Chumash Canoes of Mission Santa Bárbara: the Revolt of 1824

DEE TRAVIS HUDSON

ISTORICAL records of Mexican California are somewhat detailed in their accounts of the Chumash Revolt of 1824. This armed confrontation between two different cultures was captured in letters and reports penned by military and missionary men. From them historians are able to reconstruct the complex chain of events associated with the uprising at Missions Santa Inés, La Purísima, and Santa Bárbara, and the subsequent retreat and pursuit inland of these people by Mexican military forces (Bancroft 1885; Englehardt 1923, 1932a, 1932b; Geiger 1970; Stickel and Cooper 1969). These accounts are the Mexican version. Except for Blackburn's (1975a) recent publication pertaining to one Chumash account of this conflict, little is known about Chumash participants in the revolt or their side of the story.

In still another way, the Mexican reports are biased, for all have concentrated on the events taking place on land. Few people realize that two Chumash plank canoes also participated in the Revolt of 1824. These canoes. though not involved in naval battles at sea, were manned by neophytes fleeing from Mission Santa Bárbara. Their destination was Santa Cruz Island, some 30 miles across the channel.

The purpose of this paper is to fill in some of the missing information about these two Chumash canoes from Mission Santa Bárbara and what we know at present about the men who built and used them. My principal source is the 3,200 pages of notes on Chumash canoes collected for the Smithsonian Institution by anthropologist John Peabody Harrington, who recorded considerable data on Chumash culture from about 1912 until his death in 1961. His principal informant on canoes was Fernando Librado, a Santa Cruz Island Chumash born in 1804 and raised at Mission San Buenaventura. After working as a vaguero and handyman at various places in Santa Barbara County in later years, Fernando Librado died in Santa Barbara in 1915 (Blackburn 1975b: 18). In his last years he imparted to Harrington considerable information on Chumash plank canoes that he had seen in his youth and many stories and events pertaining to the men who built and used these boats. The canoes of Mission Santa Bárbara were built by one of his relatives, and Fernando Librado had seen them himself.

We are currently preparing all of the Harrington Chumash canoe data for publication as a book (Hudson, Rempe, and Timbrook, n.d.), which will cite the appropriate sources that follow in this paper; I fail to do so here, however, since the references are too numerous and complex to include in this brief and general paper.

In addition to Harrington's voluminous notes on Chumash canoes, I have also relied upon materials in the Santa Bárbara Mission Archive Library and research conducted by Barbara Collins, a student at the University of California, Santa Barbara, and a volunteer at the Santa Barbara Museum of Natural History. I wish at this time to thank her, as well as Fr. Maynard Geiger, O.F.M., for making this material available. I also wish to thank Janice Timbrook, Assistant Curator at the museum, for proofreading and comments on this paper.

To provide a better understanding of the Chumash plank canoe and the social and political importance of the men connected with it, I will start with a brief description of its construction, followed by its use in both aboriginal and Mission times. This will be followed with a description of Mission Santa Bárbara's two canoes and information about the men who built and used these boats. The paper will conclude with a reconstruction of the events associated with these canoes in the Chumash Revolt of 1824.

THE CHUMASH PLANK CANOE

The Chumash plank canoe of the Santa Barbara Channel was frameless, lacking an internal structure of ribs, and was made from planks split out of driftwood logs. The preferred building material was redwood, for it was relatively light in weight, durable, strong, and easy to work. But redwood was rare among the wood which drifted into the channel and washed ashore. More common were various pines and fir, and they were likewise used. Driftwood itself was the important consideration; stranded on beaches above high tide for years, it would be naturally seasoned and highly desirable for boat construction.

After the logs were split into planks, using

whale bone wedges, each plank received careful work with bone, shell, and stone tools to shape, size, and smooth it, and to remove undesirable features, such as cracks or knots. Only the best wood could be used, and from many logs only a few good boards would be produced. These were, in terms of Chumash economics, expensive lumber. Once completed, all the boards were standardized to uniform thickness and smoothed with sharkskin sandpaper.

