Title: Archaeology at Fort Ross by Cabrillo College 1975

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A Brief History:

Fort Ross was established on the Sonoma County coast in 1812, representing the southernmost point of Russian expansion in North America. It continued to operate until 1841 as a supply center for Russian sea otter hunting outposts in Alaska. The colony's activities included agriculture, stockraising, shipbuilding, lumbering, barrel-making, wool production, tanning, pottery, brickmaking, flour milling, candle manufacturing and soapmaking. Finished products were used locally by the self-supporting colony of Russian and Aleut (Native Alaskan) hunters, exported to Alaska, or traded to Spanish and Mexican California. Following the decline of the sea otter trade, the fort served as a center for American ranching and lumbering. Primary access continued to be from the sea until the 1920's, as the area played a role in the active north coast shipping industry. Fort Ross was designated a Historical Landmark in 1906, and became a State Historic Park in 1962.

Archaeology:

Over the years the fort structures have been damaged by fire, earthquake and purposeful demolition. Restoration programs commenced in 1916, accompanied in 1952 by systematic archaeological investigations. Extensive research into old drawings, photographs, and written or verbal descriptions has brought a high degree of authenticity to the present restorations. In 1975, the Cabrillo College Summer Field School excavated inside the west stockade wall for the location of a two story warehouse dating from the very early Russian occupation that had remained in use for a variety of activities until the 1920's. Four two by two meter excavation units exposed an arrangement of rock-lined foundation trenches and the remains of large redwood sills (horizontal base supports) and upright posts, as well as a wide variety of artifacts associated with the structure's multiple uses. The 1976 season will test the hypothesis that the warehouse may actually have consisted of two abutting structures on dissimilar foundations; and will gather data that may assist in defining the storage use of the structures. Placement of excavation units and techniques employed will be oriented towards these research objectives. The data recovered by the students during these and ensuing seasons will aid the State Parks department in accurate reconstruction of the structure and its uses.

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The weather can be expected to be cold and foggy in the mornings and evenings, warming up considerably at mid-day. Dressing in discardable layers (to a point) is recommended. All students during the 1975 season contracted a mild undiagnosed dermatitis on their hands and fingers, although crews working in other portions of the fort were not affected—gloves would be advised if you have a tendency towards skin problems.

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- 2 writing pens (waterproof ink)
- Plastic centimeter/inch ruler

Total of all above equipment is less than $20.

Please feel free to consult with Rob Edwards or teaching assistant, Micki Farley, on any technical, personal, great or trivial matters related to the course (425-6294). And always remember the number one rule for archaeological field school survival:

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ABSTRACT

Fort Ross was established on the Sonoma County coast in 1812, and remained active until 1841 as a southern supply center for the Russian sea otter trade in Alaska. Following the decline of the sea otter trade, the fort served as a shipping center for American ranching and lumbering activities. Over the years the fort structures have been damaged by fire, earthquake and intentional demolition. Restoration programs commenced in 1916, accompanied after 1952 by systematic archaeological investigations. In 1975, Cabrillo College excavated inside the west stockade wall for the location of a two story warehouse dating from the very early Russian occupation that stood until the 1920's. Four two by two meter units exposed an arrangement of rocklined foundation trenches and the remains of large redwood foundation sills and upright posts, as well as a wide variety of artifacts associated with the structure's multiple uses. Plans for the 1976 season are to test the hypothesis that the warehouse may actually have consisted of two abutting structures on dissimilar foundations; and to gather data that will assist in defining the storage use of the structures.
BACKGROUND

Contact was made in March, 1975, with Francis Riddell, State Parks and Recreation Department Archaeologist, regarding the possibility of conducting a two week field school at Fort Ross to aid in recovery of data sought by the State Parks department prior to reconstruction of the fort's buildings. A follow-up visit to the offices in Sacramento was made, at which time the goals of the State Parks department and the capabilities of a field school were more closely assessed with Paul Nesbitt, State Parks Historian. At this time a review of data accumulated by previous excavations on file in the office of Fritz Riddell was made, and reports dealing with the classification of certain historical artifacts (Ross, 1972, Howard, 1973) were copied for field reference. A map showing the placement of units during previous excavations was consulted. A tentative excavation plan was developed.

