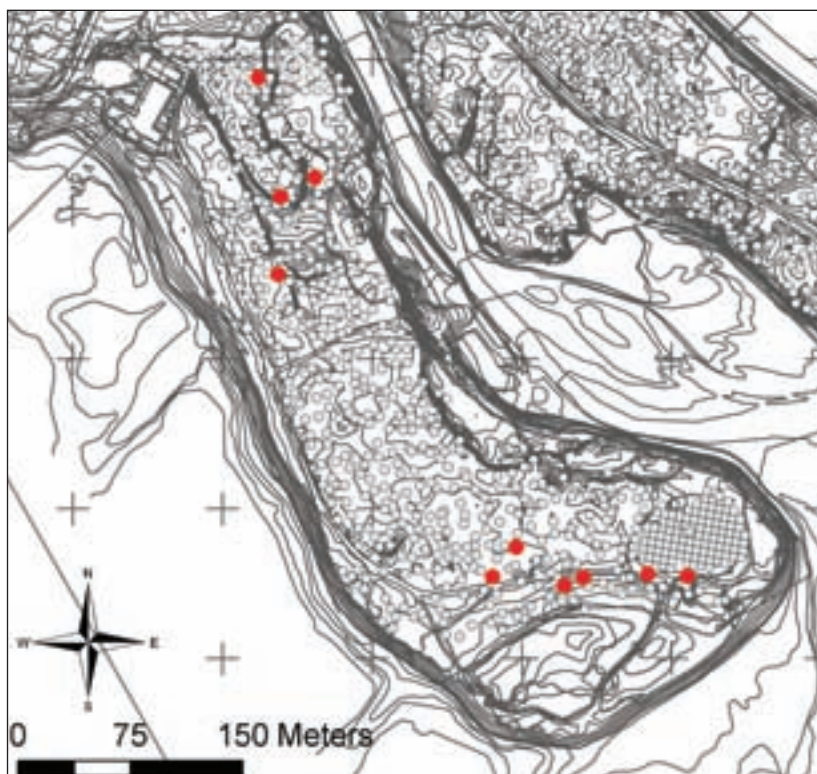


Figure 5-15. Distribution of 19th century artifacts recovered during shovel testing.

distribution of 1804 battle-related artifacts (see Figure 4-8). Further, due to its proximity with 2005-Feature 2, it is probable that ST-A319 and 2005-Feature-2 are the same or part of the same charcoal deposit.

A review of shovel test forms indicates ST-A238 and ST-A338 contained significant concentrations of charcoal and may be feature locations. ST-A238 was located near the center of the peninsula near its heel; i.e., about 120 m west of the Fort Clearing and about 340 m south-southeast of the Visitors Center. This shovel test was described as having dark brown to black loam with ash and charcoal intermixed to -20 cm bs with a 5 cm thick layer of “degraded” charcoal (no chunks) below. Some ash occurred just below the charcoal with sandy gravels immediately below the ash. Unfortunately, no charcoal sample was taken here. Nevertheless, it appears this concentration occurs within the 2005 metal detection team’s Activity Area #3 (see Chapter 4). All but one of the datable artifacts recovered here were from the mid-to-late 19th century, the exception being a token that may have been incidentally dropped on the site.

ST-A338 was located on the east margin of the peninsula about 170 m northwest of the Fort Clearing and 250 m southeast of the Visitor Center. In 2006, excavators digging ST-A338 noted charcoal mixed with dark brown loam in the 20-40 cm bs level with an 8 cm thick charcoal, fire-cracked rock, and cobble layer below. This stratum sat, in turn, on a sandy gravel layer. A charcoal sample collected from ST-A338 and submitted to Beta-Analytic for dating returned a date of 390 ± 40 BP. 2σ calibrations for this date are AD 1437-1528, AD 1545-1545, and AD 1551-1634. This shovel test is located approximately 16 m

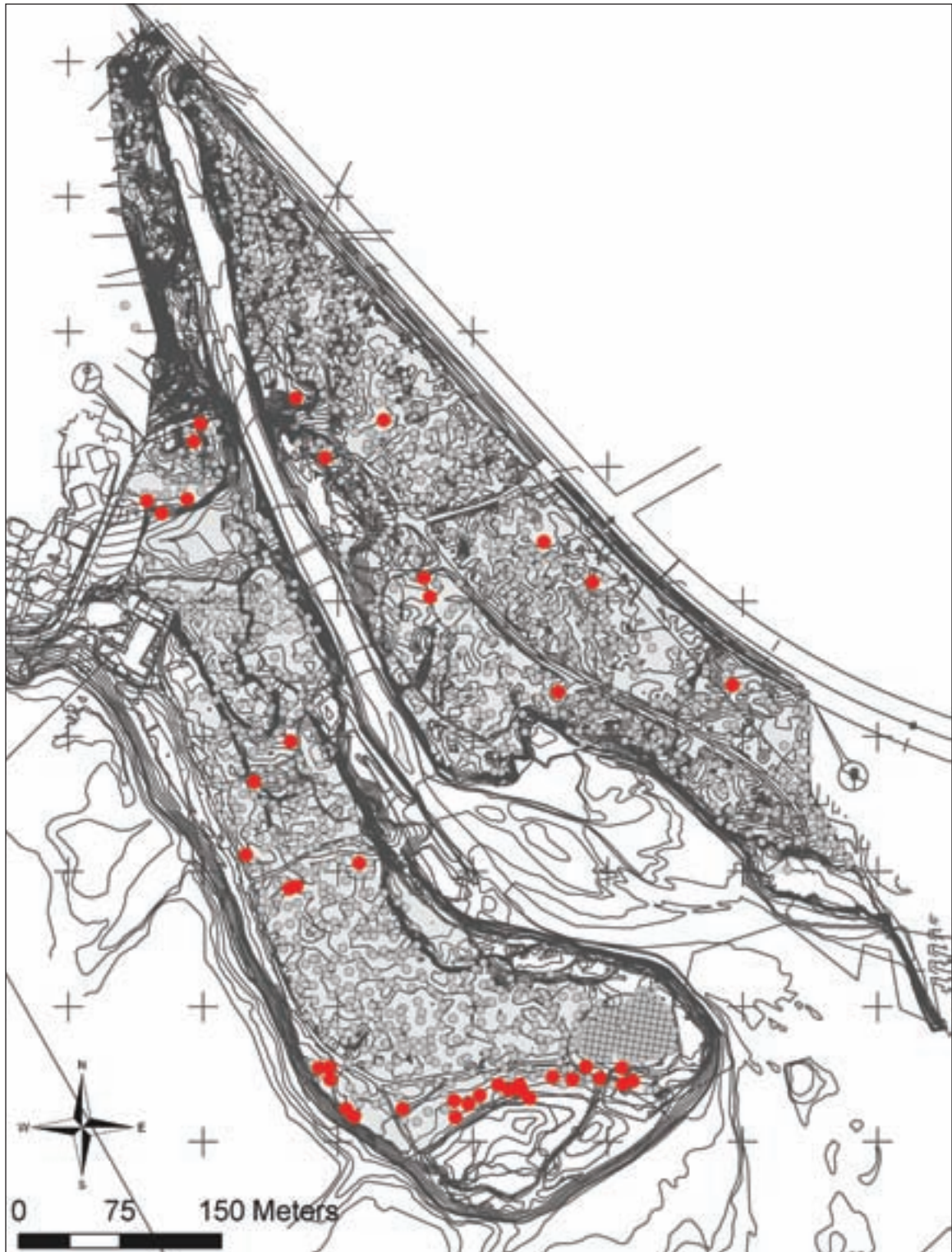


Figure 5-16. Distribution of 20th century artifacts recovered during shovel testing.



Figure 5-17. Historic domestic items: a) aqua glass stopper (Cat. 23607); b) hotelware coffee cup (Cat. 23619); c) repoussé whiteware (Cat. 23670); d) dark blue transfer printed whiteware (Cat. 23634).



Figure 5-18. Historic items of personal and unknown function: a) cold cream-type jar (Cat. 23676); b) 4-hole bone button (Cat. 23614); c) .44 Henry rimfire cartridge base (Cat. 23629); d) 12 gauge shotgun shell (Cat. 23633); e) marble (Cat. 23625); f) Olympia flask shape bottle (Cat. 23668).

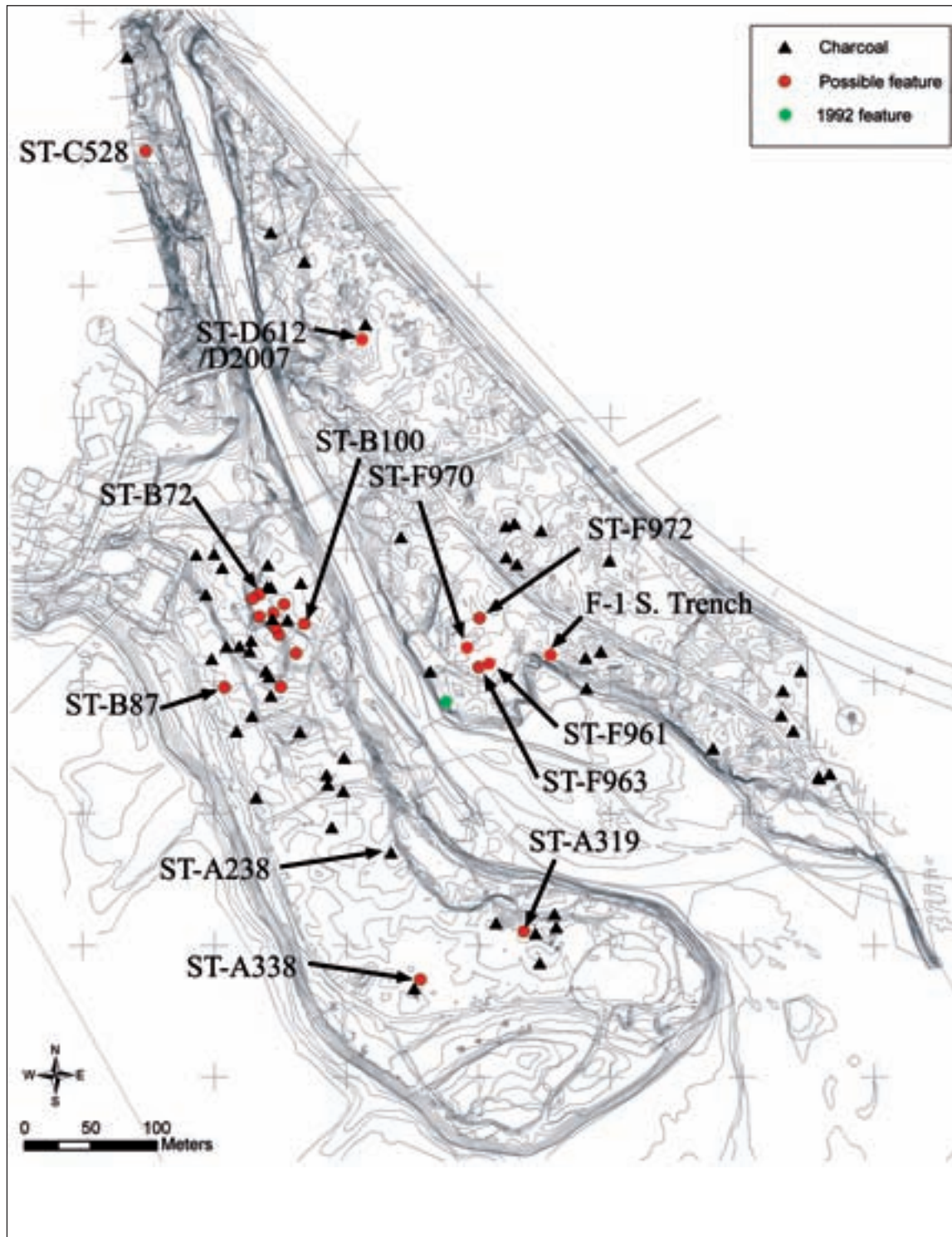


Figure 5-19. Locations where significant amounts of charcoal and probable charcoal-bearing features were encountered during shovel testing (red dots = locations of recovery in Survey Unit A; green dots = locations of recovery in Survey Unit B; blue dots = locations of recovery in Survey Unit C; magenta dots = Survey Unit D).

north of Depression A-1 at which metal detectors had recovered several historic objects. The radiocarbon date, however, indicates the feature is unlikely to be associated with the historic material. This determination is supported by the recovery of prehistoric objects from two nearby shovel tests. A basalt flake was recovered at ST-308 in the 40-60 cm bs level. This test was located 20 m west of ST-A338. A jasper pebble tool was also collected from the 40-60 cm bs level at ST-365 which was about 12 m south of ST-A338.

As the shovel test inventory took place, a number of surface and above ground cultural features were observed and recorded in Survey Unit A. These include culturally modified trees (CMTs), three depressions, and a series of U- to V-shaped earthworks. Data on the CMTs were recorded in 2007 with the trees numbered in the order of their recordation (Figure 5-20). CMTs trees were then recorded with the Alaska Office of History and Archaeology as contributing elements of 49SIT12, a number the Alaska Office of History and Archaeology has given to the park as a whole. Two culturally modified trees identified Survey Unit A in 2006 occurred on the east and west sides of the survey unit. One of these, CMT #13, was first observed during the geomorphological study of the park (referred to as CMT #2 by that team).¹¹ CMT #13 is located within Activity Area #3, as defined by the metal detection team, and occurs in the vicinity of STs A236-A239. This tree has a north-facing scar exhibiting cuts from a metal axe. CMT#14 has been known to the park staff for some time and was pointed out by Chief of Resource Management Griffin. This tree, at the east margin of the Totem Trail, is distinguished by a wood insulator attached to a dead branch on the west side of the tree by a nail or wooden peg about 4 m above the ground (Figure 5-21). The insulator was initially believed to have been used with a World War II-era telephone system and likely was part of a larger communication system for the WWII Army Beach Defenses located on the beach starting about 100 m to the south of this tree. Virtually identical objects, advertised as telephone wire insulators of the pre-WWI era, have been illustrated on the internet.¹² The choice of a wood insulator, however, is odd, particularly in a climate like that at Sitka for water reduces the insulating effect of the wood. When the water contains salts and other impurities such as at this beachside location, it will actually conduct electricity with the leak in electrical current from the telephone circuit causing noise, loss of volume, and even complete failure of the telephone circuit. The device would work for insulated wire, however. If this is a military feature, it probably would have incorporated an EE-8 Field Telephone used by the Signal Corps from early in World War II through the Vietnam War.

Three depressions noted during the course of the shovel test inventory in Survey Unit A were determined to be of cultural origin since they are much larger and deeper than any created by trees uprooted in the park. The three in Survey Unit A are of a size that makes them visible on the park's 1995 topographic map (Figure 5-22). The first of these, designated Depression A-1 (the first depression identified in Survey Unit A), has already been mentioned in Chapter 4.¹³ It is located about 150 meters southwest of the Fort Clearing, is 3.5 x 4 m x 1 m deep; and similar in form, size, and depth, to a basement depression (Figure 5-23). In 2005, two shovel tests were dug on the south and west sides of the feature resulting in the recovery of no artifacts at either location.

Two smaller depressions, Depressions A-2 and A-3, are located about 22 m west of the north end of the Fort Clearing (Figures 5-22, 5-24, and 5-25). Both are rectangular

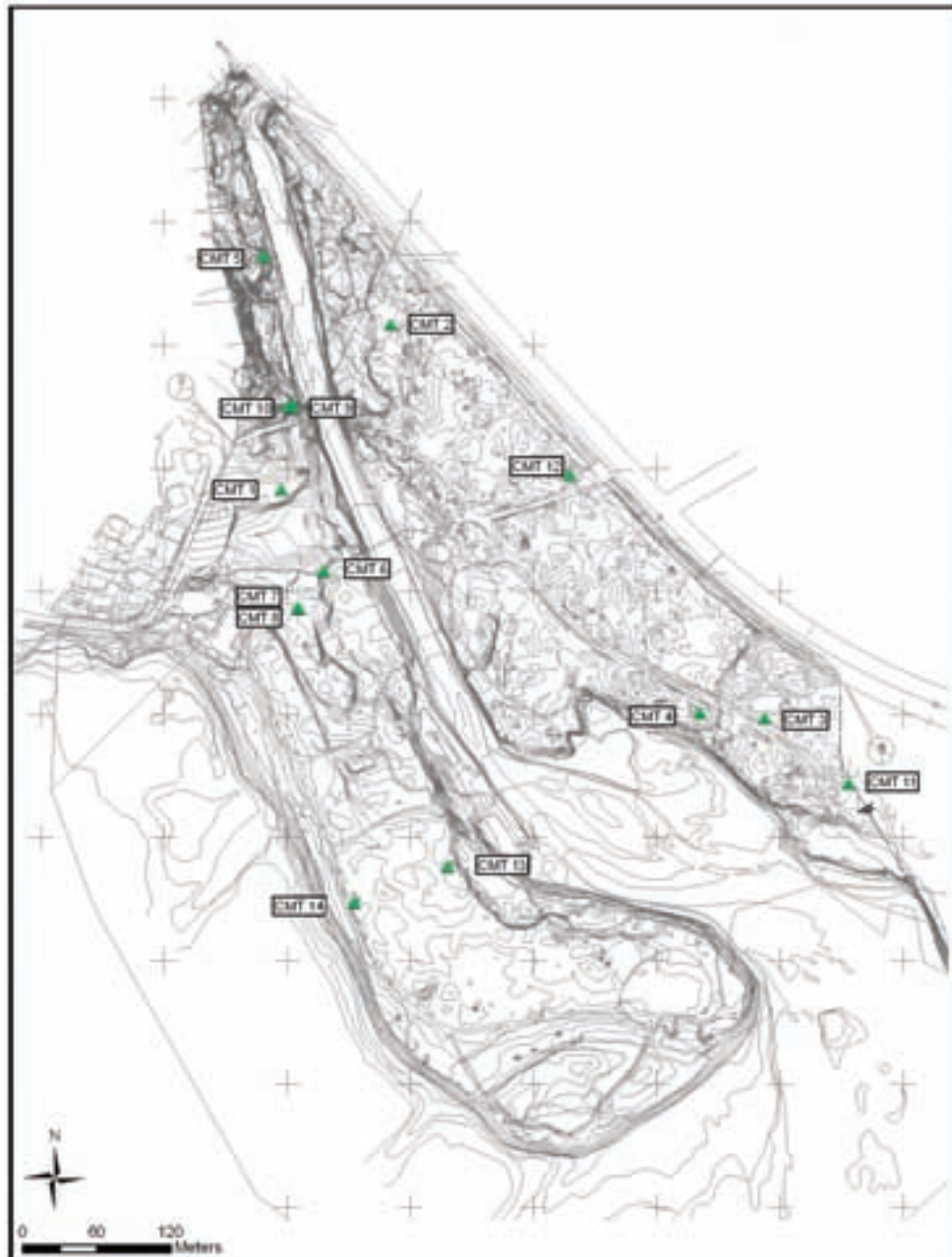


Figure 5-20. Locations of culturally modified trees (CMT).

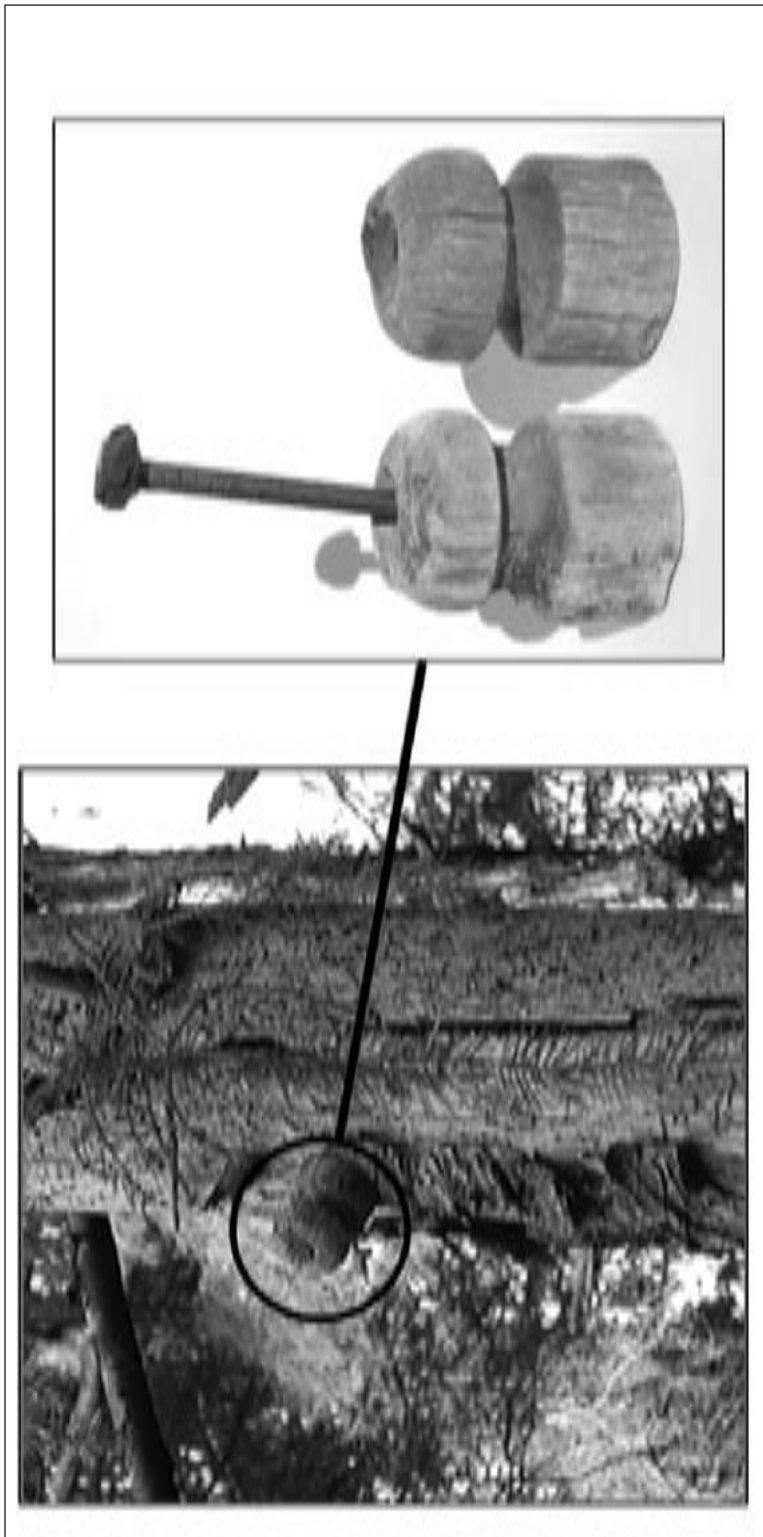


Figure 5-21. A wooden insulator on Culturally Modified Tree #13 and similar late 19th to early 20th century wooden insulators.

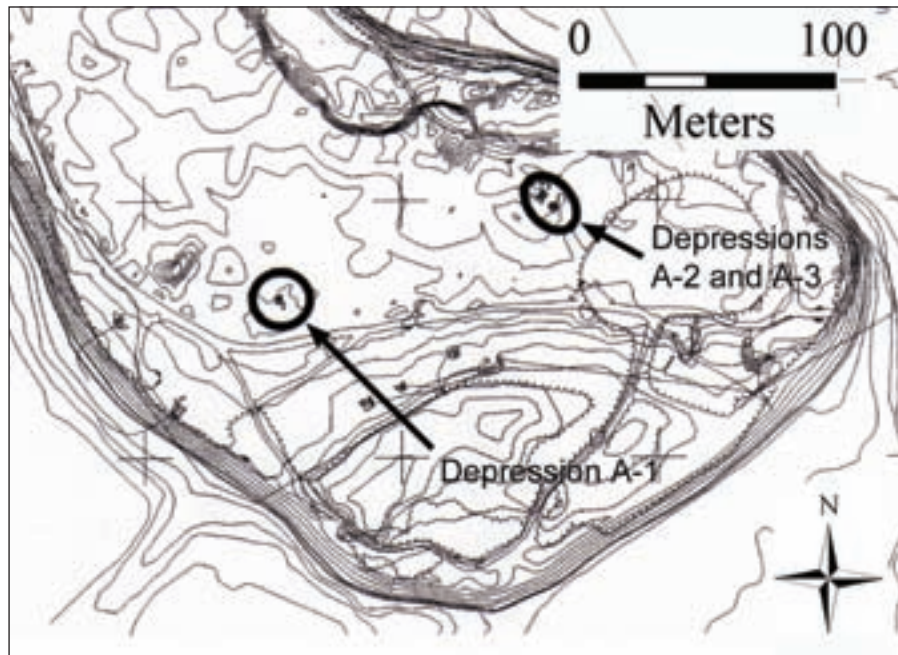


Figure 5-22. Locations of artificial depressions in Survey Unit A.



Figure 5-23. Depression A-1. Alan Carper (left) is standing on the north margin. Shawn Mitchell is in the depression and Israel Ginn (right) is standing on the south margin. Ginn and Jesse Marquez-Hopson are shovel testing on the west margin of the depression (upright shovel).

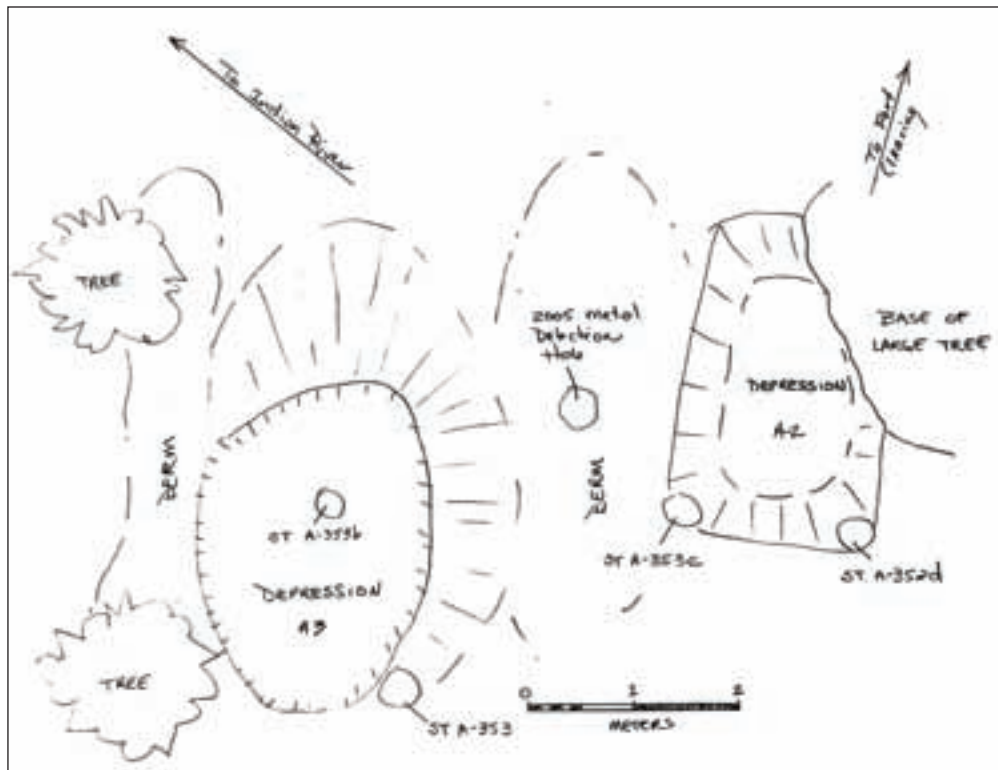


Figure 5-24. Sketch map of Depressions A-2 and A-3.



Figure 5-25. Depression A-2 (view to east).

with their long axes more-or-less oriented east-to-west. A much smaller rounded depression, located about 3 m east of the rectangular depressions, may or may not be of cultural derivation. Depression A-2 is approximately 4 m long, 2.4 m wide, and about 1 m in depth (to a dense layer of branches resting on the bottom). A large tree has grown into and partially filled its southeastern corner. This depression is separated from Depression A-3 by a low berm of soil. Depression A-3 is located 1.8 m north of A-2 and sits between the aforementioned berm and another on its north side. The berms are tentatively interpreted as fill from excavation of the depressions. Depression A-3 is about 4 m long with an additional 2 m of sloping ground on its east margin. It is about 2.8 m in width and 1.3 m in depth. Both depressions and the berm between them were shovel tested with no cultural materials recovered. While their origin remains uncertain, their similarity in size, orientation, and presence of berms on the north side of each suggest they are likely of cultural derivation. Archeologist Robert Betts has suggested these depressions may be associated with a military 1942-1943 Army communications post and cites the recovery of telegraph wire near the depressions as well as observing glass insulators and short horizontal boards as climbing aids nailed to nearby trees.¹⁴ These objects were not observed by the shovel test team. Additionally, the large tree growing in the southeast corner of Depression A-2 suggests the depressions may have been created sometime in the 19th century.

Finally, it has long been known that eight earthworks representing WWII-era gun emplacements occur in Survey Unit A along an old beach front at the south end of the park (the upper beach margin is now approximately 30 m south of its WWII location) (Figure 5-26). These were numbered GE1 (Gun Emplacement 1) to GE8 from west to east and, in 2006, the earthworks were measured, shovel tested, and photographed. The eight field fortifications occur in two types: larger crescent-shaped or V-shaped earthworks and smaller semi-circular earthwork. The larger earthworks are consistent with artillery gun emplacements in size and construction. The smaller emplacements (Figure 5-27) are consistent with rifle or machine gun field fortifications as explicated in those same World War II era manuals.¹⁵ As noted in Chapter 4, the metal detection team found decayed wood with wire nails in GE8, the largest field fortification. The wood and nails indicated the possibility of a wooden platform in the fortification. In 2006, the shovel test team encountered fragments of wood in GE3, a much smaller earthwork. While no such remains were found in the other six gun emplacements, it seems likely that they all had such a platform at one time and wood gun platforms are specified in field manuals of the era. Artillery was positioned to provide a field of fire toward an objective, in this case to oppose a landing by enemy forces or provide anti-aircraft fire on enemy aircraft. The smaller pits provided small arms and light machine gun protection for the artillery batteries. The placement of the individual field fortifications provides an interlocking field of fire between two or more emplacements.

SURVEY UNIT B

Shovel testing began at the north end of this unit in 2005 with 48 shovel tests dug in four east-west transects paralleling the Bridge Trail. The remainder of the unit was shovel tested in 2006 beginning with ST-B50 (no unit was designated ST-B49) in the northern half of Survey Unit B north of Cross-over Trail #1 and continuing to the

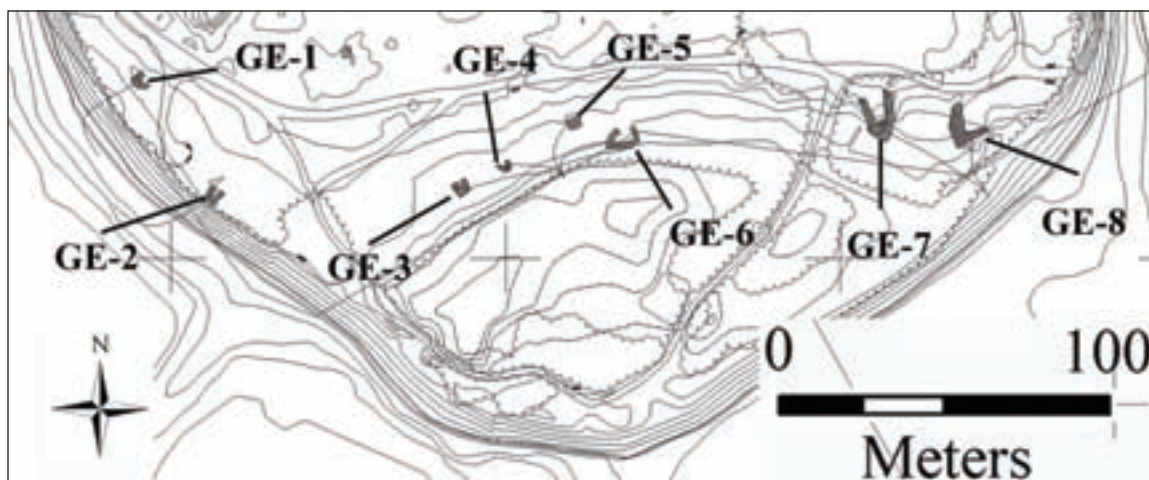


Figure 5-26. Map showing locations of World War II gun emplacements (GE).



Figure 5-27. Gun emplacement #1 as viewed from the rear of U-shaped dirt embankment. Angel McCutcheon is holding a 2m carpenter rule.

southern margin of the unit at Cross-over Trail #2. Altogether, 183 shovel tests were excavated in this survey unit (see Figure 5-3).

As noted in the previous chapter, two and possibly three prehistoric artifacts had been recovered in the survey unit from tree throw depressions during the 1995 geomorphological study of the park (see Chapter 3). Although no prehistoric artifacts were identified during the 2005 shovel test inventory in Survey Unit B, work in 2006 resulted in the recovery of six prehistoric artifacts from as many locations (see Figure 5-9). Tools include secondary flakes (Cats. 23640, 23649) from ST-B126 (40-60 cm bs) and disturbed tree fall at ST-B178b, a utilized chert flake (Cat. 23636) from ST-B100, a split pebble chopper (Cat. 23639) recovered at ST-B122 (20-40 cm bs), a cobble pick or core (Cat. 23647) from ST-B155 (20-40 cm bs), and an end scraper recovered ST-B136 (0-20 cm bs) (see Figures 5-10, 5-11, and 5-28). Two of these objects, the utilized chert flake and split pebble chopper, were recovered on the east (river) side and at the toe of a remnant beach terrace formed circa A.D. 300. The flake was recovered above a charcoal deposit radiocarbon dated to 2580 ± 50 BP (see Volume II, Section 2). The 2σ calibration date ranges for this are 834-716 BC and 695-539 BC, each date range occupying about the same relative area under the distribution curve. Three objects (flake, end scraper, and core/pick) were recovered in the western half of the peninsula, west of remnant of a large beach ridge on a landform created sometime circa A.D. 1250 which suggests a *terminus post quem* date (the earliest point in time when the object may have been made) for the artifacts. The last object, a flake, is derived from the river side of the peninsula on deposits dating to circa A.D. 1150.¹⁶

Shovel testing in Survey Unit B also produced 50 objects of historic manufacture (see Figures 5-15 to 5-18). Four objects are of unknown or modern (post-1950) era and include a squeeze-type fire extinguisher handle (Cat. 23648) and three pieces of curved glass (Cat. 23644). Two objects are likely associated with the first half of the 20th century. A partially buried hook and cable (not collected) were discovered approximately 1 m south of ST-B184 at the end of a fallen tree. The cable is about 3/4" in diameter and the hook is 7" long by 4 1/2" wide. This cable and others on both sides of the river are likely associated with an effort to stabilize the river banks in the 1940s (Sitka National Historical Park Chief of Resource Management Gene Griffin, personal communication, February 15, 2007). After the 1942 flood washed away a 10-50 ft wide section of both river banks, the U.S. Navy rebuilt the western bank and replaced the cribbing. In 1945, the Navy straightened the Indian River channel and constructed log cribbing on both sides of the river.¹⁷ The second object likely associated with the first half of the 20th century is an amber whiskey bottle (Cat. 23642) represented by 18 fragments recovered in the first 20 cm level of ST-B129. Six nineteenth century artifacts were recovered, one on top and three on the toe of the high terrace remnant in the northern half of Survey Unit B and two 5-10 m west of a low beach ridge extending southward from the higher and older beach remnant. In general, these fall on either side of the first east-west trail across the peninsula south of the Visitor Center. They include a hand painted teacup bodysherd (Cat. 23546) from STB-32 (Figure 5-17), a fragment of a late 19th century transfer printed saucer rim (Cat. 23634; Figure 5-17) from ST-B100, a homemade adze made from a pipe (Cat. 23637; Figure 5-29) recovered at ST-B109, a pontil-marked bottle base (Cat. 23638) recovered from loose fill at the base of a tree fall (ST-112b), a cut nail (Cat. 23641) from

ST-B128, and 22 fragments of a black glass bitters bottle (Cat. 23646) recovered at ST-B151. All were recovered in the upper 20 cm of the shovel tests.

During the 1995 geomorphological field study, two locations were identified within Survey Unit B which had charcoal concentrations of possible cultural origin. One of these was a 10 cm thick stratum of charcoal encountered on a low bench on the east side of the uplifted paleo-beach ridge in the vicinity of 2006 ST-B68 and ST-B72. Although additional probing in 1995 indicated this lens covers a 13 x 23 ft (300 ft²) area, no radiocarbon samples were taken at that time. The second concentration of charcoal of possible cultural origin was identified on the uplifted paleo-beach ridge in the vicinity of 2006 tests ST-B57 and ST-B58. The geomorphology crew took a sample of the charcoal here and submitted it for radiocarbon dating with the result being a date that calibrated to the 19th century.¹⁸

In the 2006 inventory, 30 shovel tests in Survey Unit B encountered scattered charcoal or layers of charcoal which extended beyond the boundaries of the shovel test hole (see Figure 5-19). For nineteen of the tests, the charcoal did not occur in enough quantity or was not concentrated enough to suggest association with a cultural feature. More significant amounts of charcoal were located in three general areas. A dense cluster of charcoal-bearing areas was encountered at the eastern foot of the uplifted paleo-beach ridge. Eight tests here revealed one to two strata of charcoal sandwiched between lighter sandy deposits. They occur on a low terrace at the edge of a shallow meander feature. Three charcoal samples were submitted for dating (see Volume II, Section 2). ST-B72 had two charcoal deposits separated by a thin yellow clay layer. Large cobbles between the charcoal strata led excavators to suggest this was a feature. The upper stratum at 20-27 cm bs returned a date of 160 ± 70 BP (Beta 218682) which calibrates to AD 1650-1953. The lower stratum, lying between 34-42 cm bs, was dated 1300 ± 40 or AD 649-781 AD 791-807 (2σ calibrated). ST-B100 also had two charcoal strata. A sample collected from the lower stratum, at 40 cm bs, returned a date of 2580 ± 50 BP which has 2σ calibrated date ranges of 834-716 BC and 695-539 BC. These dates along with those returned from the north end of the low terrace suggest a localized area of extensive, long-term occupation dating from as early as the Middle Phase of the Developmental Northwest Coast Stage with greatest use of the locality from the Late Phase of the Developmental Northwest Coast Stage to the Historic Period.

While somewhat fewer shovel tests on the west side of the peninsula encountered charcoal deposits, at least one may have intersected a feature. Excavators may have hit the east edge of a fire-cracked rock and charcoal-filled pit in ST-B87 at the 20-40 cm bs level. Stone believed by the excavators to be flakes were determined upon close examination in the laboratory not to be of cultural derivation. No prehistoric or historic objects were recovered from this pit and no charcoal was collected at the time of the shovel test. Based on its physical position, on flat ground west of the remnant terrace and a low beach ridge extending southward from that terrace, the feature should date to post-AD 1250 but more likely after A.D 1500.¹⁹

Three culturally modified trees, CMTs #6-8, were identified in Survey Unit B (see Figure). CMT #6 is a 3.1 m circumference Sitka spruce.²⁰ The modification is in the form of a concave triangular scar located on the east-northeast side of the tree about 1 m



Figure 5-28. Dorsal (top) and ventral (bottom) sides of basalt pick/chopper/core (Cat. 23647).



Figure 5-29. Historic construction tool (sledgehammer head Cat. 23643) and woodworking tool (homemade adze Cat. 23637).

above the ground surface. The scar is 73 cm high x 66 cm wide and 37 cm deep and there is roughly 17 cm of healing on its margins. The upper portions of the scar retain axe marks. CMTs #7 and #8 are about 4 m apart were relocated from a description provided in the 1995 geomorphology report.²¹ CMT #7 is a Sitka Spruce snag about 2.4 m in circumference and bearing a small triangular scar 47 cm above the ground surface on its northwest side. The scar is 54 cm high x 23 cm wide and is 10 cm in depth. There are no visible cut marks but the scar bears about 9 cm of healed tissue around its margin. CMT #8 is south of CMT #7 and is a dead Sitka Spruce. It has a circumference of 2.5 m and bears a scar on its west side 1.12 m above the ground surface. The triangular scar is 57 cm high, 18 cm wide, and 13 cm deep and retains about 13 cm of healing around its margin.

During the 2005 metal detection inventory, surveyors noted a square privy pit and an associated sign on the beach ridge east of the Visitor Center and associated it with one of two latrines built by the National Park Service in 1940 (see Chapter 4). The 2006 shovel test team relocated this pit (Privy #2) and identified another as well. The relocated pit occurred about 5 m south of ST-B92. The sign mentioned by the metal detection crew is leaning against a tree about 10 m southeast of the privy pit. The second latrine pit (Privy #1) was identified about 32 m east of the pit found in 2005 between STs B74 and 75. Both pits are square and 1.20 m on a side. Privy #1 is located with the cardinal directions while Privy #2 is turned about forty degrees. Privy #2 is about 40 cm in depth and has a vertical 1" x 4" board with a spike in the top was in its eastern-most corner. Privy #1 is of similar depth and has an upright 1" x 4" extending from the center of the pit. Both privies were apparently abandoned with the installation of new toilet facilities at the entrance in 1955.²²

SURVEY UNIT C INVENTORY

Initially, an attempt was made to place shovel tests in transects as in Survey Units A and B. Physical constraints (a large bog with standing water on the south end of Survey Unit C and the steep topography in the northern two-thirds of the unit) led to shovel testing in opportunistic locations working generally from south to north. Seventy-eight shovel tests were excavated (see Figure 5-3).

Two shovel tests in Survey Unit C yielded prehistoric artifacts (see Figure 5-9). A pebble chopper (Cat. 23651; Figure 5-11) was recovered from the ground surface at ST-C461 just north of the Bridge Trail and an angular chunk of granite interpreted as a shattered core fragment (Cat. 23672; Figure 5-13) was collected on the next higher terrace to the north from loose fill below a tree fall's roots. The age of these objects remains uncertain although one might estimate that the pebble chopper is protohistoric or historic given its recovery from the ground surface.

Five shovel tests and a surface find, all between the maintenance shed and the Visitor Center-Indian River bridge trail, resulted in the recovery of 74 historic manufacture (see Figures 5-15 and 5-16). Two objects were not collected. The few datable objects were created sometime between post-1890 and 1930 and all but three are from three tests (STs C486, C487, C488) at the northeastern margin of the parking lot. This indicates a small dump that, given its position, is most likely associated with the Cottage

Community (1888 to present). The current parking lot north of the Visitor Center was built on the eastern-most portion of this community after the National Park Service purchased properties and razed cottages on the east side of Metlakatla Street. The nearest Cottage Community-era home to this dump was occupied by Albert and Paulina James and Joe and Dorothy James Truitt.²³

Charcoal was encountered only in two shovel tests: a 1 cm thick charcoal layer in ST-C528 and a 36 cm thick stratified charcoal deposit bearing burned earth at ST-C520 (see Figure 5-19). Both occur on a low terrace above the narrow Indian River floodplain in the northern half of the inventory unit. ST-C520 occurs at an elevation of 30 ft AMSL with ST-C528 about 5 ft higher. There is no geomorphological data for this portion of the park. Of the two locations, the deposits in ST-C520 were interpreted as a feature of some kind. No artifacts were recovered from this test but charcoal was collected from the center of the deposit and submitted for radiocarbon dating (see Volume II, Section 2). A date of 300 ± 50 BP, which has 2σ calibration dated ranges of AD 1462-1666 and AD 1784-1795. The first date is most likely to be correct as it occupies 97.9% of the relative area under the distribution. The date indicates an association with the Late Phase of the Developmental Northwest Coast Stage.

Four culturally modified trees, CMTs #1, 5, 9 and 10, were identified in this survey unit. CMT #1 is located at the margin of an old beach terrace approximately 40 m southwest of the maintenance yard and 125 m north-northwest of the Visitor Center front door. This tree is a 5 m circumference Sitka Spruce that bears a scar on its north side about 2 m above the ground surface. The scar is 1.3 m high, 65 cm wide, and 92 cm deep and is obviously old as it displays about 30 cm of healing bark growing over the scar margins. The geophysical team observed metal axe cut marks in the scar in 1995 but such marks were not observed by the MWAC team in 2007.²⁴ CMT #5 is a large Sitka Spruce with a circumference of 4.5 m. It has a scar located 50 cm above the ground on the south side of the tree, is somewhat oval in shape, 1.4 m high, 50 cm wide, and 38 cm deep. The face of the scar is covered with metal axe cuts and there is about 30 cm of healing at the scar's margins. CMT #9 is a dead Western Hemlock which is about 2 m in circumference and has a board nailed into its south side about 2 m above the ground surface. A set of 2-3 holes located about 50 cm below the board may mark the former location of another step. CMT #10, located about 5 m from CMT #9, is also a dead Western Hemlock. The tree is 2.8 m in circumference and broken away about 6 m above the ground. Virtually all sides of this tree bear cultural modifications. A bolt protrudes from one of the above ground roots about 50 cm above the ground surface and a couple of large metal pins are visible on the west side of the tree. About 3 m above the ground on the east side of the tree is a broken board and the north side of the tree exhibits three wire nails driven into a now-dead branch.

SURVEY UNIT D INVENTORY

Shovel testing in this inventory unit was done within a grid system, the east-west transects paralleling the Indian River bridge-Sawmill Road trail. The only exception to this testing strategy was at the extreme north end of the unit where the crew found the park lands constricts to a narrow strip of land between the Sawmill Road trail and the

steep river bank. Here, shovel tests were undertaken every 10 m along the length of this “neck.” Altogether, 217 shovel tests were excavated in Survey Unit D (see Figure 5-3).

Three basalt artifacts were recovered from a similar number of shovel tests clustered in small area at the south center of the survey unit with the northern-most find spot only 28 m from the southern-most (see Figure 5-9). Among the objects recovered were two cores (Cat. 23672, 23671; Figure 5-13). One (Cat. 23672) was found on the ground surface between ST-D598 and ST-D606. The other core was recovered from loose fill under the roots of a tree fall between ST-D594 and ST-D595. The third object, a pebble tool which may have been used as a chopper (Cat. 23669; Figure 5-12) was recovered from ST-D582 between 40 and 60 cm bs. The landform on which these objects was recovered is estimated to have been created sometime prior to circa A.D 1650.²⁵

Only three historic artifacts were recovered from Survey Unit D and all were found on the ground surface 80-95 m north of the Bridge Trail (see Figure 5-18). A repoussé whiteware sherd (Cat. 23670; Figure 5-16) was found adjacent to and east of an old roadbed leading to a former bridge abutment. This sherd occurred in a highly disturbed area along with a small amount of other historic debris. A clear glass bottle (Cat. 23668; Figure 5-17) of the Olympia flask shape²⁶ was recovered at ST-D594. It bears a tooled champagne finish and is 7.38” high with 2.9” by 1.5” base. The bottle is 3.3” wide at the shoulder and the finish has an exterior diameter of 1.0”. A molded mark occurs on the base: “DESIGN PATENTED/PAT.AUG.9.1898”. This is the patent date for the bottle shape. The method of manufacturing the finish suggests the bottle was probably manufactured circa 1900. The last object in this category is a sledgehammer head (Cat. 23643; Figure 5-18) recovered from ST-D741. This specimen retains a remnant of the wooden handle in the hammer’s socket.

At ST-D727 excavators encountered a few cobbles just above the 20 cm bs level with flat faced wood interpreted as planking laying under the rock at 24 cm bs. The shovel test was broadened to a 50 cm x 70 cm rectangular opening to expose the wood further. The wood appeared to be 5 cm (2”) thick flat, northeast to southwest oriented planks with 30 cm (12”) wide x 10 cm (4”) thick split logs laid with the rounded side up (Figure 5-30). The arrangement was tentatively interpreted as an element of a corduroy road built by the U.S. Army prior to 1870 (later testing showed this to actually be a fortuitously flat portion of a fallen tree. See Chapter 6).

Four shovel tests in Survey Unit D encountered charcoal (see Figure 5-19) although only one, ST-D612, had a significant charcoal-bearing layer. Here charcoal was encountered at 16-26 cm bs immediately above a stratum of reddish brown mottled sandy clay. Together, the charcoal and reddened soil suggested a possible hearth. A nearby test at ST-D620 also had charcoal although in lesser amounts and without the burning suggested by the reddish brown sandy clay in ST-D612. This general area is located about 25 m north of the prehistoric find locations. A 6 cm thick charcoal lens of charcoal chunks was identified at ST-D662 at the base of a 2 m high terrace. Similarly, a 7 cm thick stratum of charcoal was encountered at ST-D683 about 40 m to the northwest of ST-D662. No artifacts were encountered in any of these shovel tests but charcoal samples were taken for possible radiocarbon dating. Only one of the samples, that from ST-D612 (relocated and sampled in 2007 as ST-D2007), was processed (see Volume II,



Figure 5-30. Exposed wood in ST-D727 interpreted as a wood plank feature in 2006.

Section 2). This returned a conventional date of 270 ± 40 which has five 2σ calibration date ranges; e.g., AD 1486-1604, AD 1607-1675, AD 1769-1770, AD 1777-1799, and AD 1950 (see Volume II, Section 2). The first two date ranges occupy over 90% of the area under the distribution and are therefore most likely to be correct. In other words, this material reflects a prehistoric occupation of the terminal Late Period (AD 1000-1700).

Two CMTs were identified in Survey Unit D (see Figure 5-20). CMT #2 is a hunter's tree stand on a massive tree trunk located at the approximate center of a space bounded by STs D641, D642, D653, and D654 (Figure 5-31). The tree is a dead Western Hemlock about 4.5 m in circumference which has had its top cut off about 8 m above the ground. Access to the top of the tree was by axe-notching toe holds in the lowest with three horizontal boards nailed to the upper portion of the tree. CMT #12 is The tree is about $2\frac{1}{2}$ m in diameter and is the largest tree in the park. It was originally identified by the 1995 geomorphology team and metal axe cuts were observed at that time in this tree which were interpreted as a blaze.

In addition to the CMTs, ten cable-girdled trees in three groups were encountered in the north half of the park along the east bank of the Indian River and north of the old highway bridge abutment (Figures 5-32, 5-33). Two of the trees and a cable extending into the river occur at the north margin of the abutment itself with three more located about 60 m north near STs D649, D665, and D666. Another cluster of six cable-girdled trees begins about 60 m upriver from the tree at ST-D666 between STs D703 and D718. These cable-girdled trees may be features associated with pre-park logging or, more likely,



Figure 5-31. Culturally modified tree #2, a hunter's tree stand.

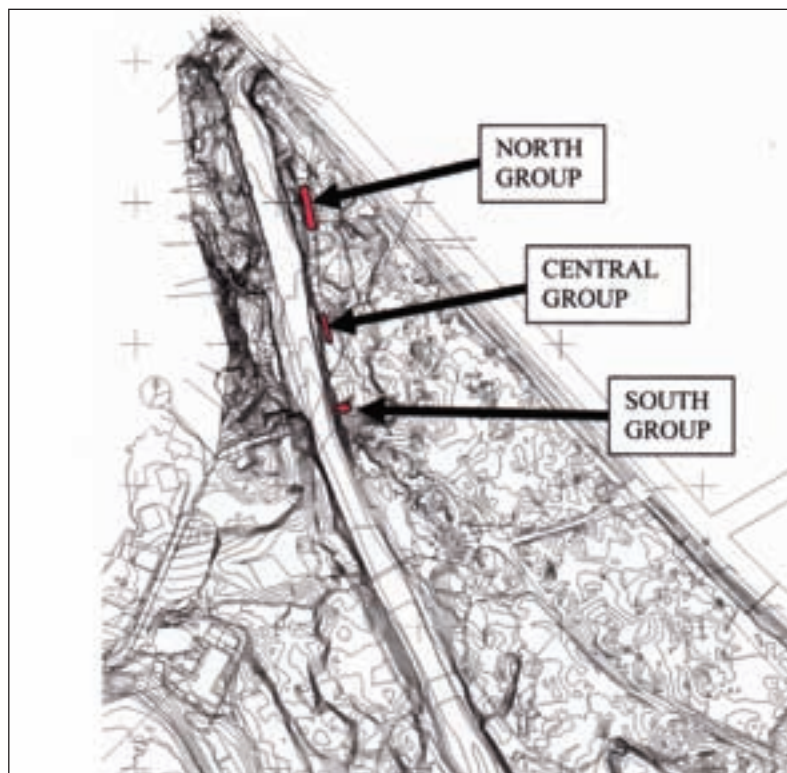


Figure 5-32. Location detail for cable-girded tree groups.

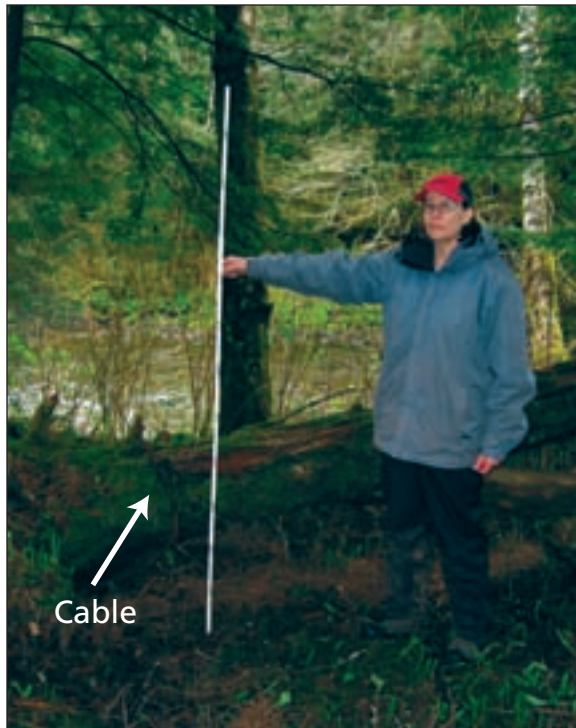


Figure 5-33. South tree in north group of cable-wrapped trees in Survey Unit D.

are associated with the 1945 Navy construction of downstream log cribbing discussed earlier in this report.²⁷

Two road traces were also encountered in Survey Unit D (Figure 5-34). Trace #1 was noted about 20 m south of the old bridge abutment. It is an east-west trace and may have been associated with a ford across the river, bridge construction, or logging. STs D731 and D743 occurred on the north margin of this trace. Trace #2 was more extensive. It is oriented north-south and runs from the river bank at approximately ST-D692 northward about 65 m to where it enters a low boggy area next to the Sawmill Creek Road trail. This trace may be associated with logging or may have led to a river ford or provided access to the river during bridge construction.

SURVEY UNIT E INVENTORY

Testing in this inventory unit in 2006 was done within a grid system using east-west transects paralleling Bridge Trail and 33 shovel tests were completed (Figure 5-3). The following year, an additional 97 tests were excavated, most of which had to be randomly placed due to masses of downed trees and numerous marshy areas. As well, in 2006, in anticipation of installing a new park boundary fence, Anne Pollnow conducted a shovel test inventory of 2.5 acres at the south end of Survey Unit E as a compliance project to examine a corridor along the southeastern boundary of the park for archeological resources (Figure 5-3).²⁸ Pollnow's crew excavated 47 shovel tests and essentially completed the shovel testing of the extreme south end of Survey Unit E. That work discovered the route of a buried gravel road, a concentration of historic-era bottles, a rock alignment, a culturally modified tree, two 2 x 2 m depressions, and "spikes" embedded in a tree. Although she notes that her crew rediscovered the location of a hearth feature originally recorded in 1992 by Sitka National Historical Park Curator Sue Thorsen, Sitka National Historical Park Chief of Resource Management Griffin indicates this was not the case. Pollnow also states that "several depressions were recorded during ground survey in the middle wooded area between the trail loop on the east side of the park to the restrooms near ... the walking bridge." Unfortunately, these features do not appear on her field map nor, apparently, were their GPS positions recorded. As a result, these items were relocated during the 2007 shovel test inventory.