Supervising this and all boatbuilding tasks was the 'altomolich or "maker of canoes." As the master boatbuilder, he directed the activities of a half dozen men engaged in the project and undertaking a variety of skilled tasksboardmaking, fitting planks, drilling holes, tarring, sewing, caulking, and decorating. He held an elite position in Chumash society, distinguished by wearing a waist-length cape of bearskin (Bolton 1930:252). He was also highly respected, not only for his knowledge and skills in boat construction and use, but also for his wealth, for only a rich man could afford the expensive materials and labor charges needed to build a plank boat. It would take as much as six months to build a tomol or plank canoe.

The 'altomolich held a position of considerable economic authority in his community, since his finished boat would be used for procuring food-fishing, collecting abalones, sea mammal hunting-as well as for distant voyages across the channel for the purpose of conducting trade. There were only a few men associated with canoes in his village, and of them, the 'altomolich represented the local head or leader of an elite professional group. This group was a guild called the "Brotherhood-of-the-Canoe." It was not uncommon for the 'altomolich to be associated with the mainstream of Chumash political power, for he could also be the village chief or wot, or hold membership in an elite religious-political organization called the 'antap.

With finished planks stacked and ready for

use, the 'altomolich directed his men to construct the bottom board for the canoe—a long, heavy plank, dished out on its upper surface. A supporting frame was next constructed to anchor the bottom board in place the tomol would be built right-side-up by adding rounds of hull boards, the first of which rested directly upon the bottom board. Working from the shaped bottom and its supporting frame, Chumash boatbuilders strung lines in a complex pattern to serve as a guide for the form of the canoe-to-be.

The first round of boards, usually 6 or more in number, had to be twisted and bent to fit the bottom board. This was done by placing the boards in a clay-lined pit filled with water. Fire-heated rocks were added to bring the water to a boil. A few hours of soaking made the rigid planks pliable, and they could then be twisted and bent to desired shape. On some occasions, it would not be necessary to use this technique, for splitting a board out of a curved log or hewing it to shape with stone and shell tools would likewise produce the desired form.

Fitting was not simple, for while boards rested edge-to-edge on top of one another, they were bevelled to overlap end-to-end, thereby giving the canoe greater strength. Hull boards were also bevelled on the outside to form a groove where they joined together; this allowed a caulking material to be placed in the hull seams of the boat later.

With fitting completed, it was time for the tarrers to start their work. There were two men who performed this task, working as a team to apply hot adhesive to all adjoining edges of the boards and to position the boards before the adhesive cooled. The work required both speed and accuracy—otherwise, one would have little confidence in the finished boat at sea.

This adhesive, called *yop*, was a mixture of two ingredients: hard tar, called *woqo*, and pine pitch. The *woqo* was mined by the Chumash, for one could not use the more available soft tar found along the beaches. Heating the *woqo* refined it, driving off the naturally present water by evaporation. Then the correct amount of pine pitch was mixed in and heated. When completed the *yop* was tested on spare planks before it was used on the canoe.

The hull was given additional strength by "sewing" the boards together. This was done by drilling pairs of holes, each pair connected by a groove, to receive several wrappings of twine which bound the boards together, both end-to-end and side-to-side. The twine itself was waxed *tok*, a vegetable fiber cordage made by women from the stalks of the red milkweed plant. Animal sinew was not used, for it would stretch when wet and was subject to rot.

Usually only three wrappings of twine were necessary to tie the boards together securely. The wrapping itself fit into the groove between the holes. After the twine was pulled tight and the ends terminated in two separate knots, *yop* was applied to seal the holes, wrappings, and grooves from the sea.

After completing the first round of boards, the 'altomolich directed his workers in repeating the above processes for the subsequent rounds. The builders varied the shapes and sizes of the hull boards as necessary so that the work would develop into the desired form of the canoe. Angles, bends, seams, ties, bevels, and countless other points occupied their attention—this was necessary if the finished *tomol* was to be seaworthy and as the Chumash said, "worthy of being called worked."

