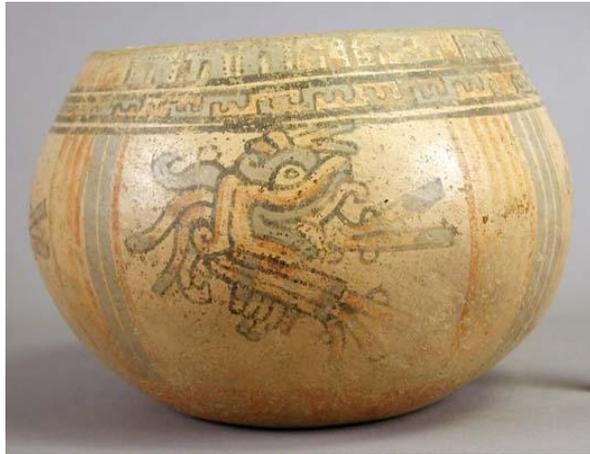


The Flight of the Feathered Serpent: A Comparative Iconological Analysis of Feathered Serpent Motifs on Greater Nicoyan Ceramics and the Mesoamerican Quetzalcoatl.



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Cover Photo: Superhemispherical Bowl with Feathered Serpent Motif. Costa Rica. Peabody Museum Harvard. Catalog number 977-4-20/25388.

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1 Introduction

The Feathered Serpent is a pervasive image in Mesoamerican religion, appearing across cultures and ethnic groups in Mexico and Upper Central America, tracing its origins from the Formative period Olmec (see Monument 19, LaVenta). The Feathered Serpent developed into a central figure in Mesoamerican religious practice in the early Postclassic during a time of political instability. It emphasized a reciprocal relationship with the religious pantheon as well as often extravagant expression of sacred motifs and was based first out of Teotihuacan, and later at Cholula (Evans 2004, 353).

The anthropomorphic deity Quetzalcoatl, also known as Kukulcan in the Maya area, arose in the “liminal zone between the Classic and the Postclassic” as a Toltec culture hero whose name became synonymous with the Aztec wind deity Ehecatl (Jansen 2005, 89). Thus, in the Mesoamerican area, the deity Quetzalcoatl can refer both to a serpent with the plumage of a bird and a god with human characteristics and neither is necessarily mutually exclusive to the other. Indeed, this image which was so widely distributed in PreColumbian times that its appearance in the Greater Nicoya area of Pacific Coastal Nicaragua and Costa Rica has been widely accepted as proof of the direct migration of people between the two areas (fig 1). This theory, however, has been called into question in recent years (McCafferty and Dennett 2010) and thus we are called upon to re-examine the available data in order to obtain new perspective on the issue.



Figure 1 - Map showing Mesoamerica and the Mesoamerican Periphery with arrow showing direction theoretical migrations. Map Courtesy of Larry Steinbrenner.

1.1 Purpose and Research Questions

The aim of this study will be to examine the image of the Feathered Serpent in two contexts; first, on ceramics of the Greater Nicoya, and second, on codices in Mesoamerica, mainly Central Mexico and the Mixtec Area. First and foremost, the documentation and description of this motif has not been undertaken prior to this, and it is indeed an important step for laying the groundwork for further study and discourse. In many cases, the motif is quite obscure and therefore it must be discussed further. Compared to Mesoamerica, there has been very little study conducted in the Greater Nicoya, and it is imperative that we start at the beginning.

A secondary purpose of this study is to outline spheres of influence on the material culture of the Greater Nicoya and to choose one of them, Mesoamerica, as a focal point. The Feathered Serpent motif has been chosen for a number of reasons. For one, it is an iconic symbol of Mesoamerican culture and has been widely studied, thus providing an ample corpus for iconographic study, which should yield several points of comparison. It was also chosen due to the fact that, in the Greater Nicoya, the Feathered Serpent appears on a wide range of styles of vessels over quite a wide time frame, and therefore allows for the study of a potentially very broad cultural frame without being bound to one style which has the potential to limit the study to only one ethnic group.

The materialization of the Feathered Serpent in the Greater Nicoya leads to several inherent questions, including how and why it was carried or adopted so far from the Mesoamerican heartland, and what the implications are for its appearance in the area; how does the Feathered Serpent of the Greater Nicoya compare to its more thoroughly studied Mesoamerican counterpart? The Serpent itself is an ideological symbol, and therefore does not automatically imply the movement of people. It can also represent both a mythological creature on one hand and, as will be discussed, a figure who was both human and divine.

In regards to the first set of questions, we may ask whether the Feathered Serpent occurs in the Greater Nicoya as an emblem on ceramics which were traded for and physically moved, or whether they were adopted as an iconographic symbol which was then transmitted by cultural diffusion into the area. These enquiries lead to more in-depth questions which are not readily answered: how do we infer this archaeologically?

Specifically, how do we determine the difference between cultural diffusion, trade and migration in the archaeological record? The question of trade and migration will be discussed but will not be the main concern of this study. Rather the central focus will be on the documentation and description of Feathered Serpent images from the Greater Nicoya and its comparison to examples from Pre-Columbian Mesoamerica. It is suggested, however that further research be carried-out in order to gain additional insight into the movement of this symbol.

The discussion of these questions will include the examination of the nature of interactions in the Greater Nicoya. Previous studies on this subject have mainly focussed on describing similarities in iconography (Day 1994, Stone 1982), and from a focussed regional perspective; few take the trouble to draw conclusions about shared ideologies and the implications for identity and ethnicity (McCafferty and Steinbrenner 2005). This study will obviously be heavily reliant on the iconographic and stylistic analysis of ceramics and material culture that occur in both areas; however it will also attempt to be inclusive in the use of artistic media as well as multidisciplinary archaeological data. By looking at the occurrence of the Feathered Serpent rather than specific art styles, this study will attempt to be more inclusive, and less reliant on preconceived conclusions as other studies that have been conducted on similar topics.

1.2 Geographic Background

The geographic region of the Greater Nicoya consists of the Pacific coastal regions of Nicaragua and Northern Costa Rica. It contains a wide array of topography, from volcanically active calderas running parallel to the coast, to rich volcanic ash lowlands. It is in these relatively flat lowlands that most of the area's population is located, and was probably also located in Pre-Columbian times (Healy 1980, 9). The Greater Nicoya encompasses the majority of archaeological sites in Nicaragua (fig 2). It is also surrounded by influential neighbours: Mesoamerica and the Mesoamerican periphery (modern El Salvador and Honduras) on the Northern border, the Moskito coast and amalgam of Caribbean islands to the east, and South America to the South.

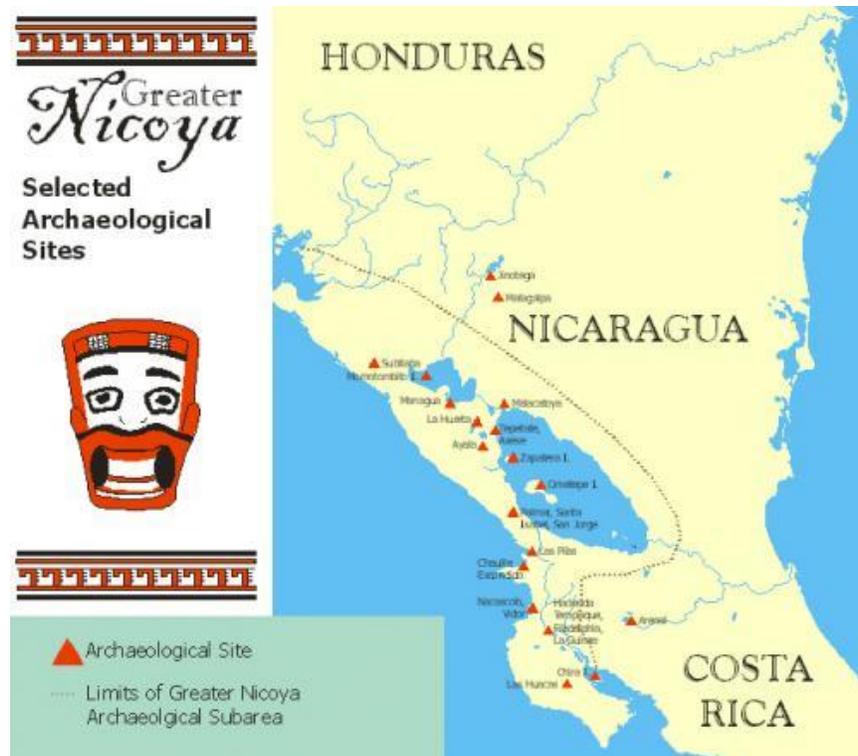


Figure 2 - Selected Archaeological Sites of the Greater Nicoya. Courtesy of Larry Steinbrenner.

The area also includes two major lakes, discovered by Gil Gonzalez de Avila; Lake Managua (also called Xolotlan) and Lake Nicaragua (or Cocibolca) (Healy 1980, 7). These are the two largest freshwater lakes in Central America, and, particularly in Lake Nicaragua, a multitude of islands can be found which contain archaeological remnants. Of these, the largest, the Isla de Ometepe, and Zapatera Island to the north of Ometepe are especially notable. Volcanic activity features prominently in the geographic and geological study of this area; many of the greatest topographic features are volcanoes, and tectonic activity in the area has led to numerous devastating earthquakes (Healy 1980, 10). There is also an indication that the land level has risen over time, and as a result, Lake Nicaragua is smaller now than it was in the past (Healy 1980, 10 quoting Dengo 1962).

Most of the Greater Nicoya is grouped in the “Tropical wet and dry climates” (Healy 1980, 11) with two main seasons, one wet season from July to October followed by a dry season for the remainder of the year. Temperatures generally remain between 24 and 30 degrees centigrade, with humidity remaining above 50 per cent for the most part. Soils are very nutrient-enriched due to the high amount of volcanic ash deposits, and the clays

around the two large lakes is particularly porous and retains water well, rendering it ideal for the cultivation of subsistence crops such as maize, beans and squash, a feature that was exploited by Pre-Columbian peoples (Healy 1980, 14). A wide array of fauna also inhabited the Greater Nicoya which were hunted by the indigenous inhabitants, including fish, birds, and a large number of mammals (Healy 1980).

1.3 Pre-Columbian and Colonial Sources Survey

This section features an overview on the historical background of the regions which will be the focus of this study; namely Nicaragua (the Greater Nicoya region) and certain Pre-Colonial and Colonial documents pertaining to the Feathered Serpent/Quetzalcoatl in Central Mexico. It will begin with the Conquest of Nicaragua and a summary of the main players in the conquest as well as some of the Chroniclers who wrote about the region. This section will lay out the ethnohistoric background for the Mesoamerican migrations hypothesis that is a central theme of this study. Next, there will be a discussion of PreColumbian-style codices (mainly from the Mixtec area of Mexico) and their links to the Feathered Serpent cult, as well as their usage in this study. This will be followed by a brief description of Quetzalcoatl as a deity and personage who figured greatly in the mytho-historical lore of Ancient Mesoamerica. It is through an understanding of the complex historical background of the area that we can begin to understand the cultural factors at play and the potential source of the Feathered Serpent in the Greater Nicoya.

1.3.1 Nicaragua: Colonial Sources and Ethnohistory

Although the Gulf of Nicoya was known to the Spanish in 1519 (Abel-Vidor 1980, 163), the Conquest of Nicaragua did not begin until 1522 with the entry of Spaniard Gil Gonzalez de Avila (or Dávila) into the Nicoya Peninsula, and subsequent conversion of and extraction of tribute from many of the native peoples that he encountered (Healy 1980, 19). Gil Gonzalez provided a written account of some of the people that he encountered, mainly in accounts meant for the King demonstrating the amount of money and baptized souls he had accrued, however some of his observations are more ethnohistorically relevant, of which Suzanne Abel-Vidor points out three important observations that he made:

“(1) Gonzalez noted a quantitative and qualitative difference between the populations contacted south of the Gulf of Nicoya, and those of the Gulf and of Nicoya as a whole; (2) he noted a further

and more marked change as he approached the lakes region of Nicaragua; (3) the size of the Nicaraguan populations, and their relative material wealth, were impressive to the Spaniards," (Abel-Vidor 1980, 163).

At the time of conquest, Healy (1980, 20) defines three main cultural groups which inhabited the Greater Nicoya: the Mangué, Orotiña, and Nicarao. This is supported by Gil Gonzalez's account of the differences between the people who were living on the coast when he arrived. Gonzalez encountered the Chorotega cacique, Nicoya, who informed him of the Nicarao cacique, Nicaragua, to the North (Fowler 1985, 43). He proceeded to engage in a philosophical discussion with Nicaragua which ended in his conversion to Christianity; a meeting which was recorded by the treasurer of the expedition, Andres de Cereceda. Cereceda made important contributions with his list of caciques and also a document in which he recorded ethnographic data, which is now lost, but was quoted by Peter Martyr (Fowler 1985, 44).

In the next year, however, the conquests of Gil Gonzalez were commandeered by Francisco Hernandez de Cordoba (under the orders of the Governor of Panama, Pedrarias), who established the colonial cities of Leon and Granada in 1524 only to attempt to become independent and be put down and executed by Pedrarias (Healy 1980, 20). Due to a lack of gold in the area (relative to the Inca Empire to the South and Aztec Empire to the North), the growth of the colony and establishment of colonial structure was slow (Abel-Vidor 1980, 155). There is no clear consensus among both chroniclers and modern scholars regarding the exact Nicaraguan population upon contact, only that it was certainly large, and that it was almost completely decimated in the next century due first to warfare and disease, and subsequently the export of between 50,000 to 500,000 indigenous peoples in the Indian Slave Trade (Newson 1982).

Perhaps one of the earliest, and most complete ethnohistorical sources on Pre-Columbian Nicaragua is that of Chronicler and bureaucrat Gonzalo Fernández de Oviedo y Valdés (1478-1557), whose *Historia general y natural de las Indias* (1851-55) is one of a small number of sources that endeavors to describe the daily life and customs of the indigenous people who lived in Nicaragua at the time of first contact. Oviedo made several references to the types of houses that he saw in the area, towns, foodways, dress, ornamentation, customs, social relations, trade and warfare, among other things. This type

of information provides an invaluable source on Nicaragua's Pre-Columbian inhabitants, although Lothrop rightly points out that this value is weakened by the fact that Oviedo often failed to mention which ethnic group he was describing in each case (1926, 30).

Serving as official chronicler of the Indies from 1532 to 1557, Oviedo made direct observations on Nicaragua between 1528 and 1529 (Fowler 1985, 46). On the subject of settlements, he wrote that towns were widely spread out, featuring "one plaza after another with wide intervals between" (Oviedo 1975, lib XLII, cap. V), calling to mind the layout of Mesoamerican sites. He also described some of the cultural differences and tensions between the groups who lived there, stating that those "of the Chorotega tongue, who are their [the Nicaraos'] enemies, have the same kind of temples: but their language, and rites, and various ceremonies and customs are of a different form, so that they cannot understand each other." (Oviedo 1975, lib XLII, cap. 1).

Relevant to this study are several observations made by the early chroniclers: the notes of Gil Gonzalez, Oviedo and others (see Alonso Ponce 1873, Alcedo (in Levy 1873, 7), Andres de Cerceda 1522) allow us to piece together the relative locations of the ethnic groups that were present in Nicaragua, as well as give us clues to the languages which were being spoken at the time of conquest. This is extremely important when dealing with the material culture that is being recovered in each area, and can be employed as a guide when attempting to assign identities to these culture groups.

