



ART FOR ARCHAEOLOGY'S SAKE

Material Culture and Style across the Disciplines

Proceedings of the 33rd Annual Chacmool Conference

Edited by

Andrea Waters-Rist, Christine Cluney,
Calla McNamee and Larry Steinbrenner



CHACMOOL © 2005
THE ARCHAEOLOGICAL ASSOCIATION
OF THE UNIVERSITY OF CALGARY

ART FOR
ARCHAEOLOGY'S SAKE
**Material Culture and Style across the
Disciplines**

Proceedings of the Thirty-Third Annual
Conference of the Archaeological Association of the
University of Calgary

Edited by

Andrea Waters-Rist, Christine Cluney,
Calla McNamee and Larry Steinbrenner

The University of Calgary

Archaeological Association, 2005

ISBN 978-0-8895-293-9

THE MEANING OF THE MIXTECA-PUEBLA STYLISTIC TRADITION: THE VIEW FROM NICARAGUA

Geoffrey G. McCafferty and Larry Steinbrenner
Archaeology, University of Calgary

Archaeologists and historians of non-Western art have struggled with the meaning of style for as long as their disciplines have existed. What do similarities mean? How are 'similarities' even identified? One goal of this Chacmool conference was to grapple with questions such as these. Style may carry information about cultural identities either overtly as emblematic symbols or covertly as shared patterns of learned behaviour. Similarly, material culture may incorporate fossilized mental templates of past societies, as well as functional information on the technology and practice of daily life. Archaeological objects therefore encapsulate a range of social information waiting to be decoded by nuanced and contextually informed analysis (Hodder 1990).

In Mesoamerican archaeology one of the most famous—and controversial—'styles' is the Postclassic Mixteca-Puebla style of Central Mexico. It was first identified by George Vaillant (1938, 1941), and has been elaborated on by H.B. Nicholson in a series of publications spanning the 1960s to 1990s (1960, 1982; Nicholson and Quiñones Keber 1994; but see Smith and Heath-Smith 1980). The Mixteca-Puebla style is largely religious in theme, and is best represented in the pictorial manuscripts of the Mixtec- and Borgia-group codices from modern Oaxaca and Puebla, Mexico. The style also occurs on polychrome pottery, sculpture, murals, and textiles over a wide geographic area and a long temporal span. Mixteca-Puebla stylistic elements have been identified as far afield as the Southeastern United States (in Southern Cult iconography) and in Greater Nicoya (that is, Pacific Nicaragua and northwestern Costa Rica) in Nicoya polychrome pottery styles dating between AD 800-1520 (Day 1994).

As defined by Nicholson, the Mixteca-Puebla style features religious motifs characterized by the Central Mexican pantheon of deities (e.g., Quetzalcoatl and Tlaloc) and the 20-day calendrical system. These are often represented metonymically, where a symbolic element such as a cut shell (i.e., Quetzalcoatl's pendant) or goggle eyes (i.e., Tlaloc's facial feature) will be used to signify an entire iconographic complex. Images are depicted in colourful, caricature-like figures that are easily recognizable. Because the iconography was used by diverse cultural groups it has also been called the "International Style" (Robertson 1970), somewhat analogous to international traffic signs that carry meaning outside of any particular linguistic system. Due to this international nature, iconographic elements of the Mixteca-Puebla stylistic tradition have been used to infer long-distance exchange as well as shared religious principles (Ringle, Gallareta Negrón, and Bey 1998; López Austin and López Luján 2000).

Since the Mixteca-Puebla stylistic tradition was defined in the 1930s, when explanations based on principles of diffusion were popular, the concept has often been employed uncritically, with the identification of presumed Mixteca-Puebla characteristics being used to infer an entire range of cultural traits. This problem has been rightly criticized by Michael Smith and Cynthia Heath-Smith (1980), who recommend dividing the Mixteca-Puebla concept into three components: religious iconography, pictorial manuscript style, and polychrome pottery. While these categories are not always mutually exclusive, the implication is that polychrome pottery does not necessarily imply a total cultural package of 'Mixteca-Puebla' traits.

This paper will take a critical look at the Mixteca-Puebla style as it appears on the southern periphery of Mesoamerica. Recent archaeological research in Rivas, Nicaragua, has recovered an assemblage of polychrome pottery that has previously been related to the Mixteca-Puebla stylistic tradition (e.g., Stone 1966; Day 1994). This paper will consider how 'similar' the iconography really is to more prototypical Mixteca-Puebla themes, and what the similarities might mean. Finally, we will consider the implications of Mixteca-Puebla style to the question of cultural complexity among migrant Mexican ethnic groups in Nicaragua.