A field visit to Ft. Ross State Historic Park and extensive interviews were held with John McKenzie, Park Historian and past Curator at Fort Ross, which proved invaluable in making final decisions on site selection. Mr. McKenzie's files, which included personal observations and notes as well as copies of all communications with the State office on excavation activities at Fort Ross, were opened to us. A number of these were copied for field reference (McKenzie 1957, 1958, 1959a, 1959b, 1974a, 1974b, 1975, anon. memo, n.d., anon. 1963 and accompanying maps). Mr. McKenzie also graciously loaned a book on the sea otter trade for copying (Ogden, 1941). On the basis of these interviews and the environmental attributes made clear by the visit, the tentative excavation plan was altered. The focus of our research became the warehouse complex in the north westerly portion of the fort quadrangle. Questions of structural
variations and function use were developed. Additional interviews to coordinate record keeping and field techniques with the archaeological crew directed by Karl Gurcke, State Parks Archaeologist I currently excavating at the fort; and with area supervisor Mr. M. Oller, Ranger Rene Avant and others in charge of facilities completed this portion of the preparations. Arrangements were made to use the crew camp for a camp base and to store an equipment trailer on the Call ranch adjacent to the fort.

CLASS DESCRIPTION
The class was open to all residents within the Cabrillo College district, with permission of the instructor but no previous archaeological experience required. The members of the class were personally interviewed by the instructor to familiarize them with the scope of work and intent of the field class prior to permission being granted. The assembled class included students of varying skills such as previous excavation experience, photography or sketching, and included an architect. The staff consisted of the director, one teaching assistant, one part time teaching assistant, and a full time cook. In addition to the assigned text (Deetz, 1967, Edwards, 1969, Ft. Ross Citizens Advisory Comm., 1974), a number of study materials were assembled for a field library which included basic readings in archaeological techniques, artifact identification, and Fort Ross historical background material. The standard field equipment (screens, buckets, transit, hand tools, etc.) were available.

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During the first two days the students familiarized themselves with the site and excavation techniques. McKenzie and Gurcke lectured on the history of the area and the types of artifacts and associations found in previous and current excavations.

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Teaching assistant Gary Breschini laid out units, with the transit datum 65m north of the Fort Ross benchmark on the N-S 0 datum line, 26 1/2° off true north. This datum was used to conform with State grid established to align future units as closely as possible with the Fort Ross stockade wall. A line was shot from this point 90° west of datum, and the NW unit datum established at 65N, 45W. Unit layouts and elevations within the established 5 x 6 meter excavation area are as follows:

Unit 1 (NW unit) 69-71N, 43-45W, 
NE datum .560m above transit datum OW-65N

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NW datum .560m above transit datum OW-65N

Unit 3 (SW unit) 65-67N, 43-45W, 
NW datum .225m above transit datum OW-65N

Unit 4 (SE unit) 65-67N, 40-42W, 
NW datum .284m above transit datum OW-65N

Unit datum is the highest corner in each unit. The datum plane for vertical measurements was established at 10cm above unit datum ground level. Units were excavated in 10 cm contour levels, with a surface plan including pertinent elevations drawn of each unit and a floor plan of each level recorded. Unit level records were completed for each unit. Artifacts were recorded on a verticle and horizontal plane on unit level records, floor plans and feature profiles. Individual field notes were kept by the students and TA's of their daily activities; these and all records were reviewed daily. Carbon copies of all field records were maintained. These records plus xerox copies of all student field notes have been deposited with Bryn Thomas, Parks and Recreation Department. Originals are at Cabrillo for use in preliminary reports.