No prehistoric artifacts were recovered during shovel testing in Survey Unit E and historic Euroamerican artifacts were recovered only in three locations (Figures 5-9 and 5-10). Sixteen of those remaining items were from ST-E767 at the north end of the survey unit and on the surface within a 10 by 30 m area immediately around that shovel

test. Objects included fragments of sun-altered straw-colored glass food containers (Cat. 23673 with a valve mark, Cats. 23674, 23678), a flashlight body (Cat. 23675), a whiteware saucer (Cat. 23677), a lamp chimney fragment (Cat. 23680), a strap hinge (Cat. 23673), and cosmetic jar (Cat. 23676; Figure 5-17). The top of a wood-burning stove was observed but not collected. Together, these objects suggest a small domestic dump created sometime in the 1930s. The whiteware saucer bears a green printed manufacturer's mark "SHANANGO/NEWCASTLE, PA./CHINA". The Shenango China Co. was established in 1901 and continues to make ceramics to the present. The printed mark is an early one although its date remains uncertain.²⁹

Six shovel test contained deposits of charcoal although none were substantial enough to suggest a feature (see Figure 5-19). A charcoal sample collected from the second level of ST E785 returned a conventional radiocarbon date age of 890 ± 120 BP (see Volume II, Section 2). The 2 σ calibrated age range for this date is AD 1369-1380, a date which places the occupation at this location within the terminal Late Period. As well, Pollnow's inventory identified a number of locations in the south end of the survey unit with charcoal layers.³⁰ All appear to have been associated with tephra deposits or were associated with relatively modern deposits.

Two CMT's were identified during the inventories (Figure 5-20), both first mentioned by Pollnow.³¹ CMT #3 a 5.6 m circumference Sitka Spruce. The otherwise healthy tree bears scar on its southeast side that is 2 m high, 50 cm wide, 65 cm deep scar. The face of the scar exhibits axe cuts and is located 1.1 m above the ground. It appears to be quite old in that there is at least 60 cm of healing growth on its sides. CMT #11³² is the remnant of a tree that had grown over round and square iron stock. The top of the stump is about 1 m in diameter and its surface parallels the ground, probably as a result of the tree being felled using a saw. The density of new growth on top of the stump prevented tree rings from being counted. Iron artifacts were observed on the south side of the stump in two groups spaced about 45 cm apart and located about 1 m above the ground. The westerly group consists of round iron stock embedded in the tree and lying on the ground directly below. The easterly group includes similar round stock with a common wire nail embedded about 20 cm above. A short fragment of square stock, perhaps the remnant of a handmade spike is about 4 cm above the wire nail. The round stock appears to be the remnants of a chain which the tree grew over. It was removed at some point in time by cutting through links on both the east and west sides. These artifacts suggest they were placed around and in the tree during the 19th century. CMT #11 is located proximal to an 1840s Russian homestead and a homestead established by Nicholas Haley in 1882.

SURVEY UNIT F

This survey unit was investigated in 2007, with 152 shovel tests excavated (Figure 5-3). Although no prehistoric objects were recovered during shovel testing, 32 historic/modern objects were collected from four locations during the course of shovel testing (Figures 5-15 and 5-16). A soft (low fired) red brick fragment recovered from ST-F887, Lev. 1 (0-20 cm) may be associated with the Russian Memorial or, more likely, with the post-1882 Haley homestead which was in this general area. A flat (window) glass fragment was collected at ST-F982, Lev. 2 (20-40 cm) in the north central portion of

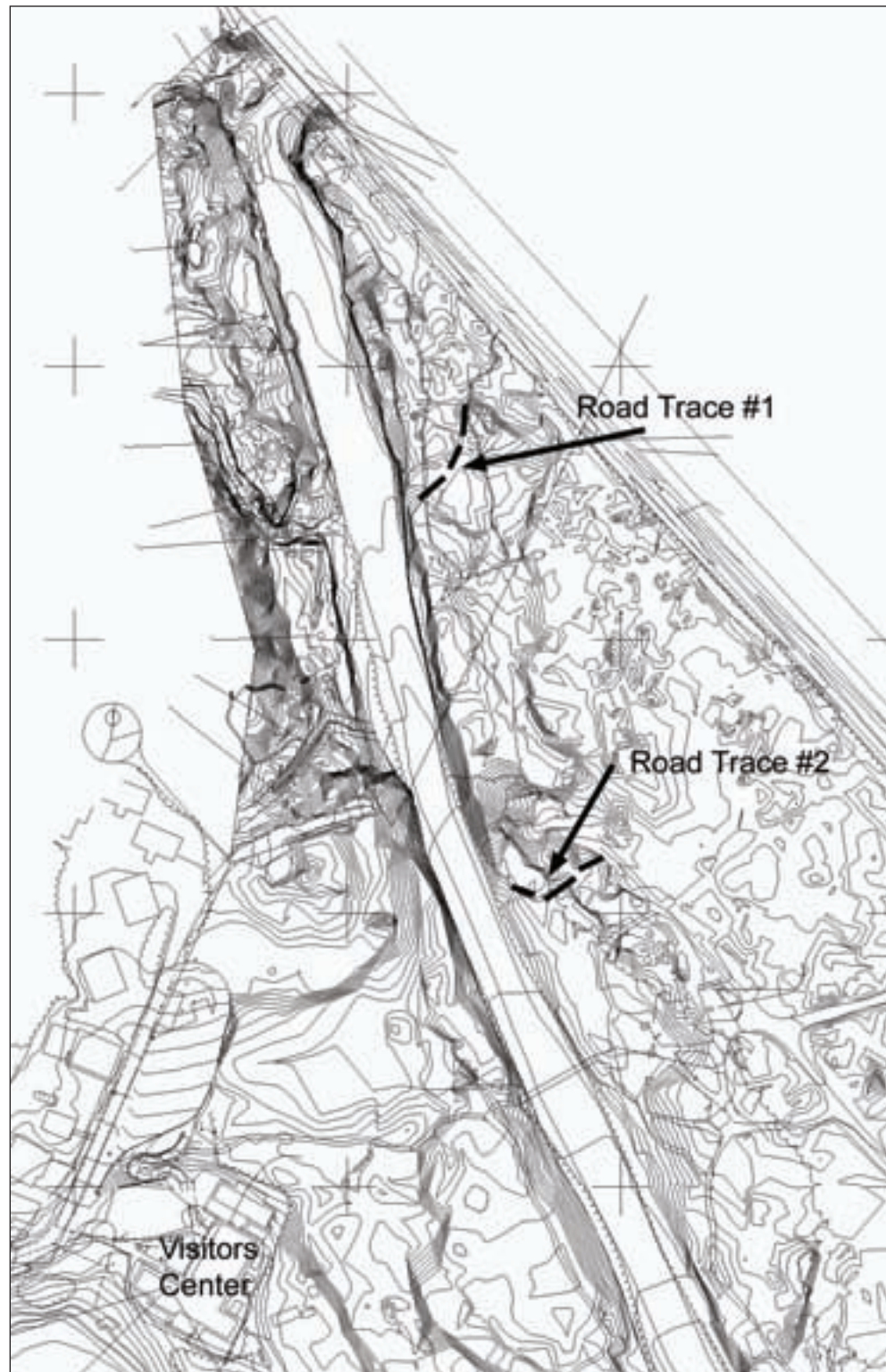


Figure 5-34. Location of road traces noted during inventory in Survey Unit D.

the survey unit. There are no known historical associations for this object. The test at ST-F1011 resulted in the recovery of 28 amber curved glass fragments. These are likely from a single modern beer bottle and probably associated with the modern picnic area where consumption of alcohol is permitted. A clear glass marble with small bubbles and red and white swirls was collected at ST-F932, Lev. 2 (20-40 cm) and is probably a 20th century artifact. Finally, a 2 inch diameter cardboard can rim fragment was collected ST-F1013, Lev. 1 (0-20 cm). This is also associated with the 20th century.

Eleven shovel tests encountered charcoal deposits (Figure 5-19). Six of these (STs F891, F917, F919, F926, F983, F1009) were not considered extensive or concentrated enough to suggest the possibility of association with a feature or extensive midden. Five tests (F961, F963, F970, F972, and F-1 South Trench) revealed charcoal strata similar in thickness and appearance to charcoal concentrations discovered on the west side of the Indian River and estimated to be elements of summer fish camps. These are all located in the general vicinity of a prehistoric fire hearth salvaged from an eroding riverbank in 1992. Charcoal from that feature returned an uncalibrated date of 390±50 BP (2σ calibration AD 1430-1645) (see Volume II, Section 2).³³

Charcoal samples were collected from all 2007 charcoal-bearing tests with five samples submitted for radiocarbon dating. Analysis results demonstrate long term use of this locality with uncorrected dates of 310±100 BP (associated with a stone assemblage at west margin Area F Depression), 520±100 BP (ST-F970), 1170±100 BP (ST-F963), to 1820±120 BP (ST-F972), and 1860±120 BP (F-1 South Trench) (see Volume II, Section 2). The 2σ calibrated date ranges for the shallow charcoal layer outside of and on the west margin of Depression F-1 vary from as early as AD 1422-1697 to as late as AD 1917-1952. The date ranges most likely to be correct are AD 1422-1697 and AD 1725-1814 occupying 80.5% and 12.6% of the relative area under the distribution, respectively. The radiocarbon date for ST-F970 has two 2σ corrected date ranges: AD 1278-1526 and AD 1556-1632. The earlier date, occupying 90.4% of the area under the distribution is probably the correct range here. The 2σ corrected date range for the sample from ST-F963 is AD 661-1024. Radiocarbon dated charcoal from ST-F972 has four calibrated age ranges varying from 86-79 BC to AD 483-533. The range most likely to be correct is 54 BC-AD 443 in that it occupies over 97% of the area under the distribution. The 2σ corrected date ranges for the F-1 South Trench sample (from a shovel test about 1 m south of Depression F-1) are 161-132 BC and 117 BC-AD 424 with the latter range being most likely correct in that it occupies over 98% of the relative area under the distribution curve.

Together, these dates indicate this location was occupied at least intermittently from the perhaps as early as 54 BC to the historic era; that is, from the terminal Middle Period to Late Periods of the Northwest Coast cultural sequence.³⁴ They provide hard physical evidence supporting Herman Kitka's identification of this general area as the place where the Kiks.ádi had a salmon fishing camp dating from the time of their encounter with the frog people to the late 19th century.³⁵

Two features were identified during the 2007 shovel testing in Survey Unit F. One of these, designated Depression F-1 (Figure 5-35), may be the same as a depression mentioned by Pollnow in her 2006 shovel test inventory report. She provided no information about size or specific location, however.³⁶ This particular depression is



Figure 5-35. Depression F-1, view to north.

located $7\frac{1}{2}$ m north of the Russian Memorial Trail about halfway between the Memorial and the Indian River footbridge at a point where the trail takes a sharp turn to the southwest. It is 3 m long (northwest-southeast), 2 m wide, and 87 cm deep although berms on the southwest and northwest margins make the base of the depression seem even deeper (1.2 m). Water worn cobbles up to 40 cm in diameter were visible at the surface in intervals around the margins of the depression. Probing with a chaining pin and clearing the humus from an irregular 3 m x 1 m area (Area F Depression 1 Test) on the northwest side suggested the depression was almost entirely bounded by cobbles extending up to 60 cm from the depression edge in some places. Except for the cobbles, Depression F-1 is similar in form to Depressions A-1, A-2, and A-3 in Survey Unit A.

A second feature composed of two large concrete bridge abutments (Figure 5-36), technically located between Survey Units F and A, was recorded in the Indian River approximately 160 m downstream from the park footbridge; i.e., in approximate alignment with Cross-over Trail #1. One of the concrete blocks is 1.4 m x 1.0 m x 2.4 m and has a corner broken away. The other, partially buried in the river gravels, is 55 cm x 1.0 m in size. Large river cobbles were used in the concrete mixture. While the abutments are located in the general vicinity of a late 19th century suspension footbridge and early 20th century vehicle bridge, those bridges had rock-filled log crib abutments. The old wagon bridge, located upstream from the footbridge, was destroyed after its massive rock footings washed out in 1942. This feature may be a remnant of a temporary vehicular bridge constructed by the Navy within a month of the flood or abutments associated with the vehicular bridge for the old road from the Cottage Community to the Russian Memorial.³⁷

One culturally modified tree, CMT #4, was identified in Survey Unit F (Figure 5-21) between the Russian Memorial Trail and the Old Highway Trail about 118 m north of the Russian Memorial. The tree, a red alder, is 1.3 m in circumference and has had two short board steps nailed to its northwest face. The lower step is 80 cm above the ground surface and the upper plank is 1.34 m above the ground. The modifications may have been made to access a hunter's tree stand although a stand is no longer evident.



Figure 5-36. Concrete bridge abutments in the Indian River.

¹Shovel tests were numbered sequentially and dug in their numerical order. Testing began in 2005 in Survey Unit B, the survey unit closest to the Visitor Center, and continued through the first half of the 2007 field season. Tests in Survey Unit B were designated ST-B001 to ST-B190. Survey Units A-D were explored in 2006 after Unit B was completed with tests there registered as A191-A454, C455-C531, and D532-D743 (ST 744 was not dug). Survey Unit E was investigated in 2006 and 2007 with tests numbered E745-E871. The north end of this survey unit used test transects but the rest of this unit had large swampy areas with much of the (somewhat) higher and drier portions so obstructed with downed trees that shovel tests were simply placed in spots where a test could be dug. The same is true for Survey Unit F which was tested in 2007 (tests F872-1021). In some cases, where additional tests were required in areas already marked with numbered flags, the new dig spot was labeled the same as the nearest numbered test with the addition of the suffix a, b, c, etc.

² Betts 1999, p. 178-179.

³ Mobley 1999.

⁴ Betts 1999, p. 179.

⁵ Chaney et al. 1995, Maps 1, 6.2.8 and 6.2.9.

⁶ Basok 2005.

⁷ Chaney et al 1995, Map 1.

⁸ White and Munhall 1977:23.

⁹ Hackman and Adams 2006.

¹⁰ Smith-Middleton and Alanen 1999:59; Betts 1999:157.

¹¹ Chaney et al. 1994, p. 138-139.

¹² Foote 2008; Gish 2008.

¹³ In the annual report for 2005 (Hunt et al. 2006, p. 22), this depression was referred to as Activity Area #2 and “Small Depression”. With identification of smaller depressions in the general vicinity, this depression came to be called Depression A1 in subsequent annual reports.

¹⁴ Betts 1999, p. 157.

¹⁵ Antonson and Hanable 1987, pp. 109-110; War Department 1940a, b; Department of the Army 1947.

¹⁶ Chaney et al. 1995, Map 1.

¹⁷ Smith-Middleton and Alanen 1999, pp. 55-56.

¹⁸ Chaney et al. 1995, pp. 136, 138, Map 3.

¹⁹ Chaney et al. 1995, Maps 6.2.8 and 6.2.9.

²⁰ This CMT is the same as Chaney et al.’s CMT#1 (1995, p. 139, Map 3).

²¹ CMTs #7-8 are the same as Chaney et al.’s CMTs#7-8 described in 1995, p. 139, Map 3.

²² Betts 1999, p. 155; Smith-Middleton and Alanen 1999, pp. 54, 59, 61.

²³ Griffin 2000; Smith-Middleton and Alanen 1999; Thornton and Hope 1998, Figure 5.

²⁴ This is the same tree identified as CMT #3 by Chaney et al. 1995, p. 139, Map 3.

²⁵ Chaney et al. 1995, Map 1.

²⁶ Putnam 1965, p. 176.

²⁷ Smith- Middleton and Alanen 1999, pp. 55-56.

²⁸ Pollnow 2006.

²⁹ Lehner 1988, pp. 419-427.

³⁰ Pollnow 2006, pp. 9-10.

³¹ *ibid.*

³² This large stump was referred to as Tree Stump (S_1) in Pollnow’s report and T_1 in her UTM data file.

³³Thorsen and Thorington 1992.

³⁴Moss 1998a, p. 92.

³⁵Thornton and Hope 1998, p. 69-70.

³⁶Pollnow 2006.

³⁷Antonson and Hanable 1987, pp. 44, 110; Smith-Middleton and Alanen 1999, pp. 31, 38, 55-57.

CHAPTER 6

2007-2008 TEST EXCAVATIONS

2007 FIELD SEASON

Once shovel testing was completed, attention turned to test excavations, the purposes of which were to clarify the cultural and temporal associations of various deposits as well as determine the function of the occupations. Before the field season began in 2007, the inventory data for 2005 and 2006 was reviewed to identify places in the park whose characteristics held greatest promise for providing the desired information. This resulted in the selection and prioritization of locations judged to have potential for prehistoric and historic features and artifact concentrations (Figure 6-1). Eleven locations were selected among which data indicated four were historic, one was multi-component prehistoric and historic, and six were associated with the prehistoric period. Excavation units were of various size with 1 m x 1 m units the most common. Unit margins were typically oriented to cardinal directions and excavations were undertaken using arbitrary 20 cm levels. Fill excavated from each level was passed through ¼ inch hardware cloth to enable artifact recovery. NPS-MWAC Excavation Unit Forms were completed for each level in each excavation unit. Stratigraphic profiles and plan view drawings were made to scale on graph paper for test excavations where there actually was stratigraphy. In many instances, however, the stratigraphy of a test area was simply humus over beach gravels. As per the shovel test inventories, test excavations were documented via the field director's daily log of crew activity, descriptions and sketch maps of inventoried areas, as well as black-and-white and color film photo documentation along with digital photographs of inventoried locales, located sites, and other documentary photographs as necessary. The locations of all test units were documented with a GPS unit as described earlier in this report.

Survey Unit A

Test Unit (TU) A227

This test unit was positioned at the location of ST-A227 where, in 2006, a wooden platform had been revealed (Figure 6-2) (see Chapter 5). Wire nails and a sauce label of foil and cellophane suggested this feature might be an element of the U.S. Army's temporary 1942 encampment. The conclusion from the limited data was that this represented a World War II-era plank floor, possibly the remnant of a 1942 Army mess hall or barracks.

In 2007, the shovel test location was quickly re-located and a unit approximately 2 m north-south by 1 m east-west was excavated. Excavation was by trowel only. Excavation levels were not used nor was excavated fill screened. After a short time of troweling the planking was re-identified at 15 cm bs and was found to incorporate only 5 boards. Four of these were about 1 m in length with the remaining specimen about ½ m long. Roots running under and over the planking had bent and twisted them somewhat. Although two additional wire nails were encountered, there were no

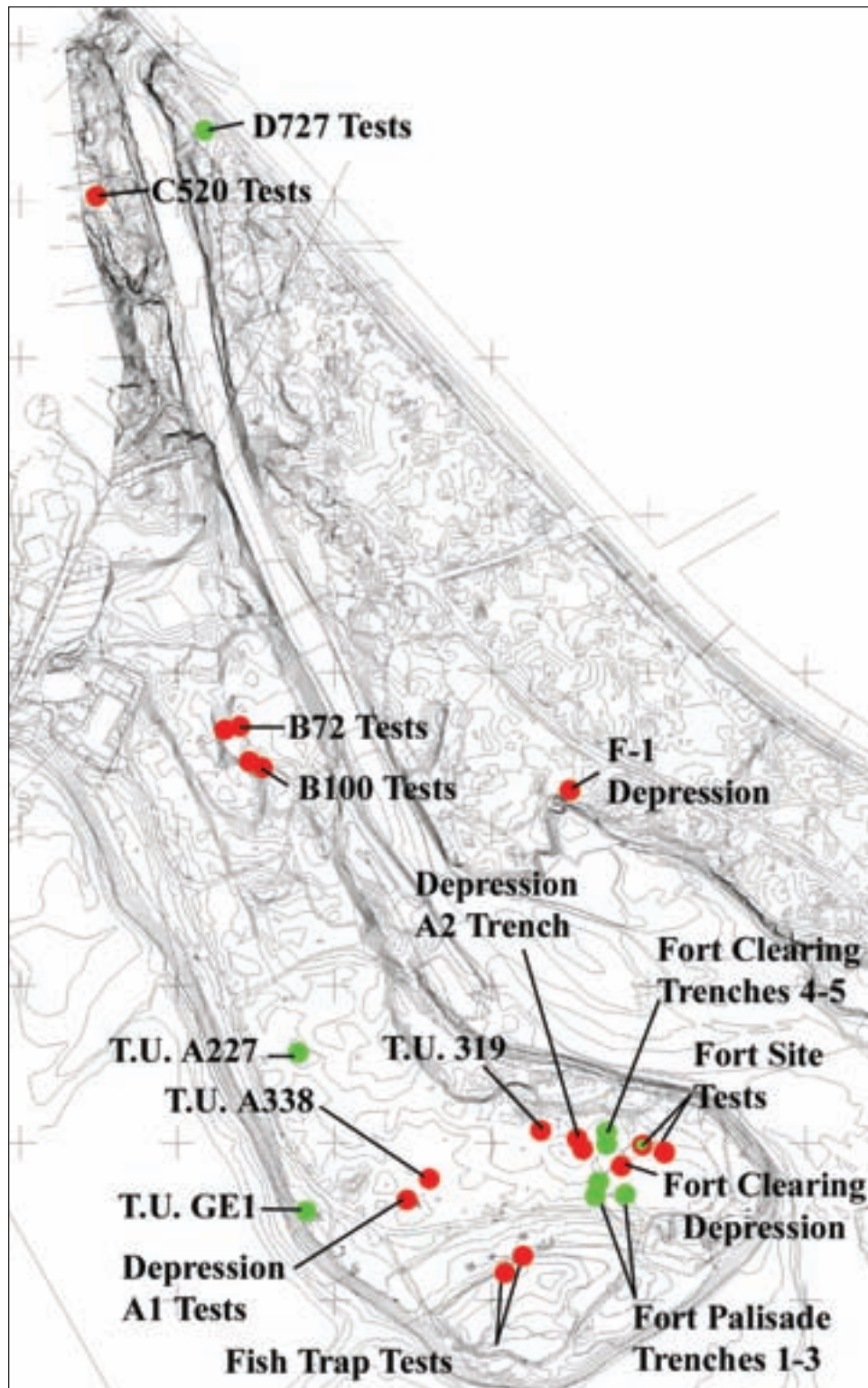


Figure 6-1. Historic (green) and prehistoric (red) locations selected to test during the 2007 field season.

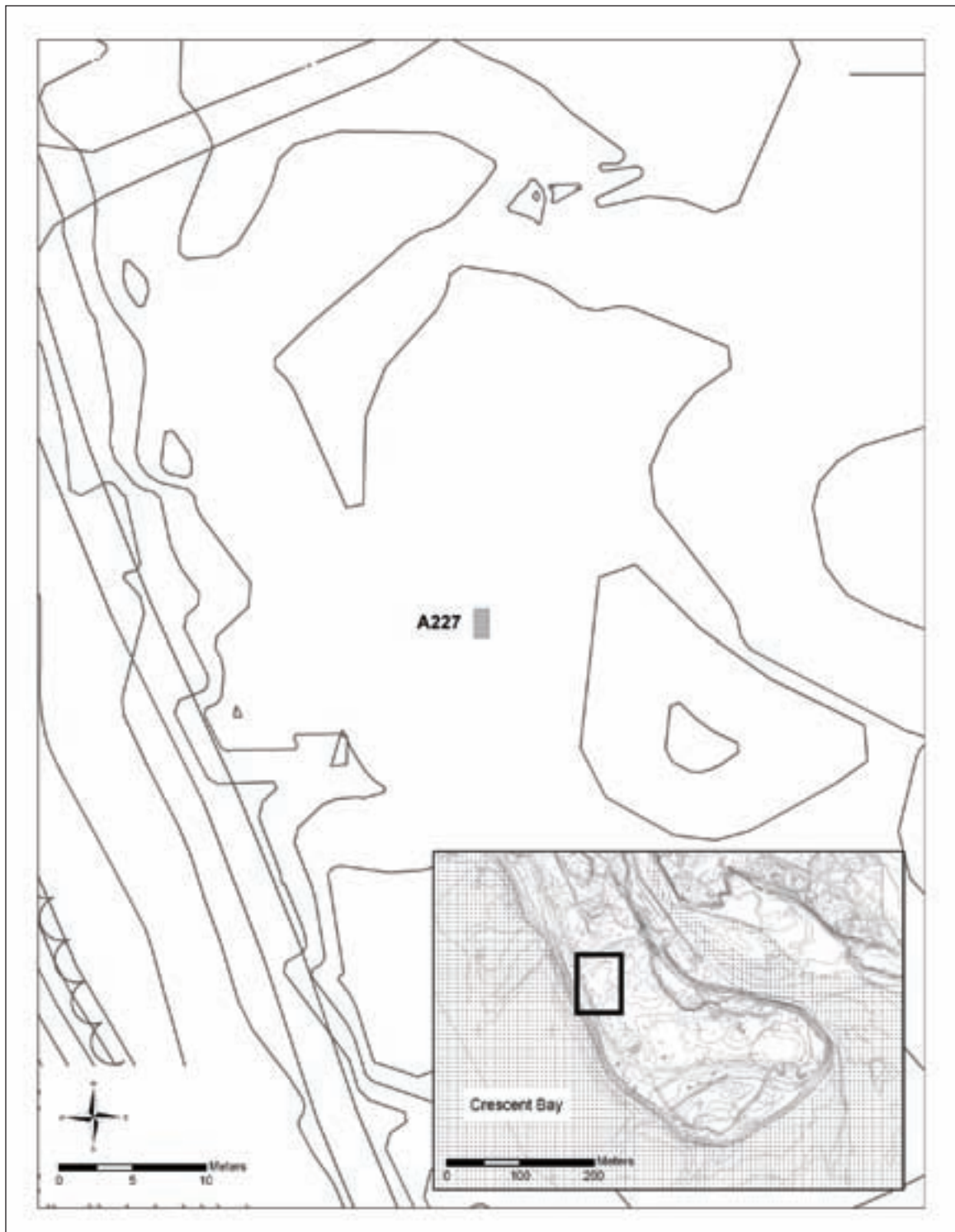


Figure 6-2. Location of Test Unit A227.

supporting footers under the boards. Two of the trees growing over the north end of the planks appeared to interrupt the planks but testing immediately north of the trees failed to identify additional board fragments. It was concluded that the feature was a secondary deposit and represented a fragment of a board platform or floor which had been disposed of in the woods sometime in the middle-to-late 20th century.

TU A319

In 2005, the metal detection team identified a mass of charcoal (referred to earlier in this report as 2005-Feature 2) about 50 meters west of the north side of the Fort Clearing. Although the origin of the metal reading that led to the discovery of the charcoal mass was not determined, the presence of the charcoal was deemed important enough to require additional investigation. As a result, the team recommended that the feature be tested.

The following year (2006) this area was shovel tested and a mass of charcoal was identified at ST-A319 in approximately the same location as 2005-Feature 2. The find was tentatively considered a possible charcoal and cobble feature. A charcoal sample from level one (0-20 cm bs) of this test returned a date of 220 +/- 70 BP. This had four 2 σ calibration date ranges with AD 1616-1892 being the most likely to be correct (see Chapter 4 and Volume II, Section 2). Together, the possible feature, extensive distribution of charcoal in the vicinity (at STs A316, A347, A348, and A349), and late radiocarbon date suggested the possibility of a terminal Late Period to Historic Period occupation. No prehistoric artifacts were recovered at or in the vicinity of ST-A319. It should be noted that this extensive area of charcoal occurs at the center of the known distribution of 1804 battle-related artifacts and the late radiocarbon date did not exclude the possibility that these deposits were associated with that battle. Finally, the proximity of ST-A319 with 2005-Feature 2 suggests that ST-A319 and 2005 Feature 2 are the same or part of the same charcoal deposit.

In 2007, the decision was made to relocate ST-A319. After excavating ten shovel tests, a thick charcoal deposit was ultimately identified about 5 m south of the GPS-indicated location in an area bounded by tree falls. This was taken to be the approximate location of ST-A319 and a 1 m x 2 m (east-west) test unit (TU A319-1) was established at the margin of the test hole (Figure 6-3). Excavation was halted at -50 cm at which point the crew reached the level of sandy beach gravels and cobbles. A 1 m x 1 m test unit (TU A319-2) was subsequently opened at the west end of TU A319-1 and excavated in the same manner. Stratigraphically, these units displayed (from top to bottom) a 15-20 cm thick layer of reddish brown (woody) rooty humus, a 1-2 cm thick layer of dark brown loamy gravelly charcoal, and a tan sandy gravel and cobble layers (Figure 6-4). The upper two layers thickened from east to west.

A lined china marble (Cat. 24230; Figure 6-5) and a 20th century cats-eye marble were recovered from level 1 (0-20 cm bs). Lined chinas date to ca. 1846-1870.¹ These objects suggest the immediate area around TU A319 was a clearing from mid-1800 through the early 20th century.

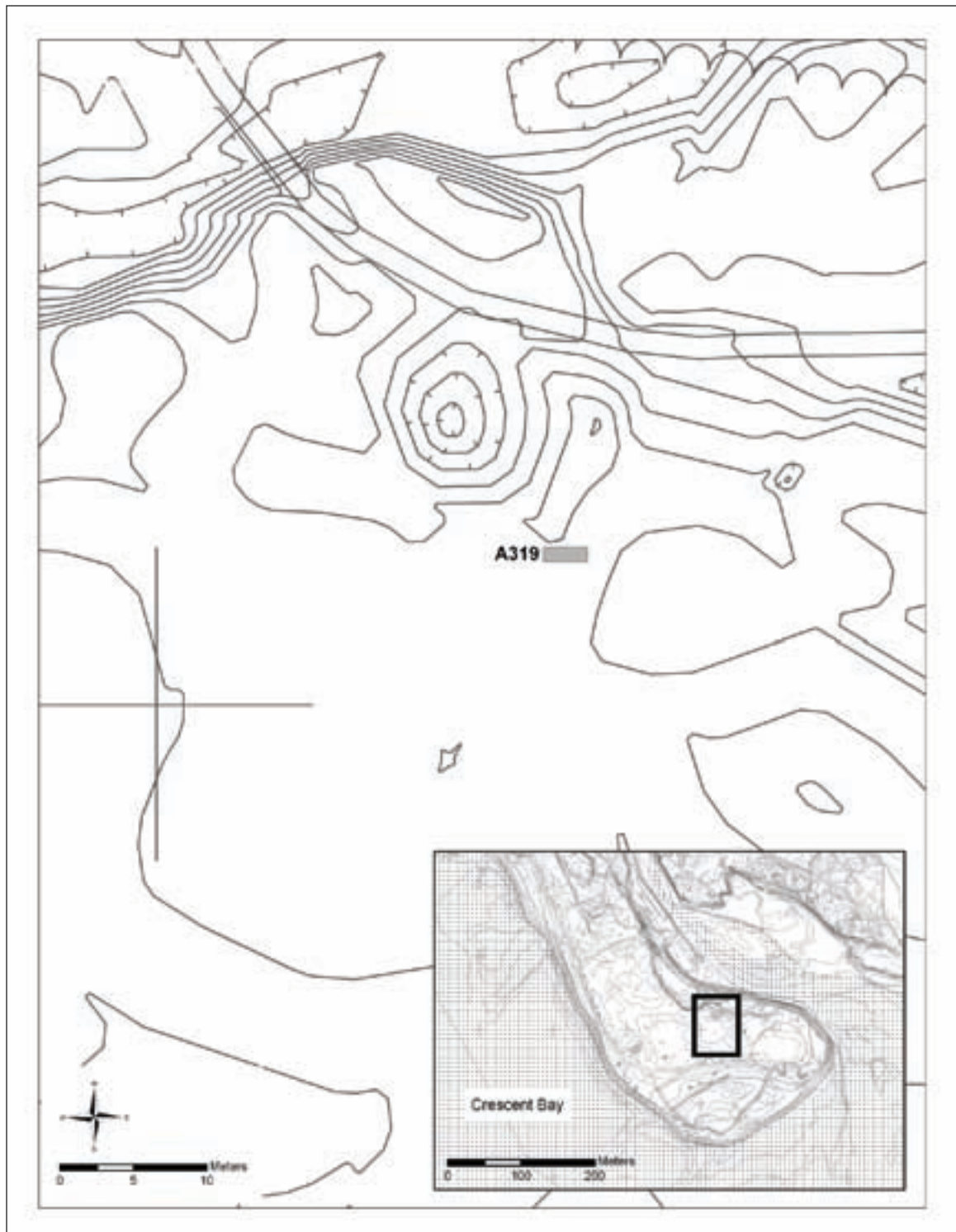


Figure 6-3. Location of Test Unit A319.

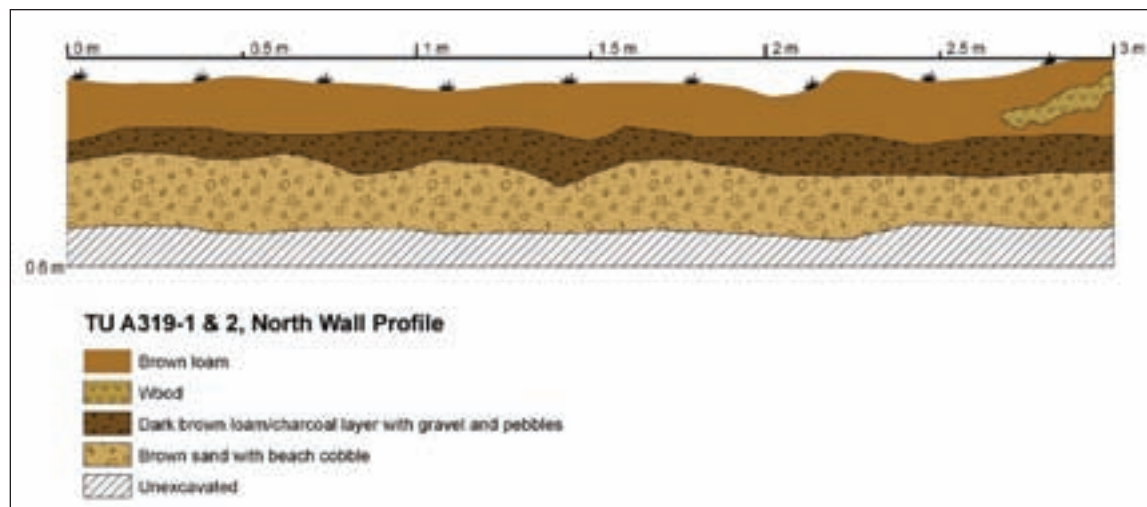


Figure 6-4. Stratigraphic profile of TU A319's north wall: A = humus and decomposed wood; B = dark brown loamy gravelly charcoal; C = a tan sandy gravel and cobble layers.

Four charcoal samples were collected, two from TU A319-1 and two from TU A319-2 (see Volume II, Section 2). Three were submitted for radiocarbon analysis. One charcoal sample from the 0-20 level returned a date of 230 ± 100 BP which has two 2σ calibration age ranges: AD 1476-1893 and AD 1906-1953. The earlier age range occupies 89.4% of the relative area under the distribution curve and is the most likely to be correct. Nevertheless, it does not address the issue as to whether the charcoal bed is of prehistoric or historic derivation. A second charcoal sample from that same layer returned a date of 380 ± 100 BP. This had five 2σ calibrated age ranges with the date range most likely to be correct being AD 1391-1681 in that that range occupies 93.8% of the relative area under the distribution curve. A third charcoal sample from 20-25 cm bs returned a date of 366 ± 70 BP. This had a single 2σ calibrated date range of AD 1430-1654. Together, these last two dates indicate a terminal Late Period occupation. The deposit is conditionally interpreted as a pre-European contact fish camp or summer house although this cannot be confirmed without more extensive archeological investigation.

TU A338

During shovel testing in 2006, a possible charcoal and cobble feature was identified in the second level of ST-A338. A charcoal sample from this level was submitted for analysis and returned a date of 390 ± 40 BP with three 2σ calibrated date ranges varying from AD 1437 to AD 1634 (see Volume II, Section 2). Prehistoric artifacts recovered from nearby shovel tests included a basalt flake at ST-308 (located 20 m west of ST-A338) and a pebble tool from ST-365 (located 12 m south of ST-A338).

The location was quickly relocated in 2007 within a basin-shaped surface depression. The first test unit, TU A338-1, was laid out as a 1 m x 2 m unit with its long axis slightly (7°) west of north to allow the unit to fit between two fallen trees (Figure 6-6). The ground surface at the north end of the unit was about 38 cm higher than the south end. Subsequently, a 1 m x 1 m unit designated TU A338-2 was opened on the south end of the first test. At approximately 50 cm bs, a line of angular rock was encountered. Light colored gravel on the south margin of the stones and reddish brown woody loam and

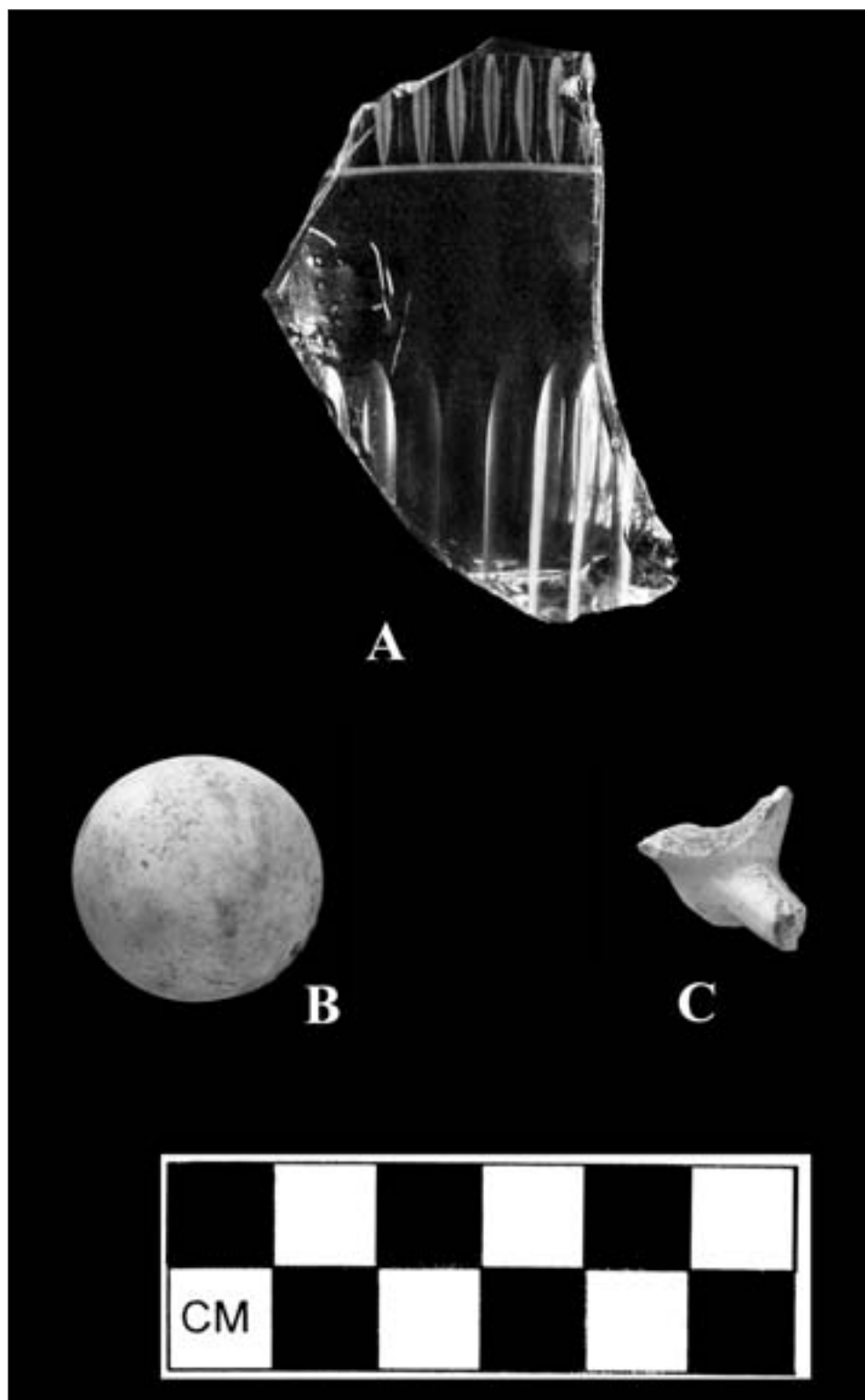


Figure 6-5. Historic artifacts recovered in 2007: A) tumbler fragment (Cat. 24156); B) lined china marble (Cat. 24230); and C) kaolin pipe bowl and spur (Cat. 24291).

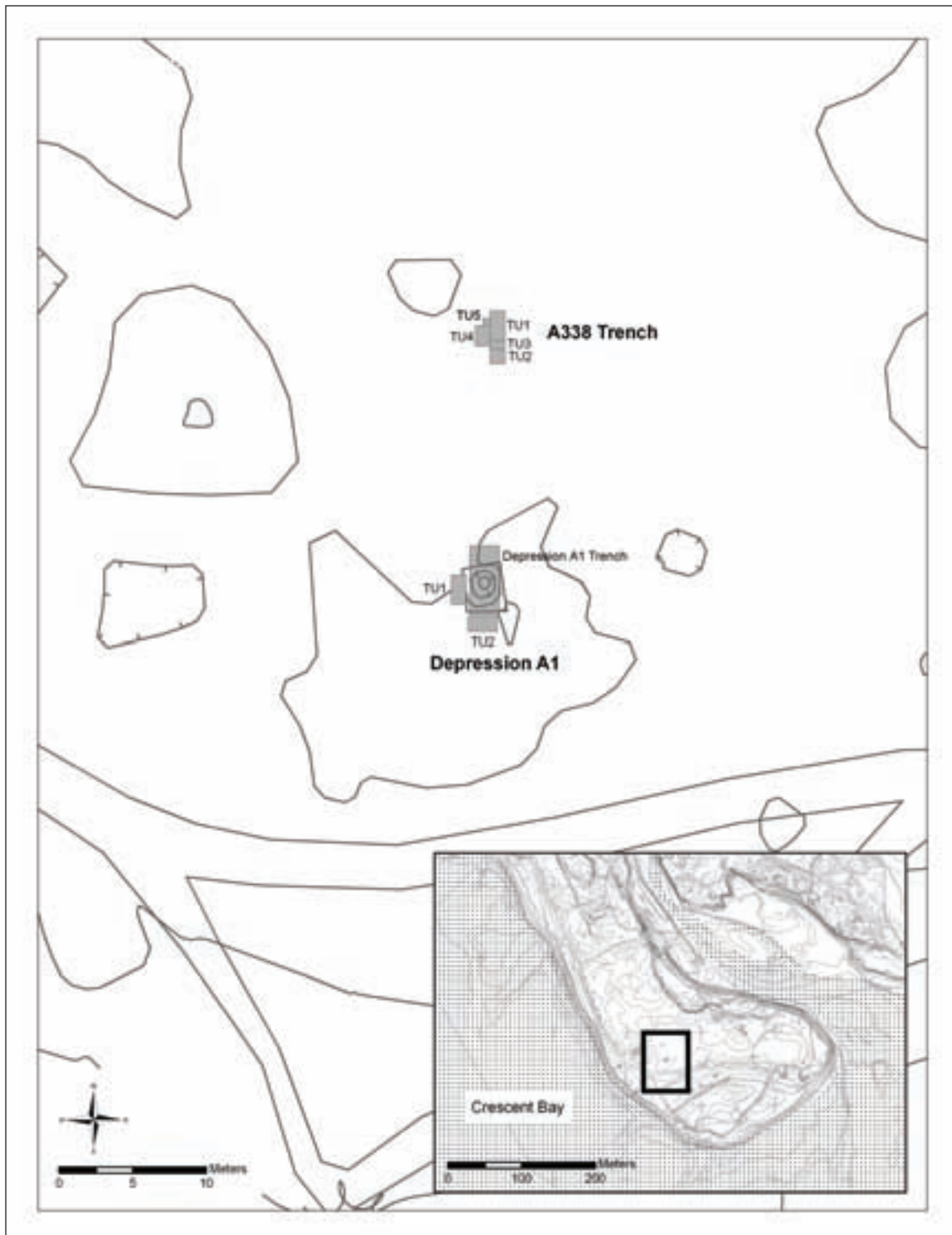


Figure 6-6. Locations of test units at TU A338 and Depression A1.

charcoal on the north side suggested this rock alignment marked the edge of a feature. An additional 1 m x 1.4 m unit (TU A338-3) was opened at the west margin of TU A338-1 to follow the feature margin. The feature edge turned at a near right angle at the juncture of the two test units. Eventually, the feature proved to be a square, rock-lined hearth oriented 50° east of north (Figure 6-7). The feature is 1.36 m northwest-southeast x 1.38 m northeast-southwest. The charcoal-filled hearth was created by digging into the beach gravels and lining the basin-shaped excavation with rounded cobbles. The depth of the hearth's base varies from about 50 cm bs at the margin to about 60 cm bs near the center. Larger cobbles and split cobbles were set on end around the perimeter, the tops of which are about 10 cm above the perimeter of the feature's base. The 2006 shovel test ST-A338 had penetrated the feature just east of its center. Immediately above the stone was a 5-10 cm thick layer of charcoal surmounted by a reddish brown layer of rotted wood and humus. On the south side of the feature, the stratigraphy consisted of (from top to bottom) a 25 cm thick layer of dark brown humus largely composed of decayed wood, an intermittent 5 cm thick layer of light colored clayey sand, a 5-15 cm thick layer of dark brown to black gravelly charcoal, and a gray-brown loamy sandy gravel at the base (Figures 6-8 to 6-9). The layers of charcoal and rotten wood rise in elevation from the feature in all directions and may represent the living surface of a structure. In fact, the depression visible on the surface appears to be a reflection, at least in part, of the feature below. Four shovel tests placed 4.2-9.8 m west of TU A338 in a similar linear depression found no like features and further indicated that the charcoal and woody layers above the hearth in TU A338 do not extend this far west.

Two prehistoric objects were recovered during the excavation of TU A338. The first is a possible split pebble tool of basalt (Cat. 24248; Figure 6-10) recovered from the 40-60 cm bs level of TU A338-1. The second is a fragment of fire-cracked basalt (Cat.

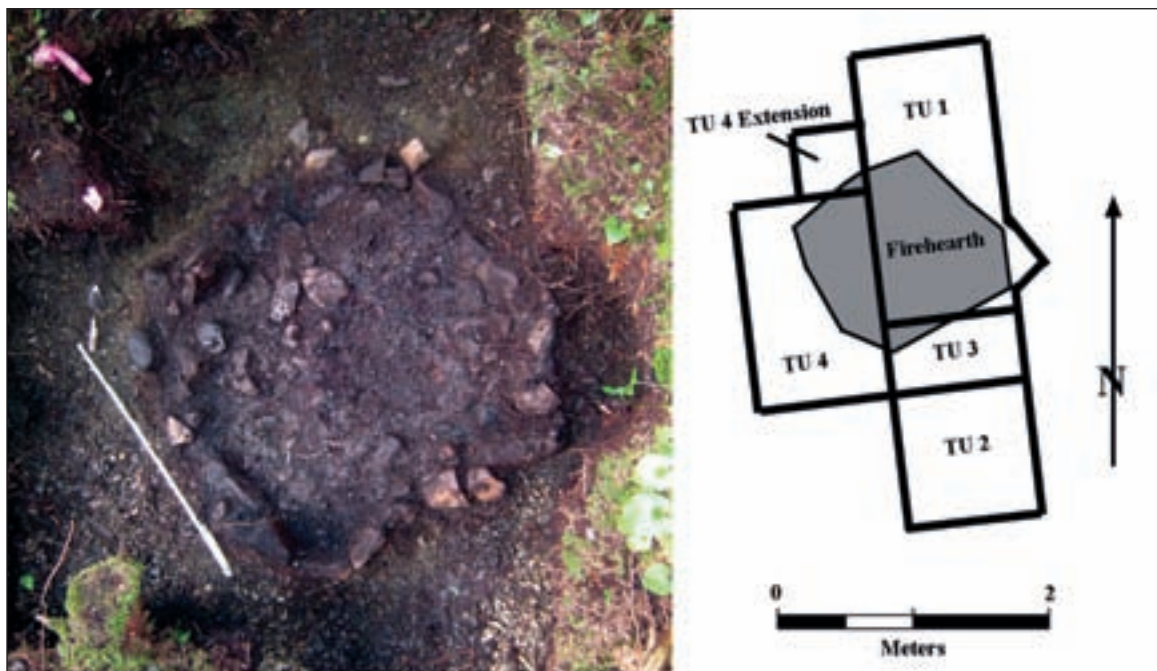


Figure 6-7. Stone-lined square fire hearth discovered in TU 338 (trowel points to north) and planview map of excavations showing hearth location.

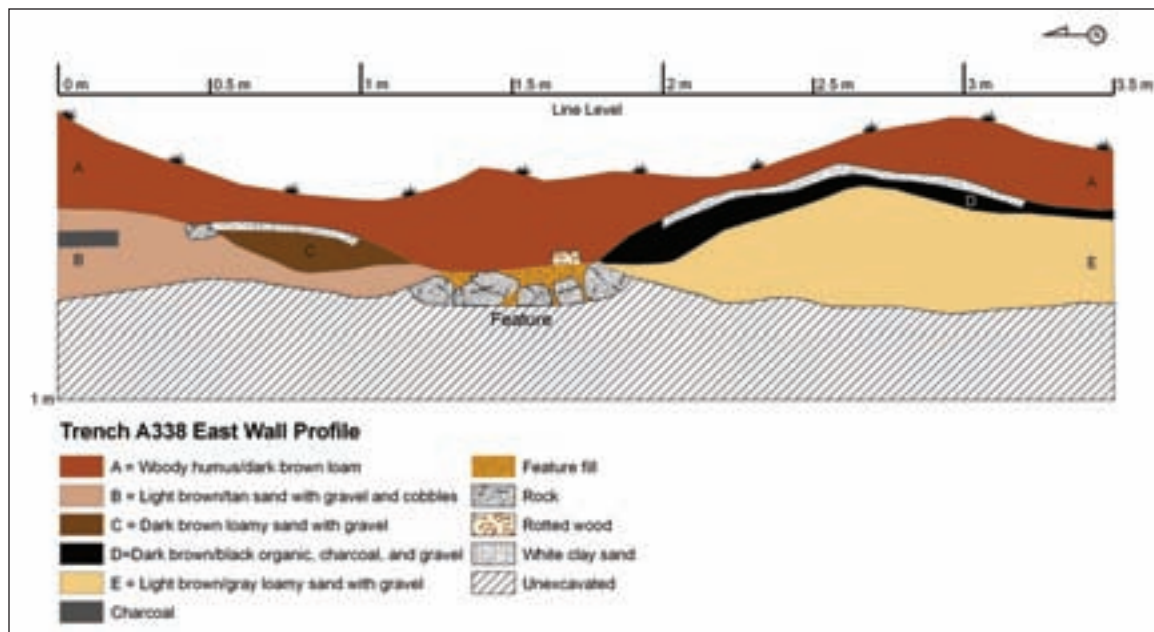


Figure 6-8. Stratigraphic profile of the east wall of Trench A, TU A338.

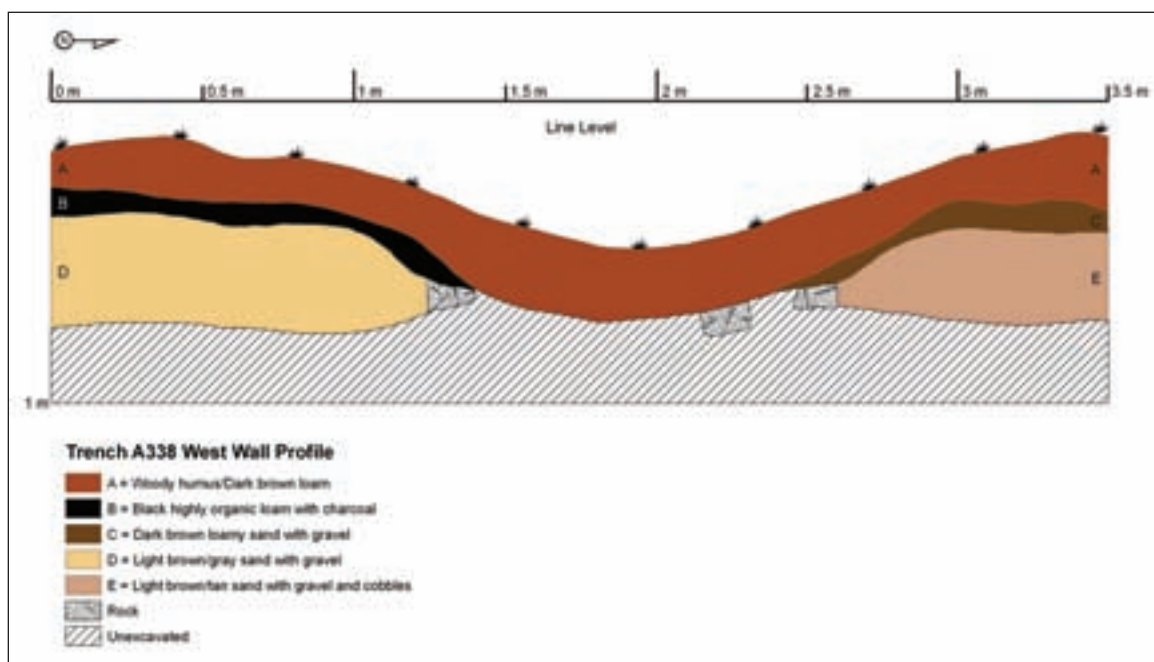


Figure 6-9. Stratigraphic profiles of the west wall of Trench A, TU A338.



Figure 6-10. Prehistoric artifacts recovered in 2007: obverse and reverse sides of tested graywacke cobble (Cat. 24247); B, B') obverse and reverse sides of graywacke flake (Cat. 24246); C, C') obverse and reverse sides of graywacke flake (Cat. 24250); D, D') obverse and reverse sides of split pebble tool (Cat. 24245); E, E') obverse and reverse sides of split pebble tool (Cat. 24248).

24249) discovered in the east corner of the fire hearth. The only other materials identified during the excavation were small shell fragments encountered outside the perimeter of the hearth at 40 cm bs in the beach gravels. Although these were not collected, Frederica de Laguna's informants indicated that broken shells were sometimes included in the fireplace fill to make the hearth more attractive (de Laguna 1972:297).

The prehistoric nature of the feature and the charcoal-filled stratigraphic layer above it was further confirmed by additional radiocarbon analysis. Charcoal samples collected from above, next to and within the stone feature returned dates of 1000 ± 100 , 700 ± 100 , and 830 ± 100 BP respectively (see Volume II, Section 2). Two sigma (2σ) calibrated age ranges vary from AD 782-1434. The date ranges most likely to apply to this hearth, occupying 96% or more of the distribution curve, are AD 856-1228, AD 1153-1434, and AD 1015-1310, respectively. The common overlapping range for these dates is AD 1153-1228.