Cultural Background

Mesoamerica has been defined as a culture area corresponding to the geographic area bounded by northern Mexico to the north and Central America to the south. Because the cultural traits used to define 'Mesoamerica' varied over time, the boundaries of the culture area were dynamic. The southern boundary was usually drawn at Honduras, but during the Postclassic period (AD 900-1550) cultural characteristics of the Greater Nicoya region suggest that the frontier should be drawn further south into Pacific Costa Rica. These characteristics were associated with cultural groups known as the Chorotega and Nicarao, who arrived in the region as the result of mythico-historical migrations beginning in the Epiclassic period, circa AD 800 and perhaps continuing into the final centuries before the arrival of the Spanish in 1529. Cultural traits of these migrant Mesoamericans included linguistic evidence for Nahuatl-speakers (Constenla Umaña 1994; Nahuatl was the language spoken by the Late Postclassic Aztecs and probably the Early Postclassic Toltecs of Central Mexico; Nahuatl is its Nicaraguan dialect, which drops the "l"); use of the Central Mexican calendar system and related rituals; a pantheon of deities related to those of Central Mexico, and myths of origin with references to migration out of Mexico around the

ninth century AD (Lothrop 1926; Healy 1980; Fowler 1989; Hoopes and McCafferty 1989). Polychrome pottery with iconography relating to the Mixteca-Puebla tradition provides a material and iconographic link between Central Mexico and the Greater Nicoya region (Day 1994).

The Epiclassic time period (AD 600-900) is noted for the dramatic social changes that took place across Mesoamerica. It immediately follows the fall of the great Central Mexican centre of Teotihuacan, and it also encompasses the end of the Classic Maya civilization. The Epiclassic is recognized as a period of eclectic internationalism, when iconographic motifs from throughout the region were combined in innovative ways to assert new configurations of power as the old models were abandoned or transformed (López Austin and López Luján 2000; McCafferty 2000, in press; Ringle, Gallareta Negrón, and Bey 1998). New centres such as Chichen Itza, Xochicalco, and Tula developed along very different principles than their predecessors. At the same time the Classic-period city of Cholula, located in the Puebla Valley of Mexico's central highlands, metamorphosed into an international economic and pilgrimage centre focused on its Great Pyramid, which combined architectural and other artistic styles from different cultures of Mesoamerica to become the crucible in which the Mixteca-Puebla tradition was created (McCafferty 1994, 2001a). Stamp-impressed ceramics feature Mixteca-Puebla iconography beginning by about AD 700 (McCafferty and Suárez Cruz 2001), and polychrome pottery appears by at least AD 900 (McCafferty 1996, 2001a; Suárez Cruz 1994).

Ethnohistorical sources identify the cultural group that occupied Epiclassic Cholula as the Olmeca-Xicallanca, a multi-ethnic group from the southern Gulf lowlands with ties to both Maya and Nahua cultures (Jiménez Moreno 1942, 1966; Olivera and Reyes 1969; McCafferty 1997, in press). The Olmeca-Xicallanca were also present at other Epiclassic centres, including Cacaxtla,

Xochicalco, and Tula (where they were known as the Nonoalca), and were the culture brokers of the new eclectic style (McCafferty in press; cf. McVicker 1985; Nagao 1989). Since early evidence for the nascent Mixteca-Puebla style derives from Cholula during the period of Olmeca-Xicallanca occupation, it is likely that the style conveys ideological principles linked to the Epiclassic transformation of pan-Mesoamerican internationalism.

Origin myths for the Chorotega and Nicaraos of Greater Nicoya suggest that they were originally inhabitants of Central Mexico—specifically Cholula—but were driven out of Mexico by the ‘tyrannical’ Olmeca (Torquemada 1975-83; cf. Chapman 1974; Abel-Vidor 1980; Hoopes and McCafferty 1989). The term ‘Chorotega’ is a corruption of ‘Cholulteca,’ the identifier for a person from Cholula; ‘Cholulteca’ is also the name of a river that flows into the Gulf of Fonseca in southwestern Honduras—another region inhabited by groups associated with this migration. The chronology of this migration is confounded in mythologized histories, but is interpreted as beginning about AD 800 (Davies 1977; Fowler 1989; McCafferty 1997). It remains unclear if this was a one-time migration or if contact was continuous over a long period of time, resulting in a continuous stream of migration (Steinbrenner 2002). Other groups of Nahuatl speakers, such as the Pipil who settled in El Salvador and Pacific Honduras, may have also been associated with this same pattern of migration (Fowler 1989)

Linguistic data also provides some clues as to the origins of the migrant groups in Greater Nicoya. Ethnohistorical sources claim that Nahuatl was spoken in the Rivas area at the time of the Spanish conquest, and this is supported by word lists provided by early chroniclers such as Bobadilla and Oviedo (Oviedo y Valdés 1851-55; cited in Healy 1980) and by the many Nahuatl toponyms that still dot the Nicaraguan landscape. In the Late Postclassic period, Nahuatl was the *lingua franca* of most of Mesoamerica, including

the Gulf Coast heartland of the Olmeca-Xicallanca (Lastra 2001). When Nahuatl first appeared in Mesoamerica remains a bone of contention, though a recent study by Dakin and Wichmann (2000) argues persuasively for the Nahuatl term for cacao in Maya documents as early as AD 350. A good part of the Nahuatl-appearance debate revolves around whether or not Nahuatl was a prominent language at the Classic urban centres of Teotihuacan and Cholula. If it was, then this provides another means of tying the Nicaraos to Central Mexico, and Cholula in particular. Complicating any migration scenario, however, is the fact that the Chorotega spoke an Oto-manguean language, the origins of which are hazy (Constenla Umaña 1994). While Oto-manguean languages can also be associated with Central Mexico, their specific associations with the major Classic urban centres has been no more clearly established than Nahuatl’s. At any rate, however, the presence of languages from at least two major Central Mexican linguistic groups in Greater Nicoya does confirm that the migrations were multi-ethnic.