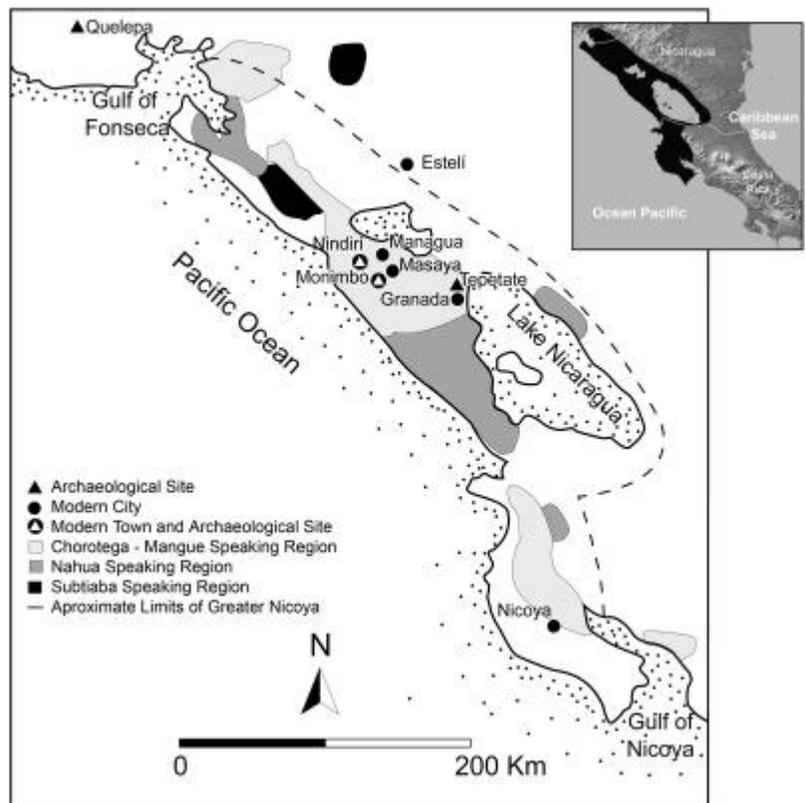


Figure 3 - Map of the Greater Nicoya with Basic Linguistic Divisions. From Carmack and Salgado 2006.

Most importantly, for this study, is what the Chroniclers say regarding the migrations of Nahuatl- and Mangue-speaking peoples from Mesoamerica; Healy (1980, 22) writes that the Spanish had noted with some amazement the resemblance between the Aztec language and that of the Nicaraos, and that there are references by colonial sources (Motolinia, Gomara, and Oviedo, in particular) to migrations of the Nicaraos into the area due to various reasons, mainly drought or conflict in the north. Healy cites a story told by a native Nicarao informant to Fray Francisco Bobadilla (but recorded by Oviedo), in which his people had arrived in Rivas some time ago from a place which he called "Ticomanga and Maguatega," which have been interpreted as being Ticomantlan and Miahuatlan, two towns nearby to Cholula, Mexico. Healy goes on to explain that the firsthand account of Torquemada in the 1520's also includes references to the Nicoyans and Mangue (Chorotegans) being from an area between the Soconusco and Tehuantepec. The Nicaraos, he says, were living in Anahuac, or the Valley of Mexico, when they were conquered by the Postclassic Mexican Olmeca and forced to flee. They moved southward, leaving small settlements behind in Guatemala, El Salvador, and Honduras before going through Nicaragua and Costa Rica to Panama. They had, however, according to Healy, been given a prophecy in Choluteca (Honduras) that they would find their home on a freshwater sea near an island with two peaks (which resembles perfectly Ometepe Island in the middle of Lake Nicaragua, Ometepe being Nahuatl for "two mountains") and had to make a laborious trip back to the Nicaraguan lake region, in which at that time another culture group (probably the Chorotega, another group who had arrived from Mexico, but slightly earlier than the Nicaraos) was already established. The Nicaraos, after settling in Leon for a time, then drove the Chorotega out of the area and took dominance in the Rivas region and islands of Lake Nicaragua (Healy 1980, 23). Simply put, there were a number of culture groups present in the Greater Nicoya area at the time of conquest (fig 3).

Here, there is an assumption that these observations from the past carry some truth and are therefore applied as a central vein in this study. There is certainly an awareness that these documents have been translated from native informant to Spaniard, in which two completely different worldviews and cognitive spheres are at being observed in combination. This is also coming from a time of heavy factional interests and intense exaggerations in order to 'spin' history one way or another (McCafferty 2000). It is the opinion of the author that these documents have been sufficiently studied and reviewed by

scholars as to at the very least render the question of some type of migrations by several groups from Mesoamerica a certainty.

It is also pertinent to point out that, after the arrival of the Spanish, the native populations of the Pacific Coast of Nicaragua were almost completely wiped-out by years of warfare, disease, and deportation in the slave trade (Fowler 1985, 38). This indicates that, unlike in some Mesoamerican studies which are able to make use of ethnographic data (see Berdan, 2009, Price 1996, Jansen and Jiménez 2005), there is very little cultural continuity to be observed in this area, and therefore to look at the customs of the people who are there now is generally an unfavorable means of obtaining information about Pre-Columbian Greater Nicoyan religious practice. Ethnohistory in any archaeological discipline must be employed very carefully; however in this instance especially it must be used as a tool to support a study and care must be taken not to be overly influenced so as to avoid bias.

1.3.2 Mesoamerican Codices and their Relevance to this Study

Codices in the Mesoamerican area refer to painted manuscripts which were produced by native artists prior to and immediately following the Conquest of the New World. Although many were created after the arrival of the Spanish, a time in which native culture was overwhelmed by the imposition of a new Spanish culture and religion (Chuchiak 2005), they still contain important information and insights regarding PreColumbian rites, rituals and cultural habits. It is these sources that will be examined for evidence of Quetzalcoatl, both as a human deity and as a zoomorphic figure. His traits and attributes are important to note, as they will serve as a basis for what will be examined in the Feathered Serpents of Greater Nicoyan ceramics. As noted above, there are several possibilities for the origins of Mesoamerican migrants into the Greater Nicoya, and therefore examples of Feathered Serpent imagery will be inspected from the Codices of both the Mixtec and Aztec groups. This will feature special attention on the Codices which are in the Mixteca-Puebla style, as several ceramic styles and motifs of the Greater Nicoya have been previously compared and linked to Mixteca-Puebla ceramics (Day 1994).

1.3.3 The Feathered Serpent in Mesoamerica – Who is Quetzalcoatl?

Quetzalcoatl as a zoomorphic Feathered Serpent, as mentioned above, has been known from a very early stage in Mesoamerican development. Temples dedicated to or decorated with the Feathered Serpent have been noted across Mesoamerica, across a great expanse of time: in Teotihuacan, Chichen Itza, Xochicalco (fig 4) and many others. As an anthropomorphic deity, Quetzalcoatl has also known several incarnations, and there has been some blending of the figure as a deity and as an historical figure, so that it is difficult



Figure 4 - Detail of Temple of the Feathered Serpent, Xochicalco, Mexico. Photograph Courtesy of Geoffrey McCafferty

to define at times which personage is being referred to (Jansen 2005, 89).



Figure 5 - Quetzalcoatl's Descent from the Sky in Codex Vienna (also called Codex Vindobonensis Mexicanus 1 or Codex Yuta Tnoho), 48

Quetzalcoatl was known to the Mixtec and as a High Priest and to the Toltec as a god named Lord 9 Ehecatl, or 9 Wind (Carrasco 1982, 28). Portrayed in the *Codex Vindobonensis* (in folio 49a-38c), *Codex Nutall*, and *Codex Selden*, Quetzalcoatl's story is most complete in the *Codex Vindobonensis*, in which he is born from a flint knife and ascends to heaven where he is shown his mission by the Divine Pair and is given an elaborate costume. The costume is the essential portion of this study, as it demarcates some attributes that will be essential for

iconographic study. As David Carrasco describes it, he is depicted wearing a "truncated cap, red buccal mask, a shell pectoral, feather bundle, and flowered weapons, [and that] he is given four decorated temples and descends to earth on a rope," (1982, 28; Fig 5). The pervasive image in these pictorial manuscripts for Quetzalcoatl is that of creator god who lays out important ceremonial areas. It is he who "guided the rulers to be devout and just,

who taught the people to work the land, to count the days, to express their thoughts and experiences in flowery songs and colorful paintings,” (Jansen and Pérez Jiménez 2007, xii).

As a means of distinction, the Toltec historical figure is often referred to as Ce Acatl Topiltzin Quetzalcoatl. The narrative of his life is described as being similar to that of the divine Quetzalcoatl by Carrasco (1982, 31), who, by combining information from the *Codex Telleriano-Remensis* and the *Codex Vaticanus A*, states that Topiltzin had a miraculous birth (via a virgin Toltec woman in this version), also provides the model to follow for proper ritual sacrifices, and is associated with four temples. What sets Topiltzin Quetzalcoatl apart is his questing and travelling, which Jansen (2005, 89-90) describes as follows: Topiltzin, the ruler and high priest at Tula, Hidalgo, leaves his royal seat and stops in the important city of Cholula. From there, he went deep into the East, all the way into the Maya lands, where he founded the city of Mayapan and became known as Lord Kukulcan. After some time, he then returned to Central Mexico, by some accounts, Cholula, and ruled for many years until partaking in a journey in which his death occurred.

1.4 Past Scholarly Research in the Greater Nicoya

Scholarly research in the area began in the mid 1800's with Ephraim George Squier (1853), who, through a diplomatic position in Nicaragua, was able to conduct anthropological and archaeological researches while publishing his findings and continuing a correspondence with several other eminent scholars. Though his conclusions are no longer current, he must be considered to be one of the first scholars to consider the intermediate area as part of a broadly interconnected network, and as one of the originators of modern anthropology (Conn 2005, 661).

One of the definitive studies of the Greater Nicoya remains, to this day, *Pottery of Costa Rica and Nicaragua* (1926), by Samuel Kirkland Lothrop. Lothrop studied many of his materials firsthand, and his two-volume series features background information on the area, thorough descriptions of ceramic types, their construction methods, interpretations of the iconographic elements and even some site and excavation descriptions. Lothrop's many colour plates and early interpretations on Feathered Serpent imagery will be essential to this study. Lothrop's work, however, predates many of the important ceramics classification studies which examine important elements such as paste. Therefore, his classifications fell

under what he referred to as “wares.” This study will attempt to employ updated contemporary vessel classifications.

Several other studies were conducted in the 50’s and 60’s; significantly, the Harvard Peabody Museum of Archaeology project from 1959-1961, of which some of the material recovered will appear in this study, as well as the Hamburg Museum of Ethnology and Prehistory on Ometepe Island (Healy 1980, 33). During this time period, many eminent scholars also published work on the area, such as Doris Stone (1941, 1966, 1972), Julian Steward (1948), and Claude Baudéz (1962, 1963, 1967, 1970) and Albert Norweb (1964), among others. These early studies were geared towards the development of scientifically-based excavation projects which would help in forming the necessary basis for chronologies and division of time into horizons of ceramic production, thus laying the groundwork to culturally situate the Greater Nicoya in the Pre-Columbian world.

One of the other main ceramics studies that will be essential is that of Paul Healy, out of Trent University in Ontario, Canada. His *Archaeology of the Rivas Region* (1980) provides a thorough cultural and geographic background of Pacific Coastal Nicaragua, as well as an intensive ceramics study that will be employed mainly for technical information as it includes empirical data on many of the pertinent ceramic types. There are also several researchers whose work will be drawn upon who began publishing in the 80’s and 90’s, including a collection of archaeologists who published a ceramics classification system in the *Vinculos* revista (Abel-Vidor et al 1987). These publications, like that of Healy, include more regional perspectives and have as their basis more focussed and specific research questions and objectives. As is the nature of scholarly research, the more that was learned about the area, the greater the realization of how little was known and needed to be investigated. Recent research includes publications by Abel-Vidor (1980, 1981, 1986), Creamer (1983, 1986, 1989), and Lange (with Doris Stone, 1984, et al. 1982, et al. 1992). The most recent work by a team from the University of Calgary will be the focus of the following section.

1.5 Ongoing Archaeological Research: Archaeological Fieldwork in Nicaragua

Recently, efforts have been made to conduct organized scholarly excavations with clear research goals in an endeavour to recover more information from an area which has received very little focus in the past. Excavations were carried out by a research team from

the University of Calgary with the specific goal of investigating the “out of Mexico” theory (Hoopes and McCafferty 1989), based on the supposition that Nicaraguan prehistory was dominated by waves of migrations by indigenous groups from Mesoamerica. These excavations occurred in two phases; first in a three-year project spanning the 2000-2004 field seasons in which the site of Santa Isabel in the Rivas area was excavated, and another project from 2008-2010 in which the sites of Tepetate and El Rayo were excavated. The author was fortunate enough to partake in the second round of excavations. Tepetate and El Rayo were both located on the western banks of Lake Nicaragua (see McCafferty & Dennett 2010 for full summary analysis of both project SIN and PAGN). Pertinent to this study, it must be pointed out that the end result of this project was to conclude that there is almost no archaeological evidence for Mesoamerican occupation in the area; there is a distinct lack of monumental architecture, though the sites that were excavated were prominent, foodways appear to have been completely different and there is no trace of *comales* for making tortillas (found in large quantities in central Mexico), and there is no trace of incense burners, another prominent artifact from the area (McCafferty and Dennett 2010, 23). These projects have also led to the realignment of the existing chronological record as the Ometepe Period was believed to mark the beginning of many ceramic types which were found to have been produced much earlier than originally believed (McCafferty 2011, 3-4).

2 Theoretical Framework

The focus of this chapter will be the theory of material culture as it pertains to archaeological remains found in the Greater Nicoya, specifically based on ceramic vessels that feature the Feathered Serpent motif, in order to conduct an iconographic analysis of the Feathered Serpent image in polychrome ceramics of the Greater Nicoya.

There will be several theoretical considerations which relate to the interpretation of the data. It will include an overview of Semiotics, which, though useful and having provided several extremely important contributions to the structuring of culture studies, is only partially applicable to this study. The next section will be devoted to outlining a methodological manner of answering some of these questions, namely through the art historical methods laid out by Erwin Panofsky. Continuing on with material engagement theory, the manner in which human cognition and objects interact with each other will be examined in order to outline a theoretical standpoint on how humans engage with the materials and symbols both physically and cognitively.

The theory presented in this outline, though applied specifically to ceramics, will attempt to be broadly applicable in order to render it useful towards the study of material culture in general of the Greater Nicoya. The choice of theoretical framework was selected based on the inherent need to outline spheres of influence in the Greater Nicoya and how those influences affected the material culture found in the area. This will address how the data is gathered and the construct in which it is considered.

2.1 Material Culture Studies Overview

There exists an extensive corpus of art history theory dealing with material culture studies. Most, however, deal with Western art that has been made in the historical period and is not easily or appropriately transferred to the study of archaeological materials; unsurprising considering that our definition of art was founded in the modern era and much of what has been studied as art was also created as art (Morphy 2010, p.269-72). It is up to us as archaeologists to decide what theory can be applied to our own field and what cannot, instead of pulling theories out of the proverbial toolbox (Foucault 1974, p.523-4). This section will begin with a general overview of some of the works that form the basis for material culture studies, and moving specifically into the study of semiotics and material

culture. It will also discuss some of the epistemological arguments to material culture studies.

