

reflects the diagnostic ceramics of the four-part chronological scheme employed in Greater Nicoya.

Ceramic Zone 4

This zone includes site numbers 21–25, and lies within the Chontales area on the eastern side of Lake Nicaragua. It corresponds with Lithic Zone 4. A distinctive characteristic of the ceramics in this zone is the great abundance of sherds on some site surfaces and an almost complete absence on others. A distinctive incised ware was frequently present; it has been chemically characterized as distinct from all Greater Nicoya chemical groups. The occasional white-slipped pottery, representing the Middle and initial Late period Greater Nicoya-type Papagayo Polychrome, demonstrates some presence of isthmian ceramics on the eastern shore of Lake Nicaragua. Except for these few examples of Papagayo Polychrome, there is an almost complete contrast between the Zone 3 assemblages on the western side of Lake Nicaragua and those from the eastern side. This division finds support in the ethnohistorical sources for the region, which indicate that there was a social, political and religious boundary line between the peoples on the two sides of the large lake. There must have been economic implications of this separation as well.

Comparison of Lithic and Ceramic Zones (Figure 3.3)

Lithic and Ceramic Zones 1 are totally congruent, based on existing data, as are Lithic Zone 4 and Ceramic Zone 4. Ceramic Zone 2 has a more restricted distribution than Lithic Zone 2, and is entirely encompassed by the latter. Lithic Zone 3 is completely encompassed by a more extensive Ceramic Zone 3. This is due to two principal factors: first, the sites in Lithic Zone 3 have non-Greater Nicoya lithic assemblages, and second, lithics have traditionally been recovered only in low frequencies from Granada south to Rivas. The comparative data base in this zone, assembled from the work of Norweb (1961, 1964), Healy (1974, 1980) and Haberland (1966, 1986; and Chapter 4, this volume), is much stronger in ceramics than in lithics.

The Culture History of Ometepe Island: Preliminary Sketch (Survey and Excavations, 1962–1963)

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This chapter details research conducted on Ometepe Island, Nicaragua during 1962–1963 and expands the data base from the 1983 survey with detailed excavation reports from Ometepe Island. Aspects of the research have been reported by Haberland (1961, 1966, 1968, 1969, 1970, 1971, 1984b, 1986), but no detailed overview has ever appeared. With the clear significance of Ometepe Island as part of the Pacific coastal archaeological zone, we invited Professor Haberland to prepare this chapter, and are delighted that he accepted. Ceramic nomenclature has been brought into line with current usage, and the text was annotated where appropriate for greater agreement with recent data. There are some limitations to this approach however, and in some areas of data presentation and/or analysis, it is best to treat this report as reflecting the “state of the art” at the time the field research was conducted.

Geographical Setting

With a surface area of 8,264 sq km, Lake Nicaragua (or Lake Cocibolca) is the largest inland body of water in Central America (Figure 4.1). Roughly oval in shape, its 160 km-long main axis runs more or less from northwest

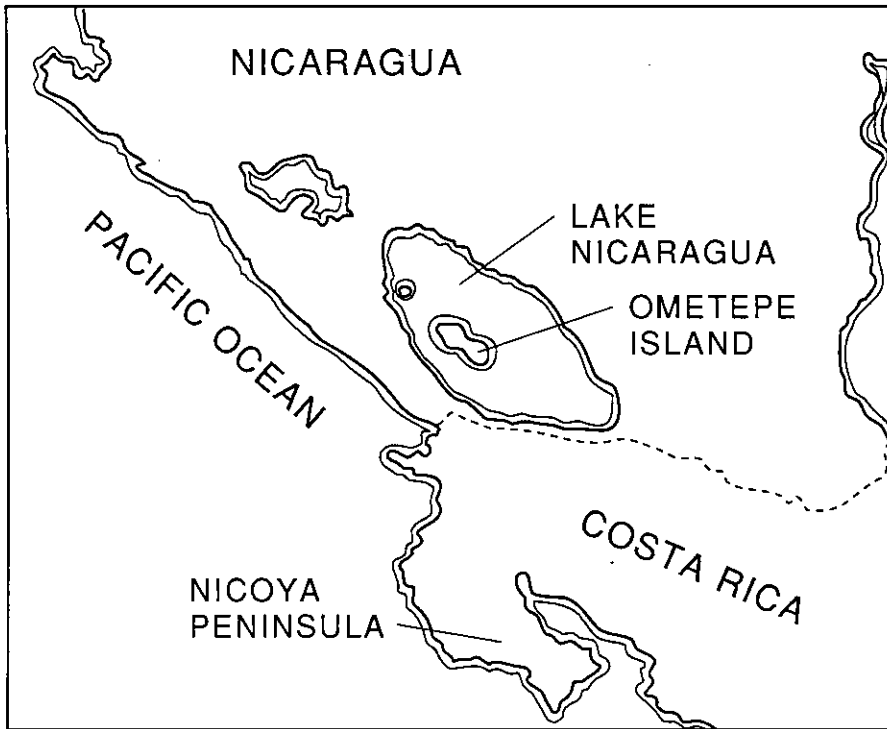


Figure 4.1. Location of Lake Nicaragua and Ometepe Island.

to southeast from Panaloya to San Carlos. At its widest part, from La Virgen on the Isthmus of Rivas to San Ubaldo at the Chontales shore, it is 65 km wide. It is said to be up to 70 m deep, but to date no depth greater than 23 m has been confirmed. The surface of the lake is 31 m above sea level and drains through the 190 km-long Río San Juan, which begins at the southeastern corner of the lake and runs to the Caribbean at San Juan del Norte.

Among Lake Nicaragua's many islands and islets, Ometepe (Nahua for "two mountains") is by far the largest, with a surface area of 276 sq km. It is situated off the center of the southwestern (or Pacific) lake shore (Figure 4.1). Its shortest distance to the mainland, from Punta Jesús María (in some maps also called Punta San Roque), is only 7.5 km, while the northeastern (or Pacific) shore is approximately 50 km away from Punta Gorda.

From the air, Ometepe resembles a figure eight. Its long axis, 31 km from Punta Helegueme in the northwest to Punta la Fuente in the southeast,



Figure 4.2. Madera volcano, Ometepe Island.

runs roughly parallel to the main axis of the lake. Each of the loops of the figure eight is occupied by a volcano. The southeastern one, with a maximal diameter of 24.5 km, is the dormant Madera volcano (Figure 4.2) (1,394 m), and the northwestern one, with a maximal diameter of 36.5 km, is the Concepción (1,610 m) volcano, formerly called "Ometepe" or "Volcán de Ometepe." Concepción is one of the most symmetrical volcanoes in Central America.

The two halves of the island are connected by a rather narrow (five km) and low lying "waist," which during most parts of the year is swampy and makes the movement between the two island halves difficult. It is probably not as old as the two volcanic cones and may have emerged only rather recently. A slight rise in the lake level (which fluctuates annually by about 65 cm) would inundate the depression again and divide Ometepe into two separate islands.

Unfortunately, the combined actions of rain and wind are threatening many of the prehistoric resources of Lake Nicaragua, especially petroglyphs carved into the soft volcanic tephra (Figure 4.3).



Figure 4.3. Natural destruction of petroglyph platform, Isla Muertos, Lake Nicaragua (spring 1990).

Volcanic Activity

Concepción volcano has erupted sporadically during historic times, mostly light eruptions with tephra falls, as during my visits in 1958 and 1962–1963. These events were not recorded in soil stratigraphy and would, therefore, not be archaeologically detectable. Even the large ash falls of 1883 and 1908–1910 mentioned by Karl Sapper (1913: 106–107) do not register in the soil profiles, this despite the fact that in 1883 tephra was blown as far as the region of Rivas on the mainland. This indicates that ash falls that can be seen in stratigraphic profiles must have been of still greater magnitude. Typically, volcanic activity seems to increase at the beginning and at the end of the dry seasons. In adjacent Costa Rica, however, there seems to be a correlation between the rainy season and seismic activity. These observations are clearly impressionistic and may be incorrect.

Periodically, major eruptions have occurred, either with much heavier ash falls, as seen in the soil stratigraphy, or with lava flows. Two lava flows, one to the south in the direction of La Esperanza and Loma El Mogote,

and one to the north in the direction of San José del Norte, can still be distinguished. The first one may represent the eruption of 1883 (interestingly, the church records of Moyogalpa give the date 1882 for this event). It was recorded by Karl Sapper (1913: 106–107) as having produced lava on its western side. I did not observe the 1957 lava flow recorded by Weyl (1980: 216). It was probably of minor dimensions.

Because of the prevailing northeastern winds, volcanic ash is mainly deposited on the southwestern side of Concepción, where it has created the largest plain on the entire island. This plain is called “Moyogalpa,” named after the main settlement of this region. The repeated addition of ash has made the soil of this plain extremely fertile, permitting constant planting, without fallowing.

There are no comparable plains on the Maderas half of the island. The shores here are often steep, bluff-like inclines or are occupied by numerous boulders, while on the Concepción half, flat shores and beautiful beaches predominate. In 1962–1963, the Maderas was mostly covered by woods, both natural vegetation and shade trees for the coffee grown on its slopes. Aerial photographs show a lake in the crater of the Maderas. The upper third of the Concepción cone is without vegetation today, although in the middle of the nineteenth century it was wooded to the top. Woods sufficient to shelter deer and monkeys are still present in the middle third of that volcano on the heavily populated half of the island.

Contemporary Habitation and Land Use

In 1962–1963, Ometepe Island had about 15,000 inhabitants, most of them living on the Concepción half of the island. The two main settlements, Moyogalpa and Alta Gracia, each with about 1,500 inhabitants, are situated on the west-northwestern shore and the eastern side, respectively. The island has no natural harbors; loading and unloading of cargo is accomplished at piers, insofar as they are still usable, or with rowboats from the open roadstead. Since the lake can be rather stormy, this can be dangerous. One pier that was in good repair during my visit was situated at Mérida, on the western side of the Maderas half of the island. At that time, Mérida was the administrative center of the agricultural activities of the Somoza family, which owned a large part of that half of the island. The largest settlement on the Maderas half was Balgue, located on the north shore outside the Somoza holdings.

Coffee growing and cattle ranching were the main Somoza activities on the southeastern part of the island, while cotton and tobacco, the latter sometimes irrigated, were prominent export crops in the northwest. Individual food production—maize, beans, bananas of different kinds, watermelons—occupied large tracts and made the island self-sufficient. Most

inhabitants farmed small tracts of land and grew food, including fruit trees, in their own garden, but only for family consumption.

In 1962–1963, access to the mainland, that is, the Isthmus of Rivas, consisted of a daily trip (excepting Sundays and festival days including “Semana Santa”) from Moyogalpa to San Jorge in a small, locally built motorboat. Normally, the “postal steamer” should have called on Moyogalpa and Alta Gracia twice a week on its way from or to Granada, the main port on Lake Nicaragua, or San Carlos, at the head of the Río San Juan. However, the service was unreliable. Several larger sailboats plied the lake as freighters and sometimes could be hired. Their erratic schedules, together with high freight rates, effectively prevented the exploitation of the high agricultural potential of the island, making its products too expensive to compete successfully in mainland markets.

Previous Archaeological Research on Ometepe Island

Before the mid-twentieth century, the main archaeological investigations on Ometepe Island were conducted in 1876–1877 by J. F. Bransford, a U.S. Navy doctor on duty with an expedition surveying a route for an inter-oceanic ship canal. His report on the excavations (1881) is a model for that time. He was the first to record and name the “Luna Polychrome” (then “Luna Ware”) and the secondary urn burials that were thought to be characteristic of the island.

Several other excavations, besides those of *huaqueros* or looters (see David Sequeira 1942) are on record, although none as well recorded as Bransford’s. Among these are the work of Frederick Boyle (1868, Vol. 2: 90–98), Charles Nutting (1885) and Walter Lehmann (1910). In 1961, Albert H. Norweb, a graduate student at Harvard University, excavated two stratigraphic test pits at the Cruz Site, about two km northwest of Alta Gracia on the east side of the Concepción half of the island (Norweb 1964). Since then, his excavations, including those on the mainland, have been studied and published by Healy (1974, 1980).

I first visited Ometepe Island from November 26 to December 3, 1958, to evaluate the archaeological potential of the island accompanied by Luis Nissen, the son of a friend living in Managua. We conducted a survey in the vicinity of Moyogalpa and located a number of potentially interesting sites. One test excavation at Los Hornos (Om-4; Figure 4.4) yielded the burial of a shaman, dated to the San Roque phase (Haberland 1961). [Note: this burial is discussed in more detail in the section in this chapter on the San Roque phase. Many archaeologists are now hesitant to use functional-behavioral terms such as “shaman” in interpreting a grave. Haberland used the term to highlight the comparative significance of the mortuary contents

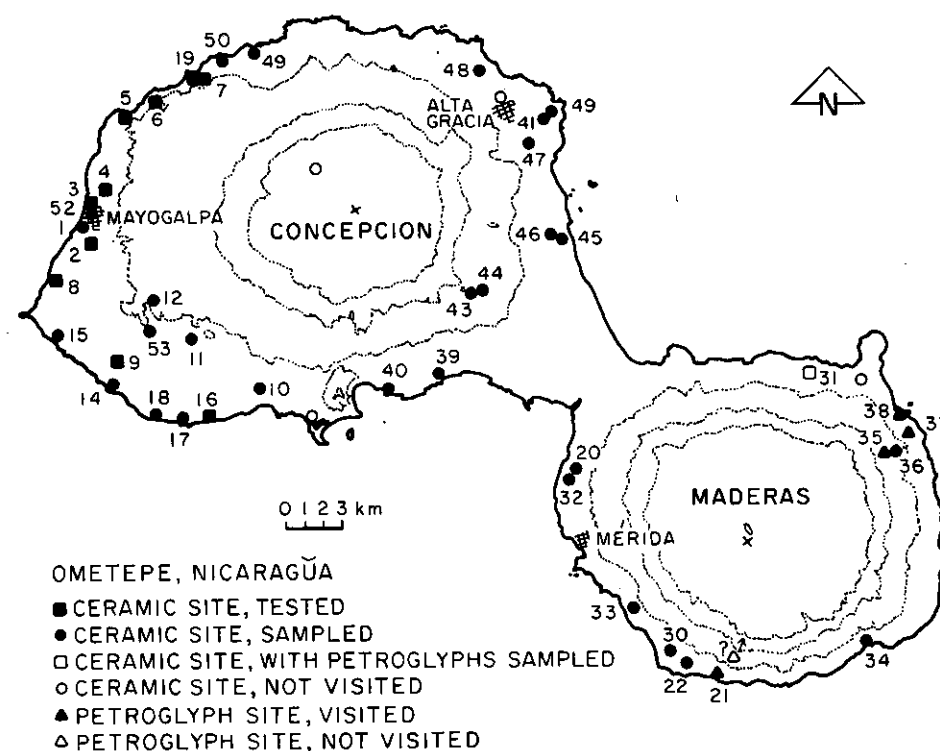


Figure 4.4. Sites surveyed and tested on Ometepe Island, 1962–63.

of the grave, and the term is maintained in that limited context in this chapter.]