The cultural background for the Classic to Postclassic transformation indicates the key role played by Cholula in the central highlands, and the use of the Mixteca-Puebla style as a form of visual communication that carried cultural information about that transformation. The multi-ethnic Olmeca-Xicallanca, as culture brokers for the wide-reaching changes, combined lowland traditions of the Gulf Coast and Maya regions with highland traditions of the Mexican plateau. Migration myths from the Greater Nicoya area also allege that the Olmeca played an important role in uprooting Mesoamerican populations from the highlands and causing them to eventually settle in Nicaragua and Costa Rica (Torquemada 1975-83; cf. Davies 1977; Fowler 1989). Problem-oriented investigations from the Greater Nicoya region can illuminate the history of the migration, and also provide information for inferring such characteristics as intensity, duration, and cause for the population movement,

as well as cultural changes that occurred within the ethnically Mexican population as it adapted to Central America. In this way the Mixteca-Puebla style will be used to interpret complexity among the Chorotega and Nicarao of late pre-Hispanic Nicaragua.

The Archaeology of Mesoamerica's Southern Periphery

Archaeological investigations of Nahua migrations to Greater Nicoya have been minimal, both in terms of number and intensity. Early explorers and culture historians such as Ephraim Squier (1852), Samuel Lothrop (1926), and William Duncan Strong (1948) recognized the importance of the migration myths and sought archaeological correlates from Nicaragua and Costa Rica, though much of the evidence came from collections without secure archaeological contexts. Art historians Doris Stone (e.g., 1966) and Jane Day (1994) have concentrated on the iconography of Nicoya materials, particularly the polychrome ceramics, and have attempted to relate them to the Mixteca-Puebla tradition. Problem-oriented archaeological research in Greater Nicoya has been conducted since the 1960s (e.g., Baudez and Coe 1962; Coe 1962; Healy 1980; Lange *et al.* 1992; Salgado 1996; Niemel, Román-Lacayo, and Salgado 1997), but due to political, economic, and environmental difficulties they have tended to be small in scale and sporadic in duration. One epistemological issue that has directed research away from the Mixteca-Puebla question is a recent orientation toward Central America as an 'Intermediate Area' that is not dependent on either Mesoamerica or South America for its cultural identity (Lange 1992, 1994).

In the summer of 2000, archaeologists from the University of Calgary initiated a project at the site of Santa Isabel, on the coast of Lake Nicaragua near modern Rivas, in the southwest portion of the country (Figure 1). While one goal of the project was to test the feasibility of archaeological investigations in the area, the

overarching objective was to recover information that could be used to evaluate the cultural context of late pre-Conquest materials relating to the Chorotega and/or Nicarao occupation. The research builds on previous work in the area by Gordon Willey and Edward Norweb (Healy 1980) and, more recently, by Karen Niemel (2003). Previous work at Santa Isabel resulted in a sketch map of the area with low mounds followed by three stratigraphic pits (Healy 1980), and Niemel's survey of the site as part of a larger regional settlement pattern survey. Paul Healy's published dissertation (1980) based on Willey and Norweb's brief study forms the foundation for local archaeological reconstructions, primarily because of its detailed ceramic descriptions.

The first field season lasted only two weeks, and included a series of 65 shovel test pits dug at 10 m intervals in a fallow field that included Healy's Mound 3, followed by five 1 x 1 m units excavated to investigate shovel tests with possible architectural features (McCafferty and Steinbrenner 2003; Steinbrenner 2002). In 2003 a longer and more intensive investigation explored adjacent mounds to the south, using additional shovel tests and seven operations that exposed 25 m² that included living surfaces and related features. The site provides outstanding preservation of faunal remains, including fish, bird, amphibian, and mammal. Ceramic and lithic remains were also recovered in abundance, providing what is already the best collection of archaeological material culture for interpreting the Chorotega and Nicarao occupation.

In the deepest of the Mound 3 stratigraphic pits, N20E30, a transition occurred in ceramic frequencies between levels below 1.40 m and those above, with Ometepe Period (AD 1350-1550) ceramics such as Castillo Engraved and Vallejo, Madeira, and Mombacho polychromes only appearing in the upper levels. Sapóa Period (AD 800-1350) Papagayo Polychrome ceramics were found below this level, but continued in barely diminished frequencies throughout the sequence. This transition between Sapóa and

Ometepe is believed to relate to the transition from Chorotega to Nicarao occupation in Rivas, and is estimated to date to about AD 1350; radiocarbon samples from N20E30 are being tested to further evaluate this chronology. The 2003 excavations recovered primarily Ometepe-Period materials, even in the deepest levels of Mound 6. Based on the continuity of the Papagayo ceramics, as well as of utilitarian plain wares, it can be inferred that the arrival of the Nicarao added cultural traits to the Santa Isabel complex but did not represent a large-scale cultural replacement.