2.1.1 Summary of Semiotics

One of the most important subjects under discussion is that of semiotics. Semiology was founded at the turn of the century by Ferdinand de Saussure and Charles Sanders Peirce as a linguistics tool (Preucel 2006, p.21, 45) and developed as a useful aid in the research of cultural studies by Claude Lévi-Strauss, among others (ibid, p.37-39). In essence, the sign came to signify the primary unit for linguistics, with elements being defined for their differences, and each sign being dependant on the existence of all the other signs in the system (ibid, p. 28-30).

Through Lévi-Strauss, it became a systematic way in which to analyse culture; using language as an analogue, and measuring units of culture by their opposition and association (Preucel 2006, p.38). For instance, he was able to relate structural elements of culture to each other in order to understand their meaning not as separate elements but as being part of a system. He applied this process in his analysis of the structure of myth, which set up a series of components which were grouped together in opposition, then interpreted based on their collective meaning (Lévi-Strauss 1958, p.310).

2.1.2 Some Issues

We invoke the use of semiotics when looking for meaning behind the symbols that we are analyzing. Although it is important to understand the roots of modern semiotics, many of Saussure and Peirce's writings are now outdated (Preucel 2006, p.83; see also Barthes 1964, I.1.6) and must be evaluated for points that retain relevancy. Even by the time that Lévi-Strauss began his work, he was critical of several aspects of Saussure's model (Preucel 2006, p.38). Of course, Lévi-Strauss' method presents its own issues; for instance, it involves breaking down mythological elements into simple matrices that are perhaps an oversimplification of a system which has many unknown influences.

2.1.3 Alternatives

One alternative is to instead think about myth from the perspective of brain science. There exists an online forum, entitled Neuroanthropology.net, in which issues such as these

are discussed. This is a venue in which anthropological research meets neuroscience. On Lévi-Strauss' structural anthropology, one contributor writes: "neuroanthropologists argue that the 'underlying structure' that generates myth, ritual and conscious thought, is not a set of categories or schemata, but rather the human nervous system and brain, embedded in a body, interacting with other individuals, and suspended in an environment," (Neuroanthropology 2009). This does not mean that all of Lévi-Strauss' contributions are over-simplified; on the contrary, his cognitive model I think rightly indicates that humans classify and modulate knowledge in order to better comprehend it. The processes that go into thought formation, however, and more importantly the actions that are the result of thought, such as myth creation, are more complex than have been allowed-for by Lévi-Strauss. Cognitive studies as they pertain to material culture will be discussed in the next section; they present important views on material engagement and as such are an extremely useful aspect of the work of Lévi-Strauss.

2.1.4 Methodological Concerns

The crux of the matter is that the use of a systematic approach renders studies more scientific, efficient and practical for application by other archaeologists. Art, and material culture in general, is encoded with cultural information that can be extracted if the right kind of methodologies are applied, and as long as an effort is made to consider potential obstacles in the interpretive process such as context, data disparity and cultural variation. Semiotics in its purest form was applied to a 2002 archaeological study (Capone and Preucel 2002) in which the ceramics of Kotyiti Pueblo in Northern New Mexico were analysed, not according to the traditional function and style forms of analysis, but by naming the sign, object and interpretant of the assemblage. In conjunction with petrographic, ethnographic and social data, they were able to determine the change in motifs under certain varying conditions as well as contradict the existing ethnohistorical accounts.

This application, though valid and, in the end effective to a certain degree, is impractical for two reasons: first, the use of Peircian semiotics involves the inference of possession of prior knowledge of Pierce and his extensive and often confusing glossary of nomenclature that renders the study less accessible to anyone who has not studied linguistics extensively; namely, most archaeologists, who are assumedly the target

audience. Second, the use of a more direct and systematic approach need not leave out any of the data acquired by the Peircian approach, it is merely presented in a different, and arguably a much more comprehensible manner. For instance, the Peircian method were to be applied to the data at hand, then the Feathered Serpent motif would be seen as a *symbol*, or a “sign whose [meaning is] established by convention” (Capone and Preucel 2002, p.101). The use of semiotics here indicates that meaning creation is an ongoing process, one which varies over the life of the object in question, and therefore the potential for multiple meanings based on context and beholder of the Feathered Serpent motif is provided. This is useful; however one is not prevented from indicating that the Feathered Serpent motif certainly carried a different meaning per differing context in any other form of analysis.

In the same vein, the petrographic analyses that have been conducted on the pastes of Nicaraguan ceramics (McCafferty and Dennett 2010) would serve as an *indexical* sign according to Peircian semiotics because inclusions are indexical of their place of origin (Capone and Preucel 2002, p.102), but one could simply state, in any analytical form of choice, that petrographic analysis can locate production centres. Capone and Preucel also indicate that a style of pottery that is indicative of a certain ethnic group can also be indexical; however it is difficult to find instances in which ceramic types have been linked to specific Nicaraguan groups, in which case this method is inapplicable. Paul Healy does write that Rivas ceramics show close similarities to Guanacaste, Costa Rica ceramics, and that this suggests that they were made by the same ethnic or cultural group (Healy 1980, p.331). He also mentions “Zoned Bichrome peoples” but does not name a specific culture group (Healy 1980, p.332) and that the late Polychrome Period can be attributed to the arrival of the Nicaraos (Healy 1980, p.337). In the end, Peircian semiotics may be applicable to studies in Nicaraguan archaeology; however they are not necessarily the best means of sharing our data with the archaeological community.

2.1.5 Practical Applications

The process of coming to a complete understanding of signs and the meaning behind them is a difficult one, and can be approached by the use of some semiological theory. Semiotics is one manner in which we can draw analogues between art and language, and endeavour to read art and material culture as we would read language. It is

structured and in its own way, scientific. The practical application of the theory is, however, incomplete as yet, and I prefer a more practical and direct approach, one which favours laying a descriptive basis and then moving on with an interpretation from that foundation. Erwin Panofsky outlined a three-step procedure for what he referred to as Iconological Analysis (Panofsky 1939, p.32), and this is to be outlined in the following section.

2.2 Method to the Madness: Panofsky and Iconology

In this study, typological and contextual data from ethnographic sources as well as archaeological investigations of ceramics will be combined with art-historical iconographic analyses in order to determine information about identity, mobility and ethnicity of the peoples of Sapoá period Greater Nicoya. This will include an intensive look at the occurrence of the Feathered Serpent motif on polychrome ceramics, as well as a broader look at the Feathered Serpent in a Mesoamerican context in several media.

The following is an outline of the approach of Erwin Panofsky and the method of iconographic analysis that will be employed in the analysis of the Feathered Serpent motif on ceramics of the Greater Nicoya. This is a highly art historical approach to iconographic analysis, one that is preferable to the previously demonstrated Peircian semiotics approach due to the more concrete and accessible format.

2.2.1 The Panofskian Method

The *Panofskian* iconology approach involves the study of visual culture at three levels. These are the pre-iconographic, the iconographic, and iconological levels (Panofsky 1955, p.28-30). The first step, the pre-iconographic stage, involves an initial look at the object in order to describe in a literal and purely descriptive way what is there. Observations are made on things like form and colour. Panofsky realized that this could lack objectivity due to the preconceived notions that humans bring to even a task as simple as describing what is seen. In order to counteract this, Panofsky introduced a “history of style” (1955, p.41) which was a corrective principle for varying historical conditions. This of course is a moot point for Nicaraguan art history, which does not yet possess a Panofskian history of style, having very little history altogether.

The second level is the iconographic level. At this point, basic individual or small groups of elements and motifs and their associated meanings are identified. This involves, for Panofsky, an extensive familiarity with scholarly works and resources, as well as ethnographic information (1955, p.30). There is very little in the way of ethnographic evidence for mythology in Nicaragua, and traditionally we have looked to Mesoamerica for a frame of reference for the Feathered Serpent motif. Other sources of iconographic analysis which may be consulted can be found in Costa Rica and Panama.

The third and final level of interpretation is the Iconological analysis (Panofsky 1955, p.30). At this stage, the analyst will examine groups of signs and their relationship to each other, as well as to more multipartite iconographic complexes. This will help to clarify those elements that were identified in the previous step by relating them to each other and thus helping to interpret their ultimate meaning. It should be noted that Panofsky believed that even the artist his/herself may be unaware of the symbolic values of the societal background that were being extracted by the art historian (Panofsky 1955, p.31).

2.2.2 Models to follow: a Case Study

Iconographic analysis can offer a systematic, methodical, and non-destructive means of examining vessels for information on their use and context. It involves the assumption that the art depicted on ancient ceramic vessels is encoded with important data; that signs are depicted according to a set structure of graphemes which reflect the ideology of a given culture. Here, the work of Gilda Hernandez-Sanchez will be the focus; her work on Mixteca-Puebla Codex Style ceramics of ancient Mexico provides an excellent example of how ritual vessels are representative of a wide array of ceremonial procedures and mythology. Ceramics are referred to as codex-style when they display the representational technique employed in the Codices, particularly the Borgia group and Mixtec Codices (Hernandez Sanchez 2010, p.253). Motifs were originally recognized by Eduar Seler (1908, p.522), who documented the similarities between the codex-style vessels and codices themselves, and were further studied by Hermann Beyer (1969, p.469), who suggested that the quality of the vessels reflected ceremonial context.

Mixtec Codices tell a historical narrative without using words or text as we know them. Mixteca-Puebla polychromes were objects for ceremony (probably serving wares for

feasting), and contain symbols of nobility and luxury that are recognizable from the codices (Hernandez 2010, p.268). Motifs were first described and then grouped into themes and refer to Mesoamerican ritual practice, like cult of the dead and agricultural propitiation. Hernandez also found groups of signs referring to other ceremonies; for example, “the “complex of warriors” referred to actions concerning warfare; the “complex of pulque,” to activities where this beverage had a central role; and the “complex of powerful beings,” to the invocation of powerful *nahuales* and other supernatural beings,” (Hernandez 2010, p.261). Hernandez also notes that some of the signs written upon the vessels may have provided mnemonic devices for prayers during ceremonies (2010, p.268). These vessels are of high quality, display a certain amount of scarcity, and have a high frequency of deposition in palaces and temple areas.

2.2.3 Applications for Nicaraguan Ceramics

The true challenge will come once approaching the Iconological stage. As there is so little research that has been done in Nicaragua, it is nearly impossible at this juncture to form a complete idea of the societies that lived there, let alone forming an idea of their religious practice. There is a great deal that we simply do not know regarding mythological stories and ritual habitus, to name a few examples. Hernandez was able to employ the use of vessel form and provenience in order to expand on her overall interpretation of the Mixteca-Puebla ceramics, even though some of her data came from museum pieces of less than exact provenience (Hernandez 2010, p.261). In the case of Nicaraguan ceramics, there is even less provenience data available, although efforts are being made to overcome this obstacle. The goal of this study is to examine the iconography extensively in order to be able to say something about the manner in which artistic vocabulary and syntax were constructed and conveyed.

2.3 Material Engagement and Cognitive studies

“The traditional conception of ‘subject access’ posits that the artifact creator encodes a stable and transparent meaning into an object, and the user (or reader, or cataloger) then decodes the meaning while interacting with the artifact,” (Winget 2009, p.20). This section will examine some of the discussions that are being held regarding how people perceive and engage with material culture. According to Olsen, material culture

studies have been neglected in the past, as purists would dictate that archaeology is about people, not things (2010, p.23); however humans need to engage with things in order to become realized in the world. The study of material engagement is ultimately what the structural anthropologists were trying to get at when they laid the basis with their semiological theory; how we conceive of, interact with and perceive objects is that which gives them meaning. The key is to situate ourselves in such a way that we can relate to the intended viewer, inherently rendered more difficult by the temporal separation of ourselves from the construction of the archaeological materials which we study.

2.3.1 Material Engagement Theory

Material engagement involves “an emphasis upon informed and intelligent action, and the recognition in them of the simultaneous application of cognitive as well as physical aspects of the human involvement with the world”; this implies that rather than putting the material world and the mind in opposition, it attempts to look at them instead as equal parts of a cohesive system, because to rely too heavily on one aspect over the other would be to deny ourselves a full understanding of what human engagement of objects really means (Renfrew and Bahn 2005, p.159). Material engagement begins with embodiment, and how we shape material culture due to the limitations of our own bodies, but it can be expanded to how individuals and societies engage with the material world, at once physically and cognitively (Renfrew and Bahn 2005, p.160).

This theory is important to consider in Nicaragua because it is at the core of ceramic production. What led the potters to make ceramics the way that they did? Why did they decorate them? How were they used? How were ceramics perceived in their society? Another important aspect of material engagement is that it considers the manner in which societies use material aspects to represent symbolic concepts (Renfrew and Bahn 2005, p.160) and how they afford religious value to objects through the intelligent and deliberate use of them (Renfrew and Bahn 2005, p.161). Colin Renfrew even goes so far as to cite material engagement as a driver for social systems, stating that, “when... these materials themselves took on, or were led to take on, symbolic power... the process of engagement became a powerful driving force for social and economic change,” (Renfrew 2004, p.127) meaning that when objects become charged with social or religious value, they gain the

ability to modify human behavior. The inclusion of symbolism is this theoretical premise ties in well with the semiotics section, in which signs and meaning were discussed.

2.3.2 Cognitive Science

Some theorists deal with material culture as a physical extension of human cognition; according to Lambros Malafouris (2004, p.53), as the body and brain work together to form the mind, so does material culture form an integral part of this system. It is the manner in which we negotiate this physical and mental interplay which defines our study of archaeological peoples and their mental frameworks. Although this may be perceived as a relativistic and inexact approach, we are able to draw some hypotheses on the manner in which ancient societies dealt with the material world. It is also interesting to view material culture, not as a separate entity, but as an extension of the mental construct of the maker. Thus artifacts become an integral part of the socio-cultural systems to which they belong. They even, according to Alfred Gell, have the power to adopt their own form of agency, as they then affect the human or drive human action (Gell 1998, p.17,68).

Malafouris notes that an “analytically-minded archaeologist” (Malafouris 2004, p.59) might object to the analysis; more specifically, however, an analytically-minded archaeologist would undoubtedly have issues with the concept of cognition as an abstract principle being put forth as a scientific entity altogether. Although there is a reasonably-argued framework for an extended-mind hypothesis, the issue is in making the transition into methodical development as well as actual experimentation.

2.4 Perspectives on Interaction

In their 2006 article, Carmack and Salgado employ a modified model of the world-systems theory, after a Smith and Berdan (2003) model for Postclassic Mesoamerica, in order to describe interaction spheres of the Greater Nicoya based on the assumption that this region forms part of the Mesoamerican periphery. This theory is based on economic factors such as trade, but incorporates several other aspects of interaction such as warfare and politics. As applied to an intermediate zone, it is able to work outside of the core-dominance model, meaning that it is outside the dominion of Mesoamerican polities, but maintains contact with them. Meanwhile, the region on the Atlantic side of the lake forms

part of the Mesoamerican frontier, and operates outside of the Mesoamerican world system.

The reasoning behind the selection of this framework is to correlate with recent studies which suggest that artifacts that appear to be Mesoamerican-related are not the result of grand migrations from Central Mexico; rather they are the result of generations of cultural contact via trade. The Carmack and Salgado article enumerates several lines of evidence for trade between the Greater Nicoya and Mesoamerica, including the presence of Ixtepeque obsidian at Tepetate (p.221-222), Disquis goldwork in the Maya area (p.224), and pertinent for this study, the movement of polychrome ceramics from Nicaragua to Palmer.

