SOCIETY for HISTORICAL ARCHAEOLOGY

The SHA Newsletter

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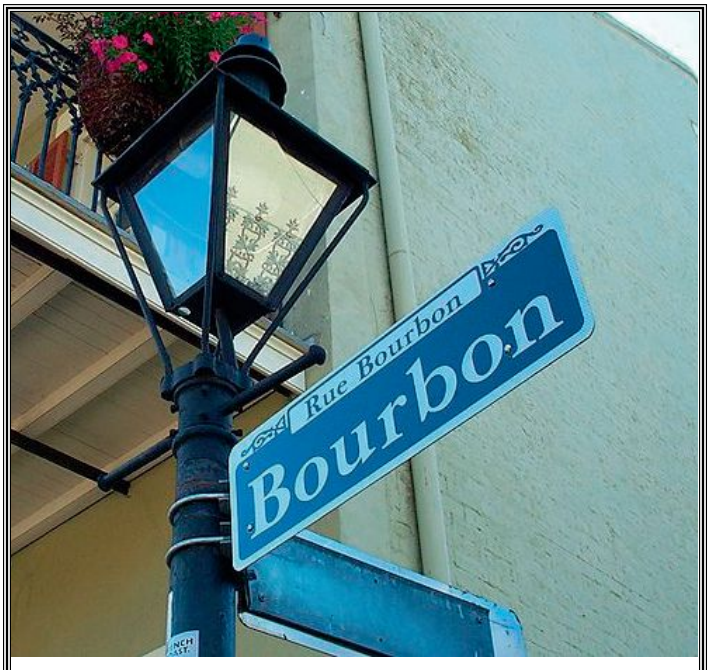
This Issue



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Inuit winter housing in Labrador - pp. 9-10.

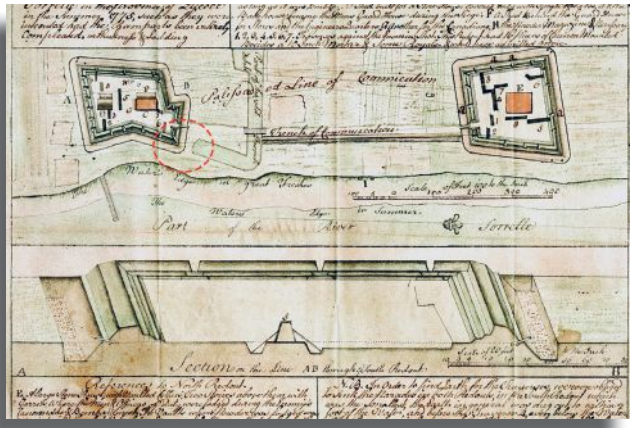

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FIGURE 3. General view of fully excavated Timber Dam, north bank of brook looking southwest.

The dam's design implies that the contractor or millwright responsible for its construction had some knowledge of dam construction techniques, but the lack of a downstream apron for the spillway and use of raised cap logs indicate that the builder probably did not have a high level of experience. These deviations from established norms may have created ongoing maintenance issues, and the apparent subsidence or collapse of the timber dam—initially attributed to the overburden of sediment—may be due in part to scouring caused by a lack of a spillway apron.

The general design and configuration of the structure indicates that it was a run-of-the-river (weir) type structure typically used for small-scale milling and manufacturing in New England between the 17th and early 19th centuries. The dam's design and workmanship indicate that the structure was likely built between 1740 and 1820. Two elements were particularly noteworthy in this respect: the limited use of sawn lumber and the lack of metal fasteners. Sawmills were not established in Pelham or adjacent Amherst until 1740–1745, providing a strong beginning date for the possible period of construction of the dam.

Analysis of archaeological data recovered from the Timber Dam revealed that it almost certainly was associated with the Crawford or Snow mills and was built in the 18th century during Pelham's early industrial and economic development. The dam is an outstanding and well-preserved example of a timber crib dam—possibly the oldest-recorded intact timber dam in Massachusetts. Future archaeological investigation of the dam site, combined with additional archival research and wood species identification and dendrochronology, could more definitely pinpoint the Timber Dam's historical associations and construction date.