Based on these results, a further excavation and survey program was formulated and carried out during the dry season of 1962–1963. The author was assisted by Peter J. Schmidt, then a student in the anthropology department of Hamburg University. We stayed on the island for six months (25 October 1962 to 25 April 1963) with our base at Moyogalpa. We employed up to 12 local residents for our various activities. During that time we made test excavations at 10 sites, all of them situated on the Concepción half of the island.

In each of these sites at least 2, but usually 3 or more (up to 12 in one case) 2x3 m test pits were excavated in arbitrary 20 cm levels. An additional 43 sites all over the island were surveyed and surface collections were made (Haberland 1984b). Of the 53 sites investigated (Figure 4.4), 8 were petroglyph sites without other associated cultural material. All of these were situated on the Maderas half of the island, as were those petroglyphic sites

yielding additional (mostly ceramic) material. These sites have already been described in detail (Haberland 1968, 1970).

The excavations and survey yielded an enormous quantity of ceramic material. For example, a single test pit at San Lázaro (Om-16) contained more than 15,000 sherds in about 6 cubic meters of excavation! To date, due to my other obligations, sorting and counting have only been completed in a preliminary way. Also still lacking is the identification of the animal bones recovered at most of the excavations. The human skeletons found at the Los Angeles cemetery have been published (Fleischhacker 1972).

Analysis has progressed sufficiently to establish a cultural sequence for Ometepe Island. While still preliminary, the sequence is comparable with those established for the Isthmus of Rivas (Healy 1980) and the Greater Nicoya Subarea in general (Lange and Abel-Vidor 1980; Lange 1984a). In the following summary, the nine phases of cultural development are characterized.

Dinarte Phase (ca. 2000–500 B.C.)

Data Base. The evidence for the oldest phase on the island is extremely limited. It consists of 111 ceramic sherds from the bottom of test pits 1 and 2 at Los Angeles (Om-9; Figure 4.4), where they were isolated from later ceramics by a 55 cm-thick sterile volcanic ash layer.

Ceramics. Most (104) of the sherds are undecorated body sherds of a rather thin, well-fired gray ceramic (Ometepe Grey). They are smoothed but not polished on the outside and rough on the interior, and sometimes broad tool marks can be distinguished. Sometimes the exterior color tends to be reddish, probably due to slightly varying firing conditions. Vessel shapes seem to be nearly exclusively globular (tecomates). One of the two rims recovered was from a globular vessel with a pronounced shoulder angle and a restricted mouth with a small straight lip, while the other came from a typical tecomate having an extremely thickened rim that, together with the adjacent part of the body, was painted a purplish red. The only other decorated sherd of Ometepe Grey shows punctations made with a three-pronged, fork-like instrument into the wet clay by the jab-and-drag method.

Four other clay objects found together with Ometepe Grey should be mentioned: two decorated body sherds, one brown with regular rows of punctations, and one crudely zoned tecomate sherd having a double incision in the grayish-brown clay dividing the punctuated area from an area that had been painted a bright red. Of the remaining two objects, one is the lower part of a flat-bottomed, nearly straight-walled vessel with extremely thick walls. The exterior is smoothed, while the interior is very rough, as if the potter did not care what it was like. The color and clay of this vessel

fragment are the same as those of Ometepe Grey, with which it probably should be included. The final object is an enigma: it is mushroom-shaped, and very massive, showing only a small "interior" part. The only explanation for this dark brown and highly polished object is that it represents one half of the mouth of a thick-walled bottle.

When the Dinarte material (Figure 4.5) was found in 1962, nothing comparable was known from Nicaragua or Costa Rica. In light of the available evidence, I thought at that time that Dinarte should date to about 1500 B.C. (Haberland 1966). During the late 1970s Snarskis (1976, 1978, 1984) found the comparable Chaparrón complex in the Llanuras de San Carlos, Costa Rica (1984: 205–206, fig. 8.4). No dates were obtained for this complex, but Snarskis estimated that Chaparrón should be placed at about 800–400 B.C. Hoopes (1984, 1987) described another early ceramic complex (called Tronadora) from excavations in the vicinity of the Arenal volcano (Costa Rica), as part of the Proyecto Prehistórico Arenal (Sheets 1984). It shares a large number of traits with Dinarte as well as with Chaparrón, and two relevant C-14 dates were obtained. Two dates for the beginning of the Tronadora phase came from stratigraphic units immediately above the Aguacate Formation. These were 2470(2166)1834 B.C. [Tx-5277: 1780 bc ± 100] and 2860(1822)1000 B.C. [Tx-5279: 1530 bc ± 320]. As Hoopes (1987: 308) noted, "The dendro-corrected 95 percent or 2-sigma confidence interval of the first date falls within that of the second, yielding a calibrated overlap range from 2470–1834 B.C."

These dates appear to validate another date of 1515 B.C. (UCLA-2113A) obtained by Snarskis from Layer D of his contemporary Montana complex of the Costa Rican Atlantic Watershed (Snarskis 1984: 201–204; Lange and Stone 1984: 386).

If these early dates hold true, and there are no reasons to believe they will not, several questions arise. What is the source of these ceramic complexes (Dinarte, Chaparrón, Tronadora)? Most authors believe that they are related to the ceramics on the Guatemalan-Chiapan coast, such as the Barra phase (Lowe 1975), which dates to about 1700 B.C. but is thought to have begun as early as 1800 B.C. (Lowe 1978: 352–53). This leaves open the possibility that a ceramic complex diffused from northeastern South America (whence Lowe would derive the Barra ceramics) through Central America into southern Mesoamerica. On the other hand, a diffusion-migration from the north, with southern Mesoamerica peoples bringing pottery and (maize) agriculture into the Nicaragua-Costa Rica area, also cannot be disregarded. This is especially true since it is thought that the people of Dinarte-Chaparrón-Tronadora practiced maize economy. The more recent uncalibrated Barra phase radiocarbon dates from Paso de la Amada (Ceja Tenorio 1985: 34) of 1350, 1370, and 1410 B.C. cluster between 1600 and 1700 B.C. when calibrated, further supporting a south-to-north dispersion model. There is,



Figure 4.5. Dinarte phase ceramics.

however, no direct evidence for a maize-based economy, as no ground stone material is known to date from any of these phases. [Note: there is both botanical and artifactual evidence for maize from the Tronadora phase.] I prefer the south-to-north scenario to a third one in which the ceramics were derived from the south and the maize from the north, with the two diffusionary tracks meeting in Costa Rica/Greater Nicoya. Only further investigations may settle these questions. Two additional questions bear directly on the Dinarte phase: how did the Dinarte people come to Ometepe Island? and, more important still, why did they come?

The Settlement of Ometepe Island. The first question is rather easily answered by observing that since the shortest distance between the island and the mainland is 7.5 km, as mentioned above, and the depth in this channel considerable, they must have used watercraft—either rafts or, more probably, dugouts. Watercraft must have already been present at this early date, an important indication of available technology also to be applied to other regions. These early watercraft must have been seaworthy, since Lake Nicaragua is often very rough, with heavy wave action that even today makes crossing in a small motorboat hazardous.

The second question is much more difficult to answer. Assuming that the Dinarte people practiced farming, hunting, and fishing, the living conditions on the mainland around Rivas and Granada (if these were their areas of embarkation) should have been quite similar to Ometepe Island. Population pressure, which might have played a role in later migrations, is unlikely for this early date. One might argue that the "settlement" at Los Angeles during Dinarte time was only a temporary fishing camp, but I believe otherwise. It is too far from the lake shore (about one km) and the pottery remnants, in spite of their small quantity, represent too many different vessels to have been brought along on a fishing trip. The Dinarte component at Los Angeles, in my opinion, represents a permanent settlement and most probably not the only one on the island at that time. However, these observations still do not settle the original question.

Fishing was probably no better from here than from the mainland. The hunting and collecting of fruits and other plant materials was probably even better on the mainland than on the rather restricted island. I cannot think of any commodity that could have been growing wild on the island but not the isthmus. The only reason I can think of for settling on Ometepe Island is a higher soil fertility from the volcanic ash content. Crop yields were probably much higher on Ometepe than on the mainland, which may have attracted people to the island. It may be for the same reason that early people settled at the foot of the Arenal volcano at the same time and that volcanic regions all over the world have always been very heavily populated, despite the hazards involved. If this scenario is correct, it supposes that the early

Central Americans had knowledge of soil fertility. It may also be that early agricultural settlements were more often in the volcanic interior than along the shores, where we have traditionally searched for them.

Geomorphological Setting of Cultural Remains. As I have said before, the Dinarte phase material was capped by 55 cm of sterile volcanic soil. [Note: probably tephra.] The lowest level consists of a very hard, laminated formation of whitish color, locally known as *cascajo* (semi-consolidated volcanic ash). This corrects an erroneous interpretation made at the time of the excavations, and maintained for some time afterwards, that this layer represented water-deposited sand, indicating a higher water level of the lake (Haberland 1966: 400). The tephra layer is not a uniform, unstructured mass, as is the "tierra blanca" formation of central El Salvador. The Ometepe layer must have been formed by series of volcanic eruptions, each of them strong enough to form layers up to two cm thick. Small reddish bands appear among the layers, indicating that the formation took some time, allowing the beginning of weathering of the uppermost ash. In any case, there seems to be no doubt that the *cascajo* represents heavy volcanic activity, which probably drove the earliest inhabitants from this settlement, if not from the island.

Cascajo layers were encountered in some but not all of our soil profiles (Haberland 1966, fig. 1). They were usually present in the southern part of the Moyogalpa Plain, but frequently absent in the northern part. This suggests that the ash was distributed by the same northeasterly winds that prevail today. The correlation of the different *cascajo* layers (there are usually two in each stratigraphic profile) was very difficult, since the profiles often changed substantially over only short distances. However, the lowest *cascajo* levels at San Roque (Om-8) and La Paloma (Om-2), as well as those of test pits 8 and 9 at Los Angeles (Om-9), may record the same events. Unfortunately, in these locations, they cap only culturally sterile soils.

In test pits 1 and 2 at Los Angeles, there is a dark loose ash layer above the *cascajo*, capped by a loamy brownish ash and, on top of the sterile layers, by a very fine gray-to-brownish ash. The latter underlies the reddish brown soil ("Braunlem"), which again contained artifacts. This 55 cm-thick complex of various volcanic ashes shows a long and vigorous but intermittent volcanic activity. The Dinarte phase people may have abandoned the island because of these volcanic activities, or resettled at as yet undiscovered sites in other parts of Ometepe.

Angeles Phase (800–300 B.C.)

Settlement Data. Pure Angeles phase material has been found only at the bottom of two test pits at Los Angeles (Om-9, nos. 8 and 9). It was also present in small quantities, mixed with subsequent material (Sinacapa phase)

at Los Angeles, in test pits 1 and 2 (the same test pits that yielded the Dinarte phase material), and probably in the lowest layers of pits 1 and 2 at La Paloma (Om-2). Furthermore, the two vessels found in 1958 near the skeleton at Los Hornos (Om-4), but not connected with it, may belong in this phase (Haberland 1961, fig. 6). Finally, three of the surveyed sites give indications that the Angeles phase may be present: Punta Viva (Om-14), Bajadero de Esquipulas (Om-15), and Sinacapa (Om-40; see Figure 4.4), although these interpretations remain to be verified.

Ceramics. The plain pottery of the Angeles phase is gray or red and, in contrast to the Ometepe Grey of the Dinarte phase, is highly polished on the outside. Tecomates with extremely thickened rims and rounded lips are highly characteristic and easily distinguishable. Decoration of the monochrome ceramics was done by pre-firing zoned incising and zoned grooving. Palmar Zoned Incised is the outstanding decorated type. Bocana Zoned Incised and Toya Zoned Incised may also be present. A revision of this material may show, however, that all of it could be included in Palmar, as suggested by Lange (1980a) and Lange et al. (1984).

Other Artifacts. Unfortunately, no lithic or bone material has been recovered that might be unquestionably assigned to the Angeles phase, nor have any "special" ceramic objects. Nevertheless, a subsistence by agriculture, hunting, and fishing seems probable.

Regional Comparisons. Based on the decorated ceramics, the Angeles phase is comparable to the "Loma B" phase ceramics from the Vidor site near the Bay of Culebra, Guanacaste, Costa Rica, which has been dated by Lange (1980a: 36) to between 800 and 300 B.C. The different regional sequences for Greater Nicoya are summarized in Table 4.1.

Sinacapa Phase (200 B.C.–A.D. 1)

Settlement Pattern. Pure deposits were found at five test pits (1, 2, 8, 9, and 11) at Los Angeles (Om-9). A dense settlement pattern is indicated during this time, since some test pits were up to 500 m apart. Another more or less pure deposit was encountered at La Paloma (Om-2; pit 2), while Los Hornos (Om-4, pit 1) and San Roque (Om-8, pit 1) yielded mixed deposits, at least according to the preliminary sorting. Furthermore, characteristic ceramics of Sinacapa have been found at seven survey sites: Las Mercedes (Om-11), El Cairo I (Om-26), El Cairo II (Om-28), Punta Gorda (Om-31), Corozal II (Om-36), Sinacapa (Om-40) and Moyogalpa itself (Om-52). Of these seven sites (Figure 4.6), four are situated on the Maderas half of the island (which was only surveyed), where the Sinacapa phase represents the oldest cultural component.

Table 4.1. Ometepe Island Site Inventory.

| Site No. | | Periods/Phases Represented | | | | | | | | | |
|----------|------------------------|----------------------------|----|---|-----|---|-----|----|----|----|--|
| | | D, | ZB | | EP | | MP | | LP | SA | |
| | | A, | S, | M | SR, | G | LP, | SL | | | |
| Om-1 | Quinta | | | | x | | x | | | | |
| Om-2 | La Paloma | | x | x | ? | x | x | | | | |
| Om-3 | Noche Buena | | | | x | x | | | | | |
| Om-4 | Los Hornos | ? | x | | | | x | | | | |
| Om-5 | Tierra Blanca | | | | | x | | | | | |
| Om-6 | San Antonio del Norte | | | | | | | | | x | |
| Om-7 | Chilaite | | | | | | x | | | x | |
| Om-8 | San Roque | | x | x | x | | | | | x | |
| Om-9 | Los Angeles | x | x | x | x | | x | | | | |
| Om-10 | Antigual | | | | | | x | | | | |
| Om-11 | Las Mercedes | | x | | | | | | | | |
| Om-12 | La Lava | | | ? | | | | | | | |
| Om-13 | Unnamed | no chronological placement | | | | | | | | | |
| Om-14 | Punta Viva | | x | | | | | | | | |
| Om-15 | Bajadero de Esquipulas | | x | | | | | | | | |
| Om-16 | San Lázaro | | | | | | | x | | | |
| Om-17 | Unnamed | no chronological placement | | | | | | | | | |
| Om-18 | Sacramento | | | | | x | | | | | |
| Om-19 | La Providencia | | | x | x | | | | | | |
| Om-20 | Santa María | | | x | | | | | | | |
| Om-21 | Unnamed | no chronological placement | | | | | | | | | |
| Om-22 | El Guineo | | | | | | x | | | | |
| Om-23-24 | Unnamed | no chronological placement | | | | | | | | | |
| Om-25 | La Palma III | | | | | | x | x | | | |
| Om-26 | El Cairo I | | x | | | | | | | x | |
| Om-27 | Unnamed | no chronological placement | | | | | | | | | |
| Om-28 | El Cairo II | | | x | | | x | | | | |
| Om-29 | Unnamed | no chronological placement | | | | | | | | | |
| Om-30 | Jaragual | | | | | x | x | x | | | |
| Om-31 | Punta Gorda | | x | | | x | | | | | |
| Om-32 | El Perú | | | | x | | x | | | | |
| Om-33 | La Gloria | | | x | | | x | x | | | |
| Om-34 | Tichana | | | x | | | | | | | |
| Om-35 | Unnamed | no chronological placement | | | | | | | | | |
| Om-36 | Corozal I | | | x | | | | | | | |
| Om-37-38 | Unnamed | no chronological placement | | | | | | | | | |
| Om-39 | Santa Teresa | | | x | | | x | | | | |

Table 4.1. Ometepe Island Site Inventory (continued)

| Site No. | | Periods/Phases Represented | | | | | | | | | |
|----------|----------------|----------------------------|----|---|-----|---|-----|----|----|----|--|
| | | D, | ZB | | EP | | MP | | LP | SA | |
| | | A, | S, | M | SR, | G | LP, | SL | | | |
| Om-40 | Sinacapa | | ? | x | | | | | | | |
| Om-41 | Teguisapa I | | | | x | | | | | | |
| Om-42 | Teguisapa II | | | | | | | x | | | |
| Om-43 | Las Pilas | | | | x | | | | | | |
| Om-44 | Piñon Seca | | | | x | | | x | | | |
| Om-45 | La Primavera | | | | x | | | | | | |
| Om-46 | Buen Suceso | | | | | | | x | | | |
| Om-47 | Calaysa | | | | x | | | | | x | |
| Om-48 | Alta Gracia | | | | x | | | x | | x | |
| Om-49 | Unnamed | no chronological placement | | | | | | | | | |
| Om-50 | Punta Robles | | | | | | | | | x | |
| Om-51 | El Respiradero | | | | | x | | | | | |
| Om-52 | Moyogalpa | | | x | | | | x | | | |
| Om-53 | Unnamed | no chronological placement | | | | | | | | | |

KEY: D = Dinarte phase, A = Angeles phase, S = Sinacapa phase, M = Manantial phase, SR = San Roque phase, G = Gato phase, LP = La Paloma phase, SL = San Lázaro phase, SA = Santa Ana phase.