Mixteca-Puebla style iconography first appears on Sapóa Period Papagayo Polychrome pottery, and continues on other related types during the Ometepe Period. However, the Santa Isabel assemblage features relatively few clear indicators of Mixteca-Puebla style: some 'cut-shell' design elements were present on Granada Polychrome, possibly relating to the wind god Ehecatl (Figure 2). On the other hand, less iconic design configurations were found on Papagayo varieties Casares (Figure 3) and Mandador (Figure 4) that were very close to pottery known from Early Postclassic period Cholula, especially the type Cuaxiloa Matte.

In addition to the polychrome ceramics from Santa Isabel, other elements of material culture also support cultural similarities with Central Mexico. A ceramic bead featured the distinctive goggle eyes and fangs of the Mexican storm god, Tlaloc (Figure 5). While 'Tlaloc' was not among the named deities of the Nicarao pantheon as recorded in the ethnohistorical chronicles, an avatar called Quiahuit, derived from the Nahuatl term for rain, does appear. It might therefore be related to the Cholula deity associated with the Great Pyramid during the Late Postclassic period who was known as Chiconauquiahuitl, meaning 9 Rain (McCafferty 2001b).

Fifteen spindle whorls were found in the Santa Isabel excavations, made of reworked and perforated potsherds, bone, and two that were formed and decorated. One of the decorated

whorls featured a design of crossed lines identical to a woven pattern found in the Nahua and Mixtec codices (McCafferty and McCafferty in press).

Among the utilitarian vessels there seems to be little similarity with Central Mexican forms. Vessels similar to the ubiquitous Greater Nicoyan type, Sacasa Striated, are unknown in Central Mexico. A form that should be found in abundance is the *comal*, a low profile griddle used for heating tortillas. In Central Mexico tortillas were a staple of Nahua foodways, and *comal* rim sherds make up about 20 per cent of a typical domestic assemblage (McCafferty 2001a). No *comals* were identified in the Santa Isabel assemblage (Steinbrenner 2002).

While there are certainly some elements of Mixteca-Puebla style used in the material culture of Santa Isabel, it was not an overwhelming feature in either the decorated ceramics or other artifact classes. And while there does seem to be a stylistic disjunction between Sapóa and the earlier Bagaces Period (AD 300-800) ceramic styles (few examples of which were recovered from Santa Isabel), the transition from Sapóa to Ometepe seems to be relatively smooth, with the addition of certain types but with relatively little loss. This evidence is consistent with at least two waves of migration, the first occurring during the Mesoamerican Epiclassic and another following the Early Postclassic. In terms of Mesoamerican culture history, this could correspond to a diaspora following the fall of Teotihuacan, followed by another following the fall of Tula, though these events would have taken place far to the northwest and are not necessarily the best explanations for cultural change in Greater Nicoya.

Style and Complexity at Rivas

Linguistic, historical, and archaeological evidence support the idea of cultural affiliation between the Greater Nicoya area and Central Mexico, beginning in the Sapóa Period (ca. AD 800) and continuing through the Ometepe Period

until the Spanish conquest in the early 1500s. The historical accounts describe Nicarao society as hierarchically organized around a *teyte*, or 'chief', and with a religious system derived from Central Mexican Nahua religion (Fowler 1989; van Broekhoven 2002). The question remains: to what extent did the Chorotega and Nicarao of Pacific Nicaragua share Central Mexican concepts of complexity? And if they arrived with a state-level social system, did it continue at that level as the ethnic groups adapted to the realities of life in lower Central America?

The Nahua of Central Mexico are associated with complex state-level societies, including monumental architecture tied to the construction of a symbolic landscape, and an expansionistic military apparatus geared toward conquest for the purpose of procuring tribute. This model certainly describes the Aztec and Toltec, and may also relate to the Teotihuacan empire, especially if recent decipherments of Maya inscriptions at Tikal and Copán relate to military intervention in Classic Maya politics (Fash and Fash 2000; Stuart 2000).

At the Pipil site of Cihuatán in El Salvador, Nahua attributes such as monumental architecture and a large ball court have been discovered (Bruhns 1980; Kelley 1988; Fowler 1989). In Greater Nicoya, however, such features are unknown. The mounded architecture at Santa Isabel measured only a few meters in height at the most, and seems as likely to have been domestic as ritual in function. The settlement data collected by Niemel (2003) indicates at least a two-tier system, with the Santa Isabel site as the largest settlement in the region, but Niemel did not find a state-level four-tier system. If the dominant ethnic group at Santa Isabel was Nahua, it seems to have lost (or rejected) the level of complexity that it had in Central Mexico, and which it even carried as far south as El Salvador.

