The research herein reported was conducted with artifactual collections, mainly ceramics, from the site of Tepetate in the region of Granada. This site was first described and dug by Albert Norweb and Gordon R. Willey in 1961 (Willey and Norweb, 1961). Three test pits were excavated by them in a nucleated area where approximately twelve low stone-faced mounds were recorded.

A regional research conducted by Salgado (1996; Salgado and Zambrana, 1994) indicated that Tepetate was the main settlement of a three-level regional hierarchy during the last six centuries before the Contact in Granada. The site was almost completely destroyed in its nucleated area by urban construction in the early 1970’s.

The collection dug by Willey and Norweb was an important source to gain some understanding on the sequence of occupation, and the activities developed in the nucleated area of the site. The analysis of the collection stored at the Peabody Museum yielded important results. First, it showed that the site, at least in its nucleated part, was not occupied before A.D. 900. Second, it helped refine the ceramic complexes of the two later periods of precolumbian occupation in the area of Granada. Third, it provided evidence for specialization in the form of pottery production.
The settlement of the site by the Chorotega, or other groups of Mesoamerican origin, is indicated by diverse features of the material culture as detailed in the following discussion.

Submitted 12/01/1997 by:
Silvia Salgado González

Analysis and Results

The three test pits dug by Albert Norweb yielded ceramics manufactured during the Sapoa phase (A.D. 900-1350) and Ometepe phase (A.D. 1350-1522). The first pit was only seventy-five centimeters deep and the second only one meter deep, and both yielded few cultural material. The third pit was selected for detailed analysis because it had the deepest stratigraphy, one meter and seventy-five centimeters, and yielded by far the largest quantity of cultural remains. Classification of pottery follow the type-variety system in use in Pacific Nicaragua and northwestern Costa Rica (Bonilla et al., 1990). Three new ceramic varieties of the Papagayo Polychrome and two new monochrome types, Tepetate Red Punctuated and Red Plain, were established as a result of the analysis. The ceramic complexes of the Cocibolca (950-1150 A.D.) and Xalteva phases (1150-1522 A.D.) established by Salgado (1996) have been refined with the study of the Peabody collection.

The Cocibolca Phase

Levels six and seven in Table 1 represent the occupation of Cocibolca. The ceramics of the phase mark an abrupt change from previous ceramic complexes in the region of Granada. The polychrome types are now defined by different technological attributes including the substitution of tan slips by white slips, surfaces that are polished but not shiny as in the previous period, and pastes that are coarser and better oxidized. Polychrome types represent close to fifty percent of all ceramics, whereas in the previous period they were only ten percent or less of all pottery. Although there is some continuity in the iconography, it is overridden by the introduction of a new set of motifs without precedent in the local tradition. Some scholars have linked the new iconographic motifs with those of Early Postclassic pottery from West México and Central Veracruz (Smith and Heath-Smith, 1980). Paul Healy (1980) has related the emergence of these motifs with the arrival of the Chorotega groups to Pacific Nicaragua (Healy, 1980). Other aspects of the material culture, discussed later, support Healy's interpretation.
Papagayo Polychrome is the most popular type of the Cocibolca phase (twenty-one percent of the sample) and the more numerous varieties are in descending order of frequency, Manta (fifty percent of the type), Casares (fourteen percent of the type) and Mandador (ten percent of the type). Healy described two types of vessel forms for the Mandador variety in Rivas, each with a distinctive decoration. The most frequent was a hemispherical bowl with direct rim and bands of step-frets painted on the exterior rim. The other form was a tripod composite bowl with the motif of the Two-Headed Dragon painted on an exterior panel. This form is the dominant in the Tepetate collection, being perhaps a regional variant of Mandador.

Pataky Polychrome is also important, and it represents approximately five percent of the ceramic complex. The type is characterized by effigy piriform vessels and by composite tripod bowls whose main painted motif is a highly stylized representation of a jaguar. According to some scholars Pataky iconography resemble some motifs found in the Postclassic in areas of the Mexican Highlands (Healy, 1980; Wallace and Accola, 1980; Day, 1984).