Ceramics. There was a change in the monochrome pottery from the Angeles phase to the Sinacapa phase. While some of the grayish-brown ceramics of the earlier phase continued to be present, a usually very thin-walled red pottery appeared and soon became dominant. The appearance of this culinary pottery, which has no antecedent on the island, indicates a new wave of immigrants from the mainland who introduced other pottery styles and other ideas. The tecomate form disappears at this time, and the main ceramic forms are now globular vessels with variable (but never excessively long) necks ("ollas"), and flat bowls which might rather be called "deep dishes," often with three small solid feet. Some of the dishes show punctation on the unpainted center of the interior, identifying them as molcajetes, a form generally thought to have been used for grinding. However, my workmen pointed out to me that more probably the molcajetes had been used for baking tortillas, with the rough punctations preventing the tortillas from sticking to the dish. This is certainly a possibility to be further explored, at least for the early levels.

The most diagnostic decorated ceramics of the Sinacapa phase are Schettel Incised and Rosales Zoned Engraved. [Note: these and other ceramic types mentioned in this chapter are illustrated, and their temporal and geograph-

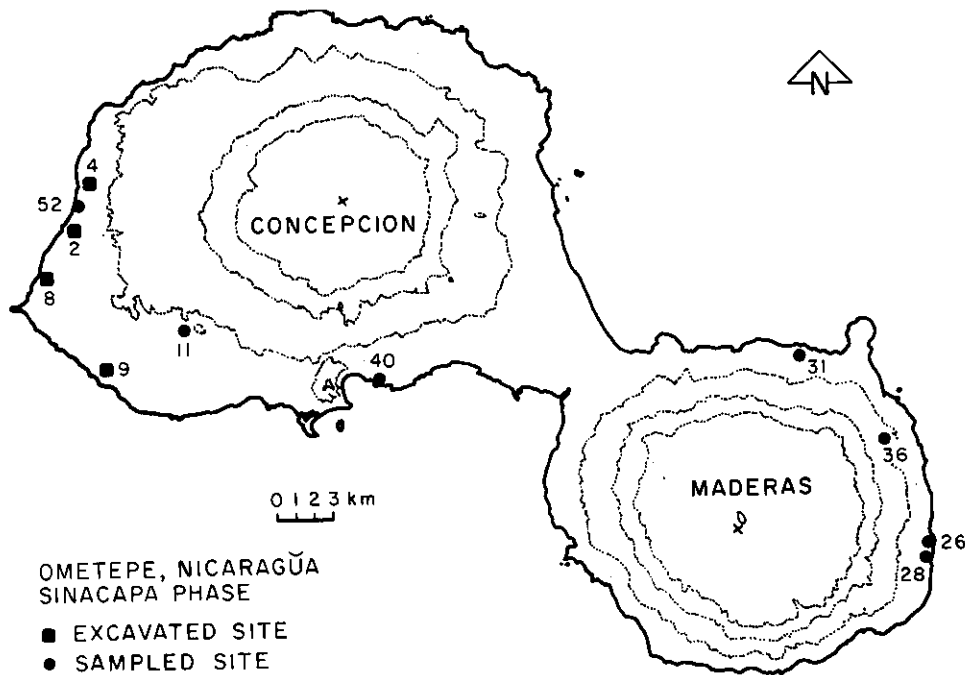


Figure 4.6. Distribution of Sinacapa phase sites.

ical significance more fully discussed, in Chapter 7.] Schettel Incised may have developed from the grooved and zoned ceramics of earlier times, where horizontal flaring and ornamental lips had already appeared (cf. the Palmar Zoned Incised vessel from Los Hornos [Haberland 1961, fig. 6, right]). At Las Mercedes (Om-11) we were fortunate enough to find sufficient sherds from a single vessel, weathered from a road cut, to permit the reconstruction of the form of the vessel: it had a horizontal lip, a vertical, slightly curving wall, a pronounced but rounded break at the lower end of the wall, and a slightly rounded bottom. This was the first time a complete Schettel vessel form was observed. The vessel did not have any additional decoration on its body.

Rosales Zoned Engraved, which in Nicaragua is much rarer than Schettel Incised, is certainly part of the same ceramic group as the monochrome red type mentioned above. Actually, some of these sherds may be undecorated parts of Rosales. Some black-on-red and orange-on-red types should be included in the same group, which is not sufficiently well typed to be included in the Rivas ceramics as described by Healy (1980). There is, furthermore, a black-on-red negative type present, also a part of the same

ceramic group. All of these types appear only in very small quantities and may have been imported to the island from the isthmus, where they probably were manufactured.

A third major type from the Sinacapa phase is García Ridged, a minor red-on-plain (mostly beige) type. Some Usulután-like sherds were also recovered.

Other Artifacts and Subsistence. Some cultural material other than ceramics can be assigned to this phase, enabling us to have a better idea of life on Ometepe Island. One fragmentary and two complete manos (all with circular cross-sections), together with the molcajates mentioned above, support previous assumptions that maize agriculture was the main subsistence basis.

Fishing and hunting also played a role, as shown by the faunal remains collected during excavation. [Note: various researchers in Greater Nicoya assess the role of maize very differently. Lange (1971, 1984a), for example, has pointed out that there is very little artifactual evidence for maize in either the northern or the southern sector. Analysis of human skeletal remains by Norr and Coleman (1982) also indicates a very low level of maize consumption (less than 15 percent of the diet) in prehistoric southern sector populations. Data from the Arenal Project in the Cordillera of Guanacaste also show a very low level of maize consumption (Sheets 1984). Healy (1980), on the other hand, feels that maize was a significant item in the diet in Rivas. Given the relatively few individuals that have been analyzed, the potential for diachronic shifts in agricultural and consumption patterns, the significant possibility of regional variation in maize consumption, the possibility of maize processing by nonpreserved wooden tools, and differential access to maize based on criteria of age, sex, or rank, the overall relative importance of maize is still an open question.]

The Sinacapa phase signals the appearance of special lithic tools, best described as "four-sided choppers." Typically, these implements are flat (1–2 cm thick), rectangular (mean measurement is 15 cm x 25 cm) slabs of dense, sometimes obviously layered stone. The surfaces are either smooth (the natural surface), or roughly chipped to thin the instrument. Usually, all four edges are beveled from both sides and smoothed by grinding, as is the adjacent surface area. The edges, however, seem not to have been sharp enough to have been used instead of celts, which are absent from Sinacapa phase contexts. Also, since there are no indications of hafting, these tools were apparently hand-held. The purpose of these "choppers" is unknown, although they may have been used for cracking open nuts or turtle shells or to mash something like tubers. Nearly all specimens recovered appeared to have been cracked from use, suggesting that they were utilized in a task that required a great expenditure of force.

Comparable implements are unknown from other sites in Nicaragua and Costa Rica. Healy (1980, pl. 13 c-d) illustrated some "beveled flat slate axes" from the Early Polychrome period that are somewhat comparable, but different in that they are beveled on only one side and also are generally smaller. They may have been used for similar purposes, however, which would, in my opinion, exclude them from having been used as axes or hoes, as Healy suggested.

Other implements recovered from Sinacapa phase contexts included a perforated sherd disk that may have functioned as a spindle whorl, a perforated animal tooth certainly used as a pendant, and a number of cylindrical ear plugs made of clay. The latter are hollow and undecorated, and slightly larger at the ends than in the middle. Healy (1980, fig. 213c) illustrated similar ear plugs from the Palos Negros phase of the Rivas region.

Finally, two small, very unsophisticated stone female figures with prominent posteriors may belong to either the Sinacapa or the following phase, as they were found at San Roque (Om-8) in mixed contexts. The figures probably represent fertility deities, and give us a limited glimpse of the religious beliefs of the period.

Regional Comparisons. The presence of Schettel Incised and Rosales Zoned Engraved ceramics links the Sinacapa phase with the Aviles phase of the Rivas region, the Orso phase on the Bay of Culebra, and the Chombo phase on the Santa Elena Peninsula, suggesting dates between 300 B.C.—A.D. 1. These ceramics foreshadow a ceramic tradition that, once begun in Greater Nicoya, persisted for almost 1000 years. This tradition is best exemplified by the various red-slipped pottery types, which probably form a single ceramic group. The ceramics in this group are very similar to those of the preceding phase. Other cultural elements such as pottery ear plugs, and, at least on Ometepe Island, the "four-sided choppers" further contribute to the tradition that marks the initial unification of Greater Nicoya as a cultural entity in lower Central America. Whether the tradition developed there, or was introduced from external sources cannot be determined yet. I believe, however, that it was "home grown" in Greater Nicoya, though it was intrusive on Ometepe Island.

Manantial Phase (A.D. 1–500)

Settlement Data. Pure components of this phase have been found in three test pits (8, 9, and 10) at Los Angeles (Om-9), in both test pits at San Roque (Om-8), and in pit 1 of La Paloma (Om-2). The phase also may be represented in the lowest levels at La Providencia (Om-19). Manantial phase materials are especially difficult to identify in surface collections, and only two survey sites were assigned to this phase—Santa María (Om-20) and

Tichana (Om-34). Three more sites may also contain Manantial phase materials: La Lava (Om-12), La Gloria (Om-33), and Santa Teresa (Om-39; see Figure 4.4).

Subsistence Patterns. There is no direct indication of agriculture, with perhaps the exception of the molcajetes. Hunting and fishing activities are reflected in large quantities of faunal material. At the San Roque site, a large number of fish bones were recovered. How various species of fish were caught is still open to question since only a single net sinker, shaped from a sherd, has been found (at La Paloma) and even this find was from an uncertain context. Turtle bones, already present in Sinacapa phase deposits, show a marked increase during Manantial times.

Ceramics. The dominant monochrome ceramic type is a polished redware. The walls are thicker than the plain redwares of the Sinacapa phase, although the two groups of ceramics are certainly related. Typical forms are flat bowls and deep dishes, often with tripod feet, as well as the standard ollas. The tripod feet of this redware, as well as some of the decorated feet of the black-on-red ceramics, are often solid, hemispherical, and have a large columnar "nipple," frequently placed eccentrically on the spheroid support. Healy (1980, fig. 92, middle) found similar feet on bowls of his Rivas Red/Rivas Variety, and the Manantial phase redwares from Ometepe probably belong in this ceramic group. Molcajetes are present in these plain redwares, but they are probably not the Rivas Red/León Variety described by Healy (1980: 209–211).

Decorated Manantial phase ceramics include García Ridged, Espinoza Red-Banded, at least two types of black-on-red, one of them certainly Puerto Black-on-Red, and orange-on-red. Grooving is present but rare, as are Usulután technique painted sherds. This assemblage is somewhat like that already described from the preceding Sinacapa phase, and is perhaps best characterized by overall continuity, except for the absence of two diagnostic Sinacapa phase ceramic types: Schettel Incised and Rosales Zoned Engraved, as well as the change in the plain redwares. The solid mammiform feet also proved to be significant as chronological indicators.

The similarity with the Sinacapa phase material makes it very difficult to assign surface collections to this phase, since the absence of either Schettel or Rosales may be purely accidental in small surface collections. Without the various stratigraphic tests, we probably would not have found this division and would have lumped the two phases together.

Other Artifacts. During the Manantial phase four-sided choppers increase in abundance. Other types of lithic implements are unknown. Bone points, many of them made from turtle shell, are also present. Again, these occurred

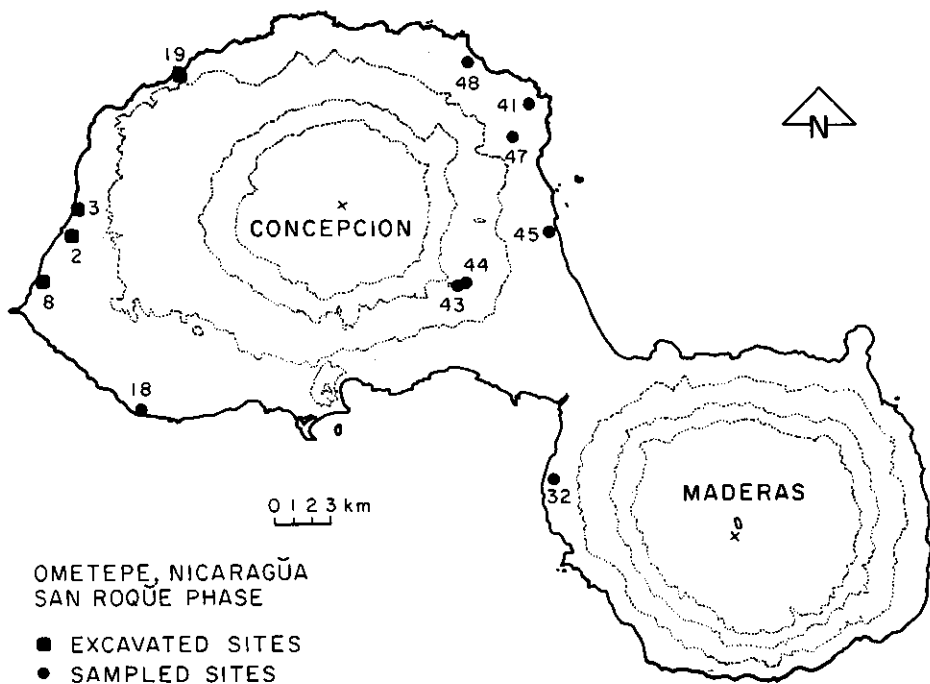


Figure 4.7. Distribution of San Roque phase sites.

first during Sinacapa phase times and increased in number during the Manantial phase. Hollow and tubular ceramic ear plugs continued to be utilized. Large fish and perhaps shark vertebrae were also items of personal adornment. The two stone female figures mentioned under the Sinacapa phase section may possibly belong here as well.

