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**AN EVALUATION OF LONG TERM CULTURAL CHANGE IN SOUTHERN CENTRAL
AMERICA: THE CERAMIC RECORD OF THE DIQUÍS ARCHAEOLOGICAL
SUBREGION, SOUTHERN COSTA RICA.**

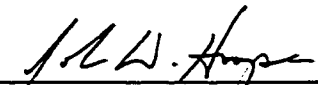
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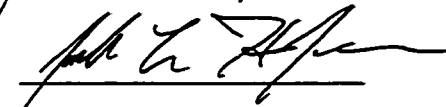
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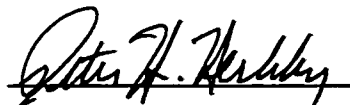
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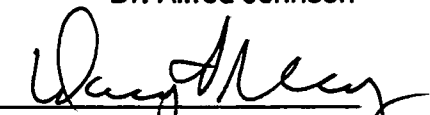
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ABSTRACT

In Southern Central America, diffusionist models for the explanation of Pre-Columbian cultural change have been contested by evolutionist models, advocated by geneticists, linguists and archaeologists. The latter suggest that present indigenous groups have been in the area for thousands of years without major genetic or linguistic discontinuities. They also indicate that these groups occupied approximately the same geographical regions that they inhabit today.

A comparative evaluation of the ceramic record of the Diquís Archaeological Subregion, Southern Costa Rica, from around 1500 B.C. until the 16th century, is the basis for evaluating diffusionist explanations, evolutionary models and regional relationships of this subregion. Discussion of local ceramic traditions and regional horizons, and evaluation of interaction spheres at different regional levels provides the point of departure for assessing whether indigenous groups evolved without major outside intrusions throughout the Pre-Columbian occupation sequence. This study is considered a contribution to the multidisciplinary approach involving archaeology, ethnography, ethnohistory, genetics and linguistics to assess cultural continuity from the Precolumbian Period to modern days in Southern Central America

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CHAPTER I INTRODUCTION

In Southern Central America, diffusionist models for the explanation of Precolumbian cultural change have been recently contested by evolutionist models advocated by linguists, geneticists and archaeologists (Constenla 1991, Barrantes 1993, Cooke and Ranere 1992, Fonseca and Cooke 1994). They suggest a local evolutionary change in Southern Central America based on linguistic, genetic and archaeological criteria. According to these models, modern indigenous groups in the area have been there for thousands of years without major genetic or linguistic disruptions. Also, it is suggested that they have occupied approximately the same zones that they inhabit today.

Barrantes and associates (Barrantes et al. 1990, Barrantes 1993) have proposed that the indigenous groups from Southern Central America are distinct from other Amerindian groups based on particular characteristics of their genetic structure. Those groups have been evolving from a common ancestor during the last 7000-10,000 years with very little external infiltration. Constenla (1991, 1995) has also proposed that those groups have been in the same areas where the Spaniards found them in the 16th century and argued that there is no linguistic evidence of large migratory movements of foreign groups, with the exception of Mangles and Nahuas that supposedly arrived to the Pacific Coast of Nicaragua and Norwest Costa Rica after the 9th century. According to glottochronology the beginning of the fragmentation of the Chibchan stock would have begun around the fourth millennium B.C. (Constenla 1991:45). The introduction or local development of agriculture could have been the cultural determinant that triggered such change

At the macroregional level, recent reappraisals call for a review of traditional denominations such as "Intermediate Area", that included Southern Central America and sections of Colombia, Venezuela and Ecuador, to place emphasis on regional distinctiveness and on the growing evidence for local processes independent of Mesoamerica and the Andes. Alternatives such as the Chibchan Historical Area (Fonseca 1992) or Chibchan-Chocó Historical Area (Cooke 1992) have been postulated

based on archaeological data and information of Chibchan and Chocoan languages distribution in Southern Costa Rica and parts of Colombia.

Archaeological data tend to support an "in situ" evolutionary history of the indigenous groups of Southern Central America. In zones such as the Arenal Basin, the Central Region of Costa Rica and Central Panamá, several authors have postulated cultural continuity among different phases and periods from Paleoindian times to the 16th century based on ceramic and lithic studies, although some parts of the sequence have not been well documented (Snarskis 1978, Cooke 1984, 1986, Ranere y Cooke 1996, Hoopes 1992).

In Greater Chiriquí, an archeological region that includes the Diquís (Southern Costa Rica) and Western Panamá, several diffusionist models have been used to explain the origin of ceramic complexes in different periods (Stone 1977, Linares 1980a, Haberland 1984a, Shelton 1984a). A comparative evaluation of the ceramic record is the basis for evaluating diffusionist explanations, evolutionary models and regional relationships of the Diquís Subregion. In the Diquís, the existing information establishes ceramic occupations from around 1500 B.C. until the arrival of the Spaniards in the 16th century. In this work I utilize B.C. or A.D. for uncalibrated dates and cal. B.C. or cal. A.D. for calibrated dates. Discussion of local ceramic traditions and regional horizons, and evaluation of interaction spheres at different regional levels provides the point of departure in assessing whether indigenous groups evolved without major outside intrusions throughout the Precolumbian occupation sequence.

The dissertation includes the following major methodological aspects:

- a. the establishment of vessel forms, appendages and decorative modes based on a bibliographic review of information about ceramic complexes for known occupation periods in the Diquís subregion (1500 B.C.- A.D. 1500).
- b. review and analyses of ceramic collections from sites within five selected zones of Southern Costa Rica. Collections were obtained by the author and other researchers from surface and profile collections. The collections were analyzed using modal and typological classifications.
- c. the application of statistical cluster analysis using percentages of frequency of ceramic modes at the Southern Central America level during the Formative Period (2000-300 B.C.).

- d. comparison of modal and typological information from the Diquís Subregion with Western Panamá and other zones from Southern Central America.
- e. discussion of ceramic traditions, horizons and ceramic interaction spheres based on the results from the modal and typological classifications.

Assuming a cultural and biological co-evolution and the proposition by Constenla that the linguistic division began with the introduction or development of agriculture, the ceramic sequences of Southern Central America must reflect a process of differentiation while maintaining a degree of familiarity. The cultural sequence of the Diquís Subregion comprises three major periods: Sinancrá (1500-300 B.C.), Aguas Buenas (300 B.C.-A.D. 800) and Chiriquí (A.D. 800-1500). The Sinancrá Period is represented by the Curré and Darizara ceramic complexes. They are characterized by globular jars and bowls decorated with varied plastic techniques including incision, shell stamping, rocker stamping, cuneiform stamping, rounded stamping, fingernail stamping, punctation, fillets and pellets appliqué. They shared formal and stylistic similarities with other early complexes from Southern Central America from Central Panamá to Pacific Nicaragua dated to the first two millennia B.C. or Formative Period, corresponding with the consolidation of agricultural practices, the appearance of pottery, and the beginning of the village lifestyle.

To contrast the archaeological information with the genetic and linguistic divisions a regional comparison of the Formative complexes of the Diquís Subregion was conducted based on the percentages of vessel forms and decoration. Cluster analysis, a statistical analysis also used by geneticists and linguists, was applied to explore the degree of relationship among the different complexes. The results support that during the period between 1500-300 B.C. in Southern Central America there was a considerable relationship among the different ceramic groups. Dendrograms based on the percentages of the different traits show grouping among complexes located in adjacent areas and in some cases clustering according to the geographical alignment of the complexes in a similar manner to the obtained using linguistic and genetic traits. In this sense, the results supports a division between "southern" complexes (Sarigua, Curré, Darizara, La Montaña, Black Creek) with a predominance of globular jars and presence of budares, and "northern" complexes (La Pochota, Barva, Los Sueños,

Tronadora, Chaparrón, Dinarte) that shared the presence of tecomate-jars, incurved bowls, and zoned bichroming.

During the following Aguas Buenas Period, pottery exhibits a red slip that in some cases alternates with unslipped areas creating a zoned bichrome style. In the unslipped area plastic techniques were used. They included incision, punctation, pellets appliqué and stamping. Zoomorphic modeling (toucans, king vultures, raccoons and coatis) was also common. The most common forms were bowls with grooves below the lip, globular jars, and tripod composite silhouette bowls. A particular trait of this period was the tabular handles and supports.

Regional comparison conducted for the Aguas Buenas Period was based on general characteristics (because of the absence of quantitative data and difficulty to relate modes). Diverse studies in Pacific Nicaragua, Costa Rica and Western Panamá have provided information of other ceramic complexes with zoned bichrome decoration dated between 500/300 B.C. and A.D. 300/500. This decoration would have its antecedents in the bands of red slip alternated with unslipped areas already present in several complexes of the Formative Period. A Zoned Bichrome Horizon, characterized by vessels with red slip alternated with unslipped areas, plastic decoration usually in the unslipped areas, simple and composite silhouette bowls and zoomorphic modeling, extended from Pacific Nicaragua to Western Panamá. Central Panamá that was included in a Formative Horizon presents the development of a local tradition of painted pottery.

For the Chiriquí Period, polychrome and bichrome painting appeared along with an increased range of vessel forms and decorative motifs. There are also distinctions between monochrome pottery with appliqué and incised motifs and painted pottery. Painted ceramic types could be bichrome (white on red, black on red, white lined) or polychrome (white slipped, with geometric patterns in black and red). After A. D. 800 there is a process of regional divergence in Southern Central America. Each region and even each subregion developed a particular identity. Local ceramic types reflect a process where each group distinguished themselves from their neighbors. The connection within the different zones of regions such as Greater Chiriquí are more in the level of panregional types or local types with regional distribution. These can be related with similar ideological or religious beliefs while going through a process of differentiation

in the other material aspects. Instead of extended horizons, there were exchange relations to obtain pottery from other areas, as prestige goods. These exchange activities could have been the origin of changes or disruptions in the transmission of information in the local ceramic traditions through adoption and transformation of new elements.

In terms of a ceramic tradition in the Diquís Subregion or continuous transmission of ceramic information during the different periods, there are some significant discontinuities. While it is clear that during the long spans of the different periods there should have been a lot of continuity; the same is not true from one period to another. In each case there is some continuity, but also striking differences appear that cannot be traced in a sequential form to the precedent period. For example, the zoned bichroming does not have an antecedent in the Sinancrá Period. In the same way, there are no antecedents for the appearance of polychromy in the Chiriquí Period. These discontinuities can be related to the action of some external factors not well clarified. But the appearance of new ceramic traits does not fit necessarily with migrations or diffusion from central points. The argument here is that those developments were the product of local groups participating in interaction spheres with other groups at the level of Southern Central America and beyond. The adoption of ceramic traits by instances such as "dependent invention" could have gone through an instant process of modification to fit with local conventions and as a consequence a distinctive local style that reveals a level of similarity but not a direct copying. Regional networks, exchange mechanisms, different type of contacts at the borders or in special places as part of interaction spheres would have enabled for the acquisition of new traits.

The focus of the study on the ceramic record must be complemented in further works by the incorporation of the other elements of the archaeological record. For the Sinancrá period, ceramics are the most visible element and in that way constituted a logical point of departure. But, for the other periods and phases there are additional information from lithics, special industries (greenstone work, goldwork, shellwork, etc.), settlement patterns, architecture, burial patterns and subsistence patterns.

Some external factors could have a role in the disruption of transmission of knowledge and information in the ceramic traditions of Diquís and Greater Chiriquí as

seen for the changes in the ceramic assemblages from the different Precolumbian periods. The nature of those factors is not clear and must be explored from period to period and from region to region and their specific role must be considered in models of local change. They could be economical (e.g. adoption of new agricultural practices, exchange of products, etc.), ritual (e.g. spread of regional symbolism), social (e.g. intermarriage) or product of conflict (e.g. captives). By different alternatives local groups were aware of the developments of the others and adopt what they considered appropriate within their particular culture. In this sense interaction spheres or "cooperation without domination" (Lange 1992b: 434) is a useful concept to understand some of those external factors.

The phylogenies of indigenous groups based on genetic and linguistic information were contrasted with the information from the ceramic record Diquís Subregion and Greater Chiriquí to discuss parallel connections among the different types of information. The results support a general process of differentiation from common roots, but at the same time it was evident that there were disruptions in the ceramic traditions of the Diquís Subregion and Greater Chiriquí region. This must be linked with studies of the other components of the archaeological record. This study is considered a contribution in the multidisciplinary approach involving archaeology, ethnography, ethnohistory, genetics and linguistics to assess cultural continuity from the Precolumbian Period to modern days in Southern Central America

CHAPTER II

THE CULTURAL AND GEOGRAPHICAL SETTING, AND HISTORY OF RESEARCH

The area under study, Southern Costa Rica, comprises parts of the modern provinces of San José and Puntarenas. The impressive Talamanca Range clearly separates the area from the rest of the country. The area remained somewhat isolated from the rest of the country until the 20th century, when an official effort was made to incorporate it in a more active way. The construction of the Inter-American Highway during the 1950's accelerated a process of colonization and development of the area. Because of its fertile soils and diverse topography, the area is dedicated to coffee, banana, and pineapple plantations, cattle ranches and subsistence agriculture. Recently, tourism has become a growing activity due to the presence of several national parks and beach resorts.

The population is comprised mainly of mestizos, a result of several factors. The early mixing of indigenous groups and Spaniards, Panamanian migration when the area was scarcely populated during the 19th and 20th centuries, migrations from the Central Valley since the beginnings of the 20th century (especially in the Pérez Zeledón area), and migration from the Guanacaste Province of Costa Rica and Nicaragua during the expansion of the banana plantations in the 1940's.

Several indigenous groups are present in the region. They include the Borucas that occupy the central part of the area, the Térraba (descending from a group of Teribes that were moved from the Caribbean Coast by the Spaniards in the 18th century), the Bribri and Cabécar (with strong traditional relations with their relatives in the Caribbean side of the Talamanca Range), and the Guaymí (the generic name for Ngawbé and Buglé groups that maintain links with their counterparts in Panamá). Their numbers are low, 5000 to 11,000 depending in the source (Barrantes 1993:41). They are struggling to keep their territories and cultural identity; but they represent the continuation of ancestral occupations that according to recent linguistic and genetic information can be traced to several millennia before. The present study has as major objective the discussion of the ceramic record in five selected zones of the area to address the issue of local evolution of the indigenous population.

In archaeological terms, the area under study can be discussed as part of different archaeological territorial divisions that are presented in the next sections as well as its the geographical setting and the history of archaeological research.

A. Archaeological Territorial Divisions

Southern Costa Rica may be understood as part of larger archaeological divisions. An approach from the more general divisions to the more specific is used to place the area under study in the regional context. Some of the divisions will be retained in the present study while others will be critiqued and modified.

Traditional divisions, such as the "Intermediate Area" were based more in the absence of traits in contrast with the regional horizons present in Mesoamerica and the Andean Area. New alternatives have been discussed according to the new data provided by genetics and linguistics. Current propositions such as the Chibchan Historical Area or Chibchan-Chocó Historical Areas have their origins in linguistic distributions and are still in the process of definition, but they present a more positive assessment than the "negative" approach used in the definition of the Intermediate Area.

1. The Intermediate Area

The definition of the Intermediate Area as the area between Mesoamerica and the Andean Area has been permeated by negative appraisals. As Linares (1979:21) pointed out, this area has been seen as a corridor through which ideas, objects and even people moved back and forth between those areas of core "civilizations". Several authors with diffusionist approaches have seen the Intermediate Area, and particularly the eastern isthmian section of Central America, as the backward frontier area of Mesoamerica or the recipient of cultural influences from North and South America (Lothrop 1926, 1963, Johnson 1963, Baudez 1970, Stone 1972, 1977). Initially the "Intermediate Area" was formulated based on the geographical distribution of ceramic traits. Haberland (1957a:156), proposed the term to designate an area between Mesoamerica and the Andes on the basis of the presence of a horizon style of Black-on-Red Painted Ware and associated features (pedestal bowls, gold figurines, shaft and

chamber graves and the absence of arrow-heads between A.D.1000 and 1450). The geographical distributions of those features comprised the Ecuadorian Highlands (with occasional spots on the coasts), western Colombia and Panamá (Haberland 1957a:149).

This initial formulation did not completely fill the gap between Mesoamerica and the Andes. The adoption and elaboration of the term by Gordon Willey (1959, 1971) extended its geographical extension and consolidated its use. For Willey (1990:51) the Intermediate Area was established as "that territory lying between the southern frontier of the Maya and northern Peru". Willey (1971:277-8) used a greater group of cultural features, including subsistence patterns, settlements, political units, funerary patterns, ceramics, stonework, metallurgy and language affiliation, to give the Intermediate Area some homogeneity. However, he concluded that the Intermediate Area did not have highly distinctive patterns, but overall (developmental and geographical) it can be considered different from Mesoamerica and the Andean Area. In general, the Intermediate Area was characterized as an area where manifestations such as extensive cultural horizons and state-level societies were not present (Lange 1992a:3, Sheets 1992:16-20).

