Although Indian population was sparse in most of southern California at the time of Spanish settlement, a dense population did exist along the Santa Barbara Channel from Malibu to Point Conception. Kroeber estimates that 8,000 to 10,000 Chumash Indians lived in villages closely spaced along the shore.

Like the other Indians of California, the Chumash depended directly on the natural environment and lived by hunting, fishing, and gathering. However, although they hunted inland to the divide between the coastal ranges and the Great Valley, their exceptional population density was supported primarily by the abundant Channel marine life. The Chumash were more nearly maritime than any other California Indians, and their distinctive attribute was a large seagoing canoe by which they could make long voyages and gather marine resources. They were predominantly a coastal people whose villages were usually established within a mile of the beach and preferably at the mouth of a stream.

Five villages are known to have been located near the mouth of the Ventura River at what is now Ventura. This site illustrates the geographic factors which were important to the Chumash economy and shows how careful adaptation to geographic conditions made it possible to support so many people by hunting, fishing, and gathering.

THE VENTURA SITE

The Ventura site on which the five villages were built is a narrow coastal plain about half a mile wide, formed of a series of uplifted marine terraces and hacked by the steep, barren slopes of the Transverse Ranges. At the west end of the plain is the deltaic mouth of the Ventura River, which emerges from the mountains through a narrow valley, and has cut a shifting channel across the plain. The river itself, fed by the high and fairly well-watered Santa Ynez Mountains, is described in early accounts as carrying a large volume of water all year and supporting a dense growth of willows and other vegetation along its lower course and around an estero or lagoon on the delta.

To the Chumash the site near the mouth of the Ventura River was almost ideal for villages. It offered easy access to varied re-
sources and had a mild climate which facilitated all-year gathering. The sea and beach furnished marine life and shellfish which were the most important food sources, and from the river fresh water and food were obtained. The river valley provided small game, construction materials, and a route to the interior grasslands and forests for larger game, timber, and trade. The marine terraces were suitable village sites.

The flat land west of the river mouth was used as a resort by the Indians from Santa Cruz Island, who regularly beached their boats in a cove west of the mouth of the river and traded with the Ventura Chumash (see Figure 1). East of the river mouth was a major cluster of villages or rancherias. Although the names of five villages in the Ventura area are known, only two specific sites have been located.

The Indian houses were hemispherical in shape, from twelve to twenty feet or more in diameter, and designed to shelter more than in one family. They were used only in bad weather. Father Pedro Font described them in 1775-76 as having a framework of strong willow poles bent together at the top, with a top opening to admit light and let out smoke. The walls were of dried grass or tules woven
between the poles and the door a woven curtain held in place by whale bone or a stick.\footnote{3}

Within the village, debris was left where it fell and the accumulation of fish oil, camp refuse, and soot impregnated the ground as much as eighteen inches below the surface. This "greasy soil" is still one of the best indications of a former village site.\footnote{4}

The Indians themselves greatly impressed Father Crespi, who described them as:

"of good figure and disposition, active industrious, and inventive. They have surprising skill and ability in the construction of their canoes which are made of good pine planks, well joined and of graceful shape, with two prows. They handle them with equal skill; three or four men go out in the open sea in them to fish and they hold as many as ten men. . . All the things which they make are neat and well finished and the most surprising thing is that they have no other tools for working the wood and stone than those made of flint, for they are ignorant of the use of iron and steel. . . The soldiers traded beads with them in exchange for baskets, pebbles, and wooden plates which would not be more graceful if they were turned with a wheel. They gave us a lot of fish, especially very savory bonito."\footnote{5}

\section*{DISTINCTIVE ATTRIBUTE: THE CANOE}

The large seagoing canoe was the distinctive attribute of Chumash culture. By increasing the efficiency of food gathering it made the dense population possible, elevated the Chumash to a level above their neighbors who had none, and illustrated best their ingenious use of the materials at hand in their environment. The canoes are described as holding from two or three to as many as twenty people.\footnote{6} They were up to eight to ten varas long (25 to 30 feet) with a four-foot beam, and were built of pine planks, although it is possible that the bottoms were dugouts made from drift logs. Near Ventura, logs off sufficient size for carving dugouts were available only a long distance away in the mountains. There was no stream large enough to float them down, and carrying them down would have been laborious. However, splitting the pine logs was relatively easy and two men could carry long boards down the trail.