Volcanic Activity. The end of the Manantial phase at San Roque (Om-8) is marked by a new *cascajo* layer 8 to 12 cm thick, laminated in the same manner as the layer marking the end of the Dinarte phase. The Manantial phase layer looks identical to the Dinarte phase layer, and could be confused with it, if not for the stratigraphic separation at San Roque, and if the archaeological context did not indicate a different temporal setting. At La Paloma (Om-2), the Manantial phase component is separated from subsequent levels by several loose ash layers, which may or may not correspond to the San Roque *cascajo*.

At Los Angeles (Om-9), Manantial phase materials appear near the top of the column in test pits 8 and 9. In pit 10, however, it is beneath a *cascajo*

layer up to 30 cm thick, which was not penetrated by subsequent burials. The same may be true at the Los Angeles cemetery (pits 3–7, and extensions), which is discussed more completely under the Gato phase below. At the Los Angeles cemetery, however, *huaquero* (grave robber) disturbances have destroyed all archaeological stratigraphy.

The fact that the burials at Los Angeles went through the *cascajo* layer indicates that it preceded the Gato phase. Despite these difficulties, we can conclude that the Manantial phase ended with significant volcanic events, although evidence for this remains only on the southern half of the Plain of Moyogalpa. These events obviously did not result in complete abandonment of the island, and at San Roque, for instance, the following phase is well represented above the *cascajo*. Nevertheless, we must assume that certain sites like San Roque, and probably also La Paloma, were temporarily abandoned.

Regional Comparisons. No radiocarbon dates exist from Manantial phase contexts. The phase does seem to correlate with the San Jorge phase of the Rivas region, although none of the phases from the Vidor site, nor from elsewhere in the rest of the southern sector of Greater Nicoya, seems to correlate with the Manantial phase. Perhaps this phase is peculiar to the development of the northern sector of Greater Nicoya, or perhaps in the southern sector it is lumped in with phases such as the Chombo or the Orso.

San Roque Phase (A.D. 500–950)

Settlement Data. Pure levels from this phase have been found in six test pits at three different sites: in both San Roque (Om-8) tests, at the bottom of both Noche Buena (Om-3) pits, and in the two La Providencia (Om-19) tests. Evidence of the phase was probably present in most of the other test excavations, for example, at La Paloma (Om-2) pits 1 and 2, but was either mixed with later levels or, according to preliminary evaluation of the data, not well defined. On the other hand, San Roque phase material tends to occur in rather thick layers, with dense concentrations of cultural material. This is especially true for the type site of San Roque and for the Noche Buena site. The following survey sites also yielded some San Roque materials: Sacramento (Om-18), El Peru (Om-32), Teguisapa I (Om-41), Las Pilas (Om-43), Piñon Saca (Om-44), La Primavera (Om-45), Calaysa (Om-47), and San Miguel near Alta Gracia (Om-48; Figure 4.7). Whether the presence of San Roque material, especially in sites surveyed in the eastern (Alta Gracia) part of the Concepción half of the island, has any significance—perhaps a settlement shift because of ash falls—cannot yet be determined.

Subsistence. Agriculture was certainly important during the San Roque phase, as shown in the number of mano and metate fragments, as well as basin-shaped mortars. Faunal remains were abundant, especially at San Roque, but the percentage of fish bone declined. This may only be a reflection of soil conditions, since a large number of net sinkers suggest continued emphasis on exploitation of the fish in the lake. Rims and bodysherds used as net sinkers are made from ceramics from preceding phases; thus, if the sinkers are not found in context, their actual use cannot be firmly associated with any phase. Turtle bones occur frequently and turtle hunting was obviously an important subsistence activity.

Ceramics. Tola Trichrome is a characteristic ceramic of the San Roque phase, as is González Polychrome (Galo Polychrome), which appears late in the phase and in lesser numbers. [Note: the Greater Nicoya Ceramic Conferences (Lange et al. 1984; Bonilla et al. 1987) decided to combine Galo Polychrome and González Polychrome under a single type name, Galo Polychrome. There is still some question as to whether this consolidation is absolute, or whether we are dealing with northern (González) and southern (Galo) varieties of a type. Specialized Galo Polychrome forms, such as human female figurines, do not seem to occur in Nicaragua.] Other decorated ceramic types include the Urcuyu and Chávez varieties of Chávez White-on-Red, which on Ometepe is more a cream-on-red. [Note: on the Bay of Salinas, Lange (1971) described a similar Chávez variant, which he called "Alhambra Orange-on-Red"; he now accepts this as a technical variation within the Chávez White-on-Red type rather than a separate type.] A black-on-red type (probably Obando) and Espinoza Red-Banded are also present. During this phase, cream-on-red replaces the older orange-on-red with which it often shares designs. Some ridged material might also appear during this phase as a carryover from the earlier phases.

Monochrome red ceramics, already dominant since the Sinacapa phase, continue to be present and are of the same type as during the Manantial phase (possibly the type Rivas Red [Healy 1980: 205]). Ollas and deep dishes with tripod legs are the dominant forms, and the feet are now nearly always hollow and often either animal-shaped or ornamented with appliqué animal heads. Zoomorphic vessels, developed from ollas, are frequent. Besides these vessels and the typical globular ollas, some ollas occur with a rhomboid circumference (Figure 4.8). These are sometimes pointed on two sides, with abstract appliqué animal heads decorating these "points." Molcajetes are frequent among the monochrome and bichrome legged dishes, but the punctation is shallower and not as well arranged as in the molcajetes of the Sinacapa and Manantial phases. Handles occur but are not abundant. Special shapes include incense ladles with deep bowls and straight hollow handles sometimes in animal shapes, very thin-walled sieves (the type Combo



Figure 4.8. "Pointed Olla," i.e. olla with a rhomboid circumference, red-painted, with some appliqué features. Reconstructed from sherds in Feature 8, Los Angeles cemetery. Gato phase.

Colander [Baudez 1967: 175; Healy 1980: 113]), and pot stands made from the necks of broken ollas.

Other Artifacts. In addition to the manos, metates, and mortars, other tools have been found. Among them was part of a stone celt, the oldest recovered from Ometepe during the excavations. The four-sided choppers reached their peak distribution during this phase, and there were many bone points as well as bone awls and spatulas. There was one sting ray spine, almost certainly from the Pacific coast.



Figure 4.9. Human figure bone pendant. San Roque (Om-8). San Roque phase.



Figure 4.10. Small stone (female?) figure from San Roque (Om-8). Sinacapa or Manantial phase.

Clay ear plugs were quite common. They continued to be cylindrical and hollow but were larger and more massive and often had grooving on the fronts or on the sides. Similar ear plugs were illustrated by Healy (1980, fig. 123e). Large fish vertebrae that have been slightly smoothed were probably used as ear ornaments. Other items of personal adornment included a pierced animal tooth, a single, rather crude clay bead, and a beautiful small human figure (Figure 4.9) carved from bone, with a suspension hole through the neck.

At La Providencia, a small female (?) figure of soft stone (Figure 4.10) was found (perhaps a continuation of the Sinacapa-Manantial phase stone figures) that may have had religious significance. Some fragments of hollow clay figures and a small ocarina were also found.

Mortuary Remains. A single burial from this phase found at Los Hornos (Haberland 1961) was extended on its back. The deceased was probably a shaman during life, as shown by the accompanying grave goods: a Tola Trichrome incense ladle, a smooth stone, a sucking tube (?) of bone, and a ring fashioned from a sherd. Since this burial appears to have been

somewhat special, this example may not be representative. Such ceramic rings have also been found in other levels of San Roque times but their function is unknown.

Regional Comparisons. The San Roque phase on Ometepe correlates with the Palos Negros phase in the Rivas region, the Mata de Uva phase at the Vidor site, the Culebra phase on the Bay of Culebra, the Santa Elena phase on the Santa Elena Peninsula, the Matapalo phase on Tamarindo Bay, and the San Bosco phase in the Tempisque Valley. Such widespread distribution shows that during this time Greater Nicoya had a high degree of cohesion. Never in later times was there such an areal uniformity.

Gato Phase (A.D. 1000–1200)

Settlement Data. This phase was somewhat difficult to define and might have gone unnoticed if the cemetery at Los Angeles (Om-9) had not been found. The phase is transitional between the Early and Middle Polychrome periods, and in non-mortuary contexts might have been attributed to mixed cultural layers. However, with our knowledge from the cemetery, layers from five test pits at three sites were tentatively assigned to this short phase: pits 2 and 3 at Tierra Blanca (Om-5), pits 1 and 2 at La Paloma (Om-2), and pit 1 at Noche Buena (Om-3). With further evaluation of excavated data, more units may fall into this phase. Burned clay from the exterior of wattle and daub houses demonstrates continuity in housing construction from the San Roque phase. The nature of the Gato phase material makes it extremely difficult to assign sites that were only surveyed to this phase. Only three are assigned with any degree of certainty: Jaragual (Om-30), Punta Gorda (Om-31), and the site of El Respiradero (Om-51; Figure 4.4). El Respiradero (Om-51) is an offering place near a still active volcanic blow-hole halfway up the Concepción volcano. A large number of smashed Potosí Appliqué incense burners were found there (Schmidt 1966). This type may be intimately connected with volcanoes, since it seems, with its cover, to imitate the volcano shape, especially with the smoke hole in the top of the incensario creating the illusion of a smoking volcano.

There may be still another connection between Potosí and volcanoes, especially Concepción: some of the incensario lids are topped with a female figure instead of an alligator, having a humanoid body and an alligator or dragon head (Figure 4.26; Lothrop 1926, pl. CXVIII from Alta Gracia; Ferrero 1977, pl. 1-85 from Greater Nicoya; Haberland 1971, fig. 8 from the Los Angeles cemetery). These vessels recall a legend still told on Ometepe Island of an old woman who lives inside the Concepción volcano whose fumarolic smoke is the smoke from her cooking fire. It is interesting to speculate that the pots and the oral tradition may be linked across the millennia.



Figure 4.11. Front view of reconstructed shoe-shaped vessel, brushed, with polished red rim. Feature 7, Los Angeles cemetery. Gato phase.

Subsistence. The Gato phase people continued to be agricultural, as shown by mano and metate fragments. Turtle bones are frequent in the faunal assemblage but occur in smaller percentages. Fish bone occurs in low frequencies in contrast with the net-sinkers from rim and bodysherds, which are relatively common. Net-sinkers made from stone are a new trait in this phase. They were made from beach pebbles of light volcanic stone, are often egg-shaped, and have indentations around their midsections.

Ceramics. Since the Gato phase is transitional between the Early and Middle Polychrome periods, its ceramic assemblage contains types from both periods. The monochrome redware (probably Rivas Red) continued from the Early Polychrome period and its final San Roque phase, as did Espinoza Red-Banded, some Chávez White-on-Red (Urcuyu Cream-on-Red), and a few molcajetes. More important is the continuation of Tola Trichrome, which is modified, however, and in field notes was referred to as "Toloid," perhaps more closely resembling Baudez's López Polychrome type (1967: 99–101). [Note: The Greater Nicoya Ceramic Conferences (Lange et al. 1984; Bonilla et al. 1987) have concluded that Lopez Polychrome is actually a southern, Lopez Variety of Tola Trichrome, rather than a separate type.] The Middle Polychrome period is represented by Papagayo Polychrome, most often by the relatively early Papagayo variety and by brushed pottery most often interpreted as ordinary culinary ware.

During this phase, the brushing was characteristically done with great care and the lines are often parallel. Based on some experimentation, the lines were probably made by rubbing the wet clay with corncobs. While thick, the brushed pottery of Gato times is well fired, with few unoxidized parts. Typical shapes are large globular vessels (ollas) with outcurving necks and everted, nearly horizontal rims. The necks and rims were painted red and polished. The shoe-shaped vessels were often slightly modeled at the "tip," showing appliqué ears, eyes, and nose of an animal, with incised mouth and whiskers (Figure 4.11). This decoration transforms the whole vessel into an animal head. Other new shapes, mostly occurring among polychromes, are hemispherical bowls with straight walls and hollow tripod feet.

Aside from these ceramics (also present either in the preceding San Roque phase or the following La Paloma phase) the Gato phase has some characteristic types. One type, Potosí Appliqué (Figure 7.48c), consists exclusively of two-part incense burners (Schmidt 1966). Another characteristic type, Tierra Blanca Appliqué (Figure 4.12), consists of large bowls with straight walls, conical lower parts, small annular bases, and rims with thickened exteriors. The exterior of the body is carefully brushed, and the interior is smoothed and often painted red, as is the rectangular lip on its exterior. Flat appliqué ornaments, mostly in animal shapes, painted red and dark brown and highly polished, are on the exterior walls, usually one per vessel. These ornaments are reminiscent of Tola Trichrome in designs and color. Thus, Tierra Blanca Appliqué, which ultimately may turn out to be only a variety of the brushed ceramics, mirrors the Gato phase ceramics and their transitional character. Another, unnamed monochrome ceramic consists of dark brown-to-blackish ollas with conical necks and horizontal lips. This shape also occurs among the "Toloid" types. Finally, some rather crude underslip-incised sherds occur, as well as some other still unidentified

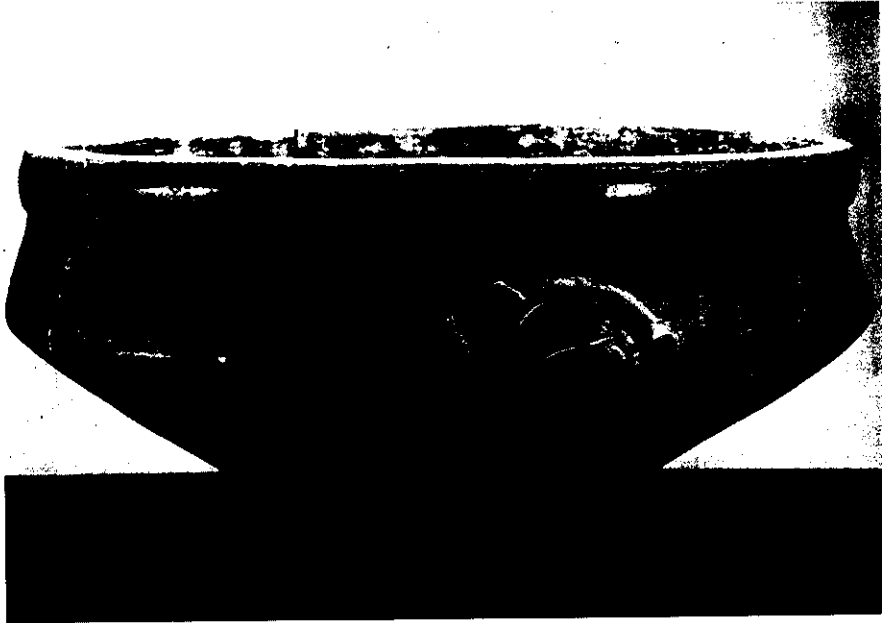


Figure 4.12. Tierra Blanca Appliqué bowl, finely brushed with polished red rim and modeled figure, partly painted in red and dark brown. Reconstructed from Feature 15, Los Angeles cemetery. This bowl covered a similar vessel that contained the remains of an infant (new-born?). Gato phase.

polychromes. These may include specimens of Granada Polychrome and González (Galo) Polychrome.