In summary, the rectangular fire hearth superimposed by the strata of charcoal and decomposed wood combined with the radiocarbon dates and possible artifacts suggest this is the site of a prehistoric structure. Radiocarbon dates vary but are interpreted as indicating an occupation sometime during the 11th to 13th centuries AD with the most likely occupation being between the late 12th and early 13th centuries AD. Assuming the hearth occurs at the center of a structure, the building may be less than 8 m in width. Information on Tlingit structures provided by George Emmons and Frederica de Laguna indicates that Tlingit summer houses were small and roughly built in comparison to winter lineage houses.² These buildings often had no flooring but, instead, were built directly on the ground. The exterior covering was either slabs of bark or, in the case of the Sitka Tlingit, boards removed from the winter house and transported to the site. Structural frameworks were lashed together with spruce root or constructed as a permanently joined frame. The structures functioned both as smokehouse and single family dwellings occupied during the fishing season. Hoonah summer structures were approximately 25 ft long (7.6 m) x 15-20 ft wide (4.6-6.1 m) at the time of contact which would be within the perceived range of this structure.

Depression A1 Tests

Depression A1 (Figure 5-23) lies within a pre-AD 1500 upraised beach meadow which had become a "young forest" by the turn of the 19th century.³ Depression A1 is similar in form, size, and depth, to a historic basement depression, an interpretation reinforced by the 2005 metal detection team's recovery of ten artifacts including forged nails, a salmon gaff, and a copper fragment, within a few meters of the depression. The location of these finds was referred to by the metal detection team leader as "Activity Area #2". In 2005 and 2006, shovel tests were dug at the margin of the depression and in its vicinity but no artifacts were recovered. The 2005 magnetic inventory identified a strong magnetic gradient anomaly located next to the depression that was interpreted as a possible historic iron artifact or a fire-related feature associated with the depression. The resistance data suggested a few square or rectangular anomalous areas interpreted as possible archeological features, two of which occurred along the east side of the grid in the proximity of the depression (see Chapter 4). Tribal elder Herbert Hope has identified this as the general location of past Kiks.ádi fish camps (see Figure 4-10).⁴

2007 testing next to the depression utilized the geophysical grid references to name and identify test unit locations. Two test units were opened (Figure 6-6). TU 4N 10E was a 1 m x 2 m (north-south) unit located on the west margin of the depression. TU 2N 13E was a 1 m x 2 m (east-west) unit positioned about 75 cm south of Depression A1. The goal of these excavations was to recover evidence relating to the depression's origin; i.e., was it of cultural or non-cultural derivation? Although both units were excavated to 60 cm bs, no artifacts or cultural features were identified. Stratigraphy in both consisted of a 12 cm thick layer of humus and dark brown sandy loam, 16 cm of the same fill with the addition of gravels and cobbles, 6-10 cm of dark brown sandy loam overlying gray loamy gravelly sand with some cobbles.

During the excavation of TU 4N 10E, wood had been noted in the unit's east wall. Subsequent to the excavation of these two units, a 2 m wide (east-west) x 4.7 m long swath (referred to as "Depression A1 Trench") through the depression was investigated. "Excavation" in this case refers to simply troweling away the humus to expose a layer of wood. The wood was found to start at the north margin of the depression and occurred only in the north half of the depression. The fill in the depression was very wet and easily compacted so excavators made a great effort not to walk or place their weight on the ground inside the trench. Unfortunately, the excavators could not help but trample on the east and west sides of the trench and this had an extremely adverse impact on the underlying, extremely soft wood remnants.



Figure 6-11. Overlapping wood layers in north end of Depression A1.

In general, individual wood elements (as far as they could be discerned) in the north half of the depression were wider than they were thick suggesting planking. The wood appeared to occur in two to three layers, the uppermost layer of elements varying in width from 7 cm to 15 cm and oriented southwest to northeast (Figure 6-11). Two fragments oriented north-to-south lay high on the upper edge of the trench and intruded into and (in one case) through the southwest-northeast oriented layer. A couple of fragments were oriented northwest-southeast. As was noted in the field director's log book, "with a little imagination, one might see [this accumulation of wood as] a wall that has collapsed from the NE and E side [of the depression]".⁵ A few small fragments of wood were noted in the south end of the trench. A wood-stained sandy loam was noted immediately under the wood layer with beach gravels below that. A north-south unmodified log fragment was

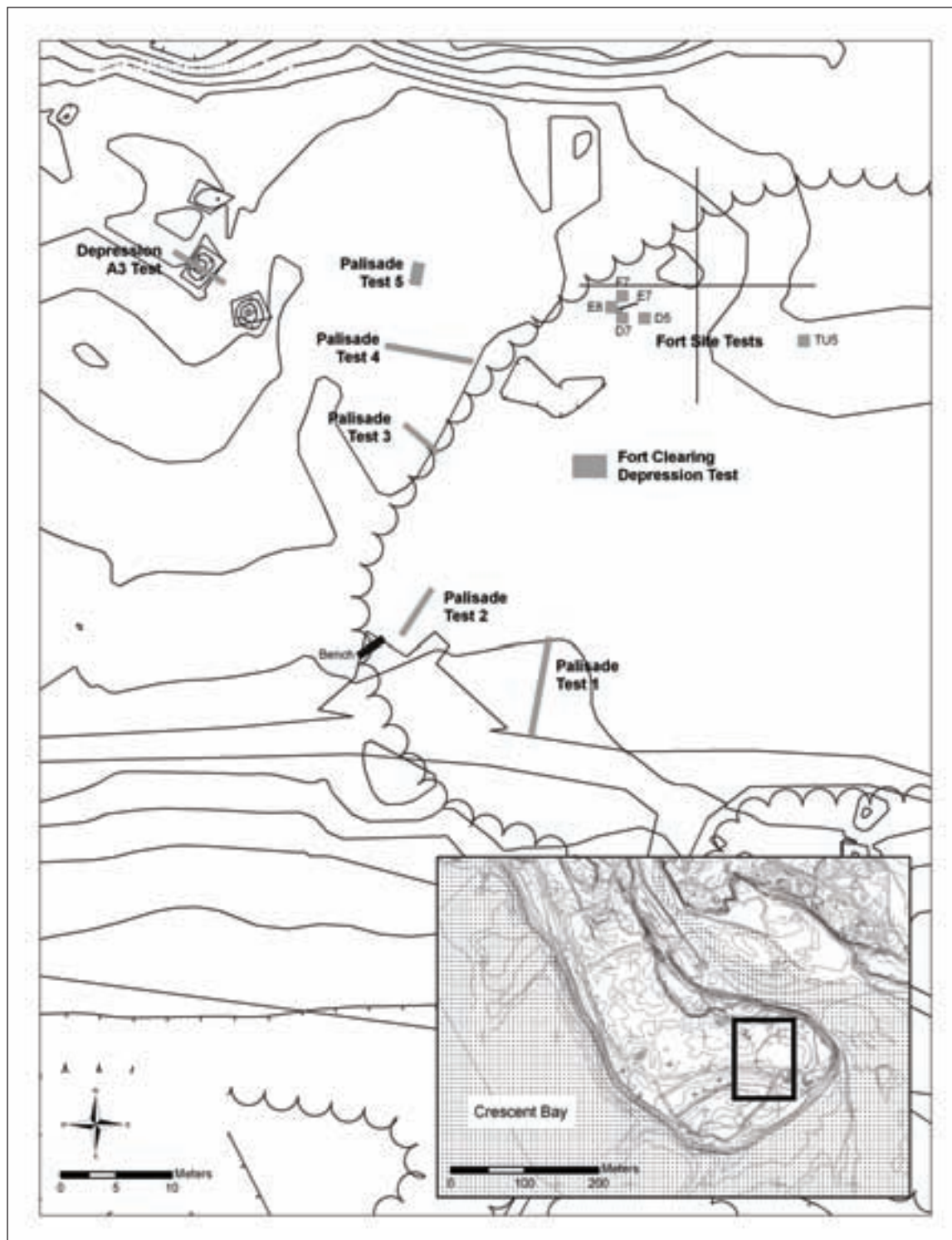


Figure 6-12. Locations of tests at Depression A3 (labeled "Trench") as well as tests in and around the margins of the Fort Clearing.

noted on the west margin of the depression. From this extended a southwest-northeast oriented log or possible board which displayed a squared, cut end. No artifacts were recovered as the wood layers were exposed.

In sum, the shape and size of Depression A1 suggests a structural depression, perhaps a basement or subfloor cache pit. Artifacts recovered in the vicinity of the depression by metal detection suggest an historic occupation. Test excavations, however, failed to recover any historic materials and wood lying at the base of the depression could not unequivocally be determined as of structural origin.

Alaska Regional Office Cultural Resources Team Manager Ted Birkedal has pointed out an intriguing possibility that this feature may represent a traditional Tlingit cache pit (personal communication, August 27, 2009). Birkedal indicated such pits could be as large as 13 ft square. Frederica de Laguna (1972:305) describes these features as depressions commonly dug behind the houses which served as the primary food storage area for all the families in a house. Pits were generally lined with planks and capped with a bark roof covered with mud. Roofs were arched like a Quonset hut or and constructed of bark and small poles or gabled using planks. The peak of the roofs could be as high as 5 ft above the ground with the pit dug a similar distance into the ground. The cache pits could have two stories, the lowest used for storage of dried fish and preserved meats which were not supposed to freeze and the higher story used for less perishable items such as dried berries. Birkedal also pointed out that Herbert Maschner (1992) has pointed out that such cache pits are more commonly associated with winter villages although such features do occur occasionally in summer fish camps. Interestingly, in this context, it should be pointed out that Depression A1 is located only about 15 m south of a feature interpreted as a Tlingit summer house (see the discussion for A338 above).

Depression A3 Trench

Depression A3 is located about 30 west-northwest of the west edge of the Fort Clearing. It is 1.8 m north of Depression A2 and has slightly raised earthen berms on its north and south sides (Figure 5-24). The berm between Depressions A2 and A3 was shovel tested in 2006 with no cultural materials recovered. While the origin(s) of the depressions remain uncertain, their similarity in size, orientation, and presence of berms on the north side of each suggest they are likely of cultural derivation. A large tree growing in the southeast corner of Depression A2 suggested the depressions may have been created sometime in the 19th century. Archeologist Roberts Betts, however, has offered that these depressions may be associated with the 1942-1943 Army occupation of the park.

In an attempt to gather data relating to the depressions' origin, a 50 cm wide trench was excavated across the short axis of Depression A3 (Figure 6-12). The 5.4 m long trench was divided into north and south halves with separate teams excavating each half using 20 cm arbitrary levels. In contrast to most other test excavations this field season, the excavated fill was not screened. Excavators were instructed to watch closely for artifacts and potential structural elements. Unfortunately, though excavation went to -80 cm bs, nothing other than beach gravels were exposed and no artifacts or structural elements were identified. Therefore, the ultimate derivation of the depressions remains

unknown. These may represent the remains of Tlingit cache pits as was hypothesized for Depression A1 earlier in this chapter.

TU GE1

This 1 m east-west by 2 m north-south test unit (Figure 6-13) was placed at the east margin of ST GE1d excavated in 2006. That shovel test produced a large assortment of artifacts including curved glass fragments, bottle bases, and an aqua glass stopper. Historic objects had also been recovered from north of Gun Emplacement (GE) 1 to GE2 to a depth of 60 cm bs. This debris was believed to represent shoreline trash dump possibly associated with late-19th to early-20th century visitors picnicking in the park. The purpose of the 2007 test was to recover additional artifacts and attempt to refine the dating of this area. Excavation utilized 20 cm levels and all fill was passed through ¼ in hardware cloth to accomplish artifact recovery. Stratigraphy in this location was found to slope toward the water and include (from top to bottom) a 10-15 cm thick layer of humus, a 1-17 cm thick stratum of tan gravel, 5-14 cm thick layer of gray gravel, and a 1-10 cm thick woody stratum lying on a basal layer of gray gravelly beach sand.

Artifacts (n = 250) were recovered from all four levels. The first level (0-20 cm bs) contained 118 objects including 116 fragments of 20th century bottle glass, a ferrous metal bottle cap, and a cut deer vertebra. Level 2 (20-40 cm bs) contained 90 objects among which were 83 fragments of 20th century bottle glass, 4 fragments of flat glass, 1 fragment of whiteware, a probable tin can represented by numerous tiny fragments of ferrous metal, 2 fish bones, and a wood fragment. Excavation of Level 3 (40-60 cm bs) resulted in the recovery of 22 artifacts. This included seven pieces of curved glass and 15 fragments of sheet metal (with two rivets). Level 4 (60-70 cm bs) produced 9 fragments of curved glass, 5 fragments of ferrous sheet metal, and 5 fish bones. No temporally diagnostic materials older than the 20th century were recovered from this unit. Thus, no new or expanded interpretation of this general area of deposition is forthcoming.

Fish Trap Tests

On June 14, 2007, the field team was visited by Sitka dentist Dr. Kenneth Cameron. Dr. Cameron, of Tlingit descent, had informed SITK Chief of Maintenance Randy Rodgers that his mother's family had used a fish trap in the park that remained in existence. After Rodgers informed the project director, Dr. Cameron was invited to come to the park at his convenience to point out the location of the fish trap and provide some background. During his visit, Dr. Cameron explained that his mother had told him that her family came to the park to catch salmon using two stone traps located at the south end of the peninsula. She was a very little girl at the time which would probably place the use of the trap in the early 20th century. His family's oral history has it that there were originally two stone traps but the trap at the mouth of the Indian River had washed away at some point. The second trap, on the south side of the peninsula, has been silted over since World War II and underlies the park trail loop commonly referred to as the Battlefield Trail. Cameron identified the large open D-shaped depression between the trail and the higher ground as the trap location (Figure 6-14). He also noted that he has found roughly worked stone tools and chipping debris along the trail route.

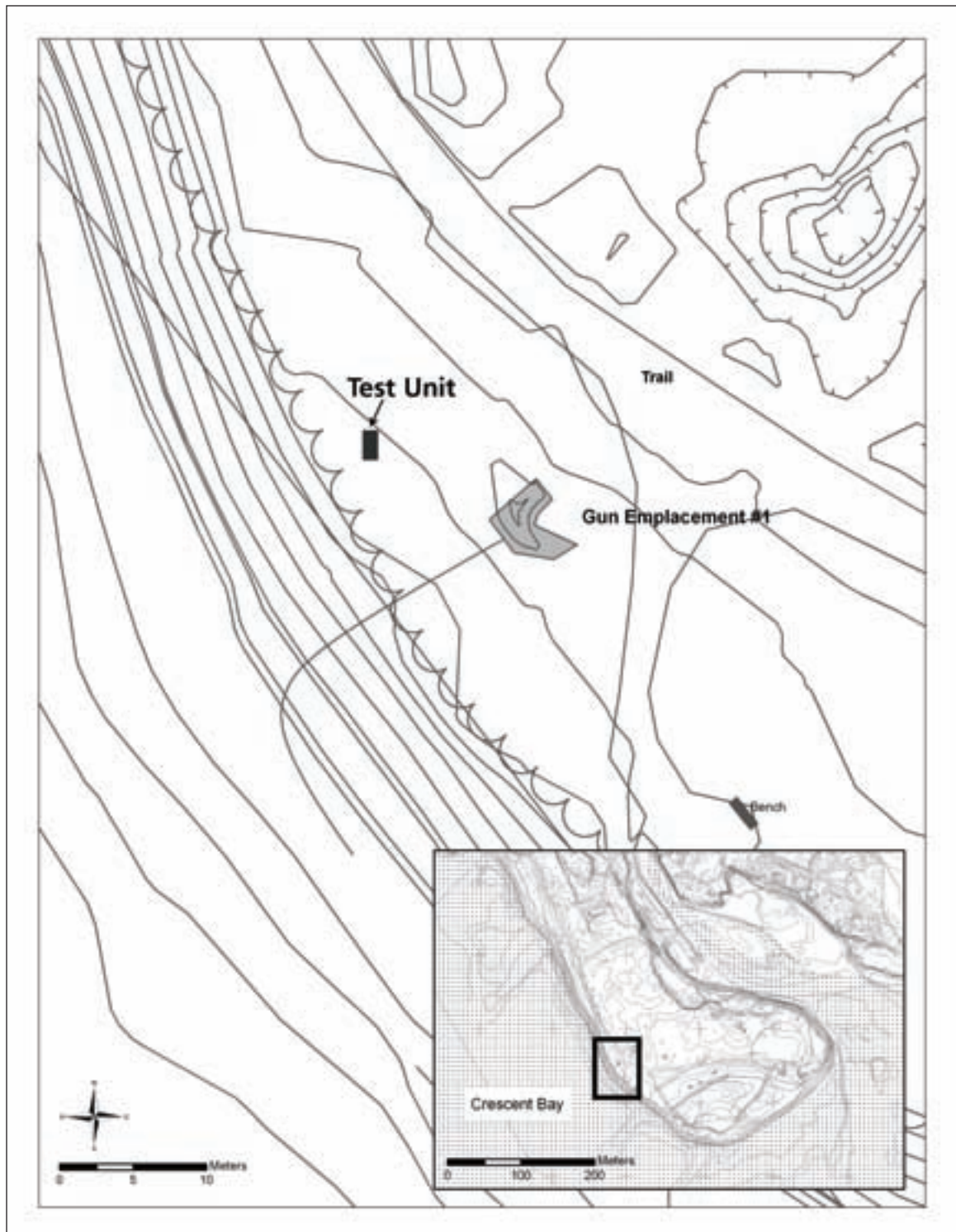


Figure 6-13. Location of TU GE1.

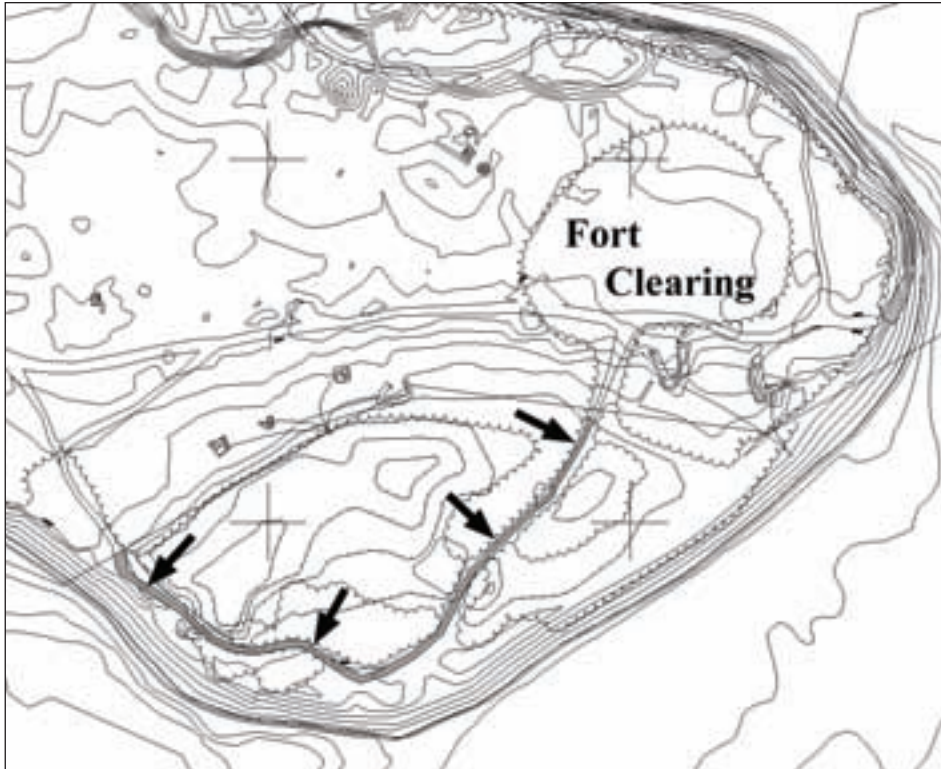


Figure 6-14. Location of fish trap identified by Sitka dentist Dr. Kenneth Cameron.

Hilary Stewart illustrates and describes Northwest Coast stone fish traps.⁶ These were essentially arching stone walls built at a river mouth where salmon would congregate as they waited for high ocean tides to swell the river allowing them to move upstream (Figure 6-15). As the tide rose, fish would move shoreward over the tops of the traps. When the tide receded, the fish were trapped behind the stone walls and could be easily caught.

Two data sources were utilized to gain further information about the reported fish traps. The first data source are aerial photographs of the park taken in 1929 and 1948 (Figure 6-16). Both images show a football-shaped area in the “arch” of the peninsular “foot” which corresponds with the location identified by Dr. Cameron as the fish trap. The space is darker than tidal flats on its southern edge suggesting it may be somewhat deeper area than the tidal flats. Neither photo has the resolution to allow one to determine the presence or absence of a structure on the southern margin of the depression but it is interesting that the feature, including the depression at the margin of the Battlefield Trail, has been in place for nearly 100 years if not longer. There is no similar “feature” at the toe of the peninsula in either photograph.

The second data source relating to the fish trap was archeological testing. During his visit, Dr. Cameron was asked where the best location would be for locating tools or debris from fishing at the trap. He directed excavators to the higher ground at the north edge of the trap area where Tlingit families would have hauled out and processed their catch. This area is located immediately south of Gun Emplacements 3-6. Remains of an old log raft occur at this same location so two spots

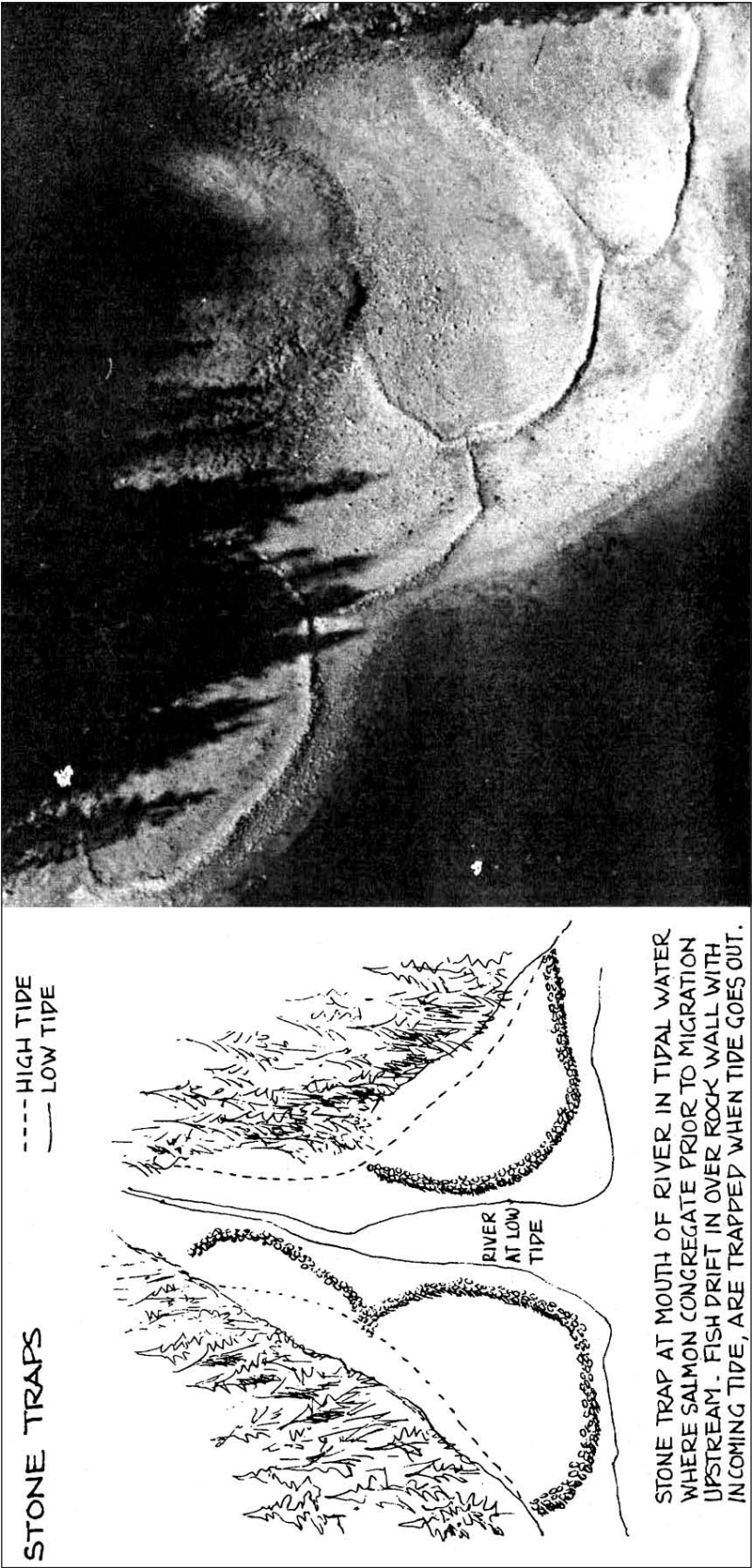


Figure 6-15. Illustration and aerial photograph of stone traps (Stewart 1977:120).

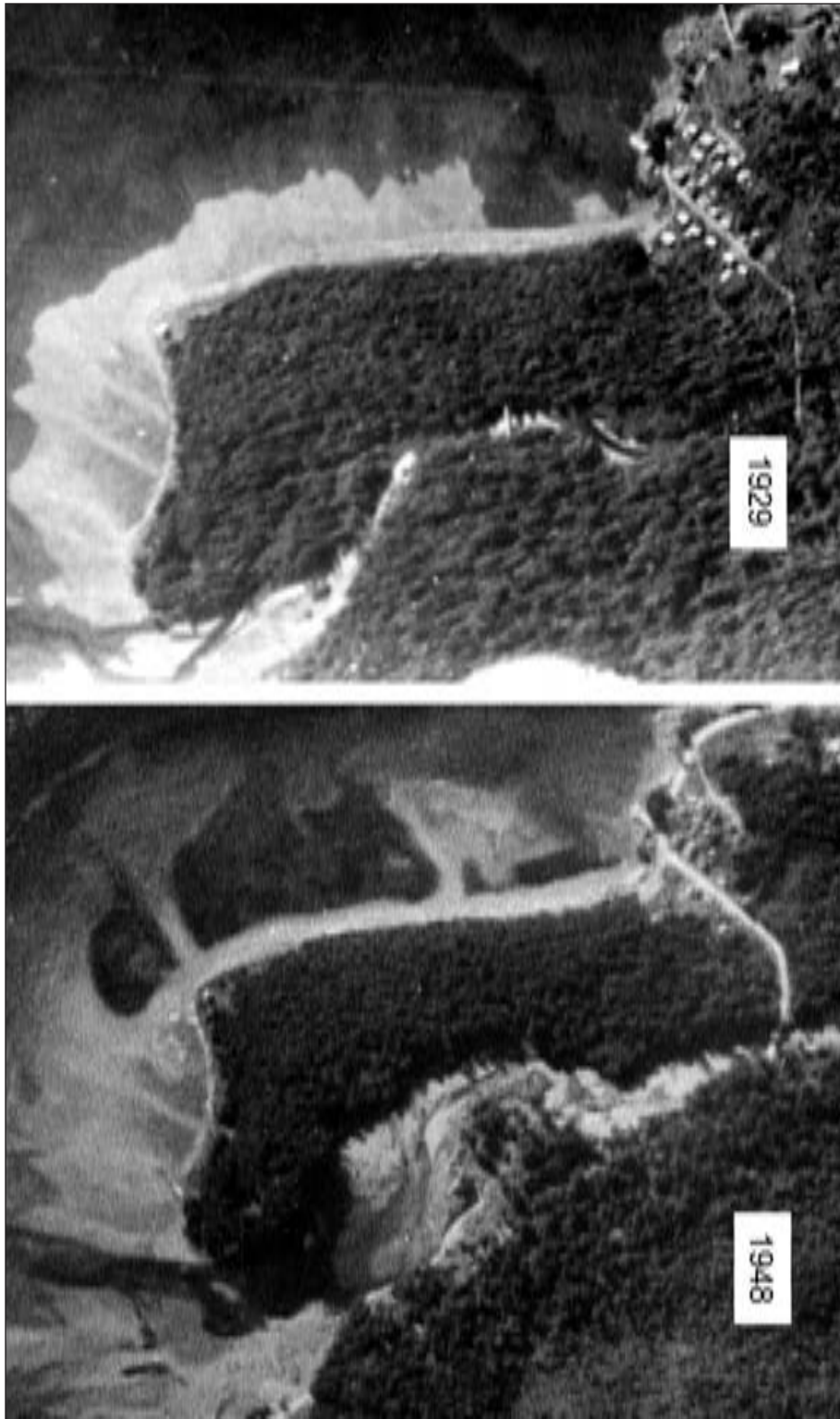


Figure 6-16. Aerial photographs of the park area taken in 1929 and 1948 (courtesy Sitka National Historical Park).

between the logs on the sloping margin of the low marshy ground were selected to establish two 1 m x 1 m test units labeled Fish Trap Test 1 and Fish Trap Test 2 (Figure 6-17). Although 122 artifacts were recovered from Fish Trap Test 1 and 31 artifacts from Fish Trap Test 2, all were mid-20th century materials.

In sum, there is some evidence at present in the form of oral history for a stone fish trap at this location. Aerial photographs of the location are suggestive but the small scale archeological tests failed to provide supporting data. Larger scale and difficult excavation under the Battlefield Trail would be required to substantiate or refute the presence of a trap.

Fort Palisade Trenches

In 2007, a series of informal trenches were excavated around the southwest and west margins of the Fort Clearing with the goal of rediscovering Hadleigh-West's 1958 palisade evidence (Figures 3-2 and 6-9). Hadleigh-West's work consisted of exposing nearly or completely decomposed wood using narrow "trenches." Often, these trenches were little more than linear areas where the forest floor debris was scraped away. Hadleigh-West also noted "the presence over most of the area of rotting wood not associated with the walls."⁷ The 2007 work utilized trowels and occasionally shovels. None of the fill, almost entirely forest humus, was screened for artifacts, trowel excavation being considered sufficient for this purpose.

Palisade Test 1 (Figure 6-12), located 12 m east of the center of the southwest entrance into the Fort Clearing, was 9 m long (north-south) and 50 cm wide. It was placed to cross timbers at the west end of the south wall as illustrated in Hadleigh-West's excavation map. No artifacts were recovered and there was no indication of timbers.

Palisade Test 2 (Figure 6-12) was 5 m (northwest-southeast) long, 50 cm wide, and positioned 3.7 m west the center of the southwest entrance into the Fort Clearing. Hadleigh-West's excavation map indicated two parallel timbers at this location. As the forest humus was troweled away, the crew identified possible timbers expressed as very soft reddish brown wood and followed for about 2 m. One fragment of black curved glass bottle base with a push-up (Cat. 24167) was recovered. Such glass generally dates to the mid-19th century but black glass bottles with push-ups are still used as wine containers today.

Palisade Test 3 (Figure 6-12) was 4 m (northwest-southeast) long by 50 cm wide and located about 20 m northwest of the center of the southwest entrance into the Fort Clearing. The goal here was to transect the west wall of the palisade as illustrated in the 1958 excavation map. Troweling away the humus revealed soft reddish brown fill which was interpreted as the possible remains of one or more of Hadleigh-West's north-south oriented timbers.

With completion of Palisade Test #3, efforts to locate fort timbers was abandoned. This was done because it was never clear how Hadleigh-West had identified the wood his crew exposed as palisade elements without opening broader areas to provide some

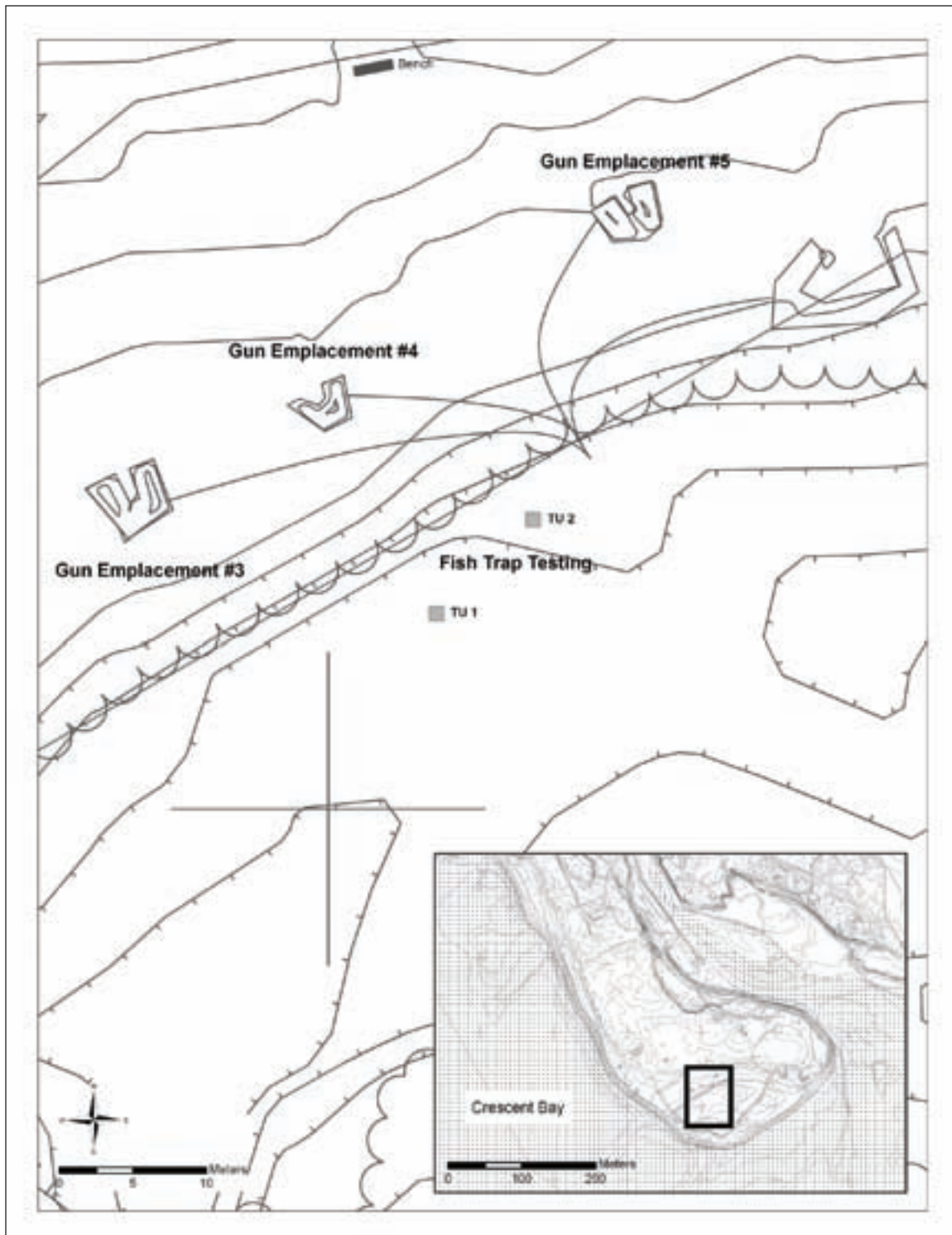


Figure 6-17. Locations of Fish Trap Tests 1 and 2.

perspective allowing differentiation between natural and cultural deposits. It was also unclear as to whether the wood exposed in 2007 was the same as that exposed in 1958. As Robert Betts has indicated “Much of the perplexity in resolving the issue of whether portions of the fort wall were actually found in 1958 rests in whether the actual fort wall logs were exposed or whether the excavators, in desperation to find evidence of the fort, exposed fortuitous alignments of naturally fallen trees.”⁸ In sum, identification of timbers associated with the Kiks.ádi fort was equivocal at best and, in the future, will require more extensive investigations than were within the scope of this inventory.

This work was followed with excavation of two additional trenches in the woods just beyond the northwest corner of the Fort Clearing (Figure 6-9). Palisade Test #4 (Figure 6-12) was placed at the south end of a 2005 geophysical grid placed in the woods west of the Fort Clearing; e.g., along the N50 line from approximately E4 to E12. The goal of this unit was to examine an area in or near the Kiks.ádi fort which had not been disturbed in the past by machinery. This trench was also another effort to determine whether there was evidence for the Kiks.ádi fort at this location. This trench was 8 m long (east-west), 50 cm wide, and excavated using shovels and trowels. The exposed stratigraphy here consisted of humus above dark brown-to-black loamy gravelly sand to -10 cm bs with dark brownish gray beach gravels underneath. The soils here are thin and suggest that the thin soils in the clearing are not necessarily due to the previous NPS blading, clearing, and digging. No evidence for structures was encountered.

Palisade Test #5 (Figure 6-12) was actually a 1 m x 2 m (north-south) unit placed to discover the source of a magnetic anomaly identified during the 2005 geophysical inventory northwest of the Fort Clearing. This anomaly was located at approximately N55 E5 on the Fort Clearing geophysical inventory grid. While not discussed in the 2005 annual report, De Vore believed this anomaly to be similar to another noted in the north-central portion of the Fort Clearing where a cannonball was later recovered (De Vore, personal communication). The unit was excavated in 20 cm levels with removed fill screened. A possible split pebble tool (Cat. 24245; Figure 6-9) was recovered in the first level. The source of the anomaly, a large piece of heavy gauge copper wire, was recovered in the second level.

Fort Clearing Depression

Geophysical inventory of the clearing in 2005 produced magnetic and resistance data interpreted as possibly representing the 1804 Kiks.ádi Tlingit fort and interior structures see Chapter 4 and Figure 4-20). Test excavations in 2007 were intended to determine the nature of the depressions in the undulating surface of the Fort Clearing. These shallow depressions are of various size ranging from about ½ m to 2+ m in diameter and are scattered across the clearing. They are particularly noticeable in the west end. A somewhat rectangular depression was chosen on the north side of the west end of the clearing, as this location is outside the general foot traffic of the public (Figure 6-12). A 3 m east-west by 2 m north-south area was laid out, centered on a depression, and divided into four contiguous 3 m x 0.5 m wide (north-south) excavation trenches referred to as A-D, from north to south. The northwest corner of the test area was located at N42.67 E23.67 on the geophysical grid and the southeast corner of the test area was at N40.67

E26.70. The sod was stripped off the depression test with shovels after which each trench, beginning with trenches A and C, were dug in 20 cm levels using trowels.

An area of black fill soon appeared as the units were dug with considerable amounts of decayed wood at the center of the depression. The north margin of the dark fill was relatively straight, about 2 m in length, and oriented northwest-to-southeast. Its rectangular outline suggested it could be of cultural derivation. Unfortunately, with the removal of the last trench (D) to -40 cm, the “feature” was shown to be more boomerang-shaped and, as the dark fill of the “boomerang” was removed, 20th century bottle glass was found to occur within it.

One hundred historic artifacts were recovered from the first 20 cm levels of the four test units. No prehistoric materials were recovered. Artifacts included 1 aluminum pull tab, 19 soft red brick fragments, 1 piece of knife-shaped cuprous sheet metal, 38 fragments of curved glass (6 black, 16 amber, 9 olive green, 7 clear), 10 cut nails, 2 wire nails, an unidentifiable ferrous metal mass, 22 fragments of flat glass, a kaolin pipe fragment (Cat. 24291; Figure 6-5), 4 undecorated porcelain and whiteware ceramics, and one piece of torn red plastic. Level 2 had 46 artifacts which included 30 fragments of curved glass, 3 unidentifiable form nails, 7 pieces of unidentifiable ferrous metal, 1 piece of flat glass, the base of a salt glazed stoneware bottle, and 4 pieces of whiteware (one displaying a green annular band). While much of this material appears to be of the 19th century, 20th century materials occurred in both levels in Trenches A and B.

In sum, the dark fill below the surface depression was determined to date from the 1930s or thereafter. Much of the artifacts are of 19th century derivation and probably associated with the mid-century homestead of Peter Ovchinnikov. The depression is likely artificial but is not associated with the 1804 Kiks.ádi fort but, rather, is likely associated with 20th century National Park Service tree clearing.

Fort Site Tests

Test excavations were initiated in the northwestern portion of the Fort Clearing (Figure 6-12). This area was chosen for a number of reasons. Shovel testing in 2005 indicated a high concentration of historic artifacts in this area, particularly in the vicinity of ST-26. A charcoal sample collected from ST-34, 5 m to the east produced a date of 300 ± 60 BP (see Volume II, Section 2). This date has three calibrated age ranges with the most likely, AD 1448-1675, occupying 95.2% of the area under the distribution curve. This date range suggests a late prehistoric occupation. Five meters west of ST-26, at ST-18, a lithic flake had been recovered, reinforcing the interpretation of a prehistoric occupation here. To the east, a pecked and ground ¾-grooved maul was recovered in 1999 at the location of the K'alyáan pole. The northwest corner of the Fort Clearing was relatively undisturbed as it is west of the 1958 excavation and probable locations of the NPS' 1972 totem pole preservation trenches. Finally, and most practically, the chosen test location was at the edge of the clearing between large stands of bushes. This was outside the normal tourist foot traffic, although still in view of visitors to the clearing.

The initial step in working here was to re-establish the geophysical survey grid. None of the stakes could be relocated, so the grid was approximated using a compass and working from a known position (ST-12 remained visible). A 5 m (north-south) x 4 m grid, subdivided into 1 m x 1 m test units, was then established oriented with magnetic north. Test units were labeled A to E, from south to north, and 5 to 8 from east to west. Test units excavated were D5, D7, F7, E8, and a small portion of E7, in that order. All fill was generally excavated in 10 cm levels (except where noted) and passed through ¼ in hardware cloth for artifacts.

The southeast corner of the first 1 m x 1 m test unit excavated, TU D5, was located at approximately N55 E25 on the 2005 geophysical grid; e.g., at about the location of 2005's ST-26. Excavators removed fill to -40 cm which was well into the former beach gravel at this location. Unfortunately, no charcoal was located and nor were any artifacts recovered. This was followed by excavation of TU D7 utilizing 20 cm levels. As with the previous test, this unit encountered no artifacts except for an intriguing flat stone, an anvil stone, in the west end of the north wall. Examination of the north wall stratigraphy suggested this object occurred just inside the west margin of a possible feature, the "feature" boundary distinguished by dark brown to black loamy gravelly sand to the west and tan loamy gravelly sand and cobble on the east (Figure 6-18). Unfortunately, this transition was not observed by excavators as the unit was dug. Small bone and shell fragments were recovered in the lab from a soil sample retrieved from the feature fill after it was identified.

TU F7 was then excavated using 10 cm levels. All levels encountered dark brown to black loamy gravelly sand similar to that interpreted as feature fill in TU D7. Thirty-two artifacts were recovered, 31 of those from the first three 10 cm levels. One artifact, a curved glass fragment was recovered from level 5 (40-50 cm bs) but this probably fell in from the upper walls as level 5 was being excavated. Level 1 had seventeen artifacts, 16 of which are historic and one, a possible fire cracked rock, being either prehistoric or historic. Levels two and three contained 7 historic objects each. No cultural material was recovered from levels 6 and 7. The increase in historic artifacts as the crew moved northward is in keeping with the high density of historic artifacts observed in this location during 2005 shovel testing.

Excavators then moved to TU E8 in an attempt to further explore the probable feature noted in the northwest corner of TU D7. Historic artifacts were recovered from the first 10 cm level. These included six fragments of curved glass (including one fragment of black glass), 1 fragment of soft low-fired red brick, and a plastic button. Similar dark brown to black fill as noted for the feature in D7 was observed here to about -35 cm bs at which point tan loamy sand was encountered. Excavation continued to -60 cm with no additional artifacts recovered and no features observed.

TU E7 was then excavated in part to remove the anvil stone in the north wall of TU D7 but also to try to follow the north-south margin of the possible feature. The unit was smaller than previous excavations (50 cm north-south x 70 cm). This quick test indicated that the base of the feature may be at -45 cm bs with the anvil stone sitting on the bottom of the feature. Several other large cobbles were noted during the excavation but close examination indicated that none had been worked or utilized. A sample of the



Figure 6-18. Stone anvil protruding from pit in northeast corner of Fort Clearing TU D7.



Figure 6-19. Pitted face of anvil stone (Cat. 24253) recovered from Fort Clearing TU D7.

screened fill from the feature was collected and submitted for radiocarbon analysis. This returned a date of 1250 ± 110 BP for which a 2 σ calibrated age ranges are AD 606-996 and 1005 AD-1012 AD. The first date range is the most likely to be correct as it occupies 99.6% of the area under the distribution curve (see Volume II, Section 2).

Finally, a 1 m x 1 m test unit arbitrarily named “TU 5” was opened with its southwest corner at the approximated location for 2005 ST-48. This had been a location where another high concentration of historic material had been recovered. Excavation proceeded in 10 cm levels here. Sixteen historic artifacts were collected, 2 from level 1 and the remainder from level 2. Black glass and a dark blue transfer printed ceramic sherd suggest an early 19th century association. A fragment of plastic recovered from level 2 indicated this area is disturbed.

The anvil stone (Cat. 24253; Figure 6-19) proved to be a very important discovery, eventually telling us much about the prehistoric occupation here circa AD 606-996. The anvil was made from a flat, water-worn graywacke cobble, 24.5 cm long, 23.3 cm wide, and 7.5 cm thick. One face of the stone exhibits heavy pitting likely caused by multiple impacts from another stone. This pitting originally led investigators to hypothesize that the anvil was used as a striking platform in bipolar stone tool production. This tool manufacturing technique involves placing a stone core against a hard surface and then striking it with another stone to removed flakes.⁹ The flakes, in turn, could be used immediately “as is” or worked further to produce other tools such as scrapers, knives, and projectile points.

After showing the anvil to Kiks.ádi elders and Tlingit artists at the Southeast Alaska Indian Cultural Center (adjoining the Visitor Center), traditional Tlingit weaver Teri Rofkar suggested that the stone may have served other possible functions. For instance, she suggested, it may have been used to pound cedar bark as part of the process of producing fibers for weaving cloth and baskets.¹⁰ Another suggestion was that the anvil could have been used for pounding berries to mix with fat and dried meat to make a Northwest Coast form of pemmican. At this point, it was time to determine whether the anvil stone had been used in either of these activities. If so, remnants of organic materials associated with those activities might continue to exist in the artifact’s pitted surface. Such residues might be able to be identified chemically and the results of such identification could reveal the true purpose of the artifact. If no organic residues existed, other analyses might identify the artifact’s function.

To determine whether organic residues were present on the artifact, the stone was sent to the Laboratory of Archaeological Sciences at California State University in Bakersfield. Under the direction of Dr. Robert Yohe, the stone was analyzed using a version of a test often utilized by criminal forensics investigators; i.e., protein residue analysis. This test utilizes immunological methods to identify plant and animal residues and has successfully adapted to archeological artifacts since the late 1980s. A version of this type of analysis has been used on 35,000-60,000 year old stone tools.¹¹

After receiving the anvil stone, Yohe’s lab staff immersed it in a mild solution of ammonia, marinated it for a few minutes and then stirred the solution with a sterile spatula. The stone was then allowed to soak for another 30 minutes after which the

ammonia solution was removed, placed in sterile plastic vials, and frozen at -20° C (-4° F). Samples of the liquid are then exposed to plant and animal antisera and exposed to an electric current. If there is protein in the sample, and that protein corresponds with the specific antiserum being tested, there is an antigen-antibody reaction and the protein precipitates out in a specific pattern.

The residue sample extracted from the anvil stone was exposed to the antisera for ten animals (bear, bovine, cat, chicken, deer, dog, guinea-pig, rabbit, rat, and sheep) and ten plants (Amaranthaceae, Asteraceae, Capparidaceae, cedar, Chenopodiaceae, kelp, Malvaceae, pine, and Poaceae). Positive reactions were registered for bear, deer, Amaranthaceae, and kelp. Bear antiserum reacts positively with black and brown or grizzly bear. Deer antiserum reacts positively with deer, elk, moose, and caribou. The antiserum for Amaranthaceae reacts positively with amaranth, pigweed, quelite, etc. Finally, the kelp antiserum reacts positively with seaweed/kelp and possibly salt and freshwater algae.

The only bear species inhabiting Baranof Island is the brown bear (*Ursus arctos*). The deer species represented must be Sitka Deer (*Odocoileus hemionus* var. *sitkensis*), a diminutive subspecies of Black-tail deer, because this is the only deer species occupying Baranof Island. It should not be surprising that seaweed was identified because this is a common traditional plant food for the Tlingit. The Kayaani Commission indicated that seaweed is gathered most commonly in February.¹² One of the favorite seaweed varieties is *laak'ásk* or *lak'úsk*, also known as “black seaweed,” “winter seaweed,” or “black laver” (*Porphyra* sp.), is gathered at low tide in May and early June. A similar plant which may be represented here is ribbon seaweed (*Palmeria palmata*) whose Tlingit name is *k'ách'* but is also known as “sea ribbon” or “summer seaweed.”¹³

Although amaranth is an exotic species at Baranof Island introduced only in the last century or so, a species of pigweed (*Chenopodium*) and subfamily of Amaranthaceae which occurs throughout Alaska and the Northwest Coast area is the Alaska orache (*Atriplex alaskensis*, sometimes listed as *Atriplex gmelinii* var. *alaskensis*). This salt-loving plant is among a group of plants often referred to generically as “saltbush,” and may be found all along the coast of Baranof Island. Many species of orache are edible and have been used for food throughout the world as far back as the end of the Ice Age.¹⁴ Another plant in the park which could have produced this positive reaction is Gmelin's orache (*Atriplex gmelinii* var. *gmelinii*) also known as Gmelin's saltbush. None of the sources referred to in this study, however, identified the Alaska orache or Gmelin's orache as a traditional Tlingit plant food.¹⁵ Nevertheless, based on the positive tests for two known Tlingit meat foods, one Tlingit plant food, and another possible plant food, it was determined that the anvil stone was used as a tool in food preparation. Production of Northwest Coast “pemmican” would certainly fit this profile although that particular application of the anvil can not be proven at this point.

In sum, data from the Fort Site Tests and nearby shovel tests and excavations perhaps two, if not more, prehistoric occupations on the west and north sides of the Fort Clearing. The recovery of an anvil stone from a prehistoric feature retained protein residues from land fauna and marine flora suggesting food processing in this location. There may also be a high density historic occupation on the northwest side and north

of the Fort Clearing possibly relating to the mid-19th century homestead of retired Russian-American Co. employee Peter Ovchinnikov.

Survey Unit B

Two general areas associated with the prehistoric period were selected for conducting test excavations (Figure 6-1). Both are located on a low river terrace at the eastern base of a paleo-beach.

B72 Tests

ST-B72, dug in 2006, revealed two charcoal-bearing strata separated by a thin yellow sandy clay layer. Large cobbles between the charcoal strata led excavators to suggest this was a feature. Charcoal samples were collected from each charcoal stratum and submitted for radiocarbon analysis. The upper stratum at 20-27 cm bs returned a date of 160 ± 70 BP which has a 2σ calibration of AD 1650-1953 (see Volume II, Section 2). The lower stratum, lying between 34-42 cm bs, was dated 1300 ± 40 BP and has a 2σ calibration ranges of AD 649-781 and AD 791-807 (see Volume II, Section 2). The earlier date range is most likely correct as it occupies 98.2% of the relative area under the distribution. Based on these dates, excavators returned to the location in 2007 to undertake further tests.

As was often the case during the 2007 field season, ST-B72 proved to be very difficult to relocate especially in the dense brush at the base of the paleo-beach. No partially healed shovel test could be located and so, by default, a 1 m x 1 m test unit labeled B72 Test Unit 1 was established at the approximated location with its margins oriented to the cardinal directions (Figure 6-20). Two 20 cm levels were excavated and, while small pieces of charcoal were noted in the first level, it was not anywhere consistent with that observed in 2006. No artifacts were recovered at this location.

Probing further in this general area with a slotted soil recovery probe identified a thick layer of charcoal within (of course) a dense stand of Devil's Club. An old shovel test from the previous year was also noted here and a new 1 m x 1 m test unit, B72 Test Unit 2, was established close by. Burned earth and charcoal were noted in the first 20 cm level and, from the start of the excavation here, a considerable volume of cobbles were noted. A charcoal sample was collected and one possible flake (Cat. 24250; Figure 6-9) was recovered in the first excavation level. The charcoal-filled stratum continued to 22 cm bs at which point a 4 cm thick layer of ash was noted. A 26 cm bs, the cobble-filled charcoal and ash layer changed to a light brown silty clay loam with only rare flecks of charcoal.

Obviously, this was not the 2007 shovel test location. Nevertheless, a radiocarbon analysis of charcoal sample from the first level returned a date of 540 ± 100 BP (see Volume II, Section 2). This corresponds to 2σ calibrated age ranges of AD 1270-1523, AD 1559-1562 AD, and AD 1571-1630. The date range most likely to be correct is the oldest as it occupies 94.3% of the relative area under the distribution. Together, this date and the recovery of a probable artifact indicate a prehistoric occupation associated with the Late Phase of the Developmental Northwest Coast Stage. The occupation, on a low terrace of

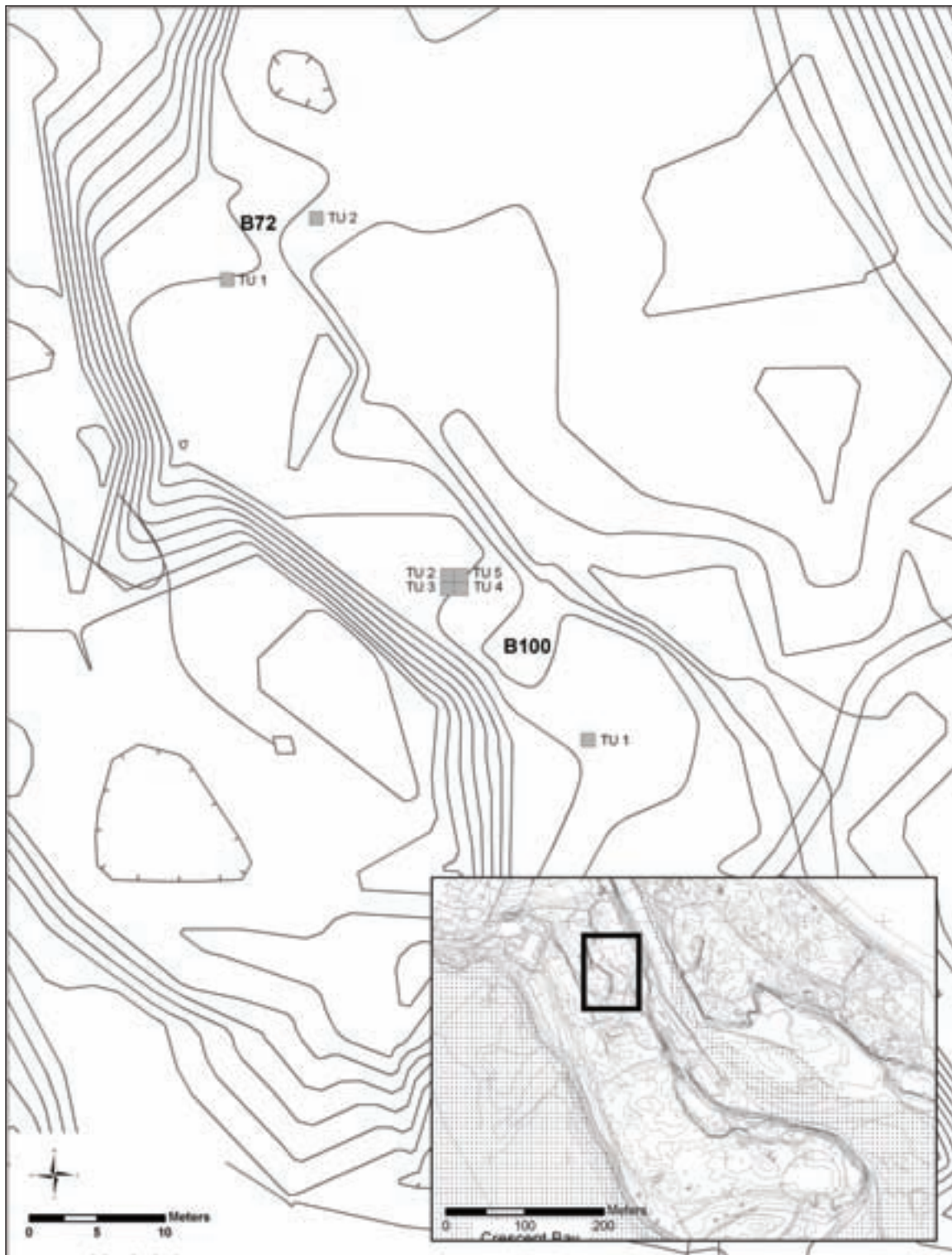


Figure 6-20. Locations of B72 Test Units 1-2 and B100 Test Units 1-5.

the Indian River immediately next to a fossilized beach ridge is tentatively interpreted as the site of a summer fish camp. Soil characteristics and the radiocarbon date suggest this was not the correct location of 2007's ST-B72, however.