2.5 Discussion

2.5.1 Some Biases

Because the archaeology of Nicaragua has undergone little study in the past, it is essential to look at, in these beginning stages, the manner in which we approach and process our materials and data in order to avoid certain biases. From a philosophical standpoint, any object that is picked up by an interpreter subject is doomed to be interpreted, categorized, and charged with a myriad of associative characteristics. We attempt to circumvent this problem however by the awareness of it. For example, the main source of bias that is immediately evident is the impressive amount of data and writing that had already been written about the neighbouring culture area of Mesoamerica. These writings tend to influence the framework and approach of the archaeologists who have a background in Mesoamerican archaeology, myself included, because we often attempt to make up for the lack of data and conclusions in the one by drawing comparisons to the other. It is crucial therefore to expand our research and continue to gather more data from a number of sites in order to increase the amount of information available. This includes gathering data in a wide array of disciplines in order to provide well-rounded analyses in different fields both cultural and scientific.

The other potential for bias often encountered is at the root of the study: the employment of the word *art* in reference to the materials that are being worked with. Though often the word 'art' and material culture are employed synonymously, it is merely a simple means of referring to decorated objects and motifs in an inclusive manner. In a

manner of speaking, art cannot be defined; no sooner does one define a rule for describing what art is, then an example is produced which will inevitably refute it. The one fairly consistent characterization of art is that it is often a means of visual communication, and as it pertains to the study of artifacts, a means of communication of cultural information and identity (for a more lengthy discussion on this, see Corbey et al. 2006). Therefore, an effort is made to remain aware of the epistemological implications regarding material culture as a physical representation of expression of identity. Under this loose definition, art need not be aesthetically pleasing in order to be considered art. This is especially important for us to make note of as archaeologists, who view material culture removed from its situational and temporal context as well as out of cultural context, and thus need to maintain a respectful and objective view of all of the art objects and styles which we study even if it does not appeal to our own personal cultural aesthetic. What we classify as art may not necessarily have been viewed that way by the people who created them, thus the use of the word as a general convenience term. It is not aesthetic representation that this paper strives to appreciate; it is the meaning behind the aesthetic which is the ultimate goal.

It must also be understood that the artifacts that we study are often outside of our cognitive sphere, and that in order to make a worthwhile analysis, we must make an effort to broaden our perception. Some authors give ethnography and anthropological study as a means of adjusting the cultural perspective (Corbey et al. 2006), however we must recall that in most cases, not only is the study temporally removed from the PreColumbian era, but in some cases, such as in the Greater Nicoya, a massive cultural overhaul also took place. Many aspects of PreColumbian culture have been erased or lost, and referring to a modern culture may be counterproductive due to the vast depopulation and displacement that has occurred in Nicaragua. This is not indicated in order to point out the futility of the study of art, rather to point out possible limitations to the study early so that an attempt can be made to overcome them.

2.5.2 Concluding Remarks

Archaeology is an integrated and physical study; we may not reach answers through theory alone, we must conduct thorough examinations of material culture using cultural studies and the physical sciences and combine these with a theoretical background. As Webb Keane so aptly puts it: "To be sure, social analysts ... no longer feel themselves

forced to choose between 'symbolic' and 'materialist' approaches," (Keane 2003). Theory does, however, help to guide our hand in the decisions that we make when we handle our data, and it is also present to remind us of the inherent biases which we bring to the table. This is often cited for archaeologists working in the Americas, that we need to overcome our own Western perspective in order to properly examine the materials, but it is especially important for those of us working in the Intermediate area to rise above our Mesoamericanist backgrounds and not to rely too heavily on the greater expanse of knowledge and writing that exists in that area of study.

The employment of semiotics in this study is an important one; it provides for a systematic examination of symbols within which iconography is likened to a syntactical language; however, an effort will also be made to avoid being bogged down by the details which may render the study inaccessible to a broad audience, namely the Peircian nomenclature. Material engagement theory, will serve a similar role, providing a framework regarding the manner in which human cognition and objects interact with each other and how humans conceptualize this in the mind. And finally, following the work of Panofsky provides a concrete direction in which to proceed with the analytical process, from the initial description to eventual iconographic decipherment.

3 Materials

The following is a short description of the type of materials that will be analysed in this study. The materials that have been selected are complete or nearly complete polychrome ceramic vessels from the Greater Nicoya region. As this is a mainly qualitative study, the analysis itself will be via both printed and digital images. The images have been assembled personally, through colleagues at the University of Leiden and University of Calgary, and some have been collected via online museum collections. Many of the images that were collected by colleagues were done at the request of the author, due to the superior quality of their photographic equipment. The ceramics date mainly to the Sapoá and Ometepe periods (fig 6), corresponding to the PostClassic period in Mesoamerica (Evans 2004, 29).

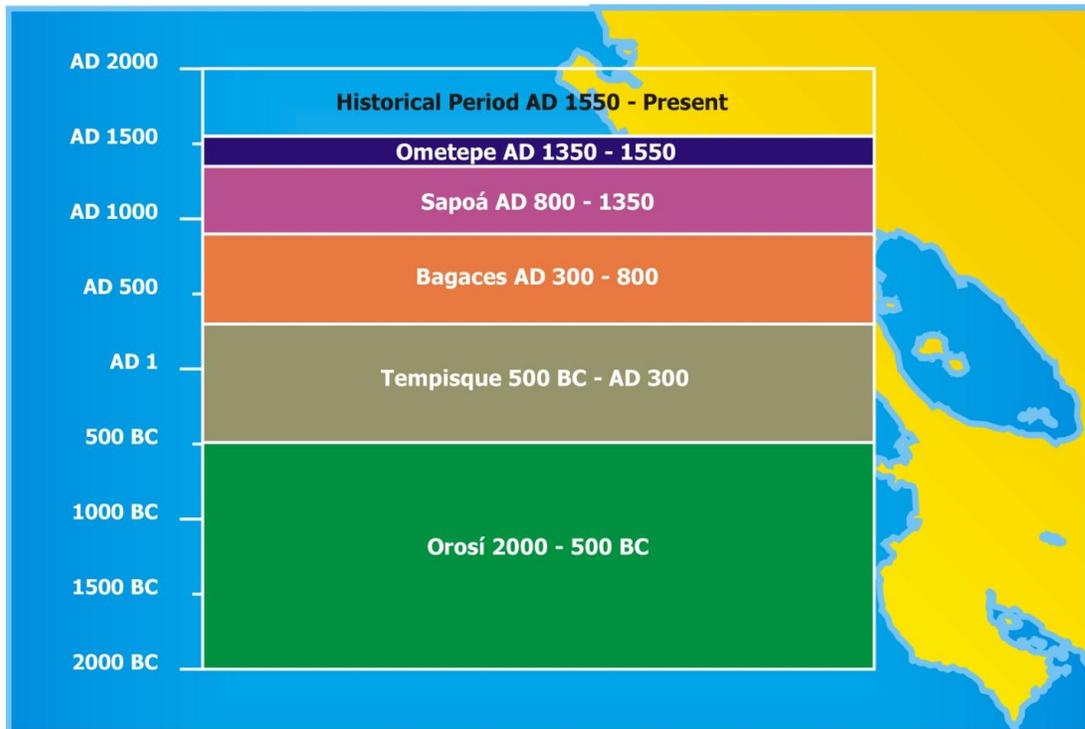


Figure 6 - Main Time Periods of the Greater Nicoya. Courtesy of Larry Steinbrenner

Several obstacles present themselves when studying ceramics in the Greater Nicoya: first, it is unfortunate that many of the vessels have come from a context which does not include their provenience data, generally due to looting. In this area, there is a vicious circle in which there is little information known by the public about Pre-Columbian

artifacts, and therefore people remove them from the ground without regard for the destruction of context, therefore propagating the lack of information available. In the cases in which provenience is unknown, the general guidelines for styles and time periods which have been established through scientific excavation studies have been observed. This leads into the next problem, however, which is that vessel classifications are difficult to assign due to the fact that construction, slips and designs seem to merge into each other fairly seamlessly, rendering the process of distinguishing between them quite difficult (Lothrop 1926, 105). As a result, ceramics from the Greater Nicoya are frequently mislabelled, even in museum collections, and that is if there is any effort made to label them at all. For this thesis, an effort has been made to classify each vessel under discussion, and in the cases in which the vessels were not classified, the author discussed their typing with other ceramicists, mainly Dr. Geoffrey McCafferty of the University of Calgary. They are thus typed to our best approximation, and the caveat may be added that these types are subject to change as more research is conducted and greater sample sizes are collected for each type.

3.1 Construction Techniques and Background

Construction techniques of polychrome ceramics generally vary by type, as different tempering methods were employed for different types, thus making petrographic studies particularly useful (see Bishop et al. 1988, Dennett and McCafferty 2011). It is probable that individual households would have constructed their own utilitarian wares while ceramic specialists were responsible for the more decorative and complex polychromes, although there is almost no reference in ethnohistoric documents to professional potters or production centers (Steinbrenner 2010, 113). As ceramics were a common form of encomendero tribute in the 16th century, it has been suggested that the towns that show up as contributors on the *Tasaciones* were also production centers, although others have suggested that ceramics were produced at special centers instead of production being greatly dispersed (Steinbrenner 2010, 114).

3.1.1 Galo

Galo polychrome ceramics, the earliest examples that will be examined here, and indeed the earliest polychrome type to appear in the Greater Nicoya (Steinbrenner 2011,

516), are also some of the aesthetically best examples. They are often compared to the Ulua-Yojoa ceramics from Northwestern-Central Honduras, however they are more likely an emulation of that style and not necessarily linked (Steinbrenner 2010, 516-518). It is important to note that, during the period that Galo polychromes were being produced in the Greater Nicoya, namely the Bagaces Period, the predominant culture group in the area and therefore likely producers of this type were Chibchan (Steinbrenner 2010, 498), a culture which, as discussed, derived its ancestry from the South, not the North.

Galo polychromes are generally of very high quality, featuring a highly burnished surface, and thin walls and incredibly thin slip paint (Stone-Miller 2002, 88). Slip colours come in both cream and red-slipped varieties with brown, white and orange and black painted decoration of zoomorphic, geometric, and linear designs (Abel-Vidor et al. 1987, 138-149).

3.1.2 Papagayo

Papagayo style vessels may be attributed to the fall of Teotihuacan and the Maya, corresponding to the Sapoá period (AD 800-1350) in the greater Nicoya. This, it is proposed, led to an influx of new potting traditions, including iconography and shapes, into the area; indeed it is the ceramic type that is most commonly associated with Central Mexican types and iconography (Stone-Miller 2002, 96). Many Papagayo vessels also feature a new manner of displaying content, depicting figures and narratives, although Stone-Miller points out that later vessels seem to blend styles and take the figures into abstraction, so that the story is much less clear and readable (2002, 97). These are often described as the first of the white-slipped wares in the Greater Nicoya, however, as was previously mentioned, Galo were indeed light-slipped and occurred at an earlier time period. Although Galo occurs quite far south, sherds of a similar style have also been found in the Rivas region, which Healy refers to as Gonzalez, and that marks the beginning of light slips in the area (1980, 124). Either way, Papagayo Polychromes mark a transition away from the older traditions of pottery (Rivas red or orange slips) towards a new white-slipped variety along with new vessel forms, and new annular bases, as well as human face supports (Healy 1980, 169).

The Papagayo type was first defined by Norweb (1964:559), and was referred to by Lothrop as “Nicoya Polychrome Ware” (1926). Papagayo vessels are white-slipped with red,

orange, black, and sometimes grey paint. They have a red-brown paste and white-cream slip (Abel-Vidor et al. 1987, 177). There are several varieties of Papagayo, however vessels generally involve a principle decoration on the inside or outside, with the other side decorated with one or two bands of orange, red or black (Abel-Vidor et al. 1987, 181).

3.1.3 Pataky

A contemporary white-ware to the Papagayo variety, Pataky polychrome features a fairly standard set of forms; including bowls, ovoid or pear-shaped vases and striking effigy (often jaguar but also anthropomorphic) vessels, with tripod or pedestal supports (Abel-Vidor et al. 1987, 247). Like the Papagayo type, they have often been compared to Mesoamerican examples, particularly to the Mixteca-Puebla style of the codices (Wallace and Accola 1980 in Abel-Vidor 1987, 249). They may have also served a purely funerary function. The predominance of jaguar and raptorial bird motifs on these vessels has also been taken as an indication of Mesoamerican influence, which Healy ties to the architecture of Postclassic Tula and Chichen Itza, with which they occur contemporaneously (1980, 192).

Also established as a type by Norweb (1964), Pataky vessels are generally white or yellow-slipped, with intricate black-lined designs around the rims and on supports, as well as thicker black bands, and occasionally maroon, orange or brown details (Healy 1980, 188). Design motifs along supports frequently resemble cut-shell patterns; along rims they very often contain human figures and feathers, a design mode that Lothrop referred to as "Plumed Serpent Type C" (1926, 151).

3.1.4 Vallejo

Vallejo is another white-slipped polychrome which ranges slightly later than the previous two examples, occurring from AD 1200-1550 (Abel-Vidor 1987, 285). Originally established by Norweb (1964), it was elaborated by Healy (1980) to include four varieties: Vallejo, Mombacho, Cara and Lazo. This variety is also often compared to Mesoamerican styles, and has been attributed to the influx of Nahuatl-speakers into Southern Nicaragua (Stone Miller 2002, 112), although Steinbrenner has argued that Vallejo more closely resembles the earlier Papagayo examples and developed out of that local tradition rather than as the result of migrations (2010, 855). Vallejo (as well as Luna and Madeira) was traditionally thought to be a marker of the beginning of the Ometepe period (AD 1350-

1550), however the study by the University of Calgary indicated that Vallejo occurs much earlier, into the late Sapoá, which supports the local development theory (McCafferty and Steinbrenner 2005b).

Some diagnostic features of Vallejo type ceramics include: the use of blue paint (combined with orange and black), incising below the slip, Feathered Serpent motifs, vertical incised parallel lines enclosing panels filled with blue and orange lines, secondary motifs of greca step-frets, half-volutes which resemble the eye/mandible of the serpent, and stylized face motifs (caras) (Abel-Vidor 1987, 285). The exterior slip is smooth and matt; there is no evidence of burnishing (Healy 1980, 243). The most common form is the bowl, with incurved rim, or incurved with short outcurving lip.

3.1.5 Luna

First described by Bransford (1881, 20-47) and elaborated by Lothrop (1926) and Healy (1980), Luna is one of the latest types that are to be examined, occurring with a similar date range to Vallejo, AD 1200-1550 (Abel-Vidor 1987, 304). Luna was named after the location in which it was discovered, the Luna Hacienda on Ometepe Island, and it is indeed believed to have originated there by the high concentration of sherds which have been found on the island (Healy 1980, 135). Many Luna vessels have been found in the particularly remarkable context of being upside-down atop the orifices of burial urns; this practice is common in Colombia, confounding to a degree the theory that Mesoamerican groups moved into the area and completely displaced the extant Chibchan tribes; in fact, these vessels seem to carry on the existing local potting traditions, and it is indicated in the account of Alonso Ponce that the people of Ometepe island spoke a language that was neither Mangué nor Nahuá, presumably Chibchan (Knowlton 1996, 152-153, 157). There is, however, a strong appearance of Feathered Serpent imagery on Luna polychromes, which blends into crocodilian motifs, and Knowlton also presents some Central Mexican examples for the use of polychrome vessels as caps for secondary burials (1996, 155).