Other Artifacts. Stone implements include flat metates that sometimes have nubbin feet, manos, celts, and two perforated stones that could have been used as weaving weights. Four-sided choppers disappear from the record.

Among the few bone implements from the Gato phase are parts of bone spatulas, some of the possible “points” mentioned earlier, a dagger or awl, and some massive spindle whorls made from turtle carapaces. Large clay spindle whorls are also present, sometimes with grooved decoration on their painted flat sides. Another special object of this time is a pottery stamp, either flat or of the roller variety.

Mortuary Practices. Given the presence of a formal cemetery, it might have been expected that the burials at Los Angeles would have yielded a wealth of personal ornaments, but quite the reverse was true. It is interesting



Figure 4.13. Los Angeles cemetery. Head of Burial 22 with three additional mandibles in the neck region; probably part of a necklace. Gato phase (photograph by P. Schmidt).

to note, however, that some burials were accompanied by complete turtle carapaces. The only items of personal adornment found were two fish ribs, located on either side of the ascending ramus of the mandible of Burial 22. These may have been earrings. In the same burial, 3 additional human mandibles were encountered near the collar bones of the skeleton (Figure 4.13). These “extra” mandibles may have been used as part of a necklace, although this is doubtful since no holes had been drilled through them. The only comparable example I know of was found in Burial 1 at Nacascolo, Bay of Culebra, Costa Rica. While the description does not say whether the mandible or maxilla was utilized (Wallace and Accola 1980: 55), the photograph (fig. 5A) seems to suggest that it was the maxilla. Contrary to the “extra” Los Angeles mandibles, the Nacascolo maxilla had perforations and other alterations, indicating it was used as an ornament. The Nacascolo burial was dated to the Monte del Barco phase (A.D. 1000–1200, the latter part of the Middle Polychrome period) by Wallace and Accola. [Note: under chronological revision adopted by the Greater Nicoya Ceramic Conferences

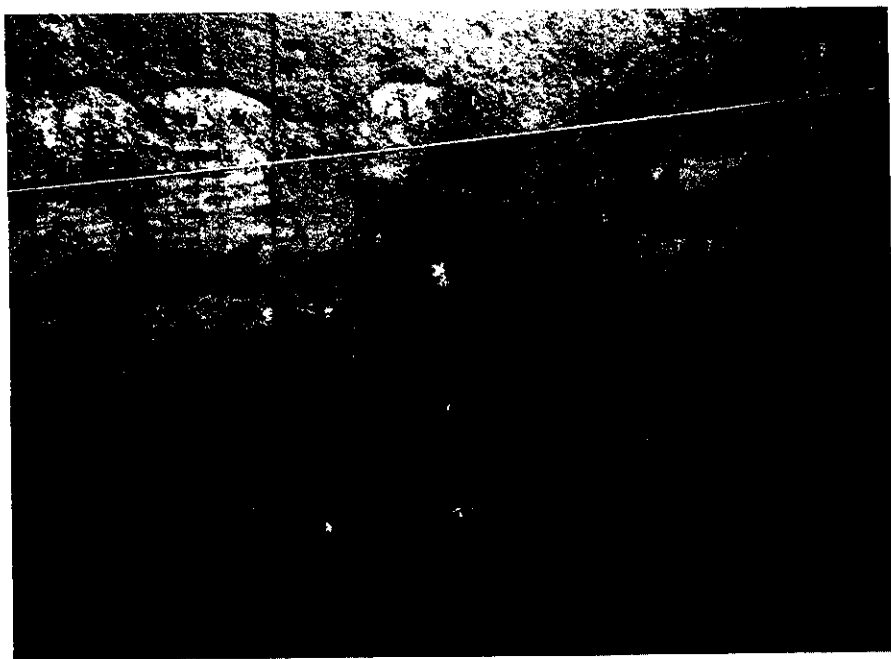


Figure 4.14. Los Angeles cemetery. Excavation cut through a burial shaft in the west wall of square 10. The diagonal excavation for the burial cuts through the thick upper *cascajo* layer. The leg bones of the burial can be seen at the bottom of the disturbed area. Gato phase.

(Lange et al. 1984; Bonilla et al. 1987), the Middle Polychrome period extends until A.D. 1350; the Monte del Barco phase would be in the middle part of the Middle Polychrome period, rather than the latter. There may be some overlap with the dating of the Gato phase, which might strengthen the dating of this multi-mandible/maxilla custom.]

Tubular clay earplugs, so popular during the preceding phases, are completely absent not only from burials but also from general excavation contexts. If personal ornaments were worn by the individuals interred at Los Angeles, they must have consisted of seeds, wood, or other highly perishable materials.

As mentioned above, the first (and best) information on the Gato phase came from a cemetery at Los Angeles (Om-9), only part of which was excavated. One section, of about 75 sq m, yielded 54 primary burials. A later test pit (number 10) 75 m to the east of the main excavation was originally intended to secure an undisturbed stratigraphy, but encountered



Figure 4.15. Los Angeles cemetery. Burial 33. The deceased was laid on his stomach with the head turned to the right. Two small ceramic vessels were placed at the left elbow. Gato phase.

the edge of the cemetery, where five more individuals were recovered. These excavations are described in detail elsewhere (Haberland 1984b, 1986), and only the more important results are summarized here.

The deceased were buried in individual graves, dug either straight or diagonally through the post-Manantial-San Roque phase *cascajo*, which could be observed at various places in the excavation (Figure 4.14). No sign of any roofing over the graves could be seen in most cases, and the bodies must have been covered directly by earth filled in after burial. In a few cases, the dead were placed on or, more rarely, beneath a layer of large stone slabs, but no system could be discerned and these skeletons were even more deteriorated than the others.

Of the 59 primary burials, 49 were extended, two were flexed (one on each side), 2 to 4 were probably seated, and the position of the remaining individuals (4 to 6) was undetermined either because they were too deteriorated or they were too disturbed by *huaquero* activity during the course of the excavations. Furthermore, of the 49 extended skeletons, 32 were definitely (and six more probably) buried face down, with the head often turned to the right side (Figure 4.15). Three other individuals, all sub-adults, were interred face up, while the positions of the other eight could



Figure 4.16. Los Angeles cemetery. Burial 34, showing cranial deformation. Gato phase.

not be determined. Sexing of the skeletal material was conducted and published by Fleischhacker (1972) and indicated a large preponderance of males. However, Fleischhacker and I concur that these analyses may have a significant margin of error.

Most of the physical characteristics can be reviewed in Fleischhacker's report, but some important highlights should be noted here: (1) quite a number of the heads showed cranial deformation by frontal flattening (Figure 4.16); (2) one individual had filed teeth. Such dental mutilation (Type A-1) has also been found in Guanacaste and elsewhere in Costa Rica (Wallace and Accola 1980: 60–61; fig. 7). Some of the dental mutilation examples

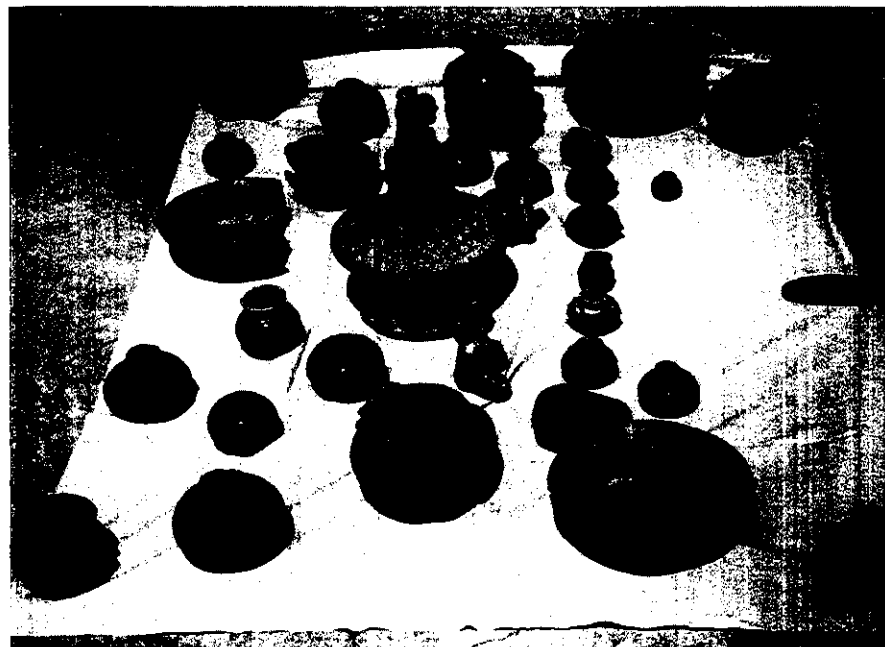


Figure 4.17. Los Angeles cemetery. Complete set of excavated ceramic vessels.

date to the Early Polychrome period and others to the Middle Polychrome period, which fits well with the dating of the Los Angeles cemetery; (3) dental caries were rare and only one individual showed indications of rachitis or malnutrition. Teeth, even of young adults, were heavily reduced, probably indicating a grain diet.

As noted above, grave goods were very rare. In addition to a celt, a possible weaving weight, four spindle whorls (two of bone and two of clay), and the bone "dagger" or awl, as well as the personal ornaments mentioned above, only 20 ceramic vessels (Figure 4.17) accompanied the burials. Since three skeletons had two vessels each, only 17 persons (28.8 percent) were buried with vessels. The small vessels were, in the majority of cases, located either at or above the left shoulder or along the upper left arm. Whether this placement has any significance could not be determined. Fourteen (70 percent) of the "grave vessels" were small ollas with globular, slightly squat bodies. Most significant among these vessels were those with conical necks, as already mentioned. Among the other vessels, two brushed miniatures (both shoe-shaped, one Espinoza-like) and two polychromes with white slip (one a Papagayo Polychrome minus its three legs) should be mentioned.

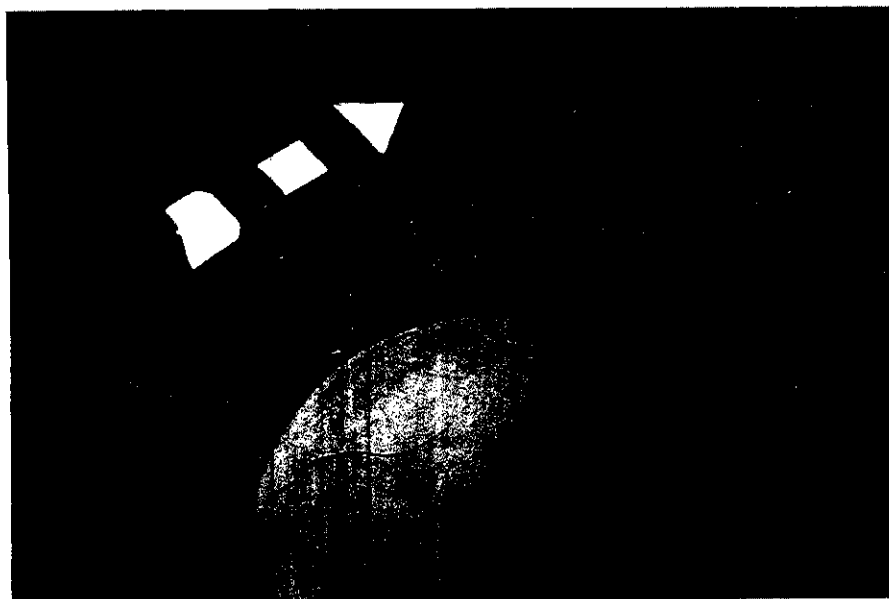


Figure 4.18. Los Angeles cemetery. Large Toloid vessel (Feature 21) showing prehistoric repair holes. Gato phase (photograph by P. Schmidt).

“Toloid” vessels (Figure 4.18) were found near some of the skeletons in pit 10. None was in direct association with the burials, but they were nonetheless considered to be part of the mortuary complex. They were not included in the total vessel counts from the cemetery, however, nor was the pile of four small vessels (two polychromes, one olla with a conical neck, and one brushed shoe-shaped vessel) and a hollow polychrome figurine found near Burial 14 (Figure 4.19). These vessels were at the left side of the individual, while a small vessel was at its right shoulder. This was the only instance in which both left and right placements occurred together. This appears to have been part of the grave furniture of a six-year-old child and was by far the richest burial encountered in the Los Angeles cemetery.

Two other types of features encountered at the Los Angeles cemetery should be discussed. One consists of a number of large vessels (Figure 4.20) that were obviously used as burial urns for very small children (less than one year of age, if not newborn). With one exception these were brushed ollas, or shoe-shaped vessels, usually covered by an inverted bowl (one an



Figure 4.19. Los Angeles cemetery. Four small pottery vessels, mostly polychrome painted, and a hollow Papagayo Polychrome figurine at the side of Burial 14. Gato phase.

early Papagayo Polychrome bowl) or a large sherd. Other than tiny bones, grave offerings were found in only one urn, where two Tierra Blanca Appliqué bowls had been set rim to rim, that is, with one covering the other. Besides the very small bones, these Tierra Blanca bowls contained a miniature ceramic vessel. It is interesting that in one case, the hand of a skeleton (Burial 40) touched the wall of such an urn (Feature 12). It is tempting to believe that we found the burial of a mother who perhaps died in childbirth with her infant, but this can never be proven. [Note: similar combinations of women and infants have been found at the Vidor site on the Bay of Culebra (Vázquez and Weaver 1980).]

The other feature “type,” a shaft burial, was encountered four times, but only once (Feature 1) were the conditions sufficiently clear-cut to be described here. Feature 1 began at a depth of about 30 cm as a concentration of rather large sherds, mixed with worked and unworked stones. This concentration, later also distinguished by a change in soil color, continued downward and formed an irregular shaft with a general width of about 65



Figure 4.20. Los Angeles cemetery. Skeleton (Burial 14) with cluster of ceramic vessels at its left side, and one small ceramic vessel next to the head. Feature 5, a shoe-shaped vessel with the skeleton of an infant inside, is in the background.