As an alternative explanation to the large-scale population movement model attested in the ethnohistorical sources, we propose a different scenario. As has been established, the Mixteca-

Puebla style was a characteristic of the Olmeca-Xicallanca, a group with origins on the Gulf Coast. This group operated throughout Mesoamerica as traveling merchants working under the umbrella of the Quetzalcoatl cult, spreading an ideology of elite interaction that was symbolically represented through the iconic images of the Mixteca-Puebla religious complex. The Olmeca-Xicallanca merchants (later known as *pochteca*) traveled long distances, trading for exotic goods that they then exchanged at certain regional markets such as Cholula and Xicalango. Among the commodities that they sought out were quetzal feathers, jade, and cacao, the bean used as currency by Postclassic peoples as well as for ritual chocolate drinks. Maya texts indicate that cacao was an important commodity at least by the Early Classic (Dakin and Wichmann 2000). It should be noted that quetzal feathers, jade, and cacao are all found in Central America, and that cacao in particular was a key crop along the Pacific coast from El Salvador to Nicaragua (Fowler 1987; Steinbrenner in press). It is still grown in Rivas, near Santa Isabel.

Instead of a large-scale movement of Nahua Nicarao resulting in population replacement, it seems more likely, based on current information, that there was minor contact, perhaps on the level of elite interaction for establishment of trading partners in order to secure exotic or valued commodities such as jade, gold, and/or cacao for international exchange (Helms 1993). As the *lingua franca* of the Olmeca-Xicallanca and Nahua merchants, Nahuatl—or rather, its doppelgänger Nahuat—may have been adopted by local groups in areas of the most intense interaction, such as Rivas. This could have resulted in a facade of 'Mesoamericanization' in Greater Nicoya that was more apparent than real.

Ongoing research will continue to explore the diachronic changes at Santa Isabel. Research objectives will target the transition from the Sapóá to the Ometepe periods, in order to interpret the relationship between the Chorotega and the Nicarao. Excavations will continue to

target domestic areas in order to better understand ethnicity on the household level. With additional material culture from systemic contexts, the relation of Mixteca-Puebla stylistic elements to Chorotega and Nicarao culture will become more readily understood.

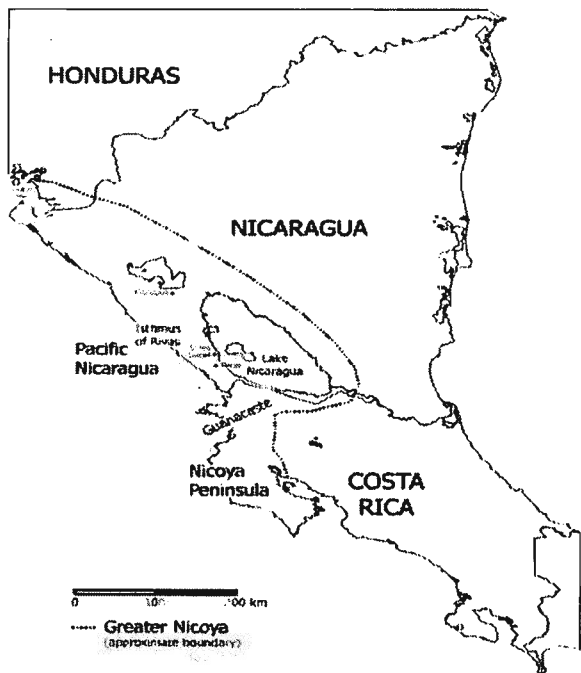


Figure 1. Nicaragua and Costa Rica, showing the approximate boundaries of Greater Nicoya.

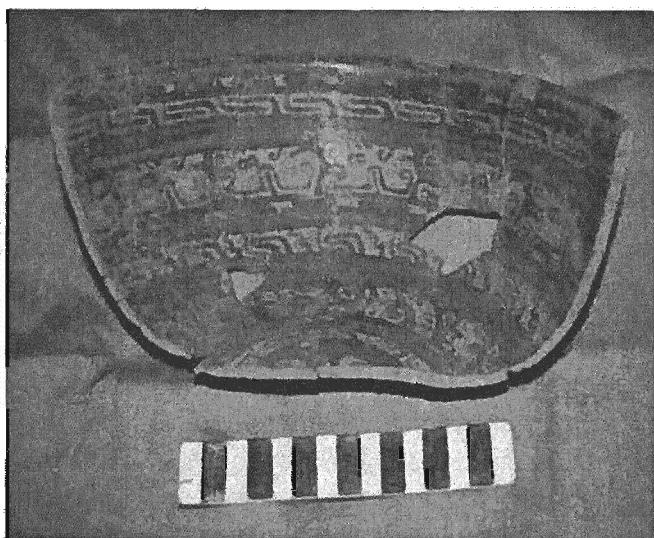


Figure 2. 'Cut-shell' design elements on Granada Polychrome (design panel around base of the bowl), possibly relating to Ehecatl.