Broo Tests

In 2006, a water-worn utilized tan chert flake and two dark blue transfer printed saucer rimsherds were recovered from the first 20 cm level of ST-Broo. ST-Broo also had two charcoal strata. A sample collected from the lower stratum, at 40 cm bs, returned an uncorrected date of 2590 +/- 50 BP which has 2 σ calibration dates of 820-760 BC (BP 2770-2710) and 680-550 BC (BP 2630-2500) making this one of the oldest charcoal samples dated during this project (see Volume II, Section 2). Charcoal from the upper stratum was not dated. These dates and others from the greater area of the small terrace suggest an extensive strip of land in the park which experienced long-term human occupation dating from as early as the Middle Phase of the Developmental Northwest Coast Stage with greatest use of the locality from the Late Phase of the Developmental Northwest Coast Stage to the Historic Period. Based on this data, a decision was made to investigate the location of ST-Broo further.

After some effort in relocating ST-Broo, a partially healed shovel test was identified in the approximate correct spot. A 1 m x 1 m test unit, Broo TU 1, was set up with its margins oriented north-south such that the shovel test occurred in the southwest quadrant of the unit (Figure 6-20). After two 20 cm levels were removed with no charcoal encountered, it was clear the test was in the wrong location and no further work was done here.

Using a slotted soil recovery probe and moving northwesterly along the base of the fossil beach terrace, another partially healed 2006 shovel test was located. Reviewing the location of the first test, it appeared that Broo TU 1 had been placed 10 m east of the sought-after spot, probably at ST-B115 which had produced no charcoal. The newly identified shovel test was re-excavated and found to contain charcoal to at least -40 cm bs with large chunks of charcoal on the south side of the hole and smaller fragments of charcoal on the northern margin. Soil coring around the shovel test showed charcoal extending at least 5 m in every direction.

Based on this information, a new 1 m x 1 m test unit, Broo TU 2, was established on the southerly side of the shovel test. Excavation proceeded in 20 cm levels. At -26 cm, the excavators encountered large, compact chunks of burned wood interspersed with areas of burned earth. Three contiguous 1 m x 1 m units were then opened to further explore the nature of the burned earth and charred wood. Broo TU 3 was located at the south margin of Broo TU 2. Broo TU 4 was positioned at the east margin of Broo TU 3 and Broo TU 5 at the north margin of Broo TU 4 and east margin of Broo TU 2. Altogether, these four units created a 2 m x 2 m excavation (Figure 6-21).

Excavation of these test units demonstrated that charcoal and burned logs occurred in all four tests with the burned logs concentrated in TU 2 (Figure 6-22). A large concentration of ash was identified near the juncture of the four test units in TUs 3



Figure 6-21. Arlo McKee and Laura Crawford exposing charcoal deposits in B100 Test Units 2-4 (view to south).



Figure 6-22. West wall profile of B72 Test Units 2-3. Note the charred log above the floor of the excavation at right (TU 2).

and 4. The base of the charcoal and burned log strata occurred between 17 and 45 cm bs at which point a natural stratum of light brown sandy loam was encountered. In general, the depth of the charcoal and burned wood deposits increased toward the west and south with the highest point of underlying sandy loam in the northeast corner of TU 5 at 17 cm bs and the deepest point in the opposite corner of TU 3 at 45 cm bs. No artifacts were recovered during these excavations, the only cultural objects observed (but not collected) were a ca. 5 cm diameter piece of fire-cracked rock and two clinkers (solid, sometimes glassy by-products of fire and burning) in Broo TU 3 within and at the base of the burned logs.

Charcoal samples were recovered from Broo Test Unit 2 (0-20 cm), Broo Test Unit 5, 0-20 cm, and Broo Test Unit 5 (20-40 cm) (see Volume II, Section 2). These returned uncalibrated dates of 240 ± 100 BP, 400 ± 100 BP, and 710 ± 100 BP, respectively. If calibrated dates associated with the historic era may be thrown out for a lack of historic artifacts, the 2 σ calibrated age ranges for the three samples that occupy the highest relative area under the distribution curves are AD 1467-AD 1712 (occupying only 54.7% of the relative area under the curve), AD 1386-AD 1674 for the second sample (occupying 94.2% of the relative area), and AD 1151-AD 1428 for the third sample (occupying 96.6% of the relative area under the curve). Together, these dates suggest an association with the Late Phase of the Developmental Northwest Coast Stage. The occupation, on a low terrace of the Indian River immediately next to a fossilized beach ridge is tentatively interpreted as the site of a summer fish camp. Again, it appears the older deposit identified in 2006 at ST-Broo was not relocated.

Survey Unit C

C520 Tests

During the 2006 shovel test inventory, a 36 cm thick stratified charcoal deposit bearing burned earth was identified at ST-C520 (Figure 6-1). This test was located on a low terrace above the narrow Indian River floodplain in the northern half of the inventory unit. No artifacts were recovered from this test but charcoal was collected from the center of the deposit and submitted for radiocarbon dating. A date of 300 ± 50 BP was returned (see Volume II, Section 2). The 2 σ calibration date range occupying 98.0% of the relative area under the distribution is AD 1462-1666 and indicates an association with the Late Phase of the Developmental Northwest Coast Stage.

The very thick charcoal deposits at this location and the radiocarbon date suggested this might be an interesting location to conduct additional tests. As at other locations in the park the location of the original shovel test could not be identified in 2007 but use of a slotted soil recovery probe in the approximated area quickly identified a broad patch of ground with deep charcoal deposits. Three test units were utilized to explore this site (Figure 6-23).

C520 TU 1 was a 1 m (north-south) x 1 m (east-west) test unit established at the easterly end of the apparent charcoal deposits near the edge of the terrace. Excavation of the unit was through 10 cm arbitrary levels for the first three levels after which excavation

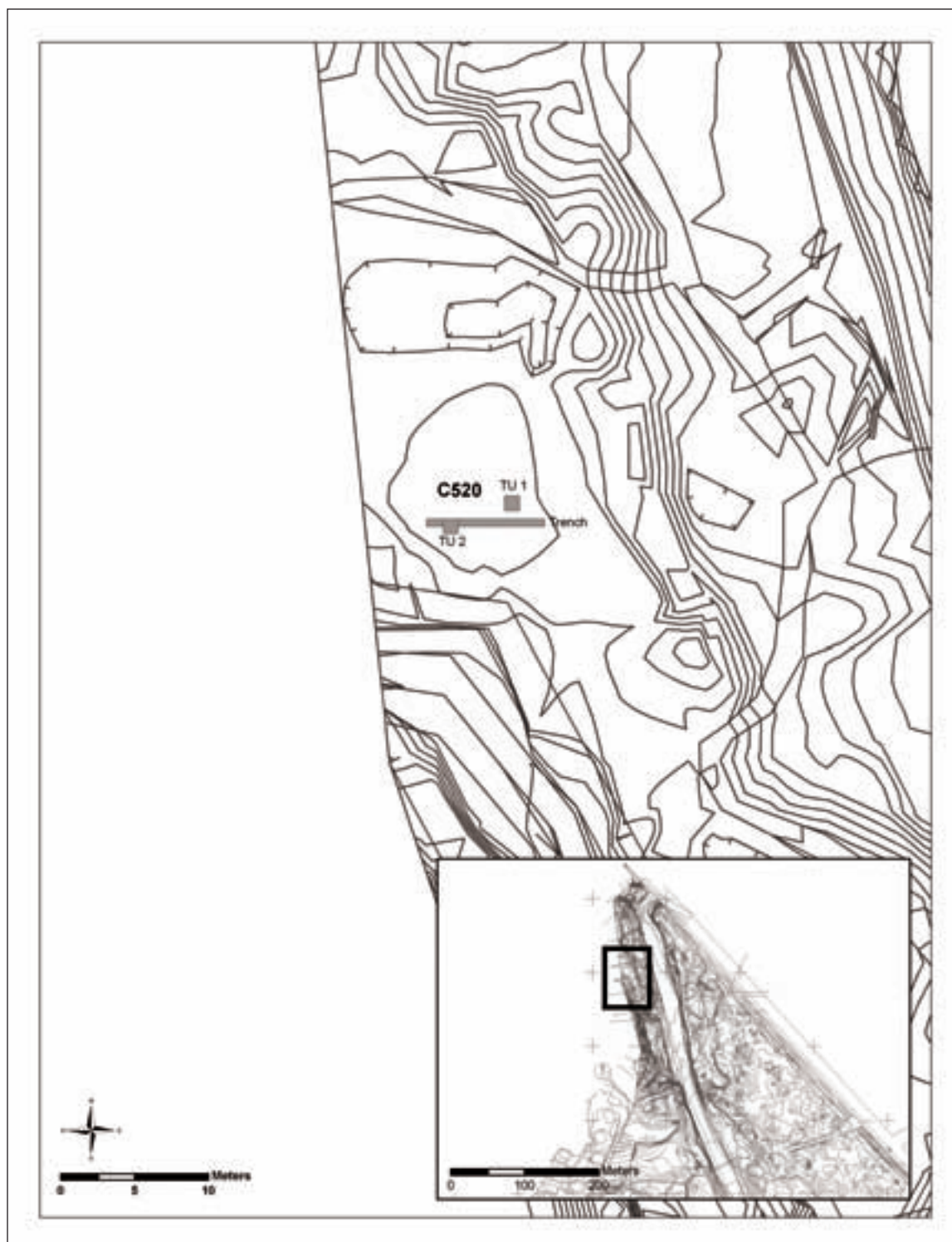


Figure 6-23. Locations of C520 test units and trench.

proceeded using 20 cm levels. An abundance of charcoal was noted at the outset. One clinker was recovered from the second level and three clinkers were identified at -22 cm in the third level but not collected. Areas of tan sand began to intrude into the charcoal stratum from underneath with all charcoal lenses removed by 35-40 cm bs. Excavation was halted at -70 cm.

Additional soil probing indicated that the charcoal thinned rapidly about 10 m east, north and west from C520 TU 1. Another 1 m x 1 m test unit, C520 TU 2, was laid out about 5 m west of the first. Excavation here proceeded using 20 cm levels. Soils below the humus consisted of a black sandy loam with occasional areas of burned wood, ash, and burned earth to 51 cm bs. Below this, soils turned into a tan clay loam containing a few water-worn cobbles to the base of the excavation at 60 cm bs. No artifacts were recovered.

In general, the horizontal distribution of charcoal deposits at this location compare favorably with those observed at A338 with the exception of being thicker at C520. Discovery of the hearth at A338 suggested by possibility of a similar feature occurring at C520 and one last exploratory excavation was undertaken as a consequence at C520. An east-west trench established across much of the apparent charcoal-filled deposit from the south margin of C520 TU1 past the north margin of C520 TU2. It was 0.5 m (north-south) wide and 8 m long. Excavators were instructed to dig the trench to well below the charcoal without consideration of levels but leaving stones or wood in place if they were encountered. The fill was not screened. When the trench was finished, large hard chunks of charcoal interpreted as possible logs were observed on each end [Note: AKRO Manager, Cultural Resources Team, Ted Birkedal observes that whole logs were often used by the Tlingit to feed their fires (personal communication August 27, 2009)]. The stratigraphy of the north wall was mapped (Figure 6-24) and charcoal and float samples were collected on the west end of the trench where charcoal deposits were thicker. No artifacts were recovered nor were any features observed.

Charcoal samples from the trench were collected from a column every 10 cm bs with no sample collected from the 0-10 cm bs level. These were submitted for dating resulting in the date ranges (from top to bottom) of were 100 ± 1 BP (10-20 cm bs), 101 ± 1 BP (20-30 cm bs), 610 ± 110 BP (30-40 cm bs), 370 ± 70 BP (40-50 cm bs), and 700 ± 100 BP (50-57 cm bs) (see Volume II, Section 2). All of these but one (40-50 cm bs) had multiple 2σ calibrated age ranges but were generally in good temporal order from top to bottom. The dates from the two highest levels each had five 2σ calibrated date ranges varying from AD 1697-1725 to AD 1906-1917. None of the date ranges occupied a majority of the relative area under the distribution curve. The date of charcoal from the third level has three 2σ calibrated date ranges varying from AD 1176-1496 to AD 1601-1615 with the earliest date range being most likely correct as it occupies 99.3% of the relative area under the distribution curve. The date from the fourth level has one 2σ calibrated date range, AD 1429-1652. The lowest level's radiocarbon date has three 2σ calibrated date ranges varying from AD 1052-1080 to AD 1153-1434 with the last date occupying 98.0% of the relative area under the distribution curve.

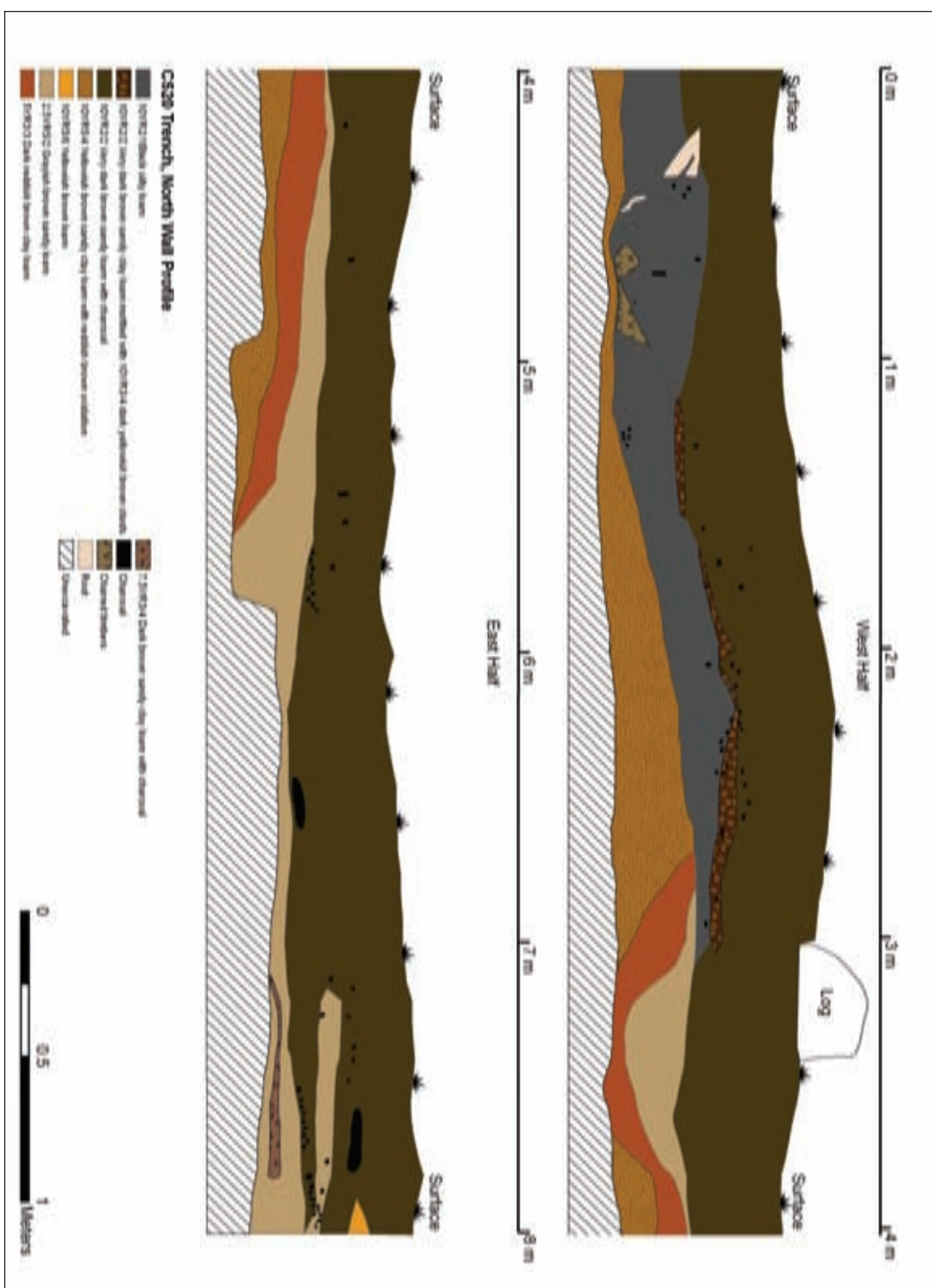


Figure 6-24. Stratigraphic profile of the north wall of C520 Trench.

Despite the lack of artifacts or features, this location is considered a midden associated with a long term if intermittent prehistoric to early historic occupation. Its location would suggest a fish camp.

Survey Unit D

D727 Test

Only one location in Survey Unit D was selected for further investigations through test excavation. This focused on ST-D727 at the northern end of the survey unit (Figures 6-1 and 6-25) where, in 2006, excavators encountered flat-faced wood interpreted as planking (see Figure 5-30). The arrangement was tentatively interpreted as an element of a corduroy road built by the U.S. Army prior to 1870. Test excavations at this location in 2007 were by shovel and trowel and were intended to expose the full width of the wood. Test units were oriented northwest-southeast (facing Sawmill Creek Road) and test unit names were based upon the last three digits of the GPS location of the initial test unit's southwest corner. The southern-most unit was 1 m x 1 m in size and referred to as 62N-801E. The adjoining 1 m x 1 m unit to the northwest was 63N-801E with the third and last unit being 1 m (northwest-southeast) x 1.5 m in size and assigned the label 64N-801E. Excavation of these units was affected to some extent by a steady rain. Unfortunately, the wood "feature" proved to be little more than a fallen tree. The flat wood exposed in 2006 was a location where the wood had split away leaving a board-like surface. Two shovel tests placed 3 m and 8.5 m southeast of the excavation area failed to identify any other materials that could be elements of a corduroy road. The only object recovered during the test excavations was a modern beer bottle.

Survey Units E-F

No test excavations were undertaken in Survey Unit E. One location, however, was selected for small scale testing in Survey Unit F.

Depression F1

As noted in the previous chapter, Depression F1 is similar in form to Depressions A1, A2, and A3 in Survey Unit A except that it appears to have a cobbles around its margin. This cobble perimeter may represent a simple foundation for a structure. A charcoal sample collected in 2007 from the west margin of Area F Depression 1 Test as an rock on that side was being cleared was radiocarbon dated. The uncalibrated date returned for this sample is 310 ± 100 BP (see Volume II, Section 2) and this has four 2σ calibrated age ranges which vary from 1422-1697 AD to 1917-1952 AD. The oldest of these, 1422-1697 AD, occupies 80.5% of the relative area under the distribution and is the most likely to be correct. The 1σ calibrated age range is 1456-1663 AD.

Three segments of a 50 cm wide test trench were also excavated across the depression in 2007 from the southeast and to the northwest margin to gather more information about the feature. These were labeled A (north end), C (center), and B (south end), respectively. While Trench F1-A contained a great deal of rock, no cultural

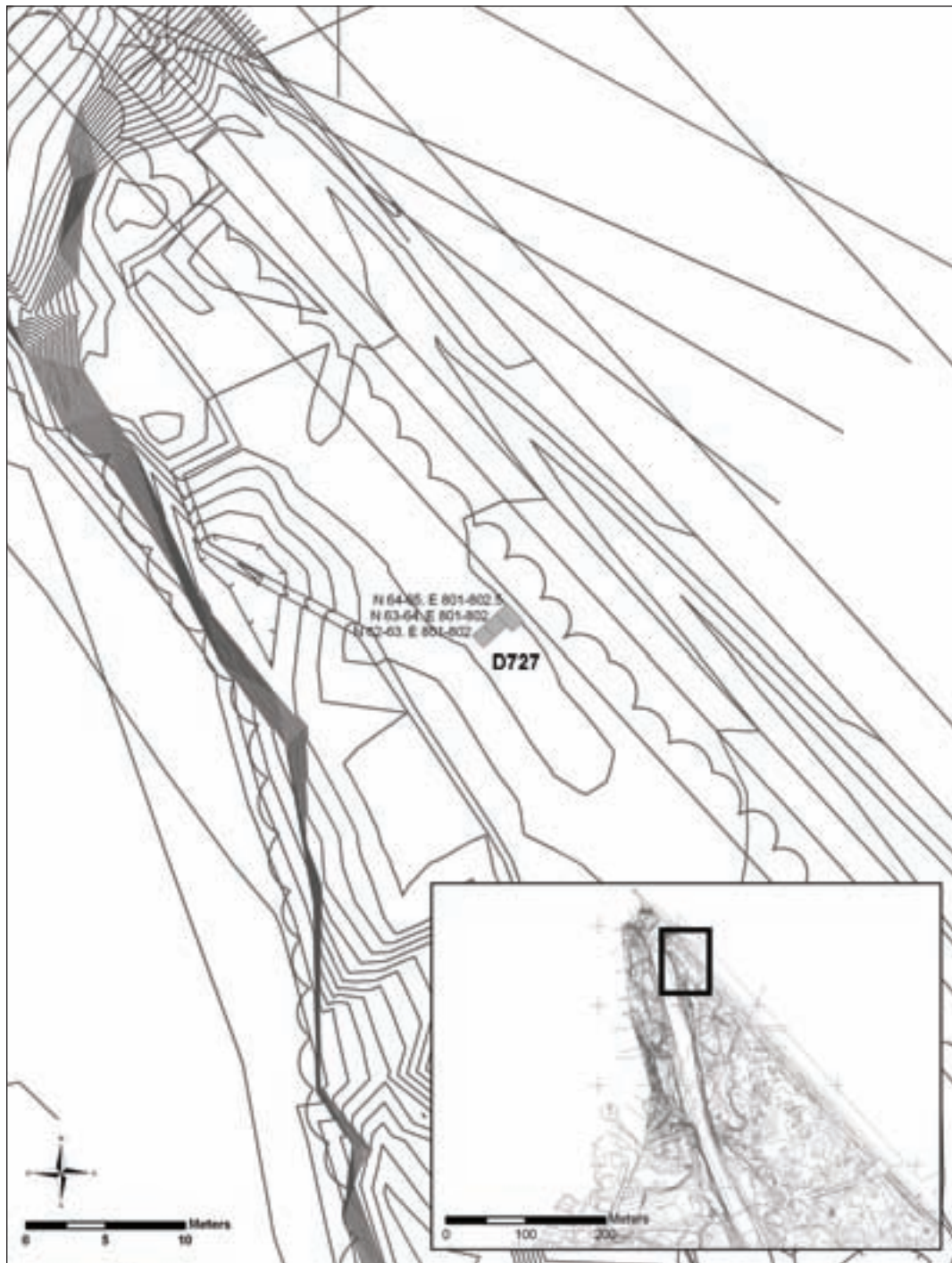


Figure 6-25. Location of Test Units D727 in the extreme north end of the park.

materials were identified or recovered. Both Trenches F1-B and F1-C revealed an array of cobbles near the surface at the depression margins. In addition, Trench F1-B revealed a charcoal layer at 35-47 cm bs beyond the southern margin of the depression (Figure 6-26). A slate flake (Cat. 24251) was also recovered from Trench F1-B and collected as a possible tool fragment. The charcoal layer predates Depression F1 and appears to thicken with distance from the depression although not enough of the layer was exposed to be certain. A sample from this layer submitted for dating returned an uncalibrated date of 1860 ± 120 BP (see Volume II, Section 2). 2 σ calibrated age ranges for this date are 161-132 BC and 117 BC-AD 424. The latter date range is the most likely correct as it occupies 98.8% of the relative area under the distribution.

In sum, it is impossible to identify the nature or origins of Depression F1 without additional investigation. It certainly postdates the charcoal layer from the south end of Trench F1-B and it may be contemporary or postdate the dated charcoal sample from the northwest edge of the feature. That date suggests a late prehistoric to historic association. A homestead shown on the 1850 Russian survey of New Archangel occurs in the same approximate location and may be related to the depression. Alternatively, the depression could represent the remnants of a traditional Tlingit cache pit (as discussed above for Depression A1).

2008 FIELD SEASON

When the project was first put into motion, the 2007 field season was originally intended to be the last with 2008 being the year this final report would be prepared. The generally unsatisfactory results of the testing in and around the Fort Clearing in 2007, however, with regard to identifying 1804 Kiks.ádis fortified village Shis'ki-Noow elements, coupled with the 2005 interpretation of magnetic and resistance data indicating possible 1804 fort structures indicated further work was needed here. In addition, discovery of prehistoric features in the Fort Clearing and at Test A338 in 2007 led to an aspiration to conduct further test excavations in with the goal of recovering additional information about that occupation. For these reasons, therefore (and admittedly, perhaps, a desire to return to Sitka one last time), a 2008 field season was set into motion with three exploratory goals, two focusing on the Fort Clearing and one associated with the stone hearth in the woods west of the clearing.

Fort Clearing

Testing Magnetic Anomalies

The first target area centered on the data resulting from the 2005 geophysical inventory where De Vore had noted the Fort Clearing contained a rectangular series of magnetic and electrical resistance anomalies forming a 28 m (86 ft) by 42 m (129 ft) rectangle (Figure 6-27). This is approximately half the width of the 1804 Kiks.ádis fortified village Shis'ki-Noow and the working theory was that this rectangle may represent the west half of the fort, the east half obscured by anomalies created during multiple NPS disturbances (tree clearing, installing and removing totem and house poles, and totem pole preservation chemical treatments, etc.). An investigation relating to this group of

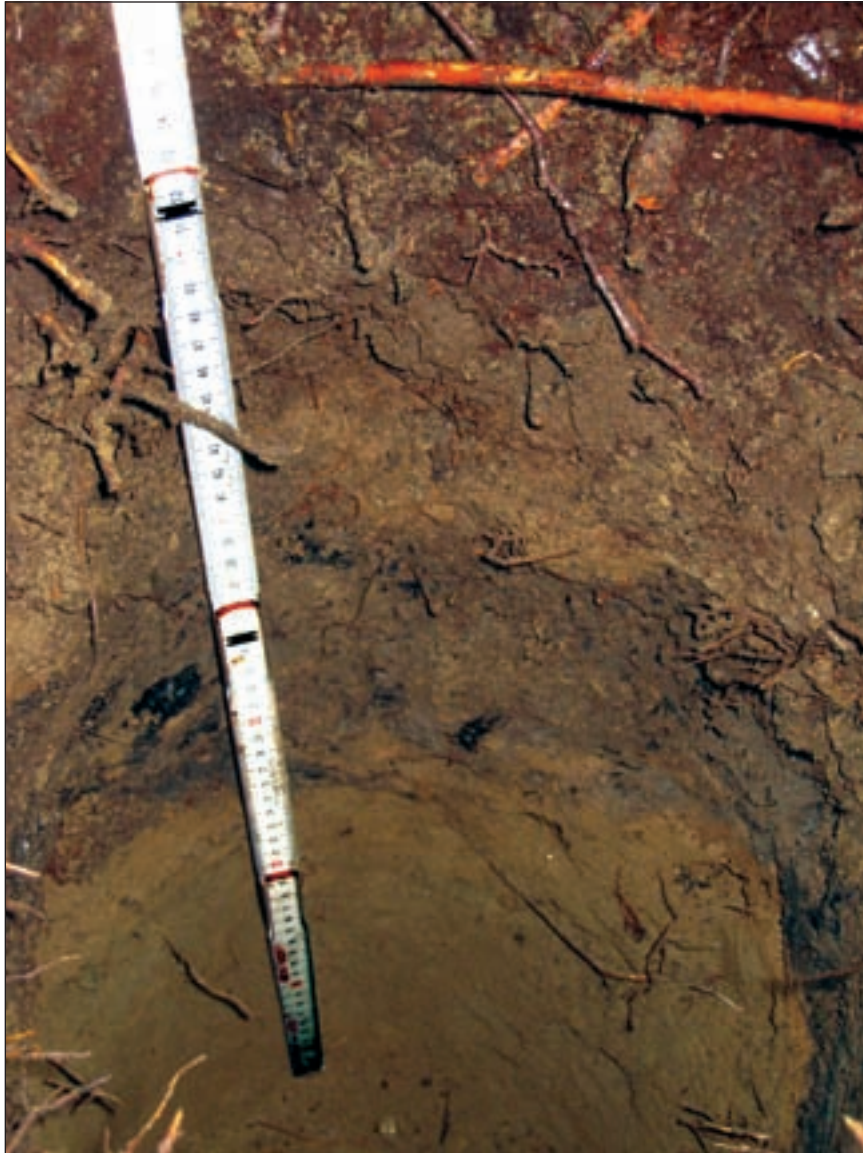


Figure 6-26. Strata observed in south end of Trench F1-B just south of Depression F-1.

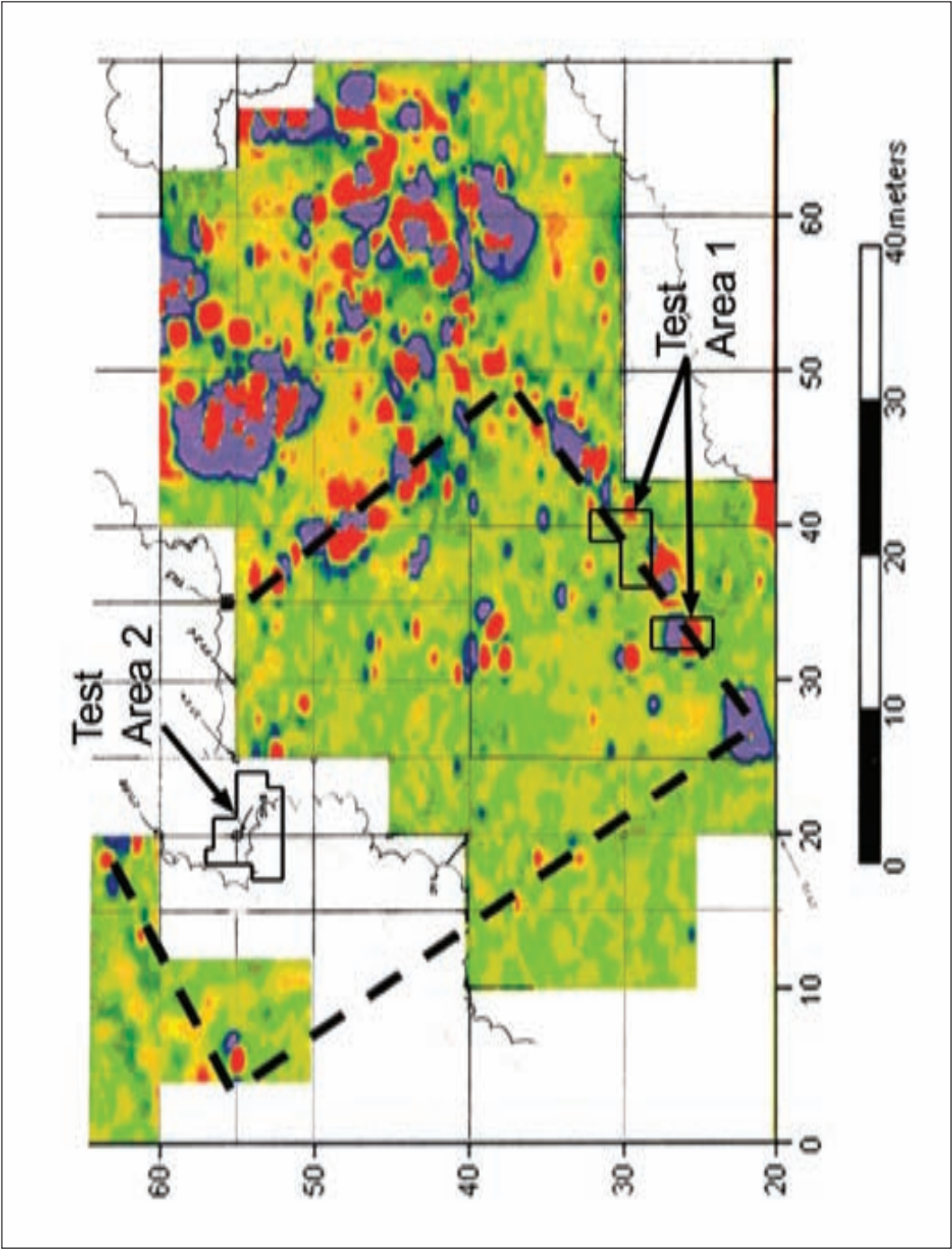


Figure 6-27. Image plot of magnetic gradient data from the Fort Clearing showing projected outline of fort (dashed lines) and 2008 tested locations.

anomalies was therefore proposed to focus on the south margin of the clearing where the magnetic anomalies were clearest and strongest and appeared to indicate a possible palisade line. The goal of the tests, of course, was to identify the sources of anomalies in the south-central portion of the Fort Clearing.

Before leaving for the field, the magnetic map of the Fort Clearing was examined and four test units were proposed for excavation to determine whether the southwest-northeast line of magnetic anomalies was of cultural derivation. The test units were to be 2 m wide (east-west) and 4 m long (north-south), essentially small trenches of a size that would enhance the chance of actually hitting a linear feature if this is what the anomalies represented. After the team's arrival on-site and re-establishment of the 2005 geophysical grid, however, the proposed site for Trench 1 was found to occur under a split log bench held together by rebar. The rebar was assumed to be the source of the large anomaly at that location. Trench 2 (Figure 6-28) was set out over the second anomaly (counting west to east from the bench), the center of the anomaly being at approximately 26N 33E. The southwest corner of this unit was located at 24N 32E. Trench 3 was positioned over a more open area of the alignment, the southwest corner of this unit being at 28N 39E. Trench 4, which was to be situated over the fifth anomaly, was not excavated. Trench 5 was then established over the third anomaly (centered at approximately 26N 37E). Its southwest corner was located at 26N 36E although only its north half was excavated. Trench 6 was a 1 m wide, 2 m long (north-south) unit connecting Trenches 3 and 5. Its southwest corner was located at 28N 38E. The trenches were subdivided into 1 m x 1 m subunits, each referred to by the coordinates of their southwest corner. Excavation was undertaken using arbitrary 20 cm levels with the fill from each 1 m x 1 m subunit screened separately from the rest. Artifacts were bagged by subunit and level. Field forms were completed for the trench as a whole with notes on each level within every subunit appended to the form rather than completing individual forms for each subunit.

Early on in the excavations, a vague 2-2½ m wide band of dark sandy loam was observed that was oriented more-or-less southwest to northeast across the middle of Trenches 2 and 3. This was bounded on both sides by sand bearing ½ cm diameter gravels. The dark loam contained 443 artifacts, all but three objects associated with the 19th and 20th centuries (see Volume II, Section 1). Two prehistoric lithic artifacts, a possible graywacke perforator (Cat. 25045) and a possible basalt flake (Cat. 25104), were recovered from Trench 3 in the upper 20 cm of fill and in the sod, respectively. A small fragment of a possible quartzite mortar was collected from Trench 5 at the 40-50 cm bs level. With rare exceptions, all historic artifacts were found in the sod layer and first 20 cm level excavated. Individual items were occasionally recovered from the upper few centimeters of the second level. The prehistoric objects from Trench 3 were obviously displaced since the fill here was contaminated by modern debris including such things as fragments of rubber boots and 4 x 4 timbers. From this, it was concluded that both Trenches 2 and 3 were likely contaminated with materials from the Russian Bishop's House and had the remaining fill in the first level of both units excavated to 20 cm bs without screening it. As this was being accomplished, a band of orangish gravels about 1 m wide (north to south) was observed crossing the trenches from southwest-northeast. Very dark brown loamy gravels on each side of this "orange" gravel band made it stand out, especially after the soils had dried (stratigraphic profiles for the west wall of Trench 2, the west

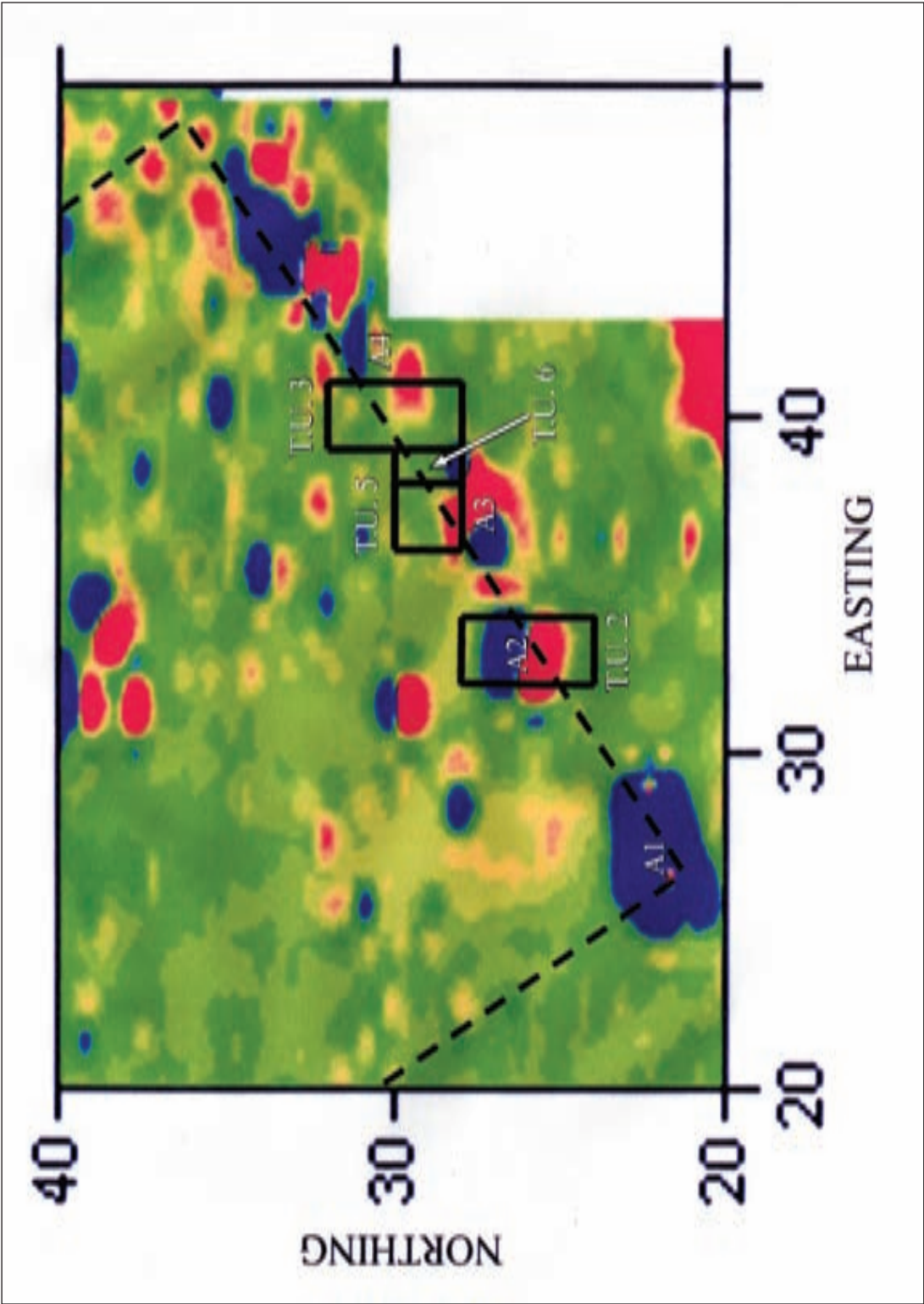


Figure 6-28. Position of Trenches 2, 3, 5 in Test Area 1 and locations of magnetic anomalies A1-A3 in the south-central area of the Fort Clearing.

wall of Trench 5 and the east wall of Trench 5 are presented in Figures 6-29 to 6-31) It now became evident that no cultural source, either features or metal artifacts, could be identified as the sources of the magnetic anomalies. Instead, they appeared to be the by-product of a geological feature; i.e., natural deposits of iron-laden sandy beach gravels.

Nevertheless, there were some unusual linear soil changes that became apparent below 40 cm bs in the southern portion of Trenches 3 and 5 suggesting possible cultural features. Feature 1 (Figure 6-32) was a 30-33 cm wide, flat-bottomed trench first noted at 40 cm and continued to a depth of 52 cm bs. Horizontally, the feature extended across Trench 3 from N29.05 E39 to N28.9 E41. In the east end of this feature, at approximately N29 E39.9 was a 75 cm diameter circular depression that appeared to continue to 71 cm bs. The exact size and shapes of these two feature elements were approximated as the feature sat within a coarse gravel fill and the margins of the feature tended to collapse as excavation proceeded. A narrow north-south spur running from the circular depression to the trench wall suggested the possibility that this may have been of natural derivation, perhaps the former location of tree. An alternative interpretation was that the linear feature marked a trench or depression, perhaps the former location of a structural wall with the circular feature reflecting the position of a massive pole. No wood or artifacts were observed or recovered from the fill, however, making it difficult to determine whether the feature was natural or cultural in origin.

With completion of the excavation of Feature 1 in Trench 3, the area between Trenches 3 and 5 was opened to determine how far Feature 1 extended to the east. Since the upper fill was disturbed, the crew shoveled out the new unit, Trench 6, to the level of Feature 1 where, at 50 cm bs, they encountered another 1 m diameter circular feature (Figure 6-32) in the southeast corner of the trench. This new feature, referred to as Feature 2, was composed of a circular area of black loamy gravel, much like the fill of Feature 1, bearing irregular patches of brown gravel. Arcing around the margins on the north side of the feature was a light gray ashy gravel with a medium gray ashy gravel arcing around the south margin. This looked very much like a hearth. Extending from the west side of Feature 2 to the southwest corner of Trench 6 was a vague, linear area of dark gray loamy gravel which appeared to be an extension of Feature 1. The more this "feature" was excavated, the more amorphous it became, and with the onset of rain, it disappeared altogether. Again, no artifacts or wood were recovered from any of the feature elements in Trench 6.

In sum, while the aforementioned features may be of cultural derivation, it was not possible to definitively prove this. Further, the features tended to follow the approximate route of the line of magnetic anomalies but, other than possibly the "firehearth" (Feature 2), contained no materials which would normally be expressed as such large anomalies. Therefore, it is concluded that, while cultural features may occur here, the large magnetic anomalies are reflections of natural features; that is, horizontally extensive deposits of iron-bearing beach gravels. These gravels are similar to those occurring about midway up the Indian River and were likely washed down from that source.

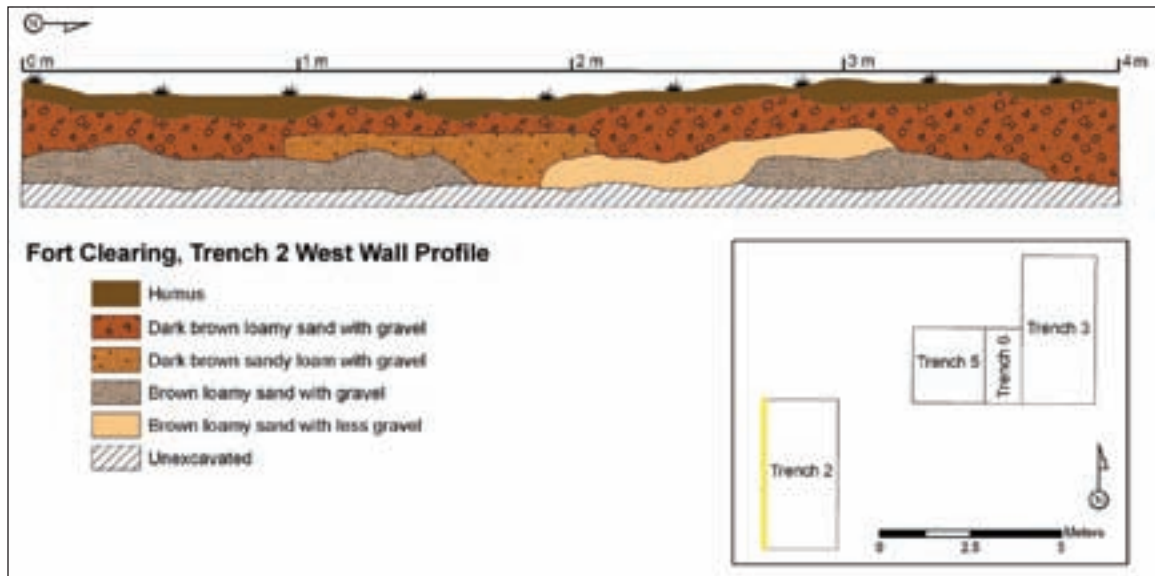


Figure 6-29. Stratigraphic profile of the west wall, Trench 2, Test Area 1 of the Fort Clearing.

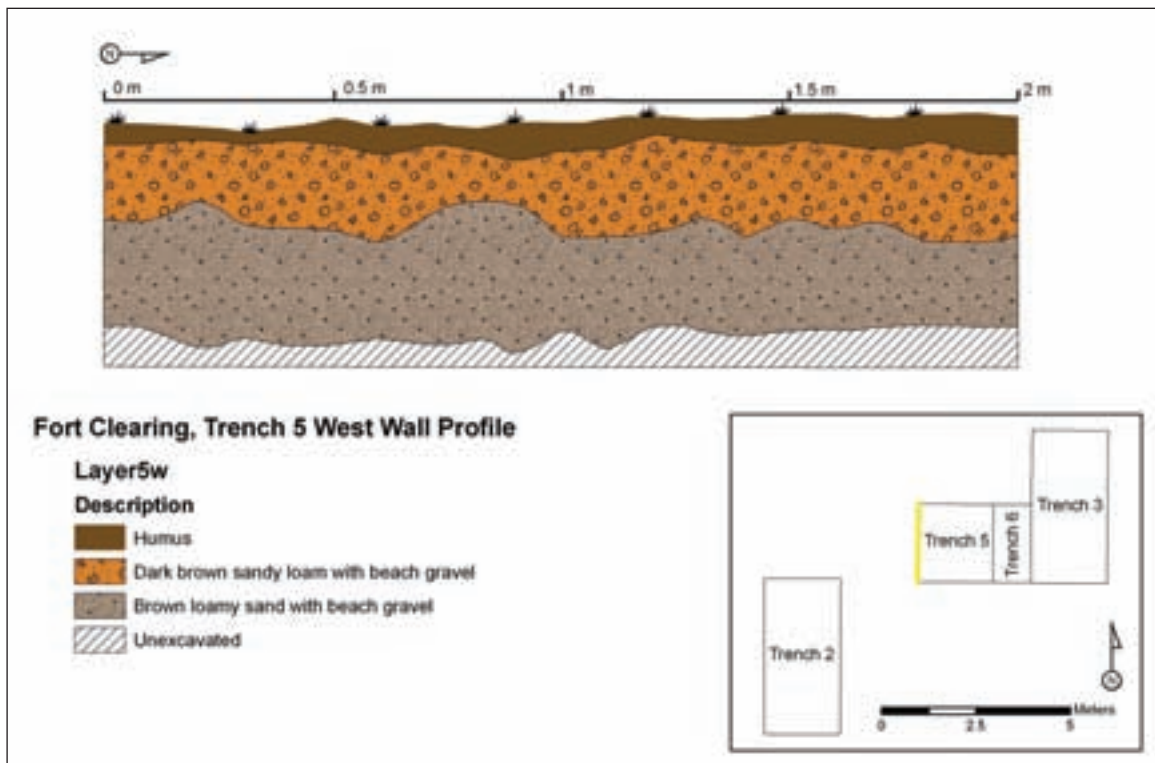


Figure 6-30. Stratigraphic profile of the west wall, Trench 5, Test Area 1 of the Fort Clearing.

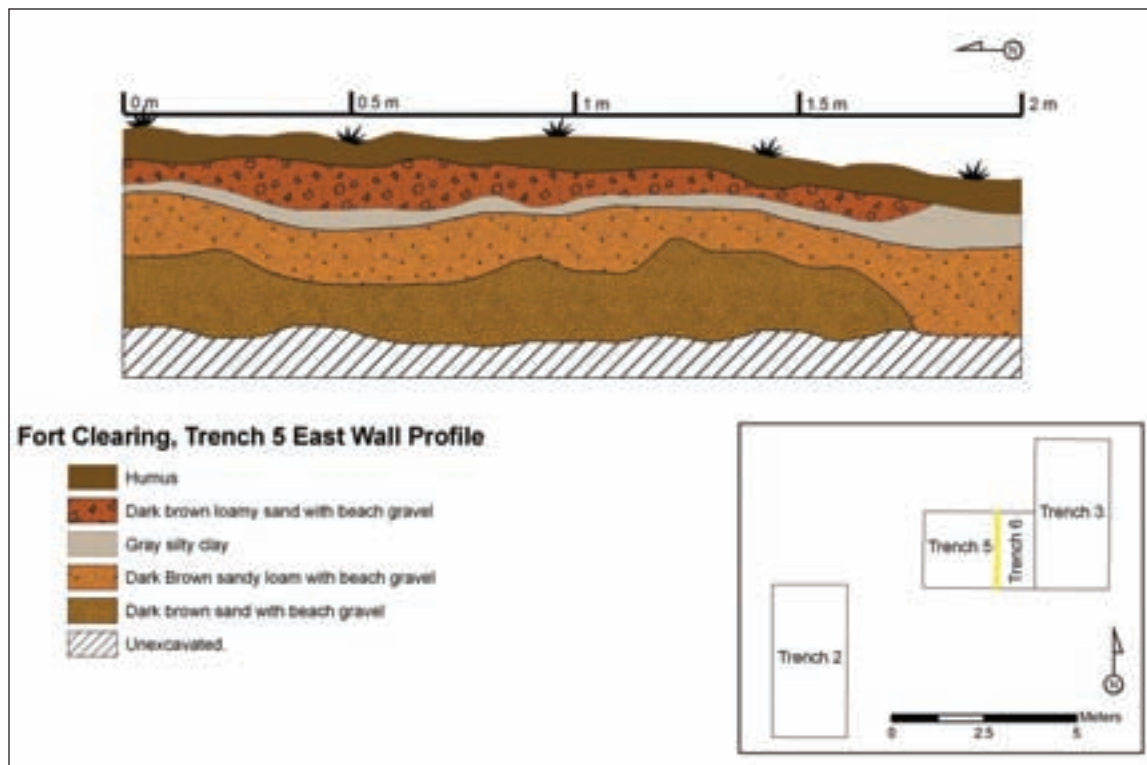


Figure 6-31. Stratigraphic profile of the east wall, Trench 5, Test Area 1 of the Fort Clearing.

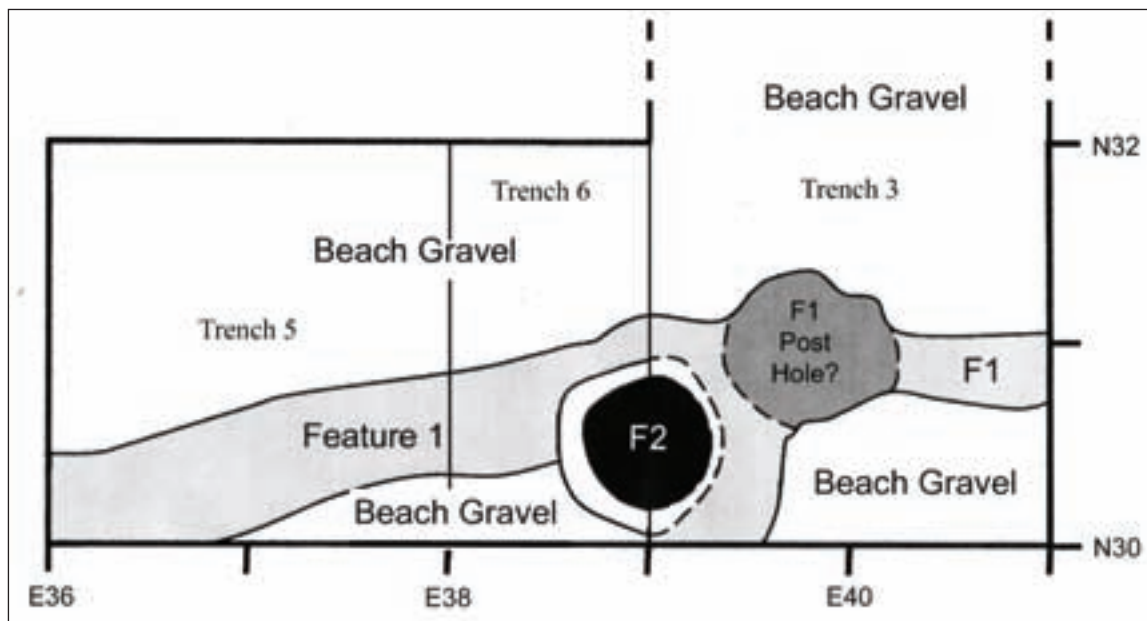


Figure 6-32. Features of possible cultural origin observed in Trenches 3, 5, and 6.

Fort Clearing - Test Area 2

The second investigative target area in 2008 was the northwest margin of the Fort Clearing (Figure 6-27) where, in 2007, the archeology crew recovered a stone anvil from the upper edge of a pit feature. Subsequent protein residue tests indicated the anvil was used in food processing and charcoal retrieved from the fill of the pit was radiocarbon dated to 1250 ± 110 BP (see Volume II, Section 2). The goals of test excavations in this target area, therefore, were to determine the pit's size, shape, and overall function. Test excavations covered 26 contiguous square meters with the southwest corner of the test excavation at 52N 17E. This investigation area was referred to as "2007 Pit Investigation Area" and was dug using 10 cm arbitrary units with excavation forms maintained for each 1 x 1 m subunit of the excavation area. As the primary goal of investigations this year focused on the magnetic anomalies in the Fort Clearing, the reference grid established this year followed the 2005 geophysical grid; that is approximately 12° east of magnetic north, in contrast with the previous year's test here which had the grid oriented toward true north (Figure 6-33). In addition, the ground at the 2007 test units had healed so well that there was no evidence of them on the surface a year later. For this reason, the 2008 excavations actually were mistakenly initiated a few meters west of the 2007 tests. The previous year's test units soon became apparent, however, as dark stains within a brown sandy gravel matrix.¹⁶

Four possible post molds were identified at -20 cm bs in the southwest corner of the test excavation (Figure 6-34). Three of these, Features 7-9 were approximately 25 cm in diameter. Feature 7 was composed of an area of black soil outlined with a narrow band of gray ashy looking material on its south and east margins. This was first noted in the 10-20 cm level centered at 52.21N 21.92E. The dark central fill and ashy boundary was similar in appearance to a forked horizontal root stain in unit 52N 20E suggesting the possibility that Feature 7 was of natural origin. The two other possible posts, somewhat more vague than Feature 7, were Features 8 and 9. These were centered at 52.8N 22.9E and 52.6N 21.0E. A small circular area, Feature 10, was about 15 cm in diameter and identified at approximately 52.5N 21.3E. Of these four features, only Feature 7 continued to be visible to 30 cm bs at which point it was largely composed of the gray ashy fill.