The recognition that tropical areas played an important role in early developments have changed the conventional assumption that everything in the Intermediate Area originated in Mesoamerica or the Andes. In fact, the Intermediate Area is seen now as an early center for technological innovations and its variability, with a number of fundamentally distinct trajectories of sociopolitical development, can be considered a distinctive characteristic (Hoopes 1992:72-73, Bray 1984:308).

Sheets (1992:18) considers that a more realistic approach must emphasize the achievements of the Intermediate Area societies within their own social, religious, political, economical, and environmental contexts. He mentions as specific achievements the early emergence of an efficient agricultural adaptation and village life, the "avoidance" of the state, a greater societal stability, smaller polities (both geographically and demographically), the maintenance of egalitarian and simple ranked societies, the significant artistic achievements in certain categories, more localized economic systems emphasizing independence, and adaptive systems based on diversity.

There have been some differences in the delimitation of the Intermediate Area. An approximate delimitation based on linguistic and archaeological information (Lange 1992a:3, Constenla 1991:5), includes Eastern Honduras, Caribbean and Central Nicaragua, Costa Rica, (excluding the Peninsula of Nicoya after A.D. 800), Panamá, the Western half of Colombia (coasts, Occidental, Central and Oriental Ranges, Santa Marta and Perijá Ranges), the western portion of Venezuela around Lake Maracaibo, and the highlands and coasts of Ecuador (Fig. 1).

However, these limits have varied according to several authors. The northern border is the more variable and considered more permeable to the influences from Mesoamerica. In general, it varies according to the different perceptions of where Mesoamerica ends, and more recently, with regard to linguistic and genetic affiliations. The region of southern El Salvador, Eastern Honduras, Nicaragua and Northern Costa Rica is an area with an ambiguous affiliation. Southern El Salvador, Pacific Nicaragua and Northern Costa Rica are sometimes considered part of Mesoamerica and sometimes a buffer zone between this area and the Intermediate Area (Lange 1984:8-9).

The Greater Nicoya Archaeological Subarea (Northern Costa Rica-Pacific Nicaragua) is considered by some authors as part of Mesoamerica (Willey 1971), while others consider that before A.D. 800 it was integral part of the Intermediate Area. After the arrival of Mesoamerican groups, a process of "mesoamericanization" is assumed (Fonseca 1994). In this regard, Lange et al. (1992:272) consider that even after the arrival of Mesoamerican groups Pacific Nicaragua, and Greater Nicoya in general, is better characterized as peripheral to Mesoamerica, since the data fail to demonstrate an archaeological basis for a significant "mesoamericanization".

Eastern Honduras and Caribbean Nicaragua are considered part of the Intermediate Area, based in archaeological, linguistic, ethnographic, and ethnohistorical information; but, the archaeological record for those areas is still very scant. Most of the zone is "terra incognita", exceptions include the works of Healy (1978, 1984), Magnus (1976), and Begley (1999), among others.

The Intermediate Area does has some geographic basis. It includes the southern part of Central America (named in archaeological terms as Lower Central America, a term discussed below) and Northwestern South America. However, there are no clear

geographical boundaries. Physical features are the thin and elongated Central American Isthmus, the continuous chain of volcanoes, the contrasting wet and dry Pacific lowlands and the wetter Caribbean coastal lowlands (Lange 1984:33).

Regarding the temporal stability of the boundaries of the Intermediate Area, Lange (1992a:4) mentions that the temporal limits can be established as early as 1500 B.C. and extend in time until Spanish Contact in the 16th century. Before 1500 B.C. the area was part of broader Paleoindian, Archaic and Formative traditions. The early developments were part of regional scale phenomena that took part over the Intermediate area and neighbor cultural areas. For latter periods, cultural borders became more stable; but we must be aware that the establishment of limits of a given archaeological region is more an attempt to establish a reference framework for comparative studies at multiple levels than a definitive landmark. They also reflect a factor of sampling and available information.

Due to the fact that the term Intermediate Area is plagued with ambiguity and negation I share the position that the term must be dropped (Fonseca 1998:38). It is also inadequate to deal with the groups that inhabited Southern Central America and parts of Colombia that have been linked by common genetic and linguistic ancestry. As Constenla (1991:137-141) has mentioned within the limits of the Intermediate Area it is possible to distinguish some sectors that are linked with other areas in linguistic and archeological terms, such as Ecuador and Southwestern Colombia related with the Andean (Linguistic) Area and the Guajira Peninsula and Northwestern Venezuela as part of the Venezuelan-Antillean (Linguistic) Area.

2. Chibchan or Chibchan-Chocó Historical Area?

According to linguistic studies, several modern indigenous groups occupying Southern Central America and parts of Colombia speak languages that descend from an ancestral language denominated Proto-Chibchan (Constenla 1991, 1995). The relationship is also genetic as has been proposed by Barrantes and associates (Barrantes 1993, Barrantes et al. 1990, Barrantes 1998, Batista et al. 1998). Fonseca (1992, 1994, 1998), using as reference the modern spatial distribution of the languages related with the Chibchan Stock, has proposed the Chibchan Historical Region for

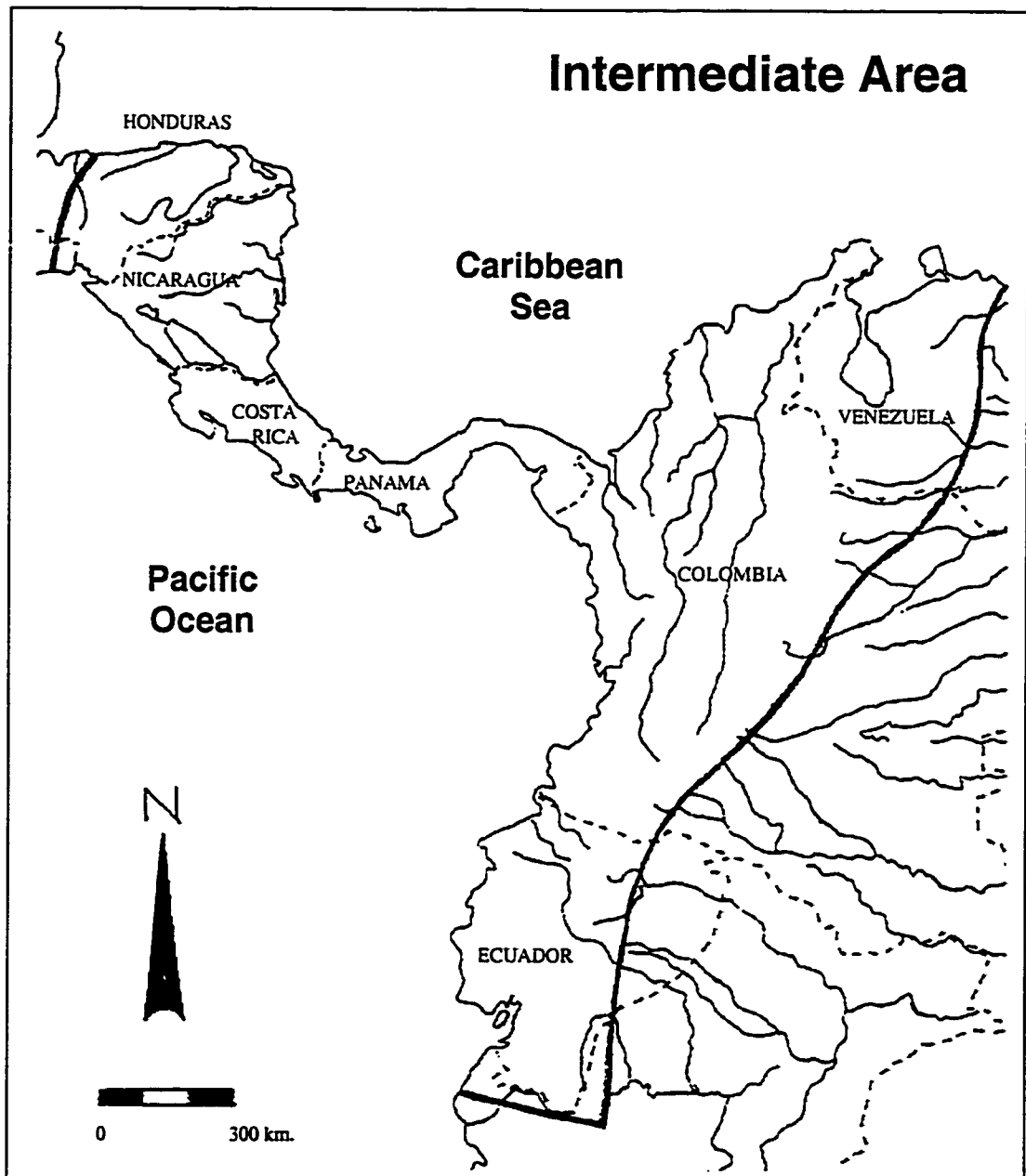


Figure 1. General Limits of the Intermediate Area. Modified from Lange (1992a, fig. 1)

Precolumbian times. For him, this is a spatial concept used to interpret the socio-cultural dynamics from the perspective of processes of endogenous change.

The Chibchan Historical Area, according to Fonseca, included part of Honduras (to the east of the Ulúa River), part of El Salvador (to the west of the Lempa River), Nicaragua, Costa Rica and part of Colombia (to the north the Atlantic Region except the Guajira, to the south a projected line from Bogotá to Armenia and to the east up the highland plateaus of the Cordillera Oriental) (Fonseca 1992:34, 1998:39). Fonseca is aware that this area contains other linguistic families than the Chibchan, but he argues that the Chibchan languages are the most extended. He also points out that some other linguistic families are of later arrival and the rest of families had a close relationship with the Chibchan family for a long period of time (Fonseca 1992:36, Fonseca and Cooke 1994:217). However, the problems that pose the recognition of different linguistic families in the archaeological record cast doubts about the appropriateness of projecting a linguistic term into the archaeological past. To what extent a term such as Chibchan is appropriate to refer to a greater linguistic diversity in the present, and in the past with unknown spatial and temporal dynamics, deserves more discussion.

Cooke (1992) uses the term Chibchan-Chocó Historical Region for the same area proposed by Fonseca to account for the presence of extinct and surviving languages of the Chibchan Stock and the Chocó Family. He considered that there were certain common patterns of subsistence, technology and cognition in relation to etiology as well as continuity among historical and modern populations (Cooke 1992:39-41).

I prefer the approach by Cooke because it is more inclusive. Nevertheless, it is still debatable to what extent we can project linguistic categories to deal with the archaeological record. Constenla uses the term Intermediate Area as a macro reference for his linguistic study and to relate his data with archaeological information, but for linguistic matters he referred to the area with Proto-Chibchan ancestry as the Colombian-Central American Linguistic Area (Constenla:1991:139). In this study I will use the term Chibchan-Chocó Historical Area as a macro reference, but with the expectation that a consensus for a better term, without linguistic implications, will be reached in the near future. Its southern limit can be placed near the present border between Colombia and Ecuador to account for the presence of Chocoan groups in that area (Constenla 1991:46). To the north, the limits may vary whether or not the

geographical distribution of the Misumalpa linguistic family is included. This family includes the Misquito, Sumo, Cacaopera and Matagalpa languages (the last two are extinct) and occupies most of Central and Caribbean Nicaragua. Constenla includes it in his Colombian-Central American Linguistic Area and it can have some remote relations with the Chibchan family (Constenla 1991:29, 1994:196). The archaeological information of the area is still scant and shows different degrees of relationships with northwestern and northern Costa Rica at different moments of time (Espinoza and Rigat 1994). Taking in consideration that during Precolumbian times the area could have had closer relationships or being part of "Chibchan" areas, I am including Central and Caribbean Nicaragua within the limits of the Chibchan-Chocó Historical Area (Fig. 2). However, the matter of cultural limits, especially for Precolumbian times, is always tentative and must be open to change.

3. Lower Central America vs. Southern Central America

Another geographical term that merits attention is Lower Central America. This term was the subject of central attention in the Advanced Seminar on Lower Central American Archaeology held in 1980 at the School of American Research, Santa Fe, New Mexico (Lange and Stone 1984). One conclusion of this meeting was the definition of Lower Central America as extending over most of El Salvador and Honduras and all of Nicaragua, Costa Rica and Panamá (Lange and Stone 1984:3). Western Honduras and Guatemala were excluded because of their Mesoamerican affiliations.

In contraposition to the diffusionist approaches, Lange and Stone (1984:5) acknowledged that there were contacts and exchanges between various regions of Lower Central America and the more "evolved" Mesoamerican and Andean cores areas. But, cultural processes in Lower Central America were not dependent upon external influences; it evolved significant cultural patterns on its own.

As mentioned in the case of the Intermediate Area, there are different opinions on the extent of inclusiveness of the term in relation to Northern Costa Rica, Pacific Nicaragua and parts of El Salvador and Honduras depending on linguistic information, assessment of the impact of the migration of Mesoamerican groups, and expansion and contraction of Mesoamerica borders.

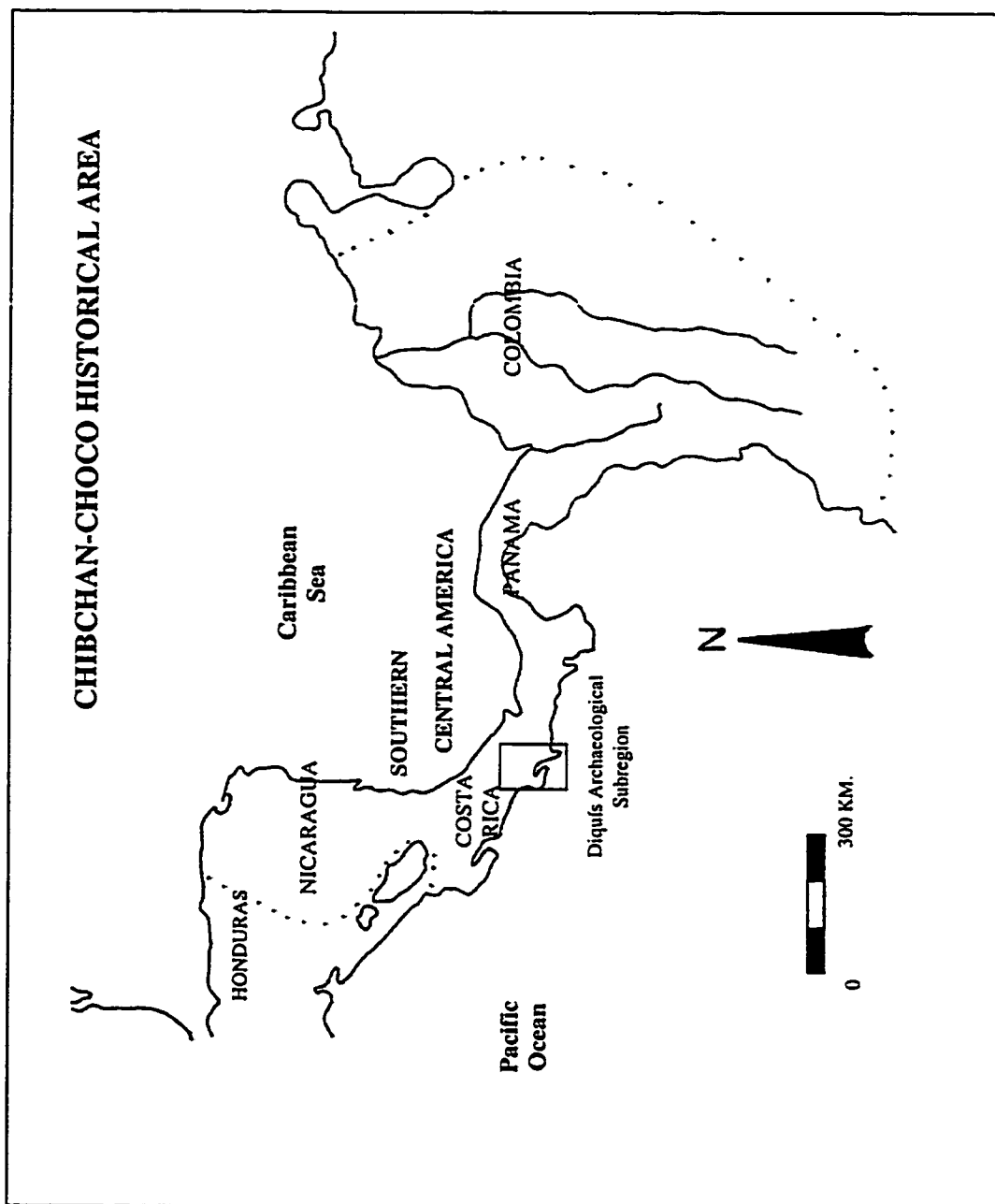


Figure 2. General Limits of the Chibchan-Choco Historical Area

Since there is not a clear agreement in terms of linguistic or archaeological limits, and to avoid the potentially negative undertone of "Lower Central America", I will use the term "Southern Central America". It has a geographical connotation and coincides "grosso modo" with other archaeological and linguistic divisions. The term is based on modern political-geographical divisions rather than archaeological concepts. It refers essentially to the territory occupied by Nicaragua, Costa Rica and Panamá. However, it can be extended to the sections of El Salvador and Honduras that are clearly non-Mesoamerican (Fig. 2). In the case of Nicaragua and Northern Costa Rica, it can accommodate further refinements of internal frontiers in different moments of time according to new linguistic and archaeological information.