Frequent comparisons with features and artifacts in the simultaneous State crew dig (inside east stockade wall, "barn" area) were made. A lab was set up in camp for washing, sorting, and cataloging level contents according to
the procedure established by Karl Gurcke. Visiting lecturers were scheduled for several evening hours, and two examinations were given over the course of the field school on selected readings, the texts, field and lab work.

DESCRIPTION OF FINDS

The first 10 cm level produced notable foundation features in each unit. Parallel rows of rock and timber running north/south were exposed along the east wall of Unit 4 (65-67N, 40-42W), while Unit 1 (69-71N, 43-45W) exposed post fragments, Unit 2 (69-71N, 40-42W) a deposit of bricks, and Unit 3 (65-67N, 43-45W) an extensive layer of sandstone rubble including a large dressed sandstone block. Further excavations to 20 cm showed correlations between structural remains such as sill remnants, foundation stones (natural and dressed), and postholes in each of the units, confirming earlier suggestions that the northern end of the east wall foundation sill, two east-west running lateral sills and two center posts had been located. One of these center posts (Unit 3) was much smaller than the posts in Unit 1 and 3. Linear measurements taken at this point (20 cm level from surface) were as follows:

From the intersection of an E-W running rocklined lateral sill trench and the N-S rocklined sill trench in Unit 4 (65-71N, 40-42W) north along a straight line postulated to be the east warehouse wall, to the center of an unexposed posthole depression in Unit 2 (69-71N, 40-42W): 12 feet. From the posthole depression in Unit 2 west along a straight line to a post in Unit 1 (69-71N, 43-35W): 13 feet 5 in.

From an E-W running lateral sill timber in Unit 1 (which extends through Unit 2) south to a parallel timber in Unit 3 (65-67N, 43-45W): 11 feet 5 in. Distance between two parallel N-S timbers in Unit 3, the westermost of which is imbedded in a gravel and mortar concretion and lines up with the exposed post in Unit 1: 4 ft 7 in. From the eastermost of these timbers east to a parallel timber in Unit 4: 5 ft. From this point east to the parallel sill postulated to be the east warehouse wall, also in Unit 4: 3 ft. Total distance between westernmost N-S timber in Unit 3 and postulated east warehouse wall: 13 ft. 10 in. In Unit 2, from an extension of the east wall sill to a parallel timber to its west: 4 ft. 4 in. All timbers are in fragments; the constant grain direction and direct line configuration assumes they were at one time solid lengths of redwood.
Portions of Units 1, 2, and 3 were selected for excavation below 20 cm (surface measurement—as are all vertical measurements to follow) in order to expose posthole features or establish the sterile level. The posthole in Unit 2 was excavated in cross section to a depth of 85 cm. The posthole was 61 cm in diameter, abutting the north side of an E-W running lateral sill trench that continued west into Unit 1, and was directly lined up with the exposed post in Unit 1, 13 ft. 5 in. to the west. The disintegrated redwood post remaining within the hole was 20-35 cm in diameter, with a knot protruding nearly to the posthole sidewall at 63 cm in depth, and the remains of an outside section of the post (at first thought to be a second post) appearing at 67 cm against the posthole south sidewall. A very dark grey organic material appeared as fill from 80-85 cm, a loose sand fill was used from 26-80 cm, and broken brick and sandstone rubble was used as fill on the north side of the post above 26 cm. Between 20 and 40 cm depth the fill was mixed with glass, ceramics, wood, mortar, sandstone, chert, metal fragments and a nail; from 40-85 cm only wood chips, glass, melted glass and sandstone were found.