This polychrome type can be identified by its abstract designs of human faces, zoomorphs (including serpents) and feathers in black, orange, brown and red, with parallel black lines which enclose motifs like a frame, as well as its white or cream slip. Bransford believed that Luna was made through hand-modelling, not coil-stacking, and Healy remarks

that in his sample, they were unable to distinguish any coil marks in the sherds (1980, 136-137). It is noted in several sources that the Luna slip often appears yellow, perhaps due to an extra surface coating like a varnish applied after firing. The most common form is the bowl, occasionally featuring tripod supports.

3.2 Paint Composition

There are very few, if any published studies on the actual composition of the paints that were used by Pre-Columbian potters in the Greater Nicoya. William Glanzman, in association with the University of Calgary, is in the process of conducting studies on the paint composition, using Raman microscopy (2012). His preliminary results show that white pigment is made up of titanium oxide from either ilmenite or rutile, minerals that can be found in the volcanic sands of the Rivas region, while red pigment is made up of hematite. Black pigment remains mysteriously indecipherable by this method, leading Glanzman to hypothesize that it may be made up of ash in which the binding agent was destroyed during firing.

3.3 Deterioration

Agriculture is certainly one of the main contributing factors to deterioration; the tilling of fields leads to the destruction of surface levels, and fracturing of ceramic materials and the presence of livestock is also presumably detrimental. As mentioned, the climate is quite humid, with heavy rainfall during the rainy season which may also lead to poor preservation. In the field, it was noted that the paint of several of the polychrome ceramic types would come away from the sherds, remaining in the dirt as the sherds were removed. It is unclear as yet whether this is due to poor quality in the paint, poor firing, or due unfavorable soil conditions.

3.4 The Collection

In total, 65 examples have been assembled for this study. These images were selected and compiled from several sources. There is an impressive online database available through the Mi Museo of Granada which features thousands of vessels from their own considerable inventory, as well as vessels from private collections around Nicaragua (Granadacollection.org). Additional images were also collected from the equally-extensive

online collection of the Peabody Museum of Harvard and a publication of the Ancient Americas collection from the Marco C. Carlos Museum (Stone-Miller 2002). Some colour-plates and drawings were also drawn from publications, such as Samuel Lothrop's *Pottery of Costa Rica and Nicaragua* (1926).

3.5 Documentation of Archaeological Materials and the Provenience Problem

An attempt was made, where possible, to include provenience for the objects that are shown in this inventory. Unfortunately, a great many were collected by private individuals under non-scientific circumstances and therefore do not carry provenience data. For this reason, the basis of this study is mainly iconographic, and bases classificatory data on general assumptions that have been formed through previous seriation studies such as that of Lothrop (1926) as well as the small number of well-documented studies that have been conducted in more recent times (Steinbrenner 2010).

4 Analysis

4.1 Catalog of Feathered Serpent Images

This section will begin the first stage of the Panofskian analysis, the pre-iconographic stage, which involves making observations purely based on physical appearance. While compiling this assemblage, an attempt was made to use complete vessels. In each case, the images are in as high resolution as possible. In most cases, the examples that were selected are either obvious instances of Feathered Serpents, they display traits which link them to Feathered Serpents, or they have been included in the Feathered Serpent complex which was outlined by Lothrop (1926).

With this collection, there is an attempt to be as inclusive as possible, and therefore it contains many examples which are controversial, and thus there will be some discussion throughout the catalog as to each side of the debate for a number of the figures. With this comes the obvious observation that in naming the field of the data set, we have already made a step into the second stage by naming the figures! However this supposition was suspended while examining the figures at hand, and an attempt to remain objective in describing these images was upheld.

These images have been sorted by vessel type and subtype. The main vessel types have been arranged relatively by date, according to the generally-accepted time periods for each type. Subtypes have simply been entered in alphabetical order. Each description will include the main traits of the serpent or serpents in question, and items directly associated with them, rather than describing entire vessels. Also, in some cases, the vessels have not been cropped out of the photos in order to give a general idea of where the images are located spatially upon the ceramics, which is an important aspect when familiarizing oneself with the prominence of the motif on the vessel.

4.1.1. Zoomorphic

As we have seen, the Feathered Serpent takes several forms in iconography. The following is a compilation of Feathered Serpent images which are depicted in a zoomorphic or animal form. In it, the examples have been chosen because they display predominantly animalistic characteristics. The main criteria for this section include one or more of the following: a serpentine body, serpent or bird-like head, bird beak, fangs, and feathers.

Type: Galo

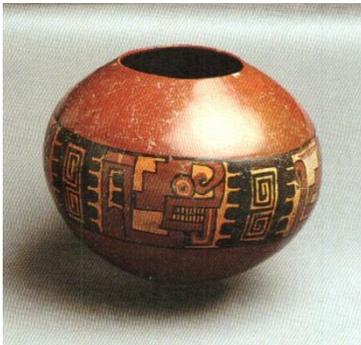


Figure 7 - Globular Vessel with Feathered Serpent Motif, Central America, Costa Rica, Galo Polychrome Period V, AD 500-800. Ex Coll William C and Carol W. Thibadeau. From Stone-Miller 2002: Figure 168.

This vessel (fig7) features a serpent which is reddish-brown in colour. It has rounded eyes and a stepped-pattern on the back side of its head which is crested with a downward-turning volute, and it appears almost as if the creature is wearing a headdress. The serpent has a full mouth of simple rectangular teeth, making it appear skull-like. The mouth has a short lower portion and the top is turned upward (in the “curl snout” manner which will appear later). It has a red tongue which extends downward and curls backward, with a lighter cream-coloured line down the middle which may serve to divide it, signifying that it is bifurcated like a serpent tongue. The body extends behind the head an angular upside-down U-shape, ending in a rounded bulb. Some small rounded bumps also emanate from the body of the serpent, two black and two red. This figure is more readily argued to be a serpent than it is a feathered serpent; its elongated body and possibly split tongue are fairly convincing. The feathers are presumably the rounded emanations which are seen on the body of the serpent.

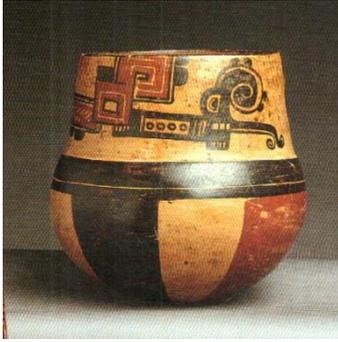


Figure 8 - Vessel with Feathered Serpent Motif. Costa Rica, Greater Nicoya, Galo Polychrome Lagarto Variety, Period V, AD 500-800. Ex coll William C. and Carol W. Thibadeau. Stone-Miller 2002: Figure 166.

The serpent in figure 8 has an ovoid eye with a curled, almost spiral snout and protruding lower jaw that also ends in two volutes which curl in either direction which may also be the tongue of the creature. There are pairs of rounded bumps, like those on the previous example, on the snout of the figure, which may be feather designs. It has a straight, elongated black body with a circle design in the middle that may also continue into a curled red portion, although that design may be part of another figure which cannot be seen due to the curved nature of the vessel and no other images of the other side. As with the previous example, the figure may be a serpent, not a feathered serpent, although it does feature the same rounded emanations and curled snout.

Type : Papagayo

Subtype : Cervantes



Figure 9 – Tripod Bowl. Greater Nicoya, Sapoá Period (AD 800-1350). Colección Francisco Rodríguez Mendoza. Granadacollection.org

This serpent (fig 9) is extremely bird-like. It has an open beak-like mouth which curls downward (reminiscent of the second Galo example) at the top like a parrot beak, and the mandible ends in a downward volute, and it appears to have a spotted tongue. Its eye is

crested with at least four rows of decoration, likely feathers or perhaps a feathered headdress. The figure is mainly orange, with some grey decoration. There is a feathered emanation behind the head of the serpent, but it does not appear to have a body. There is also a grey volute emanating from the mouth of the serpent, perhaps an indication of sound.



Figure 10 - Feathered Serpent, Nicoya Polychrome, Nicoya Peninsula, Costa Rica. From Lothrop 1926: Plate LVIIa.

This example (fig 10) has an open mouth, again with the curled snout. There is also an emanation from the mouth of the serpent, which appears to be three long feathers. There is a feathered emanation coming from the snout of the figure, although it may be the body and tail of the serpent. There is also an emanation coming from behind the eye (crested with only one row of waves, presumably feathers). The serpent also has a small arm with three small fingers coming from the base of its jaw, a feature which we will see often in Papagayo examples.



Figure 11 - Feathered Serpent, Nicoya Polychrome, Nicoya Peninsula, Costa Rica. From Lothrop 1926: Plate

Figure 11 is slightly more abstract, however an eye can clearly be seen, and from there also the familiar down-curved beak. Under the eye, we see an m-shaped exaggeration of the beak and face, a motif which will be extrapolated in later examples. Again we see the familiar tufted headdress, emanations from the mouth, and below what appears to be the body of the serpent, ending with longer feathers on the tail.

Type: Papagayo

Subtype: Culebra



Figure 12 – Cup with Pedestal Base. Greater Nicoya, Sapoá Period (AD 800-1350). Colección Francisco Rodríguez Mendoza. Granadacollection.org

This example (fig 12) contains the top beak which we look for in most Papagayo examples. However the bottom jaw with wavy on the inside and ends in a rounded nub. The figure also has a round circle behind the eye, leading to the belief that this may actually represent a jaguar. And indeed, the man-and-jaguar motif is a common representation in the Culebra subtype (Abel-Vidor 1987, 187).

Type: Papagayo

Subtype: Fonseca



Figure 13 – Hemispherical Bowl. Sapoá Period (AD 800 - 1350). Convento San Francisco Collection. Left: Granadacollection.org, Right: Photo Courtesy of Geoffrey McCafferty.

This example (fig 13) features a yellow head with sharp teeth on the bottom jaw, which is quite long, with no feathers on the head, leading to the possibility that it may in fact be a representation of a crocodile or caiman. It does however have three pointed yellow feathers with red spots near its back, and what appears to be a red serpentine body. This figure is one of the less concrete examples.



Figure 14 – Bird-Shaped Bowl with Feathered Serpent motifs on Rim and Base. Sapoá Period (AD 800 - 1350). Mi Museo Collection. Granadacollection.org

The figure on the base of the bowl (fig 14) is reminiscent of our Cervantes examples, with its curved snout, crested eye tufted with feathers resembling a headdress. The lower jaw is much shorter than the top, which echoes the m-shape that we saw in figure 11.

Type: Papagayo

Subtype: Mandador



Figure 15 – Tripod Bowl. Peabody Museum Harvard. Greater Nicoya. Catalog number 80-27-20/22590



Figure 16 - Tripod Bowl. Peabody Museum Harvard. Greater Nicoya. Catalog number 78-42-20/17035



Figure 17 - Tripod Bowl. Peabody Museum Harvard. Greater Nicoya. Catalog number Number 78-42-20/16883



Figure 18 - Tripod Bowl. Sapoá Period (AD 800-1350). Colección Samuel Santos. Granadacollection.org

The past four examples (fig 15, 16, 17, 18) are so similar that they will be described as one. These follow what Lothrop referred to as the “Two-headed Dragon” motif, which begins on the left with the head of a jaguar, the body arching and ending in the cross-hatching and frontal-face view of the Feathered Serpent (1926, 160-162), which is essentially a triangle with two round eyes and a mouth. This motif also appears in the Maya area at Copan and Quirigua.



Figure 19 - Bowl with Pedestal Base. Rivas, Nicaragua. Left: Peabody Museum, Harvard. Catalog Number 78-42-20/ 17145. Right: Lothrop 1926: Plate LVIIId.

This example (fig 19) also features a motif similar to the Two-headed Dragon as seen above, however in the place of the jaguar, we have a face which resembles examples from rims which will be described in the Anthropomorphic section. It is a white face with red face pain, particularly around the mouth. It has a hooked motif above the nose. The triangular face is flanked with feathers. There is also a Feathered Serpent motif on the base, with the eye and snout of a Feathered Serpent flanking a similar face to the one above it.

Type: Papagayo

Subtype: Serpiente

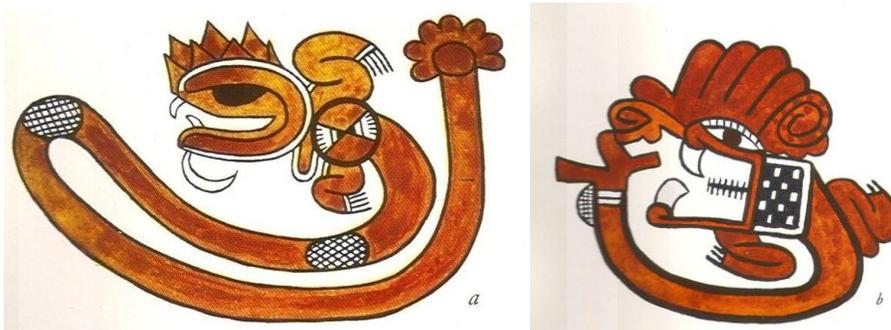


Figure 20 - Feathered Serpent, Nicoya Polychrome, Nicoya Peninsula, Costa Rica. From Lothrop 1926: Plate XLIVa.

The serpents from the Serpiente variety are some of the most readily identifiable and least debatably serpentine examples. Figure 20 a on the left has a long serpentine body ending in a tuft of feathers. On the body there is a net pattern, which represents scales (Lothrop 1926, 147). The serpent has an atypical c-shaped head, with an equally unusual blacked-out eye. The head is crested with spiked emanations, possibly a representation of scales or feathers. It has two small arms near its head which end in small claws (this is not uncharacteristic of Serpiente examples) and a circular shield (what I have named the shapes

on the backs of the serpents, though not necessarily representing actual shields) or feathered design on its back near the head. Figure 20 b has a diagnostic square u-shaped jaw, with large fangs, a barbed tongue, and ovoid eye crested with feathers and a spiral. Behind the head is a checkerboard pattern (also representative of scales, according to Lothrop (1926, 147)), and a serpentine body with tufted tail.

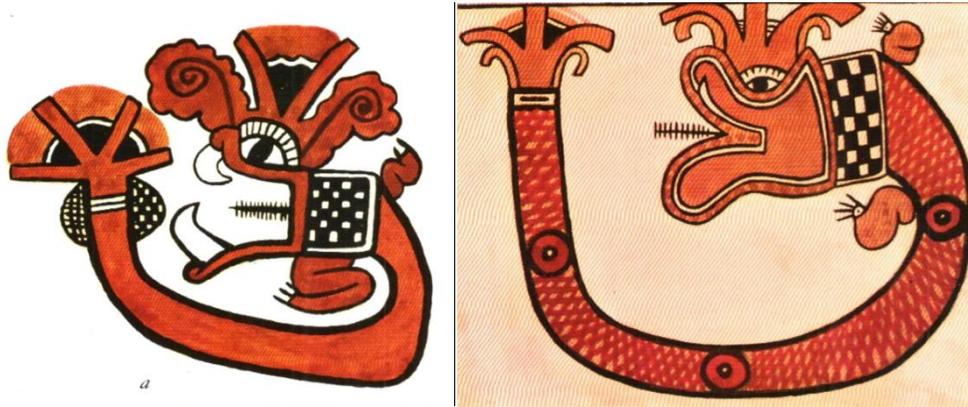


Figure 21 - Feathered Serpent, Nicoya Polychrome, Nicoya Peninsula, Costa Rica. From Lothrop 1926: Plate XLV a,b.