4. The Greater Chiriquí Archaeological Region

Within Southern Central America, the delimitation of archaeological subareas and sectors, or regions and subregions as I have denominated them (Corrales 1992), has proceeded gradually. The regional delimitations often have been ambiguous because neither geographical nor cultural limits seem to be clear. For example, geographical "barriers" such as mountain ranges did not constitute an obstacle for the expansion of closely related cultural groups. This may have been due to the existence of accessible mountain passes. The archaeological record shows that groups positioned themselves to take advantage of resources of the Pacific and Caribbean sides. This is clear in the narrowest part of the Isthmus. Connections or relations between the Precolumbian occupations of the Pacific and Caribbean sides of Central Costa Rica, between Southern Costa Rica and Western Panamá and Central Panamá have been established based on similarities of the pottery, settlements and burials (Linares and Ranere 1980, Snarskis 1981, Cooke and Ranere 1992, Corrales and Quintanilla 1996:94).

The Greater Chiriquí Archaeological Region was proposed by Haberland (1984a:233), based on the relationships among archaeological remains from different periods of occupation over a territorial extension that includes Southern Costa Rica and

Western Panamá. Authors such as Stone (1977) and Lothrop (1963:5) also mentioned this association.

However, there is an ambiguous nature in its general and internal limits. For example, the modern political borderline is used to establish the limit between two subregions: Western Panamá (Chiriquí and Bocas del Toro Provinces) and Diquís (southern sectors of San José and Puntarenas Provinces) (Drolet 1983, Corrales 1989) (Fig. 3). But, this is clearly an arbitrary limit that must be revised. Also, the spatial distribution in different phases or periods within the Greater Chiriquí region must have followed distinct patterns, with expansion and contraction of limits. In this sense, there has been an uncritical use of archaeological subareas, assuming the same boundaries for the different periods of occupation. There is an increasing concern about the fluctuations in the geographical-ecological boundaries through time and recent reviews have discussed the validity of these cultural-historical-geographical units, considered subunits of larger divisions (Lange 1996:307-308, Vázquez et al. 1994). As part of this study, a better understanding of internal boundaries is expected.

Recent explorations in the Talamanca Valley and the Caribbean slopes of the Talamanca Range (Costa Rican sector) have suggested that those areas are also part of this archaeological region, based on similarities of the pottery, settlements and burials (Corrales 1993, Hurtado 1986) (Fig. 3). This also has important implications for Constenla's allusion to the Talamanca Range playing a role in the division of language families (Constenla 1991:45). But, it would require more explorations and planned surveys to establish the type of relations among the groups on both sides of the Talamanca Range.

6. The Diquís Archaeological Subregion

The Costa Rican Sector of Greater Chiriquí has been named Diquís, after the indigenous name of the Térraba River. This designation derives from the research of Lothrop (1963) and Stone (1972). Drolet (1983) applies this term again and consolidates its use. The term must not be confused with the modern Valley of Diquís that refers to the narrow valley produced by the Térraba River while cutting the Costeña Range and the Diquís Delta, a flat alluvial land and mangroves in the lower basin of the river.

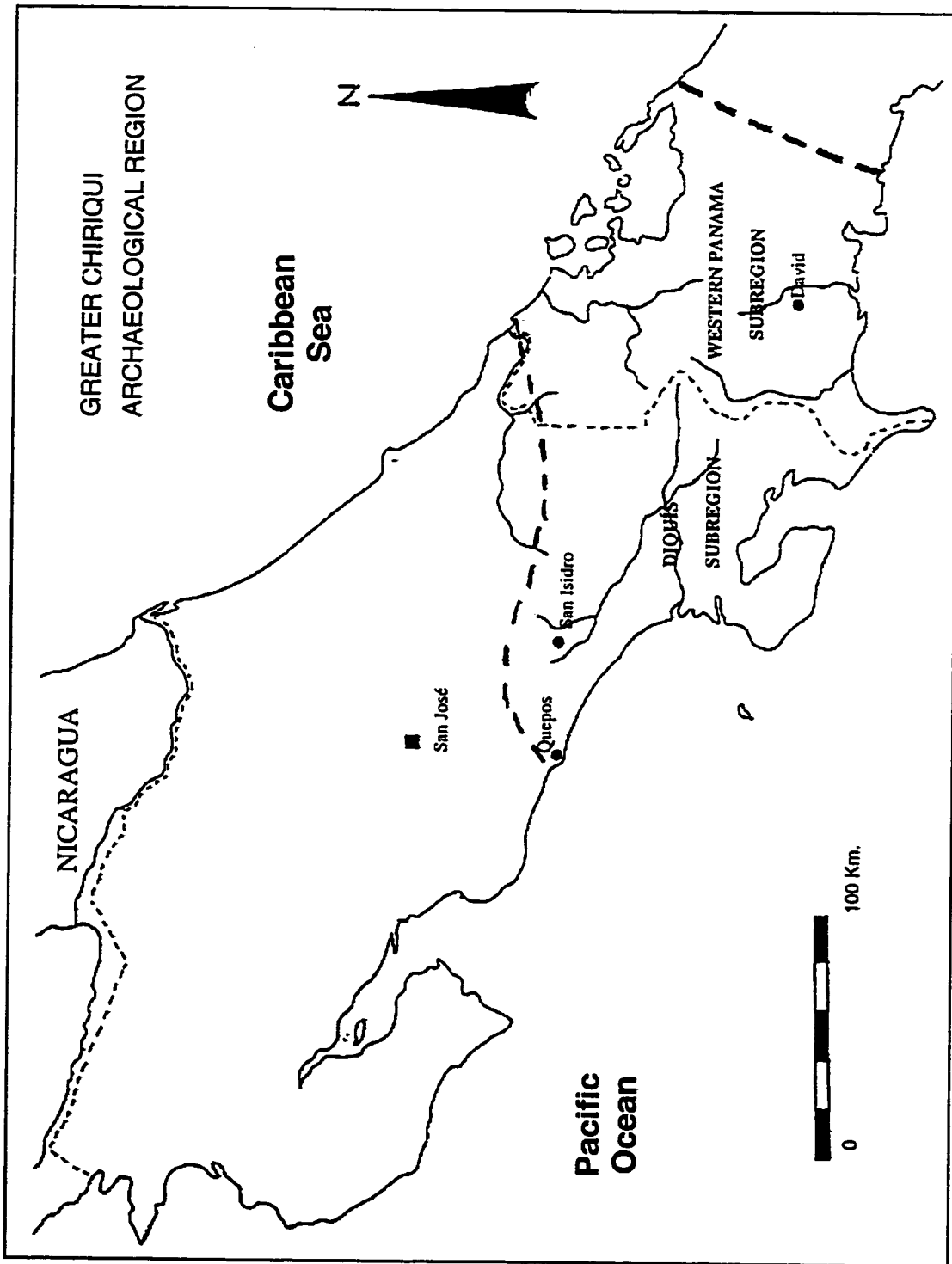


Figure 3. General Limits of the Greater Chiriquí Archaeological Region

The Diquís Archaeological Subregion comprises, roughly, the southern part of Costa Rica or the Pacific side of the Talamanca Range (Fig. 3). It begins around Quepos point in the Central Pacific littoral. The narrow coastal littoral widens up to include the Valleys of General, Coto Brus, Diquís and Coto Colorado. The traditional eastern limit, the Talamanca range, could be applied only to the northeast sector, since the new data from the Caribbean sector extend the affiliation of Precolumbian occupations to the slopes and Valley of Talamanca. For the southern sector, the modern borderline has been used as a boundary, but it must be revised as mentioned, since it does not correspond with data for ancient divisions. In this sense, units such as "Greater Chiriquí" and "Diquís Subregion" must be seen as a reference framework. The study of the patterns of expansion or contraction during different archaeological periods or phases may result in better approximations of ancient cultural boundaries.

Within Southern Costa Rica, the information is uneven. There are gaps of information for very large sectors. Also, it is necessary to acknowledge internal differences, for example, the littoral vs. inland and the highlands of Coto Brus and the General Valley vs., the internal basins and the coast. With this in mind, a division in five different zones following geographical criteria is presented below for the purposes of this study.

B. The Geographical Setting

In geographical terms, the area under study comprises the southern Pacific section of Costa Rica (Provinces of San José and Puntarenas). This area presents biophysical continuity with the Western sector of Panamá (Provinces of Chiriquí and Bocas del Toro) in correspondence with the cultural continuity already postulated.

The Talamanca Range divides the southern part or section of the Central American Isthmus into two contrasting areas: the Pacific and the Caribbean slopes. The Talamanca Range has an orogenic formation (formed by the intrusion of a batholith of granitic rock) and is capped by marine sediments or deposits from the Miocene and lava flows from Pliocene-Pleistocene volcanoes. The mountain flanks (or slopes) and plains are composed predominantly of Oligocene, Miocene and Pleistocene marine sediments and recent alluvial deposits eroded from the Talamanca Cordillera, and transported

downslope by main rivers (Linares 1968:1, Brenes 1988). The Talamanca Range is the highest range in Southern Central America, rising to 3819 meters above sea level at Cerro Chirripó. There is evidence of Pleistocene glaciation at Cerro Chirripó and surroundings peaks.

In Southern Costa Rica, there is also the Costeña Range (or Fila Costeña, also called Fila Brunqueña) of lower altitude than Talamanca. The rugged Fila Costeña, composed of folded Tertiary sedimentary rocks from the Eocene period, rises to more than 1,500 meters above sea level (Brenes 1988). In general, Southern Costa Rica surface is very broken; there are several principal river valleys, coastal plains, and river deltas. In the Chiriquí sector, the highlands present appreciable plateaus and valleys. The Chiriquí coastal plains are broader than in Costa Rica, with savanna vegetation (Vargas 1993, Linares 1968:1).

The area presents two marked seasons: a distinct dry season from about December through March and a rainy season the rest of the year. Temperatures are hot, with an annual average of 26.5 °C on the Diquís Valley. Orographic rainfall is determined by the barrier of the Talamanca Cordillera, which blocks the northeastern trade winds. Rainfall in the area is produced mainly by the blow of the Pacific southwestern winds, convection uplift, and local sea breezes. Some areas are drier, such as the Térraba Middle Basin, or wetter, such as the Osa Peninsula. The driest area is found in the higher sheltered middle parts of the Térraba River Basin (Volcán, Buenos Aires), while the coastal plains and interior hills of the Peninsula de Osa receive the heaviest precipitation, with annual averages between 4500 and 5500 mm (Vargas 1993, Herrera 1986).

Along with modern population settlements and agricultural lands, there are remnants of tropical rain forests containing a high biodiversity of plant and animal life. For example, Peninsula de Osa supports the richest tropical lowland forest on Central America's Pacific coast. There are also patches of sparse savannas (grassland and scrub) in the alluvial plains of Chiriquí and in the middle parts of the Térraba River Basin, which existed by the 16th century according to descriptions by the Spanish chroniclers (Linares 1968:1).

1. Study Zones:

Five zones have been defined for use in this study. Four of them are within the Térraba Basin, which comprises most of the territory of the Diquís Subregion, and an adjacent zone, the Coto Colorado Valley located to the border with Panamá (Fig. 4). These zones correspond roughly with some of the subregions proposed by Hoopes (1996:43).

a. The Upper General Valley: It roughly coincides with the headwaters and middle sections of the General River Basin and its tributaries. It is formed by the General River and tributaries that originate in the upper slopes of the Talamanca Range, the highest elevation in the country. This sector of the General Valley is centered around the modern city of San Isidro and presents elevations that range from 500 to 2000 meters above sea level, with the flat land limited to valley floors and river terraces. Small upland valleys such as Herradura located on the southern slopes of the Talamanca Range and Pejibaye on the Costeña Range are part of this zone.

b. The Térraba Middle Basin: This area extends from the Convento River in the north to the site where the General and Coto Brus join to form Rio Grande de Térraba o Diquís, which is geographically part of the General Valley. Most of the area is characterized by rolling hills and flat areas with altitudes ranging from 100 to 500 meters above sea level. Important extensions of savannas are found at the eastern end of the General Valley (Potrero Grande, San Andrés, Volcán, and Boruca). The spectacular gorge cut through the rugged Costeña Range by the Térraba River in its course to the Pacific Ocean is also included in this zone.

c. The Diquís Delta: The Térraba River, along with the Sierpe River, that has its source on the upper slopes of the Costeña Range forms an extensive alluvial plain, known as the Diquís Delta. The terrain of this delta is marked by little or no relief (0-100 meters above sea level) and poor drainage. It is here that the Costa Rica's most extensive mangrove ecosystem is found. The Caño Island located southwest of the mouth of the Sierpe River on the Pacific Ocean is discussed as part of this zone.

d. The Coto Brus Valley. This intermontane depression or valley is located between the Cordillera de Talamanca and the Costeña Range. It is drained by the Coto Brus River, which originates in the slopes of the Talamanca massif. The terrain is characterized by

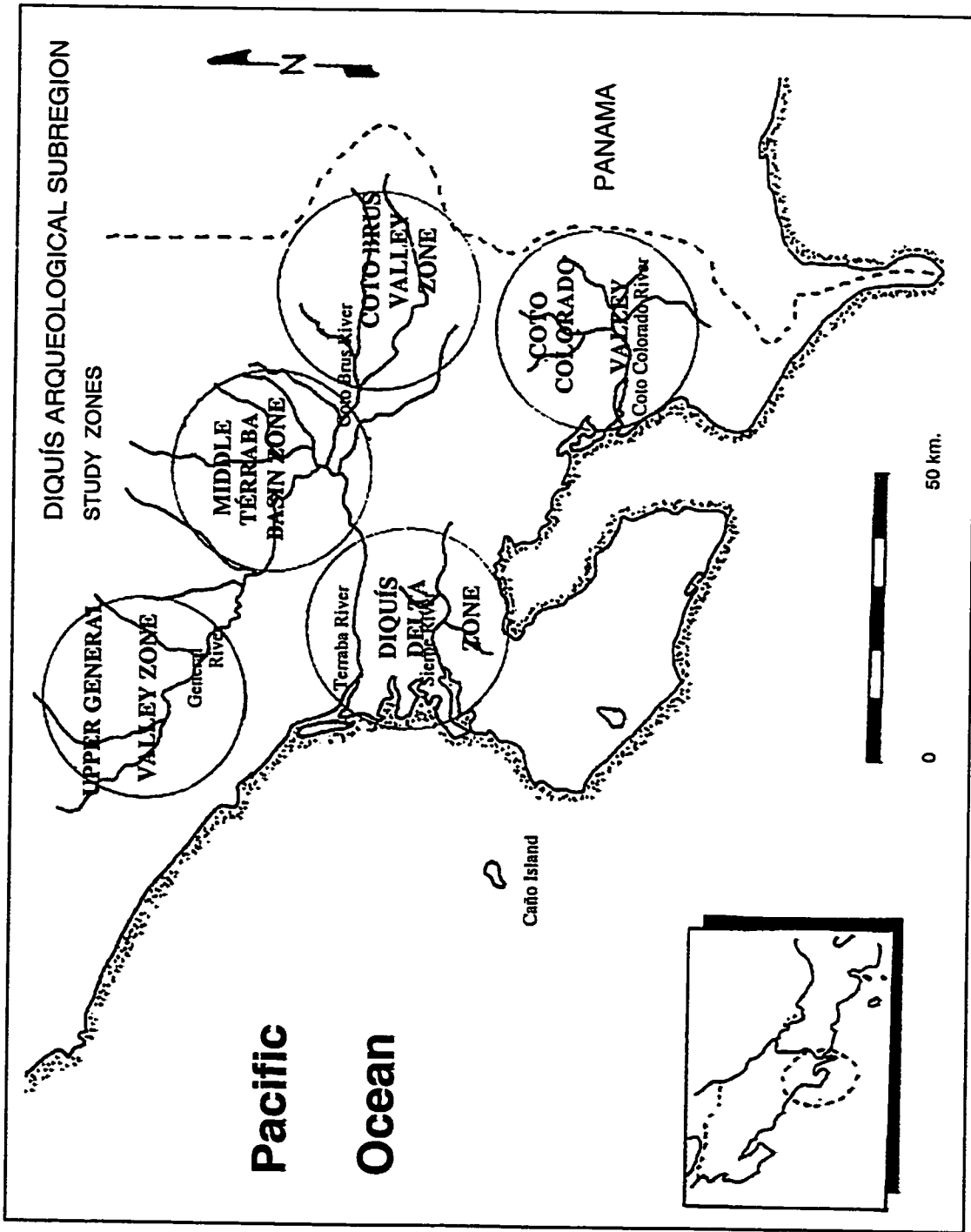


Figure 4. Study Zones, Diquís Archaeological Subregion

the presence of small valleys and plateaus with elevations ranging from 500 to 2000 meters above sea level. These particular landforms of the Coto Brus Valley continue in the volcanic highlands of Chiriquí, Panamá. The Coto Brus Valley zone is centered on the modern town of San Vito.

e. The Coto Colorado Valley: The Coto Colorado Valley built up of Quaternary alluvial materials deposited by the Coto Colorado River and tributaries and it forms the eastern margin of the Golfo Dulce. The area presents a flat terrain with elevations that range from 0 to 100 meters above sea level. It is delimited to the north by the steep Costeña Range and continues east into Chiriquí lowlands without experiencing any major break in its topography.