Without nails the boards were lashed together. Cord from bark sir animal sinews was tied through holes drilled about one inch from the edge.\footnote{7} This was then sealed by the use of asphaltum from tone of the numerous seeps. Although the plank boat of such construction is not strong there is no evidence that the canoes had strength-giving ribs. Perhaps they were not needed, because the
Santa Barbara Channel is not an especially rough body of water.

The canoes were used extensively, for the Chumash were skillful mariners who took too the water daily if weather permitted. Fortunately the mild climate made all-year fishing possible, and the Chumash regularly made large catches of the abundant Channel marine life which provided their principal food. Every type of local fish and shellfish was gathered, hooked, speared, or netted with finely wrought implements of fiber, bone, or shell.

Nearly as important was the trade which the canoes permitted. Although Father Crespi noted the adequate supply of stone for building, the local rocks were not hard enough to act as tools nor resistant to the action of fire and sudden cooling without cracking. Steatite, which could withstand rapid heating and cooling, was apparently available only on Catalina Island. To obtain it required a two-hundred-mile round trip in the canoes. Yet it was used extensively to make "ollas," which were globular thin-walled vessels with a volume up to five gallons. Flint from the San Francisco area, greenstone from the interior mountains, and obsidian from the desert were all used for making tools. These indicate an extensive trade.

Without the canoe and the sea contact the dense population could not have been supported. The Chumash had no agriculture. The advantages of the site for agriculture uses which the later Spanish found so attractive had no significance to the Indians, for their culture pattern was based entirely on fishing, hunting, and gathering. They supplemented the marine resources by specialized use of the land flora and fauna. Along the river were tules and willow which were used for house construction, thatch, and mats. Willow was also used to weave baskets which were ingeniously waterproofed on the inside with asphalt.

Although the interior offered few inducements, seasonal trips to higher elevations were made at harvest time or when game was needed. Acorns and pinon nuts were the basic vegetable foods, with grass, seeds, bulbs, roots, and berries. Coastal sage and chaparral at lower elevations offered little game, but at intermediate elevations on north-facing slopes were grasslands interspersed with California live oak which offered good browse.

These forests, reached by way of the Ventura River Valley, supplied planks for the canoes and offered good hunting. Deer and antelope were sought for food and hides. A variety of other animals and birds was accessible from the Ventura River Valley—coyotes, ground squirrels and other rodents, ducks, geese, quail, and doves. Grizzly bears and mountain lions were present in quantity but were more feared than hunted by the Indians. The game provided meat, hides and skins foot clothing, sinews for bow strings and fish nets,
and bones for tools and whistles. Other tools, implements, and currency were made of stone, shell, or whalebone.

CONCLUSION

The Chumash, therefore, made the maximum possible use of the varied resources tees the Ventura site them. The Channel, the beach, the river, and the mountainous hinterland provided the food, fibers, and materials for artifacts which the Chumash used so efficiently. Without a domesticated beast of burden, without iron or any other metal, without the wheel, and without any cultivated crop, the Chumash by careful adaptation to their environment supported the densest population of any Indian group in California. They succeeded because they developed a distinctive tool – the seagoing canoe – by which they were able to increase their efficiency in gathering the abundant Channel marine resource as a reliable food supply.

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NOTES

4. Owen H. O'Neill, History of Santa Barbara County (Santa Barbara: H. I. Meier, 1939) p. 3.
9 Ibid., p. 414.