Immediately west of these four post-like soil stains was Feature 4, a rectangular feature which appeared as a dark soil stain after the wet soils had dried out over a weekend (Figure 6-34). Feature 4 was visible at 20 cm bs, had a very sharp margin, a well-defined corner, and could easily be seen between 52N 20E to 52N 21.16E and extending north of those points to 52.33N; i.e., the feature was at least 1.16 m long (east-west) and 33 cm wide. West of 52N 21.16E, the stain disappeared. As the rain started up again and excavation proceeded, this feature disappeared once more. This feature was interpreted at the time as the possible corner of a structure and associated with the four posts just off its northeast corner.

Feature 5 was a thin, somewhat rectangular layer of gravelly charcoal (Figure 6-34) observed at 18 cm bs and centered at approximately 52.65N 18.75E. It was only about 1-2 cm thick, about 60 cm long (southeast-northwest), and about 35 cm wide. Its function remains uncertain.

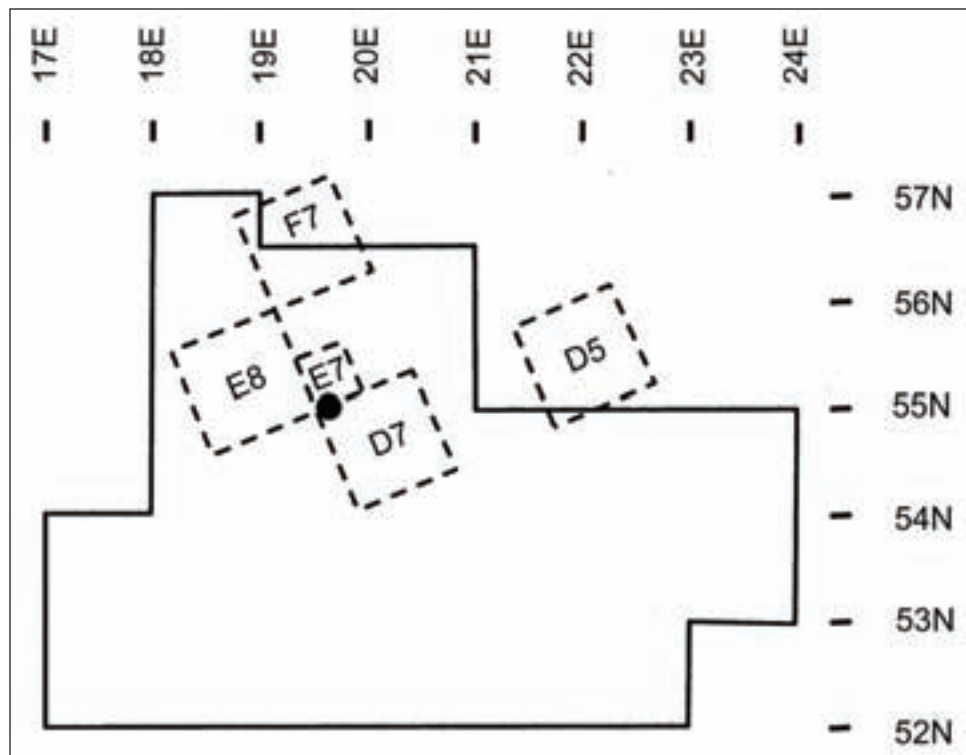


Figure 6-33. Relationship of 2007 test units (dashed lines) and 2008 units. Black circle marks the 2007 recovery location of an anvil stone.

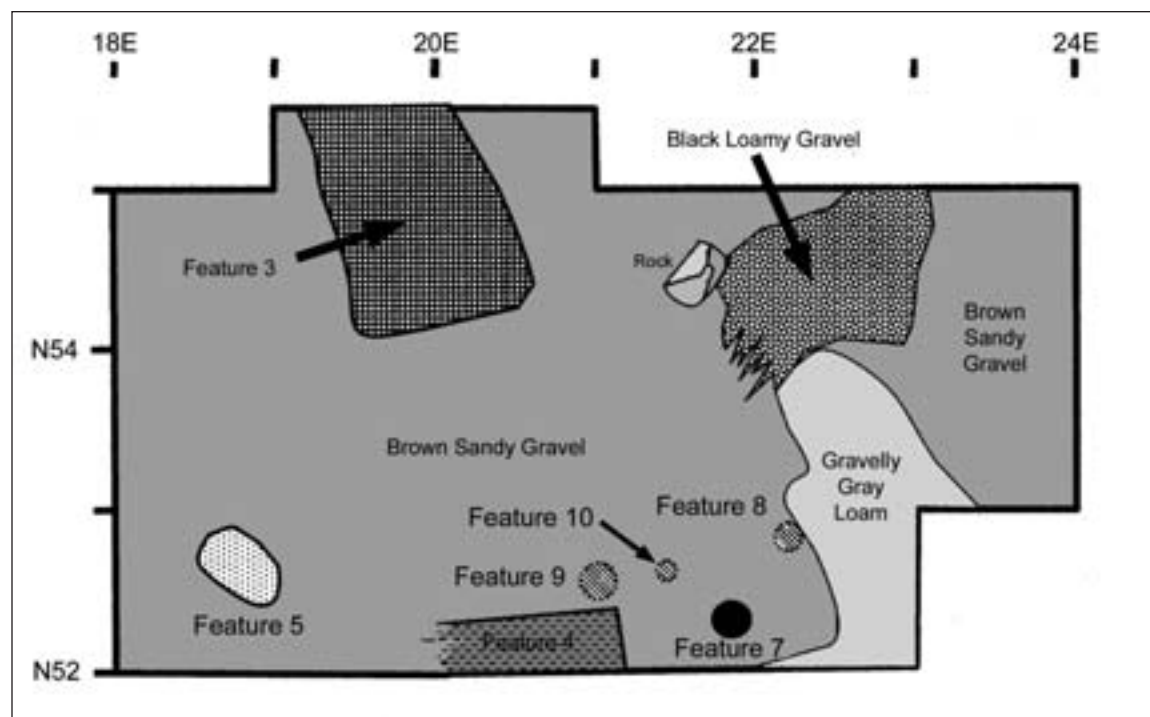


Figure 6-34. Area exposed and features identified at -20 cm in the Pit Test Area.

Feature 6 was the remnant of the prehistoric pit exposed in profile in 2007. Only a small area of this feature was revealed in the 2008 excavation. As in 2007, the pit was most visible in profile (Figure 6-35), appearing as a black gravelly loam fill extending from about 55N 19.5E to 56.5N 21E but continuing on beyond those points to the north of the excavated area. The base of the feature sloped from east to west and occurred from about 25 cm to 40 cm bs immediately above a lighter beach gravel. The feature was not visible west of unit E8 and F7 dug in 2007. Given the approximated location of the anvil stone in the north margin of D7, this pit was over 2 m north-south. Although its east-west extent remains uncertain, it was visible for at least 2 m before continuing beyond the east margin of the excavation unit. No additional artifacts were recovered. There was some suggestion that this feature was L-shaped or associated with a larger feature shaped like an open rectangle which occupied the west half of the excavation area (Figure 6-36). The nature of this open rectangle was never determined. At the end of the project, orange plastic fencing was placed in the bottom of the excavation and the unit was then backfilled. Profiles of wall segments in the northwest and southeast margins of Test Area 2 are presented in Figures 6-37 to 6-39.

Two possible prehistoric tools were recovered in the west center of the excavation area in the 0-10 cm bs level. A possible graywacke flake was recovered from unit 53N 18E and a possible slate chopper was found in the fill from 53N 19E. In addition, 416 historic items were recovered including soft red brick, transferware ceramics, cut nails, window glass, and a prong from an iron leister. Items most likely to be of 19th century derivation with a known provenience were 276 in number and included brick fragments, black glass,



Figure 6-35. Feature 6 in north wall profile of the Pit Test Area.



Figure 6-36. Rectangular area of dark soil in west half of Pit Test Area excavation at -40 cm sd (light rectangular area is at -30 cm).

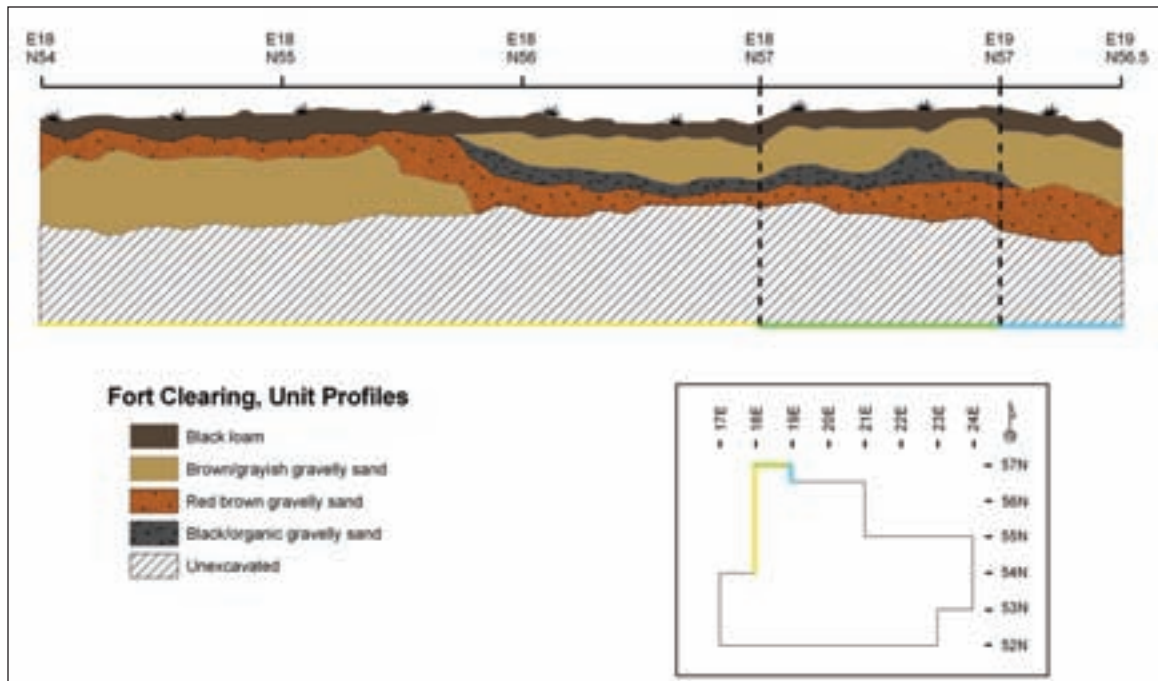


Figure 6-37. Stratigraphic profiles of wall units in the northwest corner of Test Area 2. Colored lines at base of profiles show their locations with respect to the overall boundary of Test Area 2.

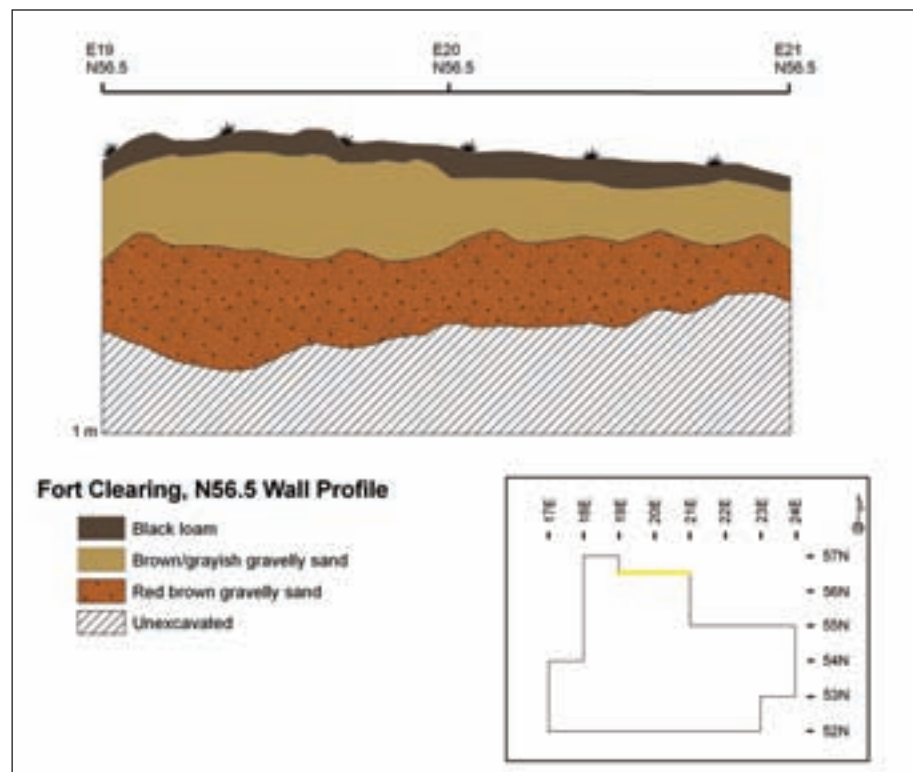


Figure 6-38. Stratigraphic profile of soils in the north margin of Test Area 2. Colored line on inset shows the locations of the profile with respect to the overall boundary of Test Area 2.

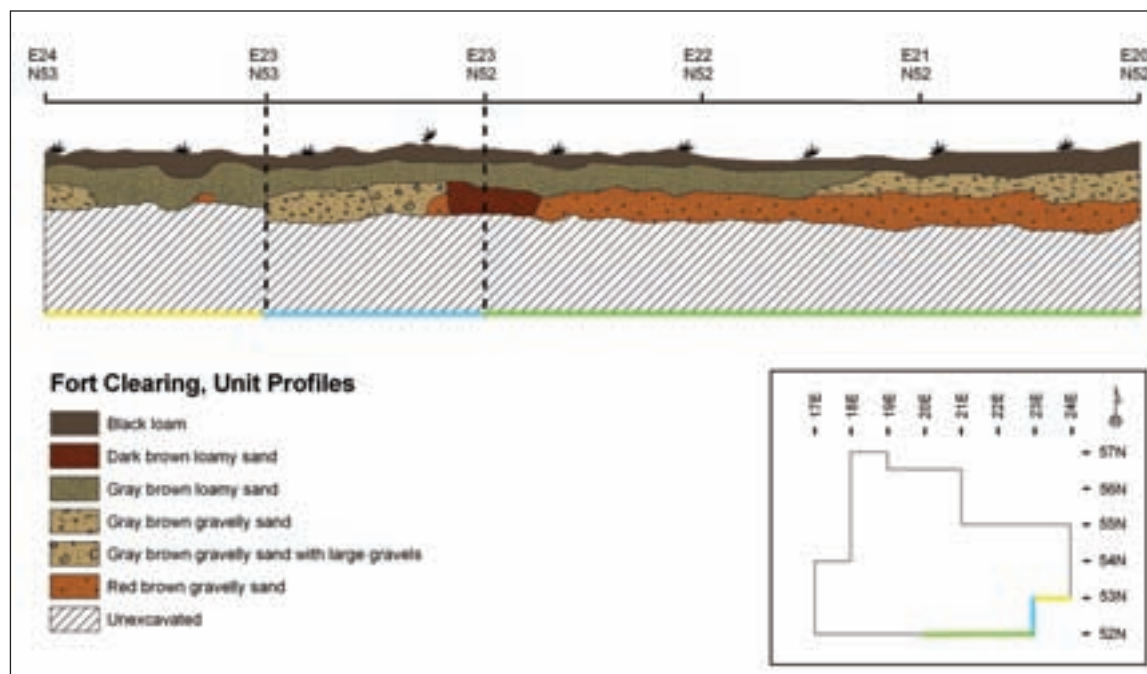


Figure 6-39. Stratigraphic profiles of wall units in the southeast corner of Test Area 2. Colored lines at base of profiles show their locations with respect to the overall boundary of Test Area 2.

ceramics, flat glass, and the leister prong. These objects are most likely associated with the homestead of Peter Ovchinnikov (who lived in this approximate location in the 1840s) and, after his death, his re-married widow Nastasiia Stepanova Fadeeva.¹⁷ Fadeeva occupied the location at least until March of 1855 at which time her home was looted and burned during a two-day Tlingit rebellion. The highest concentration of 19th century objects was clearly in the extreme northwestern corner of the excavation area with 180 (64.3%) occurring in three contiguous 1 x 1 m units (54-56N 18E). This suggests the primary occupation of the Ovchinnikov family may be northwest of the excavated area.

Prehistoric Structure

The third and final target for the 2008 investigation focused on the location of one of the more interesting discoveries of the project; i.e., the 2007 identification of a square stone-lined hearth in the woods about 150 m west of the Fort Clearing. The hearth was dug into beach gravels and overlaid by a thick charcoal-bearing layer which was interpreted as the living surface inside a Tlingit summer house as these features were traditionally placed at the center of Tlingit dwellings. Radiocarbon dates for this feature were 700 ± 100 BP, 830 ± 100 BP, and 1000 ± 100 BP (see Volume II, Section 2). The common overlapping calibrated range for these dates is AD 1153-1228. The goal here was to locate the perimeter of the summer house to determine its size while remaining minimally invasive. This was accomplished using shovel testing, working from a position believed to be well outside the structure toward the hearth feature. This resulted in a determination that the house is approximately 7½ meters square, well within the range of summer structures discussed by Emmons and de Laguna (see Chapter 2 of this report). If it is oriented with the hearth, as it should be, the house axis will be oriented 50° east of north. The doorways of Tlingit dwellings traditionally

opened to the water so this particular structure's door should be on the north side facing the Indian River or on the south side opening to the ocean. At the time of its occupation, the structure would have been on relic beach ridges at the ocean edge. Therefore, its doorway is likely to be on the south side of the structure. The pullout here would have been in an estuary partially protected by a bar extending east from the south side of the peninsula.¹⁸

Possible Tlingit Fort Depressions

Thus, all 2008 investigative goals were accomplished. In addition, one final very minor investigation was undertaken based on information developed through the project's inventory and a newly published book by Nora and Richard Dauenhauer and Lydia Black (2008). There are several references to one or more pits for the Tlingit to take refuge from Russian cannon and musket fire with the Tlingit uniformly describing one large pit within which all the clan houses were set. A contemporary Russian account (by Aleksandr Baranov) described dugout pits inside each Tlingit house. A much later, second-hand account whose information is probably ultimately derived from Baranov, described the Tlingit defenses as including dugout houses set in a shallow depression in the ground. This last description would seem to reconcile the Tlingit narratives of one large pit and Baranov's description of pits inside each house.

There are three large pits on the peninsula west of the Fort Clearing. Two of these (referred to in this report as Depressions A-2 and A-3) lie in the heart of the battle zone as defined through metal detection and recovery of musket and cannon balls. Two cannon balls and two canister shot, both from 12-pound cannon (the size of late 18th and early 19th century Russian naval guns), and a musket ball occurred 13, 16, 21, 23, and 24 m from the center of the two depressions (see Figure 4-8). A large tree has grown into and partially filled the southeastern corner of Depression A2 (see Figure 5-25). While their origin remains unknown, their similarity in size, orientation, and presence of berms on the north side of each suggest they are likely of cultural derivation. Betts suggested these depressions may be associated with a military 1942-1943 Army communications post and cites the recovery of telegraph wire near the depressions as well as observing glass insulators and short horizontal boards as climbing aids nailed to nearby trees.¹⁹ These objects were not observed by the shovel test or test excavation teams. On the other hand, the large tree growing in the southeast corner of Depression A2 suggests the depressions may have been created sometime in the 19th century. Further, the 2007 test of Depression A3 resulted in recovery of a slate flake. If this object is truly culturally modified, it would reinforce an association with the Kiks.ádis fort.

The question therefore arose, "Are these depressions old enough to be associated with the Kiks.ádis 1804 fort or were they dug in the 1840s by the Russian homesteader Peter Ovchinnikov?" The answer to this question can be addressed, at least in part, by determining the age of the tree growing into Depression A2. Forest Service Silviculturalist Pat Heuer came to the park over his lunch hour to examine the tree and brought an increment boring tool with him to obtain a core from the tree. This would allow him to date the tree through its rings. After showing him the tree, he noted its large size would insure that we could not reach the center of the tree at the base. In fact,

it proved too thick even 8 ft above the ground, the point where the core was eventually taken. To make a long story short, the tree was determined to have initiated its growth circa 1830. This date suggests the pits were in place before 1830 since it is unlikely a small tree would have been tolerated at the edge of a Russian structure's basement. This is certainly too early for Ovchinnikov to have created the depressions. It suggests the possibility the depressions are elements of the Kiks.ádis fort although the data do not rule out the possibility that they were created by the Russians during the first few decades of their occupation.

Alternatively, all three depressions could represent the remains of traditional Tlingit storage caches. See the discussion above in this Chapter for Depression A1 tests.

Establishment of Archeological Mapping Data

At the end of the 2008 field season, two permanent site markers were established at the Fort Clearing with two more in the woods at the site of the stone fire hearth. Concrete was poured around a rebar set into a section of vertical plastic pipe with special copper markers installed in pairs on each datum. The markers, bearing likenesses of the two Tlingit moieties Eagle and Raven, were made by Tlingit copper and silversmith Charlie Skulta, Jr. (Figure 6-40). One marker on each datum was inscribed "NPS MWA 2008" identifying the markers as installed in 2008 by the Midwest Archeological Center. The second marker on the datum bore that location's north coordinate followed by "NPS" and the east coordinate. At the Fort Clearing, these data were established at N57



Figure 6-40. One of a pair of data established at the Fort Clearing.

E 20 and N20 E 20 on the geophysical grid. At the fire hearth location, the data were positioned at No E 10 and N20 E10 on the geophysical grid.

¹ Alan's Marble Connection 1998.

² Emmons 1991, pp. 69-71.

³ Chaney et al. 1995, Map 1.

⁴ Hope 1993.

⁵ Hunt 2007c, p. 56.

⁶ Stewart 1977, pp. 119-121.

⁷ Hadleigh-West 1959, p. 43.

⁸ Betts 1999, p. 186.

⁹ An excellent illustration of the bipolar percussion technique is provided in Stewart 1973, p. 68.

¹⁰ The process of turning yellow cedar bark into fibers used to make twine, blankets, cloth, etc. is described and illustrated by Hilary Stewart (1984, pp. 124-126). One step in the process is to use a stone to beat soaked and shredded bark on a flat stone similar to the anvil stone recovered at Sitka National Historical Park.

¹¹ Yohe 2007.

¹² The Sitka Tribe of Alaska Kayaani Commission 2006a:17-18; 2006b. The Kayaani Commission was established in 1998 by the Sitka Tribal Council to preserve and protect the historical and traditional knowledge of the way plants were used.

¹³ Newton and Moss 1984, pp. 18-19, 42-43.

¹⁴ Davidson 1999, pp. 556-557. The on-line site "Gardening eu" indicates this plant is a perennial herb. See <<http://www.gardening.eu/arc/plants/Perennial-Plants/Atriplex-alaskensis-S.-Wats/7472/>>. Site accessed October 16, 2008.

¹⁵ Newton and Moss 1984; Thornton and Hope 1998; Sitka Tribe of Alaska's Kayaani Commission 2006a, b.

¹⁶ One of these dark square stains was mistakenly named Feature 3 before it was realized it was the remnant of 2007 test unit D7.

¹⁷ Arndt and Pierce 2003, pp. 242, 252, 261-262.

¹⁸ Chaney et al. 1995, Figures 6.7 and 6.8.

¹⁹ Betts 1999, p. 157.

SITKA

CHAPTER 7

OUTREACH

At the initiation of the Sitka National Historical Park Parkwide Inventory, two goals were established to broaden participation of the public and various private and governmental organizations in the project and disseminate information about the project and its results to those same entities. The goals were: a) to improve public knowledge, understanding, and appreciation of archeological resources, and b) to involve other governmental, tribal, educational organizations to participate in the project.

The first goal is based on the understanding that the public will assist in the preservation and protection of a resource if it understands and appreciates it. NPS Washington Office's Chief Archeologist Frank McManamon has succinctly stated it: "Leaders in American archaeology perceive that better public understanding about archaeology will lead to more preservation of sites and data, less site looting and vandalism, greater support for the curation of archaeological collections and records, and a demand for yet more archaeological interpretation and participation by the public."¹ In large part, this is a by-product of public ownership of the resource; i.e., if the public believes it is a partner with the National Park Service in understanding and managing a resource, it will be more likely to help protect and preserve that resource.

This goal ties directly to a primary mission of the National Park Service; that is, to make available to the public, and preserve for the future, the valuable resources found within units of the National Park system. The Midwest Archeological Center is committed to this mission, especially as it relates to archeological resources. The process by which the public achieves this knowledge, understanding, and appreciation of archeological resources is through education about archeology and this education can be accomplished through a range of activities including such things as meeting with elementary school groups, youth and adult associations (Figure 7-1), interacting with park visitors, and working with interested volunteers at archeological sites or in the laboratory.

With this in mind several public education efforts were identified that would be directed toward a broad range of audiences. An array of media venues were utilized to deliver information to the public. These are listed in Table 7-1. Most of these efforts were initiated by park personnel with the cooperation and participation of the archeological teams.

Several other outreach products, addressed primarily toward international professional archeological audiences, will be completed well after the project is completed. One of these will be development of a poster presentation for 2010 to be exhibited at the 43rd Annual Conference on Historical and Underwater Archaeology, the 74th Annual Meeting of the Society for American Archaeology, or the 7th World Archaeological Conference.

Table 7-1. SAIP Project Outreach via Media and Public Presentations..

	MEDIA	AUDIENCE	DESCRIPTION
2005	Internet	International - General	"Sitka National Historical Park, Year 1 of 2005-2008 Parkwide Inventory," in Midwest Archeological Center Field Season: Project Photos, on the U.S. Department of the Interior, National Park Service, Midwest Archeological Center website at < http://www.cr.nps.gov/mwac/sitka/sitk/index.html >.
	Internet	International - General	Griffin, Kristen, 2005, Sitka National Historical Park Archaeological Survey Project Newsletter 1, August 1, 2005. On the Sitka National Historical Park website at < http://www.nps.gov/sitk/parknews/archaeological-survey-project-newsletter-1.htm >.
	Internet	International - General	Griffin, Kristen, 2005, Sitka National Historical Park Archaeological Survey Project Newsletter 2, December 5, 2005. On the Sitka National Historical Park website at < http://www.nps.gov/sitk/parknews/upload/arch_newsletter_2.pdf >.
	Newspaper	Local - General	"Team digs Into Past at Sitka National Park," Daily Sitka Sentinel, August 12, 2005.
	Radio	Local - General	Sitka public radio station Raven Radio, KCAW, 104.7 FM, story by Melissa Marconi-Wensil, August 26, 2005.
	Radio	State/Regional - General	Alaska Public Radio, , story by Melissa Marconi-Wensil, date unknown
	Radio	Local - General	Interview of William Hunt and SITK Historian Kristin Griffin on Sitka station KIFW-AM 1230, August 12, 2005.
	Newsletter	Regional - Professional	Review of project by Bill Hunt, 2005-2006, "Midwest Archeological Center," in NAPA [Nebraska Association of Professional Archeologists] Newsletter vol. 20, pp. 4-5.
	Newsletter	Local - General	August 2005, Profile of Alan Carper, Youth Employment Program worker with archeological crew, Sitka Works! vol. 1, no. 1, p. 1.

Table 7-1. Continued.

	MEDIA	AUDIENCE	DESCRIPTION
2006	Radio	Local - General	Interview of William Hunt, SITK Historian Kristin Griffin, and Sitka Tribe of Alaska/Kiks.adi clan liaison Steve Johnson on Sitka station KIFW-AM 1230, April 14, 2006
	Radio	Local - General	Sitka public radio station Raven Radio, KCAW, 104.7 FM, interview of William Hunt, Kiks.adi elder "Duck" Didrickson, and park staff by Melissa Marconi-Wensil, May 2, 2006.
	Newspaper	Local - General	Photoessay about logging field data - "Logging in the Park," Daily Sitka Sentinel, April 28, 2006.
	Magazine	Local - General	Polmanteer, Jessica, 2006, Unearthing History. Life Style Lincoln, Fall, pp. 46-52.
	Newsletter	Regional - Professional	Bill Hunt, Winter 2006-2007, "Sitka National Historical Park (SITK) Parkwide Inventory: 2006 Fieldwork," NAPA [Nebraska Association of Professional Archeologists] Newsletter vol. 21, pp. 9-10.
	Magazine	National - General	Bawaya, Michael, 2006 Archeologists Find Tlingit Fort. American Archaeology 10(3):11.
	Newspaper	Regional/National - General	Article by AP reporter Anne Sutton and photographer Seanna O'Sullivan appearing in: "Archeologists Hunt for Battle Site." Archaeology News website < http://www.archaeologynews.org/link.asp?ID=84610&Title=Archeologists%20hunt%20for%20battle%20site > May 19, 2006. Accessed January 22, 2007.
			"Dig Unearths Shot, Cannonballs at Sitka Glade." Associated Press. In The Seattle Times on line at http://seattletimes.nwsources.com/html/localnews/2003010564_tlingitfort22.html . Accessed May 22, 2006.
			"Tlingit vs. Russians Update: Dig Unearths Shot, Cannonballs at Sitka Glade." ArchaeoBlog website at < http://archaeoblog.blogspot.com/2006_05_01_archive.html >. Published on the Internet May 31, 2006. Accessed January 22, 2007.
			"Dig unearths shot, cannonballs at Sitka glade". From David J Shirlaw. Date: Mon, 22 May 2006 15:11:08 -0700. On Listserv 14.5 website at < http://post.queensu.ca/cgi-bin/listserv/wa?A1=ind0605&L=marhst-l#78 >.
	Report	Park Management/Sitka Tribe of Alaska	"Tlingit Indians' Last Stand in Alaska," Los Angeles Times, May 28, 2006, print edition B-7. Hunt, William J. Jr., Douglas D. Scott, and Steven L. De Vore, 2006, Sitka National Historical Park: Year 1 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Table 7-1. Continued.

	MEDIA	AUDIENCE	DESCRIPTION
2007	Newsletter	International - Professional	Hunt, William J. Jr., 2007, Sitka National Historical Park (SITK), Alaska, 2006 Parkwide Inventory. In "Current Research," SHA [Society for Historical Archaeology] Newsletter.
	Newsletter	Regional - Professional	Hunt, William J. Jr., 2007, Sitka National Historical Park (SITK), Alaska, 2005 and 2006 Parkwide Inventories, Alaska Anthropological Association Newsletter.
	Internet	International - General	Griffin, Kristen, 2007, "Sitka National Historical Park Survey," on the National Park Service Archeology Program website. On the Internet at < http://www.nps.gov/archeology/sites/npSites/sitka.htm >.
	Internet	International - General	"Sitka National Historical Park Parkwide Inventory, Year 1," in the Featured Projects section of the National Park Service, Midwest Archeological Center website. On the Internet at < http://www.nps.gov/history/mwac/sitka/year1.htm >.
	Internet	International - General	"Sitka National Historical Park, Year 2 of 4 Parkwide Inventory," in the Featured Projects section of the National Park Service, Midwest Archeological Center website. On the Internet at < http://www.nps.gov/history/mwac/sitka/year2.htm >.
	Internet	International - General	"Sitka National Historical Park, Year 3 of 4 Parkwide Inventory," in the Featured Projects section of the National Park Service, Midwest Archeological Center website. On the Internet at < http://www.nps.gov/history/mwac/sitka/year3.htm >.
	Magazine	International - Professional	Griffin, Kristen, 2007, "Connecting the Past, Present, and Future at Sitka National Historical Park." In the Research Reports of CRM: The Journal of Heritage Stewardship 4(1).
	Radio	Local - General	Sitka public radio station Raven Radio, KCAW, 104.7 FM, interview of William Hunt and Kristen Griffin by Melissa Marconi-Wensil [broadcast date unknown].
	Newspaper	Local - General	Photoessay about outreach to Girl Scouts of American - "Women in Science," Daily Sitka Sentinel, June 25, 2007.
	Presentations	Local - General	Presentations were made to students in the Anthropology Club at the University of Nebraska-Lincoln, and in an Introduction to Anthropology class at the University of Nebraska-Omaha
	Report	Park Management/Sitka Tribe of Alaska	Hunt, William J., Jr., 2007, Sitka National Historical Park: Year 2 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Table 7-1. Concluded.

	MEDIA	AUDIENCE	DESCRIPTION
2008	Conference Presentation	Regional - Professional	"Singin' In The Rain ": Archeology, Legends, Oral Histories, and Tlingit Partnerships in Sitka National Historical Park, Alaska. Oral Presentation at the 35th Annual Meeting of the Alaska Anthropological Association, Anchorage, Alaska, held February 27-March 1, 2008.
	On-site poster	Local - General	Park visitor information was accomplished through three large posters exhibited at the work site, Visitors Center, and strip mall. These posters explained the purpose and goals of the inventory, how the work has been accomplished, and the goals of the 2008 field season.
	Interpretive panels	Local - General	Two trailside panels were designed by the project director explaining the project and providing an overview of the park's prehistoric and historic archeology.
	Book	International - General	Griffin, Kristen, 2008, Historical and Archeological Investigations at Shis'gi Noow. In Anóoshi Lingit Aanií Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804, pp. 291-294. Edited by Dauenhauer, Nora Marks, Richard Dauenhauer, and Lydia T. Black. University of Washington Press, Seattle.
	Internet	International - General	Update of " Sitka National Historical Park, Parkwide Inventory, " in the Featured Projects section of the National Park Service, Midwest Archeological Center website. On the Internet at < http://www.nps.gov/history/mwac/sitka/year3.htm >.
	Report	Park Management & Sitka Tribe of Alaska	Hunt, William J., Jr., 2008, Sitka National Historical Park: Year 3 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

In addition, articles are being prepared for publication in the *Alaska Journal Of Anthropology* and the fall 2010 issue of *Alaska Park Science*.

One of the general issues the project had to address with regard to outreach was to involve other agencies, disciplines, and native people. This would be accomplished through two goals, the first of which was to supplement data from archeological contexts with a broad range of multidisciplinary environmental, historical, ethnographic, and oral history research to provide a comprehensive understanding of the people and events that have shaped the cultural landscape of the park. This goal has been accomplished through the presentation of information contained in this report.

The second goal was to involve other governmental, tribal, educational organizations to participate in the project. With the leadership of park superintendent Greg Dudgeon and his cultural resource staff, this was accomplished by involving the public in various ways in the field research and by providing employment and volunteer opportunities.

The other federal land management agency in the Sitka area is the U.S. Forest Service, an organization which has contributed more than any other to our understanding of Baranof Island archeology and the prehistory of southeast Alaska. Forest Service Archeologist Jeremy Karchut was often consulted through the course of this project. Karchut provided access to Baranof Island archeological collections stored at Sitka and copies of limited distribution archeological reports for archeological work done on the island by Forest Service archeologists. After Karchut transferred out of the Sitka area, the contact person in the Sitka office became Forest Service Ranger and Education Specialist Jim Case who assisted with comparative Baranof Island site data. Forest Service Silviculturalist Pat Heuer also assisted the project by assessing tree ages with focus on one tree in particular within the 1804 fort and battlefield area (see Chapter 6).

The importance of a partnership between the park, NPS archeologists, the Sitka Tribe of Alaska and Tlingit clans can not be overstated. Liaison with native peoples were considered of great significance since lands encompassing Sitka National Historical Park lie within the heart of Tlingit territories (Sheey At'ika or Sheetka'ká Kwaan). The Tlingit, unlike many tribes in the mainland United States, were not removed from their traditional homelands. Today, the Sitka Tribe of Alaska (STA) lists over 3100 tribal members with the overwhelming majority residing in the Sitka, Alaska, area.² Further, Sitka National Historical Park occupies land recognized as within the traditional *at.oow* (literally translated as “an owned or purchased object”) of the Kiks.adi clan. Within the boundaries of the park are resources and places claimed and used by the Kiks.adi for perhaps 5000 years or more.³ Given the relatively youthfulness of the park landforms, it is therefore likely that many if not most archeological sites within the park are associated with the Tlingit and particularly with ancestors of the Kiks.adi clan. This association with the park by the Tlingit has continued to the present day. Individuals still living in the Sitka area remember going to the park for berry picking, salmon gaffing, picnics and memorials. Their elders showed them where they had established fish camps and erected smoke houses. There is considerable Sitka Tlingit oral history relating to the park and surrounding environs beyond the Russian conflicts. For these reasons, it was

considered important to include the Sitka Tribe of Alaska and particularly the Kiks.adi clan members in the project. It is obvious the tribe and clan have much to contribute with regard to identifying archeological sites, site functions, artifacts, and site histories. The archeology project, in turn, has the potential to offer the tribe and clan specific information about archeological resources in the park, the objects and features they may contain, occupation periods, and prehistoric activities, all of which can add to the rich oral history the Tlingit and the clans already have in place.⁴

The partnership between the tribe, the clan, the park, and the archeological team began in June, 2005, with a reconnaissance trip to the park by the Midwest Archeological Center team. During this visit, archeologists and park staff met with STA Chairman Woody Widmark and members of his staff. Center archeologists at this meeting included William Hunt (general archeology), Doug Scott (metal detection), Steve De Vore (geophysical inventory), and Karin Roberts (curation). STA representatives at the meeting were Tribal Chairman Woody Widmark, Resources Protection Director Jessica Perkins, and Administrative Officer Lisa Gassman. Park staff in attendance included Chief of Resource Management Gene Griffin, Museum Specialist Sue Thorsen, Historian Kristen Griffin, and Chief of Administration Liz Roberts (Figure 7-2). This meeting addressed the nature and scale of the archeological investigations that were to take place, tribal concerns, and issues and actions crucial to successful development of a partnership between the three groups. That evening saw a meeting at the park Visitor Center with members of the Kiks.adi clan to discuss the project and address concerns they may have had. In general, the tribal government and clan members expressed a strong positive interest in the project, seeing it as a means to advance knowledge of their tribal and clan histories and, thus, make stronger connections to the past.

Archeologists and park personnel also met with STA members at their June Cultural Committee Meeting held in the Amphitheatre of the Visitor Center. Project goals were presented and the director of each field team described the work that would soon be undertaken. This broader meeting was attended by members of a number of clans and suggestions were made by those attending as to how information could be passed back and forth. Of some concern was the possibility that archeologists would encounter burials. Some were in favor of excavating them and some did not want that to happen. The NPS policy and procedures on burial discovery were outlined at this meeting with Center and park staff noting that burial locations would be recorded but no burial excavations would take place. In the event a burial was encountered, the information would be immediately passed on to the park management and Superintendent Dudgeon would be responsible for the informing the tribe and clan.⁵

To enhance the process of consultation and information sharing, park management encouraged the tribe and the clan to select a liaison to meet and work with the archeological project director on a regular basis. The purpose of the liaison was to share information and concerns of tribal members regarding the project with the project director (Hunt) and park managers and, in turn, for the project director to pass on information to the clan and tribe about the project. The person selected by the Tribal Chairman as the tribal liaison was STA Resources Protection Director Jessica Perkins. The Kiks.adi clan's chosen liaison was Steve Johnson Jr., the Department of Defense



Figure 7-1. MWAC Archeological Technician Callie Unverzagt interpreting a test excavation in the Fort Clearing to a group of Girl Scouts in 2007 for Women In Science Day.



Figure 7-2. June 2005 meeting of staff members from the Sitka Tribe of Alaska, Sitka National Historical Park, and Midwest Archeological Center.

Lands Investigator within the tribe's Resources Protection Division. Ms. Perkins, in turn, designated Johnson as her day-to-day representative to simplify communication.

Throughout the course of each year's fieldwork, project results were shared with the tribe and clan in a number of ways. Hunt and Johnson often met to discuss the project's "current events." Meetings were also held at irregular intervals between liaisons Perkins and Johnson, the archeological project director, and park staff (particularly with Gene Griffin, Kristen Griffin, and Superintendent Greg Dudgeon) to discuss communication issues between the various parties. Johnson often arranged meetings between Hunt and Kiks.ádi clan elders and other members at the STA's offices. Artifacts brought to these small gatherings were often focal points of discussion, eliciting stories about Tlingit work and life in the park. Of particular interest were the bullets and cannonballs recovered in 2005, artifacts with which the elders had strong visceral connections. They were seen as objects directly connected to the deaths of their clan's young men during the 1804 battle with the Russians. Kiks.ádi elders Irene Jimmy (*Shdéen Hít*, Steel House) and "Duck" Didrickson (*Kaxatja Hit*, Shattering House Housemaster) visited worksites at least once each field season. In part, the importance of the archeological work to the clan and tribe was demonstrated by a short article "Clan Helps Search For Site of Last Stand Against Russians." published on line in 2006.⁶ Hunt and Dudgeon also met with individuals of the Kaagwaantaan clan in 2005 near the end of the fieldwork. Clan members at the meeting were Nels Lawson, Dan Moreno, and clan leader Herman Kitka. The meeting was held at Kitka's home. Artifacts from were brought to this meeting and the three men, particularly Kitka, remarked on such subjects as the clan's role in the battle and the very early occurrence of iron artifacts in the region (derived from Japanese and Chinese shipwrecks).

At least once during each field season, project archeologists presented overviews of the inventory findings and accomplishments to Kiks.ádi clan members at the SITK Visitor Center's Amphitheatre. Although the head of the Kiks.ádi clan, Ray Wilson (Aanyaanax), Gagaan Hit (Sun House) housemaster, was unable to attend (he lives in Juneau), Superintendent Dudgeon kept him updated regularly about the project. The Superintendent also made drafts of annual project reports available to tribal and clan reviewers for review and comment and distributed copies of each final annual report to the tribe and clan each year.

Employment opportunities were provided for local youth utilizing Alaska's special hiring authorities to allow greater local participation in the project with special emphasis on hiring Tlingit workers. In 2005, SITK park staff notified the STA and Kiks.ádi clan of that jobs were available for Tlingit youth and were urged to encourage their younger members to apply. Three local youth applied for the jobs and, as a result, the project employed two high school students (one a non-Tlingit and one belonging to the Kaagwaantaan clan) and a college student (Kiks.ádi clan) as members of the shovel test crew. In 2006, six local people were hired, three of whom were tribal members. In 2007, Four local workers (two of which were Tlingit) were brought on the project as field workers. In 2008, two local non-Tlingit college students were hired.

Volunteers in Parks (VIP) and other public education programs within the National Park Service provide a means of opening the project to a potentially very broad

segment of society. MWAC has been involved in the VIP program for over twenty years and this project was no exception. Volunteers worked alongside professional staff in all aspects of project research from metal detecting and geophysical surveys, site testing, major excavations, and laboratory analysis.

Over the course of the project, the project director worked with SITK Chiefs of Administration Liz Roberts and Julia Rosborough, Park Ranger Clarence Wadkins (SITK VIP Program Coordinator), and MWAC Archeologists/ VIP Program Coordinators Bruce Jones and Dawn Bringleston to identify and enlist volunteers to work alongside the archeological team. As a result, nine individuals volunteered in 2005, working from a half day to three weeks and incorporated both men and women ranging in age from 15 to 56 years. While volunteers were utilized primarily by the shovel test team, at a minimum they were exposed to the operations all three teams, their goals, their methods, and instrumentation. They also learned general park history as well as general archeological goals and methods. By contributing to the VIPs knowledge, understanding, and appreciation of archeology and SITK archeological resources, the project engendered a connection between the individuals and the park. This connection is an important element for future site preservation at SITK and other locations. Three of the volunteers were professional archeologists who provided technical assistance critical to the successful completion of the fieldwork. Melissa Connor utilized the GPS to document geophysical survey grids, metal detection finds, and shovel test locations. She also provided temporary backup direction for the shovel test team when the team leader (Hunt) could not be on-site. Charlie Haecker and Chris Adams lent their years of metal detection expertise to the metal detection team and, in fact, with team leader (Scott) were the team. Non-archeologists serving as VIPS in the project were from the Sitka area and included Israel Ginn, Deirdre LaBounty, Aaron Didrickson, Shane Mitchell, Blaine Scouller, and Sandra Vent. These individuals worked long days digging and screening dirt (actually mud, since it rained most of the time) on the shovel test team and occasionally were assigned to work with the geophysical team moving lines or operating instruments. Altogether, the volunteers contributed 460 hours of labor worth an estimated value of \$15,000 to the project.

In 2006, there was no VIP participation as the project occurred before the end of the school year and the weather was nothing short of miserable. In 2007, however, five VIPs participated in the field effort. Katie Griffin (Alaska), John Banks (Minnesota), Laura Crawford (Nebraska), Jennifer Williams (Ohio), and Kay Sargent (Washington) donated 492 hours of work which is equivalent to \$7822.80 in contributed labor. The archeological team also participated in the park's education program organized by SITK Education Specialist Lisa Matlock, Kristen Griffin, and SITK Museum Specialist Ramona East. Two groups of Girl Scouts visited test excavation locations as a part of a "Women in Science" fun day learning about archeological investigative methods, the importance of site integrity, and the relationships between artifacts and "the story."

In 2008, fourteen people worked as project VIPs. Two people, Allison Marcel (Louisiana) and Emily Vance (Florida), assisted with excavations. In addition, Woody Widmark and about eleven children in his S.C.O.R.E. Program helped backfill some of the completed excavations. One person, Laura Crawford (Nebraska), assisted with laboratory work. Together, these people donated 63 hours at no cost to the agency,

equivalent to \$1017.60 in labor. In total, over the course of the project volunteers contributed 1016 hours of labor, equivalent to a project savings of \$23,840.40.

In 2008, park visitor information was accomplished in part through three large posters designed by the author explaining the “Goals and Objectives” of the inventory, how the work was accomplished (“Field Methods”), and the goals of the 2008 field season (Figure 7-3). Superintendent Mary Miller used the “Field Methods” poster to help generate the interest of Sitka citizens to visit the park by moving the poster from the Visitor Center to the lobby of Lakeside Grocery. All of these posters, at the work site, at the Visitor Center, and in the grocery, received a great deal of attention in the field and Visitor Center and were viewed by several thousand citizens of Sitka and visitors to the park.

At the close of the final field season, two interpretive panels designed by the author were prepared for installation on Totem Trail near the Visitor Center. One of the panels, entitled “Native American Archeology” (Figures 7-4) was designed to provide an overview of Tlingit prehistory from 10,000 years ago through the 1804 battle with the Russians. The second panel, “Historical Archeology” (Figures 7-5), presents an overview of the park’s story from the Russian occupation to World War II as told by the park’s archeological sites.

In sum, this four-year public outreach program was amazingly successful. It introduced thousands of people to archeology in general and specifically to the history and archeology of Sitka National Historical Park and southeast Alaska. The archeological project staff was able to provide a means for the park visitor to personally connect to a little-known aspect of the park, one the visitor would have not had an opportunity to see, learn about, or understand. Finally, the success of the program was possible only through the combined assistance, support, and encouragement of the staffs of the Midwest Archeological Center and Sitka National Historical Park.



Figure 7-3. Visitor information posters placed on site and in the Visitor Center during the 2008 field season.

Historical Archeology

Sitka National Historical Park

Historical archeology at Sitka National Historical Park spans two centuries and reflects use and occupation of the park by people of Tlingit, Russian, and American cultures.

Russians used this area as a park while the Tlingit continued fishing and gathering summer foods here. By 1801, the Russians had a rope-making facility and a garden near the Indian River's mouth. That was also the location of a Russian homestead established in 1840-1845. The home of Peter Ochsminkov, retired Russian-American Co. sergeant, was built in the vicinity of the 1804 Tlingit fort site. The home was burned in the Tlingit uprising of 1855.

Archaeological investigations at the vicinity of Peter Ochsminkov's homestead.

The United States purchased Alaska in 1867 and the park became known as "Indian River Park." Civil War veteran Nicholas Haley staked a homestead claim east of the river's mouth in 1882. A few years later, the Sheldon Jackson Mission established the Cottage Community at the west side of the park. Late 19th and early 20th century artifacts in the park are derived from picnickers, visitors of the Cottage Community and Haley's homestead.

After Japan attacked Pearl Harbor in 1941, the U.S. Army took control of the park's shoreline for a few months. Earthen gun positions and aircraft observation posts were built west of the Indian River. The navy dredged gravel at the mouth of the Indian River to expand Japanese island naval base and causeways to other island defensive positions. Only concrete, cables, and iron abutments remain.

Archaeologists have identified several historic sites in the park, including the location of Peter Ochsminkov's homestead, the site of the 1804 Tlingit fort, and the site of the 1855 Tlingit uprising.

Archaeologists have identified several historic sites in the park, including the location of Peter Ochsminkov's homestead, the site of the 1804 Tlingit fort, and the site of the 1855 Tlingit uprising.

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¹Sitka Tribe of Alaska 2004.

²Newton and Moss 1984; Thornton and Hope 1998, p. 1.

³Foster and Croes (2004) argue that Native Americans can provide a critical analytic and interpretive cultural knowledge to archeologists, especially in the manufacture and use of wood and fiber objects.

⁴No burial was ever encountered.

⁵Native Village 2006.

⁶Native Village 2006.

CHAPTER 8

CONCLUSIONS, PART 1: PREHISTORIC ARCHEOLOGY IN THE PARK

Long before people came to live in the Sitka area, the lands now incorporated in Sitka National Historical Park were submerged below the waters of the Pacific Ocean. Over the years, volcanologists and geomorphological geologists have discovered evidence attesting to the relative youthfulness of Sitka National Historical Park land forms. Geologists have observed a former high tide line above the 40 foot elevation contour of the Sitka area and evidence that, prior to 5,600 years ago, the Indian River delta was about 1½ miles northwest of where it is now at the south end of the park. The first area of the park to emerge from the ocean was likely a bedrock island projecting southward from the delta (Figure 1-5). This former island now forms a small hill in the north end of the park, its crown rising 41 feet above mean sea level and overlooking the west bank of the modern-day Indian River. The geological estimate for the emergence of this island, similar to the array of islands off the modern shore, is around 5,500 year ago and this represents the earliest possible date for a human occupation within the park boundaries.¹

DISTRIBUTION OF PREHISTORIC MATERIALS

Thirty-three charcoal samples have been submitted to date for radiocarbon dating during the past three field seasons (Figure 8-1; see also Volume II, Section 2). These indicate prehistoric occupations in lands now occupied by Sitka National Historical Park from perhaps as early as 888 BC to the historic era; i.e., from the last half of the Middle Period to the end of the Late Period (Figure 8-2).² These occupations predominantly occur on the west side of the Indian River. It is likely, however, given the distribution of (probable cultural) charcoal deposits on the east side of the river, that many archeological sites were destroyed by post-gravel quarrying floods and riverbank erosion.

Prehistoric occupation of the park locality is more clearly demonstrated by recovery of crude stone tools, features, and extensive areas of stratified charcoal deposits (Figure 8-1). Since 1982, archeologists have dug over 1400 shovel test holes and small excavation units covering all areas of the park. Despite this, the recovery of artifacts was extremely low. Only 46 stone artifacts of various types have been found throughout the park with 39 of these collected (see Figures 3-5, 3-7, 5-10 to 5-14, 5-28, and 6-18). No bone or shell artifacts were recovered at all. This is likely a by-product of the wet, acidic forest soils found throughout the park which quickly disintegrate bone and shell. The only exception to this would be in cases where such materials occur in large quantities, such as in a shell midden. In that microenvironment, the calcium carbonate of the shells increases soil alkalinity, neutralizing the normally acidic soils. Unfortunately, no shell middens were found in the park and, given the large number of shovel tests, it can be assumed they do not exist here.