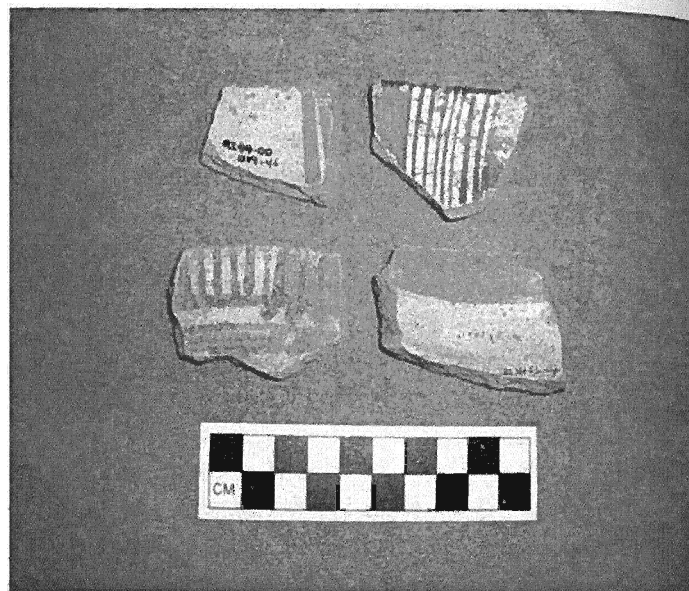


Figure 3. Papagayo Polychrome: Casares Variety.



Figure 4. Papagayo Polychrome: Mandador Variety.

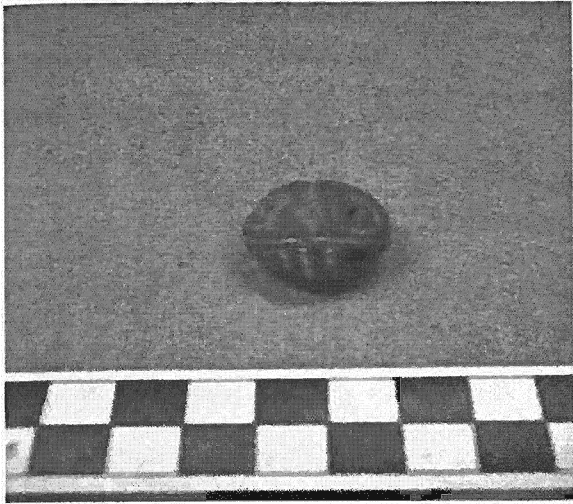


Figure 5. Bead with 'Tlaloc' image.

References Cited

- Abel-Vidor, S. 1980. The Historical Sources for the Greater Nicoya Archaeological Subarea. *Vinculos* 6:155-176.
- Baudez, C.F., and M.D. Coe. 1962. Archaeological Sequences in Northwestern Costa Rica. *Acta, 34th International Congress of Americanists* (Vienna 1960), pp. 366-373.
- Bruhns, K.O. 1980. *Cihuatlan: An Early Postclassic Town of El Salvador*. Monographs in Anthropology, No. 5. Museum of Anthropology, University of Missouri, Columbia, MO.
- Chapman, A.M. 1974. *Los Nicaraos y los Chorotegas segun los fuentes historicas*. Ciudad Universitaria, Costa Rica.
- Coe, M.D. 1962. Costa Rican Archaeology and Mesoamerica. *Southwestern Journal of Anthropology* 18:170-183.
- Constenla Umaña, A. 1994. Las lenguas de la Gran Nicoya. *Vinculos* 18-19:209-227.
- Dakin, K., and S. Wichmann. 2000. Cacao and Chocolate: An Uto-Aztecan Perspective. *Ancient Mesoamerica* 11(2):55-76.
- Davies, N. 1977. *The Toltecs, Until the Fall of Tula*. University of Oklahoma Press, Norman, OK.
- Day, J.S. 1994. Central Mexican Imagery in Greater Nicoya. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H.B. Nicholson and E. Quiñones Keber, pp. 235-248. Labyrinthos Press, Culver City, CA.
- Fash, W.L., and B.J. Fash. 2000. Teotihuacan and the Maya: A Classic Heritage. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones, and S. Sessions, pp. 433-464. University Press of Colorado, Boulder, CO.
- Fowler, W.R. Jr. 1987. Cacao, Indigo, and Coffee: Cash Crops in the History of El Salvador. *Research in Economic Anthropology* 8:139-167.
- . 1989. *The Evolution of Ancient Nahua Civilizations: The Pipil-Nicarao of Central America*. University of Oklahoma Press, Norman, OK.
- Healy, P.F. 1980. *Archaeology of the Rivas Region, Nicaragua*. Wilfred Laurier University Press, Waterloo, Ontario.
- Helms, M.W. 1993. *Craft and the Kingly Ideal: Art, Trade, and Power*. University of Texas Press, Austin, TX.
- Hodder, I. 1990. *Reading the Past: Current Approaches to Interpretation in Archaeology*. 2nd ed. Cambridge University Press, Cambridge, UK.
- Hoopes, J.W., and G.G. McCafferty. 1989. *Out of Mexico: An Archaeological Evaluation of the Migration Legends of Greater Nicoya*. Paper presented at the Annual Meeting of the Society for American Archaeology, April 1989, Atlanta, GA.
- Jiménez Moreno, W. 1942. El enigma de los Olmecas. *Cuadernos Americanos* I(5):113-145.
- . 1966. Mesoamerica before the Toltecs. Translated by M. Bullington and C.R. Wicke. In *Ancient Oaxaca: Discoveries in Mexican Archeology and History*, edited by J. Paddock, pp. 3-82. Stanford University Press, Stanford.