C. Previous Archaeological Research in Greater Chiriquí

Southern Costa Rica and Western Panamá has been the subject of ongoing archaeological research since the 19th century, but in general the numbers of studies are scant. In the case of Southern Costa Rica, this can be attributed to the relative isolation of the area, the lack of interest by foreign and national researchers and the costs of operation. Southern Costa Rica was not well connected to the rest of the country until the construction of the Interamerican Highway during the 1950s. The situation has changed, especially after 1980, with a growing number of studies.

The insufficient number of studies contrast with the activities of "huaquerismo" or illegal digging of archaeological sites, especially cemeteries. The presence of gold objects as funerary offerings triggered a real "gold fever" among the "huaqueros" that have been operating in Southern Costa Rica since the arrival of the first settlers from the Central Valley and Panamá. This activity has been rampant since the last century. The Panteón de la Reina Site, for example, has been looted since 1850 and maybe earlier. As a consequence, most of the cemeteries have been destroyed and the information lost forever. Unfortunately, this activity continues today along with the destruction by development projects and urban growth. There are insufficient human and institutional resources to stop it.

For the presentation of the history of research in Greater Chiriquí, with a focus in Southern Costa Rica, and the prevalent theoretical approaches I will follow the well

known divisions established by Willey and Sabloff in their book A History of American Archaeology (1993). However, there will be some differences in the chronological span of the periods proposed. This is because of the different rhythm of activities executed in this area and the permanence of approaches after they declined in the U.S. and other areas. A particular emphasis is put in the ceramic classifications employed by the different researchers.

1. Explorers and Travelers (1860-1910)

This initial period, according to Willey and Sabloff (1993:12-14) is characterized by "three trends of thinking, that contain within themselves the seeds of the archaeological discipline in the Americas". These trends were: the 16th-17th century reports by chroniclers, the 18th-19th century accounts by explorers and travelers that described ruins and mounds in their reports and speculated at great length on the regions of their finds, and a few efforts that had archaeology as their primary concern (e.g. the famous case of Jefferson's diggings) (Willey and Sabloff 1993:13).

The earlier reports about Southern Costa Rica, in "strictu sensu" are those from the Spanish chroniclers in the 16th century. But, I will emphasize here the reports after the second half of the 19th century, when the knowledge about ancient societies was conceived as an academic exercise.

In this first period, the information came from travelers, explorers and scholars from other disciplines, especially from the natural sciences. These individuals made expeditions to Southern Costa Rica when the zone was little known, and reported findings of remains belonging to ancient societies. They reported cemeteries in particular, giving in some cases detailed descriptions. During this period several explorations of scientific character sponsored by the state went to Southern Costa Rica. The persons in charge of these expeditions had as their primary goal the collection of information and samples to get a better knowledge of the geographical, ecological and demographic conditions of the region.

The German naturalist and geologist, Alexander von Frantzius, visited the zone at the end of 1860. In his report of 1890 he mentions the finding of archaeological remains (tombs) in the vicinities of El Hato (modern Buenos Aires) and Cañas Gordas.

The information obtained from "huaqueros" indicated that the tombs contained gold figures and carved stone together with ceramic vessels. This finding led von Frantzius to speculate about the origins of the ancient habitants of the zone, which he linked to the Cueva Indians (von Frantzius 1890:3).

Several years later another naturalist, Henri Pittier, reported new findings. A Swiss botanist, Pittier made several exploratory trips to Southern Costa Rica during the decade of 1890's. In his travel reports, he describes several places with Precolumbian materials at Santa María de Dota, El General and Buenos Aires. He opened some graves in El General (modern General Viejo) and obtained several ceramic vessels and figurines. He also reported the presence of several petroglyphs (Pittier 1891).

At the beginnings of this century the Costa Rican government showed renewed interest in the development of the El General zone and commissioned Pedro Pérez Zeledón to do some surveys of the region to collect as much information as possible and to propose alternatives and possibilities of exploitation of natural resources. Like the previous explorers, Pérez Zeledón mentions the existence of Precolumbian cemeteries and provides a description of the famous Panteón de la Reina (The Queen's Cemetery), located near the town of Rivas, in the conjunction of the Bella Vista and Chirripó Rivers. This cemetery is famous in the region even today for its great size, terrain modifications made by the indigenous groups to locate the burials, and the great number of gold figures and ornaments that continue to be extracted after more than a century. Pérez Zeledón also reported other cemeteries in Cajón and Buenos Aires (1907-08).

In this first period, one must include the publication by Anastasio Alfaro (1935), in which he describes the characteristics of some gold figures from the south of the country.

These initial reports fit with descriptive and speculative characteristics of the period and provide us with the first glimpse of the archaeological occupations of the zone, particularly funerary patterns, type of artifacts and regional distinctions. They also provided valuable information about archaeological resources that were actively looted. However, it is clear that a collecting interest guided the activities of these explorers that also had close contacts with looters and local collectors.

2. Classificatory-Descriptive Period (1910-1940)

The principal focus of this period is the description of archaeological materials, especially architecture and monuments, and rudimentary classifications. Throughout the period, archaeologists struggled to make archaeology into a systematic scientific discipline. The period was characterized by a lack of rigorous chronological perspective and an emphasis on typological, classificatory and geographical distribution studies (Willey and Sabloff 1993:38-39).

During these years, there were no research studies in Southern Costa Rica. However, it is important to note that Samuel K. Lothrop in his monumental work Pottery of Costa Rica and Nicaragua (1926) classified and analyzed a small ceramic collection from "Boruca", the generic name that he used to designate Southern Costa Rica. He also presented a recapitulation of the known sites, mentioning those reported by von Frantzius, Pittier and Pérez Zeledón and adding some new ones, emphasizing some from the highlands of Cerro de la Muerte and Division zone (a rockshelter, cemeteries and petroglyphs). Willey and Sabloff (1993:117) see Lothrop's study as transitional between purely descriptive classification and classification designed to aid in chronology-building, a characteristic of the next period.

In the limits of Greater Chiriquí, three relevant works were made with collections from Western Panamá that clearly reflect the characteristics of the period. These studies were classificatory analyses of collections obtained in the second half of the 19th century and deposited in U.S. museums and in private collections.

The first study was done by William Holmes (1888) with the collection of the U.S. National Museum (now the Smithsonian Institution), obtained from the area of David, Panamá. Willey and Sabloff (1993:55) mentions that Holmes was one of the principal figures of the period and that he "... was particularly interested in prehistoric ceramic and stone technology, and his classificatory work helped to set the stage for the typological developments in the next period". Holmes considered all of the pottery in the whole collection as a single ware. This general ware was divided into the unpainted and painted wares. Each was divided into groups based on material, color, shape, finish, ornamentation, method of manufacture and evidence of use (Holmes 1888:84), a criteria similar to the one used later to define ceramic types.

The same system was followed by George MacCurdy (1911) who analyzed a collection from Yale University in a similar way to Holmes. But, MacCurdy changed the names and revised some of the groups established by Holmes, and added new ones. This was the beginning of successive changes of nomenclature that is the trademark of ceramic analyses in Greater Chiriquí Region.

Cornelius Osgood (1935) re-studied again the Yale Collection with some new additions. He also visited Chiriquí and did some observations on grave constructions and collected information about the geographical distribution of some of the wares. Osgood did not adopt the denomination of "group of ware," simplifying it to just "ware" and reducing the number of groups of ware established by Holmes and MacCurdy to only four wares. He also discussed their spatial distribution and the origin of some of the minor wares. Osgood also pointed out that earlier classifications had included material not from the region. The Panamanian archaeologist Olga Linares (1968:10) asserts that Osgood simplified in a practical manner the categories elaborated by the first researchers. Cooke (1984) opinionated that the works of Holmes, MacCurdy and Osgood "exemplify the intellectual trends that were in vogue in foreign academic circles before the First World War. Although Holmes sought to comment on the evolution of style. They were limited to describe, in a methodic and meticulous form, but, without analytical pretensions the material funerary culture of a zone that at that moment was scientifically unknown".

As a positive aspect we can mention that the rigorous classification and the detailed descriptions as well as the quality of documentation and illustration of the material present in these works make them a good source to consult aspects of form and motifs. Also, they presented some information about site distribution and internal features. The negative side was the rampant collecting and the looting implied, sponsored by local and foreign museums, universities and private collectors.

3. Descriptive-Diachronic Period: 1940-1970

This period corresponds with the Classificatory-Historical Period (1914-1960) of Willey and Sabloff. The discrepancy on dates is due to the peripheral role that Southern

Central America played during those times in the interest of the archaeologists. Some advances in archaeology were implemented late in time in Costa Rica and Panamá.

A fundamental interest in the earlier part of this period is the formulation of chronological sequences of local occupations. For this purpose, stratigraphic excavations were carried out to study the variation of materials over time and establish different phases or periods of occupation. Also, it maintained the interest in obtaining complete artifacts (and its pernicious association with local and foreigner private and museum collections). As a consequence most of the activity was concentrated on the excavation of cemeteries or the analysis of mortuary lots.

In Southern Costa Rica, this period began in the 1940s with the activities of Doris Stone (1943a, 1943b, 1954, 1963a, 1963b, 1966, 1972). She excavated several cemeteries, although her excavation methods were limited and not free of controversy. She is still part of folk tales in the region, regarding her methods of work and the "treasures" she found. Among the most prominent sites excavated by her are: Coquito, an extensive cemetery in the Chánguena zone; and Jalaca, one of few cemeteries in Southern Costa Rica from which osteological remains have been reported (Stone 1963a, 1966, Laurencich de Minelli 1967). From these sites, gold offerings and sophisticated worked bone and shell objects were also recorded.

Stone also made observations about the stone balls from the Diquís Delta. She had the opportunity to record some ball clusters before they were disturbed by agricultural activities and looting. Another important result of Stone's work was her findings of European artifacts in indigenous burials. In this way she could relate occupations with the arrival of the Spaniards. Stone (1943b) initially distinguished between monochrome with appliqué and painted wares in the ceramic she recovered from the Diquís Delta; later, she applied a combination of the ware and type classifications of Lothrop (1963), Haberland (1959a, 1961a) and Laurencich de Minelli and Minelli (1966, 1973) (Stone 1958, 1977).

One of the most important works of this period is the research done by Samuel K. Lothrop in the Diquís Delta. He went to Costa Rica in 1948 with the initial intention of continuing his previous work in the Nicoya Peninsula, Northwestern Costa Rica. But, the political situation at that time (internal civil war and some fighting along the Nicaraguan border) forced him to change his plans. Through Doris Stone's intervention, he received

an invitation to work in the properties of the United Fruit Company, in the southern part of the country (Lothrop 1963:v).

He did a survey of different areas and selected the Diquís Delta because of the presence of the stone balls, statuary, artificial mounds, and abundant ceramic material. His mapping of surface configurations of mounds and stone balls and detailed descriptions and observations of the lithic and ceramic materials are invaluable due to the latter disturbance of these contexts by the banana plantation activities and heavy looting. Lothrop, as many of his colleagues of the epoch, obtained objects for museums and worked freely with collectors to establish his classifications.

He conducted mainly stratigraphic excavations to establish a relative sequence of occupation. He established a ceramic typology divided in two groups. The older consists of monochrome wares, some of which persisted throughout the sequence. The most recent group included, besides monochrome wares, painted vessels, sometimes allied stylistically with adjacent areas, occasionally traded with other areas (Lothrop 1963:109). He subdivided each group on the basis of gradual transitions rather than abrupt breaks in continuity.

Lothrop established ceramic wares based on paste and surface finish as the main categories. He also established ceramic types to account for particular characteristics of form and decoration within the wares (Lothrop 1963). Despite his attempt to retain the nomenclature proposed by Holmes and MacCurdy, he kept only the term Chocolate Ware. He was hesitant to use names long in use for newly found local manifestations such as the ones in the Delta (Lothrop 1963:43).

Wolfgang Haberland, a German archaeologist, began his work during the 1950s in Southern Costa Rica and Western Panamá (Haberland 1955, 1957b, 1959a,b, 1960, 1961a,b,c, 1962, 1976, 1984a, 1984b). His main concern was the establishment of a cultural chronology for this region. Based on his results, he proposed the Greater Chiriquí Archaeological Region, according to the tendency of the period to establish cultural areas based on concepts such as horizon and tradition (Willey and Sabloff 1993:204).

He excavated cemeteries and conducted stratigraphic excavations in habitation sites. In Southern Costa Rica, Haberland investigated in Buenos Aires, where he excavated several funerary mounds and recorded habitation sites. He also worked in the

zone of Aguas Buenas and Cañas Gordas, near the border with Panamá, and visited the Osa Peninsula reporting several habitation and funerary sites. Haberland was the first to establish a chronological sequence for Greater Chiriquí. Each phase is characterized in terms of specific ceramic types, settlement patterns and geographical distributions of specific traits. Similar to Stone, Haberland advocated migration or diffusion to explain the appearance of cultural complexes in the area.

Haberland established a ceramic typology more in accordance with new trends, revising those established by Holmes (1888), MacCurdy (1911) and Osgood (1935). Initially, he used the concept of ware based on shape, surface finish and decoration to classify the ceramic material from the Buenos Aires and Coto Brus zones in the Diquís Subregion, and plains of Chiriquí (Haberland 1955, 1957b, 1959a, 1959b, 1961c). He changed several of the names provided by Holmes, MacCurdy and Osgood, giving emphasis to the technique and motifs of decoration. He also divided some of the original groups (e.g. lost color group) and proposed new wares. He was the first to propose ceramic complexes based on his own excavations. The Aguas Buenas Complex was established based on the remarkable differences from the materials associated with the "Classic Chiriquí" Complex. In the same way La Concepción Complex, exemplified by the Scarified Ware, was considered of greater antiquity (Haberland 1962). These complexes were assigned to phases providing the first regional sequence for Greater Chiriquí.

Haberland (1961a), later adopted the type-variety system and changed his previous wares to ceramic types and varieties. He actively used his new typological denominations in subsequent publications. Unfortunately, the best descriptions for the new types were the descriptions provided in his German publications for the original wares. This could be one of the reasons why other authors ignored his nomenclature.

The Italian archaeologists Luigi Minelli and Laura Laurencich de Minelli made investigations between 1960 and 1964 in the Coto Brus zone. They excavated several burials in El Zoncho, Piedra Pintada, Tres Ríos and Copal and conducted stratigraphic excavations in habitation deposits in the San Vito vicinity (Laurencich de Minelli and Minelli 1966, 1973). Their work supported the cultural sequence proposed by Haberland, and established some local variants. It is basically descriptive concerning formal characteristics. In some cases there are references to the function of the materials. In

their diverse excavations, there was no concern for recovery of organic remains. There is almost no reference to subsistence activities or socio-political organization of the Precolumbian groups.