USA - Pacific West

California

Sonoma Coast Doghole Ports Project (*submitted by Denise Jaffke, Deborah Marx, and Matthew Lawrence*): Archaeologists and historians from the National Oceanic and Atmospheric Administration's (NOAA) Office of National Marine Sanctuaries (ONMS), California State Parks (CSP)—Maritime Heritage Program, Sonoma State University, and National Park Service (NPS)—San Francisco Maritime National Historical Park spent eight days in August 2016 conducting terrestrial and underwater surveys along California's Sonoma Coast to identify and record sites and features associated with the logging industry during the mid-19th to early 20th century. This work focused on documenting small coastal ports and shipwrecks to illuminate the area's maritime cultural landscape. Rapid development of California's towns and cities after the Gold Rush, coupled with the industrial and urban development occurring around the Pacific Rim, spurred entrepreneurs to exploit the Redwood Coast to meet the massive demand for forest products. The rugged topography and lack of roads and railroads meant that the most economical way to transport the resources to market was by sea. This resulted in the use of "doghole" ports, so named because mariners joked they were barely large enough for a dog to turn around. The purpose of the project was to (1) document what remains from this industry; (2) spur local, state, and national interest in maritime heritage along the Northern California coast; and (3) draft the first maritime cultural landscape National Register of Historic Places nomination that would collectively include terrestrial and submerged resources.

The Pacific coastline between Bodega Bay and Humboldt Bay presented special problems for coastal shipping. This area has nothing that resembles a natural harbor, with an almost unbroken line of rocky bluffs plunging into water studded with numerous pinnacles and reefs (Figure 1). Yet there was profit in the lumber that existed here, with prices exploding from $60/1000 board feet in 1848 to $750/1000 board feet by mid-1850 (Cox 1974). Spurred on by the insatiable demand for wood products, mills and associated infrastructure developed along the northern coast to extract, process, and ship boards, railroad ties, cord wood, and tan bark to San Francisco, but also to the U.S. Eastern Seaboard, Australia, and Asia.

Regional lumber mills developed interesting and complicated apparatuses to move their products onto vessels. The trough chute, also known as a slide or apron chute, was composed of an "A" frame supporting a wooden trough tied to the shore with wire cables. A system of pulleys and wires allowed the chute to be raised and lowered to the schooner or steamer waiting below. The chute had a movable plank, called a "clapper," that facilitated hand loading of cargo by the deckhand. The length of the chute was dependent upon how far the mooring field was located offshore. During the last decades of the 19th century, improved wire rope technology allowed some doghole ports to transition to "wire chutes." In this configuration a wire cable was strung from a large drum onshore to an anchor point beyond where the vessel was moored. Cargo was then bundled together

FIGURE 1. Overview of Russian Gulch doghole port. (Photo courtesy of John Foster.)

and strapped to a traveler, much like a zip line. The weight of the load transported the timber products down the wire toward the waiting ship with a braking system controlling the speed of descent. A system of wires and pulleys returned the traveler to the bluff for the next load and to move cargo and people from ship to shore.

The Fisk Mill operation provides an excellent example of a small-scale milling operation that processed and exported lumber products for 14 years but left an exceptionally small footprint of its existence on the landscape. J. C. Fisk built a mill and developed a port 2½ miles north of Salt Point in 1860. The steam-powered mill had the capacity of processing 20,000 board feet per day. A tramway then connected the mill to a warehouse and trough chute at water's edge. As indicated on a detailed map created by the U.S. Coast and Geodetic Survey in the 1870s, part of the chute's trestle was built on an offshore rock with the associated mooring field beyond that structure in deeper water. The mill remained as the only sawmill in the Salt Point Township until early 1872. Two years later the mill was dismantled and shipped to Mendocino County to begin operations further north (Sonoma County 1880). In the 14 years of operation, an estimated 42 million feet of lumber was cut and exported from the mill. The only evidence of the doghole port at Fisk Mill Cove today is the iron hardware drilled into the sandstone cliff, a small scatter of deteriorated milled lumber, and cut notches, or "rebates," where legs of the chute's A-frame were set.