Between the fifth and sixth round of boards the builders installed the only structural bracing—a crossbeam that went across the boat amidships. Though appearing much like a thwart in a modern boat, the crossbeam served only as a brace, since the seamen never sat upon it when they rowed.

Then the builders added the sixth and final round—the gunwale round boards. Unlike any of the rounds below, the gunwale boards did not meet at the prow and stern, but remained apart, forming a V-shaped gape. This gape was a necessary feature, because all lines leaving the boat during its use had to pull the boat from its prow or stern. Harpoon or fishing lines off the sides of the boat could easily capsize it. Chumash seamen reinforced the gunwale round by tying a rope around the ends of the boat to keep the boards from pulling away from each other.

At this point hull construction was essentially complete. Remaining to be done were the addition of posts on the inside of the boat at the prow and stern to provide added strength, and the attachment of half-moon-shaped washboards above the gunwale round at the prow and stern. The latter were called "ears."

The prow and stern posts were triangularshaped planks, carefully fitted so that they would reach from the top of the bottom board to the base of the V-shaped gape. After the post was fitted and anchored with *yop*, it too was sewn with *tok* to hold the end boards firmly together at the prow and stern.

The "ears" were sewn to the gunwale boards. Besides being ornamental, they kept surf from coming into the canoe upon launching or landing in high seas. After the ears were attached, the boat was ready for finishing and decorating.

In finishing, first the hull was carefully inspected for apparent weaknesses, and corrective action taken as required. All excess or runover *yop* was removed, and sharkskin was employed to smooth the rough edges. Then a stain made from red ochre and pine pitch was applied to the seasoned wood as a sealer. Otherwise, the dry wood absorbed sea water and became heavy.

The *tomol* was completed with artistic embellishment in paint or shell inlay, sometimes both. The ears could receive one of many geometric patterns in shell inlay. A few canoes were also "spangled" with crushed abalone shell applied to a sticky tar surface on the edge of the gunwale boards at the prow and stern. The tomol was then made ready for its maiden voyage, to be tested in nearshore waters for seaworthiness. As captain, the 'altomolich sat in the stern of the canoe. In front of him were two other crewmen, a rower fore and a rower-bailer amidships. A fourth man stood in the sea to hold the boat steady and push it off. The crew knelt on seagrass matting and used long double-bladed paddles, synchronizing their paddle strokes to the words of a special canoe song. The boat was put through a series of tests, and satisfactory completion meant that it was a functional canoe. Given regular maintenance and care, it would serve well for 20 years or more.

ABORIGINAL CANOE USE

The Chumash have long been known as California's greatest maritime people (Kroeber 1925; Landberg 1965). Fishing, collecting shellfish, and sea mammal hunting were important economic activities for which the *tomol* was used. Departing for the rich fisheries off the coast in the predawn morning calm, the canoemen would return by afternoon, often with a boatload of fish they had caught using shell fishhook and line, nets and traps, or harpoons for larger prey such as giant sea bass.

Procuring food from the sea was only one use for the plank boat. Equally important was transportation of goods for trade across the channel or between the islands. Cargo bound for island ports included bundles of milkweed fiber, seeds, acorns, deer, bows, and arrows. To the mainland in return came finished products, such as a variety of objects made from shell, bone, or stone, and basketry and otter pelts. Trade was a lucrative enterprise for these merchants-at-sea. Canoe ports along both coasts were linked together, their trade regulated by members of the Brotherhood-ofthe-Canoe.

Another use of the plank canoe was to

transport passengers, some of whom evidently paid their fares in shell bead money. Trips might be made by entire villages, perhaps to attend a ceremony held at some distant town across the channel or to visit relatives and friends. The number of passengers a canoe could carry depended upon the size of the boat and the size of the passengers.

MISSION CANOE USE

It is well known that the colonization of Chumash country by the Spanish spelled disaster for the aboriginal way of life. Brought into the mission system as laborers, craftsmen, tanners, herders, or farmers, or decimated by waves of epidemic diseases, the survivors and their descendants faced the same end result acculturation.