Laurencich de Minelli and Minelli (1966), in their typological classification of ceramic vessels from the Chiriquí phase in the Zoncho cemetery in the Coto Brus Valley, used a mixed nomenclature based on the denominations by Holmes, MacCurdy and Haberland, giving preference to the older ones when they were still clear. They also proposed new types for material that in their opinion had not been described. For their analysis of Aguas Buenas material from the San Vito area (Laurencich de Minelli and Minelli 1973) they respected the type-variety classification of Haberland (1961a), adding a new variety to the Moravia Red type.

During this period, María Eugenia Bozzoli de Wille, a Costa Rican anthropologist with training in archaeology reported several sites. She revisited the Panteón de la Reina, in the upper part of the General Valley, providing further descriptions of surface features and remains (Bozzoli de Wille 1961, 1966)

In Chiriquí, Western Panamá the "Sociedad Arqueológica del Colegio Félix Olivares" from the city of David was a high school organization lead by Dr. Roberto de la Guardia that had as a main goal the acquisition of archaeological artifacts for the Museo Chiricano. They practiced excavations without following rigorous procedures (it seems that there were no legal regulations) and published their results in the Boletín del Museo Chiricano from 1965 to 1968 (de la Guardia 1966, 1967, Esquivel 1967, Flinn and de la Guardia 1967, Friedman and de la Guardia 1966, Miranda et al. 1966, Morales and de la Guardia 1965, among others). Their activities can be labeled as official collecting but, in the light of the extensive looting going on in Chiriquí, the actions of this group had as a justification an interest in the Chiriquí past and a concern with recording and publishing data.

In the regional context of Greater Chiriquí, the concern for context and function, settlement patterns and relationships between culture and natural environment that characterized the second part of the Classificatory-Historical Period (Willey and Sabloff 1993:153) truly began with the work of Olga Linares in Western Panamá in the early sixties. In 1961, Olga Linares began her research as part of the program "Interrelations

of the Cultures of the New World", organized by Institute of Andean Research and sponsored by the National Science Foundation (Linares 1968).

In four months of fieldwork, Linares and her team visited 60 sites and tested 12 of them. In her monograph of 1968, she presents the results obtained from four of the sites, three located in the Gulf of Chiriquí and one on the mainland. The sites presented refuse mounds with sherds, lithics and remains of terrestrial faunas. Linares established a cultural chronology for the Gulf of Chiriquí, relating her local phases to the sequences for Western and Central Panamá and with Southern Central America in general. She contrasted the occupations from the islands with those of the mainland and made an attempt to reconstruct ways of life and subsistence patterns. She also used ethnohistorical data to support her archaeological data. Her work represents a more modern approach. This was the basis for her model of adaptive radiation, presented in the following section.

Linares revised the previous classifications for Chiriquí material, but in the case of Haberland, she referred only to his initial wares and not to the types that he proposed later. She concluded that the value of Haberland's division of the Osgood's groupings could not be ascertained from her study of the ceramic of the Gulf of Chiriquí and therefore proposed a new nomenclature. In so doing, she tried to remedy the splitting, regrouping and addition of new wares (Linares 1968:5), an unsuccessful attempt.

Linares presented a classification based on ceramic types for the ceramic remains of three different phases based on stratigraphic excavation. Each ceramic type was described according to paste, form, decoration, chronological position, geographical distribution and comparative material. Appendages (handles and supports) were described in detail in a more modal fashion. Plain sherds of every complex were grouped under the category of Plain Wares (Linares 1968).

Anthony Ranere (1968) collaborated with Linares in the analysis of ceramics from surface collections and test pits from 24 sites recorded in the districts of Punta Burica, San Felix and Remedios. He followed Linares' classification and added some local ceramic types for the Burica Peninsula. His analysis was centered in the distinction of established ceramic complexes and the establishment of a preliminary chronology for the districts.

4. Explanatory or Modern Stage (1970-present)

Willey and Sabloff (1993:214) in their revision of A History of American Archaeology changed the name of the period from Explanatory to Modern "...in the light of some of the developments of the last decade". This term is more non-committal and must be understood in chronological sense. They clarify the point in this way:

"We have done this because we feel that the goal of explanation -in the strict sense of the explanation of process in past culture change- is too limiting. The course of American Archaeology over the past thirty years, while still much involved with such explanation, has shown other concerns which also must be considered as a part of the recent history of the discipline" (Willey and Sabloff 1993:214-215).

The goals of archaeological research have changed according to the development of theoretical models. Traditionally, archaeology has been equated with the recovery, analysis and interpretation of the material remains of the human past (Thomas 1979:371), or in the opinion of Renfrew and Bahn (1991:11) some approaches tended to regard the objective of archaeology mainly as a reconstruction, piecing together a jigsaw.

In the sixties occurred a theoretical renovation in archaeology, that was named "New Archaeology" or Processual Archaeology, with its stated goals the reconstruction and explanation of the lifeways of people responsible for the archaeological remains (Renfrew and Bahn 1991:11). The chronological and spatial models are seen as reference frameworks and not as ultimate goals. It was postulated that Archaeology must elucidate the cultural process and the reasons for socio-economical change. The main goal should be the formulation and testing of theories and laws, possibly explanatory of the human past, and of human behavior in general (Watson et al. 1984: 266). The "new archaeologists":

"espoused an evolutionary approach, a systemic view of culture that emphasized cultural variability and its systemic organization; an ecosystem perspective that was concerned with the links between cultures and their environments, the statistical control of such links and variability and attention to sampling techniques that could permit generalizations about the variability; and a general 'scientific approach' that stressed explicitness of assumptions, problem orientation and structured research strategies, hypothesis testing (particularly in the non-deductive nomological form) and a positivism philosophical position" (Willey and Sabloff 1993:221).

An emphasis on studies of subsistence, settlement patterns, and the internal and external causes of socio-economic and cultural change are characteristic of this period. These studies commonly resulted in eco-functional models of archaeological "phases". At the methodological level, long term and regional projects are proposed, as well as horizontal excavations of domestic structures, recovery of organic samples, interdisciplinary work with disciplines such as ethnology, botany, zoology, geology, etc.

After the initial impact of the "New Archaeology", some new approaches have emerged against the positivism and programmatic nature of the "New Archaeology" (Willey and Sabloff 1993:298). These recent approaches known collectively as post-processual archaeology try also to explain the past, but with different emphasis or theoretical perspectives: cognitive, behavioral, critical, neo-Marxist, etc. (Lamberg-Karlovsky 1989, Preucel and Hodder 1996). They share as common element their antagonism to "scientific and objective" procedures alone to understand all the human events of the archaeological past. They sustain that the archaeological past is not directly accessible in any truly direct way and that the subjectivity and social context of archaeologists affect its construction. They hold a "particularist and relativist view of the past along with the conviction that the past is socially constructed" (Willey and Sabloff 1993:298).

In Greater Chiriquí, we can talk of activities within the label of "New Archaeology" after 1970. However, basic goals of the previous period have continued being an important part of current research. Several projects conducted during the 1970s in Western Panamá were guided by more explanatory goals. Among them we can mention the survey executed by Olga Linares, Payson Sheets and Jane Rosenthal (1975) in the upper drainage of the Chiriquí Viejo river, excavations of rockshelters by Anthony Ranere, and the research by Linares on Aguacate Peninsula and the Chiriquí coast. All these works were implemented with the goals of obtaining information about settlement patterns, subsistence, social and political organization and the determination of the development process and adaptive radiation by comparing archaeological data and ecological variables.

In 1980, Olga Linares and Anthony Ranere published the book Adaptive Radiations in Prehistoric Panamá in an attempt to reconstruct a Precolumbian example of adaptive radiations of human populations in the tropics of the New World. Linares and

Ranere also try to make controlled comparisons through time to investigate the possible effects of ecological variables on the evolution of cultural systems.

In this work, Linares, Ranere and their associates took a different approach in the ceramic analysis. While recognizing the validity of the types proposed for the Gulf of Chiriquí, they preferred an approach based on style and wares. The ceramics from a site or a region were sorted into mutually exclusive classes of different degrees of similarity. The most inclusive level was the "style": an easily recognized group sharing the same paste and decorative treatment and belonging to the same time period. Within each style, different wares were established using attributes of paste and surface finish. To account for stylistic variants within a site or cluster of sites, they used attributes of rim shape or mode shape (e.g. handle or supports) (Linares 1980a:83-84).

This combination of style-ware-mode analysis was used in the establishment of the Bugaba Style for the Chiriquí Highlands (Linares 1980a, Spang et al. 1980), for the establishment of ceramic classes for the Bocas del Toro Sites (Kudarauskas et al. 1980), and in the revision and discussion of the ceramic assemblages from the different areas studied (Linares 1980a). This approach was used to discuss their model of adaptive radiation of populations from the highlands to the Caribbean and Pacific coasts.

In Southern Costa Rica, Will Finch and Kim Honetschlager surveyed Caño Island, located west of the Osa Peninsula. In the first months of 1979, they conducted a systematic survey of the whole island to determine the type and duration of the Precolumbian occupations and the hypothesis that the island served as an exchange port. Their work allowed them to define the areas that were occupied, the occupational sequence and the presence of material from the Guanacaste region. They provided a discussion about subsistence, function of the different localities recorded and the role of the island within regional exchange networks.

The National Museum of Costa Rica initiated in 1980 a major rescue project in Southern Costa Rica. The project to build a dam in the Térraba River mobilized an effort to do an archaeological survey in the area to be flooded. A systematic survey was designed with the financial support of the Costa Rican Institute of Electricity (ICE) (Findlow et al. 1981, Snarskis and Gamboa 1981:191-192). Robert Drolet and Robert Markens directed the fieldwork. The systematic survey of 10% of the territory to be

affected was conducted using one km² units randomly sampled in four different ecological zones. The main goals of the project were to obtain data about settlement patterns, subsistence and territorial organization (Drolet 1983). A total of 56 sites were recorded and a sequence represented by two different periods of occupation was established (Drolet 1984). Unfortunately, the survey was discontinued after one year of operation due to the cancellation of the dam project. In 1983, the National Museum resumed the project under the direction of Drolet. The project was renamed the T rraba-Coto Brus Project to extend its reach to the whole T rraba Watershed. Under a cultural-ecology perspective, the project was oriented towards: a, the continuation of sampling survey; b, the search of hunter-gatherer sites (5000-3000 B.C.); and c, the establishment of a cultural chronology based on C14 dates and excavation of selected sites to obtain evidence of houses, domestic artifact complexes and organic materials related to subsistence (Drolet 1984).

In its first years of functioning, the project propitiated the participation of local archaeologists. Later it included foreign students. Specific projects were the survey of quadrants in Potrero Grande zone (Corrales 1986b), excavation at Murci lago Site (Drolet 1983, 1984, 1992), the Curr  Site (Corrales 1985, 1989) Paso Real, an Indo-Hispanic Contact site (Quintanilla 1986), micropatterns of settlement at Murci lago site (De La Cruz 1986), early agricultural groups subsistence (Rago 1988), the spatial distribution and iconography of petroglyphs (Zilberg 1986), excavation of burials at La Pista site (Iwaniec 1986), test excavations at the Quebradas Site (Corrales 1986c, 1988 Henderson 1986), and an archaeological survey in the Herradura zone (Kantner 1988), among others.

Drolet published several syntheses of the results of the project emphasizing the development of agricultural villages, subsistence base, settlement patterns and socio-political relations. He used ethnohistoric information to give insights about the late period of occupation (Drolet 1983, 1984, 1986, 1988, 1992).

In the Diqu s subregion, when research began again in the eighties, the ceramic nomenclature introduced by Haberland was the most used (Drolet 1983, 1984, 1992, Corrales 1985). In specific cases, some of Linares' wares were used when Haberland terminology was not clear (e.g. Bugaba Engraved). However, comparisons between the

ceramics of Diquís and Western Panamá were made (Drolet 1983, Corrales 1985, Kantner 1988).

Corrales (1985, 1989) opted for a modal analysis, based on attributes, for the new Curré Complex, the oldest ceramic complex in the Diquís Subregion, since the size of the sherds were too small to establish clear associations between decoration motifs and vessel forms. The same approach was used for the Darizara Complex, in the Coto Colorado Valley (Herrera and Corrales 1997) for the establishment of local ceramic phases and regional comparison.

Other studies during the 1980s were exploratory surveys on the La Amistad International Park, with emphasis in the chronological sequence and spatial distribution of sites (Corrales and Morales 1982, Corrales 1986a, Hurtado de Mendoza 1985, 1986, León 1986). The short lived Osa-Goffito Project developed a survey in the piedmont and alluvial plain in the southeast area of the Diquís Delta (Jalaca-Villa Colón-Fila Grisera) (Barrantes 1988, Corrales and Badilla 1988)

In Panamá, the more recent works have been an archaeological rescue of sites affected by the construction of the Bocas del Toro-Chiriquí oil pipeline (Barillas 1982), and the dissertation research by Catherine Shelton (1984a). Shelton focused her interest on the agricultural occupations in the mid-slopes of San Vicente, Chiriquí, and the relationships of the ceramic complexes of Concepción and Bugaba Phases (Shelton 1984a,b, 1995). She argued that the literature on the regional ceramics was confusing and therefore a reassessment was needed. She opted for a ceramic analysis based on wares and shapes within wares so that an analysis of changes in form and style could provide the basis for a chronological ordering of the materials (Shelton 1984a:102). In some cases, she put more emphasis on surface finish than on paste and also tried to determine vessel shapes and associated appendages within wares. She defined several wares for the La Concepción and Bugaba complexes and compared them with the ones established by Spang et al. (1980). While a general correspondence was found, there are some differences in the boundaries of the wares. It must be noted that since Shelton's research, Western Panamá has not been the subject of new field research.

In Southern Costa Rica, the 1990s have seen the development of several archaeological projects. After the Térraba-Coto Brus Project was discontinued in its regional scope in the late 1980s, a more geographically restricted project was designed

to continue Drolet's study of the late period in the General Valley. The Rivas Archaeological Project under the direction of Jeffrey Quilter and Aida Blanco focused in the Rivas Site, in the upper drainage of the General River. The goals of the project have been to examine variability of site organization, subsistence, craft specialization and other aspects of culture (Quilter and Blanco 1995:204).

In 1990, a French team led by Claude Baudez conducted a survey and excavations in the same areas as Lothrop in the alluvial plains of Palmar-Sierpe, Diquís Delta. Using mainly the cuts made for the irrigation system of banana plantations (a tradition established by Lothrop and Stone); they recorded a series of archaeological deposits. The ceramic material from 448 stratigraphic cuts and the associated C14 dates allowed them to produce a more refined ceramic typology sequence for the area (Baudez et al. 1993). The goals of this project, although in the perspective of the Descriptive-Diachronic Period, were a necessary step due to the incomplete picture of ceramic sequences that still prevails. Baudez et al. (1993) revised the previous classifications and concluded that the prevalent confusion made difficult regional comparisons. They proposed the general adoption of the type-variety system, which has been applied successfully in neighbor areas, to unify the ceramic classification in Greater Chiriquí.

The assessment of the material suggested to them that the attributes of form and decoration were more relevant than paste and surface finish characteristics in the formulation of types and varieties. They also used a modal approach for the attributes that were not associated with a specific type. In their nomenclature, they used primarily the classifications by Haberland (1961a, 1976), Linares (1968, 1980) and Spang et al. (1980). They maintained some of the designations, reformulated the wares into types, subdivided some of Haberland's types and create new ones. Despite Baudez et al. attempt to propose a unified classification, some of their types add new confusion, since they kept old names but used different elements in the description.

The National Museum continued with the research in the area. From 1991 to 1996, the project "Man and Environment in Sierpe-Térraba Delta" under the direction of Ifigenia Quintanilla, was oriented to the documentation of the settlement patterns, sequence of occupation, use of resources from the different ecosystems and cultural relations with the rest of the Diquís Subregion (Quintanilla 1992).

In 1990, John Hoopes began the Golfito Archaeological Project. He conducted a survey around the Golfito Bay and excavations in shell middens as a first phase of a multidisciplinary investigation of human adaptations to tropical ecosystems. A principal focus of the project was the recovery of subsistence remains and their interpretation on both local and regional cultural contexts (Hoopes 1990, 1994a). Recently, the University of Costa Rica has initiated in the same area of Golfito the first phase of an expected long-term project. Some test pits and explorations were done during 1999.