Monochrome types are represented by Sacasa Striated and Red Plain. Sacasa is the most abundant type in southern Pacific Nicaragua during the Sapoa (800-1350 A.D.) and Ometepe (1350-1522 A.D.) periods. Red Plain is a newly established type that shares the paste features with Sacasa but differs in surface treatment. It lacks the striated decoration typical of the former, and the surface is totally slipped in red. Dominant forms are large hemispherical vessels and deep bowls.

Specialized production of figurines begins in Cocibolca, and it is shown by the presence of numerous figurine fragments and figurine molds. Molds to manufacture the supports of tripod vessels of the Papagayo Polychrome type offer more evidence of specialization.

The lithic complex of Cocibolca at Tepetate is formed roughly by thirty-three percent of obsidian artifacts, sixty-five percent of chert artifacts and two percent of ground-stone artifacts. Most obsidian artifacts are prismatic blades and debry from core-blade technology made from Ixtepeque raw materials (Geoffrey Braswell, personal communication, 1996). Prismatic blades were also made of local chert, as well as bifaces. The latter are not found in the lithic complexes of previous periods. Payson Sheets (Lange et al., 1992) have already noticed that the manufacture of a specific class of artifact, the stemmed, round-based biface, could indicate interaction with the southern Maya area where this type of artifact became common during the Late Classic.

The lithic complex defined at Tepetate differs from the coetaneous complex at the site of Ayala, located approximately five kilometers to the south. Ayala was a third-level site in the regional hierarchy during Cocibolca, and has a significantly lower percentage of obsidian artifacts (about twenty percent of all lithic artifacts). Since obsidian was imported from Mesoamerican sources; it could be hypothesized that it was imported to Tepetate and redistributed from there to other sites in the region.
**The Xalteva Phase**

This phase could tentatively be divided into two facets. In Table 1, levels two to five represent facet one and level one facet two. The first is marked by the emergence of two monochrome types, Combo Collander and the newly established Tepetate Red Punctate. The latter type is defined by hemispherical jars slipped in red with a short, direct neck. The only decoration is a strip of clay with punctuations spaced regularly on the joint of the neck and the body of the vessel.

Vallejo Polychrome and Banda Polycrome (Bonilla *et al.*, 1990) are also markers of this first facet. Vallejo is characterized by iconography that includes representations of Mexican deities such as the Earth Monster and Ehecatl, as well as hummingbirds and stylized serpents (Stone, 1977; Healy, 1980; Day, 1984; Canouts and Guerrero, 1988). These representations show, again, the incorporation of Mesoamerican cultural ideas in the region of Granada.

Papagayo and Pataky are still important but declining types during Xalteva. The most important varieties of Papagayo during this phase are, in declining order of importance, Alfredo (twenty-five percent), Cervantes (twenty percent) and Fonseca (six percent). The former two peak at the beginning of facet one and decline at the end of it; Fonseca increases its frequency by the end of the facet. In addition, the new established varieties, Kruger (thirteen percent), Paco (twelve percent) and Priscilla (one percent) emerged and decline during Xalteva.

Production of pottery figurines continues, and the manufacture of pottery net-sinkers shows, perhaps, a technological innovation in fishing techniques. An important number of reworked sherds whose function has not been determined are part of the artifact repertoire.

The second facet of Xalteva is defined by the emergence of the type Madeira Polychrome and the continuation of types already present in facet one. Finally, the lithic complex shows continuity from that of the Cocibolca phase.
### Table 1. Distribution of Types and Varieties