What is generally not known by scholars is that the Chumash plank canoe, its technology, use, and some of the social organization surrounding it, survived during the Mission period.

The tremendous expense for materials and labor was paid by the Church, and the missions became the owners of the canoes. Wood not needed for mission construction was sent by the priests to selected groups of freed laborers, such as carpenters, to construct plank boats under the guidance and authority of a *tomolero*.

The word tomolero, which replaced the aboriginal 'altomolich, is of interest in terms of its etymology, for it illustrates well the marriage between Chumash canoes and the mission system. The word tomol is Chumash for canoe. The Spanish added the suffix ero to mean "one who is associated with canoes." The result was a curious blend of Chumash and Spanish—tomolelu as the Chumash prounced it, for they lacked the sound of "r" in their language, and replaced the "o" sound with the more familiar "u" ending (Thomas Blackburn, personal communication, 1975). Following the status of the 'altomolich before him, the tomolelu was a respected and important man. During the construction of a plank boat in some designated area belonging to the mission, the tomolelu wore distinctive clothing to mark his rank of importance: a shirt replaced the former bearskin cape, while the workers wore only a G-string. Technology also changed, as men were allocated iron tools to replace their former ones of bone, shell, and stone.

It was necessary for the priest and other mission officials to trust their *tomolelu* completely, because he was often absent from their control at sea or at the beach or port where the canoe was kept and maintained. In addition, he inspired the confidence of his crewmen to trust his judgement at sea by practicing the old traditional beliefs, rituals, and customs of Chumash seamen.

The priests' motives for having these expensive boats were basically similar to those of the Chumash: procuring food from the sea, communicating with the Channel Islands, and sea otter hunting.

During lean times for the mission agriculural system, the Chumash were often released to exploit the wild plant and animal foods, and fishing was certainly a part of this activity. Former Chumash ports became fishing ports for mission canoes. At Mission Santa Bárbara the canoes operated out of what is now the harbor, the former village of Svuhtun. Their canoes also used La Patera estero, later known as Goleta Slough. Mission San Buenaventura had its fishing port at the site of Shisholop, once an important Chumash coastal town with many canoes. For Mission Santa Inés, the port was probably situated at Qasil, or modern Refugio State Beach, while for Mission La Purisima Concepcion the port was located at El Cojo. The former Chumash village there was also known as Shisholop, the name itself perhaps meaning "port" (Applegate 1974:199).

No doubt the major reason for the plank

canoe's survival into Mission times concerned its use in procurement and trade of sea otter pelts. As noted previously, Chumash seamen transported otter pelts from the islands in aboriginal times, so it did not take long for the arriving Spanish to seize upon this market system and turn it into a foreign trading enterprise. The missions in Chumash country entered the fur business, providing their neophyte canoemen with food and supplies, and covering the cost of constructing plank canoes-all of which was directed to procuring otter pelts for the mission for sale or trade (Ogden 1941:15-25). By the first decade of the nineteenth century, business was booming. Mission San Buenaventura, for example, reported yearly totals of 100 to 160 pelts (Simpson 1962:64), while Mission La Purísima was receiving an annual cash benefit of \$10,000 from the pelts (Bancroft 1885:124).

Many of these pelts were not directly exported to Mexico, but were sold illegally to foreign vessels, mostly Russian and American. One sea captain, William Shaler, skipper of the Lelia Byrd, noted in 1804 that the sea otters of the Santa Barbara Channel were better than those found along any other part of the coast. Vessels such as his, John T. Hudson's Tamana. and many others would spend 5 or 6 months trading with friars and Indians for such furs, leaving behind annually some \$25,000 from American traders alone. The illegal nature of this trade required that the vessels put into lesser-used ports to escape Spanish civil authority (Bancroft 1885:21, 23-24, 33-36). No doubt some of the ports they used were the Mission Chumash canoe ports: El Cojo, Qasil, and so forth.