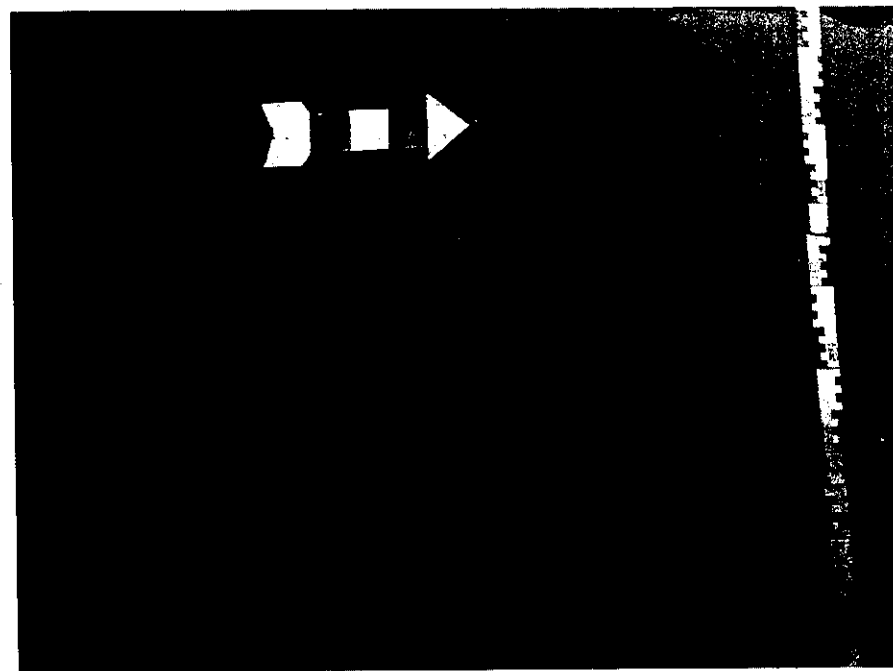


Figure 4.21. Los Angeles cemetery. Metate at the lower end of Feature 1. Gato phase (photograph by P. Schmidt).

cm north-south and a length to the eastern wall of Pit 4 of 75 cm. The shaft went to a depth of 160 cm (Figure 4.21). The real dimensions of the feature could not be measured accurately because the eastern wall, and therefore the eastern part of the feature, had been destroyed by *huaqueros*.

Below 160 cm the shaft became something like a ditch, dug partly into the lapilli layer otherwise untouched by the burials. Here a number of human bones were found (Burial 23), seemingly without any order, except for the legs, which were straight with the toes pointing up. It could be inferred that the deceased had been buried in a sitting position, with the bones above the pelvis scattering when the skeleton subsequently collapsed. The burial was accompanied by a pointed celt, the only complete one found during the excavations.

Many of the sherds from the shaft fitted together, allowing the reconstruction of a number of whole and partial vessels. These sherds from the shaft were of ceramic forms and types not observed elsewhere in the excavations, including two tall vessels of gray-brown color with nearly straight

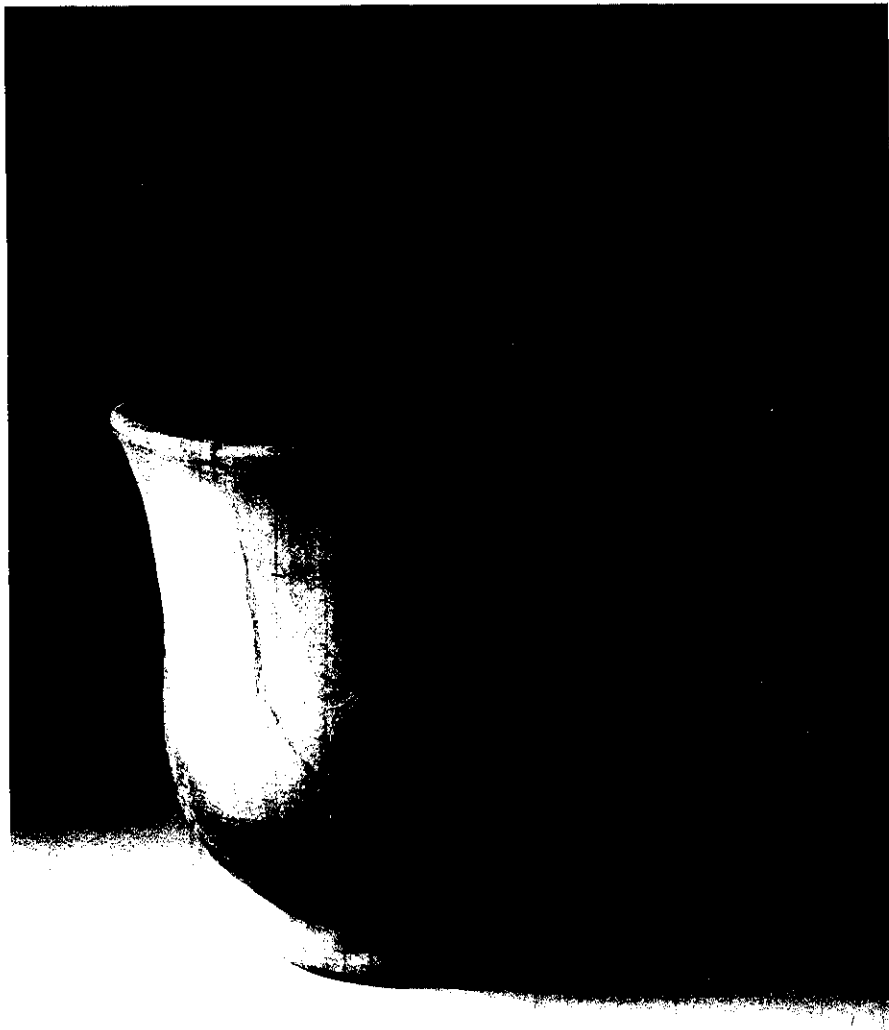


Figure 4.22. Los Angeles cemetery. Open vessel with small annular base. One of several vessels reconstructed from sherds found in Feature 1. Gato phase.

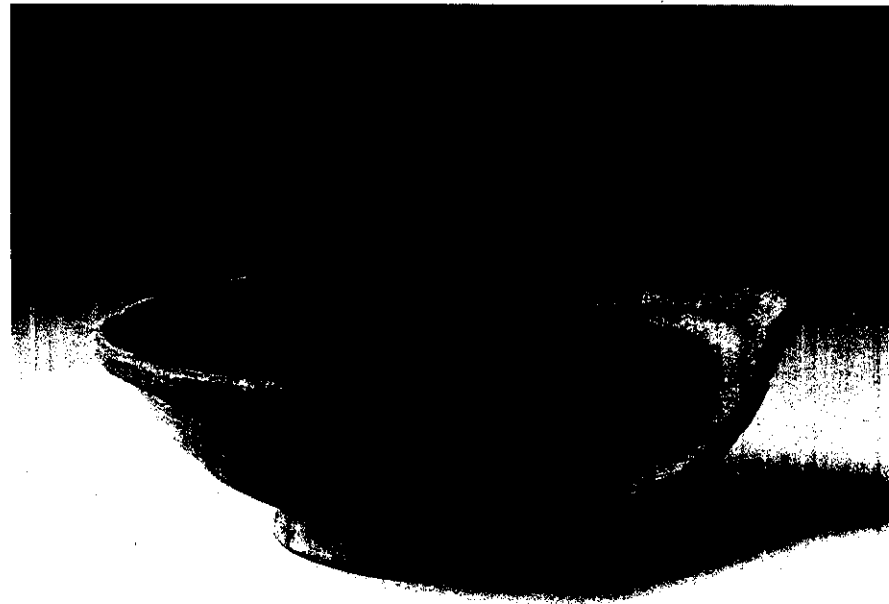


Figure 4.23. Los Angeles cemetery. Orange bowl with annular base and red rim. Reconstructed from sherds found in Feature 1. Gato phase.

walls (Figure 4.22), a small bowl with an annular base (Figure 4.23), and a large funnel-shaped bowl with 3 large, hollow, mammiform legs (Figure 4.24). Nothing comparable to this bowl is known from Greater Nicoya thus far, but the shape is not unusual in the Early Classic period of the Maya area (see Baudez and Becquelin 1973, fig. 14). However, this bowl (and the fragments of another from the same feature) appear not to have been imports. They are red polished—the usual Early Polychrome period slip color—and show typical, although faded, Urcuyu (Chávez White-on-Red/Urcuyu Variety [Lange et al. 1984]) designs. Other vessels found in the shaft were typical ollas, some of them with a rhomboid diameter, as already described for the San Roque phase (Figure 4.24).

A reconstruction of the events leading to the placement of this burial feature suggests that after digging the shaft and grave, the deceased was buried in a seated position, with outstretched legs. Then the shaft was filled with purposely (and perhaps concurrently) smashed ceramic vessels and

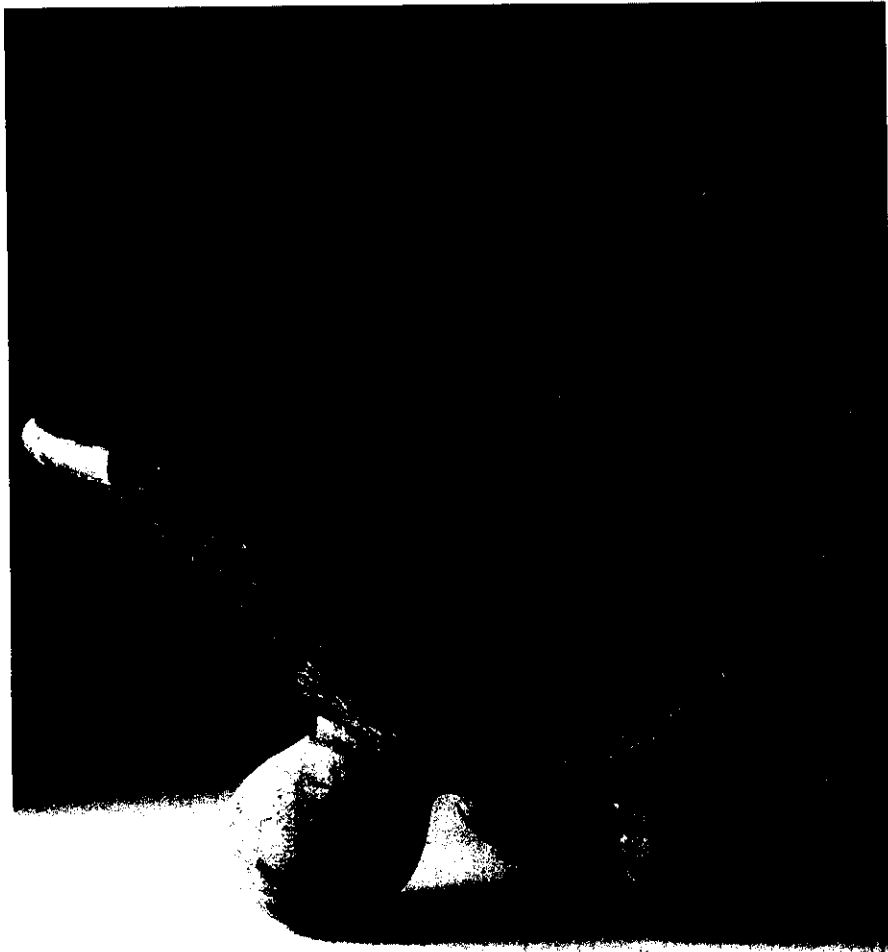


Figure 4.24. Los Angeles cemetery. Large bowl with three hollow mammiform feet, Chávez White-on-Red, Chávez variety. Reconstructed from sherds found in Feature 1. Gato phase.

stones, and was later capped by earth, which gradually filtered into the shaft (Figure 4.25). Why the extraordinary ceramic vessels were purposely destroyed remains something of an enigma. The deceased may have been a higher status individual, as suggested by the presence of the celt in Burial 23, celts being rare on Ometepe Island.

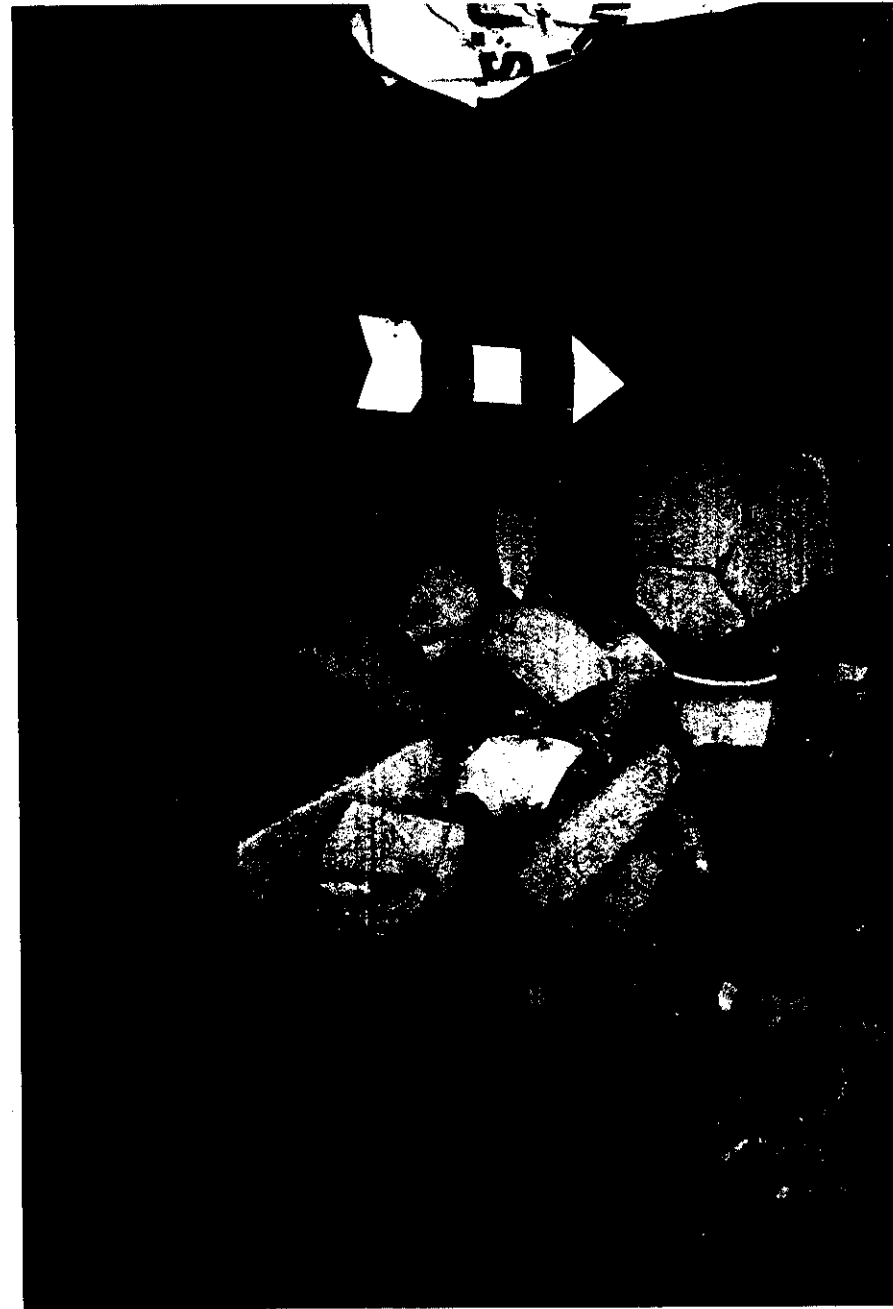


Figure 4.25. Los Angeles cemetery. Smashed pottery in Feature 8. Gato phase.