Archeological research in Southern Costa Rica has advanced a lot in the last years, however there are some basic aspects that must be addressed such as better spatial and chronological frameworks, and consensus in ceramic nomenclatures. Besides these basic aspects there is a need for long term multidisciplinary projects with explanatory goals. Recent activities have been restricted to evaluations of the impact of development projects in restricted areas, and occasional visits to evaluate looting or damage by infrastructure work of specific sites.

There is also an increasing concern with the management of cultural resources, protection of particular sites and the involvement of local communities in the study, protection and management of archaeological sites. Indigenous communities in the area have become more concerned about their cultural heritage derived in part of historical reconstructions of the past and the threat of development projects. The present study takes in consideration the genetic and linguistic affiliation of indigenous groups in the region to assess their continuous occupation of the territory since ancient times.

CHAPTER III

A SUMMARY OF THE ARCHAEOLOGICAL INFORMATION FOR GREATER CHIRIQUÍ

In this summary of the archaeological information for Greater Chiriquí, local sequences of occupations are followed instead of panregional chronological periods. Chronological divisions for larger archaeological phenomena do not fit precisely with regional change requiring in some cases the division of local phases or periods. Since the focus of the present study is on local processes of change, it was decided to keep attention on the periods proposed for the region with the exception of some local phases. Despite attempts by several scholars to establish divisions within these periods, the differences are not completely clear and needs further data and evaluations. For this reason, the information is presented in terms of the major divisions in the understanding that during the long spans of time of each period the process of emergence, peak expression and decline of different cultural phenomena should have taken place. The objective of this study is the evaluation of long term changes.

In the overview of the different periods, I will place an emphasis on data from the Diquís Subregion with special attention to the history of ceramic classifications and the problems caused by recurrent changes in ceramic nomenclatures. This second emphasis is critical for understanding the nature and relationships among the ceramic complexes proposed by different researchers and for making regional and chronological comparisons.

A. Hunters and Gatherers (10,000-1500 B.C.)

The archaeological information for the Paleoindian Period (10,000-7000 B.C) in Southern Central America is scant. Quarries and workshops and fluted points have been found in the Turrialba Valley, Caribbean Costa Rica (Snarskis 1977,1981, Castillo et al. 1987) and La Mula-West in Central Panamá (Cooke and Ranere 1992). Other isolated fluted points have been recovered from the Arenal area, Northwestern Costa Rica. (Sheets et al.1991) and other sites in Central Panamá (Ranere and Cooke 1992).

There is no information yet for Paleoindian occupations in Greater Chiriquí, but such sites may occur deeply buried in the alluvial valleys.

For the Archaic Period (7000-2000 B.C.) there is evidence from the same areas with Paleoindian data. There is evidence from rockshelters and open sites in the Turrialba Valley, Arenal zones and Central Panamá (Acuña 1983, Sheets 1984, Ranere and Cooke 1992), but it also has been obtained from the Highlands of Chiriquí. Pre-ceramic occupations have been recorded in rockshelters and open sites along the Chiriquí Viejo River between 500 and 900 m. (Ranere 1980a).

Ranere (1980a) has proposed two preceramic phases, Talamanca (5000-2300 B.C.) and Boquete (2300-1500 B.C.), based on the difference in the lithic assemblages. The initial Talamanca Phase represents groups that, according to the available information, did not know pottery and agricultural practices. Gathering of wild fruits played an important role. Palm nuts (Acrocomia vinifera and Scheelia zonensis), nance (Byrsonima crassifolia), guapinol (Hymeneae courbaril), and other species abundant near the rockshelters were collected (Ranere 1980a). This activity was complemented by hunting of terrestrial animals.

The lithic assemblage was composed of implements manufactured mostly in andesite, but also in chalcedony. In general terms, the lithic artifacts of the Talamanca Phase had three main functions: stonework, woodwork, and processing of foods. The typical instrument was a bifacially flaked wedge, probably used in woodworking (Ranere 1980a:29). Scrapers, knives and choppers are also present. Edge ground cobbles, grinding bases and nutcrackers (to break palm nuts) were used to process food.

The following phase, Boquete (2300-1500 B.C.) includes implements that continued from the previous phase. A new implement, the tabular chisel, appears in high quantities. There are also edge ground cobbles, celts, chisels, handstones and grinding bases. The morphology of implements and replicative functional experiments indicates to Ranere (1980a:33) that agriculture based on tubers and trees made its appearance at this time. This is reinforced by evidence from phytolith analysis of samples obtained from the rockshelters that show limited alteration of the surrounding forests and the absence of maize.

Despite differences in the lithic assemblages, it is believed that Boquete Phase represents an evolution development from Talamanca Phase. Ranere (1980a,b) argued

that the variations present in the Boquete assemblage were developed as an integrated whole and that this pattern remained essentially unaltered until the consolidation of agricultural practices that modified the lithic assemblage. Here we can leave open the possibility that the new lithic assemblage played a role in the modification of agricultural practices.

B. Sinancrá Period (1500-300 B.C.)

The transition from preceramic hunters and gatherers with incipient horticulture to sedentary, agricultural, ceramic-using groups is still vague in Greater Chiriquí. Information for the Formative Stage, used here in the sense of consolidation of agricultural practices, the appearance of pottery, and the beginning of the village lifestyle (see Hoopes 1987:1-11 for a discussion of the application of the term in Southern Central America) is still scant, but new information from different areas is adding to our knowledge of the period. In Southern Central America the earliest ceramic populations recorded correspond to the Monagrillo Complex in Central Panamá that dates from 3800-1200 B.C. (Cooke 1995:179). There are different interpretations as to whether or not the Monagrillo pottery corresponds to an autochthonous development or was derived by diffusion from earliest ceramic complexes in Northern Colombian and Ecuador (Hoopes 1987, 1995, Cooke 1995, Fonseca 1997, Meggers 1997). It may represent the antecedent of several ceramic complexes in Southern Central America

In the area from Central Panamá to Pacific Nicaragua, several ceramic complexes sharing several formal and decorative traits have been dated from 2000 to 300 B.C. The earliest ceramic complex is the Tronadora complex in the Arenal zone with beginning dates around 2000 B.C., although the ceramics were associated with even earlier dates which were considered less reliable (Hoopes 1987, 1994c). The other complexes, all of them with relatively well made pottery, have been dated, mainly by regional comparison, beginning around 1500 B.C. and ending around 500/300 B.C. (Snarskis 1978, 1981, Norr 1986, Corrales 1985, 1989, 1997, 1999a,b, Odio 1992, Haberland 1992, Chávez et al. 1996, Herrera and Corrales 1997a,b). Fonseca (1997:60) has postulated a Central Group of ceramic complexes that occur in Central and Southern Costa Rica and Panamá that are different from a Southern Group in

Colombia and a Northern Group from Northern Costa Rica to Guatemala. This Central Group of ceramic complexes has a distribution similar to that of the Isthmian Group of languages postulated by Constenla (1995). A review and comparison of the different complexes is presented in Chapter VI.

Within the limits of the Greater Chiriquí, two local phases, Curré and Darizara, have been postulated on the basis of specific sites. Because of the lack of radiometric dates, the stratigraphic position and formal and stylistic comparisons at the regional level are the bases for suggesting a chronological position between 1500 and 300 B.C. The two phases were grouped within the Sinancrá Period by Herrera and Corrales (1997b). Occupations for this period may appear to have been scant and dispersed with a very restricted appearance in the archaeological record.

In the Térraba Middle Basin, the Curré Phase was postulated on the basis of excavations at Curré. From the lower levels of stratigraphic pits, ceramic and lithic materials were obtained that were different from those previously recorded for the Diquís Subregion (Corrales 1989). Small stone chips were identified as part of graters, to process tuber or roots. Corrales (1989) considered these, along with the absence of handstones and metates, as evidence of early horticulture practices.

The Curré Ceramic Complex, as it was designated (Corrales 1985, 1989), is characterized mostly by small globular jars and bowls with flared lips. Outcurved bowls, tecomates and cylindrical vessels were also present. Flat bases with vertical walls characterize the latest forms. The vessels were decorated with plastic techniques including incising, punctation, fingernail stamping, shell stamping, reed stamping, jab and drag, appliqué and others. The vessels were covered with a slip the same color as the paste. Due to the small sherd size a clear association of the decorative modes with the reconstructed vessel forms was not always clear.

In the Diquís Delta, some limited but relevant ceramic evidence has been associated with the Curré Complex. Quintanilla (1992) reported the presence of several sherds decorated with plastic techniques (shell stamping, punctation, incision), small globular vessels and flat plates with a thick rim or "budares" in surface collections in the lowlands of the Térraba-Sierpe Delta. She has associated this material with the Curré Ceramic Complex. At Caño Island, which can be related to the Delta, Corrales and León (1987) found several sherds with Curré-like characteristics. Later, Badilla (1994b)

identified two other sherds in a collection reported initially by Finch and Honetschlager (1986). This suggests the presence of an early occupation or use of Caño island that remains to be explored.

Another local phase, the Darizara Phase, was postulated based on stratigraphic excavations in the Ni Kira Site, near the slopes of the Costeña Range in the Coto Colorado Valley. A ceramic assemblage similar to Curré, but with differences in the presence and quantity of specific modes of vessel forms and decoration motifs, was recorded in the lower levels of stratigraphic pits (Herrera and Corrales 1997a,b). Globular jars and bowls were the most common shapes, decorated with an array of plastic techniques including incision, shell stamping, punctation, fillets and pellets appliqué. In Darizara, the range of vessel forms is limited in comparison with Curré. Flat bases associated with cylindrical vessels, pellet appliqué, and drag and jab decorations are rare. Rocker stamping is more frequent in Darizara, in contrast to Curré, where short strokes with the dentate edge of shells are more common (Fig. 13). In both of them, the predominant decorative technique is incised lines.

There is no information yet for this period in the Upper General Valley and the Coto Brus Valley. There simply has not been specific research projects aimed to locate early sites.

In Western Panamá, some pottery labeled as "non identified" by Ranere (1968), collected in the San Felix and Remedios districts in the Chiriquí lowlands presents some modes that can be identified as related to Darizara and Curré. In a similar way, sherds found in the upper levels of the Trapiche and Horacio González rockshelters and in the Schoolyard open site, Chiriquí Viejo River area, can be related to early ceramic occupations. Haberland (1984a:237) considers that the affiliation of this pottery with the Scarified-Concepción-Aguas Buenas tradition by Linares and Ranere (1980) could be partially erroneous. Citing the opinion of Cooke, Haberland (1984a:237) proposes that these sherds can be associated with an older pottery complex and suggests that the radiocarbon date SI-1844, (circa 3000 B.C.) can be applied to this new unnamed complex. While I consider this date too early (the ranges were not provided), I agree that the presence of pottery in rockshelters with particular characteristics may be related to the presence of occupations during the Early Formative.

C. La Concepción Phase (500/300 B.C.-A.D. 300/400)

During the period from 500/300 B.C. to A.D. 300/500 several ceramic complexes from Pacific Nicaragua to Western Panamá exhibit similar decoration consisting of zoned bichroming (red slipped areas alternating with unslipped zones) and decorative motifs executed with plastic techniques and zoomorphic modeling (Snarskis 1978, 1981:25,44, Hoopes 1996:17). While some authors have seen this "horizon" extending to Mesoamerica (Snarskis 1981) or even at the whole "Intermediate Area" (Myers 1978), in this study I focus on the relationships within Southern Central America with the consideration that comparisons must depart from more exhaustive evaluations that generalizations based on isolated traits (see Chapter VI)

In Greater Chiriquí, the La Concepción Complex has been considered older than the also zoned bichromed Aguas Buenas-Bugaba tradition. While in fact they can be considered partially contemporaneous, with similar beginning dates, I would present La Concepción first since the Aguas Buenas tradition continued after the decline of La Concepción.

The La Concepción Phase has a distribution in the plains and piedmont of Chiriquí, Panamá. Only ceramic and lithic deposits have been recorded. Settlements should have been small with no major structures, but no remains of house structures have been identified. Haberland (1976) also excavated tombs with walls covered with cobblestone or metates.

For La Concepción, Haberland (1984a:240) established an antiquity not older than 500 B.C. However, Linares believes its starting date is more recent (1980c:240-241). Shelton (1995:83), based on two radiocarbon dates (see Table 8), suggests initial dates between 300 B.C.- A.D. 400. Beginning dates around 300 B.C. for the of La Concepción are reasonable, since they match the dates proposed for the appearance of zoned bichrome pottery. It also suggests a degree of coexistence with the occupations associated with the Aguas Buenas and Bugaba complexes.

The La Concepción complex presents scarified decoration and some unique forms different from the Bugaba-Barriles-Burica complexes. It was established by Haberland (1962) after the descriptions by Holmes (1888:87-90, Figs. 118-127), MacCurdy (1911:96-100, Figs. 164-169, Plate 26) and Osgood (1935). Haberland

(1962) defined four groups that later he clustered in two types, Solano Incised and Solano Monochrome, with several varieties (Haberland 1976). Principal vessels forms were oval vases, bowls with annular bases, restricted bowls, jars with a sharp angle, and chimney vessels with flat bottoms and three cylindrical supports. The most significant decorative modes are scarified or incised patterns (parallel lines, in some cases alternated with red painted stripes, cross-hatching, herringbone) in unslipped zones. Adornos and appliqué are rare. Supports are solid in the form of animal legs with three toes or claws or solid cylindrical, long, flat or conical (Haberland 1962: 381-386, 1976:116).

Shelton (1984a,b) described several ceramic wares in her ceramic analysis from surface collections and test pits in four selected areas in the coastal plains and mid-elevations of Chiriquí. She gave priority to surface finish of sherds and their relationships with whole vessel shapes and appendages and to overall changes within and between wares (Shelton 1984a:108). All of the types and varieties proposed by Haberland fall into her Ware B: Zoned Incised (Table 1). She established other two wares, A and C, as particular to this complex. Three additional wares: D, E and F are considered transitional between La Concepción and Bugaba phases (Shelton 1984a).

Table 1. La Concepción types and wares as proposed by Haberland (1976) and Shelton (1984a)

Haberland 1976	Shelton 1984
Solano Incised v. Mata	Ware B: Zoned Incised
Solano Incised v. Bugaba	
Solano Incised v. Bongo	
Solano Monochrome	
	Ware A: Lobed Zoned Incised
	Ware C: Smoothed unslipped shoulder or neck
	Ware D: Incised Lines on Smoothed Body*
	Ware E: Dark Fired with band of vertical lines on the neck*
	Ware F: Plain Ware*

* Considered transitional between La Concepción and Bugaba

D. Aguas Buenas Period (300 B.C.-A.D. 800)

The zoned bichromed pottery with plastic decoration and zoomorphic modeling that was widespread from 300 B.C. to A.D. 300 in Southern Central America continued in use in Greater Chiriquí, after it declined in other regions. Several local phases postulated for the different zones are dated between 300 B.C. and A.D. 800. They show a close formal and stylistic similarity, and can be linked as part of a more general Aguas Buenas Period as suggested by several authors (Baudez et al. 1993, Hoopes 1995, Herrera and Corrales 1997b). In the Diquís Subregion this span of time was initially called the Aguas Buenas Phase, based on Haberland's research in the Agua Buena area, near the Costa Rica-Panamá border (Haberland 1955). The designation was expanded for the whole subregion in subsequent studies in the General, Diquís, Coto Brus, Coto Colorado Valleys and Caño Island (Haberland 1961, 1976, Laurencich de Minelli and Minelli 1973, Drolet 1983, Corrales 1984, 1986a, Finch and Honetschlager 1986, Herrera and Corrales 1997a,b).

In Western Panamá, four local phases have been established that are closely related to Aguas Buenas in terms of chronology, and physical and stylistic characteristics (Linares 1968, 1980a). In the Volcán Barú area, Linares established the Bugaba A (A.D. 200-400) and Bugaba B (A.D. 400-600) Phases. Another local phase, Burica (A.D. 400-600), was established in the coastal zone. Finally, the Barriles Phase (400 B.C.-A.D. 200) was defined at Barriles with a similar ceramic assemblage to Bugaba Phases (Table 7).

The chronology of this period is quite extended, despite the rejection of some early dates (see the discussion by Hoopes 1996:29). In the light of regional comparisons and the extent of the different dates available, the Aguas Buenas Period ranges from dates around 500/300 B.C. to A.D. 800 (see Table 8 for a compilation of radiocarbon dates and their calibration). What is remarkable for this long period of more than one thousand years is the similarity in the ceramic assemblages found throughout the region. For example, Baudez et al. (1993) proposed dates between A.D. 600 and 800 for their Camibar Phase that contains ceramic types and modes similar or identical to the ones dated between 500 B.C.-A.D. 200 in the Upper General Valley (Drolet and Siles 1988) (Tables 6-8).