Harrington's notes indicate that each of the missions in Chumash country owned one or more plank canoes. Exactly what the count was for each mission during the height of the sea otter trade, before 1810, is not known at this time. We do have some indication of the number of canoes owned in the 1820's: San

Buenaventura, three canoes; Santa Barbara, two canoes; and Santa Inés, one canoe. In addition, there is some evidence that La Purísima owned at least one canoe. Fr. Mariano Payeras of that mission, for example, wrote in his account book under the date February 6, 1814, that he had entered into a partnership with a Santa Rosa Island captain named Gele to purchase two Indian boats. Payeras' share consisted of a sack of wheat and 17 pesos in glass beads. (Brown 1967:16, 47). Incidentally, these data go a long way toward explaining the subsequent historic introduction of the plank canoe to Mission San Luis Obispo, an area in which these craft were not known prior to the coming of Europeans (Heizer and Massey 1953:293).

USE IN THE REVOLT OF 1824

As I noted earlier in this paper, two Chumash canoes, both from Mission Santa Bárbara, took part in the revolt of 1824. The story of this revolt is a rather long and complex one which I will not repeat here. Of importance to us is that after the revolt had begun at Missions Santa Inés and La Purísima, a messenger was dispatched for Mission Santa Bárbara to notify the Indians there of what was taking place. This messenger, travelling via San Marcos Pass, arrived the following morning-Sunday, February 22, 1824. Women and children at Santa Barbara were ordered into the foothills for their own safety; the men had meetings and later armed themselves for potential fighting with Presidio soldiers.

After a series of incidents at the mission which resulted in open conflict, the Indian men began to evacuate the neophyte quarters that afternoon, heading inland to join their families. By this time several neophytes had been killed by Presidio soldiers. In the weeks that followed, Mexican military forces sent out from Monterey and Santa Barbara finally caught up with the Chumash in the Tulare region of what is now southwestern Kern County. By June 22nd, the Chumash and Mexican forces had reached a peaceful solution to the conflict, and the Indian people then returned back to Santa Barbara. The revolt was officially over (Geiger 1970).

Of importance to us are the words of Fr. Antonio Ripoll, the resident priest at Mission Santa Bárbara when the revolt broke out. After spending several pages of his letter of May 5th, while the revolt was still in progress, on the subject of the conflict, personalities, and emotions, he concluded with the following comment concerning his personal feelings (Geiger 1970:357):

Finally, this narrative would be endless were I to recount the feelings I have experienced and the sufferings I have undergone during this period. They have been of such intensity that I have been tempted to flee to the island in a canoe where fifty of the neophytes from here are who on the day of the uprising embarked during the night at Mescaltitán. We have only two canoes but I am certain that if we had twenty or thirty we could take the two hundred people whom I have reunited with me and I would have gone along with them. . . .

What we learn from this account is significant enough to summarize here. First, Mission Santa Bárbara owned two canoes. Second, the neophytes used them, embarking the evening of February 22nd from Mescaltitán, as Ripoll spells it or more properly Mescaltitlan at La Patero estero. Third, fifty people were transported in these boats to "the island," most likely Santa Cruz Island (Geiger 1970:364, note 78). Last, by May 5th, some 11 weeks after the departure, these people had apparently still not returned to Santa Barbara. Let us now turn to Harrington's canoe notes, records at Mission Santa Bárbara and the information previously presented in this paper, to fill in some of the missing details in Ripoll's account.

TOMOLELUS OF MISSION SANTA BARBARA

Harrington's notes provide the names of four Chumash men at Mission Santa Bárbara who were associated with the construction and use of plank canoes just prior to the revolt. These men were José Sudón Ka-mu-li-ya-tset, José Venadero Si-li-na-hu-wit, Paisano, and Laudenzio.

The notes state that José Sudón, Paisano, and Laudenzio constructed two plank canoes at a location which corresponds with Ripoll's Mescaltitlan. Both of these boats are described. Nothing else is known concerning Paisano and Laudenzio, but a great deal of information is available on José Sudón from both the canoe notes and mission records.