A selected 50 x 100 cm area in Unit 1 was excavated to 35 cm in order to expose the contours of the posthole in that unit as it lined up with the previously described posthole in Unit 2. The section was heavily disturbed by gophers, rendering any clear interpretation impossible. Its association with an adjacent sill was unclear, but appeared to be a single half-round or nearly square cut redwood log possibly 56 cm in diameter, placed flat side against a redwood plank laid on the north side of the E-W running sill. Post area screenings produced redwood, charred redwood and heat altered sandstone, franciscan chert, glass and plastic. Excavations beneath the E-W running sill produced a Russian iron nail, a copper fragment, an obsidian flake and fragments of redwood bark; the sill later appeared to be a half-round redwood timber laid in the ground bark side down, hand adzed on its upper surface.
A posthole was discovered in Unit 3 on the last day of excavations, extending to a depth of 76.5 cm below the surface, 32 cm in diameter. The remains of the redwood post were set in dirt fill from 67-76.5 cm, with dirt and sand mixture from 67 cm to the surface. The posthole was located 34 cm west of the remains of a N-S wooden plank or timber in that unit, previously described as imbedded in a concrete-like substance, and adjacent to the north of an E-W timber protruding into the unit from the west wall, in alignment with the E-W rocklined trench in unit 4 to the east. A field map drawn by student Richard Clark showing correlations of postholes, sills and foundation trenches has been previously submitted to the State Parks Department; xerox copies of each unit are attached. A finished copy is in preparation.

ARTIFACT CATALOG

All artifacts recovered during the field school have been washed, sorted, and cataloged according to the system set up by State Parks Archaeologist Karl Gurcke. No analysis has been made of these finds other than in very general terms. Curved glass fragments, nail fragments, modified lithic material, and wood fragments were most abundant of all artifact categories.

EPILOGUE

Subsequent meetings with Bryn Thomas, director of the State Parks Department Fort Ross Archaeological Project have reviewed the data from the 1975 season and helped develop research objectives for future excavations. The 1976 season will test the hypothesis that the warehouse may have actually consisted of two abutting structures on dissimilar foundations; and will gather data that may assist in defining the storage use of the structures. Placement of excavation
units and techniques employed will be oriented towards these research objectives. The data recovered by the students during these and ensuing seasons will aid the State Parks department in accurate reconstruction of the building and its uses. Full reports on both the 1975 and 1976 field schools will be completed following the 1976 season.

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UNIT LAYOUT LOCATION.

(APPROXIMATE -- REFER TO STATE PARKS GRID FOR MORE PRECISE SCALE)

CABRILLO COLLEGE "WAREHOUSE" EXCAVATIONS -- JUNE 1975

BASE MAP FROM FORT ROSS STATE HISTORIC PARK
RESOURCE MANAGEMENT PLAN
AND GENERAL DEVELOPMENT PLAN - FEBRUARY 1976
June 2, 1976

Mr. Fritz Riddell,
Senior Archaeologist
Mr. M. P. Oller,
Area Manager
Department of Parks and Recreation

Gentlemen:

This letter is to acknowledge verbal commitments about the Cabrillo College Field School which I have made with various State personnel this past month, not covered in Mr. Riddell's letter of May 18, 1976.

We will be able to reduce our student number to approximately 20 individuals with support staff of three or four. This should relieve some pressure on the water supply. Two chemical toilets have been arranged for through Empire Sanitation of Santa Rosa. They should be delivered approximately June 8th and picked up after the 28th of June.

In addition to the hot water heater, I will be bringing up a propane stove for use by the camp cook. Consulting with McPhails, I was told to expect that this might use between 50 and 100 gallons. I have arranged for a delivery of 100 gallons to be delivered prior to June 11th. The stove will be removed when we leave.

I was told by Mr. Oller and Mr. Luckey that garbage cans would be provided which could be dumped at Fort Ross. Also four picnic tables would be provided for food and class use. Also electricity would be turned on and because of minimum expected use no charge would be made. I would also like to reserve about 20 Fort Ross books for sale to the class.