**Tepetate Site, Test Unit 3**

<table>
<thead>
<tr>
<th>Type</th>
<th>1%</th>
<th>2%</th>
<th>3%</th>
<th>4%</th>
<th>5%</th>
<th>6%</th>
<th>7%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madeira Polychrome</td>
<td>107</td>
<td>4.0</td>
<td>2</td>
<td>0.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banda Polychrome</td>
<td>36</td>
<td>1.4</td>
<td>13</td>
<td>0.5</td>
<td>2</td>
<td>0.01</td>
<td></td>
</tr>
<tr>
<td>Pataky Polychrome</td>
<td>41</td>
<td>1.5</td>
<td>33</td>
<td>1.3</td>
<td>106</td>
<td>4.0</td>
<td>147</td>
</tr>
<tr>
<td>Papagayo Polychrome</td>
<td>129</td>
<td>5.0</td>
<td>305</td>
<td>12.0</td>
<td>344</td>
<td>13.1</td>
<td>283</td>
</tr>
<tr>
<td>White-slipped undet</td>
<td>747</td>
<td>29.0</td>
<td>327</td>
<td>12.9</td>
<td>251</td>
<td>9.5</td>
<td>372</td>
</tr>
<tr>
<td>Sacasa Striated</td>
<td>597</td>
<td>23.2</td>
<td>756</td>
<td>29.8</td>
<td>861</td>
<td>32.7</td>
<td>1398</td>
</tr>
<tr>
<td>Red Plain</td>
<td>740</td>
<td>28.8</td>
<td>706</td>
<td>27.8</td>
<td>580</td>
<td>22.0</td>
<td>454</td>
</tr>
<tr>
<td>Combo Collander</td>
<td>16</td>
<td>0.6</td>
<td>15</td>
<td>0.6</td>
<td>14</td>
<td>0.5</td>
<td>11</td>
</tr>
<tr>
<td>Monochrome undeterm.</td>
<td>32</td>
<td>1.2</td>
<td>21</td>
<td>0.8</td>
<td>17</td>
<td>1.1</td>
<td>18</td>
</tr>
<tr>
<td>Polychromes undeterm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jar bases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Figurines</td>
<td>1</td>
<td>0.0</td>
<td>1</td>
<td>0.0</td>
<td>4</td>
<td>0.1</td>
<td>6</td>
</tr>
<tr>
<td>Molds</td>
<td>3</td>
<td>0.1</td>
<td>4</td>
<td>0.2</td>
<td>5</td>
<td>0.2</td>
<td>6</td>
</tr>
<tr>
<td>Spindle-Whorls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net Sinkers</td>
<td>51</td>
<td>1.9</td>
<td>26</td>
<td>1.0</td>
<td>16</td>
<td>0.6</td>
<td>2</td>
</tr>
<tr>
<td>Reworked Sherds</td>
<td>88</td>
<td>3.4</td>
<td>268</td>
<td>10.5</td>
<td>361</td>
<td>13.7</td>
<td>89</td>
</tr>
<tr>
<td>Miniatures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2573</td>
<td>2541</td>
<td>2636</td>
<td>2820</td>
<td>1571</td>
<td>1672</td>
<td>880</td>
</tr>
</tbody>
</table>

### Conclusions

Our understanding of the role and activities of the Tepetate site have been enlightened with the research conducted at the Peabody Museum. Tepetate provides the first concrete evidence of economic specialization found in precolumbian sites of Pacific Nicaragua. In addition, the higher percentage of obsidian prismatic blades found at Tepetate compared to other sites of Granada, and the structural characteristics of the site as reconstructed by Salgado (1996), provide strong evidence for its place as a regional center during Cocibolca and Ometepe.
Changes in pottery and lithic technologies and incorporation of new iconography point to strong interaction with Mesoamerica. The etnohistorical evidence evaluate with the archaeological data strongly support the idea that Mesoamerican groups, or at least with strong links to Mesoamerica, settled the site around 900 A.D. When the Spaniards arrived to Granada in 1522 A.D. Tepetate was very likely part of the Chorotega town of Xalteva mentioned in the historical sources.

Genetic studies of populations of human skeletons of Cocibolca and Xalteva and populations of previous phases could confirm the arrival of Chorotega groups to Granada. Excavations at secondary centers also are necessary to expand the data base to reconstruct the process of settlement of the Chorotega in Granada, and the transformations occurred as a result of it.

The research reported here has shown that Granada was part of the Mesoamerican periphery during the last six centuries before Contact. The study of precolumbian populations during that period has to be understood in the context of sociocultural processes and interactions taking place in the Mesoamerican world-economy.

Sources Cited

Bonilla, Leidy; Marlin Calvo, Juan V. Guerrero, Silvia Salgado y Fred Lange (editors) 1990 La ceramica de la Gran Nicoya. Vinculos 13.


Salgado González, Silvia

Salgado González, Silvia y Jorge Zambrana Hernández

Smith, Michael E. y Heath-Smith, Cynthia M.

Stone, Doris

Wallace Henry y Richard M. Accola

Willey, Gordon R. y Albert H. Norweb