The canoe notes reveal that José Sudón received his last name, Sudón, because he was always in a sweathouse. The name is derived from sudor, Spanish, meaning "to sweat." He was born at Swahil village on Santa Cruz Island, the grandson of the village's first captain and founder. Years later he was living in Santa Barbara and was the captain of a village near Goleta Slough. During Mission Santa Bárbara days, José Sudón and his friend, José Venadero, were both mission fishermen. Both were also captains of canoes and members of the Brotherhood-of-the Canoe, but apparently abandoned their canoes sometime in the mid 1830's in Santa Barbara. No canoes were ever seen in the Santa Barbara region after that date.

Mission records corroborate Harrington's biographical data on this man. Under Entry No. 4126 in the Baptismal Register at Mission Santa Bárbara is the name José *Ca-mu-lu-yatset* (note phonetic spelling of the padre). His wife, Cecilia, is listed under entry No. 4134. Both were baptized in the Mission church by Fray Antonio Ripoll on July 29, 1819. Both were natives of Santa Cruz Island; José was listed as about 38 years old, while his wife was about 41 years old. They are noted as the parents of Atenogenes *Li-li-ua-nai-tset*. José was given the Christian name of José Crespin. His godfather was a man named Buenaventura.

We could find no other references in the Mission records to José, his wife, or his child. A check with local city records and cemeteries yielded no further information. I believe, however, that he is the same man who, on November 4, 1856, provided Rev. Antonio Timeno with a vocabulary of Santa Cruz Island Chumash. According to Taylor (1860) this man was named Joseph *Ca-mu-lu-ya-zet* (phonetic spelling), aged about 80 years, of Santa Barbara.

Harrington's canoe notes provide the following information about José Venadero. He was born in Quichuma and given the Indian name of Si-li-na-hu-wit. His name Venadero was given to him because he knew the haunts of deer, mountain lion, and other animals-the Spanish word venadero means "a place frequented by deer." José Venadero was a close associate of José Sudón A fisherman during Mission Santa Bárbara days, Venadero was also a member of the Brotherhood-of-the-Canoe and a local officer of that organization. The canoe notes also relate that after a Ventura plank canoe had made a visit to La Patera, José Venadero built a boat very much like it. I am not certain, nor are the notes clear, whether this was a third canoe for Mission Santa Bárbara, or if it may have been one of the two under José Sudón's construction. I suspect the latter interpretation is correct since only two canoes are ever mentioned for the Santa Barbara region.

Again there is corroboration between Harrington's data and the Mission Santa Bárbara Baptismal Register. Under Entry No. 3535, José Venadero *Ci-li-na-ju-it* (phonetic spelling of priest) was baptized on April 9, 1812, at about the age of 40. His native village was *Sihuava*, which is not far from the village of 'Aqicum, hispanicized into Quichuma, and again later changed into its modern spelling of Cachuma (Applegate 1974:197). José's godfather was Captain José Dario Argüello, who served as Commandante of the Presidio of Santa Barbara, and for a brief period as Governor of California.

From the information given above, the conclusion can be drawn that Venadero and Sudón were the builders of the canoes which took part in the revolt. Their association with Mission Santa Bárbara the La Patera region, and membership in the Brotherhood-of-the-Canoe support this, as does their status as tomolelu and users of these boats at sea. In addition, the baptism dates of these men at Mission Santa Bárbara indicate that the two plank boats used in the revolt were constructed sometime after the year 1819, when José Sudón arrived at the mission. That the canoes headed for Santa Cruz Island during the revolt may be related to the fact that José Sudón was from that island—a native of Swahil on the east coast of the island.

I should point out here before passing on into a brief description of these two canoes, that Mission Santa Bárbara quite probably owned several canoes in the many years of the mission prior to José Sudón's and José Venadero's arrival.

DESCRIPTIONS OF THE TWO CANOES

Fortunately, descriptions of these two plank canoes built by José Sudón have survived. The information was passed on to Harrington by Fernando Librado, who must have been about 20 years old when he saw them.

According to Librado, both canoes were built by traditional Chumash methods in most of their features. A few features were distinctive, and these I will describe below.