- Kelley, J.H. 1988. *Cihuatán, El Salvador: A Study of Intrasite Variability*. Vanderbilt University Publications in Anthropology, No. 35, Nashville, TN.
- Lange, F. 1992. The Intermediate Area: An Introductory Overview of Wealth and Hierarchy Issues. In *Wealth and Hierarchy in the Intermediate Area*, edited by F.W. Lange, pp. 1-14. Dumbarton Oaks Research Library and Collection, Washington, D.C.
- . 1994. Evaluación histórica del concepto Gran Nicoya. *Vínculos* 18-19(1992-93):1-8.
- Lange, F., P.D. Sheets, A. Martinez, and S. Abel-Vidor. 1992. *The Archaeology of Pacific Nicaragua*. University of New Mexico Press. Albuquerque, NM.
- Lastra, Y. 2001. Linguistics. In *The Oxford Encyclopedia of Mesoamerican Cultures*, editor-in-chief D. Carrasco, pp. 123-131. Oxford University Press, Oxford.
- López Austin, A., and L. López Luján. 2000. The Myth and Reality of Zuyua: The Feathered Serpent and Mesoamerican Transformations from the Classic to the Postclassic. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones, and S. Sessions, pp. 21-87. University of Colorado Press, Boulder, CO.
- Lothrop, S.K. 1926. *The Pottery of Costa Rica and Nicaragua*. 2 vols. Heye Foundation, Museum of the American Indian Memoir 8, New York, NY.
- McCafferty, G.G. 1994. The Mixteca-Puebla Stylistic Tradition at Early Postclassic Cholula. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H.B. Nicholson and E. Quiñones Keber, pp. 53-78. Labyrinthos Press, Culver City, CA.
- . 1996. The Ceramics and Chronology of Cholula, Mexico. *Ancient Mesoamerica* 7(2):299-323.
- . 1997. *Giants, Tyrants, and Toltecs: Ethnic Change in Classic/Postclassic Cholula*. Paper presented in the Liminal States: Central Mesoamerica during the Classic/Postclassic Transition workshop, University of Texas-Austin Maya Meetings, Austin, TX.
- . 2000. Tollan Cholollan and the Legacy of Legitimacy during the Classic/Postclassic Transition. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, M.L. Jones, and S. Sessions, pp. 341-367. University Press of Colorado, Boulder, CO.
- . 2001a. *Ceramics of Postclassic Cholula, Mexico: Typology and Seriation of Pottery from the UA-1 Domestic Compound*. Monograph 43, The Cotsen Institute of Archaeology, University of California, Los Angeles, CA.
- . 2001b. Mountain of Heaven, Mountain of Earth: The Great Pyramid of Cholula as Sacred Landscape. In *Landscape and Power in Ancient Mesoamerica*, edited by R. Koontz, K. Reese-Taylor, and A. Headrick, pp. 279-316. Westview Press, Boulder, CO.
- . *in press*. So What Else is New? A Cholula-centric Perspective on Lowland/Highland Interaction in the Classic/ Postclassic Transition. Manuscript for *Rethinking Tula, Tollan, and Chichen Itza*, edited by C. Kristan-Graham and J. Kowalski. Dumbarton Oaks, Washington, D.C.
- McCafferty, S.D., and G.G. McCafferty. *in press*. Weaving Space: Textile Imagery and Landscape in the Mixtec Codices. Manuscript for *2001: An Odyssey of Space*, edited by E. Robertson, D. Fernandez, and M. Zender. Proceedings of the 34th Annual Chacmool Conference, University of Calgary, AB.
- McCafferty, G.G., and L. Steinbrenner. 2003. *N-RI-44-00, Informe Preliminar*. Report submitted to the Dirección de Patrimonio Cultural, Managua, Nicaragua.
- McCafferty, G.G., and S. Suarez Cruz. 2001. Stamp Bottom Bowls of Cholula, Mexico. *La Tinaja: A Newsletter of Archaeological Ceramics* 13(2):4-10.
- McVicker, D. 1985. The 'Mayanized' Mexicans. *American Antiquity* 50(1):82-101.
- Nagao, D. 1989. Public Proclamation in the Art of Cacaxtla and Xochicalco. In *Mesoamerica after the Decline of Teotihuacan, AD 700-900*, edited by R.A. Diehl and J.C. Berlo, pp. 83-104. Dumbarton Oaks, Washington, D.C.
- Nicholson, H.B. 1960. The Mixteca-Puebla Concept in Mesoamerican Archaeology: A Re-Examination. In *Men and Cultures: Selected Papers from the Fifth International Congress of Anthropological and Ethnological Sciences, Philadelphia, September 1-9,*