Although a logical division between an earlier and a later part of the period has been suggested based on stratigraphic distribution of sherds associated with specific ceramic types in given sites, the presence of similar assemblages in the different sites makes it difficult to establish a clear difference between early and late ceramic manifestations. Other elements such as stone statues, barrel-shaped objects, decorated metates and stone balls may be associated with a growing social complexity by the end of the period (Linares 1980, Drolet 1983, Baudez et al. 1993).

Most sites of this period do not present identifiable structures, only ceramic and lithic deposits from domestic units. However, in different territories, particular sites presented a greater complexity. Examples would be Barriles with the presence of artificial mounds, paved causeways, statuary, and petroglyphs, and Bolas with artificial mounds and stone balls. According to the evidence of the Bolas site and some other sites in the Sierpe-Térraba area, stone ball manufacture began in this period (Drolet 1983, Quintanilla 1992). Natural elevations were used to locate dwellings at the Monge site, in the Upper General Valley. Petroglyphs with spirals, lines and dots were created within the occupation area at the Quebradas Site, Upper General Valley, Ni Kira site, Coto Colorado Valley, and Cotoncito site, Coto Brus Valley.

Site sizes range between one or two hectares in the middle and upper Térraba Basin. In the Coto Brus and Coto Colorado Valleys, they can reach seven hectares. Sites in the Diquís Subregion tend to be located in hilltops, with some occupation of alluvial terraces (Drolet 1983, Corrales 1985). In the Coto Brus Valley and Volcán Barú zones, sites are located along main and secondary rivers in fertile alluvial terraces (Linares and Sheets 1980, Corrales 1984). They are also present in coastal areas such as the Chiriquí Gulf, Burica Peninsula and Caño Island.

Burial practices are almost unknown for the Diquís Subregion, at least from controlled excavations. The finding in Coto Brus of whole vessels in domestic areas led to the conclusion that burials were located within the houses (Laurencich de Minelli and Minelli 1963). A disturbed cemetery on a hilltop in the Coto Brus Valley contained unmarked graves, with ceramic, metates, and green stone ornaments as offerings (Corrales and Gutiérrez 1984). Green stone anthropomorphic pendants have been reported from the Las Brisas and Monge sites in the Upper General Valley (Drolet 1992) and green stone beads were also reported from an oval habitation structure at

Pitti-Gonzalez site in the Volcano Barú area (Linares 1980b:140). Green stone ornaments, including jadeite, as well as ritual metates, are also associated with other zoned bichromed complexes in Central and Northwestern Costa Rica (Snarskis 1981, Guerrero 1986, 1998).

In contrast to the evidence in the Costa Rican sector, fields with funerary urns have been excavated in Chiriquí. Desarticulated individuals were located in large vessels covered with ceramic bowls used as lids. In some cases small circular or rectangular mounds of cobblestones covered the buried urns. Groups of urns were buried in flat areas (Miranda et al. 1966, Quintero 1967, Flinn and de la Guardia 1967, Barillas 1982). Shaft tombs with slab-lined chambers were reported for the Barriles Site in what could be a hierarchy related distinction (Stirling 1950:243). These differences between the burial pattern of Western Panamá and that of the Diquís needs to be confirmed by the discovery and excavation of cemeteries in the Costa Rican sector.

A mixed agriculture system that included the use of trees and the cultivation of roots and tubers as well as seeds (maize, beans) has been suggested in the Diquís Subregion (Drolet 1983). Mora (1994:82-86) found low percentages of maize phytoliths (less than 1%) in samples from the Herradura and Las Brisas sites in the Upper General Valley in contexts dated between 300-0 B.C. This contrasts with the identification of a major role for maize and beans for Western Panamá based on the presence of manos and metates and the direct evidence from sites such as Pitti-Gonzalez (Linares and Ranere 1980). Gathering, hunting and fishing played a complementary role in both subregions (Linares 1980c:243, Drolet 1988:178). At the coasts, marine and mangrove resources had a bigger role complementing agricultural practices (Hoopes 1996:32).

A "cottage" lithic industry would have included knives, scrapers and metates. However, the presence of more specialized instruments such as polished celts and axes, and elaborated metates may be an indication of specialists. Regional exchange networks and different mechanisms of economic and ritual integration were probably present (Drolet 1983, Linares and Ranere 1980:79).

One element considered as a sign of social stratification are the large stone statues found at the Barriles Site, Western Panamá. They consist of representations of an individual wearing a conical hat, necklaces with pendants and holding staffs on the shoulder of an individual without ornaments. Despite the warning by Hoopes (1996:37)

about subjective denominations of “chiefs” and “slaves”, and the argument by Bruhns (1992:345) about the small number of these statues and alternative explanations as representation of dances, ceremonies or victory display, I agree with other authors that they would be representations of rank and power of principals over the rest of the population, because of the differences in attire and the submissive position of the lower individual. Their presence in the most complex site of the period reinforces the interpretation that they are visual representation of ranking. Similar iconography of an individual wearing a conical hat while others do not is found in a ceramic vessel illustrated by Linares (1975:143). Heads with conical hats are also common in ceramic adornos. Some kind of warfare and the presence of “warriors” is suggested by the depiction in stone “barrels” of individuals with stone axes and trophy heads (Sander 1961:2, Linares 1975:143). In addition, large metates are decorated with carved trophy heads.

1. Ceramics

The pottery characteristic of this period in a large portion of Southern Central America presents a distinctive zoned bichrome decoration. A red or red-orange slip was applied to most of the vessels, leaving in some cases a natural color band decorated with plastic applications, incisions or punctation. Zoomorphic adornos are also common in the unslipped area. The principal vessel forms are: restricted bowls (simple, bowls with a groove below the lip) with tab supports and appliqué adornos, jars with or without tab supports and vertical strap handles, s-shaped rim jars, tecomates, plates with or without handles, spherical jars, with annular bases, among others.

Several ceramic complexes between 300 B.C. and A.D. 800 have been postulated in Greater Chiriquí. All of them shared the zoned bichrome decoration and most of the diagnostic modes. However, there have been different nomenclatures applied to essentially the same material creating an unnecessary confusion. The initial establishment of the Aguas Buenas Complex came from the work of Haberland in the late 50's and early 60's in the Aguas Buenas and Cañas Gordas zones of Costa Rica and Bambito, Panamá. He initially distinguished a Red Ware and a Red-Rimmed Ware (1959b) that was later renamed as the Moravia Variety and Bambito Variety of the Moravia Red type (Haberland 1961a). This type encompassed most of the pottery of the

complex. Two other types, Barriles Zoned and Cañas Incised (Haberland 1961c) or Cañas Zoned (1976) were postulated for variants with less representation (See Appendix 3 for a description of the different types). Laurencich de Minelli and Minelli (1973:219-224), based on their excavations in the San Vito area, added a third variety to Moravia Red: the Pintada variety which they considered a more evolved and refined one and thereby more recent.

Lothrop (1963) despite his great number of excavations pits (149) in the Diquís Delta, did not identify a clear ceramic sequence because of alteration by looting and agriculture activities and shallowness of the deposits (Lothrop 1963:119). For this reason, there are no stratigraphic correlations in his work, and Aguas Buenas material present in his ceramic classification (based in wares) were mixed with late Chiriquí Phase material that was predominant.

For the lowlands and islands of the Gulf of Chiriquí, Linares (1968) established the Burica ceramic complex as characterized mainly by a thin dark maroon slip. Linares established the presence of two types: Isla Palenque Maroon and an unclassified Plain Ware C. However, the plain type differs from Isla Palenque Maroon only in the absence of the thin maroon slip. Linares (1968:21) suggests that in fact they are the same type, but that the maroon slip had worn off the plain pottery. Ranere (1968:117) established two varieties for the Isla Palenque Maroon type: thin and thick.

In her next work, Linares and associates established the Bugaba Style for the highlands of Western Panamá with seven different wares: Cerro Punta Orange, Valbuena, Bugaba Engraved, Cotito, Zoned Bichrome, Combed and Plain (Spang et al. 1980), ignoring Haberland's typology as already mentioned (see Appendix 3).

The Bugaba Style,

"is characterized by a fine-grained compact paste in which fine river sand and feldspar were used for temper; by the total absence of polychromes; by the presence of an orange to dark red slip or wash applied in zones that alternate with unslipped areas that may be plain, incised, brushed, or decorated with punctuation, by a wealth of varied appliqué motifs made up from clay pellets and strips; and finally, by a number of distinctive supports and handle shapes" (Linares 1980a:86).

This description fits pretty much the Costa Rican Aguas Buenas material already mentioned. This is not surprising since the sites excavated by Haberland are located in the vicinity of Highland Chiriquí.

Linares formulated two phases: Bugaba A (A.D.200-400) and Bugaba B (A.D. 400-600) based on slight differences in the distribution of certain wares in stratigraphic units excavated in an oval structure at the Pitti-Gonzalez site in the Volcán Barú area. The tendency of the bowls with a groove below the lip of the Cerro Punta Orange Ware to be more frequent in the lower levels, in contrast to the simple and S-shaped bowls of Valbuena and Bugaba Engraved wares to be more abundant in the upper level, was the basis for suggesting the division. However, other areas of the site did not show that pattern and the evidence of contingency table analysis was inconclusive. The distinction in fact was very minimal and the wares "were not so far apart in time for entirely new wares to have appeared or old ones to have dropped off" (Linares 1980a:89-90,113-115). This division came despite the assertion by Spang (1976:63, in Linares 1980a:86) that the percentage frequencies "indicate a single phase occupation".

Information from the lowlands of the Costa Rican section does not support that distinction. Sites in the borderland (Cotoncito in the highlands, Ni Kira in the foothills) and Caño Island showed a similar distribution of the mentioned wares in the different levels at stratigraphic excavations (Corrales 1986a, Corrales and León 1987, Herrera and Corrales 1997b). For the lowlands of Chiriquí, Linares (1980a:113), commented that, except for a few bowls with a groove below the lip rim sherds and the presence of less than five specimens, the Burica collection lacked the elaborate bowls with appliquéd pellet figurines and high-relief animal adornos so characteristic of the Cerro Punta Orange ware. However, this situation is restricted to La Pitahaya Site since there is evidence for other sites containing Cerro Punta Orange (Linares 1980a:116).

Because of these factors, it is inappropriate to use the presence of sherds related to those wares or types in surface collections to establish chronological affiliation to Bugaba A or B, as Linares (1980a) and Shelton (1984a) did. Besides, paste, surface finish and decorative techniques are similar in all the Aguas Buenas-Bugaba assemblage. As Linares warned, "the distinctions were suggestive but not conclusive" (Linares 1980a:115).

Additional information regarding the problems with dating and ceramic distinctions came from the postulation of the Barriles Complex, established at the Barriles Site (Linares 1980a). This "local" and questionable complex does not differ from the Bugaba Style except in frequency of types and absence or presence of some traits. The main wares present are Cerro Punta Orange and Valbuena. However, this phase has been dated earlier than Bugaba on the basis of the presence of La Concepción-like decorative techniques (shell impressed, reed incised and deep incised, plus a webbed foot) and radiocarbon dates within the range of 400 B.C. to A.D. 400. This "complex" was predominant in the peripheral area of the site, presumably older than the ceremonial area with artificial mounds, paved causeways, stone statuary (man on "slave"), giant metates and petroglyphs, with associated dates ranging from A.D. 600 to A.D.800 (Linares 1980a:92). According to this information, the Bugaba Style would have begun some centuries B.C. and continued until A.D. 800, a fact that is largely overlooked by Linares and associates.

Shelton (1984a), after doing an independent analysis, related some of the wares defined by her in the mid-elevations and plains of Chiriquí with the ones established by Spang et al. (1980) as follows: Ware G: Bugaba Engraved, Ware H: Cerro Punta Orange, Ware I: Valbuena Ware, Ware J: Valbuena?, Ware K: Zoned Bichrome. Shelton (1984a) used Linares distinction as a definitive assessment and established a clear-cut difference between Early Bugaba and Late Bugaba, assigning sites to each phase based on the appearance of distinctive wares. However, she failed to distinguish similar distribution for the different wares in her own tables. She presents information from different stratigraphic layers where it is clear that the Ware H (Cerro Punta Orange=Early Bugaba) had the same distribution as Ware I (Valbuena=Late Bugaba) (Shelton 1984a: 248-250, Table 4-3). Moreover, according to her, the s-shaped bowls, the characteristic form of "late" Valbuena for Linares and associates (Linares 1980a:114, Spang et al. 1980:360), are also present in her "early" Ware H (Cerro Punta Orange). Interesting enough, in the tables of the San Vicente area, the s-shaped bowls (H5) of ware H appear in some quantity, but not the s-shaped bowls (I10) of the Ware I. This means that, in Shelton's classification, one of the main markers of Late Bugaba (according to Linares), it is also a principal marker of Early Bugaba!

By the same token, the bowls with a groove below the lip of Cerro Punta Orange, and the most characteristic "early" shape (Linares 1980a:114, Spang et al. 1980:360), are also listed as vessel form (I5) for Ware I (Valbuena) in Shelton's classification, being the predominant form in at least one of the sites (Site 59) of the San Vicente area. These contradictions in Shelton's classification highlight the problems of establishing divisions between early and late components within the Aguas Buenas-Bugaba Complex.

The zoned bichrome pottery of this period had a regional extension beyond the limits of Southern Costa Rica and Chiriquí. The Aguacate Phase (AD. 600-) established for the Caribbean lowlands of Bocas de Toro is represented by Bugaba material that was found in the bottom levels of excavations conducted at the two main localities identified at the Cerro Brujo Site, Aguacate Peninsula (Kudarauskas et al. 1980, Linares 1980a:99). According to Kudarauskas et al. (1980:389), the Bugaba material found in Cerro Brujo was identical to the Volcán Wares and represents the first and oldest occupation of the Aguacate Peninsula and the Cerro Brujo Site. The occupation was dated to A.D. 600 by association with the Volcán zone and assuming a migratory movement from that zone (Linares 1980a:99). The next phase, Bocas, was estimated to date ca. A.D. 900, but it was not clear whether or not the Aguacate Phase would have extended until 900 A.D. In a similar way, Corrales (1984, 1993) and Hurtado de Mendoza (1986) have reported the presence of Aguas Buenas-like material for the Talamanca Valley, Eastern Caribbean Costa Rica.

During the eighties, several authors working in the Térraba Middle Basin and other zones initially followed Haberland's classification, identifying most of the Aguas Buenas pottery as the Moravia Red type (Drolet 1983, 1992 Corrales 1985, 1986b, 1989 Finch and Honetschlager 1986, Kantner 1988). However, the distinction among the varieties postulated by Haberland and Laurencich of Minelli and Minelli (1973) was not made. In this sense, Moravia Red became a very broad type that included most of the particular modes described by the different researchers and did not reflect the variety within the complex. (see presentation and discussion of ceramic types in Appendix 3). In the case of the other two types established by Haberland, the Barriles type was most commonly identified as Zoned Bichrome and the Cañas Types as Bugaba Engraved following the nomenclature established by Spang et al. (1980) for Western Panamá.

This mixing of nomenclatures reflect the problems in the history of ceramic analysis in Greater Chiriquí mentioned in Chapter II.

In the Upper General Valley, along with the typical modes established by Haberland for the Aguas Buenas Complex, vessels with characteristics not yet documented in the literature appeared in several sites such as Quebradas, Las Brisas, Monge and Hidalgo (Corrales 1986c,1988, Henderson 1986, Rago 1988, Drolet 1992). Large to medium-sized composite silhouette bowls and jars, often with thickened lips. decorated with a wide band of deep, parallel-line incision geometric patterns were proposed initially as a new ceramic complex. The principal reason was that they were larger and coarser than the typical Aguas Buenas vessels and the predominant pottery in the sites mentioned (Corrales 1988, Drolet and Siles 1988, Drolet 1992). However, their repetitive association with Aguas Buenas bowls with a groove below the lip and jars led to its reconsideration as a ceramic type instead of a complex. The new Quebradas type was established, with two varieties: plain and incised (Drolet 1992). It was later identified in the Diquís Delta (Baudez et al. 1993) and the Middle Térraba Basin (Curré Site) (Corrales et al. 1992), but it has not been recorded in the Coto Brus and Colorado Valleys. It was also considered the earliest type within the Aguas Buenas Period, based on the C14 dates obtained by Drolet (1992) in the Upper General Valley.