Both canoes lacked any sort of shell inlay in the "ears." Such inlay was a fairly common artistic feature on many Chumash canoes. The typical use of the red ochre stain sealer, so frequently observed by early coastal explorers (cf. Heizer 1938:Table 1) was used only on the outside of one canoe, while the other went totally without it.

Perhaps of historic introduction to Chumash boatbuilding was the addition of ribs, for this feature is noted as lacking on the canoes seen by the explorers (cf. Heizer 1938:Table 1). In the two Mission Santa Bárbara canoes, ribs were installed on both craft. On one boat two ribs were employed, positioned no doubt in the fore and aft sections of the canoe. On the other boat the location of the single rib is not noted.

With all of this information now at hand, let us conclude by reconstructing the events associated with these canoes and the Chumash Revolt of 1824.

CANOES AND THE REVOLT: A RECONSTRUCTION

On the afternoon of February 22, 1824, 43year-old José Sudón Ka-mu-li-ya-tset and his friend, 52-year-old José Venadero Si-li-na-huwit, considered plans to use the mission's two canoes to flee from the revolt in progress at Santa Barbara. They were probably assisted by Paisano, Laudenzio, and four other men—all of whom formed the operating crews (seamen and launchers) for these two boats.

The boats were kept in the tules at La Patera, near Mescaltitlan Island, at the small settlement-port for neophyte Chumash who used and maintained these boats for Mission Santa Bárbara. José Sudón, a *tomolelu*, was also probably the settlement's captain, since he did hold this office in later years.

Under cover of darkness to avoid discovery by Mexican soldiers from the Presidio, the sailors removed the boats from their tule storage place and began to prepare them for sea. Paddles, matting, and bailing baskets were gathered, and water bottles were filled. Blankets to warm them at sea during the chilly February night were also collected. The sailors' families, who were the remaining occupants of the tiny mission canoe port, also took part in gathering essential belongings to sustain them on their journey and in the months ahead. The boats were loaded with some 50 people.

One can only speculate on the composition of this group. First, there would be adult men who crewed these boats or served in their launching and landing. With four for each boat, there would thus be about eight men. Their wives, and perhaps an aged relative or two, would add another eight or so adults, among them Cecilia, Sudón's wife. Then came their children, among them Atenogenes Li-liua-nai-tset, the child of Sudón. How many children were in the community is anyone's guess. If our estimated 16-18 adults are subtracted from the total population of about 50, then about 32-34 children completed the group, or about two children for each adult.

As a means of cross-checking these figures, we can compare the weight of the passengers to the carrying capacity of the tomol. Figuring 200 pounds for each adult and 100 pounds for each child, probably high estimates, the calculated weight is about 3,200 pounds per canoe. This figure is not unreasonable in view of what we know now about the carrying capacity of a 26.5-foot-long Chumash tomol we have built and tested (Hudson, Rempe, and Timbrook, n.d.). It does not include the weight of the belongings of the fugitives and the accessories needed to operate the boat. In any event, the boats were no doubt heavily loaded and certainly extremely crowded, but obviously still seaworthy.

The canoes then left the *estero* in darkness, their destination being Santa Cruz Island. Normally the boats would have turned eastward to follow the coast, stopping at various canoe ports until reaching Port Hueneme. Then they would cross at the narrowest part of the channel to Anacapa Island, steering westward for Santa Cruz Island. But perhaps fear of discovery, or of being detained at Mission San Buenaventura when the boats put into Shisholop, resulted in their attempting a direct crossing of the channel. During the late hours of the evening or early hours of the morning the passage would be easiest, but it was still rarely attempted by the sailors (Hudson, Rempe, and Timbrook, n.d.). Even so, they decided upon a course due south which would bring them to Santa Cruz Island, perhaps to the canoe port of Kahas, located at today's Prisoner's Harbor. They had to risk it, because the mainland was in a state of war and only the islands offered safety.

Where they landed on Santa Cruz Island is unknown, but perhaps José Sudón, who knew the island well from having left it only 5 years before, selected a safe location for the refugee colony at *Swahil*, the village where he had been born and raised. In any event, Sudón most probably became the colony's leader.