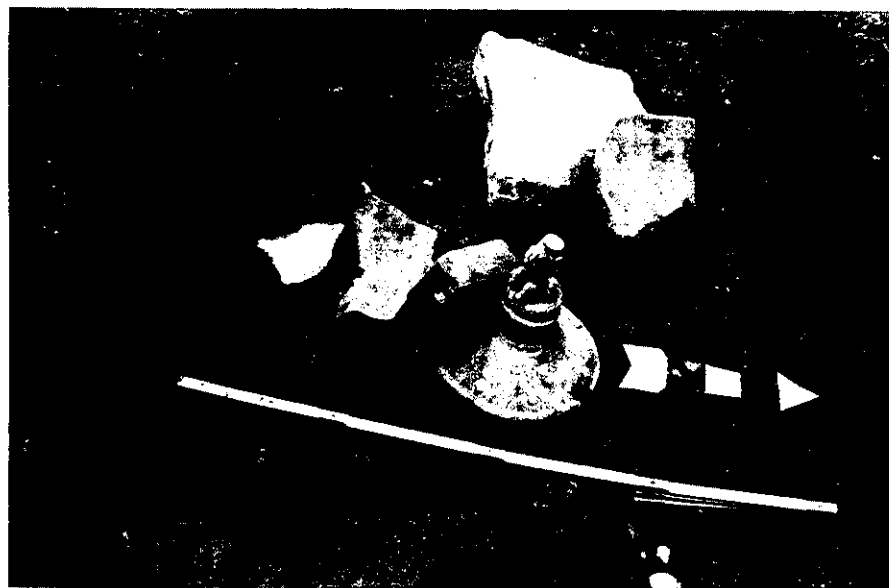


Figure 4.26. Los Angeles cemetery. Incense burner (Potosí Appliqué, Santos variety) with cover in Burial 9. Gato phase.

The Potosí Appliqué/Santos Variety incense burner in Burial 9 (Figure 4.26) (where Feature 2 formed the burial shaft) is another possible indicator of special status. The incense burner appears to have been placed in the grave still burning, as evidenced by the charred twigs in its bowl. There was another similar combination in Feature 12 and Burial 42, although this burial did not have any associated offerings. Feature 8 was another shaft yielding, among other objects, the leg of a stone "throne." The shaft with Burial 27 had been destroyed by *huaquero* activities. These deep shaft graves appear to be something special, and probably relate to the status of the deceased rather than to temporal differences.

Regional Comparisons. One radiocarbon date (Hv-2688) from the Gato phase came from Feature 1 of the Los Angeles cemetery and gave a corrected date of A.D. 980–1070 (see Appendix 1 for the full range of radiocarbon dates from Greater Nicoya). Based on the available chronological information, the Gato phase seems to date from between A.D. 950 and 1100. There appear to be no coeval phases from elsewhere in Greater Nicoya. The Gato phase on Ometepe may be a transitional phase, mistaken else-

where for a mixed level; or the Early Polychrome period may have been prolonged on Ometepe, while elsewhere in Greater Nicoya the Middle Polychrome period was already initiated. This may have been related to the arrival of the Chorotega peoples to the island where, isolated in the middle of the lake, the change from Early to Middle Polychrome was more gradual and perhaps more an amalgamation of two cultures than a displacement of the old by the new. The problem of the arrival of the Chorotegas is still clearly a matter of debate. While the polychrome ceramics point to Mesoamerica, the brushed shoe-shaped vessels (Sacasa Striated) are part of a New World-wide complex of shoe-shaped vessels.

La Paloma Phase (A.D. 1100–1300)

Settlement Data. This phase covers the first part of the Middle Polychrome period, which in its pure form has been found only at one of the ten sites tested, La Paloma (Om-2), where four test pits were excavated. However, other sites, such as Los Hornos (Om-4) and Chilaite (Om-7), also show some evidence of this phase. Houses during this phase continued to be of the wattle and daub type, as evidenced by a number of "briquettes" found at the type site. Fourteen sites that were surveyed but not tested also dated to this phase: Quinta (Om-1), Antigüal (Om-10), El Guineo (Om-22), La Palma III (Om-25), El Cairo II (Om-28), Jaragual (Om-30), El Perú (Om-32), La Gloria (Om-33), Santa Teresa (Om-39), Taguisapa II (Om-42), Piñon Seca (Om-44), Buen Suceso (Om-46), San Miguel/Alta Gracia (Om-48), and Moyogalpa (Om-52; Figure 4.27). Some of these sites may actually represent the Gato phase, since the presence of Papagayo Polychrome was taken as an indication for the La Paloma phase. However, the multicomponent potential of these sites can only be evaluated by excavation.

Subsistence. Agriculture during this phase is indicated by various manos, metates (either basin-shaped, or with three or four legs), mortars, and pestles. Hunting continued, especially turtle-hunting, but not as much as during earlier times. Net-sinks made of sherds, rims, and stone were present. Other activities are reflected by the presence of polished stone celts, stone projectile points, and pottery stands made from the necks of ollas.

Ceramics. As noted, Papagayo Polychrome was the main decorated ceramic type for this phase. Most of the numerous Papagayo varieties are also present, although the early Papagayo variety is rather rare. Other polychrome types, some of which suggest the latter part of the Middle Polychrome period and the beginning of the Late Polychrome period, were also found, among them Granada Polychrome and, very infrequently, Pataky Polychrome. The Mombacho ("underslip incised") variety of Vallejo Polychrome was also

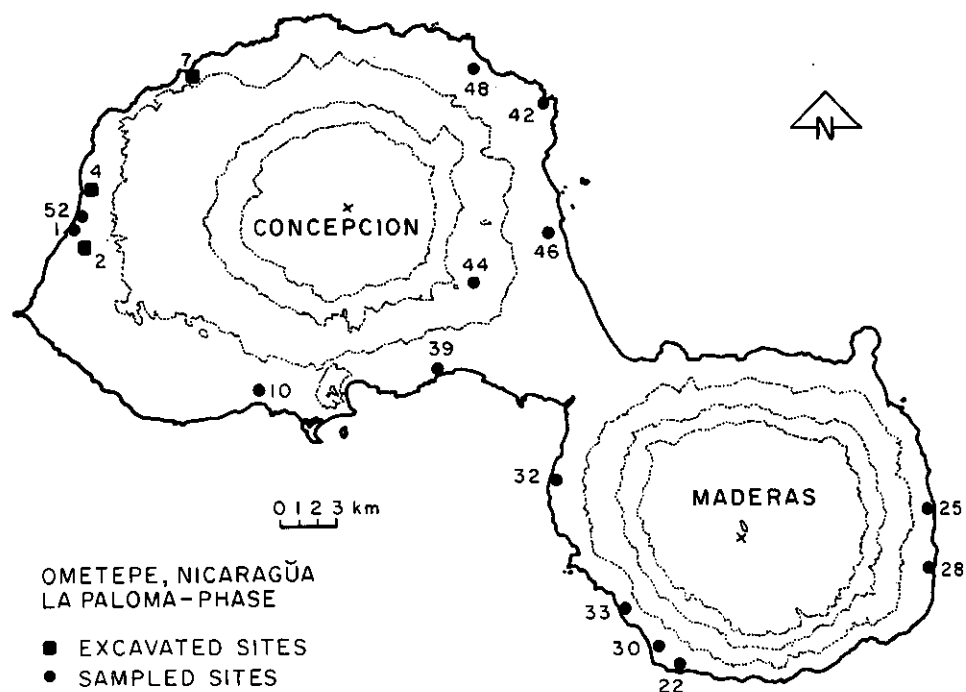


Figure 4.27. Distribution of La Paloma phase sites.

found, but again only in small percentages. The main vessel forms of these polychrome ceramics were hemispherical bowls, sometimes with an annular base, and three-legged bowls with flat bottoms and out-curving walls. Egg- and pear-shaped vessels were rare. Incised ceramics were also found, but as with incised ceramics elsewhere in Greater Nicoya, the typology is sufficiently confused as to make comparisons difficult.

The main undecorated ceramic type was Sacasa Striated, although the brushing seems less careful than on similar ceramics from the Gato phase. The walls are thicker, the firing less complete, and the vessels are often rather large and either olla or shoe-shaped. A number of monochrome redware vessels were also present, but again they were not as carefully made or as highly polished as similar vessels from the Early Polychrome period.

Other Artifacts. The only ornaments known from the La Paloma phase are a ceramic bead and a probable bone bead.

A special aspect of the La Paloma phase is the big stone figures for which the islands of Nicaragua have long been famous (cf. Bovallius 1886; Thieck

1971; Haberland 1973; Bruhns 1982; n.d.). Excavations around a badly damaged figure at Chilaite (Om-7) revealed a stone foundation, including some roughly rectangular, relief-sculpted stone blocks, and sherds of the La Paloma phase. [Note: while many of the statues have been dated to later phases by many scholars (Bruhns 1982, n.d.; Haberland 1973, this chapter), certain forms and motifs are also suggestive of similar renditions on jade axe-god pendants in the southern sector (Lange n.d.b), dating to a considerably earlier time period (300 B.C.—A.D. 500). Castillo (1989) has completed a detailed locational and iconographical analysis of the stone sculptures on Punta de Sapote (Mound 1). He examined the relationship between architecture and sculptural elements and concluded (1989: 17) that the statues show both mesoamerican and South American influences.]

There are some similarities between these stone figures and those on top of Potosí Appliqué incense burners. Nevertheless, we believe that the figures of the Ometepe variety of the Lake style (Haberland 1973: 145–46) were erected during the early La Paloma phase. Proof of temporal association will be very difficult, since most of the figures have been removed from their original settings (Arrellano 1980a, 1980b).

Mortuary Practices. Unfortunately, nothing is known about the burial customs of the La Paloma phase. It is suspected that secondary urn burial, perhaps evolving out of the practice of primary urn burial for small children, was a prominent practice, but this remains to be demonstrated.

Regional Comparisons. Two radiocarbon dates (Appendix 1) from the La Paloma phase on Ometepe Island, and both from the type site (Om-2), provided corrected ranges of A.D. 1230–1290 (Hv-2690) and A.D. 1240–1310 (Hv-2691). Related phases from the Nicaraguan mainland near Rivas are probably the Apompúa and La Virgen phases, both included in Healy's (1980) Middle Polychrome period. Other related Greater Nicoya phases are either the Panamá or Monte del Barco phases, or perhaps both, on the Bay of Culebra (Accola 1978a; Lange and Abel-Vidor 1980), the Doscientos phase of the Santa Elena Peninsula (Sweeney 1975), and the Palo Blanco phase of the Tempisque Valley (Baudez 1967).

San Lázaro Phase (A.D. 1300–1400)

Settlement Data. This phase is known in its pure manifestation from only one site tested on Ometepe Island, San Lázaro (Om-16). Of the surveyed sites, three showed surface indications of San Lázaro phase materials: La Palma III (Om-25), Jaragual (Om-30), and La Gloria (Om-33).

San Lázaro itself, where the test excavations were placed, is a single component site, resting on a series of old beach gravels. Obviously, the lake



Figure 4.28. Bone tools from Ometepe Island. Spindle whorl from turtle carapace from San Roque (Om-8); awls of bone and antler, bone spatula, and ear plug from shark vertebra from San Lázaro (Om-16).

level had shifted over time, perhaps to its present level or to an even lower level. This may be one of the reasons that San Lázaro material is so rare on the island.

Subsistence. Manos and metates again point to agriculture as the main subsistence activity, but fishing was also important (although perhaps only at this site) judging from the huge number of sherd net-sinkers (Haberland 1986, fig. 25.3) from reused body and rim sherds. These quantities of net-sinkers may indicate that throw nets, still popular for fishing throughout Central America, were in use at this time. Faunal remains also indicate continued hunting for turtles, armadillos, and deer. Other bones were present but not identified.

Ceramics. The San Lázaro phase is characterized by Madeira Polychrome. Some late varieties of Papagayo Polychrome and the Mombacho variety of Vallejo Polychrome occur, but in low frequencies. Engraved ceramics are also present. Brushed pottery is dominant, although further technical and design deterioration from the high standards of the Gato phase is evident. A poorly made monochrome redware was also used.

Other Artifacts. Except for the metate and mano fragments, one of the latter of the "over-hanging" type (see Healy 1980: 280, fig. 128), stone implements were rare. No celts or celt fragments were found, although a specimen similar to a "nutting stone" (Lange 1971) was found. One spindle whorl was recovered, as were bone implements, especially awl-like tools and perhaps needles (Figure 4.28). These may have been used in net manufacture, or for clothing. One awl was made from an antler and may have been used as a perforator. There was one piece of worked bone, perhaps a projectile point. Personal ornaments are only represented by a possible ear-plug made from a large fish vertebra, a bead of greenish stone, and a hollow bird (?) bone with two holes on the shaft that may have been part of a necklace.

Mortuary Practices. Urn burial was practiced, using large ollas and squat shoe-shaped vessels with brushed exteriors. The bowls covering the ollas were partly destroyed and most of the bones had disintegrated. It was not possible to determine whether or not the interments had been primary or secondary, although the size of the remaining bones indicated adult burials, where secondary interment is assumed.

Regional Comparisons. One radiocarbon date from the type site has a corrected range of A.D. 1380–1410 (Hv-2692). Taking Madeira Polychrome as the primary typological key, comparable phases are Las Lajas on the Isthmus of Rivas, La Cruz A on the Santa Elena Peninsula, Bebedero A in the Tempisque Valley, and Iguanita on the Bay of Culebra. There seems to be some doubt about the Iguanita phase, since the list given by Lange (1980b, table 1) seems to contradict his regional sequence (Lang 1980b: Fig. 9). Therefore, it might be that the Ruíz phase should be substituted for Iguanita. [Note: in the Bay of Culebra area, the Iguanita phase dates from A.D. 1150–1300, and the Ruíz phase from A.D. 1300–1530 (Lange and Abel-Vidor 1980, fig. 3)].

If, as suggested, the San Lázaro phase on Ometepe Island dates from A.D. 1300–1400, it would be out of alignment with other "Early Late Polychrome" phases, which have normally been dated to between A.D. 1200–1350 (Lange 1980b, fig. 9; Day 1984, fig. 1). [Note: as mentioned earlier, the Greater Nicoya Ceramic Conferences have decided to extend

the Middle Polychrome period to A.D. 1350, which corresponds to Haberland's interpretation of his data.] This may again reflect the isolation of Ometepe, which seems to have been in the "backwaters" of Greater Nicoya at this time. While other authors called the phase "Early Late Polychrome," I prefer to call it, at least on Ometepe, Late Middle Polychrome. The ceramics still belong in the Middle Polychrome tradition, and I do not see any sharp break between the La Paloma and San Lázaro phases. Such a break does occur on Ometepe, however, between the San Lázaro and Santa Ana phases.

Santa Ana Phase (A.D. 1400–1550)

Settlement Data. This last pre-Conquest phase has been found in at least nine test excavations at four sites: San Antonio del Norte (Om-6), pits 1, 2, and 3; Chilaité (Om-7), pits 1 and 2; San Roque (Om-8), pits 1 and 2; and La Providencia (Om-19), pits 1 and 2. Material was also found at a number of surveyed sites: Quinta (Om-1, and possibly the site known as the Luna Hacienda by Bransford), Punta Viva (Om-14), Caláysa (Om-47), San Miguel/Alta Gracia (Om-48), and Punta Robles (Om-50). The phase may also be present at El Cairo I (Om-26), and Sinacapa (Om-40; Figure 4.29).

The Santa Ana phase people obviously preferred the same settlement localities as did those of the Zoned Bichrome and Early Polychrome periods. At San Roque (Om-8) and La Providencia (Om-19), Santa Ana phase material often directly overlies San Roque phase material, with scarcely a trace of Middle Polychrome (Gato to San Lázaro phases) present. Thus, if only San Roque had been tested, we might have completely missed the Middle Polychrome component on the island.