I would assume the same arrangement for daily equipment storage as last year can be worked out. We moved equipment into the adjacent block house just prior to closing and removed it early in the morning. We will not work on Sunday and would therefore remove the equipment completely Saturday evening. I would like to arrange to be in the Fort by 7:30 to 8:00 each morning, as part of the success of the course is long hours and early morning starts.

I appreciate all the assistance I have received this far and look forward to a very interesting and productive field experience.
Enclosed also is a copy of an interim report on last year's efforts, a student handout, and a class flyer for your files.

Sincerely,

Rob Edwards
Professor of Anthropology

RE/ms

cc: Thomas
    Hood
    McKenzie
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Unit 3 (SW unit) 65-67N, 43-45W, NW datum .225m above transit datum OW-65N

Unit 4 (SE unit) 65-67N, 40-42W, NW datum .284m above transit datum OW-65N

Unit datum is the highest corner in each unit. The datum plane for vertical measurements was established at 10cm above unit datum ground level. Units were excavated in 10 cm contour levels, with a surface plan including pertinent elevations drawn of each unit and a floor plan of each level recorded. Unit level records were completed for each unit. Artifacts were recorded on a vertical and horizontal plane on unit level records, floor plans and feature profiles. Individual field notes were kept by the students and TA's of their daily activities; these and all records were reviewed daily. Carbon copies of all field records were maintained. These records plus xerox copies of all student field notes have been deposited with Bryn Thomas, Parks and Recreation Department. Originals are at Cabrillo for use in preliminary reports.

Frequent comparisons with features and artifacts in the simultaneous State crew dig (inside east stockade wall, "barn" area) were made. A lab was set up in camp for washing, sorting, and cataloging level contents according to
the procedure established by Karl Gurcke. Visiting lecturers were scheduled for several evening hours, and two examinations were given over the course of the field school on selected readings, the texts, field and lab work.

DESCRIPTION OF FINDS

The first 10 cm level produced notable foundation features in each unit. Parallel rows of rock and timber running north/south were exposed along the east wall of Unit 4 (65-67N, 40-42W), while Unit 1 (69-71N, 43-45W) exposed post fragments, Unit 2 (69-71N, 40-42W) a deposit of bricks, and Unit 3 (65-67N, 43-45W) an extensive layer of sandstone rubble including a large dressed sandstone block. Further excavations to 20 cm showed correlations between structural remains such as sill remnants, foundation stones (natural and dressed), and postholes in each of the units, confirming earlier suggestions that the northern end of the east wall foundation sill, two east-west running lateral sills and two center posts had been located. One of these center posts (Unit 3) was much smaller than the posts in Unit 1 and 3. Linear measurements taken at this point (20 cm level from surface) were as follows:

From the intersection of an E-W running rocklined lateral sill trench and the N-S rocklined sill trench in Unit 4 (65-71N, 40-42W) north along a straight line postulated to be the east warehouse wall, to the center of an unexposed posthole depression in Unit 2 (69-71N, 40-42W): 12 feet. From the posthole depression in Unit 2 west along a straight line to a post in Unit 1 (69-71N, 43-35W): 13 feet 5 in. From an E-W running lateral sill timber in Unit 1 (which extends through Unit 2) south to a parallel timber in Unit 3 (65-67N, 43-45W): 11 feet 5 in. Distance between two parallel N-S timbers in Unit 3, the westermost of which is imbedded in a gravel and mortar concretion and lines up with the exposed post in Unit 1: 4 ft 7 in. From the easternmost of these timbers east to a parallel timber in Unit 4: 5 ft. From this point east to the parallel sill postulated to be the east warehouse wall, also in Unit 4: 3 ft. Total distance between westernmost N-S timber in Unit 3 and postulated east warehouse wall: 13 ft. 10 in. In Unit 2, from an extension of the east wall sill to a parallel timber to its west: 4 ft. 4 in. All timbers are in fragments; the constant grain direction and direct line configuration assumes they were at one time solid lengths of redwood.
Portions of Units 1, 2, and 3 were selected for excavation below 20 cm (surface measurement—as are all vertical measurements to follow) in order to expose posthole features or establish the sterile level. The posthole in Unit 2 was excavated in cross section to a depth of 85 cm. The posthole was 61 cm in diameter, abutting the north side of an E-W running lateral sill trench that continued west into Unit 1, and was directly lined up with the exposed post in Unit 1, 13 ft. 5 in. to the west. The disintegrated redwood post remaining within the hole was 20-35 cm in diameter, with a knot protruding nearly to the posthole sidewall at 63 cm in depth, and the remains of an outside section of the post (at first thought to be a second post) appearing at 67 cm against the posthole south sidewall. A very dark grey organic material appeared as fill from 80-85 cm, a loose sand fill was used from 26-80 cm, and broken brick and sandstone rubble was used as fill on the north side of the post above 26 cm. Between 20 and 40 cm depth the fill was mixed with glass, ceramics, wood, mortar, sandstone, chert, metal fragments and a nail; from 40-85 cm only wood chips, glass, melted glass and sandstone were found.