From Ripoll's letter, we know that they were on the island for at least 11 weeks and perhaps longer. We can guess that their subsistence followed the aboriginal patterns of exploiting land plant and animal foods, collecting shellfish, and procuring fish and sea mammals by use of their two canoes. From their arrival in late February until the end of the rainy season in April, however, food supplies would have been scarce; fish, though erratic and unpredictable in winter, and shellfish must have been the principal food resources available (Landberg 1965:102). By spring, green plants and sprouts, bulbs, roots, and tubers would have supplemented their seafood diet. In any case, these people must have had to work hard to procure enough food for survival.

Unfortunately, there is as yet no information about the return of these people to the mainland or their ultimate fate. The notes do indicate that both José Sudón and José Venadero were back at La Patera with their canoes in the 1830's. Since the Chumash who retreated inland were "pardoned" by the Mexican military forces sent to bring them back, we can assume that no disciplinary action was taken against those who fled to the islands by canoe.

It is hoped that this reconstruction and the information presented in this paper will contribute to a fuller understanding of the Chumash Revolt of 1824, and the men and canoes which took part in it.

> Santa Barbara Museum of Natural History

REFERENCES

- Applegate, Richard
- 1974 Chumash Placenames. The Journal of California Anthropology 1:185-205.
- Bancroft, Hubert
 - 1885 The Works of Hubert Howe Bancroft, Vol. 19: California. San Francisco: A. L. Bancroft and Co.

Blackburn, Thomas

- 1975a The Chumash Revolt of 1824: A Native Account. The Journal of California Anthropology 2:223-227.
- 1975b December's Child: A Book of Chumash Oral Narratives. Berkeley: University of California Press.
- Bolton, Herbert
 - 1930 Anza's California Expeditions, Vol. IV, Font's Diary. Berkeley: University of California Press.
- Brown, Alan K.
 - 1967 The Aboriginal Population of the Santa Barbara Channel. Reports of the University of California Archaeological Survey No. 69.
- Engelhardt, Zephyrin
 - 1923 Santa Bárbara Mission. San Franciso: The James 4. Barry Co.

- 1932a Mission Santa Inéz. Santa Barbara: Mission Santa Bárbara.
- 1932b Mission La Concepción Purísima. Santa Barbara: Mission Santa Bárbara.

Geiger, Maynard (translator and editor)

1970 Fray Antonio Ripoll's Description of the Chumash Revolt at Santa Barbara in 1824. Southern California Quarterly 52:345-364.

Heizer, Robert

1938 The Plank Canoe of the Santa Barbara Region, California. Ethnological Studies 7:194-228.

Heizer, Robert, and William Massey

1953 Aboriginal Navigation off the Coasts of Upper and Baja California. Smithsonian Institution, Bureau of American Ethnological Bulletin 151:285-311.

Hudson, Dee Travis, Melissa Rempe, and Janice Timbrook

n.d. Tomol: The Ethnographic Notes on Chumash Watercraft by John Peabody Harrington. Ramona, California: Ballena Press. (MS 1976, in press).

Kroeber, Alfred

1925 Handbook of the Indians of California.

Smithsonian Institution, Bureau of American Ethnology Bulletin 78.

Landberg, Leif

1965 The Chumash Indians of Southern California. Southwest Museum Papers 19.

Ogden, Adele

- 1941 The California Sea Otter Trade: 1784-1848. Berkeley: University of California Press.
- Simpson, Lesley
 - 1962 The Letters of José Señán, O.F.M., Mission San Buenaventura, 1796-1823. Ventura: Ventura County Historical Society.

Stickel, E. Gary, and Adrienne Cooper

1969 The Chumash Revolt of 1824: A Case for an Archaeological Application of Feedback Theory. Los Angeles: University of California Archaeological Survey Annual Report 11:5-21.

Taylor, Alexander

1860 The Indianology of California. The California Farmer and Journal of Useful Sciences, May 4, 1860, Col. No. 9.