The historic remains of Fort Ross Cove's transshipment infrastructure offer a notable comparative case. Since it developed as a relatively early lumber port and operated until the 1920s, the research team observed technological and logistical changes of the doghole port's configuration through time. The wharf and loading chutes were built along the northern rim of Fort Ross Cove to guard against prevailing winds and take advantage of deeper water. Originally designed as a trough chute in 1867, the lumber-loading facilities were relocated closer to the open sea and reconfigured as a wire chute in 1910 (Davidson 1889). The chute was suspended between massive support legs, which were mortised into the rock at the cliff's base. The research team documented numerous extant elements associated with the wharf and the two chutes, including mortared rebates that secured A-frame legs, bolts and pins driven into surrounding rocks,

FIGURE 2. Eyebolt drilled into sandstone at Del Mar Landing. (Photo courtesy of Denise Jaffke, CSP MHP.)

FIGURE 3. Diver, Deborah Marx, inspecting the driveshaft of the Pomona. *(Photo courtesy of Matthew Lawrence, NOAA ONMS.)*

stabilizing cables that held the chute in place, and mooring points for vessels docking under the chutes. Hazards abound along this section of coastline and include undertows, shallow reefs, thick kelp, swells, and hidden rocks, yet mariners would pull into these ports, moor, and begin the process of loading cargo onto their ships. The transport vessels needed to be stabilized for loading/unloading. Buoys were sited at various spots in the cove, usually consisting of large logs with chain and anchor. Members of the crew would attach the ship's line to the buoy. Iron eye bolts set in rocks above the waterline were also used for anchoring lines onshore or in the cove. The crew would often install additional mooring lines to anchor the vessel during storms but this region is known for unpredictable weather. The *Archie and Fontie*, a schooner moored at the end of the Fisk Mill's lumber chute, was driven ashore and wrecked when a storm broke without warning.

The combined efforts of archaeologists working in both underwater and terrestrial environs located lumber-industry infrastructure at 10 of the 11 doghole ports visited. Archaeological sites were recorded at Duncan's Landing, Russian Gulch Landing, Fort Ross Cove, Gerstle Cove, Fisk Mill Cove, Timber Cove, Stillwater Cove, Stewart's Point, Bihler's Landing, and Del Mar Landing (Figure 2). Gerstle Cove and Fisk Mill Cove lie within Salt Point State Park, the Fort Ross lumber-loading features are within Fort Ross State Historic Park, and Duncan's Landing and Russian Gulch are located in Sonoma Coast State Park. Due to the difficulty in accessing Rule's Landing in Sonoma Coast State Park, the project personnel did not complete a survey of this doghole port. The underwater component of the doghole ports is within NOAA's Greater Farallones National Marine Sanctuary (GFNMS) and is jointly managed by the California State Lands Commission.

The underwater survey team based its operations off the ONMS West Coast Regional research vessel *Fulmar*. Archaeologists and divers investigated four doghole ports underwater (Fort Ross Cove, Gerstle Cove, Fisk Mill Cove, and Duncan's Landing) and located submerged infrastructure at Fort Ross Cove and Gerstle Cove. In addition to investigating the lumber-industry infrastructure, archaeologists also sought out several shipwrecks in the area, tentatively locating the remains of the steam schooner *Acme* onshore in Kohlmer Gulch, part of Fort Ross State Historic Park. Divers visited the National Register-listed steamship *Pomona* shipwreck in Fort Ross Cove, documenting its condition (Figure 3). Exploratory dives at various locations on the Sonoma Coast focused on the schooner *J. Eppinger*, bark *Windermere*, and wrecking steamer *Whitelaw*. While the remains of those three shipwrecks were not found, the team confirmed the location, from reports by recreational divers, of the ship *Joseph S. Spinney* near Russian Gulch in GFNMS.

Doghole ports were once the center of maritime activity along the Northern California coast and the evidence of that confluence of land and sea networks can be seen in the archaeological remains of lumber chutes and lost vessels. The story of the human interaction with the environment during the heyday of the lumber industry in Sonoma County, California can be viewed through the archaeological resources present today. While only a few scant archaeological indicators remain, these terrestrial and submerged elements act as touchstones of a once-vital maritime enterprise along the Sonoma Coast.

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