A selected 50 x 100 cm area in Unit 1 was excavated to 35 cm in order to expose the contours of the posthole in that unit as it lined up with the previously described posthole in Unit 2. The section was heavily disturbed by gophers, rendering any clear interpretation impossible. Its association with an adjacent sill was unclear, but appeared to be a single half-round or nearly square cut redwood log possibly 56 cm in diameter, placed flat side against a redwood plank laid on the north side of the E-W running sill. Post area screenings produced redwood, charred redwood and heat altered sandstone, franciscan chert, glass and plastic. Excavations beneath the E-W running sill produced a Russian iron nail, a copper fragment, an obsidian flake and fragments of redwood bark; the sill later appeared to be a half-round redwood timber laid in the ground bark side down, hand adzed on its upper surface.
A posthole was discovered in Unit 3 on the last day of excavations, extending to a depth of 76.5 cm below the surface, 32 cm in diameter. The remains of the redwood post were set in dirt fill from 67-76.5 cm, with dirt and sand mixture from 67 cm to the surface. The posthole was located 34 cm west of the remains of a N-S wooden plank or timber in that unit, previously described as imbedded in a concrete-like substance, and adjacent to the north of an E-W timber protruding into the unit from the west wall, in alignment with the E-W rocklined trench in unit 4 to the east. A field map drawn by student Richard Clark showing correlations of postholes, sills and foundation trenches has been previously submitted to the State Parks Department; xerox copies of each unit are attached. A finished copy is in preparation.

ARTIFACT CATALOG

All artifacts recovered during the field school have been washed, sorted, and cataloged according to the system set up by State Parks Archaeologist Karl Gurcke. No analysis has been made of these finds other than in very general terms. Curved glass fragments, nail fragments, modified lithic material, and wood fragments were most abundant of all artifact categories.

EPILOGUE

Subsequent meetings with Bryn Thomas, director of the State Parks Department Fort Ross Archaeological Project have reviewed the data from the 1975 season and helped develop research objectives for future excavations. The 1976 season will test the hypothesis that the warehouse may have actually consisted of two abutting structures on dissimilar foundations; and will gather data that may assist in defining the storage use of the structures. Placement of excavation
units and techniques employed will be oriented towards these research objectives. The data recovered by the students during these and ensuing seasons will aid the State Parks department in accurate reconstruction of the building and its uses. Full reports on both the 1975 and 1976 field schools will be completed following the 1976 season.

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UNIT LAYOUT LOCATION

(APPROXIMATE — REFER TO STATE PARKS GRID FOR MORE PRECISE SCALE)

CABRILLO COLLEGE "WAREHOUSE" EXCAVATIONS — JUNE 1975

*Base Map from Fort Ross State Historic Park Resource Management Plan and General Development Plan. February 1976*