Almost identical to figure 20 b, figure 21 a has a square u-shaped jaw with large fangs on the top and bottom, barbed tongue, checkerboard behind the head, small arms with claws, a serpentine body and tufted feathered tail with checkerboard on the end of the tail. The crested eye features a very interesting decoration, with a central feather fan flanked by two spirals which appear on puffed-out backings. Figure 21 b has the squared-out u-shaped jaw, although this time it is much thicker, making up more of the head and creating a much less open mouth. Also note the m-shaped that is created beneath the eye which as expected is crested with feathers. This example also has the checkerboard pattern, curiously in combination with the net pattern which covers the serpent's entire body. It also has three donut-shaped circles along the length of its body, ending in a tufted tail. The small arms of the figure also have small circles for hands, ending in claws.



Figure 22 - Pedestal vase with appliqué. Peabody Museum Harvard. Catalog number 17-3-20/C8252. Costa Rica.

The figure on this vase (fig 22) shows the squared u-shape jaw which is bulked-up with red detailing. There is very little cresting around the eye. It has rather long arms, particularly the lower one, and it has a net pattern on the shield. The body is orange and c-shaped, ending in a tufted tail with some fanning.



Figure 23 – Hemispherical Bowl. Sapoá Period (AD 800 - 1350). Mi Museo Collection. Left: Granadacollection.org, Right: Courtesy of Geoffrey McCafferty.

This serpent (fig 23) is an interesting example as it occurs in the bottom of a bowl, full-bodied and repeated on the other side (mirrored, then flipped). It does not have the typical stylized square jaw, but rather the head of a reptilian, perhaps the slightest hint of a downturned snout. It does have the familiar crest of grey feathers over the eye, as well as the back shield, small arms and sectioned body ending in a tuft on long grey feathers.



Figure 24 - Feathered Serpent, Nicoya Polychrome, Nicoya Peninsula, Costa Rica. From Lothrop 1926: Plate XLVI a,b,c.

Figure 24 a (on the top right) has a head somewhat in-between the squared and rounded u-shaped jaw, with contrast lines along the lips, an upward curve around the nose and a hint of small fangs and the barbed tongue. Its nose and eye are linked by a strange circle that resembles them, a white ovoid with a black line in the middle. Indeed this example repeats the white enclosure with a black spot throughout. The nose is crested with a row of long grey feathers. Behind the head, there is a square shield with a white circle in the middle with a brown dot, and bordered by a black line and dot pattern all framed in grey. This is followed by another row of white squares with a small fingered/clawed arm on either side. The serpent's body is c-shaped with a brown next pattern which is flanked by two sections of solid brown on each side and ends with a tuft of feathers. Figure 24 b has the m-shaped beak head with long bottom jaw and a net pattern inside the mouth, flag-standard-like feathered headdress above the eye and a circular shield on the back which is framed by the white square pattern. The body is solid brown and features emanations along the length like feathers. The tail is tufted and fanned. Figure 24 c features a similar eye and nose to that of figure a, joined by a white line and with a white line continuing behind the eye. The jaw is square, with a row of sharp teeth on the top and bottom. The snout curls upward around the nose hole. Above the eye, there is a crest of long feathers, and behind the head, a square shield. The shield is brown with two white vertical lines down the middle, with a brown, un-outlined spot overlapping both at the centre and white squares toward the outside. The serpent has two bent brown arms ending in yellow fingers. The body is c-shaped, and decorated elaborately with net patterns and lines. The tail ends in a tuft of grey feathers.

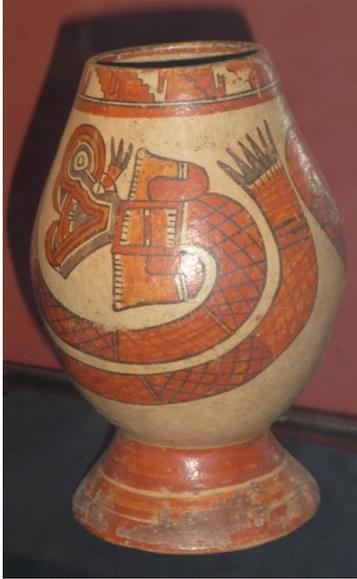


Figure 25 - Palacio Nacional de la Cultura, Managua, Nicaragua. Photo Courtesy of Willem Liethof.

This figure features a squared jaw which curls up around the snout in grey (the previous examples were brown), a point which is emphasized by being echoed in yellow and orange respectively. The serpent has sharp fangs on the top and bottom, and a wide grey cavity for a mouth which does not seem to include a tongue. The shield behind the head is similar to that of figure 24 c, with a central line over a field of orange and bordered on either side by white squares. The arms on the top and bottom of the shield end in wide feet with an impossible amount of toes (nine on each foot), indicating perhaps that the artist was copying another image without the understanding of what the feet were. The body is decorated in alternating net patterns of black-on-orange and red-on-orange, and the tail ends in a tuft of grey feathers.



Figure 26 – Pedestal Vase with Feathered Serpent Motif. Sapoá Period (AD 800 - 1350). Photos Courtesy of Geoffrey McCafferty

Figure 26 displays a squared jaw which curls up around the snout in grey which is bordered in orange. The serpent has a row of blunt teeth on the top and bottom, and brown lines which emanate from the mouth which may indicate a bifurcated tongue. The shield behind the head is similar to that of figures 24 c and 25, however in this instance there is a grey centre line with lines of colour on other side in the same order: black, white, black, and red, followed by white squares. On the top and bottom of the vessel, there are again arms which appear similarly to the others, with the hands being extremely wide, indicating again that they were perhaps copied from another vessel without knowledge of what they were. The body is c-shaped and is light orange except for one strip of darker orange net patterning near the middle. This serpent also interestingly has another pattern at the end of its tail, before the tuft of grey feathers, which is identical to the pattern on its shield.



Figure 27 - Pedestal vase with Feather Serpent Motifs. Sapoá Period (AD 800 - 1350). Colección Lawrence Goodlive. Granadacollection.org

On the main body of the vessel in figure 27, we have four serpents; two in the rim and two on the main body. In the leftmost image, we see a serpent with the diagnostic long downward curling snout and shorter mandible, which is yellow with red spotting along the entire length of the mouth and with a red line along the lips of the figure. There is also what appears to be a line of teeth (as it is white with stripes all along the length), or perhaps a bifurcated tongue, with the lined elaboration similar to the barbing on the tongues of the other examples. The serpent has an elaborately and colourfully crested eye/headdress with a variety of types of feathers. Below the lowest point of the bottom jaw, we can see the conventionalized double arms. It also seems to have a 'shield', by its mouth, as if the serpent were flying in one direction and then had suddenly turned its head. There is an emanation from the shield that is highly decorated and feathered, perhaps the tail. The serpent in the rightmost image is virtually identical to the first, with some small alterations; there is a tuft of three feathers above the nose of the one on the right, and it appears to have another tail trailing behind it. The serpents on the rim are also very similar, with

feathered headdresses and then apparent tails emanating from their mouths, but they also seem to have bodies which follow the bottom of their cartouches.



Figure 28 - Pedestal vase with Feathered Serpent Motif. Sapoá Period (AD 800-1350). Colección Glenda Castro. Granadacollection.org

This vessel (fig 28) features a feathered serpent in the rim design. It is typified by the extremely long and curled snout in orange with shorter bottom jaw.



Figure 29 - Tripod Bowl. Sapoá Period (AD 800 - 1350). Convento San Francisco Collection. Granadacollection.org

Represented here (fig 29) is merely the head of the Feathered Serpent. The beaked nose and short mandible which create an m-shape are present, as well as the crested eye with longer feathers on top suggesting a crest or headdress. There are also long feathers emanating from the mouth, as we have seen in some of the later examples.



Figure 30 - Tripod Bowl with Feathered Serpent motifs on Rim and Base. Sapoá Period (AD 800 - 1350). Mi Museo Collection. Granadacollection.org

In Figure 30, we see a Feathered Serpent which is fairly eroded, so it is difficult to make a detailed analysis. However, the downward-curved snout and serpentine body are visible. There are some volute curls emanating from the body, possibly representing feathers. The tail appears to have a fan of feathers, and then three longer feathers emanating from that.

Type: Vallejo

Subtype: Vallejo



Figure 31 - Superhemispherical Bowl with Feathered Serpent Motif. Costa Rica. Peabody Museum Harvard. Catalog number 977-4-20/25388.

This serpent (fig 31) is shown with a cream head, blue mouth, and white fangs. Emanating from the mouth is a multi-coloured object with three small circles upon it, possible a tongue (bifurcated, like a serpent) or an indication of sound. Notably, above the eye of the serpent, there is an eyebrow which ends behind the eye in a volute, which, as we will see, is reminiscent of Mesoamerican examples. Above the eyebrow, there is a crest of feathers, not unlike the Papagayo examples, and there are quite a few multicoloured feathers emanating from behind the head, as well as below, where there may be a short body and tail represented. One detail that shows up here and in many of the following examples is the small volute directly behind the jaw of the serpent. It often starts behind the eye, moving down and ending in a curl. It is uncertain what this might represent,

whether it is a containing element for the tufting feathers, a continuation of an older motif, or perhaps a miniaturization of the serpent body.



Figure 32 - Vallejo Vase with Feathered Serpent Motif and Applique. Late Sapoá or Ometepe Period (AD1000-1550). Sequiera Collection, Granada Nicaragua. Photo Courtesy of Larry Steinbrenner.

One of the most beautiful examples of a Vallejo Feathered Serpent is unfortunately found in a private collection with no provenience (fig 32). This serpent displays a deep orange jaw and row of blunt teeth. The eye is elaborately crowned with a blue voluted eyebrow, crested with an array of multicoloured feathers, first short, then longer. There is also an emanation from the mouth, an indication of perhaps fire or sound. There are also feathers all about the nose and mouth of the figure. Note also the Mesoamerican year glyphs which decorate the upper portion of the rim.



Figure 33 - Superhemispherical Bowl. Late Sapoá or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This small example (fig 33) is quite divergent from the others that have been and are to be examined. The figure had a rather elongated white face, small round eye, blue mouth and sharp teeth. It is borderline crocodilian. It does, however have a feather motif behind its head, similar to the many other Feathered Serpents of the Vallejo type.



Figure 34 - Superhemispherical Bowl. Late Sapoá or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This vessel (fig 34) features two examples, each quite similar. The mouth is extremely birdlike, but also reminiscent of some Papagayo examples in which the top snout curled downward and the mandible was short. The eyebrow is blue and uncrested. There are multi-coloured emanations from the mouth, three this time so clearly not the bifurcated tongue of a serpent. There are also three multicoloured feathers stemming from the back of its head, as well as the jaw volute/miniature body motif.



Figure 35 - Superhemispherical Bowl. Late Sapoá or Ometepe Period (AD1000-1550). Colección Oscar Rufino. Granadacollection.org

This vessel (fig 35) displays a running motif of feathered serpent heads along its midline. Each serpent is fairly crudely drawn and outline in red rather than black. They have white jaws with blue eyebrows and feathers which emanate from front, mouth, and back.



Figure 36 - Tripod Bowl. Late Sapoá or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This example (fig 36) shows a yellow-headed serpent with a long straight snout and short mandible with feathers coming from the front and back, as well as the jaw volute/miniature body motif.



Figure 37 - Tripod Bowl. Late Sapoá or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This serpent head in a darker orange than usual, with long snout and short jaw, sharp teeth, and very minimal feathering (fig 37).



Figure 38 - Tripod Bowl with Supports Broken. Late Sapoá or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This serpent head (fig 38) is quite similar to the Papagayo styles with its rounded curl snout and jaw, as well as the crested eyebrow. It also shows the jaw volute/miniature body motif.

Type: Vallejo

Subtype: Mombacho



Figure 39 – Superhemispherical Bowl with Feathered Serpent Motif. Costa Rica. Peabody Museum Harvard. Catalog number 976-54-20, 24911.

This example (fig 39) is difficult to decipher in photograph form, as the paint is mainly gone, leaving only the incised image behind. The image is quite similar to Papagayo examples, with a crested eye, curled snout and short jaw. It also has several striations along the mouth resembling a dental arcade. There is an array of emanations from the mouth of the creature, and feathering coming out from behind.



Figure 40 - Tripod Rattle Bowl with Modeled Zoomorphic Heads. Costa Rica/Nicaragua, Greater Nicoya. Late Period VI AD 1350-1520. Ex coll William C. and Carol W. Thibadeau. Stone-Miller 2002 Figure 230.

This image is not in colour, so it is more difficult to describe thoroughly (fig 40). The serpent is incised, in the Mombacho subtype style. It features the familiar mouth with three feathers emanating from it, as well as two darker feathers in between suggesting a fan shape. The eyebrow is voluted. Behind the serpent, again we see the curled volute/body motif. Finally, behind the serpent is another three-feathered fan motif, perhaps there to create symmetry in the figure.



Figure 41 – Superhemispherical bowl with Feathered Serpent Motifs. Nicaragua, Greater Nicoya. Photo Courtesy of Geoffrey McCafferty

This bowl (fig 41) features several incised serpents. An image of the full vessel has been included in order to show placement, and a detail of each that will be described: one head variant and one full-bodied. Both unfortunately have lost most of their paint. The head variant features the typical curl-snout short-jaw mouth, with breath/sound/feathers

emanating from the mouth, volute eyebrow and volute behind the head (curiously curled on both the top and bottom). Four feathers emanate from the back, the fourth of which is not attached to the creature. The full-bodied variant has the same curled-snout and eyebrow, and emanations from the mouth. It also has a fan-like crest of the head. Along the body are rounded circular motifs and the tail appears to be tufted.



Figure 42 – Superhemispherical bowl with Feathered Serpent Motif. Nicaragua, Greater Nicoya. Mi Museo Collection. Photographs courtesy of Geoffrey McCafferty

This figure (fig 42) has a typical mouth with no emanations, a white eyebrow with no volute and with an extra level of black over the head. There are three fanned, multicoloured feathers coming from behind. The vessel appears to be crudely painted, with the paint not reaching the limits of the incising in most areas.



Figure 43 - Superhemispherical Bowl with multiple Feathered Serpent Motifs. Late Sapoa or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

Here, we have another vessel (fig 43) with multiple serpents, with head variants along the rim and full bodied variants on the body of the bowl. The head variant has a white typical jaw with blue unvoluted but crested eyebrow, blue body volute, and three emanating feathers behind. The creature appears to have a white emanation coming from its mouth, with blue polka dots. The full-body variant is nearly identical, though with no emanation from the mouth. The body appears to be in an s-shape.



Figure 44 - Superhemispherical Bowl with multiple Feathered Serpent Motifs. Late Sapoa or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This vessel (fig 44) is similar to the previous one, although all of the serpents are full-bodied variants. They have quite gracile jaws and their bodies are long and sinuous. All along their bodies, there are fans of short feathers alternating sides. As the examples on the bottom are quite eroded, no further effort will be made to describe them.