- 1956, edited by A. F. C. Wallace, pp. 612-617. University of Pennsylvania, Philadelphia, PA.
- . 1982. The Mixteca-Puebla Concept Re-visited. In *The Art and Iconography of Late Post-Classic Central Mexico*, edited by E.H. Boone, pp. 227-254. Dumbarton Oaks, Washington, D.C.
- Nicholson, H.B., and E. Quiñones Keber. 1994. Introduction. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H. B. Nicholson and E. Quiñones Keber, pp. vii-xv. Labyrinthos Press, Culver City, CA.
- Niemi, K. 2003. *Social Change and Migration in the Rivas Region, Pacific Nicaragua (1000 BC-AD 1522)*. Ph.D. dissertation, State University of New York, Buffalo, NY.
- Niemi, K., M. Román-Lacayo, and S. Salgado González. 1997. El migración de grupos mesoamericanos hacia el pacífico de Nicaragua durante el período posclásico temprano: una revisión de la secuencia cerámica de Gran Nicoya. In *XI Simposio de Investigaciones Arqueológicas en Guatemala, 1997*, edited by J.P. Laporte and H. Escobedo. Museo Nacional de Arqueología e Etnología, Guatemala.
- de Olivera, V.M., and C. Reyes. 1969. Los Choloques y los Cholultecas: Apuntes sobre las Relaciones Étnica en Cholula hasta el Siglo XVI. *Anales del INAH*, Epoch 7, vol. 1 (1967-8):247-274.
- Oviedo y Valdés, G.F. de. 1851-55. *Historia General y natural de los Indios, islas tierra firme del mar oceano*. 4 vols. J. Amador de los Rios, editor. Madrid.
- Ringle, W.M., T. Gallareta Negrón, and G. Bey III. 1998. The Return of Quetzalcoatl: Evidence for the Spread of a World Religion during The Epiclassic Period. *Ancient Mesoamerica* 9:183-232.
- Robertson, D. 1970. The Tulum Murals: The International Style of the Late Postclassic. In *XXXVIII Internationalen Americanisten Kongresses (Stuttgart-Munich) 1968*, *Verhandlungen* 2:77-88.
- Salgado González, S. 1996. *Social Change in the Region of Granada, Pacific Nicaragua (1000 BC-1522 AD)*. Ph.D. dissertation, State University of New York, Albany, NY.
- Smith, M.E., and C.M. Heath-Smith. 1980. Waves of Influence in Postclassic Mesoamerica? A Critique of the Mixteca-Puebla Concept. *Anthropology* IV(2):15-50.
- Squier, E.G. 1852. *Nicaragua: Its People, Scenery, Monuments, and the Proposed Interoceanic Canal*. 2 vols. Appleton Co., New York.
- Steinbrenner, L. 2002. *Ethnicity and Ceramics in Rivas, Nicaragua, AD 800-1550*. M.A. thesis, Department of Archaeology, University of Calgary, Alberta.
- . *in press*. Cacao in Greater Nicoya: Ethnohistory and a Unique Tradition. In *Cacao in Mesoamerica*, edited by C. McNeil.
- Stone, D.Z. 1966. *Introduction to the Archaeology of Costa Rica*. Revised ed. Museo Nacional de Costa Rica, San José.
- Strong, W.D. 1948. The Archaeology of Costa Rica and Nicaragua. In *Handbook of South American Indians*, vol. 4, edited by J. Steward, pp. 121-142. Bureau of American Ethnology, Bulletin No. 143. Washington, D.C.
- Stuart, D. 2000. "The Arrival of Strangers": Teotihuacan and Tollan in Classic Maya History. In *Mesoamerica's Classic Heritage: From Teotihuacan to the Aztecs*, edited by D. Carrasco, L. Jones, and S. Sessions, pp. 465-515. University of Colorado Press, Boulder, CO.
- Suárez Cruz, S. 1994. El Policromo Laca de Cholula, Puebla. In *Mixteca-Puebla: Discoveries and Research in Mesoamerican Art and Archaeology*, edited by H.B. Nicholson and E. Quiñones Keber, pp. 45-52. Labyrinthos Press, Culver City, CA.
- Torquemada, Fray J. de. 1975-83. *Monarquía Indiana*. 2 vols. (1615). Coordinated by M. Leon-Portilla. Instituto de Investigaciones Historicas, Universidad Nacional Autonoma de México, Mexico D.F.

Vaillant, G.C. 1938. A Correlation of Archaeological and Historical Sequences in the Valley of Mexico. *American Anthropologist* 40:535-573.

---. 1941. *Aztecs of Mexico: Origin, Rise and Fall of the Aztec Nation*. Doubleday, Garden City, NY.

Van Broekhoven, L.N.K. 2002. *Conquistando lo Invencible: Fuentes históricas sobre las culturas indígenas de la región Central de Nicaragua*. CNWS Publications, Mededelingen van het Rijksmuseum voor Volkenkunde, Leiden, The Netherlands.