How is this small number of recovered stone artifacts to be explained? The low rate of recovery³ seems strange at first but, when one considers the regional culture

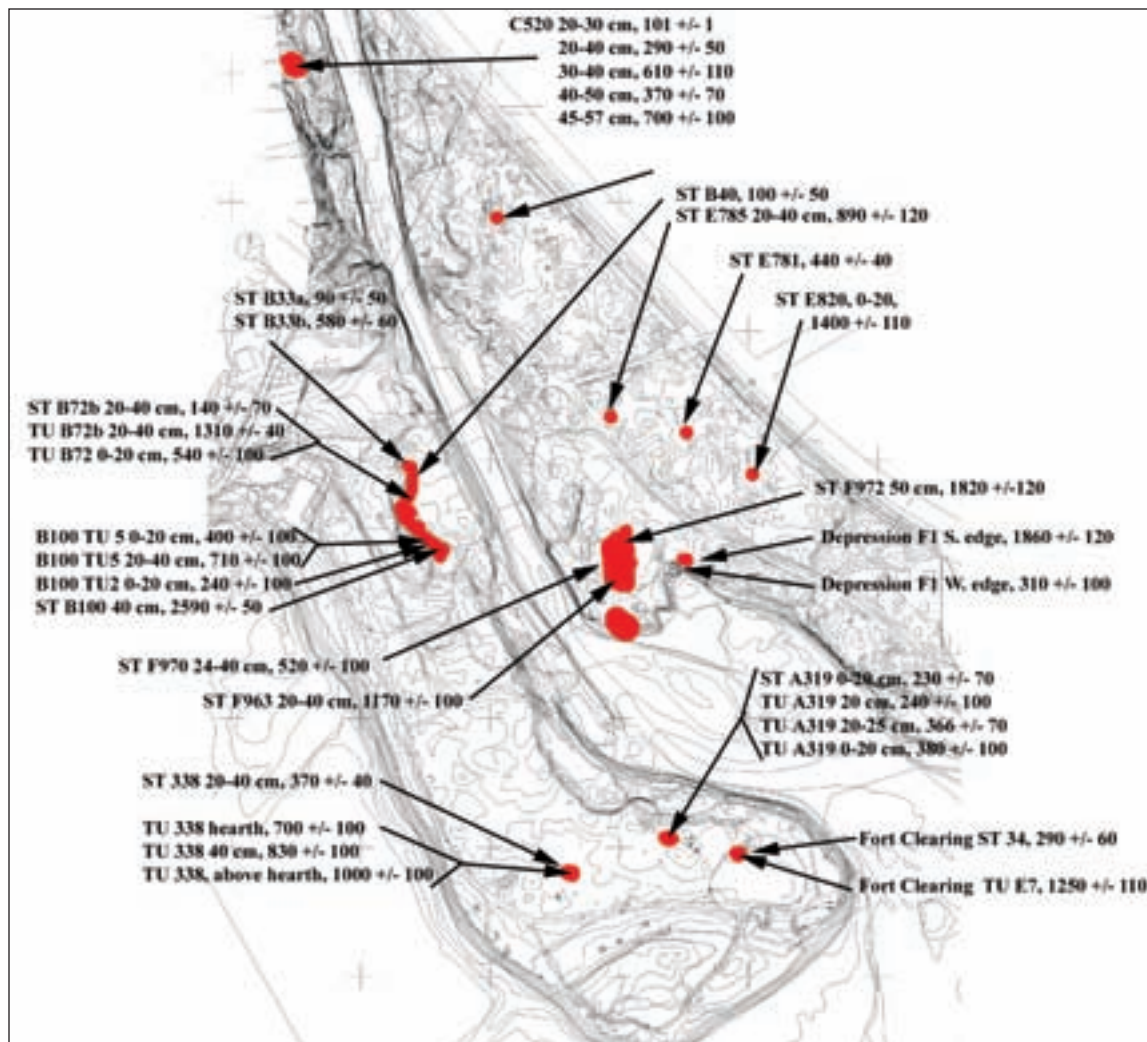


Figure 8-1. Radiocarbon dated charcoal concentrations interpreted as likely prehistoric occupation areas (Note: dates are uncorrected).

history from the context of park landform ages and locations of artifacts recovery, it makes more sense. To some extent, the maximum age of prehistoric artifacts can be determined if one knows the age of landforms upon which they occur.⁴ Artifacts, of course, can be no older than the landform unless evidence suggests the object was dropped in the water or is an older object collected and brought to the site for some reason. Forty-six prehistoric artifacts have been recovered in the park in the last twenty years, five on land surfaces which have not been dated. Plotting the distribution of the remaining 41 objects on the landform map of Sitka National Historical Park (Figure 8-3), one finds:

- 1 (2.4%) artifact from a landform created 2600-3500 BC
- 2 (4.9%) artifacts from a landform created circa 2500 BC
- 1 (2.4%) artifacts from a landform created circa AD 100
- 3 (7.3%) artifacts from a landform created circa AD 300

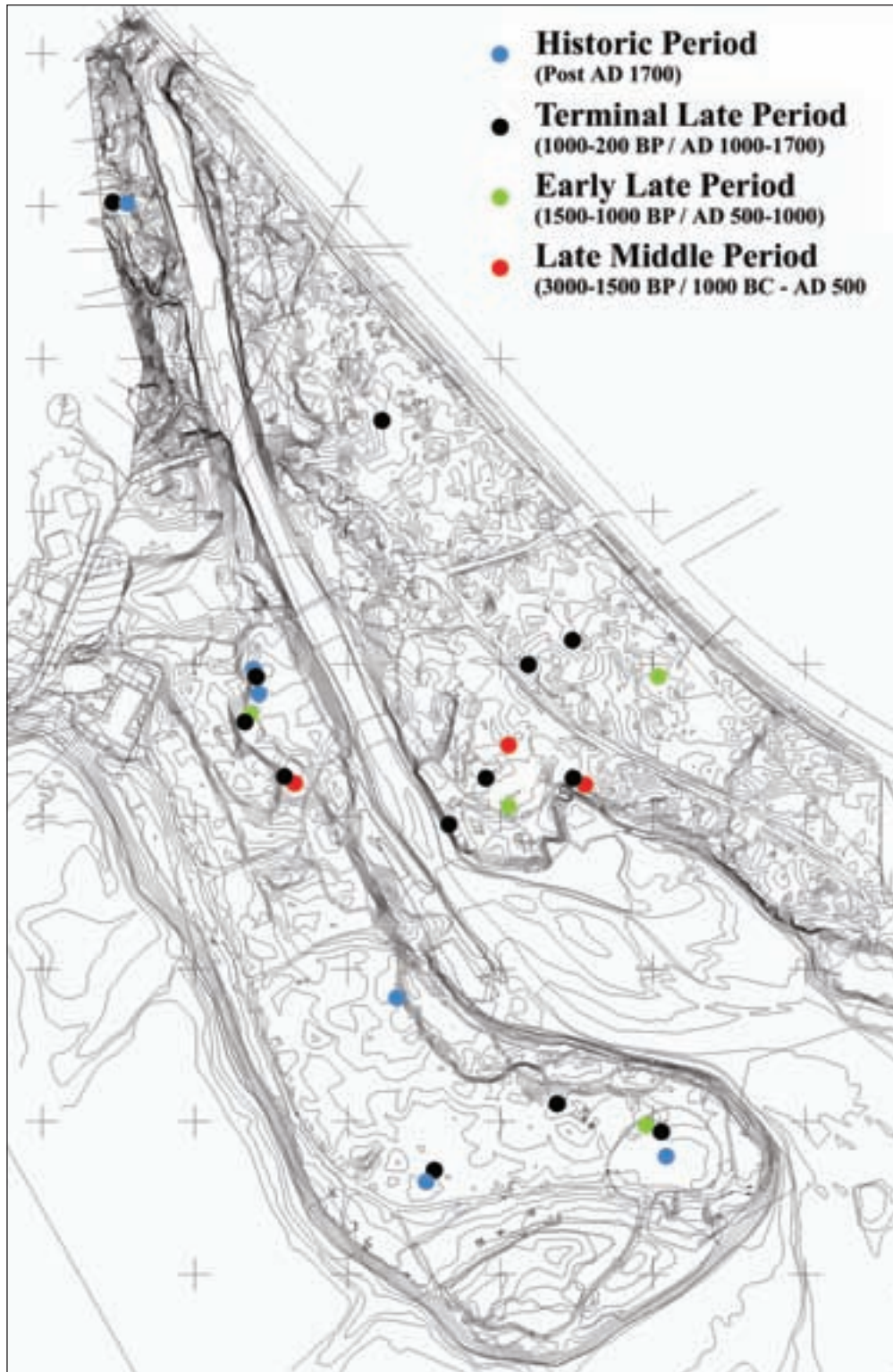


Figure 8-2. Prehistoric occupations at Sitka by time period.

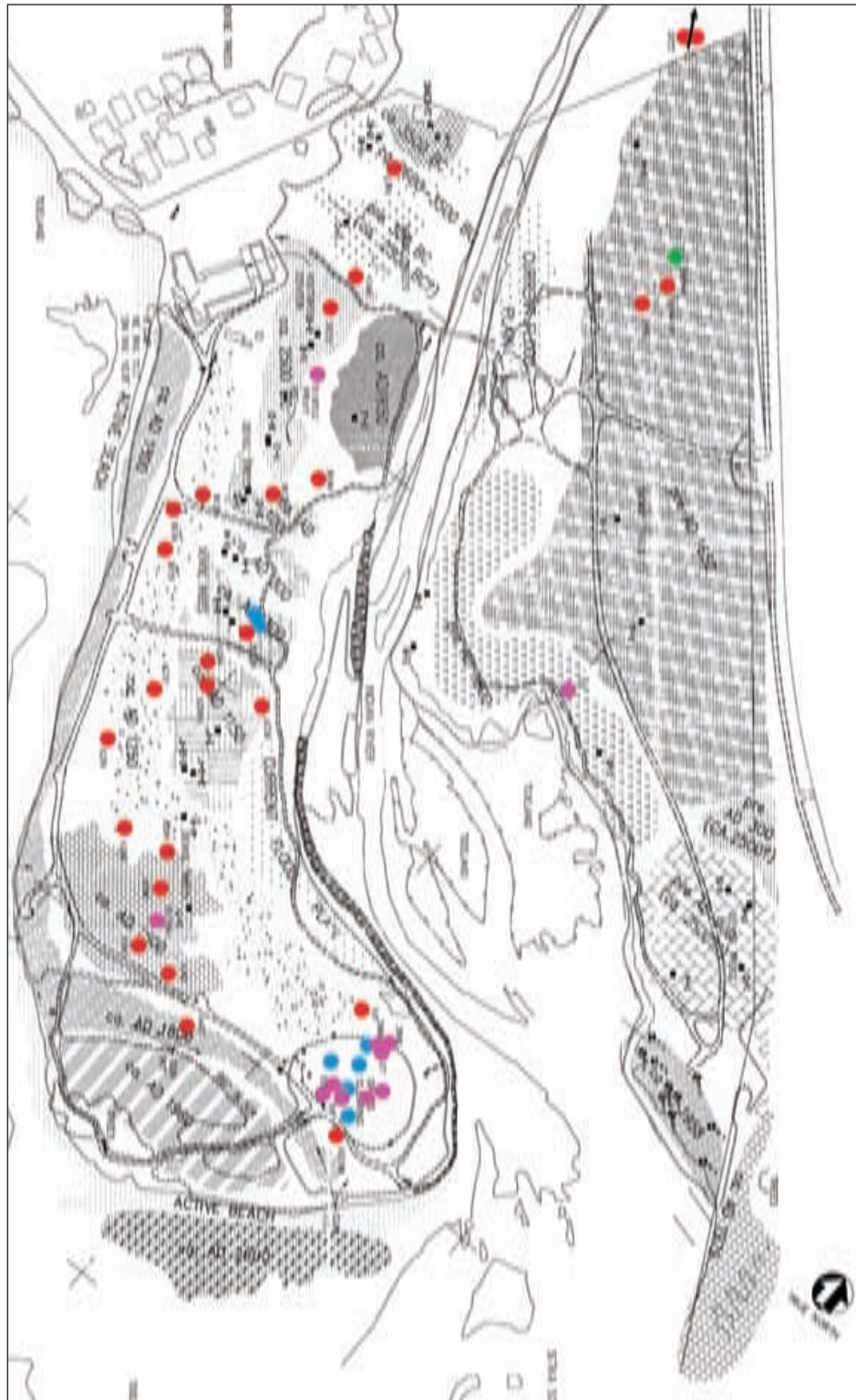


Figure 8-3. Landform chronology map for Sitka National Historical Park showing locations where prehistoric objects have been recovered (red circles = shovel tests; blue = not collected; magenta = test excavations; green = surface) (adapted from Chaney et al. 1995: Map 1).

- 3 (7.3%) artifacts from a landform created circa AD 1150
- 8 (19.5%) artifacts from a landform created circa AD 1250
- 4 (9.8%) artifacts from a landform created circa AD 1500
- 3 (7.3%) artifacts from a landform created pre-AD 1650
- 15 (36.6%) artifacts from a landform created pre-AD 1800 (includes objects from Fort Clearing)
- 1 (2.4%) artifact from a landform created circa AD 1800

From this, we can conclude that the overwhelming preponderance ($n = 34$, 82.9%) of the stone tools must be younger than 900 years old. In this volume's earlier review of regional archeology (Chapter 2), we learned that a fundamental shift in tool technology occurred after 3500 years ago (circa 1500 BC) and was fully in place by 1500 years ago (circa AD 500). During this millennium, there was a rapid reduction of chipped stone tools, a total disappearance of microblades and burins, and a corresponding appearance of ground slate tools, a high percentage of ground stone tools other than slate, and a sharp increase in the number and diversity of bone tools. By 1500 years ago, the onset of the Late Substage of the Northwest Coast Developmental Stage, chipped stone tools were rare and largely replaced by ground stone and bone tools.⁵ Thus, given the youthfulness of the park's landforms (most are younger than 1700 years old), it is not surprising for prehistoric stone tools to be relatively rare.

The morphology of stone tools from Sitka National Historical Park and the raw materials from which they were manufactured suggest that prehistoric people using the park area tended to rely on "opportunistic tools"; e.g., tools that are simple, quickly manufactured, used briefly, and discarded. The raw materials, with few exceptions, are water-worn igneous (basalt and graywacke) cobbles collected from the Indian River as well as from the Crescent Bay shoreline and tidal flats. Very light brown chert and a red siliceous stone (often referred to as jasper)⁶ were used on rare occasions to produce flakes and blades. Although numerous chert sources exist on Baranof Island the nearest primary source for chert would be the Khaz Formation which occurs in a broad north-south band in the mountains east of Sitka (Figure 8-4). Since the head of the Indian River intrudes into this formation, water-born cobbles would be a secondary and perhaps most likely chert source. Water-worn cobbles of jasper have been found in the park suggesting similar primary and secondary derivation to chert and, in fact, jasper-bearing beds of platy siliceous greenschist have been identified in northern Baranof Island.⁷

Stone tool forms found in Sitka National Historical Park during the 2005-2008 inventory include pebble, cortex spall, flake, and ground stone tools. No patterned tools diagnostic of a particular time frame or cultural group were recovered.

Pebble tools are the simplest stone tool form and have been made by humans essentially since our ancestors began making stone tools millions of years ago. These artifacts are the most typical kind of tool recovered at Sitka National Historical Park and little more than a water-worn cobble or pebble which has had a few flakes removed

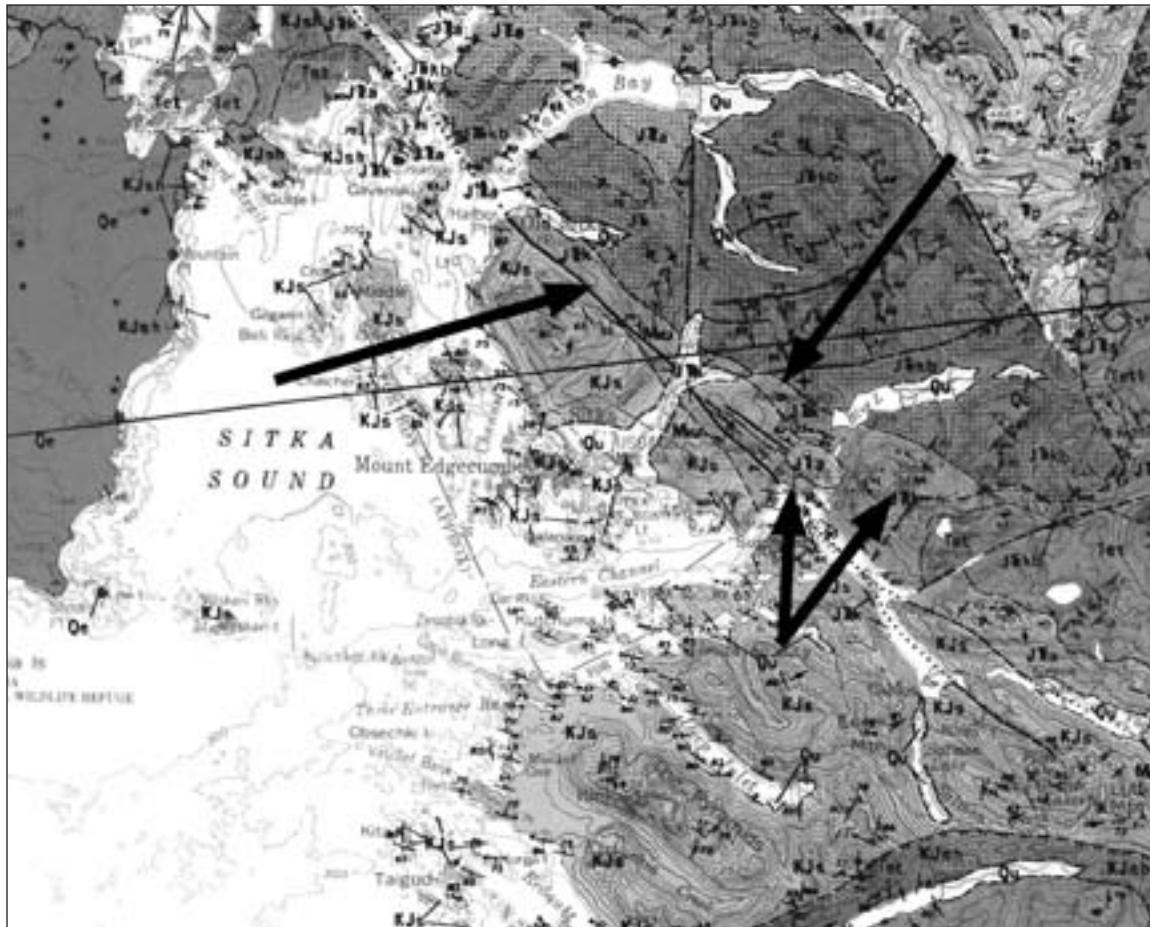


Figure 8-4. Sitka Area geology map showing the location of chert-bearing Khaz Formation (JRK) on Baranof Island.

from one end. Such artifacts exhibit thick working edges suggesting heavy-duty use in such activities as chopping, crushing, shredding, digging, and scraping.⁸ Pebble choppers have been noted in abundance at fish traps in Washington suggesting their use for stunning, killing, and perhaps processing salmon.⁹

Among the twenty-two pebble tools found at Sitka are a small adze, five choppers, two possible picks, a side scraper, and a possible perforator. Five appear to be cores (multiple flakes removed) or tested stones (one or two flakes removed). The form of four possible pebble tools was too generic to allow an estimation of their function.

Cortex spall tools are the flakes that have been removed from the pebble tool cores with a hard blow using another cobble as a hammerstone.¹⁰ These are large primary flakes in that one face of the flake is covered with the cortex (the worn or weathered surface) of the rock. Ten such objects were recovered in the park, two of which were modified with additional flaking along one margin to produce a scraping tool. One specimen is similar in form to a perforator although it is not clear that it was used as such. The remainder are either waste by-products from manufacture of pebble tools and/or were simple tools in their own right used for a cutting or scraping task and discarded. Three similar flakes without the cortex, sometimes referred to as tertiary

flakes, were derived from the inner portions of slate (n = 1) or graywacke (n = 2) cobbles. These probably functioned similarly to the primary cortex spall tools.

At least six ground stone tools have been found in the park. Three are mauls or hammers which were made in two different forms. Nipple top mauls of granite and a possible limestone maul were found in 1940 by workmen at the Indian River Bridge and other during the 1958 excavations at the Fort Clearing. These tools were typically used to pound wedges into a cedar log to split off planking for construction of houses. Such mauls, of course, also served as utilitarian hammers that could be used for a variety of purposes such as for driving stakes or mashing food. The second form, a three-quarter groove granite maul, was also found in the Fort Clearing in 1999 during excavations anticipating the K'alyáan totem pole installation. Two ground stone tools were used for processing food. A large flat, water-worn rock used as an anvil stone was recovered in 2007 from a shallow, bowl-shaped feature in the northwest corner of the Fort Clearing. One face of the stone exhibits heavy pitting from pounding on it with another stone and protein residue analysis indicates it was used to process bear and deer meat as well as kelp and perhaps orache plant foods. A fragment of a flat, water-worn quartzite cobble, also recovered from the Fort Clearing in 2008, may be a mortar fragment. One face of the stone is very smooth and exhibits a small area of polish near its broken edge. One slate fragment, found in Survey Unit F, may be an element of a ground stone tool.

Eight chert or jasper flake artifacts were noted during investigations at Sitka National Historical Park. This type of stone is composed of microscopic silica crystals and can produce fine, sharp edges when compared with similar cortex spall tools and may have been used for cutting and scraping. Although no patterned tools were recovered, tool forms represented in this small collection include 5 chert flakes, a small chert side scraper, and 2 utilized chert flakes.

PREHISTORIC SITES

It has already been noted that Sitka Tlingit have been in the area for perhaps as long as 4000 years although the ground in the vicinity of Sitka National Historical Park was uninhabitable at the time of their arrival. The Kiks.ádi clan is the traditional owner of resources in the park and surrounding lands and are likely the original inhabitants here. Kiks.ádi oral history at Sitka begins with settlement at the Indian River and adoption of the frog as their clan crest:

Indian River at Sitka is “owned” by the Kiksadi clan. Its name is kasdehin (Kasde stream). Kasde was the name of the stream among the Frog People. One day a canoe entered the stream at high tide. The wind was blowing upstream. A man on the bank shouted, “Gudax yaku sawe’h” (Where from canoe come?). A (frog) woman in the canoe answered, “Tchauhan a i ya’h kasdehinedi’h ca_ya uha’n” (It is we, kasde stream people women we are). The moment this was said all the women disappeared into the water and the canoe had become only a log. So it is that the Frog People gave the name to the stream.

And so it is that the Kiksadi can back their claims to the other places they own. Only they know the stories behind the names.”

Oral histories such as this one place Kiks.ádi salmon fishing camps in the park from the time of their arrival through the late nineteenth century. Herman Kitka placed one of these camps consisting of “three to four smokehouses and adjacent dwellings” on the Indian River’s east bank.¹² Herb Hope identified another area above the beach on the west side of the peninsula.¹³ If the historic pattern reflects prehistoric use of the park, prehistoric fish camps could be expected to be seasonal (summer) encampments associated with the collection and processing of fish and other foods from Sitka Sound and Indian River. These sites may have been similar to those known for the Tlingit historically; i.e., small, temporary structures similar to those described and illustrated by George T. Emmons in his book *The Tlingit Indians*. These were smaller than the winter houses, more roughly constructed, and built directly on the ground surface without flooring. Extended families commonly lived in these structures and the same building could serve as both smokehouse and dwelling or the smokehouse might be built on a river bank in front of the dwelling. An historical note by Frederica de Laguna in Emmons’ book suggests that these buildings could be 25 feet long and 15-20 feet wide and housed up to 18-20 persons.¹⁴

The archeological data suggests that at least eight localities in Sitka National Historical Park contain remnants of such encampments. The camps, scattered along terraces above the floodplain on both sides of the Indian River, have been recorded with the State of Alaska’s Office of History and Archaeology as site 49SIT751 (Components #3 and #4), 49SIT752, 49SIT753, 49SIT754 (Component #1), 49SIT755, 49SIT756, 49SIT757, and 49SIT758. The distribution of sites of this era through the park (Figure 8-2) suggests that prehistoric people established fishing camps on both sides of the Indian River from the onset. These locations are marked by dense concentrations of charcoal and usually very little else, a frustrating characteristic preventing any in-depth analyses of the occupations. It does appear, however, that fishing camps increase in number and locale through time. On the west side of the river, with two exceptions, sites interpreted as fish camps occur on the edges of terraces overlooking the narrow floodplain of the Indian River. The exceptions are 49SIT752 and 49SIT753 which are side-by-side at the high point of the south peninsula and nearer the ocean than the river. Sites on the east side of the river occur primarily in the central portion of the park both in riverside settings and set back 60-90 meters away from the river.

Late Middle Period Sites

Three sites interpreted as probable fish camps are associated with the Late Middle Period (3000 BC to AD 500)¹⁵ and represent the earliest recorded occupations in the park known to date. They occur in the mid-section of the park on both sides of the river at an elevation of 15 ft AMSL (Figure 8-3).

49SIT754 (*T’ooch’ Aan* or Charcoal Village site) is located on the west side of the Indian River along a long narrow terrace at the foot of a steep, fossil beach ridge. Charcoal recovered from 20-40 cm below the surface at a shovel test (ST-B100) in the south end of this site produced a radiocarbon date of 2580 ± 50 BP (Beta 218686; see Volume II, Section 2). The 2 σ calibrated age ranges for this date (that is, a likelihood of 95% that the date appears between these limits) are 834-716 BC and 695-539 BC. The

charcoal sample was associated with burned gravels and fire-cracked rock suggesting the presence of a hearth. A utilized chert flake was recovered from the 0-20 cm level.

49SIT758 (Big Hole site) is located on the east side of the Indian River just above its eroded bank. An aerial image taken in 1929 suggests that, at that time, the site was about 60 m east of the river. A test at the south margin of a large depression in this site revealed a stratum of charcoal 35-47 cm below the surface. The layer predates Depression F1⁶ and appears to thicken with distance from the depression. A sample from this layer submitted for radiocarbon dating returned an uncalibrated date of 1860 ± 120 BP (GX-32938; see Volume II, Section 2). The 2 σ calibrated age ranges for this date are 161-132 BC and 117 BC-AD 424. The second date range occupies 98.75% of the area under the distribution curve and represents the most likely correct age range for the deposit. A slate flake (Cat. 24251) was recovered from Trench F1-B and collected as a possible tool fragment. Unfortunately, the depth of recovery was not recorded at the time of its retrieval preventing its absolute association with the charcoal stratum.

49SIT757 (Riverside site), is a multicomponent occupation on the east side of the river just north of 49SIT758. A charcoal sample retrieved from a depth of 50 cm below surface at ST-F972 dated to 1820 ± 120 BP (GX-32934; see Volume II, Section 2). This has four 2 σ corrected date ranges: 86-79 BC, 54 BC-AD 443, AD 449-463, and AD 483-AD 533. With 97% of the relative area under the distribution, the most likely age range for the charcoal stratum is 54 BC-AD 443.

As an aside, the geographic position of the tests producing these three dates conflicts to some degree with the geomorphological interpretation of the land forms. ST-Broo falls on an undated low terrace between the floodplain estimated to have been created circa AD 1600 and a relic beach dating to circa 2500 BC. The early date at this shovel test suggests that some of the lowlands east of the relic beach may have been in existence at the same time as the beach itself. If so, the fish camp at the north end of 49SIT754 would have been located at the mouth of the Indian River. 49SIT757 is on a landform dated to pre-1650 and supporting the geomorphologist's statement that land forms on the east side of the river defy generalized characterization. Obviously, some of the land on that side was in place by at least AD 200 which, in turn, suggests the site may have been at the juncture of the river and the ocean as well with a view across the river to the virtually contemporaneous fish camp at 49SIT754.

Early Late Period Sites

Four probable fish camps are associated with the Early Late Period (AD 500-1000). All occur in the southern half of the park, two on each side of the river, and represent a continuum of occupations from circa AD 637 to AD 854 (Figure 8-3).

49SIT759 (Tree Fall site) is the oldest fish camp of this period and distinguished further by the fact that it lies about as far away from the Indian River as one can get and still be in the park. The center of the site is 120 m east of the Indian River. Its age was determined from a charcoal sample retrieved from a shovel test (ST-E820) that returned a conventional date of 1400 ± 110 BP (GX-32933; see Volume II, Section 2). The

2 σ calibrated date range is AD 423-879 which suggests the fish camp here predates and perhaps overlaps the occupational time frame for a component of the *T'ooch' Aan* site, 49SIT754. The lower charcoal stratum from shovel test ST-B72b at 49SIT754 produced a conventional date of 1300 \pm 40 BP (Beta-218683; see Volume II, Section 2) which is calibrated (2 σ) to an age range of AD 649-781 and AD 791-807. the earlier date occupies over 98% of the relative area under the distribution curve and probably represents the correct date range for this occupation.

49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield site) is a somewhat later (and perhaps overlapping) occupation identified in the Fort Clearing. Charcoal retrieved from the fill of a shallow pit in the northwest corner of the clearing produced a date of 1250 \pm 110 BP (GX-32939; see Volume II, Section 2). This date calibrates to two time ranges, AD 606-996 and AD 1005-1012, with 99% of the distribution curve associated with the older date range.

The last occupation identified for this period in the park occurred at the Riverside site, 49SIT757. A shovel test (ST F963) about 35 m east of the Indian River produced a conventional date of 1170 \pm 100 (GX-32932; see Volume II, Section 2) or AD 661-1024 (2 σ calibration).

Unlike the Middle Period sites, at least one of the Early Late Period sites (49SIT751, *Shis'ki-Noow* Fortified Village and Battlefield) had a feature and stone artifacts associated with it. 2007 test excavations in the northwest corner of the Fort Clearing exposed the west edge of a shallow bowl-shaped pit. The size of the pit itself was never determined. It had greater visibility after the soils (dark brown to black loamy gravelly sand) dried somewhat but its margins could be distinguished from the beach gravels it had been dug into (see Figure 6-17). Unfortunately, this transition was not observed by excavators as the unit was dug and the feature was observed only in profile. Small bone and shell fragments were recovered in the lab from a soil sample retrieved from the feature fill after it was identified suggest it may have had something to do with food processing or as a storage unit of some sort. This was supported by the recovery of an anvil stone (Cat. 24253; see Figure 8-11) just inside the pit margin, about 10 cm below the surface of the ground. Protein residues extracted from the pitted surface tested positive bear, deer, *Amaranthaceae*, and kelp. Corresponding species on Baranof Island are the brown (grizzly) bear, Sitka Deer, orach, and seaweed. The seaweed represented may be *laak'ask* or *lak'usk*, also known as “black seaweed,” “winter seaweed,” or “black laver” (*Porphyra* sp.) which is gathered at low tide in February to early June (depending upon the source consulted). The seaweed could also be ribbon seaweed (*Palmeria palmata*) whose Tlingit name is *k'ach* but is also known as “sea ribbon” or “summer seaweed.”¹⁷ Orach, a species of pigweed (*Chenopodium*) and subfamily of *Amaranthaceae*, occurs throughout Alaska and the Northwest Coast area. The species represented here may be Alaska orach or Gmelin's orache also known as Gmelin's saltbush.

In addition to the anvil stone, shovel tests and test excavations in and adjacent to the Fort Clearing have resulted in the recovery of thirteen additional stone artifacts including four cortex spall tools (one a possible perforator), four chert flakes and a chert retouched flake or side scraper, two ground stone mauls, two ground stone anvil stone/mortars, and a pebble chopper tool of slate (see Volume II, Section 1). These may or may

not be associated with the Early Late Period as the clearing has a Terminal Late Period component as well (see below). Although none of the objects were temporally diagnostic, a geomorphological study of the park dates the establishment of the Fort Clearing's landform from post-AD 1250 to circa AD 1500.¹⁸ Obviously, the prehistoric component of the site would date to after the creation of the landform. Nevertheless, the radiocarbon dated feature from the Fort Clearing suggests this land form is slightly older than the geomorphological team had interpreted it to be.

Terminal Late Period Sites

Thirteen tested locations in eight sites interpreted as likely summer fishing camps are associated with the Terminal Late Period (AD 1000-1700) (Figure 8-3). These include 49SIT751 (2 components), 49SIT752, 49SIT754 (3 components), 49SIT755, 49SIT756, 49SIT757 (2 components), 49SIT758 (2 components), and 49SIT759 (2 components). Uncalibrated dates from these tests range from 160 ± 70 BP (2 σ calibrated date range = AD 1650-1953) to 1000 ± 100 BP (2 σ calibrated date range = AD 782-789, AD 811-846, AD 856-1228, AD 1232-1241, and AD 1247-1251; the best date range is AD 856-1228 which occupies 96.36% of the area under distribution) (see Volume II, Section 2). Sites of this period are almost equally distributed on either side of the Indian River with seven components in four sites on the west side and six components in four sites on the east. Radiocarbon dates and multiple charcoal layers are evidence for repeated use of three sites over expansive time periods.

The longest usage appears to be at 49SIT754 (*T'ooch' Aan*, Charcoal Village) site, where people have established multiple summer fishing camps from at least 790 BC to perhaps the turn-of-the-20th century. The camps tend to be distributed along the length of the terrace with some points on the terrace demonstrating stratigraphic evidence for multiple occupations.

The site with the single longest occupation in one spot is 49SIT755 (*Cháas' Ísh*, Deep Salmon Hole site). The site sits on a high terrace overlooking a very narrow floodplain at the north end of the park. During the 2006 shovel test inventory, a 36 cm thick stratified charcoal deposit bearing burned earth was identified here. Charcoal collected from the center of the deposit and submitted for radiocarbon dating returned a date of 300 ± 50 BP (Beta-218681; see Volume II, Section 2). The 2 σ calibration date ranges for this are AD 1462-1666 and AD 1784-1795 with the earlier date range (occupying about 98% of the relative area under the distribution curve) likely being the correct one. In 2007, two 1 x 1 m test excavation units and a 50 cm wide test trench was dug across the site. Although no artifacts or features were observed, the test trench exposed the charcoal beds along its length. Charcoal samples were collected every 10 cm bs from a column at the west end of the trench with no sample collected from the 0-10 cm bs level. These were submitted to a laboratory for dating resulting dates of 100 ± 1 BP (GX-32923; 10-20 cm bs), 101 ± 1 BP (GX-32922; 20-30 cm bs), 610 ± 110 BP (GX-32929; 30-40 cm bs), 370 ± 70 BP (GX-32919; 40-50 cm bs), and 700 ± 100 BP (GX-32940; 50-57 cm bs) (see Volume II, Section 2). All of these but one (40-50 cm bs) had multiple 2 σ calibrated age ranges but were generally in good temporal order from top to bottom. Date ranges interpreted as most likely to be correct are (from top to bottom) AD 1697-1917, AD 1697-1917, AD 1176-1496, AD 1462-1666, and AD 1153-1434. The only sample with an anomalous date range

was from the 40-50 cm level. The reason for the inversion of dates between this sample and the next higher level is unknown.

49SIT757 (the Riverside site) is located on the east side of the Indian River on higher ground between the river and an old stream meander on the north side of the site. Occupations here range in time from perhaps as early as 86 BC to AD 1653 (see radiocarbon dates in Volume II, Section 2). Although there is no evidence for a fish camp here in the historic era, *Kaagwaantaan* leader Herman Kitka has indicated that a small community of dwellings and adjacent smokehouses existed at some point in time.¹⁹

49SIT758 (Big Hole site) has as its most noticeable element a 3 m long (northwest-southeast), 2 m wide, and 87 cm deep depression designated Depression F₁ (see Figure 5-35). Berms on the southwest and northwest margins make the base of the depression seem even deeper (1.2 m). Water worn cobbles up to 40 cm in diameter bound the perimeter of the depression and may represent a crudely built foundation for a structure. Except for the cobbles, Depression F₁ is similar in form to Depressions A₂, A₃ across the river in the *Shis'ki-Noow* Fortified Village and Battlefield. It is also much like Depression A₁ in the Salmon Hook site. All of these are tentatively interpreted to be structural depressions. Most likely, this represents a traditional Tlingit cache pit, depressions commonly dug behind the houses which served as the primary food storage area for all the families of a house. Pits were generally lined with planks and capped with a bark roof covered with mud and had arched or gabled roofs. The peak of the roof could up to 5 ft above the ground with the pit dug a similar distance below the surface. Cache were used for storage of dried fish and preserved meats as well as for less perishable items such as dried berries. Although they are more commonly associated with winter villages, such features occur occasionally in summer fish camps. Interestingly, in this context, it should be pointed out that the Big Hole site is located only about 15 m south of a Tlingit house site recorded as the Aas Gutú Hit (In the Forest House) site (see the discussion for 49SIT752 below). The two sites were separate primarily on the basis of a disparity in chronology and the lack of evidence that they are directly related. Future studies may conclude that these are actually one and the same and join them under one site number and name.

A charcoal sample collected from the southwest edge of Depression F₁ returned an uncalibrated date of 310 ± 100 BP (GX-32937; see Volume II, Section 2). 2 σ calibrated age ranges for this date are 1422-1697 AD, AD 1725-1814, AD 1835-1877, and 1917-1952 AD. The earliest date occupies a little over 80% of the distribution curve with the AD 1725-1814 date incorporating another 12.6% of the curve leading to the conclusion that this (probable) structural depression was created between the late prehistoric to early historic period. Less likely is an association with a Russian homestead which was located in this approximate area on a 1850 Russian map of New Archangel.

49SIT752 (*Aas Gutú Hit*, In the Forest House site) is the oldest site of this Terminal Late Period time frame, and the most interesting archeologically. A 2006 shovel test identified a possible feature here. Charcoal from this test was submitted for analysis and returned a date of 390 ± 40 BP (Beta-218684; 2 σ calibrated date range = AD 1437-1634; see Volume II, Section 2). Interest in this locality was enhanced by the fact that prehistoric tools had been recovered from two nearby shovel tests. A basalt flake was collected 20 m

west of the possible feature and a jasper pebble tool was found about 12 m to the south. Both tools were recovered immediately above the beach gravels that underlie nearly all areas in this part of the park.²⁰

In 2007, test excavations revealed a square, rock-lined hearth (see Figure 6-7) created by digging into ancient beach gravels and lining the basin-shaped excavation with rounded cobbles. The depth of the hearth's base varies from about 50 cm bs at the margin to about 60 cm bs near the center, the same depth that tools were recovered from in nearby shovel tests. Recovered during the test excavation were a split pebble tool of basalt and a fragment of fire-cracked basalt (Cat. 24249). Charcoal samples collected from above, next to and within the stone feature returned dates of 1000 ± 100 , 700 ± 100 , and 830 ± 100 BP respectively (GX-32926, GX-32928, GX-32927; see Volume II, Section). The 2 σ calibrated age ranges most likely to be correct for these dates are AD 856-1228, AD 1153-1434, and AD 894-1299, each range occupying over 96% of the relative area under their distributions. The very late date mentioned earlier raises the possibility that this location may have been utilized more than once as a fishing camp.

This rectangular fire hearth, superimposed by the strata of charcoal and decomposed wood, associated artifact, and the radiocarbon dates, suggest a prehistoric structure once stood here. Assuming the hearth occurs at the center of a structure, shovel testing around the feature in 2008 suggested the building may be about 7½ m square. This is within the size range of Hoonah summer structures which are reported to have been approximately 25 ft long (7.6 m) x 15-20 ft wide (4.6-6.1 m) at the time of contact.²¹ These buildings often had no flooring but, instead, were built directly on the ground. The exterior covering was either slabs of bark or, in the case of the Sitka Tlingit, boards removed from the winter house and transported to the site. The framework for these structures often consisted of poles lashed together with spruce root although some were constructed as a permanently joined frame. These buildings often served both as smokehouse and single family dwellings and were occupied during the season of the local salmon run. Assuming the species of salmon running up the Indian River is the same today as it was 900 years or so ago, 49SIT752 *Aas Gutú Hit* would have been occupied perhaps as early as late July and as late as mid-September. Similar features are expected at the other charcoal deposit areas interpreted as fishing camps.

Protohistoric/Historic Sites

Three locations in the park are associated with this time frame (Figure 8-2). A few objects recovered in the Fort Clearing area of 49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield site) by Hadleigh-West in 1958 are historic Tlingit in origin (see Chapter 3). All of these artifacts, including a ground stone maul, rubbed hematite, glass beads, copper ornament, and lithic flake, were derived from the center and southern margins of the clearing and are likely associated with the Kiks.ádi fort and 1804 battle although the maul and flake could be derived from earlier occupations in the clearing.

49SIT754 (*T'ooch' Aan*, Charcoal Village), and 49SIT755 (*Cháas' Ísh*, Deep Salmon Hole) are sites which radiocarbon dates indicate are probably represent fish camps dating to the protohistoric or historic era. Two charcoal samples from adjacent 2005 shovel tests in 49SIT754 produced conventional radiocarbon dates of 80 ± 50 , $100 \pm$

50, and 160 ± 70 BP (Beta-208389, Beta-208391, Beta-218682; see Volume II, Section 2). Calibrated date ranges were AD 1680-1939, AD 1676-1941, AD 1650-1953, respectively. Similarly, charcoal samples from 0-10 cm bs and 10-20 cm bs from 49SIT755 produced radiocarbon dates of 100 ± 1 and 101 ± 1 BP. Calibration of these dates resulted in 2 σ date ranges of 1697-1917. These time references suggest the likelihood that the sites were occupied after European contact but certainly does not rule out the possibility of their occupation during the protohistoric era, that is immediately before contact by Europeans.

¹ Chaney et al. 1995, Chapter 6, Map 1, pp. 144-146.

² The archeological record for the Tlingit is much older, however, as suggested by the presence of intertidal fish weirs on Admiralty Island radiocarbon dated to 3,000 years ago. See Moss, et al. 1989 for more information.

³ Only 28 artifacts were recovered during three field seasons of shovel testing by the Midwest Archeological Center. At least 1305 holes were dug making the recovery rate of one artifact for every 46.6 holes (about 2.1%) of the shovel tests excavated.

⁴ Two artifacts were from an unanalyzed, undated land form at the extreme north end of the park in Survey Unit D and three artifacts were recovered from a river terrace bracketed by landforms created ca. 2500 BC and ca. AD 1600.

⁵ It has been estimated that 90-95% of prehistoric artifacts were of wood and fiber with the remaining 5-10% of shell, bone, and stone. See Foster and Croes 2004, p. 126.

⁶ Zeitner 1964. Most geologists distinguish jasper from chert only by color. Red cryptocrystalline quartz is jasper and all other colors area generally referred to as chert.

⁷ Loney et al. 1975; Berg and Hinckley 1963; U.S. Geological Survey 2008.

⁸ Stewart 1973, pp. 66-67.

⁹ Foster and. Croes 2004, p. 132.

¹⁰ Stewart 1973, p. 68.

¹¹ Olson 1967 [in Thornton and Hope 1998, p. 21).

¹² Thornton and Hope 1998, pp. 69-71, Figure 8.

¹³ Hope 1992.

¹⁴ Emmons 1991, pp. 69-74.

¹⁵ As denoted by Moss 1998a, b.

¹⁶ This proved to be true when charcoal samples were retrieved from a stone feature at the west side of the depression just below the surface. These returned a date of 310 ± 100 BP.

¹⁷ The Sitka Tribe of Alaska Kayaani Commission 2006a:17-18; 2006b.

¹⁸ Chaney et al. 1995, Maps 1, 6.2.8 and 6.2.9.

¹⁹ Thornton and Hope 1998:69, Figure 8.

²⁰ Hunt 2007, pp. 23, 26.

²¹ Emmons 1991, pp. 69-71.

CHAPTER 9

CONCLUSIONS, PART 2: HISTORICAL ARCHEOLOGY IN THE PARK

With Tlingit Kiks.ádi withdrawal from their fort Shís'gi Noow in 1804 and subsequent Survival March over the rugged mountains to the other side of the island, the Russians under the leadership of Alexander Baranof occupied the village of Sheet'ka. They built a fortified compound, naming it Novo-Arkhangelsk. The Tlingit Kiks.ádi had lived in this area for centuries and had evolved an intricate tapestry of interrelationships with the land, surrounding waterways, animals, and plants, and other peoples. The Russian American Company, its business leaders, and employees seized much of the Tlingit property, their *at.óow*, by force, burning much of it, and with no compensation to the Tlingit. The Tlingit returned within a couple of years to start over spawning an era of sometimes uneasy truce with the Tlingit and Russians in close daily interaction. With transfer of the Alaskan Territory to the United States of America in 1867, the Russians withdrew to the motherland and Novo-Arkhangelsk became Sitka. American influence had been felt by the Tlingit for some time through the goods traded by New England traders. As the 19th century came to a close, that influence gained strength manifesting itself through missionary activities, Native American high schools and trade schools, the Cottage Community, fishing regulations, road construction, establishment of a National Park, and development of a growing tourist trade. Euroamerican impacts reached their peak during World War II when the physical relationships of the community and the islands immediately offshore were altered with jetties and causeways with landfill dumped into the former Russian shoreline harbors and boat construction slips to expand the shoreline in downtown Sitka. These things have left a lasting impact on the Tlingit, Sitka, Baranof Island, and Sitka National Historical Park.¹

DISTRIBUTION OF 19TH CENTURY ARTIFACTS

At least 82 artifacts associated with the 19th century were recovered from thirteen shovel tests (excluding the Fort Clearing) (Figure 5-15; artifacts are listed in Volume II, Section 1). Among the noted and collected artifacts are fragments of black glass ale, wine or champagne bottles; fragments of a black glass bitters bottle; fragments of an aqua beer bottle with a fold-out finish; a .44 Henry rifle cartridge; a handpainted whiteware teacup bodysherd; a fragment of a transfer printed saucer rim; a pontil-marked bottle base; fragments of a whiskey bottle; and a cut nail (Figures 5-7, 5-18). A soft red brick fragment found at ST-F887 may also be an artifact associated with this period (see Volume II, Section 1 for a complete list of historic artifacts collected each field season).

Black glass (actually extremely dark green glass) was most commonly used on all kinds of vessels during the 19th century except tableware. According to (former) Bureau of Land Management archeologist Bill Lindsey, "American made black glass bottles of any type were uncommon after about 1880, making the presence of this color useful in the dating of archaeological sites. Even in imported bottles, black glass seems to disappear by the 1890s."² The fold-out bead finish on the aqua beer bottle (Cat. 23577) was typically used on mouths of glass vessels from the first decade of the 19th century

until circa 1870 or so.³ The .44 Henry rifle cartridge (Cat. 23629) was a rimfire originally manufactured for the Henry rifle beginning in 1860 and continuing into production until 1934. Most Henry rifles were manufactured between 1860 and 1866.⁴ The handpainted whiteware bodysherd (Cat. 23546) is decorated with broad green leaves above what may be a bright blue flower and to the left of a dark turquoise squiggly line. The clear glaze above the green leaves has popped off with the result that the green pigment below is somewhat degraded. The bright colors and style of application suggests manufacture from the mid-1830s through circa 1860.⁵ The transfer printed saucer rim (Cat. 23634) displays acorn-adorned oak branches over a dark blue pattern of alternating dotted lines and lines of 5 dots and equal sized blank spaces and was likely manufactured in the early to mid-19th century. A light green bottle base (Cat. 23638) displays a blowpipe pontil mark. Pontil scars are usually (but not exclusively) found on American made utilitarian bottles that date to or before the American Civil War (mid-1860s). Pontil scars of all types became ever increasingly unusual as the 1860s progressed and largely disappeared by the late 1860s or early 1870s.⁶ The Jesse Moore whiskey bottle was recovered by Anne Pollnow in 2006 from loose fill at the base of a tree fall on the east side of the Indian River. This brand of whiskey was sold between 1876 and 1896.⁷

For the most part, these 19th century artifacts were found in three general areas of the park: the south end of the peninsula, the upper end of the peninsula, and on the east side of Indian River near its mouth. The occurrence of the fold-out finish and black glass at the south end of the peninsula suggests the possibility of an association with Peter Ovchinnikov's circa 1843-1855 homestead although the items could have easily been discarded by recreational visitors of that era or during the initial years of American occupation. The northern cluster of artifacts on the peninsula indicates a possible historic occupation of similar temporal association in that area; perhaps on the south end of the high fossil beach ridge or immediately south of the ridge but still north of Crossover Trail #1. Three chain link fragments (Cat. 24213) retrieved from an old stump a few meters west of the park's east boundary fence appear to have been manufactured by a blacksmith and are probably elements of a chain which had been wrapped around and overgrown by the trunk of the tree. The chain links along with a soft brick fragment and the Jesse Moore whiskey bottle recovered at the south end of the park near the Russian Memorial are likely associated with the post-1882 homestead of Nicholas Haley. Although artifacts were not concentrated enough to warrant recording that location as a site, three 19th century archeological sites were identified in the park.

19TH CENTURY SITES

49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield), is a multicomponent site with three 19th century components. The primary component of the site, Component #1, represents the 1804 battle zone and the likely location of the Tlingit (*Kiks.adi* clan) fortified village *Shis'ki-Noow* (roughly translated as "Sapling," "Green Wood," or "Second Growth"). Metal detection in 2005 recovered 15 specimens of artillery and small arms ammunition associated with the 1804 conflict (see Figures 4-6 to 4-8). Three artillery and firearms artifacts were found on the north and west sides of the fort clearing, five were found just outside the northwest edge of the clearing, with the remaining seven specimens recovered in the woods up to 160 m west-northwest of the clearing. Unfortunately, the GPS unit was unable to record the location of a canister shot and a

.63 cal. lead musket ball. The recovered artifacts include a four iron canister shot about 1 inch in diameter; two cannonballs about 2 inches in diameter, two cannonballs about 4¼ inches in diameter, and four lead balls of .35, .44, and .63 (n=2) calibers. Another iron cannonball and a lead ball (estimated at .40-caliber) embedded in wood were recovered during 1958 excavations on the south side of the Fort Clearing.⁸ That cannonball, now lost, was reported to be about 3 inches in diameter and weighed 3 pounds. If the description is accurate then this piece was probably for a 3-pounder gun. The solid iron artillery shot recovered in 2005 includes 12-pounder solid shot, 12-pounder canister, and 12-pounder grapeshot. Together, this data attests to the presence of at least a 3-pounder gun and a 12-pounder gun as the minimum types of artillery used in the battle. Musket balls are of the calibers likely used by both the Kiks.adi and the Russians and their Aleut allies. The spherical lead balls indicate the firearms where likely .69-caliber trade guns or military smoothbore muskets and 36-caliber, .40-caliber, and .44 or .45-caliber small arms.

Historians Nora and Richard Dauenhauer and Lydia Black, referencing Tlingit oral history and Russian documents, indicate that one or more pits were dug within the fortified village to allow Tlingits to take refuge from Russian cannon fire. Tlingit accounts uniformly describe one large pit within which all the clan houses were set or a large pit within which the community house was built. A contemporary account by Russian Aleksandr Baranov describes dugout pits inside each Tlingit house.⁹ A much later, second-hand account whose information is probably ultimately derived from Baranov, described the Tlingit defenses as including dugout houses set in a shallow depression in the ground. This last description would seem to reconcile the Tlingit narratives of one large pit and Baranov's description of pits inside each house.¹⁰

There are three large pits on the peninsula west of the Fort Clearing. Two of these. Depressions A-2 and A-3, lie in the heart of the battle zone, about 30 m northwest of the Fort Clearing, as indicated through recovery of musket and cannon balls (see Figure 4-7 for the juxtaposition of the artifacts and features).¹¹ Two cannon balls, two canister shot, (both from 12-pound cannon; the size of late 18th and early 19th century Russian naval guns), and a musket ball occurred 13 m (43 ft), 16 m (52 ft), 21 m (69 ft), 23 m (75 ft), and 24 m (79 ft), respectively, from a point between the two depressions. Both pits are rectangular, more-or-less oriented with their long axes east-to-west, and similar in size to early historic basement depressions. While the origin of these two surface depressions remains unknown, their similarity in size, orientation, and presence of berms on the north side of each suggest they are likely of cultural derivation.

2007 testing recovered a slate flake from Depression A-3, the only potential artifact recovered during that work. If this object is truly culturally modified, it would reinforce an association with the fortified village. Betts, however, has suggested the possibility that these depressions are associated with a military 1942-1943 Army communications post.¹² As evidence, he cites the recovery of telegraph wire near the depressions as well as observing glass insulators and short horizontal boards as climbing aids nailed to nearby trees. The large tree growing in the southeast corner of Depression A2 (Figure 5-25), however, was determined to have initiated its growth circa 1830 suggesting greater antiquity for the depressions. This indicates the pits were in place long before World War II and, further, predates the circa 1842-1855 Ovchinnikov homestead (see 49SIT751,

Component 2 below). It also leaves the door open for the possibility that the depressions may be elements of the Tlingit fort. The available data, however, do not exclude an early colonial (1804 to circa 1830) Russian derivation. If the depressions are associated with the Tlingit fort, the approximate position of the structure shifts northwestward from that proposed by Hadleigh-West (Figure 9-1). If they are not associated with the fort, these pits most represent traditional Tlingit cache pits.

49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield), Component #2 is the 1842-1855 homestead of Peter Ovchinnikov, a former Russian-American Co. employee. Ovchinnikov lived here with his family until his death in 1853. His wife, Nastasiia Stepanova Fadeeva, and her children, and her new husband continued to occupy the house until 1855 when it was looted and burned during a one-day Tlingit “uprising.”¹³ Although the exact locations of the house and outbuildings remain uncertain, a scatter of early to middle 19th century debris at the Fort Clearing relates in part to this occupation.

In 2005, the Fort Clearing was intensively shovel tested with most historic objects identified associated with the 19th century. Some or all of these objects may be

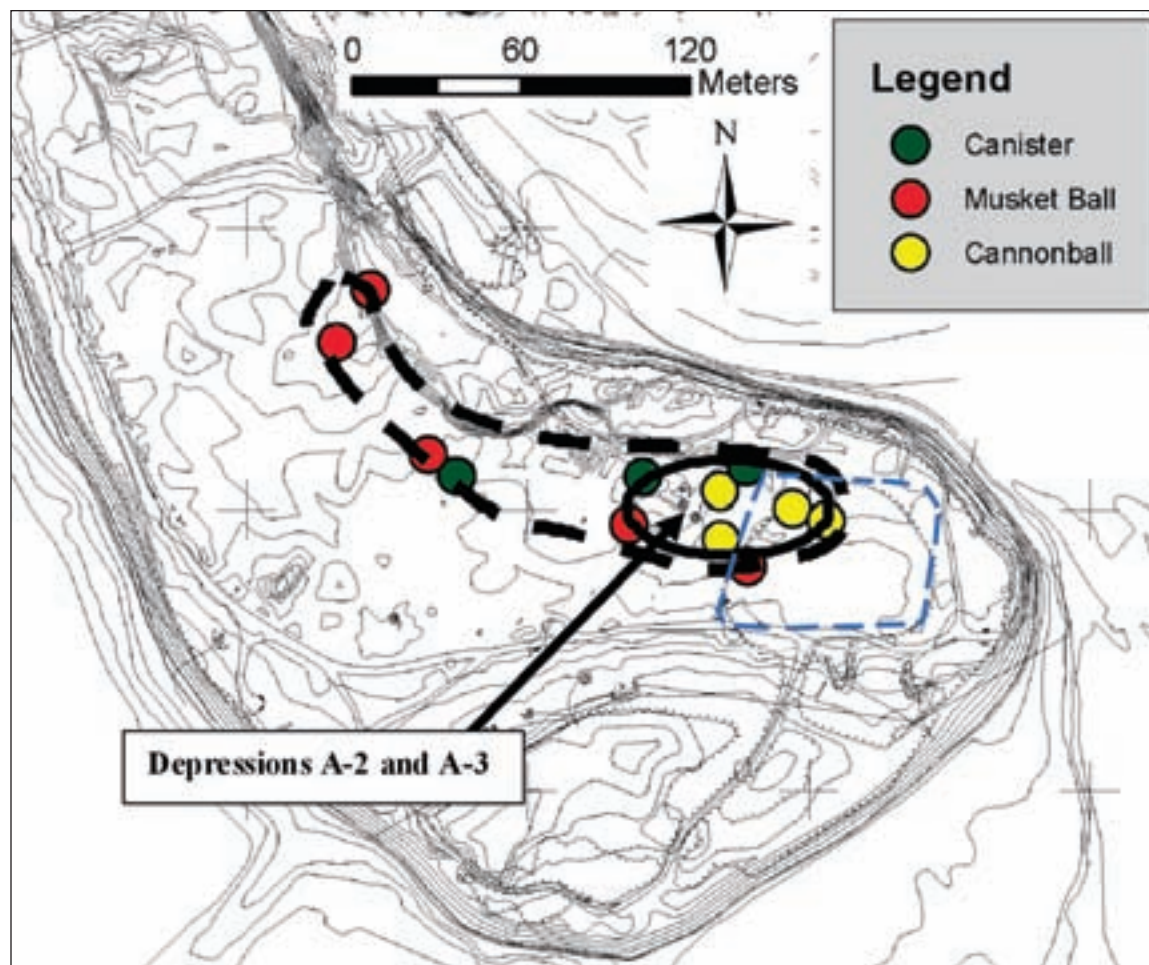


Figure 9-1. The 1804 battle zone (dashed lines) and possible location of 1804 Tlingit fort (solid line) as compared with Hadleigh-West's 1958 proposed location (blue line).

contamination from artifact-bearing fill from the Russian Bishop's House used to level totem pole preservation trench depressions in 1982. This is particularly true for those tests in the east half of the clearing. In general, historic objects were notably sparse in the southwest corner of the clearing. They tended to occur in higher numbers, however, in the central one-third and northeast portions of the clearing. Unfortunately, these are the same areas indicated for the 1972 totem pole preservation trenches and 1982 trench depression fill. This generally, makes it difficult to make any predictions about subsurface historic deposits based on artifact distributions. On the other hand, historic materials recovered northwest and west of the possible totem pole preservation trenches may actually represent locations where historic deposits are intact. Further testing in the Fort Clearing in 2007 and 2008 suggest an increase in artifact density toward the north, well beyond the NPS disturbances in the Fort Clearing during the 1970s and 1980s. The higher number of brick and flat glass fragments in the northwest margin of the clearing suggests the possibility that remnants of a structure, possibly with a brick chimney, may exist northwest of the clearing.

Component 4 of 49SIT751 and 49SIT753, were identified by the 2005 metal detection team and are represented by artifacts and, in one case, a possible feature. Charcoal was not found at either site preventing radiocarbon analyses.