Figure 45 - Superhemispherical Bowl with multiple Feathered Serpent Motifs. Late Sapoa or Ometepe Period (AD1000-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

This vessel (fig 45) features several feathered serpents on the rim and body with full-bodied examples around the body and head variants with what are perhaps small bodies around the rim. The body variants are too difficult to decipher from the images. The head/small body variants feature the typical mouth, with full dental arcades, a volute emanation from the mouth and crested and voluted eyebrows. The 'tail' ends in long feathers.

Type: Luna



Figure 46 - Bowl with Feathered Serpents Motifs. Ometepe Period (AD1350-1550). Nicaragua, Greater Nicoya. Colección Jaques Guirous. Granadacollection.org

Though typically abstract, this example from the Luna type shows three quite clear repeated Feathered Serpent heads, with the bird-beaked mouth, voluted eyebrow with crest of feathers above it, and many feathers emanating from around the head.

4.1.2 Anthropomorphic

The following figures show examples which contain anthropomorphic features or the specific features of human subjects, such as faces and/or torsos which stand erect. As will be seen, this type of pattern is the least common, as it is the least easily associated with the Feathered Serpent. There are many human faces which appear upon polychrome ceramics of the Greater Nicoya; however, tying them to the Feathered Serpent is often quite problematic.

Type: Papagayo

Subtype: Cervantes



Figure 47 - Tripod Bowl with Anthropomorphic Figure on Base and Feathered Serpent Motifs on Rim. Sapoá Period (AD 800-1350). Mi Museo Collection. Left: Granadacollection.org, Right: Courtesy of Geoffrey McCafferty.

This vessel (fig 47) was selected to be shown for its quite conspicuous resemblance to Central Mexican ceramics, and the feathered raiment of the central figure, as well as the anthropomorphic figures along the rim which Lothrop referred to as belonging to the Plumed Serpent motive, Type C (1926, 152). The figure on the base, though certainly worthy of more extensive study, does not contain enough ties to the Feathered Serpent/Ehecatl to be considered here, however the rim figure will be discussed, due to its being proposed as a feathered serpent by Lothrop. The face of the rim figure, or head variant, is nearly identical to that of the full-figured individual on the base of the bowl, showing a human head with the top half of the face painted red, bottom half painted orange, and a rather bulbous white nose, followed by an elaborately feathered headdress on both variants with nearly identical plumage.



Figure 48 - Tripod bowl with Anthropomorphic Head Supports. Nicoya Polychrome, Greater Nicoya. Sapoá Period (AD 800-1350). Stone-Miller 2002 Figure 192

The supports on this vessel (fig 48) are the focus of this description. This particular type of support is abundant in the Greater Nicoya, particularly at the excavations that the author took part in on the lakeshore of Lake Nicaragua near modern Granada. The supports show a human head with a red elongated buccal mask which resembles the Mesoamerican wind god Ehecatl, which was an aspect of Quetzalcoatl (McCafferty 2008, 75). The figures also show the wind god's puffed-out cheeks and conical hat.

Type: Vallejo

Subtype: Vallejo



Figure 49 – Vallejo Pedestal Vase with Anthropomorphic Feathered Serpent Motif. Sequiera Collection, Granada. Photo Courtesy of Larry Steinbrenner.

This vessel (fig 49) shows yet another interesting and atypical figure. The serpent in this image appears to have the body of a serpent and an anthropomorphic head. The figure's face is blue, with an orange and yellow stripe across the eye. It has a curling spiral nose, and a large-lobed red and orange ear. The teeth are rounded and oddly striated with colour. Above the eye/on top of the head is a crenellated crest with a fan or bundle on either side. There is a striated emanation from the mouth with has some circular decorations on it as well as a fan-like object, perhaps a stylized flower, which is repeated

twice on the belly of the creature and three times on the back, each one painted slightly differently and striated. The body of the serpent is s-shaped and is painted blue on top while the belly is left white. There is a series of u-shaped decorations in orange running down the length of its body. The tail ends with a bundle of feathers; each one is orange with white tips, and one sinuous blue line.



Figure 50 - Vallejo Polychrome. Ehecatl. Stone 1982: Figure 37.

This vessel (fig 50) shows the full body of the wind god Ehecatl as identified by Stone (1982). The figure features the elongated mouth or buccal mask of the deity as well as full feathered headdress and raiment.

4.1.3 Abstract

This is the most difficult category with which to work due to the fact that each element that is identified as a serpent is somewhat debatable; the figures no longer completely resemble serpents and are therefore up to the interpretant to recognize and identify. Many of these motifs are identified as Feathered Serpents due to an observation of a natural progression of abstraction (Lothrop 1929, 203-204), as well as a recognition of certain forms that have been maintained through the abstraction process, such as the curved snout of the Feathered Serpent.

Type: Papagayo

Subtype: Serpiente



Figure 51 - Bowl with Feathered Serpent motif on Base. Sapoá Period (AD 800 - 1350). Mi Museo Collection. Granadacollection.org

The figure on the base of figure 51 does not contain the typical characteristics of a Feathered Serpent, as it has been streamlined and rendered quite abstract, however it maintains the curled-snout m-shape of previous Papagayo examples, and has been exaggerated slightly. It is interesting to note that this calls to mind the Lazo motif that is found on many Vallejo vessels which will be seen below.

Type: Pataky

Subtype: Pataky



Figure 52 a and b– Vessels with Inverted Jaguar and Plumed Serpent Motifs. Costa Rica/Nicaragua, Greater Nicoya. Period VI AD 1000-1350. Stone-Miller 2002 Figures 212 and 225.

All three Pataky vessels (figures 52 a and b, figure 53) contain what Lothrop referred to as the Conventionalized Plumed Serpent type C (1926, 150-152). In the upper rim, in the thickest part of the motif, there can be distinguished a human face (except in figure 52 b, in

which there is a zoomorphic face), accompanied by several lines and circles, as well as feathers, and very often a black volute resembling a cane shape.

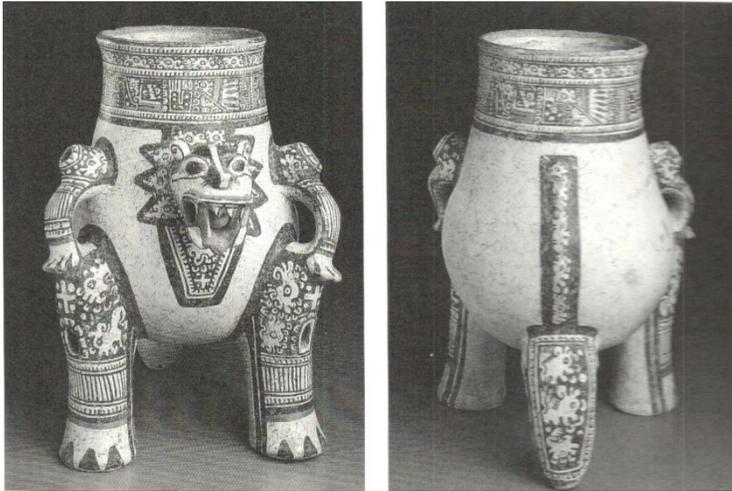


Figure 53 - Pear-Shaped Tripod Vessel with Modeled Jaguar Features, front and back. Costa Rica/Nicaragua. Period VI AD 1000-1350. Ex coll. William C. and Carol W. Thibadeau. Stone-Miller 2002 Figure 222



Figure 54 - Flat-bottomed bowl with Feathered Serpent Motif. Sapoa Period AD 800-1350. Convento San Francisco Collection. Granadacollection.org

This vessel (fig 54) is another example similar to that above, perhaps with slightly better visibility. Note that the face is painted similarly to the Ehecatl supports, with a white face and red buccal area, and that the black volutes are present both in front of and behind the face. There are also several fanned rows of feathers.

Type: Vallejo

Subtype: Lazo



Figure 55 - Vallejo Bowl. Late Sapoa or Ometepe Period (AD1000-1550). El Rayo, Granada, Nicaragua. Photo by Author.

This example (fig 55) has been selected as a representation of many examples of Vallejo Lazo, which are generally quite standardized and all appear quite similar. The main design element to focus on is the m-shaped motif that is by now quite familiar to our study, and the eye which clearly appears above it.

Type: Luna

Subtype: Altagracia



Figure 56 - Museo Arqueológico Gregorio Aguilar Barea. Juigalpa, Chontales, Nicaragua. Late Polychrome, 1200-1550 CE. Photos courtesy of Roos Vlaskamp.

This vessel (fig 56), as well as the following one (fig 57) features a repeated feathered serpent motif, with white rounded mouth with short mandible, downward-curved snout, with grey detailing. There is a crest over the eye which is blended into the overall vessel.



Figure 57 - Peabody Museum Harvard. Nicaragua, Central America. Catalog number 17-3-20/C8348.



Figure 58 - Museo Arqueológico Gregorio Aguilar Barea. Juigalpa, Chontales, Nicaragua. Late Polychrome, 1200-1550 CE. Photos courtesy of Roosmarie Vlaskamp

In this vessel (fig 58), the figures feature a squared-off jaw which shows an eye on either side of the snout, and eliminating the short bottom jaw. This is perhaps indicating that the figure is in fact the so-called 'earth monster' which appears on Vallejo ceramics and is well-known in Mesoamerica as the Aztec deity Tlaltecotli (Lothrop 1926, 191). It may, however merely be a Feathered Serpent that has been doubled in order to render it more abstract, as these vessels are quite conventionalized. The following two vessels (figures 59 and 60) also follow this pattern.



Figure 59 - Museo Arqueológico Gregorio Aguilar Barea. Juigalpa, Chontales, Nicaragua. Late Polychrome, 1200-1550 CE. Photos courtesy of Roos Vlaskamp



Figure 60 - Tripod Bowl. Ometepe Period (AD 1350-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org



Figure 61 - Superhemispherical Bowl. Ometepe Period (AD 1350-1550). Mi Museo Collection, Granada, Nicaragua. Granadacollection.org

The figures in this example (fig 61) are quite abstract, with many small lines coming off the main red lines, creating a highly-charged effect on the vessel. These lines are generally thought to be the feathers of past examples, rendered more abstract. The key to deciphering the serpent heads in these vessels is to first find the eye, and subsequently it becomes easier to find the eyebrow, snout and any other features.



Figure 62 - Peabody Museum Harvard. Nicaragua. Catalog number 78-42-20/16985.

These examples (fig 62 above and fig 63 and 64 below) follow a similar vein for the Luna type when it comes to placement and general characteristics; however the style of them is much more curvilinear and voluted. The following two vessels also follow this new style.

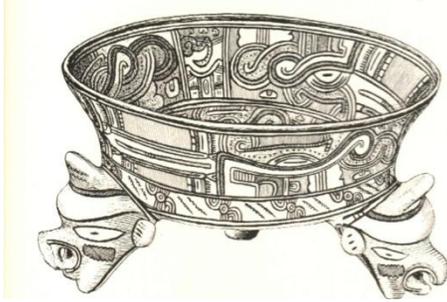


Figure 63 - Tripod Bowl. Alta Gracia, Nicaragua. Lothrop 1926: Figure 101.



Figure 64 – Luna Polychrome Tripod Bowl. Mi Museo Storage. Granada, Nicaragua. Photo Courtesy of Geoffrey McCafferty

Type: Unknown

Subtype: Unknown



Figure 65 – Bowl with Abstract Feathered Serpent Motifs. Nicaragua. Peabody Museum Harvard. Catalog number 78-42-20/16949.

With this vessel (fig 65), and the following one, the figures have become quite edge. The bottom jaw is quite short, and the feathers appear in small protrusions behind the head, no longer obvious but quite stylized.

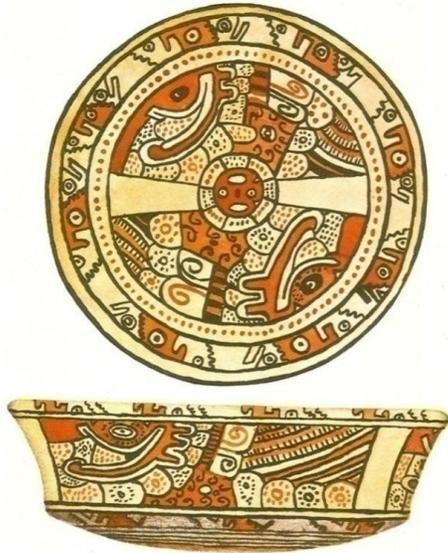


Figure 66 - From Lothrop 1926: Plate LXXXIX.

For this example (fig 66), the mandibles are quite a bit longer than the top of the mouth. Stylized feathers appear quite a distance from the head of the serpent, which, like the previous example, has small nub feathers emerging from its head. There is notably no emission from the mouth of this figure, as we saw in almost every other type.

4.2 Trait Catalog

Trait	Description	Associated with (Type)	Associated with (Subtype)	Number of Vessels from Sample
Curl Snout Upward	Top part of the mouth of the figure extends past the bottom jaw and curls upward	Galo	-	1
		Papagayo	Serpiente	9
		Luna	Alta Gracia	1
Beak/Curl Snout Downward	Top part of the mouth of the figure extends past the bottom jaw and curls downward	Galo	-	1
		Papagayo	Cervantes	4
		Papagayo	Fonseca	1
		Papagayo	Serpiente	5
		Vallejo	Vallejo	4
		Vallejo	Mombacho	5
Square U-Shaped Mouth	Mouth forms a U-Shape in which the bottom part of the U is flat	Papagayo	Serpiente	8
		Vallejo	Vallejo	1
		Luna	Altagracia	4
Bifurcated Tongue	Tongue splits into two sections and often curls outward	Galo	-	3
		Papagayo	Serpiente	1
		Vallejo	Vallejo	2
Speech/Feathers from the Mouth	Emanations from the mouth in such a way that cannot be a tongue	Papagayo	Cervantes	2
		Papagayo	Fonseca	1
		Papagayo	Serpiente	3
		Vallejo	Vallejo	5
		Vallejo	Mombacho	8
		Luna	Altagracia	2
Arms	On a serpent, the appearance of small appendages on either side of the body near the head	Papagayo	Cervantes	1
		Papagayo	Serpiente	12
Feathers - Head	Feathers appear as emanations from the head/ as a headdress	Papagayo	Cervantes	4
		Papagayo	Fonseca	1
		Papagayo	Mandador	1
		Papagayo	Serpiente	16
		Vallejo	Vallejo	12
		Vallejo	Mombacho	4

		Pataky	Pataky	4
		Luna	Altagracia	1
		Unknown	Unknown	2
Feathers - Body	Feathers appear as emanations from the body.	Galo	-	1
		Papagayo	Cervantes	1
		Papagayo	Fonseca	1
		Papagayo	Serpiente	1
		Vallejo	Mombacho	3
Feathers - Tail	Feathers appear as emanations from the tail	Papagayo	Cervantes	2
		Papagayo	Mandador	1
		Papagayo	Serpiente	15
		Vallejo	Vallejo	2
		Vallejo	Mombacho	3
		Pataky	Pataky	4
Net Pattern/ Checkerboard	Crosshatching patterns some squares filled-in	Papagayo	Mandador	4
		Papagayo	Serpiente	12
M-Shape	The mouth creates a diagnostic m-shape	Papagayo	Cervantes	1
		Papagayo	Fonseca	1
		Papagayo	Serpiente	3
		Vallejo	Vallejo	2
		Vallejo	Mombacho	1
		Vallejo	Lazo	1
		Pataky	Pataky	2
Volute Eyebrow	Supraorbital ridge ends in a voluted curve	Vallejo	Vallejo	2
Crested Eyebrow	Supraorbital ridge is crested with feathers or crenellated ridge	Vallejo	Mombacho	3
		Papagayo	Cervantes	3
		Papagayo	Fonseca	1
		Papagayo	Serpiente	15
		Vallejo	Vallejo	4
		Vallejo	Mombacho	5
		Luna	Altagracia	2
Red Buccal Mask	Figures have a red jaw or mask across the lower half of the face	Papagayo	Cervantes	1
		Vallejo	Vallejo	1
		Pataky	Pataky	3

4.3 Descriptions of Patterns and Data

As we have seen from the descriptions, the mouths of the serpents that were described mainly show beak-like mouths, with very few, mainly from the Papagayo Serpiente group, that showed a snout which curled upward. Many figures showed emanations from the mouth, mainly from the Vallejo group, and very few had a bifurcated tongue. Very few showed feathers along the body (very few even had bodies to begin with), and the artists opted instead to show feathers mainly on the head (45 examples, many of which also depicted feathered crests over the eyebrows) or on the tail (27 examples). Only instances from Papagayo:Serpiente were depicted as having arms, save for one lone Cervantes example. The m-shape motif that was pointed out did not appear in great numbers in each group, but it did occur within a diversity of different vessel types and subtypes. The net/checkerboard pattern only occurred in Papagayo:Serpiente and Papagayo: Mandador. There were no examples with distinct scales, only the netting. Only Vallejo examples depicted the eyebrows ending in a volute. Red buccal masks only appeared in a few examples.