Why this pattern of settlement distribution evolved is still not clearly understood, but it may well have been related to fluctuations in the level of Lake Nicaragua. Middle Polychrome sites are located closer to the present lake shore than are other sites, and it should be recalled again that the San Lázaro phase materials were directly above beach gravels.

Ceramics. In the polychrome ceramics, there is a complete break with the preceding Middle Polychrome tradition, and Luna Polychrome is the only type of any consequence. Some imitations or derivations may be present, but that remains to be verified. In shapes (bowls with incurving rims, bowls with hollow cylindrical feet open at the lower end), color combination (orange and dark brown on light cream-to-white slip), and style (fine-line painting and new motifs), Luna Polychrome is completely different from the previous polychromes and was not derived from them.

The source is still an enigma, although indications seem to point south

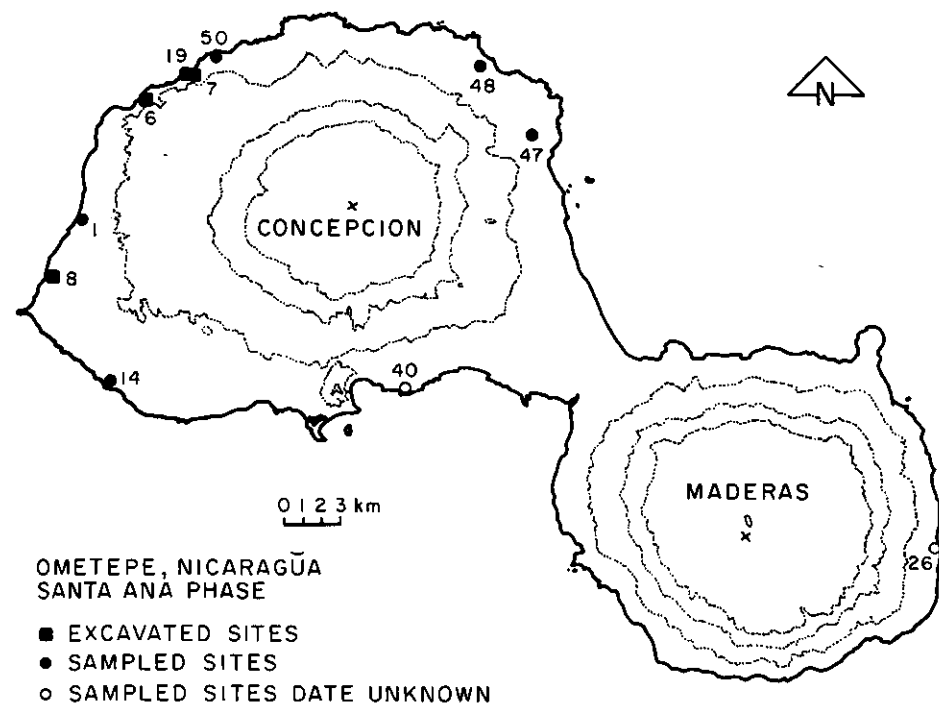


Figure 4.29. Distribution of Santa Ana phase sites.

and southeast to the Atlantic coastal plains. The artistic inspiration may reach as far as South America, but that is purely speculation. [Note: the INAA data (Bishop, Lange, and Lange 1988; Chapter 6, this volume) indicate that Luna is closely related in terms of production areas with the types Bramadero Polychrome and Madejra Polychrome in groups GN 22, 23, 25, and 26.] The break with the previous traditions is still more pronounced by the appearance of two other decorated ceramic types: Castillo Engraved and Lago Black-Modeled, both in rather great quantities.

Brushed ceramics continued to dominate the utilitarian wares, but they are scarcely comparable to the Gato phase ceramics of the same style. The brushing is now extremely careless, often done with a sharp or pointed object, resulting in sharp, irregular incisions. Sometimes the brushing is even absent. The walls of the pots are very thick and badly fired, and have thick unoxidized black cores that crumble very easily. Shoe-shaped vessels are still present (Figure 4.30), but they are squat, very round (often nearly an olla shape), and in no sense comparable to the elegant "shoes" of the

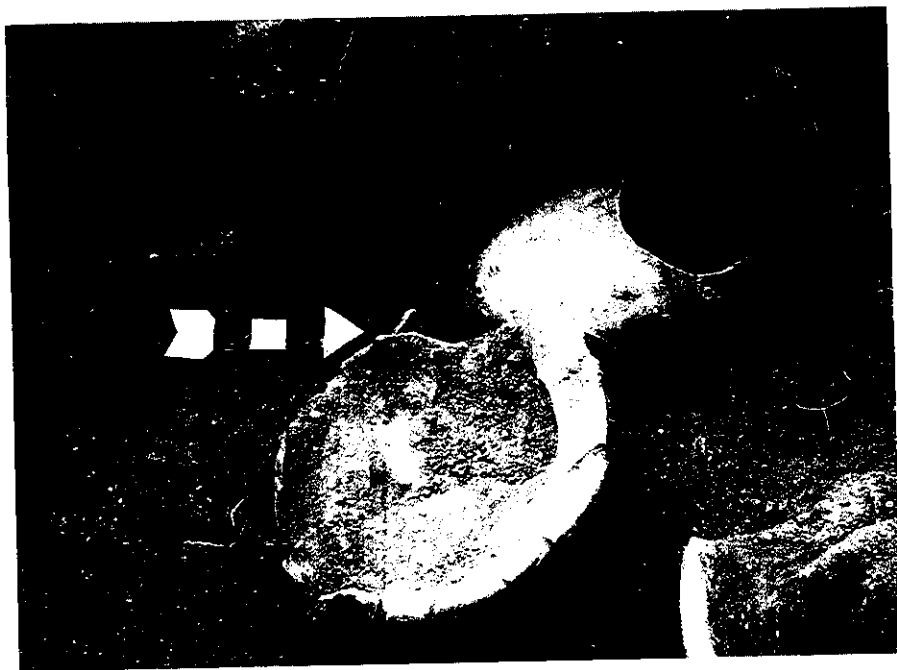


Figure 4.30. San Antonio cemetery. Shoe-shaped vessel, Urn 2, Square 2. The rim had been removed prior to burial to accommodate the long bones. Santa Ana phase.

Gato phase. If one did not know the entire sequence, the relationship between the two groups of vessels would be difficult to imagine. The knowledge that the vessel form had originated from an animal head was obviously lost over time. On decorated vessels, crude humanoid faces or rude abstract animals were appliquéd, or a number of deep incisions, crossing one another diagonally, were placed on the upper side (see Bransford 1881, figs. 3, 5, 8-10). Curiously, two small appliquéd projections, often almond-shaped, are sometimes present at the same place on the vessel where formerly the ears of the animal had been. They have no meaning, however, in the new context.

Large ollas continued to be made. They were often very large with annular bases, ovoid bodies, wide mouths, vertical necks, and slightly outcurving, bolstered lips. They either have brushed bodies with red necks and lips, or, frequently, are made of a plain red ceramic. The latter were as poorly made as the brushed ones. The exterior of these red vessels is usually unpolished,

and the poorly fixed red paint often rubs off. In any case, the quality is obviously not equal to the lustrous red ceramics of the Early Polychrome period.

Comparing the excellently fired and carefully decorated pottery of the Luna Polychrome, Castillo Engraved, and Lago Modeled types with these brushed and red-slipped ceramics (the poorest quality ceramics I have excavated anywhere in Central America) one wonders how the two ceramic groups are related. It seems inevitable to conclude that there were two groups of potters active at this time, each producing specific types and each uninfluenced by the other.

Other Artifacts. Fragments of celts, manos, and pestles have been identified among the lithic artifacts, and net-sinkers of stone and ceramic rims and bodysherds also continued to be present, as did pottery stands made from olla necks.

The only ornaments recovered were long, delicate beads made from untempered clay. These beads reflect excellent workmanship and are either plain or indented to imitate several beads. (Bransford [1881, fig. 106] illustrated similar beads from his excavations.) Other beads were made from a hard green stone, and from rolled gold sheet. All the beads were found in secondary urn burials, excavated at Chilaite (Om-7) and especially at San Antonio del Norte (Om-6). Here, test pit 2, with a dimension of 3.5 m x 2 m uncovered a Santa Ana phase cemetery.

Mortuary Practices. Eleven urn burials were excavated within the 7 sq m area. Some of the olla or shoe-shaped urns were very close to one another and sometimes the well-stacked bones of the deceased could still be seen; but only rarely was it possible to save the crumbling bones. As far as could be determined, the long bones were standing upright together as if they had been placed inside the vessel as a bundle; the skull usually lay on top of this bundle. To insert the bones more easily, the rims of the shoe-shaped vessels apparently had been broken off (Figure 4.31) before they were used as burial urns, indicating that their use as burial urns was only secondary. These urns were not deeply buried and most of the covering vessels that had served as lids had been destroyed by agricultural activity. The only Luna Polychrome that was present in definite association with the urns was one-half of a bowl placed against the wall of an urn.

Burial 3 deserves additional commentary, as it was placed deeper than the others in this group. Four large ovoid ollas were placed in pairs with one on top of the other and the mouths together. Why such large vessels were used as covers, since the bones fitted easily into the lower vessel, could not be determined.



Figure 4.31. San Antonio cemetery, Square 2. Urns containing secondary burials. Santa Ana phase.

Regional Comparisons. Since there are no radiocarbon dates for the Santa Ana phase, comparisons with other regional phases are difficult, except for the Alta Gracia phase of the Rivas region. This is partly because many vessels are typed as Luna Polychrome, when in fact they are “imitations” (see Healy 1980: 137–40). [Note: Lange (1971) designated a “Lunoid Polychrome” based on data from Las Marías on the Bay of Salinas. The participants in the Greater Nicoya Ceramic Conferences decided to refer to these ceramics as “Banda Polychrome,” although they might still be considered a variety of Luna Polychrome.] Luna Polychrome has been found together with European trade materials (Lothrop 1926: 194). The saint (?) image mentioned by Healy (1980: 140) from Bransford (1881: 46, fig. 106, upper row) is certainly not a European import, but came from Costa Rica or farther south. In my opinion, only the Santa Ana phase represents the Late Polychrome period on Ometepe Island. [Note: As already indicated, the Greater Nicoya Ceramic Conferences (Lange et al. 1984; Bonilla et al. 1987) would agree with Haberland on a relatively brief Late Polychrome period for the rest of Greater Nicoya.]

Summary and Conclusions

The analysis of survey and excavation data obtained by the author and Schmidt during the dry season of 1962–1963 demonstrates that Ometepe Island in Lake Nicaragua was first settled around 1500 B.C. and perhaps as early as 2000 B.C., and had a rather complicated and eventful cultural history. The nine phases established and defined here can be combined into four larger periods, not all of which conform to those established for the rest of Greater Nicoya, to which Ometepe was only sometimes closely related.

These differences may be due, at least in part, to the fact that Ometepe is an island, and therefore somewhat isolated. It appears to have been passed by occasionally, or to have received external cultural impulses later than other parts of the subarea. On the other hand, the island also appears to have received cultural influences that never arrived in the rest of the subarea or only achieved broader distribution after significant time lags.

The division between the northern and southern sectors of the Greater Nicoya Archaeological Subarea, already referred to by Lange (1984a) and Day (1984: 190–91) is much more pronounced if Ometepe is compared, for example, with sites from the Nicoya Peninsula in the southern reaches of the subarea. During the final pre-Conquest phase, I doubt that Ometepe was at all a part of Greater Nicoya.

The first of the cultural-historical periods on Ometepe Island is composed of the Dinarte and Angeles phases. This period can be referred to either a “Formative” or as “Zoned Bichrome,” and it began with the settlement of Ometepe around 1500 B.C.. Despite the probable gap between the two phases (possibly due to active volcanism), I still believe that the Angeles phase developed out of the Dinarte phase *sui generis*; at the very least, their cultural assemblages show them to have been intimately related.

Outside influences, however, manifest themselves with the beginning of the Sinacapa phase. This phase marks the introduction of the Polished Rivas Ceramic tradition, included in part by the Rivas Ceramic Group established by Healy (1980: Table 14). I would add Rosales Zoned Engraved and Tol Trichrome to this ceramic group, since their undecorated bodysherds are indistinguishable from those of the Rivas Ceramic Group.

On Ometepe Island, this tradition, which in part covers the Early Polychrome period of Greater Nicoya, is further distinguished by tubular ear spools and the four-sided chopper, as well as by the absence of polished celts and net-sinkers made from stone. Furthermore, it was perhaps the only time that obsidian was used on the island, as the few tiny chips of this material seem to occur only during this period. Like obsidian, quartz hornstone, and similar material had to be imported to the island; their very small flakes, however, have been found in Middle and Late Polychrome

contexts. While small flakes are occasionally found, no complete implements or fragments made from these materials have been recovered. It is probable that bone and hardwood implements were employed instead. Primary burials may also be characteristic of this tradition, which peaked during the San Roque phase and represents the pinnacle of cultural development on Ometepe Island. It appears to have ended during the following Gato phase. Obviously, Ometepe Island was part of the mainstream of Greater Nicoya during this period of cultural development.

The Gato phase represents the transition from the Polished Red tradition to the Middle Polychrome period, which occurred later on the island than on the mainland, and took some time to establish itself. Despite the apparent time lag, the distinction between the two periods or traditions is clear. There is little continuity and it appears that during the Middle Polychrome period we are witnessing the arrival of a new group of people. That they co-existed with the older inhabitants is demonstrated by the intensifying traditions of the Gato phase. The newcomers eventually became dominant and by La Paloma times all traces of the native tradition were gone, except for important subsistence tools such as manos, metates, net-sinkers, and bone awls.

Both the La Paloma and San Lázaro phases are part of this tradition with its white- or cream-slipped ceramics, brushed ceramics, shoe-shaped vessels, and probable polished stone celts. Net-sinkers made from stone and the big stone statues may be other elements of this period, and secondary urn burials may have been introduced during this time.

The Santa Ana phase was the final period of prehistoric occupation on Ometepe Island. Brushed pottery of a very inferior quality continued, while the introduction of Luna Polychrome, Castillo Engraved, and Lago Black-Modeled indicates the influx of new ideas, if not peoples. If new populations are posited, where they came from is still subject to debate and speculation. In any case, they were not the Nicaraos out of Mexico, as has been variously claimed (Lothrop 1926: 3-4; Stone 1972: 170-71), but as Ciudad Real reported in 1586 (1873, I: 369), a group speaking neither Chorotega nor Nicarao.

These peoples probably came from the eastern (Atlantic) coast of lower Central America, and perhaps were related to the Sumo and Mosquito, but this interpretation remains to be tested. The Santa Ana phase appears to have been a transitional phase in which older and newer elements were combined. What would have been the cultural result of this new transition we shall never know, because of the intervention of the Spanish Conquest.

The data presented in this overview demonstrate that (1) Ometepe Island was settled by agricultural people for about three and one-half millennia before the arrival of the Spanish; (2) the island went through cycles of flux between local development and external ideas; and (3) natural forces such as volcanic events and changes in the lake level affected the lives and cultural

development of the prehistoric peoples. This overview also demonstrates that there are still many intriguing questions which only further archaeological research on this rich island will answer.

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