49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield), Component #4, is located on the west side of the river at the edge of a 10 ft high terrace 150 meters north-northwest of the Fort Clearing. Seven metal artifacts were recovered within a 20 m x 20 m space. Objects collected include three lead musket balls, a brass button back with an omega loop shank, a forged iron nail fragment, an iron nut and bolt shaft, and a good luck token from a Tacoma, Washington, clothing company. The token dates to the early 20th century while the other pieces date from the mid- to late-19th century. Shovel testing failed to recover additional artifacts. The function of this component remains uncertain although the scarcity of material here and its limited distribution suggests the possibility that this was a short-term fish camp.

49SIT753 (Salmon Hook site) was also located by the metal detection team. The most distinctive thing about it is a 3.5 x 4 m x 1 m deep depression.¹⁴ The depression lies within an area identified by Chaney et al. (1995: Map 1) as a pre-AD 1500 upraised beach meadow which had become a "young forest" by the turn of the 19th century and is similar in form, size, and depth, to an historic basement depression. This interpretation is reinforced by the 2005 metal detection team's recovery of ten artifacts within a few meters of the depression. These included salmon gaffing hook, six hand-forged large iron nails, an iron strap, a fragment of flat copper or brass, and a nail head fragment. The hand-forged iron nails suggest a pre-1850 date for the material. Together the nails and nail head indicate the site is or was associated with a structure or its demolition. The gaffing hook leads one to infer this is the location of a fish camp. This general area was identified on a map sketched by tribal elder Herbert Hope as the location of several historic fish camps.

Geophysical inventory at the site identified a strong magnetic anomaly about 1½ m west of the depression which was interpreted as a possible iron artifact or a fire-related feature such as a hearth. An area of higher resistance also occurred at the west

margin of the depression in a rectangular area approximately 8 m north-south by 4 m east-west. Shovel testing and test excavations around the margins and in the general vicinity of the depression recovered no artifacts and were unable to determine the source for the magnetic and resistance anomalies identified two years earlier. A wood layer in the depression may be residue from a collapsed structure and the form of the pit, its shape and size, also suggests a structural depression, perhaps a basement or subfloor traditional Tlingit cache pit. Artifacts recovered in the vicinity of the depression by metal detection suggest an historic fishing camp which may date to the mid-19th century.

49SIT766 (WWII Army Beach Defenses site) Component #2 is a concentration of late nineteenth-century artifacts discovered in the general vicinity of the two westernmost World War II earthwork gun emplacements (GE#1 and GE#2). Test excavations indicated that artifacts occur to 70 cm below ground surface. Among the objects recovered were amber, clear, green, olive green, aqua and cobalt blue curved glass; an aqua glass club sauce stopper; a bone button; a thick-walled coffee cup and other miscellaneous whiteware ceramics; deer bone; fish scales; clear glass ketchup bottle fragments; and a metal milk bottle cap. The locations of recovery were along the upper beach or just above the beach edge in the late 1890s through early 20th century and may represent picnic trash.

DISTRIBUTION OF 20TH CENTURY ARTIFACTS

During the 2005-2007 shovel testing inventory, field workers recovered 325 20th century objects from 47 shovel tests outside the perimeter of the Fort Clearing (see Figure 5-16). Isolated artifacts were recovered from 17 of these test locations, the rest occurring in concentrations interpreted as historic sites or components of historic sites.

Shovel testing in Survey Unit A resulted in the recovery of 154 artifacts judged to be of unknown or modern (post-1950) derivation. Five artifacts were located in the woods from as many shovel tests less than 30 m from one of the trails. Three of these are fragments of green and amber curved glass in the north end of the survey unit and six are clear curved glass fragments from the southeast area of the survey unit. A 30.06 shell casing with no headstamp (non-military) was also found in the north end of the unit. The remaining 145 objects are associated with site 49SIT776 (see below; for a complete listing of historic artifacts collected each field season, see Volume II, Section 1 of this report).

Shovel testing in Survey Unit B in 2005 and 2006 resulted in the collection of 21 fragments of curved glass from three locations in the center and southern half of the survey unit. A partially buried ¾" cable and J-hook was identified near ST-B184 at the south margin of the unit but not collected.

Five shovel tests and a surface find, all between the maintenance shed and the Visitor Center-Indian River bridge trail, resulted in the recovery of 74 artifacts of historic manufacture (2 objects were not collected). The few datable objects were created sometime between post-1890 and 1930 and all but three are from three tests (STs C486, C487, C488) in a small dump at the northeastern margin of the parking lot. The dump is

likely associated with the Cottage Community and has been recorded as site 49SIT767 (see below in the section “20th Century Sites”).

Only three historic artifacts were recovered from Survey Unit D and all were found on the ground surface 80-95 m north of the Bridge Trail. A repoussé whiteware sherd was recovered on the east side of an old roadbed near where it connects to a former bridge abutment. This sherd occurred in a highly disturbed area along with a small amount of other historic debris. A clear glass bottle of the Olympia flask shape was recovered at ST-D594 and a sledgehammer head was found at ST-D741.

Survey Unit E was shovel tested in 2006 and 2007 with a 10-35 m wide strip of ground at the south end of the unit shovel tested by Anne Pollnow in 2006.¹⁵ In the north end of the survey unit, three fragments of curved amber glass and a cast-iron stove top were noted by the MWAC crew in 2006 but were not collected. Three 20th century artifacts were recovered here in 2007 including single fragments of curved (bottle) clear and amber glass, and a clear curved glass lamp chimney rim fragment. A concentration of 16 objects identified in and around ST-E767 has been recorded as site 49SIT759 and is discussed in the following section. Historic artifacts recovered by Pollnow’s crew include fragments of four whiskey and beer bottles dating from the late 19th century through mid-20th century and a fragment of a grease gun, all kicked up by the roots of a fallen tree.

Shovel testing in Survey Unit F resulted in recovery of thirty-one 20th century objects at test locations near the center of the survey unit and at the margin of the picnic grounds in the north end of the survey unit. There are no known historical associations for a fragment of flat glass collected at ST-F982 in the north central portion of the survey unit. The test at ST-F1011 resulted in the recovery of 28 amber curved glass fragments all likely from a single modern beer bottle and probably associated with the modern picnic area where consumption of alcohol is permitted. A clear glass marble with small bubbles and red and white swirls was collected at ST-F932 and a 2 inch diameter modern cardboard can rim fragment was collected ST-F1013 at the edge of the picnic area. Fragments of a modern 12 v car battery were encountered in ST-1018 but these were left in the ground.

20TH CENTURY SITES

Nine sites in the park are associated with the 20th century. Four are on the west side of Indian River, four are on the east side of the river, and one in the river itself.

49SIT765 (Sawmill Road Dump site), a small domestic dump, was identified in and around shovel test ST-E767. This location is just south of the park’s east parking lot off Sawmill Road. Items found in the 10 m by 30 m scatter include a cast-iron wood-burning stove top, glass food containers, a flashlight body, whiteware ceramics, lamp chimney fragment, a strap hinge and cosmetic jar. The contents suggest the dump was created in the 1930s.

49SIT767 (Cottage Dump site) may be contemporary with the Sawmill Road Dump. The few datable objects associated with it were manufactured sometime between post-1890 and 1930 and preponderantly from three shovel tests (STs C486, C487, C488) at the northeastern margin of the parking lot. Elements of a cast iron stove were observed in this general area during the 1995 geophysical inventory but were not relocated during the 2006 shovel tests.¹⁶ This small dump is likely associated with the Cottage Community (1888 to present). The parking lot was built on the eastern-most portion of this community after the National Park Service purchased properties and razed cottages on the east side of Metlakatla Street.¹⁷ Prior to 1945, several structures were in this general location among which were three homes (occupied by Albert and Paulina James and Joe and Dorothy James Truitt, James D. and Flora Marshall Williams, and George and Louisa Hobbs), a shop, and an outbuilding of undesignated function.¹⁸

49SIT766 (WWII Army Beach Defenses) consists of a string of earthen banked gun pits or field fortifications (see Figures 5-26 and 5-27). These occur west of the Indian River at the southwest margin of the park along an old beach front (the upper beach margin is now approximately 30 m south of its WWII location). Little historical information is currently available regarding their function or construction¹⁹ but the eight field fortifications occur in two types: a larger crescent shaped earthwork and a smaller semi-circular earthwork. The larger earthworks are consistent with artillery gun emplacements in size and construction. Wood gun platforms are specified in field manuals of the era.²⁰ Identification of wood and wire nails in Gun Emplacement 8 and wood in Gun Emplacement 3, one of the smaller fortifications, suggests similar wooden gun platforms were utilized here.

The smaller earthworks are consistent with rifle or machine gun field fortifications as explicated in those same World War II era manuals. The placement of the eight field fortifications is consistent with standard artillery practice of the era. Artillery was emplaced to provide a field of fire toward an objective, in this case to oppose a landing by enemy forces or provide antiaircraft fire on enemy aircraft. The smaller pits provided small arms and light machine gun protection for the artillery batteries. The placement of the individual field fortifications provides an interlocking field of fire between two or more emplacements. Such an organization is consistent with military tactics for defense of an artillery battery or section during the World War II period.

The earthworks and the ground between them were metal detected in 2005 and shovel tested in 2006. Metal detection identified only modern debris between the individual earthworks with the exception of a military foot powder can fragment which was not collected. Overall, the earthworks themselves were surprisingly devoid of metal artifacts. There is, however, a large field of debris between the third and seventh earthwork gun emplacements (counting from the west) along an old beach line. Most prominent among the objects noted here were iron cables, massive bolts, and cable clamps embedded in the ground and in and around logs. In part, the debris field may be remains of a log raft washed up on shore sometime after World War II or it may be the remnants of a defensive barricade constructed at about the same time as the World War II earthworks. Vestiges of a two-track road occurs on the north edge (landward side) of this debris line. Some or all of the objects of unknown temporal association recovered

during shovel testing in this area may also belong to the era of military occupation. Among these are cobalt and straw-colored curved glass, a .30-40 Krag rifle cartridge, curved glass fragments and bottle bases, a whiskey bottle fragment and cap, and a shotgun shell base.

Little is actually known about the locations of specific military activities in the park. The park was closed for years as the long, shallow beach deposits in this location offered one of the best places for Japanese landing craft. The Army's activities were not publicized preventing civilian references to the military's use of the park. Superintendent Monthly Reports did not mention the Army's activities either until after the Army's departure when it mentions only that the military removed its facilities and cleaned up the park. No maps of the Army facilities in the park have yet been located.²¹

49SIT754 (Component #2 of *T'ooch' Aan* or Charcoal Village site) incorporates two square pits located on remnant terrace east of the Visitor Center. These pits are all that remains of latrines built in 1940.²² One of these (Privy #2) and an associated sign were located by the metal detection team in 2005. This was relocated by the shovel test team in 2006 about 5 m south of ST-B92.²³ The sign is leaning against a tree about 10 m southeast of the privy pit. In 2006, the second latrine pit (Privy #1) was identified about 32 m east of the pit found in 2005 between STs B74 and 75. Both pits are square and 1.20 m on a side. This corresponds well with Betts' estimate that they were about 4 ft square.²⁴ Privy #1 is located with the cardinal directions while Privy #2 is turned about forty degrees. The depression for Privy #2 is about 40 cm in depth and has a vertical 1" x 4" board with a spike in the top was in its eastern-most corner. Privy #1 is of similar depth and has an upright 1" x 4" extending from the center of the pit. Both privies were apparently abandoned with the installation of new toilet facilities at the entrance in 1955.²⁵

49SIT764 (Log Walkway site) incorporates a small depression and a nearby linear alignment of logs. It is located east of the Indian River, directly across Sawmill Creek Road from the east exit drive of the post office, and about 3 m west of the pedestrian/bike trail paralleling the southwest side of Sawmill Creek Road. The alignment of logs is oriented northwest-to-southeast with its northwest end terminating abruptly at the edge of an old drainage, currently a low swampy area, and about 1½-2 m above the swamp. Logs are 1.2 m long, about 30 cm square, and exhibit squared ends. These have been laid side-by-side for 23 m from the swamp east to the edge of the woods. Small trees have grown through the alignment in some locations. The alignment is tentatively interpreted as an early boardwalk or the base of a former and very large stack of firewood. A shallow, rounded depression was noted about 12 m south of the log alignment's west end. This feature is about 1½ m east-west by 80 cm north-south and about 40 cm deep. It may mark the location of a former privy

49SIT760 (Bridge Abutment site) incorporates two large concrete bridge abutments (Figure 5-36). This site is located in the middle of the Indian River approximately 160 m downstream from the park footbridge; i.e., in approximate alignment with Cross-over Trail #1. One of the concrete blocks is 1.4 m x 1.0 m x 2.4 m and has a corner broken away. The other, partially buried in the river gravels, is 55 cm x 1.0 m in size. Large river cobbles were used in the concrete mixture. While the abutments

are located in the general vicinity of a late 19th century suspension footbridge and an early 20th century vehicle bridge, those bridges had rock-filled log crib abutments. The old wagon bridge, located upstream from the footbridge, was destroyed after its massive rock footings washed out in 1942. This feature may be a remnant of a temporary vehicular bridge constructed by the Navy within a month of the flood or abutments associated with the vehicular bridge for the old road from the Cottage Community to the Russian Memorial.²⁶

49SIT761-763 (Cable-Wrapped Trees sites) were recorded as sites because they represent concentrations of culturally modified trees (see Figures 5-32 and 5-33). All are located on the east bank of the Indian River north of the old Wagon Bridge abutment. 49SIT761 is the northern-most group of trees. This particular cluster incorporates six cable-girdled trees with the distance from the north tree to the south being about 35 m. 49SIT762 has three cable-girdled trees strung along and near the edge of the Indian River's east bank at the north end of the park. The distance from the north tree to the south is about 35 m. 49SIT763 consists of two trees along and near the edge of the Indian River's east bank and a cable extending into the river occur at the north margin of the old Wagon Bridge abutment. These cable-girdled trees may be associated with logging prior to the park's acquisition of this property. More likely according to SITK Chief of Resource Management Gene Griffin (personal communication, February 15, 2007), the trees are associated with an effort to stabilize the river banks in the 1940s. After the 1942 flood washed away a 10-50 ft wide section of both river banks, the U.S. Navy rebuilt the western bank and replaced the cribbing. In 1945, the Navy straightened the Indian River channel and constructed log cribbing on both sides of the river.²⁷

MISCELLANEOUS CULTURAL RESOURCES

Sitka National Monument (Sitka National Historic Park, Shiske-Nu) was placed on the National Register of Historic Places in 1966 and recorded as a site by the Alaska Office of History and Archaeology in 1974 as 49SIT12. This site designation would include the Russian Memorial, the Blockhouse reconstruction's foundation element, as well as a large, cast-iron water pump and fourteen culturally modified trees (CMTs) recorded during the 2005-2008 inventory. The Alaska Office of History and Archaeology treats these as isolated finds and recommended their description under an amended site form for 49SIT12 (personal communication, Survey and Inventory Archeologist Rachel (Joan) Dale).

The old water pump was first identified by SITK Resource Manager Gene Griffin who found it protruding from the right (west) bank of the Indian River (Figure 9-2). The pump is made of cast iron, has three pistons, and may have been anchored by a 1" cable, a portion of which lies in the river below. No manufacturer's markings were observed on the machine or its cast iron housing. The pump occurs on land formerly owned by Sheldon Jackson College and may have supplied drinking water to the college and/or the Cottage Community.

CMTs (Table 9-1; Figure 5-20) are considered elements of site 49SIT12 which is the number recorded by the State of Alaska for the entire Fort Unit. Note that the CMT

Table 9-1. Culturally modified trees recorded as elements of 49SIT12.

CMT#	Tree Species	Modification	Location
1	Sitka Spruce	This is the same tree identified as CMT #3 by Chaney et al. (1995:139, Map 3). The scar is located on the north side of a 5 m circumference Sitka Spruce about 2 m above the ground surface. It is 1.3 m high, 65 cm wide, and 92 cm deep. It is obviously an old scar with about 30 cm of healing bark curving into the tree. Chaney et al. observed metal axe cut marks in the scar in 1995 but such marks were not observed by the MWAC team in 2007.	At the margin of an old beach terrace approximately 40 m SW of the maintenance yard and 125 m NNW of the Visitor Center front door.
2	Western Hemlock	An historic hunter's tree stand, this dead tree is about 4.5 m in circumference and has had its top cut off about 8 m above the ground. On the north side of the tree is a rectangular, axe-cut toe hold 94 cm above the ground surface. The notch is 60 cm wide, 11 cm high, and 11 cm deep. Above this notch are a series of three horizontal plank steps which have been nailed into the tree. The lowest of these steps is 3.7 m above the ground.	East of the Indian River in the north end of Sitka National Historical Park. More specifically, it is about 42 m west of Sawmill Creek Road and about 165 m north of the east end of the park's Indian River footbridge.
3	Sitka Spruce	This tree was originally identified during the 2006 inventory by Pollnow (2006:6). It was relocated and data collected for it in 2007 (Hunt 2008:48). The tree is 5.6 m in circumference and bears a 2 m high, 50 cm wide, 65 cm deep scar on its southeast side. The face of the scar exhibits axe cuts. The scar is located 1.1 m above the ground and appears to be quite old in that there is at least 60 cm of healing growth on its sides.	The south end of Sitka National Historical Park east of the Indian River. More specifically, it is about 6.5 m north of the Old Highway Trail and about 70 m north of the Russian Memorial.
4	Red alder	The tree is 1.3 m in circumference and is modified by having two short board steps nailed to its northwest face. The lower step is 80 cm above the ground surface and the upper plank is 1.34 m above the ground. The modifications may have been made to access a hunter's tree stand although the stand is no longer evident.	East of the Indian River in the south end of Sitka National Historical Park between the Russian Memorial Trail and the Old Highway Trail about 118 m north of the Russian Memorial
5	Sitka Spruce	This tree is 4.5 m in circumference and bears a scar 50 cm above the ground on the south side of the tree. The scar is somewhat oval in shape, 1.4 m high, 50 cm wide, and 38 cm deep. The face of the scar is covered with metal axe cuts and there is about 30 cm of healing at the scar's margins.	West of the Indian River in the north "panhandle" of Sitka National Historical Park. It is on the west side of the Indian River at the east margin of the Westwood Trail about 30 m north of the wood bridge going over the Sheldon Jackson sluice and 300 m north of the park's maintenance yard at the north end of the Visitor Center parking lot.

Table 9-1. Continued.

CMT#	Tree Species	Modification	Location
6	Sitka spruce	This is the same as Chaney et al. (1995:139, Map 3) CMT#1. The tree is 3.1 m in circumference and has been modified by a concave triangular scar located on the east-northeast side of the tree about 1 m above the ground surface. The scar is 73 cm high x 66 cm wide and 37 cm deep and there is roughly 17 cm of healing on its margins. The upper portions of the scar retain axe marks.	At the south margin of the Bridge Trail about 30 m west of the bridge crossing the Indian River and about 100 m east of the Visitors Center parking lot.
7	Sitka spruce	CMT #7 was relocated from a description provided in the 1995 geomorphology report and is the same as Chaney et al. (1995: 139, Map 3) CMT#6. This snag is about 2.4 m in circumference and bears a small triangular scar 47 cm above the ground surface on its northwest side. The scar is 54 cm high x 23 cm wide and is 10 cm in depth. There are no visible cut marks but the scar bears about 9 cm of healed tissue around its margin. This tree is located 4 m from CMT#8.	West side of Indian River about 30 m south of the Bridge Trail and about 46 m east of the Visitor Center's north end
8	Sitka spruce	This is the same as Chaney et al.'s CMT#7 (Chaney et al. 1995: 139, Map 3). It is located about 4 m south of CMT 7. The dead tree has a circumference of 2.5 m and bears a scar on its west side 1.12 m above the ground surface. The triangular scar is 57 cm high, 18 cm wide, and 13 cm deep and retains about 13 cm of healing around its margin. An animal burrow occurs at the base of this tree.	West side of Indian River about 30 m south of the Bridge Trail and about 46 m east of the Visitor Center's north end
9	Western Hemlock	This dead tree is about 2 m in circumference and has a board nailed into its south side about 2 m above the ground surface. A set of 2-3 holes located about 50 cm below the board may mark the former location of another step. It is located 5 m from CMT#10.	West side of Indian River at the west margin of the Westwood Trail and about 10 m north of the east-west trail following the old highway from the Sitka National Historical Park maintenance shed toward the river.
10	Western Hemlock	The tree is 2.8 m in circumference and broken away about 6 m above the ground. Virtually all sides of this tree bear cultural modifications. A bolt protrudes from one of the above ground roots about 50 cm above the ground surface and a couple of large metal pins are visible on the west side of the tree. About 3 m above the ground on the east side of the tree is a broken board and the north side of the tree exhibits three wire nails driven into a now-dead branch.	West side of Indian River at the west margin of the Westwood Trail and about 10 m north of the east-west trail following the old highway from the Sitka National Historical Park maintenance shed toward the river.

Table 9-1. Concluded.

CMT#	Tree Species	Modification	Location
11	Unknown	<p>This stump was identified by Anne Pollnow who referred to it as Tree Stump (S_1) in the text and T_1 in her UTM data file (Pollnow 2006: 5, Figure 4). It is the remnant of a tree that had grown over round and square iron stock. The top of the stump is about 1 m in diameter and its surface parallels the ground, probably as a result of the tree being felled using a saw. The density of new growth on top of the stump prevented tree rings from being counted.</p> <p>Iron artifacts in the south side of the stump occur as two groups spaced about 45 cm apart and about 1 m above the ground. The westerly group consists of round iron stock embedded in the tree and lying on the ground directly below. The easterly group includes similar round stock with a common wire nail embedded about 20 cm above. A short fragment of square stock, perhaps the remnant of a handmade spike is about 4 cm above the wire nail. The round stock appears to be the remnants of a chain which the tree grew over. It was removed at some point in time by cutting through links on both the east and west sides. These artifacts suggest they were placed around and in the tree during the late 19th century suggesting the tree may be associated with the homestead established by Nicholas Haley in 1882.</p>	Located immediately next to the fence line marking the east boundary of Sitka National Historical Park. It is 26 m northeast of the Russian Memorial.
12	Sitka Spruce	This was briefly described in the geomorphological report as CMT #4. The tree is about 2½ m in diameter. It is the largest tree in the park. Chaney et al (1995:139, Map 3) observed metal axe cuts in this tree which were interpreted as a blaze.	Located east of the Indian River approximately 32 m west of Sawmill Creek Road and about 12 m NW of the Bridge Trail (running from the Sitka National Historical Park Visitor Center across the Indian River footbridge to Sawmill Creek Road).
13	Sitka Spruce	This CMT was briefly described in Chaney et al. (1995:139, Map 3) as CMT #2. This tree was observed to have a north-facing scar exhibiting cuts from a metal axe.	In the south half of the park, west of the Indian River. More specifically, it is about 46 m SE of the southern-most cross-over trail between the Totem and Indian River trails and about 16 m west of the Indian River Trail
14	Unknown	This tree bears a wood insulator about 3-4 m above the ground on the west side of the tree. This insulator is consistent in style with a World War II telephone system and likely is part of a larger communication system for the 1942 WWII Army encampment located in the south end of the park.	In the south half of Sitka National Historical Park west of the Indian River. More specifically, it is at the east edge of the Totem Trail about 240 m SE of the Sitka National Historical Park Visitor Center and about 50 m south of the southern-most cross-over trail between the Totem and Indian River trails.



Figure 9-2. Cast iron water pump casing in the west bank of the Indian River.

numbers do not correspond with those in the 1995 geomorphological report.²⁸ All CMTs are believed to be less than 200 years old, especially those within the original boundaries of the park where trees uniformly appear to be that age or younger. CMT's within areas acquired in the late 20th century (Survey Units C and the northern three-quarters of D) could be older than that but, with the exception of CMT #1, a massive Sitka Spruce, the trees are generally too small to be of great antiquity. This is supported by the fact that modifications are uniformly produced using wire nails, in the case of hunter's tree stands or metal cutting tools where the modification is bark removal. Eight CMTs are Sitka spruce, three are Western Hemlock, one is red alder, and two are of unidentified species.

As indicated, there are several varieties of modifications made to trees in the park: bark stripping, construction of steps, use as a living telephone pole, and

as a post to tether animals and/or fasten inanimate objects. The first and most common modification to park trees is the removal of bark, a pursuit that probably reflects traditional Tlingit activity. In Sitka National Historical Park, all such modifications (n = 8) occur on Sitka spruce (CMTs #1, 3, 5-8, and 12-13). The objective here may have been to collect pitch or gum, product of many uses in Tlingit culture. This product was obtained after removal of the bark using an adze or other tool, marks that were observed on most of the bark-stripped trees in the park. Spruce pitch was used as a fire starter and was especially important for establishing campfires at rainy campsites, such as those used by backwoods hunters and along marine travel routes. Pitch was also used for the repair of watercraft. As well, pitch was utilized in traditional Tlingit medicine. Cheesecloth impregnated with heated pitch could be applied to sores, cuts, and boils. It is also a good source of vitamin C and was taken internally as a syrup or tea as a remedy for coughs.²⁹

Steps, either in the form of nailed boards or cut notches, occurred on four trees, all three Western hemlocks and the single modified Red alder. One of the hemlocks, CMT #2, is clearly a hunter's stand modified with both foot notches and board steps. The alder, CMT #4, retains two board steps and is assumed to have served as a hunter's stand as well. All board steps are fastened with wire nails indicating a post-1890 date and these stands, both on the east side of the Indian River, were probably used to hunt Sitka deer which occur in abundance throughout the island.

Two hemlocks, CMTs #9 and #10, also display remnants of steps but may have served some other purpose than as hunter's stands. These dead trees are within a few meters of each other and situated at the west margin of the river immediately next to the old highway bridge ramp. While CMT #9 bears evidence for at least two board steps, CMT #10 has board steps as well as a variety of nails and bolts protruding from it well above the surface of the ground. The variety and number of fasteners on this tree and its location immediately next to the old highway suggests that CMT #10 may have served as an anchor for power, telegraph, or phone lines. Its proximity with CMT #9 suggests the latter may have served in a similar role.

A tree obviously used as a line pole is CMT #14. A dead branch of this tree bears a wood insulator about 3-4 m above the ground on the west side of the tree. The tree is situated immediately next to the Totem Trail. This insulator is consistent in style with a World War II telephone system and likely is part of a larger communication system for the 1942 WWII Army encampment located in the south end of the park.

Finally, CMT #11 is tree stump at the south end of the park on the east side of the Indian River. Iron artifacts in the south side of the stump occur as two groups spaced about 45 cm apart and about 1 m above the ground. The westerly group consists of round iron stock embedded in the tree and lying on the ground directly below. The easterly group includes similar round stock with a common wire nail embedded about 20 cm above. A short fragment of square stock, perhaps the remnant of a handmade spike is about 4 cm above the wire nail. The round stock appears to be the remnants of a chain which the tree grew over. It was removed at some point in time by cutting through links on both the east and west sides. These artifacts suggest they were placed around and in the tree during the late 19th century suggesting the tree may be associated with the homestead established by Nicholas Haley in 1882.

¹An example of the affects of Sitka expansion on the Tlingit is the semi-destruction of Herring Rock. Herring Rock was located across Katlian Street from the Sitka Pioneer Home. It was buried during the landfilling operation that created Totem Square and is now covered by the Sheffield Hotel, a Native-owned hotel which has been renamed the Shee Atikà Totem Square Inn. The rock was an important landmark for the Tlingit long before the Russian arrival and was a focal point for traditional celebrations including the herring festival (Schroeder and Kookesh 1990, pp. 14-15). The *Kaxatja Hit*, Shattering House Housemaster, "Duck" Didrickson, indicated the rock was blown up and partially destroyed, the largest fragment moved in front of the Sheet'ka Kwaan Naa Kahidi Community House where it sits today.

²Lindsey 2008.

³Jones et al. 1985:80-81.

⁴Barnes 1980:296.

⁵Majewski and O'Brien 1984, pp. 41-43.

⁶Lindsey 2005.

⁷Pollnow 2006, p. 6.

⁸Hadleigh-West 1959, pp. 50, 62, 64.

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⁹ Baranov 2008.

¹⁰ Dauenhauer et al. 2008.

¹¹ These depressions were referred to as Depressions A2 and A3 in the 2006 Annual Report in Hunt 2007, p. 79.

¹² Betts 1999, p. 157.

¹³ Arndt and Pierce 2003, p. 262.

¹⁴ This depression was referred to in the 2005 geophysical inventory as the “Small Depression” and in later reports as Depression A-1. See Hunt et al. 2006; Hunt 2007a, 2008a.

¹⁵ Pollnow 2006.

¹⁶ Griffin 2000; Smith-Middleton and Alanen 1999; Thornton and Hope 1998, Figure 5.

¹⁷ Griffin 2000; Smith-Middleton and Alanen 1999.

¹⁸ Thornton and Hope 1998, Figure 5.

¹⁹ Antonson and Hanable 1987, pp. 109-110.

²⁰ War Department 1940a, b; Department of the Army 1947. Interestingly, the park’s only apple tree occurs near Gun Emplacement #9. The park had it cored to determine its age with the hope that it was associated with the 1840s Russian homestead. Instead, it dated to the 1940s and is probably from an apple thrown out by one of the soldiers occupying the park.

²¹ Personal communication from Gene Griffin.

²² Betts 1999, p. 155; Smith-Middleton and Alanen 1999, pp. 59, 61.

²³ Hunt et al. 2006, p. 24; Hunt 2007a, p. 31.

²⁴ Betts 1999, p. 155.

²⁵ Smith-Middleton and Alanen 1999, p. 54.

²⁶ Antonson and Hanable 1987, pp. 44, 110; Smith-Middleton and Alanen 1999, pp. 31, 38, 55-57.

²⁷ Smith-Middleton and Alanen 1999, pp. 55-56.

²⁸ Chaney et al. 1995, pp. 138-139.

²⁹ Thornton and Hope 1998, pp. 101-102, Figure 16.

CHAPTER 10

FUTURE RESEARCH AND MANAGEMENT CONSIDERATIONS

In 1992, the National Park Service developed and implemented a new program to address its lack of information about the location, characteristics, and significance of archeological resources on our nation's park lands. This Systemwide Archeological Inventory Program has a single goal: to conduct systematic, scientific research to locate, evaluate, and document archeological resources on National Park System lands. The specific objectives of this program are: 1) to determine the nature and extent of archeological resources in park areas; 2) record and evaluate those resources, including nominating properties for listing in the National Register of Historic Places; and 3) recommend appropriate strategies for conserving, protecting, preserving *in situ*, managing, and interpreting those resources. A direct product of this program has been the 2005-2008 Sitka National Historical Park Parkwide Inventory which has resulted in recordation of 17 new sites, updating one previously recorded site, and recovery and cataloging of 1787 artifacts and 49 soil, charcoal, and other samples. In addition, this project has accomplished one of the few 100% archeological inventories for a park in the National Park system and the first such 100% inventory in the Alaska Region.

While the previous chapters examined the methodology, results, and interpretation of the archeological project, this chapter provides information intended for use by park managers as they work to preserve, protect, understand, and interpret the resources within Sitka National Historical Park. To assist the park in its cultural resource management planning, each of the identified archeological resources have been reviewed with regard to site condition, disturbances to the resource, future threats to the resource, and whether the resource has qualities that make it eligible for listing on the National Register of Historic Places. Site 49SIT012 is not included in this review since it equates with the entirety of the park and is not an archeological site *per se*. No preservation treatments are required at this time so this issue will not be discussed. Recommendations are made, however, with regard to inspection schedules by park personnel to insure preservation and protection of the park's significant archeological resources.

SITE CONDITIONS

Site condition refers to the physical state of the site and is defined in terms of deterioration. When conducting site condition assessments, an archeologist will select from six categories ranging from "Destroyed" to "Good." The definitions of the six site condition categories are:

Good: The site, at the first condition assessment or during the time interval since its last condition assessment, shows no evidence of noticeable deterioration by natural forces and/or human activities. The site is considered currently stable and its present archeological values are not threatened. No adjustments to the

currently prescribed site treatments are required in the near future to maintain the site's present condition.

Fair: The site, at the first condition assessment or during the time interval since its last condition assessment, shows evidence of deterioration by natural forces and/or human activities. If the identified impacts continue without the appropriate corrective treatment, the site will degrade to a poor condition and the site's data potential for historical or scientific research will be lowered.

Poor: The site, at the first condition assessment or during the time interval since its last condition assessment, shows evidence of severe deterioration by natural forces and/or human activities. If the identified impacts continue without the appropriate corrective treatment, the site is likely to undergo further degradation and the site's data potential for historical or scientific research will be lost.

Inundated/Uncertain: The deposits and condition of an inundated site, formerly in a terrestrial setting, are obscured and cannot be accurately assessed due to factors such as water turbidity or natural lack of clarity, wave action, growth of aquatic vegetation, and other conditions. Application of standard methods to assess the condition of an inundated site is not possible in these circumstances.

Not Relocated/Unknown: The location where the site was last documented was visited, but the site could not be relocated. Based on best professional judgment that considers standard site types in the park, geography, topography, site documentation, and other pertinent factors, the area is deemed to most likely be the location of the site. Further testing may be required to determine the site location.

Destroyed: The site's formal condition assessment resulted in a professional determination that the site was destroyed or so severely damaged that the data potential/scientific research value was deemed insufficient to warrant further archeological monitoring or investigation. A destroyed site is excluded from Government Performance and Results Act (GPRA) and other national level reporting requirements and is recorded in ASMIS in the Local Resource Type field.

All resources at Sitka National Historical Park identified in this inventory and recorded as archeological sites or components of those sites were found to be in good condition (Table 10-1).

Table 10-1. Evaluations of Recorded Archeological Resources in Sitka National Historical Park.

Site	Component	Evidence	Condition	Disturbance Level	Threats		Eligibility Criteria	Temporal Association	Arch. Site		Significance	DOE
					Natural	Cultural			Physical Integrity	Data Potential		
49SIT751	#1 - 1804 battle zone	Metal detecting, artifacts, shovel testing, test excavations	Good	Low	Tsunami, blow downs, river bank erosion	Illicit metal detecting	A, B, D	1804	Exceptional	High	Significant	Eligible
	#1 - Fortified village <i>Shis'ki-Noow</i>	1958 West excavations	Good	Severe	Tsunami, river bank erosion	Looting, vandalism, illicit metal detecting,	A, B	1804	Poor	Modest to Low	Significant	Eligible
	#2 - Ovchinilkov homestead	Shovel testing, artifacts, test excavations, historic documents	Good	Moderate	Tsunami, blow downs, river bank erosion	Looting, vandalism, illicit metal detecting,	A, D	circa 1840s-1855	Substantial	High	Significant	Eligible
	#3 - Prehistoric occupation	Shovel testing, test excavations, feature, artifacts, radiocarbon dates	Good	Moderate	Tsunami, blow downs, river bank erosion	Looting, vandalism	D	circa 1400-1700	Substantial	High	Significant	Eligible
49SIT752	#4 - Historic	Metal detecting, artifacts, shovel testing	Good	Low	Tsunami, blow downs, river bank erosion	None	D	late 19th c.	Exceptional	None	Not significant	Ineligible
	Prehistoric structure with stone firehearth	Shovel testing, test excavations, radiocarbon dates	Good	Low	Tsunami, blow downs	Looting, vandalism	D	AD 1430-1630	Exceptional	High	Significant	Eligible
49SIT753	<i>Kiks.adi</i> clan fish camp	Metal detecting, geophysical inventory data, shovel testing, test excavations, historic documents	Good	Low	Tsunami, blow downs	Looting, vandalism	D	Early historic	Exceptional	High	Significant	Eligible
49SIT754	Multicomponent prehistoric occupation	Shovel testing, test excavations, artifacts, radiocarbon dates	Good	Low	Tsunami, blow downs	Looting, vandalism	D	820 BC to historic	Exceptional	High	Significant	Eligible
	NPS privies	Depressions; metal sign	Good	Low	Blow downs	None	D	1940-1955	Exceptional	Medium	Significant	Eligible

Table 10-1. Continued.

Site	Component	Evidence	Condition	Disturbance Level	Threats		Eligibility Criteria	Temporal Association	Arch. Site		Significance	DOE
					Natural	Cultural			Physical Integrity	Data Potential		
49SIIT755	Multicomponent prehistoric occupation	Shovel testing, test excavations, radiocarbon dates	Good	Low	Tsunami, blow downs,	Looting, vandalism	D	AD 1294-1826	Exceptional	High	Significant	Eligible
49SIIT756	Prehistoric occupation	Shovel testing, artifacts, radiocarbon dates	Good	Low	Tsunami, blow downs,	Looting, vandalism	D	AD 1486-1675	Exceptional	High	Significant	Eligible
49SIIT757	Multicomponent prehistoric occupation	Shovel testing, radiocarbon dates, feature	Good	Low	Tsunami, blow downs,	Looting, vandalism	D	circa 54 BC - AD 1526	Exceptional	High	Significant	Eligible
49SIIT758	Multicomponent prehistoric occupation	Shovel testing, radiocarbon dates, feature	Good	Low	Tsunami, blow downs,	Looting, vandalism	D	117 BC-AD 424 AD 1422-1697	Exceptional	High	Significant	Eligible
49SIIT759	Multicomponent prehistoric occupation	Shovel testing, radiocarbon dates	Good	Low	Tsunami, blow downs,	Looting, vandalism	D	AD 894-1299 AD 1410-1519	Exceptional	High	Significant	Eligible
49SIIT760	Historic bridge	Displaced concrete bridge abutments	Good	Low	Flooding river	None	None	20th century	Exceptional	None	Not significant	Not Eligible
49SIIT761	Historic	Six cable-girdled trees	Good	Low	Flooding, river bank erosion	None	None	20th century	Exceptional	None	Not significant	Not Eligible
49SIIT762	Historic	Three cable-girdled trees	Good	Low	Flooding, river bank erosion	None	None	20th century	Exceptional	None	Not significant	Not Eligible
49SIIT763	Historic	Three cable-girdled trees	Good	Low	Flooding, river bank erosion	None	None	20th century	Exceptional	None	Not significant	Not Eligible
49SIIT764	Historic	Log alignment, depression	Good	Low	Blow downs	Vandalism	D	20th century	Exceptional	Modest	Undetermined	NA
49SIIT765	Historic	Shovel testing, artifacts	Good	Low	Blow downs	Vandalism	D	1930s	Exceptional	Low	Not significant	Not Eligible

Table 10-1. Concluded.

Site	Component	Evidence	Condition	Disturbance Level	Threats		Eligibility Criteria	Temporal Association	Arch. Site		Significance	DOE
					Natural	Cultural			Physical Integrity	Data Potential		
49SI766	#1 - World War II, U.S. Army beach defenses	Shovel testing, metal detection, artifacts, features	Good	Low	Tsunami, blow downs,	Vandalism	A, D	1943	Exceptional	Medium	Significant	Eligible
	#2 - shoreline trash dump	Shovel testing, test excavation, artifacts	Good	Low	Tsunami, blow downs,	Vandalism	D	Late-19 th to early-20 th century	Exceptional	Modest	Not significant	Not Eligible
49SI767	Cottage Community dump	Shovel testing, artifacts, historic documents	Good	Low	Blow downs	Vandalism	A, D	Post-1890 and 1930	Exceptional	Modest	Significant	Eligible

RESOURCE DISTURBANCE AND THREATS

There is a clear difference between the concepts of disturbance and threats. A disturbance is an impact on a resource caused by natural forces or human activities which has had a negative effect on the integrity or data potential which reflects, in turn, the scientific research value of the site. It is an observed harmful effect. A threat, on the other hand, is a detectable condition that predicts future disturbances or harmful effect; i.e., a threat can become a disturbance.¹

Assessment of Disturbance Effects

Five levels of disturbance effect are recognized when a site's condition is evaluated.² These are:

Destroyed: The harmful effect has destroyed the site.

Severe: The harmful effect is so great that the site is in danger of soon being totally destroyed. A limited portion of the site remains intact. For an impact to be considered severe, it must meet at least one of the following criteria: the resource(s) will be significantly damaged or irretrievably lost if action is not taken within 2 years; and/or there is an immediate and severe threat to visitor or staff safety.

Moderate: The harmful effect is significant and the site is in danger of being destroyed. For an impact to be considered moderate, it must meet at least one of the following criteria: the resource(s) will be significantly damaged or irretrievably lost if action is not taken within 5 years; and/or the situation caused by the impact is potentially threatening to visitor or staff safety.

Low: The harmful effect is minimal and the site is in the early stages of being destroyed. For an impact to be considered low, it must meet at least one of the following criteria: the continuing effect of the impact is known, and will not result in significant damage to the resource(s); and/or the impact and its effects are not a direct threat to visitor or staff safety.

Of the eighteen sites recorded for Sitka National Historical Park, all but two are considered to have a disturbance effect level of "Low." Their disturbance level is actually better than the definition, however, in that none are "in the early stages of being destroyed."

Unfortunately, three components of one site, 49SIT751 (*Shis'ki-Noow* Fortified Village and Battlefield), have been very badly damaged, enough to deserve assessments of moderate and severe disturbance effects. This situation is very disconcerting because Sitka National Monument (which was later designated Sitka National Historic Site) was established to commemorate the 1804 Battle of Sitka fought between the Tlingits and the Russians. Above all, the location of the Tlingit fort and battlefield should be sacrosanct from any and every human impact.

Nevertheless, serious damage has occurred to *Shis'ki-Noow* Fortified Village, the park's premier historic site. Prior to the park's administration by the National Park Service, in 1901 and again in 1906, civilian managers excavated huge holes in the east end of the clearing to install the Saanaheit pole and house posts using massive concrete footers to hold them in place. The clearing itself may have been expanded at that time. The impacts continued after 1916 when management of Sitka National Monument became the responsibility of the National Park Service. In 1942, the Park Service dug huge holes to remove the original totems and their concrete pedestals and inter newly carved replacement poles. Additional clearing also appears to have taken place at this time. Graveling operations at the mouth of the Indian River starting in 1939, intensified during the early 1940s, and was finally brought to a halt until 1978. These excavations changed the flow of the river and resulted in devastating floods that seriously eroded the river banks. This bank erosion may have removed elements of the fort site. Since World War II the Park Service has: 1) used the clearing in 1970-1972 to excavate an unknown number of 8 foot wide, 30 inch deep trenches of unknown length to dip totem poles in preservative; 2) used heavy machinery traffic across the site and installation of fencing around the clearing during this process; 3) removed trees and brush from the clearing using heavy equipment; and, 4) in 1982, leveled the depressions left by the preservation trenches with artifact-bearing fill acquired from the Russian Bishop's House Unit.³ In short, it is astonishing, given the Service's mission to protect and conserve its natural and cultural resources, that NPS actions at the Fort Clearing site has deleteriously impacted and perhaps destroyed significant elements of the Tlingit fort.

Based on this history, the assumed site of *Shis'ki-Noow* was assessed to have a disturbance level of "Severe." However, in that a limited portion of the site may remain intact, an assessment of "Destroyed" seems unsupportable at present. Only large scale excavations extending over the greater portion of the Fort Clearing can allow an assessment of the actual degree of damage to be made. Geophysical inventory and shovel testing indicate the east end and south central portion of the clearing has experienced the most significant impacts. There is evidence of tree removals throughout the clearing, however, and certainly damage has occurred to the prehistoric and historic Russian components identified on the west side of the clearing as well. These two components have been assessed to have "Moderate" levels of disturbance.

Assessment of Threats

Threats to archeological resources are from both natural forces and human activity. There are a number of natural threats to archeological resources in the park among which are tsunami, flooding, river bank erosion, tree blow downs, and wave action. Together, these have made huge impacts on the archeological record in Sitka National Historical Park and will likely continue to do so.

The threat of damage to the park by tsunamis and seiches is considerable. Southeast Alaska has been the site of ten of Alaska's historical tsunamis with the maximum-recorded tsunami at Sitka generated by the 1964 Prince William Sound earthquake being 7.8 feet. Experts have predicted that there is a 65% chance of a tsunami with a maximum wave height of at least 32 feet each 100 years at the Sitka airport.⁴ Given the enclosed space of the Sitka harbor, there is also a possibility of a seiche, a wave similar

to a tsunami that is confined in a partially or totally enclosed body of water. Such a wave can be especially destructive since the wave bounces back and forth across a body of water striking locations repeatedly as it rebounds.⁵ Due to the relatively low elevations of lands in the park, a large tsunami or seiche might affect all known sites in the park. At low tide, the maximum recorded tsunami of 7.8 feet might only affect 49SIT766 (WWII Army Beach Defenses). With a very high tide, the tsunami might affect all sites around the mouth of the Indian River. In addition to 49SIT766, these would include 49SIT751 (Shis'ki-Noow Fortified Village and Battlefield), 49SIT752 (Aas Gutú Hit -In the Forest House), 49SIT753 (Salmon Hook), 49SIT757 (Riverside), and 49SIT758 (Big Hole).

Flooding and riverbank erosion would potentially affect sites situated on the riverbanks and floodplains. These include sites 49SIT751 (Shis'ki-Noow Fortified Village and Battlefield), 49SIT754 (T'ooch' Aan - Charcoal Village), 49SIT757 (Riverside), and 49SIT758 (Big Hole), 49SIT760 (Bridge Abutment), 49SIT761 (Cable Trees - North Group), 49SIT762 (Cable Trees - Middle Group), 49SIT763 (Cable Trees - South Group) and miscellaneous isolated features (CMTs and water pump) of 49SIT12.

Forest blowdowns occur naturally in forests all over the world. Exceptionally strong storms blow across Southeast Alaska on average every eight years and their affects can be devastating to localized areas of forest. For instance, in 1968, a single storm resulted in more than a billion board feet of timber being blown down.⁶ The forest in Sitka National Historical Park exhibits a number of such locations with perhaps 50% or more of the park containing dense areas of blown down trees. The thin soils over beach gravels which are characteristic in the park cause tree roots to grow outwards from the trunk instead of down and when a tree is blown over it generally pulls up all the soils within an area 15-20 feet in diameter or greater. This bioturbation has greatly affected archeological sites in the past and will continue to do so in the future and one can assume that the vertical context of any artifacts or features that may occur in these areas of dense blow downs has largely destroyed. The most dramatic areas witnessed during shovel testing occur between Cross-over Trail #1 and Cross-over Trail #2 west of the river between the Fort Clearing and the Visitor Center, on an ancient beach terrace northeast of the Visitor Center parking lot and south of the maintenance area, on the east side of the river east of the remnants of the Wagon Road bridge (north end of the Old Highway Trail), and on the east side of the river in the area northeast of the Russian Memorial between the Old Highway Trail and Sawmill Creek Road. All sites in densely wooded areas that have not experienced a blow down in the past thirty years or so are susceptible to damage from strong winds and blow downs. These include parts of 49SIT751, 49SIT752, 49SIT753, 49SIT754, 49SIT755, 49SIT756, 49SIT757, 49SIT758, 49SIT759, 49SIT765, 49SIT766, and 49SIT767.

Wave action at very high tides has potential to do damage to one site, 49SIT766 (WWII Army Beach Defenses). In fact, one gun emplacement bunker (GE 2) has already been damaged by wave action. Intense wave action might erode the beach sufficiently in the future to damage GE 1 at the north end of the string of the gun emplacements.

While natural forces have had negative impacts on park sites and will continue to adversely affect the park's archeological resources, threats to those resources may also occur via human actions. One would expect that these would be of more modest scale

unless heavy machinery was put into play because the sites are difficult to locate and do not typically contain large numbers of artifacts. Nevertheless, we have already seen the kinds of major impacts that can occur through a review of the Fort Clearing's history. All sites in the park are open air sites which occur in locations rarely visited by park staff. These sites may be endangered by illicit artifact collection, digging, and other forms of vandalism especially in the southeastern portion of the park where there appears to be a significant number of people entering the woods to drink and conduct other illicit activity. The site most threatened by this would be 49SIT764 (Log Walkway) which occurs at the park margin where the greatest amount of activity appears to occur. While it is unlikely that anyone would intentionally dig into the site to collect artifacts, it is possible that the site could be impacted by people crossing the site or pulling up logs for use in evening fires.

DETERMINATION OF ELIGIBILITY

Sitka National Historical Park as a whole has been listed on the National Register of Historic Places (NRHP) since 1966. In addition to the protection and preservation provided simply by being within a National Park property, smaller elements of the park, such as its archeological sites, are additionally protected under the NRHP umbrella. They may be listed individually or subsumed under the park's listing creating an archeological district with individual sites contributing or does not contributing to the park's eligibility.

Among the critical components for a Determination of Eligibility (DOE) assessment to list a resource on the NRHP are: a) delineation of the age of deposits/remains; b) determination of site integrity; and c) determination of site significance. Properties were evaluated for eligibility from the perspective of two of the four criterion used by the NRHP:⁷

Criterion A - associated with events that have made a significant contribution to the broad patterns of our history; and

Criterion B - associated with the lives of persons significant in our past.

Criterion C - embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction and the historical significance of the place.

and

Criterion D - have yielded or may be likely to yield, information important in prehistory or history.

Archeological sites are most commonly evaluated from the perspective of Criterion D although historic sites may be evaluated from other criterion as well.

Date ranges for sites and their components are presented in Table 10-1. Clearly, all these resources meet the DOE age requirement of being 50 years old or more.

The second critical factor which must be considered in any DOE is an assessment of physical integrity. The NPS Cultural Resource Management Guideline clarifies that

Integrity is not the same as condition. The condition of a resource is defined in terms of deterioration; integrity is defined in terms of correspondence with associations in the past. Condition is a matter of rot and rust; integrity is a matter of age and authenticity. All physical things have a condition; they do not all have historical integrity.⁸

Determination of integrity at an archeological site usually requires both surface and subsurface site documentation and utilizes terminology recognizing degrees of alteration. Depositional integrity assessments range from "Exceptional" to "Unevaluated" which are defined as follows:

Exceptional: Virtually all archeological deposits are completely intact and retain all of their original archeological integrity. Preservation is exceptional and all indications are that the archeological deposits are entirely in situ and unaltered.

Well preserved: The archeological deposits have suffered some minor degradation due to natural forces and/or human activities, but this has not appreciably reduced the overall integrity of the extant archeological deposits. The existing archeological deposits are mostly intact and complete.

Substantial: The archeological deposits have clearly suffered as a result of natural forces and/or human activities, but only a minor portion of their original archeological value has been significantly compromised. Despite the loss, the majority of the archeological deposits remain relatively intact and complete.

Moderate: The archeological deposits have clearly suffered as a result of natural forces and/or human activities and a majority has been compromised. Despite the loss, a sizable portion of the remaining archeological deposits are relatively intact and complete.

Poor: The greater majority of archeological deposits have been severely disturbed by natural forces and/or human forces, but a small portion remains relatively intact.

Lacking: All of the archeological deposits, as a result of natural and/or human impacts, have lost all archeological integrity and have been determined, through professional evaluation, to be insufficiently intact to address any currently conceptualized spheres of archeological research that would warrant further investigation.

Unevaluated: The archeological deposits have not been sufficiently assessed to evaluate their archeological integrity.

Archeological resources identified in this study and components of those sites have generally been found to have exceptional integrity (Table 10-1). The exceptions are three of the four components of 49SIT751, *Shis'ki-Noow* Fortified Village and Battlefield, for reasons noted earlier in this chapter regarding site disturbances.

Assessment of significance, the third critical element in a determination of eligibility, requires one to ascertain the informational content of a site, the historic context, and appropriate National Register Criterion under which the site can potentially be listed. Addressing the last requirement first, as it is the most elementary, archeological sites are almost always assessed under "Criterion D." That is, they are judged with regard to their potential for providing important information about prehistory or history. Data potential assessments, an estimate of the data potential or scientific research value degrees of an archeological resource, range from "Exceptional" to "Unevaluated" and are defined as follows:

Exceptional: Based on a preliminary, professional and documented field assessment, the data/scientific research potential at this site is considered outstanding and able to address research questions of prominent archeological interest at the **national** level of importance. Alternatively, the site has been evaluated as possessing data/scientific research value that is believed to merit nomination as a National Register site (or revision of existing National Register documentation) at the **national** level of significance. The site might also merit nomination as a National Historic Landmark or World Heritage site.

High: Based on a preliminary, professional and documented field assessment, the site contains a wealth of information that has substantial scientific data potential and compelling research value of **regional or state** interest or importance. Alternatively, the site, on its own merits, has been evaluated as possessing data/scientific research potential qualifying it for nomination to the National Register of Historic Places (or revision of existing National Register documentation) at the **state** level of significance.

Medium: Based on a preliminary, professional and documented field assessment, the site is evaluated as possessing data/scientific research potential for addressing a number of research questions of **state or park interest** or importance. Alternatively, the site, on its own merits, has been evaluated as possessing data/scientific research potential qualifying it for nomination to the National Register of Historic Places (or revision of existing National Register documentation) at the **local** level of significance.

Modest: Based on a preliminary, professional and documented field assessment, the site is evaluated as possessing data/scientific research potential for addressing a number of research questions of **local interest** or importance. Alternatively, although the site may not possess data/scientific research value potentially

qualifying it for nomination to the National Register of Historic Places on its own merits, it may potentially do so as a contributor with other sites within a National Register district.

Low: Based on a preliminary, professional and documented field assessment, the data potential/scientific research value of the site is evaluated as having little potential to address research questions of national, regional, or state interest, but would likely yield some useful scientific data for addressing a limited number of research questions of lesser (**local**) importance.

None: Based on a preliminary, professional and documented field assessment, the site was judged insufficient to address any currently conceptualized spheres of archeological research that would warrant further investigation.

Unevaluated: The site has not been professionally assessed in order to determine its data potential/scientific research value; or the assessment is undocumented.

The data potentials of archeological resources identified during this study vary from "none" to "high" (Table 10-1). None of the resources were determined to be "Exceptional" in that no site contained information which would allow researchers to address archeological questions at the national level of importance. Three components of 49SIT751 (the battle zone, Ovchinnikov homestead, and the prehistoric occupation) were determined to have "High" data potential as did 49SIT752-754, and 755-759. The NPS privy component of 49SIT754 and the shoreline defenses component of 49SIT766 were determined to be of "Medium" data potential. Three sites evaluated as having "Modest" data potential included 49SIT764, the shoreline dump component of 49SIT766, and 49SIT767. One site, 49SIT765, was determined to have a "Low" data potential and the fortified village component of 49SIT751 was evaluated to have "Modest to Low" in data potential due to the severe impacts it has experienced.

To be significant and eligible for the NRHP, then, a site must meet all the evaluative measures. If it fails to meet any single qualification, it can not be found eligible. Based on the aforementioned factors, it was concluded that eleven archeological sites or components thereof are eligible for nomination to the NRHP (Table 10-1). Four sites (49SIT760-763) were found ineligible since they have no data potential. The eligibility of one site, 49SIT764, could not be determined in that it requires testing of the depression to ascertain whether it has data potential for addressing Criterion D.

SITE INSPECTION SCHEDULE RECOMMENDATIONS⁹

Regular site inspections and condition assessments have become an important instrument in park management's toolkit for furthering the preservation and protection of their archeological resources. A condition assessment focuses on the physical stability of a site and the degree or amount of deterioration it has experienced since the last assessment. To make such an assessment, the sites must be visited on a regular basis, the schedule varying according to the level of threat. The assessment itself is critical to making decisions about treatments which may be necessary for the preservation,

protection, and interpretation of sites. Further, it is the policy of the National Park Service (i.e., NPS Management Policies, Director's Orders) based in statute (i.e., ARPA, NHPA's section 110) to conduct such assessments. Completion of this task also addresses the park's accountability and accomplishment requirements (i.e., GPRA, PART).