4.4 Mesoamerican Iconography

Traits of the Mesoamerican Feathered Serpent have been widely studied (Carrasco 1982, Jansen 2007), and will be outlined briefly below. Many of these are in the Mixteca-



Figure 67 - Quetzalcoatl, as depicted in the Codex Magliabechiano. 16th century.

Puebla style, which, as mentioned, has been compared with ceramics from the Greater Nicoya several times. What was being looked for was conclusive evidence tying the Mesoamerican Feathered Serpent to that of the ceramics that were examined above. This forms part of the second stage of the Panofskian analysis, in which groups of signs are identified and examined for their associated meaning, but also leading into the Iconological stage, in which the groups of symbols and attributes come together to form an iconographic complex.

We have already seen in Section 1.3.3, Quetzalcoatl has several important characteristics. It must be stated that in the codices, there is a great deal of creativity and

artistic licence, and therefore no two depictions are precisely the same, however, there are a few attributes to Quetzalcoatl that we may often see. To re-iterate, for the anthropomorphic deity, they are the conical cap, red buccal mask, shell pectoral, feather bundle, and flowered weapons (fig 67). As such, there are very few traits which have been analysed which can be linked to the deity Quetzalcoatl of Mesoamerica, as we just do not see definitive examples containing the conical cap or conch shell imagery in the ceramics.



Figure 68 - Quetzalcoatl in the Codex Telleriano-Remensis. 16th century.

The red buccal mask is a sign that perhaps there was a link between the two, and indeed McCafferty writes that the late PostClassic Nicarao worshipped a deity named “Hecat,” likely a corruption of “Ehecatl,” the wind god aspect of Quetzalcoat (McCafferty 2008, 75). The bulk of the examples which we have seen have been zoomorphic creatures, and the anthropomorphic figures from the Greater Nicoya do not appear to possess the same

raiment and attributes as the Mesoamerican deity Quetzalcoatl.

For the zoomorphic figure, we do see some similarities, perhaps more in style than in iconography, between the two regions, particularly towards the Ometepe period, which is the time period in which the bulk of the supposed Mesoamerican migrations occur. The ‘earlier’ Papagayo:Serpiente examples appear completely separate from Mesoamerican influence, however with the later Papagayo examples in which the ‘beak’ begins to be introduced, we do see more of the familiar style of headdress and then into the Vallejo examples, there are real similarities to Mesoamerican Feathered Serpents such as that shown in the Codex Telleriano-Remensis (fig 68).

5 Discussion / Conclusions

5.1 Discussion and Iconographic Investigation

Most of the depictions of feathered serpents on Central American ceramics do not feature 'Quetzalcoatl' in association with any of his common Mesoamerican attributes, such as the conch shell. He is also most often depicted in a zoomorphic form rather than an anthropomorphic form. This may indicate that although the symbol of the deity itself has been adopted (perhaps as a method of gaining prestige), the meaning behind the religious aspects of the Mesoamerican feathered serpent have been lost or overlooked. This calls to mind the examples of the Olmec jades which have been reworked, as they would seem to place more emphasis upon the material than the significance of the object itself (Luke 2003). This form of religious simulacra was common in the ancient Americas (see Inga Calvin's doctoral dissertation on Maya pseudo-glyphs), as a form of social aggrandizement through prestige items without a need to incorporate the meaning behind the important object.

This is not to indicate that the semasiographic nature of the motif has ceased to exist. Just because the meaning has altered or been transferred, does not mean that it has lost meaning; on the contrary, it has likely to have gained alternate meaning as it became representative of something else that is, as yet, unclear. Art, like language, is in constant flux, and alters with the performance of it. It is up to us to view and extract the common threads in order to make sense of them.

5.1.1 Uses of Nicaraguan Polychromes: Cultural analogue to Mixteca-Puebla polychromes?

The uses of these vessels remain undetermined. The nearest hypothesis is that they were a cultural analogue to ritual ceremonial vessels that have been found in Mesoamerica, which are interpreted as having been used in ceremonial feasting rituals (Hernandez 2010). They certainly resemble these vessels in certain ways pertaining to shape and decoration as has been discussed by Day (1994), however there are certain major differences that call into question whether or not we can really compare the two vessel classes at all.

Nicaraguan polychrome vessels, upon examination, often do not appear to have a great deal of wear on the inside, indicating that they were not perhaps greatly used or that

they were at least not handled roughly. They are also in general (with some exceptions) not as finely made as the Mixteca-Puebla polychromes to the North; they have thicker walls, the paint does not adhere as well (often coming away and remaining in the dirt while the sherd is removed, however the climate in Nicaragua lends to a greater overall annual precipitation which may lead to the greater deterioration of materials) and they are not finished with the same degree of shine as the Mesoamerican examples (save perhaps Galo polychromes, which are highly burnished).

Nicaraguan ceramics indeed do appear to have served a function similar to that of Mixteca-Puebla ceramics, in spite of a great deal of differences between the two cultures. There are no monumental sites in Nicaragua, no obvious ceremonial centers at which these vessels could be found. They are found scattered throughout what has been interpreted as village sites surrounded by house mounds (McCafferty 2011). There is no conclusive evidence of the degree to which social stratification existed, although each tribe certainly had a *cacique*, as we have documentation of them through the inventories of the Spanish. It is certain that in Central Mexico and the Mixtec area, these vessels were often used by groups of ruling elites (Hernandez 2010). We do have some evidence of use from Oviedo, who wrote that the food that was served to the *cacique* Agateyte of Tecoatega in a “three legged vessel of clay,” (Lothrop 1926, 46).

With such differences, one might ask whether it is useful to make a comparison at all between the two cultures. Certainly any analysis must take into account that these are separate ethnic groups who dealt with different climates both socio-culturally and physically, however it is apparent that there was contact or at least influence due to proximity and it is an integral part of the study to consider what impact this proximity had on either culture.

5.2 New Insights

The Feathered Serpent image was chosen as the central element for analysis in this thesis because it appears on a diverse array of vessels types over a broad expanse of time. The image, that of a mythological creature with associations to Mesoamerican religious practice seems to have been transported to the Greater Nicoya and flourished as a religious symbol which was adopted by a wide range of cultures. This lends to the theory that,

despite the repeated influx of migrants into the region, there was a certain degree of cohesion and shared ideology amongst the people who lived there (Dennett and McCafferty 2011, 24-25).

Coming back to material engagement, we might employ the idea of culture memory, in which rulers attain longevity by linking themselves and their descendants with visual symbolism upon objects in order to reinforce their power and ideology. Culture memory is also often bound to specific rites and the supernatural, and is reinforced by repetition and performance. In a similar vein, rulers also often adopt foreign motifs in order to solidify their position within their own political sphere (Helms 1993). Dennett and McCafferty, argue that there was little reliance upon foreign symbols at that time (2011, 24), and to a certain extent, this is true. There is extensive evidence that the image of the Feathered Serpent was highly regarded in the Greater Nicoya. Though traditionally thought of as a Mesoamerican deity, we have seen that this image was adopted centuries before the supposed influx of foreign migrants into the area, and therefore may have been perceived, not as a foreign symbol, but as a common international motif, as common as the jaguar or bird motif. As there has been little evidence of the anthropomorphic Quetzalcoatl in the Greater Nicoya area, it is likely that the image was adopted without many of the associations that made it relevant to the Mesoamerican religion of the Feathered Serpent which inspired the erection of grand monuments and lavish ceremonies.

5.3 Conclusion

In spite of the ethnographic evidence that suggests that there were wide-scale migrations from Mesoamerica into the Greater Nicoya, first by the Mague-Speaking Chorotega and later by the Nahua-speaking Nicarao, there is very little archaeological evidence to support this theory. After an extensive look at the iconography and style of serpents from both areas, the evidence is even less convincing. Certainly there are some similarities, and the image could well have originated in Mesoamerica, but the iconography is quite distinct, and there is very little evidence to suggest that the Feathered Serpent of the Greater Nicoya was being worshipped in any way similar to the god Quetzalcoatl of Mesoamerica.

5.4 Suggestions for Further Research

Aside from a few cursory iconographic and stylistic studies (See Lothrop 1926; Healy 1981), very few organized efforts have been made to analyse, in a holistic way, the ceramics that are found in Nicaragua and the Greater Nicoya Region. Because studies of this nature are in the beginning stages, there is an opportunity here to build a consistent and inclusive analysis from the ground up. Unfortunately, there is already evidence of regionalism and failure of awareness of surrounding areas; for example, what is referred to as Las Vegas Polychrome in Honduras looks extremely similar to a sub-type of Papagayo polychrome in Nicaragua (Healy 1981, p.324). This is a trend which we must be careful to end by remaining in close contact with archaeologists (and their writings) that specialize in Honduran, El Salvadorian, and Costa Rican ceramics especially.

5.4.1 Ceramics Studies and their Application

Measuring where vessels were found in relation to each other is one of the most common aspects of archaeological investigation. A particular vessel type's presence at a particular site can yield insight into the types of rituals that were performed there. The vessel's proximity to other types of objects can also be linked to use, for example, in Kathryn Brown's 2007 study of ritual ceramics in Belize, in which she was able to place the ceramics in a ritual feasting context due to their being serving wares, as well as their being found in a ceremonial centre, in association to "faunal remains, carbon, and exotics such as marine shell and obsidian" (p.12). Brown's study also included an ecological component. Phytolith analysis led to information about the kinds of ritual feasting that ceramics were involved in (Brown 2007, p.16). Phytolith analysis involves the study of particles of silica which are derived from the cells of plants and remain after the decomposition or burning of the plant (Renfrew & Bahn 2004, p.249). This deposit featured a wide array of animal species, from birds to mammals, reptiles and fish, leading the researchers to hypothesize that the ritual feast was a communal event in which different community members were obliged to bring different species of animals to the feast (Brown 2007, p.16). Further analysis of the faunal remains also showed charring and cut marks, which further supported food preparation theories.

Tied to phytolith analysis, residue analysis also involves the study of micro-remains and can be conducted on ceramic vessels in order to determine use. For an example of this, we turn again to the Maya area, in which chocolate (cacao) is a known ritual drink in the

Maya and Olmec areas, and is indicated by the presence of theobromine, its active ingredient (Powis et al, p. 85). A team from the University of Texas was able to use chocolate residues to prove that Middle and Late Preclassic spouted vessels in Colha contained chocolate. This indicates that chocolate was in use by the Maya in Middle Preclassic times, much earlier than previously thought (Powis et al 1999, p.98). Residue analysis can also be employed to detect the presence of fats and amino acids, which can lend insight into not only determining the types of foods that were served in ritual ceramic vessels, but the recipes that were involved (Renfrew & Bahn 2004, p. 283). Chemical and infrared spectroscopy can also be conducted on residues in order to determine chemical composition (Renfrew & Bahn 2004, p. 283), which can yield results as to content and therefore use.

As we have seen, microscopic analysis can be used to determine the ancient contents of a vessel which have long since decayed. The vessel itself can also be examined in several ways, including petrographic analysis. Petrographic analysis or petrological examination is the observation of mineral inclusions in ceramic paste under a light microscope (Renfrew & Bahn 2004, p.366). This can yield valuable information about how the vessel was made and changes in mode of production, where it was made (if source clay samples can be collected for comparison), and diachronic vessel standardization (Hardy 2006). For example, Arthur Joyce led a team examining Late/Terminal formative sherds from 20 sites around a broad area of Oaxaca (Joyce et al 2006). They were able to determine the location of two production centres, both of which showed continuity into the colonial period (Joyce et al 2006, p.588). It should be noted that this method can only be employed by creating thin sections of the ceramic material, and is therefore not an option for museum pieces as it requires the destruction of the ceramics vessel.

Nicaraguan ceramic studies will benefit from combining many of the aforementioned approaches; beginning especially with some much-needed spatial analysis. There is a dearth of sound provenience data amongst the museum-quality pieces that are found from the area. Many are simply labeled by general region and style, with no mention of site, and no associated radiocarbon dates. Current projects need to gather data on time periods in order to solidify our existing chronologies. In addition, they need to collect data on ceramic types which appear at each site. It would be extremely useful for this data to be

gathered in one place that is widely available and easily accessible, such as an online database, so that we can determine which ceramic types were appearing where and at what time.

As we do not find the same grand ceremonial centres or pyramids as in the Maya or Mixtec areas, Nicaraguan rituals remain somewhat a mystery. It would also be extremely useful for current studies to make use of the many scientific methods listed above. As noted, the use of residue analysis in determining the past contents of a vessel can indicate its former contents and therefore give an indication of what it was used for, information that would be integral to our studies. There are also petrographic studies being carried out by the University of Calgary (McCafferty & Dennett 2010) which are focussed mainly on determining production centres (a study which should be carried-out for all of the major sites in the Greater Nicoya) but could also be geared towards establishing the degree of standardization of vessel fabrication.

Iconographic analysis can be applied to deduce the types of rituals that were carried-out or to establish the sacrality of a vessel. This, when combined with scientific testing such as provenience data (including relation to ceremonial centres as well as other ritual objects or faunal remains), residue analysis, phytolythic analysis, and petrographic analysis, provides a clearer picture of the ritual use of ceramics in Mesoamerica. It is proposed that we also apply these methods in the study of Nicaraguan ritual ceramics in order to broaden the relatively minute knowledge of religious practice in Nicaragua, and the Greater Nicoya region in general.

Abstract

The majority of studies of the Greater Nicoya area of Pacific Nicaragua and Costa Rica have relied heavily upon the assumption that large-scale Mesoamerican migrations took place sometime in the Postclassic period, resulting in the similarity between some styles of pottery and iconography between the two regions. Recently, studies have shown that there is little archaeological evidence to link the two areas, besides the ethnohistorical data and the appearance of the aforementioned iconography. This study examines one of those icons, the quintessentially Mesoamerican figure of Quetzalcoatl, the Feathered Serpent, in order to look for evidence that might support either side of the debate.

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