All archeological sites located within the legislated boundaries of a National Park unit and for which the National Park Service has the legal authority to manage must have a condition assessment. The Resource Management Plan Condition definitions emphasize the fact that sites should be monitored and condition reassessed on a periodic basis. In order to develop a monitoring program and an inspection schedule for a site, the site must be first visited and assessed to establish a baseline condition. The first condition assessment must be done by a professional archeologist and this has been accomplished during the course of the parkwide inventory. If a site has not been revisited in more than 3 years, a professional archeologist should conduct the site visit and assessment. If monitoring needs to occur more frequently, however, the park's cultural resource staff should be trained to monitor site stability and impacts and may subsequently conduct site visits in consultation with a professional archeologist. The RMP Condition definitions focus on the physical stability of a site and the potential for site deterioration over time.

Several levels of inspection schedules are recommended which are based on site significance, visitor frequency (on or near trails), and visibility. Table 10-2 outlines inspection priority for each site and recommended seasonal inspection schedules. Note that the recommended schedules approximate seasonal visitation with more frequent site visits (in contrast to a full, formal condition assessment) during periods of higher park visitation.

Table 10-2. Recommended Inspection Schedules for Archeological Sites in Sitka National Historical Park.

Site Number	Inspection Priority	Inspection Schedules		Comments
		May-Sept.	Oct.-April	
49SIT751	1	Weekly	Monthly	High visitation, numerous artifacts present
49SIT752	2	Monthly	Once/season	Highly significant site but off trail
49SIT753	2	Monthly	Once/season	Very visible depression but off trail
49SIT754	3	Annually		Highly significant site but off trail
49SIT755	1	Weekly	Monthly	Highly significant site, next to trail, and little tourist traffic
49SIT756	4	Annually		Not visible and difficult to locate
49SIT757	1	Weekly	Monthly	Not visible but next to trail
49SIT758	1	Weekly	Monthly	Very visible depression next to trail
49SIT759	2	Monthly	Once	Not visible but next to trail
49SIT760	5	Not Required		Not significant and in the river
49SIT761	5	Not Required		Not significant and difficult to see
49SIT762	5	Not Required		Not significant and difficult to see
49SIT763	5	Not Required		Not significant and difficult to see
49SIT764	1	Weekly	Monthly	Significance undetermined but there is a great deal of illicit traffic/alcohol consumption here
49SIT765	2	Annually		Not significant but many surface artifacts
49SIT766	1	Weekly	Monthly	Earthworks visible from trail
49SIT767	2	Annually		In marshy brush but many surface artifacts

All sites in the park were assessed in 2007-2008 and all were found to be in good condition. No future assessments are required for four sites determined ineligible for the NRHP and with low visibility. It is recommended that one or more Park Rangers be trained to undertake future conditions assessments. Field procedures should include a walkover of the entire site and its subsites with coverage sufficient to ensure that any physical disturbances are detected visually. Check for eroding surfaces or edges, man-made holes, and recent vegetation disturbances as clues to recent effects on condition. Use as much physical evidence of site stability as possible, including the threats and disturbances that will influence its potential for deterioration over time, for the initial and all subsequent assessments. If a site has one or more subsites, each subsite must be inspected and assessed. The value assigned for the overall RMP condition for a site should be based on the subsite in the worst condition.

SUGGESTIONS FOR FUTURE ARCHEOLOGICAL RESEARCH

In 1995, when Robert Betts prepared his excellent Archeological Overview and Assessment for Sitka National Historical Park, two paramount issues framed the parameters of future archeological work in the Fort Unit. The first of these was the uncertain location of *Shis'ki-Noow*, the Tlingit fortified village and battlefield. At that time, the location of the 1804 battlefield and position of the fort walls was uncertain. The 2005 metal detection inventory reported herein successfully identified the general battlefield area and extent although the density of the forest undergrowth prevented a more detailed understanding of the battle in terms of combatant positions and movements. In addition, the weight of the evidence, in the form of oral history and archeological data, points to the Fort Clearing as the most likely location of the fortified village. Nevertheless, the evidence remains weak, however, and much remains to be done to convincingly fix the exact boundaries for *Shis'ki-Noow* at this location.

The second paramount issue Betts identified for the park, described by him as “the most pressing archeological priority,” was “for a complete survey of the entire unit to inventory the full range of historic and prehistoric sites that exist within the park boundaries.”¹⁰ This has effectively been accomplished with seventeen new sites and fifteen isolated cultural elements (culturally modified trees and riverside water pump) recorded. Nevertheless, there is much information that remains unknown with regard to the park’s prehistory and history. For the immediate future, any archeological investigations on park resources will necessarily have to focus on securing basic information about the park’s sites: how old are they, what are their extents, do they contain features and what kind, what do the tools look like, how do these change through time, what activities were pursued and where? With this in mind, a few basic issues have been identified for each of the seventeen sites identified to date (Table 10.3). The listing should not be considered exhaustive and restrictive but instead suggests a range of issues which can be addressed along with others that may develop as archeological methods and theory develops through time.

In addition, future archeological investigations do not need to be site focused but can focus on broader parkwide and regional issues that can be addressed using data from within and outside the park boundaries. For example, are there prehistoric organic cultural materials preserved in the wetlands immediately north of the Bridge

Trail west of the Indian River? Such an investigation would be expensive and difficult but has the potential of discovering rare materials similar to those identified in 1995-1998 investigations at Baranof Castle. A question of more regional interest asks if prehistoric fish camps can be identified through soils analysis? This would require soil samples to be collected at known prehistoric and historic fish camps and compare their chemistry with those collected from areas in the park suspected of being fish camps.

Table 10-3. Suggested Research Topics and Corresponding Methodological Approaches for SITK Archeological Sites.

SITE	TOPICS		REQUIRED RESEARCH
49SIT751 (<i>Shis'ki-Noow</i> Fortified Village and Battlefield site)	Prehistoric	Are there house structures or additional smaller features here?	Additional controlled excavations in the west half and just outside the northwest corner of the Fort Clearing
		How are features here similar or dissimilar to others investigated elsewhere in Southeast Alaska?	
		What is the range of tools represented at the site and how were they used?	
		What is the full extent of the feature or prehistoric deposit identified in the northwest corner of the Fort Clearing in 2007-2008?	
	1804 Battle	Clarify the battlefield boundaries	Additional metal detection in early spring prior to summer's lush botanical growth.
		Are Depressions A-2 and A-3 cultural or natural?	
		If Depressions A-2 and A-3 are cultural, when were they created?	Controlled excavations around the margins and within the depressions.
		How were Depressions A-2 and A-3 used?	
		Are Depressions A-2 and A-3 related to structures?	
		Are the depressions associated with <i>Shis'ki-Noow</i> Fortified Village?	
	Russian Homestead	Are there structural remnants associated with the Russian homestead?	Controlled excavations in the west half and northwest of the Fort Clearing.
		Where are the remaining artifact concentrations associated with the Russian homestead?	
		What activities were pursued at the Russian homestead and where?	
World War II	Russian Homestead	How does the Russian homestead material culture differ from that at the Russian Bishop's House and Baranov's Castle?	Documentary research at records warehouse in Elmendorf Air Force Base, Anchorage, and Pacific Alaska Regional Archives branch of the National Archives in Anchorage; broad area excavations in the clearing.
		Was the clearing utilized by the military in World War II? If so, how was the clearing used?	
	Other	Is the small depression noted east of Depressions A-1 and A-2 a cultural or natural feature?	Test excavation.

Table 10-3. Continued.

SITE	TOPICS	REQUIRED RESEARCH
49SIT752 (Aas Gutú Hit, In the Forest House site)	What are the physical dimensions of the structure?	
	How was it built?	
	How is the structure similar or dissimilar from prehistoric and historic structures documented in other areas of Southeast Alaska?	
	At what time of the year was the structure occupied?	
	How long was it utilized?	
	What is the range of tools represented at the site and how were they used?	Controlled excavations in and around the structure.
	Is there evidence of rebuilding?	
	What were its functions?	
	Is there physical evidence relating to subsistence?	
	Are there other structures in the near vicinity and are these contemporaneous with Aas Gutú Hit? In other words, was there a small seasonal community here or was this a single, isolated structure?	Clear brush and conduct geophysical survey followed by test excavations.
49SIT753 (Salmon Hook site)	Is Depression A-1 of cultural or natural origin?	
	If cultural in origin, when was Depression A-1 created and how was it used?	
	What is the range of tools represented at the site and how were they used?	Controlled excavations around the margins and within and the depression.
	Is Depression A-1 related to a structure?	
49SIT754 (T'ooch' Aan, Charcoal Village site)	Are there house structures or other smaller features here?	
	How are features here similar or dissimilar to others investigated elsewhere in Southeast Alaska?	
	What is the range of tools represented at the site and how were they used?	Clear brush and conduct geophysical survey followed by test excavations.
	Do one or more structures occur at this site?	
49SIT755 (Cháas' Ísh, Deep Salmon Hole site)	Are there features at this site?	
	How do the features and structures compare to prehistoric and historic structures documented in other areas of Southeast Alaska?	
	What is the range of tools represented at the site and how were they used?	Conduct geophysical survey followed by test excavations.

Table 10-3. Concluded.

SITE	TOPICS	REQUIRED RESEARCH
49SIT756 (<i>Sháchk A Wánka</i> , Swamp Edge site)	Do one or more structures occur at this site?	Conduct geophysical survey followed by test excavations.
	Are there features at this site?	
	How do the features and structures compare to prehistoric and historic structures documented in other areas of Southeast Alaska?	
	What is the range of tools represented at the site and how were they used?	
49SIT757 (Riverside site)	Do one or more structures occur at this site?	Conduct geophysical survey followed by test excavations.
	Are there features at this site?	
	How do the features and structures compare to prehistoric and historic structures documented in other areas of Southeast Alaska?	
	What is the range of tools represented at the site and how were they used?	
49SIT758 (Big Hole site)	Is Depression F-1 of cultural or natural origin?	Controlled excavations around the margins and within and the depression.
	If cultural in origin, when was Depression F-1 created and how was it used?	
	Is Depression F-1 related to a structure?	
	What is the horizontal limit of the charcoal deposit on the south side and predating Depression F-1?	
49SIT764 (Log Walkway site)	What does this charcoal deposit south of Depression F-1 represent?	Conduct geophysical survey followed by test excavations
	Is the small circular depression west of the log walk's south end a cultural feature?	
	How old is the walkway?	
	Is the log walkway associated to a former structure?	
49SIT766 (WWII Army Beach Defenses)	What other elements of this temporary Army camp may be represented in the park archeologically?	Conduct test excavation at depression. Examine Sitka real estate records. Conduct test excavation. Documentary research at records warehouse in Elmendorf Air Force Base, Anchorage, and Pacific Alaska Regional Archives branch of the National Archives in Anchorage.

INTERPRETATION RECOMMENDATIONS

"A thematic approach to the construction of spatial narratives serves both to highlight and to separate issues, periods, and perspectives while maintaining that they belong to one and the same story. Weaving spatial narratives around a theme amounts to telling these elements of the story separately in space."¹¹

Although Sitka National Historical Park occupies a relatively small space, it clearly has a long, diverse and interesting history. In addition to the Fort Unit's current interpretive foci, the park has several stories that can draw from its archeology combined with Tlingit oral history. Archeological resources in the park which lend themselves to interpretation include the concentration of prehistoric to contact era fish camps at 49SIT754 (*T'ooch' Aan*, Charcoal Village site); the prehistoric firehearth and probable structure at 49SIT752 (*Aas Gutú Hit*, In the Forest House site); 1804 battlefield Kiks.ádi fort (49SIT751, *Shis'ki-Noow* Fortified Village and Battlefield site); Russian homestead (49SIT751, *Shis'ki-Noow* Fortified Village and Battlefield site); historic fish camps and probable structural depressions (49SIT753, Salmon Hook site and probably 49SIT758, Big Hole site); and World War II occupation of the park (49SIT766 WWII Army Beach Defenses site).

The Fort Unit's past may be divided into at least four great stories or themes, each of which incorporate several subthemes and utilize different combinations of archeological data, oral history, historical documents, and non-cultural (geological and other subjects) data (Table 10-4). While the park is an historical space which encompasses all these stories (and more), each story occupies a somewhat different horizontal space within and beyond the park boundaries. Some of the subthemes may be told at a single point in the park while others may require story elements to be narrated at several places, some of which lie outside the boundaries of Sitka National Historical Park.

In addition to these historical themes, park managers may want to consider a more general archeology topic, "How Do They Know?" This theme would involve explanation of archeological techniques which explain determining the age of an artifact or site as well as how archeology provides insights about past societies and the conditions within which people lived.

Table 10-4. Suggested Interpretive Themes, Subthemes, and Data Sources.

THEME	SUBTHEME	DATA SOURCES
Prehistoric Era (c. 2500 BC to AD 1741)	Kiks.ádi Clan's Arrival/Meeting the Frog People	Oral history supported by local geological data and Southeast Alaska archeological data
	Archeological Sites and Salmon Fishing	Oral history and park archeology
European Contact (AD 1741- 1804)	European Exploration	Historical accounts and oral history
	Russian Expansion into the New World	Historical accounts, Alaska archeology, and oral history
	1798 Russian Settlement and the 1802 and 1804 Battles	Sitka archeology, park archeology, oral history, historical accounts
	The Survival March	Oral history
Russian Colonial Era (AD 1804- 1867)	Establishment of Novo- Arkhangelsk	Historical accounts, Sitka archeology
	Return of the Tlingit	Oral history, historical sources
	Russian Homesteads and Factories in the Park	Historical sources, park archeology
American Territorial Era (AD 1867-present)	Tlingit Uses of the Park	Oral history, archeology
	The Cottage Community	Historical accounts, oral history
	Establishment and Development of the Park	Historical accounts
	World War II	Historical accounts, archeology

¹Midwest Archeological Center 2006.²ibid.³Betts 1999, pp. 173, 174, 178,⁴City and Borough of Sitka, Alaska 2008.⁵City and Borough of Juneau, Alaska 2008.⁶Fahey and Cahill 1983, p. 1.⁷National Park Service 2008b.⁸National Park Service 2002.⁹Much of this section is drawn from Child 2006 and Federal Preservation Institute 2001.¹⁰Betts 1995, p. 254.¹¹Azaryahu and Foote 2008, p. 188.

REFERENCES CITED

Alan's Marble Connection

- 1998 "Lined Chinas" in Non-glass Handmade Marbles. Identification Guide. Internet site <http://web.archive.org/web/20061207184227rn_1/www.marblealan.com/nonglass/>. Accessed December 17, 2007.

Andrews, Alex

- 1960 The Battle of Sitka. Audio tape recording collected by the National Park Service, Sitka National Historical Park, July 20, 1960. Transcribed in Tlingit and translated by Nora Marks Dauenhauer, 1987. Unpublished manuscript on file at U.S.D.I., National Park Service, Sitka National Historical Park, Sitka, Alaska.

Anonymous

- 2001 Shot Sizes - What Do They Mean? *Museum of the Fur Trade Quarterly* 37(1):7-13.
- 2005 "Pinfire," *Wikipedia, the free encyclopedia* at <<http://en.wikipedia.org/wiki/Pinfire>> accessed November 17, 2005.
- 2005b Profile of Alan Carper, Youth Employment Program worker with archeological crew. *Sitka Works!* (August) 1(1):1.

Antonson, Joan M. and William S. Hanable

- 1987 *Sitka National Historical Park: An Administrative History*. Report prepared under contract by IPH/JMA-Alaska and published by U.S.D.I., National Park Service, Alaska Region, Anchorage.

Arndt, Katherine L. and Richard A. Pierce

- 2003 *Sitka National Historical Park Historical Context Study. A Construction History of Sitka, Alaska as Documented in the Records of the Russian-American Company*. 2nd ed. Prepared by the Department of Anthropology, University of Alaska Fairbanks under Cooperative Agreement CA 9910-7-0032 for Sitka National Historical Park, Sitka, Alaska.

Aubrey, Michele, Dana C. Linck, Mark J. Lynott, Robert R. Mierendorf, and Kenneth M. Schoenberg

- 1992 *National Park Service's Systemwide Archeological Inventory Program*. U.S. Department of the Interior, National Park Service, Anthropology Division, Washington, D.C.

Autrey, John T. and Stanley D. Davis

- 1985 Test Excavation of the Mud Bay Shell Midden Site (49SIT240). U.S. Forest Service, Chatham Area, Tongass National Forest, Sitka, Alaska.

Azaryahu, Maoz and Kenneth E. Foote

- 2008 Historical Space as Narrative Medium: On the Configuration of Spatial Narratives of Time at Historical Sites. *GeoJournal* 73:179-194.

SITKA

Baranov, Aleksandr

- 2008 Letter to D.I. Kulikalov (excerpts), April 29, 1805. Translated by Lydia T. Black. In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aaní Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*, pp. 249-251. University of Washington Press, Seattle.

Barnes, Frank C.

- 1980 *Cartridges of the World* (revised 4th ed.), edited by K. Warner. DBI Books, Northfield, Illinois.

Basok, Alexander

- 2005 "Nicholas I (1825-1855), Russian Milled Imperial Coins," on the *Rusty Pennies Website of Alexander Basok* at <http://www.rustypennies.com/catalog/nicholas_I.html>. Updated 11/29/05. Accessed December 19, 2005.

Bawaya, Michael

- 2006 Archeologists Find Tlingit Fort. *American Archaeology* 10(3):11.

Beechie, T. J., B. D. Collins, and G. R. Pess

- 2001 Holocene and Recent Geomorphic Processes, Land Use and Salmonid Habitat in Two North Puget Sound River Basins. In *Geomorphic Processes and Riverine Habitat, Water Science and Application*, Vol. 4, pp. 37-54, edited by J. B. Dorava, D. R. Montgomery, F. Fitzpatrick, and B. Palcsak. American Geophysical Union, Washington D.C.

Berg, H.C. and Hinckley, D.W.

- 1963 Reconnaissance Geology of Northern Baranof Island, Alaska. In *Contributions to General Geology, 1961*. U.S. Geological Survey Bulletin, 1141-O, pp. 1-24.

Betts, Robert C.

- 1999 *An Overview and Assessment of Archeological Resources, Sitka National Historical Park, Alaska*. Prepared under contract #1443PX991097174 for the National Park Service, Sitka National Historical Park by Vanguard Research, Sandpoint, Idaho.

Blomkvist, E. E.

- 1972 A Russian Scientific Expedition to California and Alaska, 1839-1849. The Drawings of I. G. Voznesenskii. *Oregon Historical Quarterly*, pp. 101-170. June 1972. Originally published 1951 in *Collections of the Museum of Anthropology & Ethnography*, Vol. XIII. Leningrad. Translated by Basil Dmytryshyn and E. A. P. Crownhart-Vaughan.

Chaney, Gregory P., Robert C. Betts, and Dee Longenbaugh

- 1995 *Physical and Cultural Landscapes of Sitka National Historical Park, Sitka, Alaska*. Report prepared for the National Park Service, Sitka National Historical Park, by Vanguard Research, Douglas Alaska.

- Child, Terry
 2006 "Condition Assessments of NPS Archaeological Sites." Online Power Point presentation accessed through the Federal Preservation Institute's website at <<http://stage.historicpreservation.gov/Download.aspx?DocumentFolderID=4b76724f3fbo4aabb2af44746c6eobdi>>. Accessed December 23, 2008.
- City and Borough of Juneau, Alaska
 2008 Tsunami and Seiches. Emergency Management web site at <http://www.juneau.org/emergency/Tsunamis_Seiches.php>. Accessed December 18, 2008.
- City and Borough of Sitka
 2008 Hazards and Emergencies. Local Emergency Planning Committee information on the Internet at <<http://www.cityofsitka.com/lepc/hazards.html#tsunami>>. Accessed December 18, 2008.
- Clay, R. Berle
 2001 Complementary Geophysical Survey Techniques: Why Two Ways are always Better than One. *Southeastern Archaeology* 20(1):31-43.
- Clark, Anthony
 2000 *Seeing Beneath the Soil: Prospecting Methods in Archaeology*. Reprint. Routledge, London. Originally published in 1990 by B. T. Batsford, Ltd., London.
- Connor, Melissa and Douglas D. Scott
 1998 Metal Detector Use in Archaeology: An Introduction. *Historical Archaeology* 32(4):76-85.
- Daily Sitka Sentinel*
 2006 "Logging in the Park." *Daily Sitka Sentinel*, April 28, 2006. Sitka, Alaska.
 2007 "Women in Science," *Daily Sitka Sentinel*, June 25, 2007. Sitka, Alaska.
- Dauenhauer, Nora Marks and Richard Dauenhauer
 1990a The Battles of Sitka, 1802 and 1804, From Tlingit, Russian, and Other Points of View. In *Russia in North America: Proceeding of the 2nd International Conference on Russian America*, edited by Richard Pierce, pp 6-23. Limestone Press, Fairbanks, Alaska.
 1990b *Haa Tuwunaagu Yfs, For Healing Our Spirit: Tlingit Oratory*. Edited by Nora Marks Dauenhauer and Richard Dauenhauer. University of Washington Press, Seattle.
- Dauenhauer, Nora Marks, Richard Dauenhauer, and Lydia T. Black (editors)
 2008 *Anóoshi Lingit Aani Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*. University of Washington Press, Seattle.

SITKA

Davidson, Alan

- 1999 "Orach." In *The Oxford Companion to Food*, Oxford University Press, New York, pp. 556-557.

Davis, Craig and David Staley

- 1982 Indian River Bank Erosion Control; Archeological Clearance Survey Form.
Report on file, National Park Service, Sitka National Historical Park, Sitka, Alaska.

Davis, Stanley

- 1985 Test Excavation of the Starrigavan Site, 49 SIT 229, Baranof Island, Alaska. U.S. Forest Service, Chatham Area, Tongass National Forest, Sitka, Alaska.

- 1990 Prehistory of Southeastern Alaska. In *Northwest Coast, Handbook of North American Indians*, Vol. 7, pp. 197-202. Edited by Wayne Suttles. Smithsonian Institution, Washington D.C.

Davis, Stanley (editor)

- 1989 *The Hidden Falls Site, Baranof Island, Alaska*. Aurora Alaska Anthropological Association Monograph Series V. Alaska Anthropological Association. Fairbanks, Alaska.

de Laguna, Frederica

- 1972 *Under Mount Saint Elias: The History and Culture of the Yakutat Tlingit*. Smithsonian Contributions to Anthropology, Vol. 7. Smithsonian Institution Press, Washington.

- 1990 Tlingit. In *Northwest Coast*, edited by Wayne Suttles, pp. 203-228. *Handbook of North American Indians*, vol. 7, general editor William C. Sturdevant. Smithsonian Institution, Washington.

Department of the Army

- 1947 *Engineer Field Data Department of the Army Field Manual FM 5-3*. Department of the Army, Washington D.C.

Dice, Lee R.

- 1943 *The Biotic Provinces of North America*. University of Michigan Press, Ann Arbor.

Dilliplane, Timothy

- 1993 Analysis and Recommendations Concerning the Site of Shisk-Kee-Nu, Sitka National Historical Park. Draft report to the National Park Service on file at Sitka National Historical Park, Sitka, Alaska.

Dumond, Don E.

- 1977 *The Eskimos and Aleuts*. Thames and Hudson, London.

- Emmons, George T.
 1991 *The Tlingit Indians*. Anthropological Papers of the American Museum of Natural History. Edited and additions by and Frederica De Laguna. University of Washington Press, Seattle.
- Erlandson, Jon, Madonna Moss, and Robert Stuckenrath
 1990 Radiocarbon Dates from a Tlingit Fort in Sitka Sound, Southeast Alaska. 17th Annual Meeting of the *Alaska Anthropological Association*. Fairbanks, AK, April 8-10, 1990 (in Betts, p. 46).
- Fagan, Brian M.
 2000 *Ancient North America: the Archaeology of a Continent* (3rd edition). Thames & Hudson, New York.
- Fahey, Donald J. and James M. Cahill
 1983 Evaluation of Blown Down Alaska Spruce and Hemlock Trees for Pulp. United States Department of Agriculture, Forest Service, Pacific Northwest Forest and Range Experiment Station, Research Note PNW-403.
- Federal Preservation Institute
 2001 "RMP Condition Definitions Used in ASMIS." On the Historic Preservation Learning Portal website at <http://www.historicpreservation.gov/NPS_Portal/portlets/autosuggest.jsp?seshost=b5b2b7beb4beb4beb5&sesport=4db5b4b4&drehost=b5b2b7beb4beb4beb5&dreport=4db4b4b4&username=e8e9e6e5f9e0f8&pib=true&threshold=50&numresult=15&defaultlogo=htm.gif&display=831&curl=http%3A%2F%2Fwww.nps.gov%2Fphso%2Farcheology%2Fconddefs.htm&links=RMP,CONDIT,DEFINIT&docid=985974&command=gethighlights>. Last update 6/18/01. Accessed December 23, 2008
- Fladmark, Knut
 1982 An Introduction to the Prehistory of British Columbia. *Canadian Journal of Archaeology* 6:95-195.
 1984 Mountain of Glass: Archaeology of the Mount Edziza Obsidian Source, British Columbia, Canada. *World Archaeology*, vol. 16, No. 2, pp. 139-156.
- Foote, Jack
 2008 Little wood insulators? On the *Insulators: Glass and Porcelain* web site at <<http://www.insulators.info/pictures/?id=205374015>>. Accessed November 21, 2008.
- Foster, Rhonda and Dale R. Croes
 2004 Joint Tribal/College Wet Site Investigations: A Critical Need for Native American Expertise. *Journal of Wetland Archaeology* 4:125-137.
- Geoscan Research
 1987 *Fluxgate Gradiometer FM9 FM18 FM36 Instruction Manual, Version 1.0*. Geoscan Research, Bradford, England.

SITKA

1994 Geophysical Remote Sensing Surveys within Sitka National Historic Park. Report submitted to Sitka National Historical Park. Geoscan Research (USA), Sea Ranch, California.

2003 *Geoplot Version 3.00 for Windows Instruction Manual, Version 1.6*. Geoscan Research, Bradford, England.

Gish, Elton

2008 Porcelain Wiring Cleats. On the R= ∞ website at <<http://www.r-infinity.com/Cleats/index.htm>>. Last updated November 22, 2008. Site accessed November 25, 2008.

Golden Software

2002 *Surfer 8 User's Guide: Contouring and 3D Surface Mapping for Scientists and Engineers*. Golden Software, Golden, Colorado.

Griffin, Gene

1985 Archeological Clearance Survey for Indian River Bank Erosion Control; Underground Electrical Cable Route; and Additional Maintenance Building Construction. Report on file, U.S. Department of the Interior, National Park Service, Sitka National Historical Park, Sitka, Alaska.

Griffin, Kristen

2000 *Early Views: Historical Vignettes of Sitka National Historical Park*. U.S. Department of the Interior, National Park Service, Alaska Support Office, Anchorage, and Sitka National Historical Park, Sitka, Alaska.

2005a *Sitka National Historical Park Archaeological Survey Project Newsletter 1*, August 1, 2005. On the Sitka National Historical Park website at <<http://www.nps.gov/sitk/parknews/archaeological-survey-project-newsletter-1.htm>>.

2005b *Sitka National Historical Park Archaeological Survey Project Newsletter 2*, December 5, 2005. On the Sitka National Historical Park website at <<http://www.nps.gov/sitk/parknews/archaeological-survey-project-newsletter-1.htm>>.

2007a "Sitka National Historical Park Survey," on the National Park Service Archeology Program website. On the Internet at <<http://www.nps.gov/archeology/sites/npSites/sitka.htm>>.

2007b "Connecting the Past, Present, and Future at Sitka National Historical Park." In the *Research Reports of CRM: The Journal of Heritage Stewardship* 4(1).

2008 Historical and Archeological Investigations at Shis'gi Noow. In *Anóoshi Lingit Aani Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*, pp. 291-294. Edited by Dauenhauer, Nora Marks, Richard Dauenhauer, and Lydia T. Black. University of Washington Press, Seattle.

- Grinev, Andrei Val'terovich, Richard L. Bland, and Katerina G. Solovjova
 2005 *The Tlingit Indians in Russian America, 1741-1867*. University of Nebraska Press, Lincoln, Nebraska.
- GSSI
 2003 *TerraSIRch SIR System-3000 User's Manual*. Geophysical Survey Systems, Inc., North Salem, New Hampshire.
- Hackman, Emory and Linda Adams
 2006 "Common Guns in the Civil War: 1860 Henry Rifle" on the *Hackman-Adams* website at <<http://www.hackman-adams.com/guns/henry.htm>>. Accessed January 9, 2007.
- Hadleigh-West, Frederick
 1959 Exploratory Excavations at Sitka National Monument. A Cooperative enterprise conducted under an agreement between the University of Alaska and the National Park Service (Contract number 14-10-434-210). Ms. on file, U.S. Department of the Interior, National Park Service, Sitka National Historical Park, Sitka, Alaska.
- Hayes, Derek
 1999 *Historical Atlas of the Pacific Northwest: Maps of Exploration and Discovery: British Columbia, Washington, Oregon, Alaska, Yukon*. Sasquatch Books, Seattle.
- Hellickson, Micki
 1992 Conversation Record dated August 12, 1992, with Herb Hope and his son, Doug Hope on the subject "Landscape of battlefield/fort site; Research into 1804 Battle of Sitka. Unpublished manuscript on file, U.S.D.I., National Park Service, Sitka National Historical Park, Sitka, Alaska.
- Hope, Herbert
 1992 Conversation with Herb Hope, September 28, 1992, Alaska Region Office. Anchorage. On file, National Park Service, Sitka National Historical Park, Sitka, Alaska.
- 1993 Letter to Superintendent Michele Hellickson, Sitka National Historical Park, dated March 1, 1993. On file, National Park Service, Sitka National Historical Park, Sitka, Alaska.
- Hopkins, Sally
 1958 Audio tape recording collected by Peter Nielson, Sitka, 1958. Transcribed in Tlingit and translated into English by Nora Marks Dauenhauer, 1987. Unpublished manuscript on file at U.S.D.I., National Park Service, Sitka National Historical Park, Sitka, Alaska.

SITKA

Hunt, William J., Jr.

1986 *Fort Union Trading Post National Historic Site (32WI17) Material Culture Reports, Part V: Buttons as Closures, Buttons as Decoration. A Nineteenth Century Example From Fort Union*. U.S. Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Hunt, William J. Jr.

2005a Memorandum dated June 24, 2005, to the Manager, Midwest Archeological Center, through the Archeological Assistance Program Manager, Midwest Archeological Center, from the Archeologist, Midwest Archeological Center. Subject: Reconnaissance trip to Sitka National Historic Park (SITK). On file, Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, and Sitka National Historical Park, Sitka, Alaska.

2005b Memorandum dated August 26, 2005, to the Manager, Midwest Archeological Center (MWAC), through the Archeological Assistance Program Manager (MWAC), from the Archeologist (MWAC). Subject: Sitka National Historical Park (SITK) Parkwide Inventory: Fieldwork, Year 1 of 4. On file, Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, and Sitka National Historical Park, Sitka, Alaska.

2005c "Midwest Archeological Center" In *NAPA* [Nebraska Association of Professional Archeologists] *Newsletter* 20: 4-5.

2005d "Sitka National Historical Park, Year 1 of 2005-2008 Parkwide Inventory," in Midwest Archeological Center Field Season: Project Photos, on the U.S. Department of the Interior, National Park Service, Midwest Archeological Center website at <<http://www.cr.nps.gov/mwac/sitka/sitk/index.html>>.

2006 Memorandum dated May 19, 2006, to the Manager, Midwest Archeological Center (MWAC), through the Archeological Assistance Program Manager (MWAC), from the Archeologist (MWAC). Subject: Sitka National Historical Park (SITK) Parkwide Inventory: Fieldwork, Year 2 of 4. On file, Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, and Sitka National Historical Park, Sitka, Alaska.

2006b "Sitka National Historical Park (SITK) Parkwide Inventory: 2006 Fieldwork," *NAPA* [Nebraska Association of Professional Archeologists] *Newsletter* 21: 9-10.

2007a Sitka National Historical Park: Year 2 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

2007b Memorandum dated July 13, 2007, to the Manager, Midwest Archeological Center (MWAC), through the Archeological Assistance Program Manager (MWAC), from the Archeologist (MWAC). Subject: Sitka National Historical Park (SITK) Parkwide Inventory: Fieldwork, Year 3 of 4. On file, Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, and Sitka National Historical Park, Sitka, Alaska.

- 2007c SITK daily logbook of William J. Hunt, Jr. with entries from Wednesday, May 30 through Wednesday, June 27, 2007. Curated at Sitka National Historical Park, Sitka, Alaska.
- 2007d Sitka National Historical Park (SITK) Parkwide Inventory: 2006 Fieldwork. *NAPA Newsletter* 21:9-10.
- 2007e Sitka National Historical Park (SITK), Alaska, 2006 Parkwide Inventory. In "Current Research," *SHA* [Society for Historical Archaeology] *Newsletter*.
- 2007f "Sitka National Historical Park (SITK), Alaska, 2005 and 2006 Parkwide Inventories." *Alaska Anthropological Association Newsletter*.
- 2007g "Sitka National Historical Park, Year 2 of 4 Parkwide Inventory." In *Featured Projects* on the National Park Service, Midwest Archeological Center website. On the Internet at <<http://www.nps.gov/history/mwac/sitka/year2.htm>>.
- 2007h "Sitka National Historical Park, Year 3 of 4 Parkwide Inventory." In *Featured Projects* on the National Park Service, Midwest Archeological Center website. On the Internet at <<http://www.nps.gov/history/mwac/sitka/year3.htm>>.
- 2007i "Archeology of Sitka National Historical Park." Presentation made November 2007 to the Anthropology Club, University of Nebraska-Lincoln.
- 2007j "Conducting An Archeological Survey in Sitka National Historical Park." Presentation made in Anthropology 1050, "Introduction to Anthropology," University of Nebraska-Omaha.
- 2008a Sitka National Historical Park: Year 3 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.
- 2008b "'Singin' in the Rain": An Archeological Inventory of Sitka National Historical Park, Alaska." Paper presented at the 35th Annual Meeting of the Alaska Anthropological Society, held February 27-March 1, 2008, at Anchorage, Alaska.
- 2008c Memorandum dated July 14, 2008, to the Manager, Midwest Archeological Center (MWAC), through the Archeological Assistance Program Manager (MWAC), from the Archeologist (MWAC). Subject: Sitka National Historical Park (SITK) Parkwide Inventory: Final (4th) Year of Fieldwork. On file, Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, and Sitka National Historical Park, Sitka, Alaska.
- 2008d Update of "Sitka National Historical Park, Parkwide Inventory," in the Featured Projects section of the National Park Service, Midwest Archeological Center website. On the Internet at <<http://www.nps.gov/history/mwac/sitka/year3.htm>>.

Hunt, William J. Jr., Douglas D. Scott, and Steven L. De Vore

2006 Sitka National Historical Park: Year 1 of 2005-2008 Parkwide Inventory. U.S. National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Jacobs, Mark Jr.

2008 Early Encounters Between the Tlingits and the Russians, Part Three. In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aaní Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*, pp. 2897-289. University of Washington Press, Seattle.

Johnson, Andrew P.

2008a Part One: The Battle of 1802. Undated narrative In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aaní Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*. University of Washington Press, Seattle, p. 157-165.

2008b Part Two: The Russians Move into Sitka. Narrative recorded in 1979. In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aaní Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*, pp. 115-122. University of Washington Press, Seattle.

Jones, Olive and Catherine Sullivan with contributions by George L. Miller, E. Ann Smith, Jane E. Harris, and Kevin Lunn

1985 *The Parks Canada Glass Glossary for the Description of Containers, Tableware, Flat Glass, and Closures*. Studies in Archaeology, Architecture and History, National Historic Parks and Sites Branch, Parks Canada, Environment Canada, Quebec.

Khlebnikov, K.T.

2008 Initial Settlements in America. In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aaní Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*. University of Washington Press, Seattle, pp. 173-175.

Kriekhaus, Brad, Rick Foster, and Susan Trull

1993 Ecological Inventory: Sitka National Historical Site. Prepared for U.S.D.I. National Park Service, Alaska Regional Office under Interagency Agreement No. IA 97070-2-9017 by U.S.D.A. Forest Service, Tongass National Forest, Chatham Area, Sitka, Alaska.

Kvamme, Kenneth L.

2001 Current Practices in Archaeogeophysics: Magnetism, Resistivity, Conductivity, and Ground-Penetrating Radar. In *Earth Sciences and Archaeology*, edited by Paul Goldberg, Vance T. Holliday, and C. Reid Ferring, pp. 353-384. Kluwer Academic/Plenum Publishers, New York.

- Lehner, Lois
1988 *Lehner's Encyclopedia of U.S. Marks on Pottery, Porcelain & Clay*. Collector Books, Paducah, Kentucky.
- Lewis, Berkeley R.
1956 Small Arms and Ammunition in the U.S. Service. *Smithsonian Miscellaneous Collections*, vol. 129. Washington, D.C.
- Lindsey, Bill
2005 *Historic Glass Bottle Identification & Information Website* at <http://www.blm.gov/historic_bottles/index.htm>. Bureau of Land Management, Klamath Falls Resource Area, Klamath Falls, Oregon. Updated 10/22/05. Accessed 11/17/05.

2008 *Historic Glass Bottle Identification & Information Website*. On the Society for Historical Archaeology website at <<http://www.sha.org/bottle/index.htm>>.
- Lisianskii, Iurii
2008 Eyewitness Account of the Battle of 1804 and Peacemaking of 1805. Translated by Lydia T. Black. In Dauenhauer, Nora M., Richard Dauenhauer, and Lydia T. Black (editors), *Anóoshi Lingít Aani Ká, Russians in Tlingit America: The Battles of Sitka, 1802 and 1804*. University of Washington Press, Seattle, pp. 225-247. Originally published in 1812 as *Puteshestvie Vokrug Sveta v 1803, 4, 5, i 1806 Godakh na Korable Neve*, 2 vols. and atlas. Tipografia Drekhslera, St. Petersburg, Russia.
- Lisiansky, Urey
1968 *Voyage Round the World in the Years 1803, 1804, 1805, and 1806*. Reprint of the original 1814 edition published by Surrey, England. Da Capo Press, New York.
- Logan, Herschel C.
1959 *Cartridges*. Bonanza Books, New York.
- Loney, R.A., Brew, D.A., Muffler, L.J.P., and Pomeroy, J.S.
1975 *Reconnaissance geology of Chichagof, Baranof, and Kruzof Islands, Southeastern Alaska*. U.S. Geological Survey Professional Paper 792. USDI U.S. Geological Survey, Reston, Virginia.
- Majewski, Teresita and Michael O'Brien
1984 *An Analysis of Historical Ceramics from the Central Salt River Valley of Northeast Missouri*. Cannon Reservoir Human Ecology Project, vol. 2, edited by Michael O'Brien. Publications in Archaeology No. 3, American Archaeology Division, Department of Anthropology, University of Missouri, Columbia.
- Maschner, Herbert D.
1992 The Origins of Hunter and Gatherer Sedentism and Political Complexity: A Case Study from the Northern Northwest Coast. Ph.D. dissertation, University of California-Santa Barbara, Santa Barbara, California.

SITKA

Matson, R. G. and Gary Coupland

1995 *The Prehistory of the Northwest Coast*. Academic Press, New York.

McConnaughey, Bayard H., and Evelyn McConnaughey

1985 *The Audubon Society Nature Guides: Pacific Coast*. Alfred A. Knopf, New York.

McKee, W. Reid and M. E. Mason Jr.

1980 *Civil War Projectiles II Small Arms and Field Artillery*. Moss Publications, Orange, Virginia.

McManamon, Francis P.

1991 The Many Publics for Archaeology. *American Antiquity* 56(1):121-130.

McNab, W. Henry and Peter E. Avers

1994 "Section M245B--Northern Alexander Archipelago." In Chapter 27, *Ecological Subregions of the United States*. Prepared in cooperation with Regional Compilers and the ECOMAP Team of the Forest Service. On the Internet at <<http://www.fs.fed.us/land/pubs/ecoregions/>>. Last updated Oct. 30, 1996. Accessed September 16, 2008.

Midwest Archeological Center

2006 Midwest Archeological Center Site Condition Assessment Form and Criteria for Site Evaluations. On file, U.S. Department of the Interior, National Park Service, Midwest Archeological Center, Lincoln, Nebraska.

Milsom, John

2003 *Field Geophysics*. Third Edition. John Wiley & Sons, Chichester, United Kingdom.

Mobley, Charles M.

1999 Archaeological Excavation for the New Kiksadi Totem Pole, Sitka National Historical Park, Baranof Island, Alaska. Charles M. Mobley & Associates, Anchorage, Alaska.

Moss, Madonna L.

1998a Northern Northwest Coast Regional Overview. In North Pacific and Bering Sea Maritime Societies: the Archaeology of Prehistoric and Early Historic Coastal Peoples. *Arctic Anthropology* 35(1):88-111.

1998b Southeast Alaskan Sequence. In *Archaeology of Prehistoric North America: An Encyclopedia*, edited by Guy Gibbon, pp. 777-779. Garland, New York.

Moss, Madonna L. , Jon M. Erlandson, and Robert Stuckenrath

1989 The Antiquity of Tlingit Settlement on Admiralty Island, Southeast Alaska. *American Antiquity* 54(3):534-543.

Munsey, Cecil

1970 *The Illustrated Guide to Collecting Bottles*. Hawthorn Books, Elsevier-Dutton, New York.

National Park Service

2002 *NPS-28: Cultural Resource Management Guideline*. U.S. Department of the Interior, National Park Service, Washington, D.C. Published on the Internet at <http://www.cr.nps.gov/history/online_books/nps28/28chap1.htm> accessed October 17, 2006.

2004 *Prehistory of Southeast Alaska* at <<http://www.nps.gov/akso/akarc/seast.htm>>, last updated 22-Dec-2004. Accessed January 12, 2007.

2008a "When did the NPS Begin?" On the National Park Service website at <<http://www.nps.gov/legacy/legacy.htm>>. Last updated February 26, 2008. Accessed September 4, 2008

2008b "Listing a Property: Some Frequently Asked Questions." On the National Register of Historic Places website at <<http://www.cr.nps.gov/nr/listing.htm>>. Accessed December 22, 2008.

Native Village

2006 "Clan Helps Search For Site of Last Stand Against Russians." *Youth and Education News*, June 1, 2006, Issue 168, Vol. 1. On the Native Village website at <<http://www.nativevillage.org/Archives/2006/June%201%202006%20News%201%20168/June%201,%202006%201%20168%20Vi.htm>>. Accessed January 30, 2009.

Newton, Richard G. and Madonna L. Moss

1984 *The Subsistence Lifeway of the Tlingit People: Excerpts of Oral Interviews*. USDA Forest Service, Alaska Region Administrative Document No. 131.

Olson, Ronald L.

1967 *Social Structure and Social Life of the Tlingit in Alaska*. Anthropological Records, vol. 26. University of California, Berkeley [in Thornton and Hope 1998:21].

Patrick, Andrew

2002 *The Most Striking of Objects: The Totem Poles of Sitka National Historical Park*. U.S. Department of the Interior, National Park Service, Alaska Support Office, Anchorage, Alaska, and Sitka National Historical Park, Sitka, Alaska.

Peddie, Norman W.

1992 *The Magnetic Field in the United States, 1990, Total Intensity Chart*. U.S. Geological Survey Geophysical Investigations Map GP-1002-F. U.S. Geological Survey, Reston, Virginia.

SITKA

Peddie, Norman W., and Audronis K. Zundie

1988 *The Magnetic Field in the United States, 1985, Inclination Chart*. U.S. Geological Survey Geophysical Investigations Map GP-986-I. U.S. Geological Survey, Reston, Virginia

Pohl, John

2008 Modern Salmon And The Ice Age Salmon Life History Is Tested First by Mountain Building, Then Ice. In *Marine Life*, April 26, 2008, online at <http://marine-life.suite101.com/article.cfm/modern_salmon_and_the_ice_age>. Accessed February 18, 2009.

Pollnow, Anne E.

2006 Sitka National Historical Park Fence Compliance. Report on file, Sitka National Historical Park, Sitka, Alaska.

Polmanteer, Jessica

2006 Unearthing History. *Life Style Lincoln*, Fall, pp. 46-52.

Putnam, H. E.

1965 *Bottle Identification*. Published by the author.

Riehle, James R., Daniel H. Mann, Dorothy M. Peteet, Daniel R. Engstrom, David A. Brew, and Charles E. Meyer

1992 The Mount Edgum Tephra Deposits, a marker Horizon in Southeast Alaska near the Pleistocene-Holocene Boundary. *Quaternary Research* 37:183-202.

Rhodes, Diane

1983 Memorandum to Senior NPS Archeologist DSC dated July 27, 1983, re Monitoring of Backhoe Project, Sitka National Historical Park, July 5-7, 1983. On file, U.S. Department of the Interior, National Park Service, Sitka National Historical Park, Sitka, Alaska.

Reimer, P. J., M. G. L. Baillie, E. Bard, A. Bayliss, J. W. Beck, C. J. H. Bertrand, P. G.

Blackwell, C. E. Buck, G. S. Burr, K. B. Cutler, P. E. Damon, R. L. Edwards, R. G.

Fairbanks, M. Friedrich, T. P. Guilderson, A. G. Hogg, K. A. Hughen, B. Kromer, F. G.

McCormac, S. W. Manning, C. B. Ramsey, R. W. Reimer, S. Remmele, J. R. Southon, M.

Stuiver, S. Talamo, F. W. Taylor, J. van der Plicht, and C. E. Weyhenmeyer

2004 IntCal04 Terrestrial radiocarbon age calibration, 26 - 0 ka BP. *Radiocarbon* 46, 1029-1058.

Russell and Erwin Manufacturing Co.

1980 *Illustrated Catalogue of American Hardware of the Russell and Erwin Manufacturing Company: An Unabridged Reprint of the 1965 Edition*. Introduction by Lee H. Nelson. Reprinted. Association for Preservation Technology, Pub Press, Baltimore. Originally published 1865, Francis Hart & Company, Printers, New York.

- Scholl, David W. and Alan A. Cooper
 1977 Indicators of Plate Tectonics in Southern Alaska and Adjacent Deep-Sea Area, Late Paleozoic Through Cenozoic Time: Abstract, *AAPG Bulletin*, Volume 61.
- Schroeder, Robert F. and Matthew Kookesh
 1990 The Subsistence Harvest of Herring Eggs at Sitka Sound, 1989. Technical Report Number 173. Alaska Department of Fish and Game, Division of Subsistence, Juneau, Alaska. Available online at Alaska Department of Fish and Game's Subsistence Technical Papers web site at <<http://www.subsistence.adfg.state.ak.us/TechPap/tp173.pdf>>.
- Sears, Roebuck and Co.
 1969 *1902 Edition of the Sears, Roebuck Catalogue*. Introduction by Cleveland Amory. Reprinted. Bounty Books, New York. Originally published 1902, as Catalogue No. III of Sears, Roebuck and Co., Chicago.
- Sharma, Prem V.
 1997 *Environmental and Engineering Geophysics*. Cambridge University Press, Cambridge, United Kingdom.
- Shaw, Ian and Robert Jameson (editors)
 2002 *A Dictionary of Archaeology*. Blackwell Publishing, Oxford, England.
- Shelford, Victor E.
 1974 *The Ecology of North America*. University of Illinois Press, Urbana.
- Sheriff, Robert E.
 1973 *Encyclopedic Dictionary of Exploration Geophysics*. Society of Exploration Geophysicists, Tulsa, Oklahoma.
- Sitka National Historical Park
 2008 "Nature and Science." Sitka National Historical Park web site <<http://www.nps.gov/sitk/naturescience/index.htm>> Last updated: July 29, 2008. Accessed August 28, 2008.
- Sitka Tribe of Alaska
 2004 Comments from the Sitka Tribe of Alaska to the U.S. Commission on Ocean Policy, Washington, D.C., dated May 21, 2004. Accessed December 9, 2005, on the Internet at <http://www.oceancommission.gov/documents/gov_comments/Sitka_Tribe_Alaska1.pdf>.
- 2008 Sitka Tribe of Alaska website at <<http://www.sitkatribes.org/>>. Accessed November 17, 2008.
- Sitka Tribe of Alaska Kayaani Commission
 2006a *The Kayaani Commission Ethnobotany Field Guide to Selected Plants Found in Sitka, Alaska*. The Kayaani Commission, Sitka Tribe of Alaska, Sitka, Alaska.

SITKA

2006b *Kayaani Dis Wooxéeyi, the Kayaani Commission Calendar*. Sitka Tribe of Alaska, Sitka, Alaska.

Smith-Middleton, Holly and Arnold R. Alanen

1999 *Testaments to Place and Time: A Cultural Landscape Report for Sitka National Historical Park*. Prepared by the Department of Landscape Architecture, University of Wisconsin-Madison for the U.S.D.I., National Park Service, Alaska Systems Support Office, Anchorage.

Smithsonian National Museum of Natural History

2008 "Edgecumbe." In Department of Mineral Sciences, Global Volcanism Program website on the Internet at < <http://www.volcano.si.edu/world/volcano.cfm?vnum=1105-04>>. Accessed August 28, 2008.

Sprague, Roderick

1980-81 A Functional Classification for Artifacts from 19th and 20th Century Historical Sites. *North American Archaeologist* 2:251-261.

Stewart, Hilary

1973 *Indian Artifacts of the Northwest Coast Indians*. Hancock House Publishers, Blaine, Washington.

1977 *Indian Fishing: Early Methods on the Northwest Coast*. The University of Washington Press, Seattle.

1984 *Cedar: Tree of Life to the Northwest Coast Indians*. University of Washington Press, Seattle.

Stuiver, Minze and Paula. J. Reimer

1993 Extended ¹⁴C database and revised CALIB radiocarbon calibration program. *Radiocarbon* 35:215-230.

Stuiver, Minze, Paula. J. Reimer, and Ron Reimer

2006 *Calib Radiocarbon Calibration*. On the internet at <<http://calib.qub.ac.uk/calib/>>. Last updated 07/22/2006. Accessed December 10, 2007.

Sutton, Anne

2006a "Archaeologists hunt for battle site." *Archaeology News* website <<http://www.archaeologynews.org/link.asp?ID=84610&Title=Archaeologists%20hunt%20for%20battle%20site>> May 19, 2006. Accessed January 22, 2007.

2006b Dig Unearths Shot, Cannonballs at Sitka Glade. Associated Press.

In *The Seattle Times* on line at http://seattletimes.nwsources.com/html/localnews/2003010564_tlingitfort22.html. Accessed May 22, 2006.

2006c "Tlingit vs. Russians update: Dig Unearths Shot, Cannonballs at Sitka glade." *ArchaeoBlog* website at <http://archaeoblog.blogspot.com/2006_05_01_archive.html>. Published on the Internet May 31, 2006. Accessed January 22, 2007.

- 2006d "Dig unearths shot, cannonballs at Sitka glade". From David J Shirlaw.
Date: Mon, 22 May 2006 15:11:08 -0700. On *Listserve 14.5* website at <<http://post.queensu.ca/cgi-bin/listserv/wa?A1=indo605&L=marhst-l#78>>.
- 2006e "Tlingit Indians' Last Stand in Alaska," *Los Angeles Times*, May 28, 2006, print edition B-7.
- Swanson, Karen and Stanley D. Davis
1983 Archaeological Investigations at Lake Eva, Baranof Island, Alaska. U.S. Forest Service, Chatham Area, Tongass National Forest, Sitka, Alaska.
- Thornton, Thomas F. and Fred Hope
1998 Traditional Tlingit Use of Sitka National Historical Park. Final report prepared under NPS Contract #1443PX970095345 for Sitka National Historical Park, Sitka, AK.
- Thorsen, Sue and Dan Thorington
1992 Archaeological Site Report, Sitka National Historical Park. Ms. on file, U.S.D.I., National Park Service, Sitka National Historical Park, Sitka, Alaska.
- Toulouse, Julian H.
1971 *Bottle Makers and Their Marks*. Thomas Nelson, Camden, New Jersey.
- U.S. Geological Survey
2008 "Summary of Citation: Kelp Bay" on the National Geological Map Database, Geologic Names Lexicon, "GEOLEX" at <http://ngmdb.usgs.gov/Geolex/Refsmry/sumry_5759.html>. Last modified May 2, 2008. Accessed February 2, 2009. U.S. Department of the Interior, U.S. Geological Survey, Reston, Virginia.
- Utah State Historic Preservation Office
2001 *Intermountain Antiquities Computer System (IMACS) Guide*. Edited by the Utah State Historic Preservation Office. On line at <<http://www.anthro.utah.edu/imacs.html>>. Accessed November 14, 2006.
- Utermohle, Charles J.
1995 Spatial Analysis of the Fort Site Artifact Assemblage. Report prepared under Order No. 1443PX983594034 by Thule Research, Anchorage, Alaska, for Sitka National Historical Park, Sitka, Alaska. Report on file at Sitka National Historical Park.
- War Department
1940a *Engineer Field Data Department of the Army Field Manual FM 5-3*. United States Government Printing Office, Washington, D. C.
1940b *Coast Artillery Field Manual: Antiaircraft Artillery Organization and Tactics (FM 4-105)*. United States Government Printing Office, Washington, D. C.

SITKA

Weymouth, John W.

1986 Geophysical Methods of Archaeological Site Surveying. In *Advances in Archaeological Method and Theory*, Volume 9, edited by Michael B. Schiffer, pp. 311-395. Academic Press, Orlando, Florida.

1998 Appendix III: Review of Report: Geophysical Remote Sensing Surveys Within Sitka National Historical Park (Geoscan Research). In *An Overview and Assessment of Archeological Resources, Sitka National Historical Park, Alaska* by Robert C Betts. Prepared under contract #1443PX991097174 for the National Park Service, Sitka National Historical Park by Vanguard Research, Sandpoint, Idaho.

White, Henry P. and Burton D. Munhall

1977 *Cartridge and Headstamp Guide* (1st revision). Revised by R.T. Huntington and D.R. Dunn. H.P. White Laboratory, Street, Maryland.

Whitney, Stephen

1985 *The Audubon Society Nature Guides: Western Forests*. Alfred A. Knopf, New York.

Worl, Rosita

1990 History of Southeastern Alaska Since 1867. In *Northwest Coast, Handbook of North American Indians*, Vol. 7, pp. 149-158. Edited by Wayne Suttles. Smithsonian Institution, Washington D.C.

Yehle, Lynn A.

1974 Reconnaissance Engineering Geology of Sitka and Vicinity, Alaska, with Emphasis on Evaluation of Earthquake and Other Geologic Hazards. U.S. Geological Survey Open-File Report 74-53. Report available online on the State of Alaska, Department of Natural Resources, Division of Geological and Geophysical Surveys website at <<http://www.dggs.dnr.state.ak.us/webpubs/usgs/of/text/of74-0053.PDF>>.

Yohe, Robert M. II

2007 Protein Residue Analysis of an Anvil Stone from Sitka National Historical Park. Report prepared for USDI, National Park Service, Midwest Archeological Center, Lincoln, Nebraska, by the Laboratory of Archaeological Sciences, California State University, Bakersfield, California. Report on file, Sitka National Historical Park, Sitka, Alaska.

Zeitner, June C.

1964 "Jasper-Gem of Confusion." *Lapidary Journal* 18(9): 980-998.