A recent attempt to remedy some of the nomenclature problems added new confusion. Baudez et al. (1993) established a local sequence for the Diquís Delta. The local Camibar Phase (A.D. 600-800) was subdivided in terms of ceramic material in A and B, redefining at the same time the Haberland and Linares and associates classifications. Baudez et al. maintained some of the names of Spang et al., but their description differs in some cases substantially from the original wares. Some types, such as Cerro Punta Orange have different modes in the definition by Baudez et al. (1993) than those provided by Spang et al. (1980) (see a description and discussion of the ceramic types in Appendix 3). Camibar A would be characterized by the Quebradas type in its two varieties (Modes 1 and 47), Corral Red v. Coronado, Cerro Punta Orange v. Cotito and Guarumal Incised v. Cebaca. Camibar B is defined by the presence of Bugaba Engraved, v. Bugaba and Lacoste, Cerro Punta var. Cotito, Guarumal Incised var. Guarumal and mode 22. In Camibar B, the earliest types are not present, with the exception of some appearance of Quebradas Plain.

The division of Camibar in two parts, as in the case of Bugaba A and B, is based on the interpretation of stratigraphic cuts. However, sherds associated with the different types are present in lower and upper levels (see Baudez et al. 1993, Appendix 1). Types such as Bugaba Engraved have been considered "late". While I agree that this seems to be a more elaborated type (presence of more stylized representations and negative painting), sherds recognized as Bugaba have been found in association with sherds related to the other types in similar stratigraphic levels and surface collections. It could have had a more important role to the end of the period, but it is not a late appearance, or at least such has not been demonstrated.

The ceramic complex of the Abrojo Phase, proposed by Herrera and Corrales (1997b) based on their excavations in the Ni Kira Site, includes most of the typical Aguas Buenas modes with predominance of bowls with a groove below the lip, and globular jars, plastic decorations, zoned bichroming, zoomorphic and anthropomorphic modeling, tabular handles and supports. However, the absence of fine line engraving (Cañas-Bugaba Engraved) is remarkable (Herrera and Corrales 1997b).

Table 2: Main wares, and types and varieties established by subregion, Aguas Buenas Period

DIQUIS	WESTERN PANAMÁ	BOCAS DEL TORO
Moravia Red v. Moravia (1)		Bugaba-style ware (5)
Moravia Red v. Bambito (1)		
Moravia Red v. Pintada (2)		
Guarumal Incised v. Cebaca (6)		
Cañas Zoned (1)	Bugaba Engraved (3)	
Bugaba Engraved v. Bugaba (6)		
Bugaba Engraved v. Lacoste (6)		
Barriles Zoned (1)	Zoned Bichrome (3)	
Guarumal Incised v. Guarumal (6)		
Corral Red v. Corral (6)	Cerro Punta Orange (3)	
Corral Red. V. Coronado (6)		
Cerro Punta Orange v. Cerro Punta (6)		
Cerro Punta v. Cotito (6)	Cotito Ware (3)	
Quebradas Plain (7)		
Quebradas Incised (7)		
	Valbuena (3)	
	Isla Palenque Maroon (4)	

	Combed Ware (3)	
	Plain Ware (3)	

1. Haberland 1961 a
2. Laurencich de Minelli and Minelli 1973
3. Spang et al. 1980
4. Linares 1968
5. Kudarauskas et al. 1980
6. Baudez et al. 1993
7. Drolet 1992

E. San Lorenzo Phase (A.D. 700-1000)

The San Lorenzo Phase is restricted to the coast and islands of Chiriquí. It was established by Linares (1968) based on the excavation of four sites in the Gulf of Chiriquí, three of them located on islands. The phase is mostly represented in the area around the Estero de Horconcitos and the Bahía de Muertos (Linares 1968:91). There were no structures, activity areas, or burials in the different sites assigned to this phase. Ranere (1968) reported the presence of San Lorenzo sherds in the coastal plains of San Felix and Remedios. Shelton (1984a) had a similar report for the mid-elevation lands of San Vicente. The San Lorenzo Phase was dated initially from A.D.800 to 1100 based on a radiocarbon date and the stratigraphic position below Chiriquí Phase materials (Linares 1968:86). Later, it was modified to A.D. 700-1000 (Linares 1980e:76) or A.D. 700-900 in the same publication (Linares 1980a:107,108,116).

San Lorenzo is defined by the presence of types decorated with red lines, red bands or a red slip. It included the following types: Arayo Polished Line, Banco Red Line, Caco Red Slipped, Cangrejal Red Line, Castrellón Red Slipped, Centeno Red Banded, Horconcitos Red Banded, Pan de Azúcar Red Line, Zapote Red Banded, and Linarte Zoned Red Line (Linares 1968:17) (see descriptions in Appendix 3). Ranere (1968) in his analysis of surface collection from sites in Punta Burica, San Felix and Remedios districts and a test pit at the site BA-8, recognized sherds related to several of the types proposed by Linares for the San Lorenzo Phase and added two new types, restricted to the Punta Burica area: Balsa Polished and Quebrada Baúles Brushed. (Tables 1, p.117, 2, p.118, 5, p.119). Linares (1968) thought that this complex was influenced by the Veraguas style in the neighboring area to the east. There also could be some influence in vessel forms and decorative techniques from the Coclé-Azuero

area (Linares 1968:91). Cooke (1980:377) suggests that some of these pottery types could be imitative of Central Panamá types.

The proposition by Linares (1968) that there was a gradual transition from San Lorenzo to Chiriquí, perhaps related with continuity in the population, merits discussion. In stratigraphic pits at the different sites, sherds associated with red lined types tend to be concentrated in the middle levels but also present in the lower and upper levels, mixed with materials identified as Isla Palenque Maroon type of the precedent Burica Phase and Villalba Red Streaked and Tarragó Biscuit types of the subsequent Chiriquí Phase (Linares 1968:Tables1-4). Also, San Lorenzo is not present in other areas of Western Panamá, with the exception of some sherds of Castrellón Red Slipped in one site on the Burica Peninsula (Ranere 1968). San Lorenzo seems to be a geographically restricted phenomenon. Instead of continuity, there could be an overlap of ceramic sequences as Ranere (1968) and Linares (1980a:107) have already mentioned.

The presence of some of San Lorenzo-like vessels in Chiriquí Period graves (Haberland 1976) could be explained as a continuity of some types within the Chiriquí complex, but an alternative explanation could be exchange; assuming some degree of contemporaneity for both occupations as proposed by Ranere (1968:116), or "heirlooms" obtained by late Chiriquí populations.

F. Chiriquí Period (A.D. 800-1500)

As in the case of Aguas Buenas, I propose the use of Chiriquí Period to deal with the previously denominated Chiriquí Phase or "Classic Chiriquí" as Haberland (1959a, 1984a) labeled it, since it has a regional scope in Greater Chiriquí. Haberland (1959b, 1976) initially postulated the Boruca Phase (A.D. 800-1500) for the Diquís Subregion and the Chiriquí Phase (A.D. 800-1500) for Western Panamá, but Drolet (1983) extended the Chiriquí Phase to the Diquís Subregion. This period will also include the local phases Palmar and Sierpe formulated for the Diquís Delta (Baudez et al. 1993). The temporal range of this period from A.D. 800 to the Conquest time is based on radiocarbon dates from the different zones (see Table 9 for a compilation of radiocarbon dates and their calibration), thermoluminescence dates, association with European artifacts and regional comparisons.

In coastal Chiriquí, Linares (1968) established the Chiriquí Phase from the excavation of four principal sites in the shoreline and islands of the Gulf of Chiriquí. It has later dates, A.D. 1100 to A.D. 1500, because of the presence of the San Lorenzo Phase. However, she agrees with Haberland that it could have begun earlier in the Chiriquí Highlands (Linares 1968:86,90). In her 1980 review, Linares corrected her initial dates, placing Chiriquí between A.D. 1000-1100 (Linares 1980a:108, 111: Table 17) with no discussion about the change. The Bocas Phase in the Caribbean piedmont and coast with a ceramic complex with plastic decorations and red on orange paint (Linares 1980a) is related to this period based on the presence of Bisquit pottery and exchange of ceramic postulated as the Lérica Red on Orange type. Linares (1980b:65) established an initial date around A.D. 900, but she did not suggest ending dates for this phase (Tables 7, 9).

The Chiriquí Period marked several major changes in contrast to the previous Aguas Buenas Period. There was an increase in the size and internal complexity of the archaeological sites. There was also the appearance of polychrome pottery and goldwork, together with an increase on the production of stone balls and stone statues.

Local and regional settlement hierarchies, suggest territorial delimitation among social groups and a chiefdom level of organization (Drolet 1983, 1988). Different political territories should have maintained exchange relationships and political alliances to face common enemies; but competition for resources or territories or the search for power eventually would have led to conflict. Archaeological evidence for conflict is extremely limited, but statuary representation of warriors with trophy-heads and ethnohistoric accounts of battles and palisaded settlements are evidence of warfare.

A settlement hierarchy has been proposed for the Térraba Basin. Nucleated villages with large extensions (up to 30 hectares), circular house foundations, artificial mounds, and stone walls made up of cobblestones, were surrounded by secondary villages characterized only by deposits of ceramic and lithic material. In sites such as Murciélago, Curré, Finca Remolino, San Andrés, Rivas, Finca 4-6 and Buenos Aires, cobble-stone circles have been interpreted as house foundations, presumably for extended families. There were also internal divisions within settlements. Groupings of circular foundations, artificial mounds and empty spaces in between have been interpreted as representing multiple dwellings and internal residential divisions (Drolet

1983). Stone balls and human sculptures were located in open areas that would have functioned as plazas or public spaces. Wealth and status do not appear to have been reflected in housing styles, but rather by location within the community. The principal villages would have had economic and political importance. In general, the communities were located along lower terraces close to flat, fertile alluvial fans. Every village had access to different products from nearby rivers and forests; however, there should have been differentiated access to particular resources such as gold and some kinds of stone.

The funerary pattern became more complex than previously, with a marked hierarchy of complex and simple cemeteries. Cemeteries generally were located on hilltops, with tombs formed by cobble stones, artificial mounds covered by cobble stones, and the use of stone slabs or columns (pillars) to mark their location. But there are also funerary zones within and near the domestic areas, such as large funerary mound registered at the Curré site (Corrales 1985). Complex cemeteries range from single large mounds with cobble stone walls and a great number of individual tombs to clusters of several associated mounds. They contrasted with simple cemeteries (small, isolated funerary mounds) (Stone 1963a,b, Drolet 1983, Corrales 1986b, Iwaniec 1986). Graves with differences in mortuary paraphernalia, reflected some kind of social stratification and the use of rank symbols such as gold indicated the social position of the individual. The most common offerings that have been preserved were objects made of clay, gold, and stone.

Subsistence was based on seed agriculture, mainly of maize (Voigt 1985, Drolet 1992). The fertile alluvial soils next to the main settlements were appropriate for an intensive agricultural system. There is direct evidence of charred remains of maize, palms, nance and other plants in sites such as Curré and Murciélago (Voigt 1985). Great quantities of metates and manos are common in the different sites. Maize could have been intercropped with other plants such as beans and squash. Shelton (1980) has suggested for coastal Chiriquí the practice of horticultural practices (use of nuts and roots crops) along with a heavy reliance on maize agriculture. Hunting of animals such as white-tailed deer, peccary, tapir and agoutí complemented the diet (Voigt 1985, Linares 1968). Among the wild foods used were palms (Acrocomia vinifera, Scheelia rostrata). Coastal and island communities used riverine, mangrove and marine

resources. In the Gulf of Chiriquí islands, fishing complemented farming, with hunting and gathering mollusks as secondary activities (Linares 1968).

Lithic tools associated with agricultural practices such as axes, adzes and celts, nutcrackers, metates, and manos have been documented extensively (Linares 1968, Shelton 1980, Drolet 1983). For the Middle Térraba Basin, a "cottage industry" was differentiated from a specialized industry of polished celts and adzes produced in probable manufacture centers (Drolet 1983). There is no evidence of workshops, but some sites could have been centers for specialized goods (gold, polychrome pottery, polished celts, stone balls). Craft specialization may have been a part of the economy.

Navigation on the Térraba, Sierpe and other rivers should have been the main avenues of communication and exchange between coastal and inland settlements. The location of the villages and some artifacts representing canoes may be cited to support this proposition. Long-distance trade with the Greater Nicoya region is suggested by the presence of polychrome pottery from that region, especially in Caño Island (Finch and Honetschlager 1986, Corrales and León 1987), but also in the Diquís Delta (Baudez et al. 1993, Badilla et al. 1997). In the Diquís Delta there is also the presence of pottery from Central Panamá (Badilla et al. 1997).

Goldwork had its climax in this period. Gold and tumbaga (an alloy of copper and gold) were used for ornaments in the form of animals: birds (vultures, owls, eagles), frogs, armadillos, crocodiles, peccaries and other animals. Also common are human representations with animal masks, staffs, and musical instruments identified with shaman representations. Gold objects with distinctive form and motifs were used to indicate the individual's rank in the social hierarchy, and served as funerary offerings and exchange goods. Gold was obtained mainly from river sands in the Peninsula of Osa and was worked with hammering and casting techniques (Fernández 1999, Fernández and Quintanilla in press).

Stone balls are one of the most attractive elements of Diquís archaeology. They are located mainly in the alluvial plains of the Diquís Delta. With almost perfect sphericity, stone balls have been suggested as rank symbols and territorial markers (Corrales et al. 1988, Fernández and Quintanilla in press). Clusters of balls could have had astronomical meaning, related with agricultural cycles (Lothrop 1963). Unfortunately, looting and removal affect their interpretation. Their size ranges from

some centimeters to 2.5 m. and they weigh from few kilograms to 15 tons (Lothrop 1963, Badilla et al. 1997). Raw material (gabbro, granodiorite) was obtained from the Costeña Range. There is no hard evidence of workshops and how they were transported from the slopes to the plains (Fernández and Quintanilla, in press). Other stonework included anthropomorphic and zoomorphic statues, some up to 2 m. tall. A peg base was used to place them vertically, probably in open areas (Lothrop 1963, Fernández and Quintanilla in press).

1. Ceramics

In the ceramic record of the Greater Chiriquí Region, a major change occurred around A.D. 800. Polychrome and bichrome painting appeared along with an increased range of vessel forms and decorative motifs. The different types defined share similar vessel forms, but decorative motifs tend to be restricted with particular types (Haberland 1976:118). In terms of the ceramic classification, the situation is less complicated than in the preceding Aguas Buenas Period, but with some additional problems.

Chiriquí complex ceramics are represented in the works of Holmes (1888) and MacCurdy (1911), who classified lots of vessels from looted Chiriquí cemeteries stored in museum collections. They proposed different groups of wares that become the basis for later ceramic types of the Chiriquí Complex proposed by Haberland (1961a, 1976). This in turn has had a regional application (Linares 1968, 1980a, Drolet 1983, Baudez et al. 1993). In general terms, the Diquís Subregion and Western Panamá present material associated with local ceramic types and are linked by several types with a panregional distribution.

In the Diquís Subregion, other than the small sample included by Lothrop in his study of 1926, the first analyses began in the 1940s. Stone (1943a), in her report on the excavation of some artificial mounds from La Olla area at the base of the foothills of the Coastal Range, made a basic distinction between monochrome pottery with appliqué and incision, and polychrome pottery (white slipped, with geometric patterns in black and red) without reference to the works of Holmes, MacCurdy or Osgood. In her subsequent works she used a combination of the classifications by Lothrop (1963), Haberland (1961a) and Laurencich de Minelli and Minelli (1966, 1973).

Lothrop (1963) found the Diquís Delta pottery unusually difficult to analyze and describe because of its poor quality, the absence of whole vessels, fugitive red paint, and a "vicarious" use of colors (Lothrop 1963:43). He defined large wares where he mixed different types, including some types of the preceding Aguas Buenas complex.

When Haberland (1957b, 1960, 1961b) began his excavations of sites in Costa Rica and Panamá, he initially classified the pottery following a ware classification derived from the works of Holmes and MacCurdy. He later developed a type-variety classification renaming his previous wares (Table 3) (see Appendix 3 for a description and discussion of the different ceramic types). Haberland (1961c) identified similar ceramic types in his excavations of four cemeteries (Cotito, Chebo, Foncho and Montelirio) in the Santa Clara Valley in Highland Chiriquí, and a cemetery near La Concepción in lowland Chiriquí, some of them also similar to offerings in cemeteries from the Buenos Aires area in Costa Rica (particularly Biscuit and Alligator Ware). These affinities led him to propose close relations between Western Panamá and Southern Costa Rica in terms of ceramic material. However, apparent from Haberland's work were the distinctive distribution of material associated with some types. Whereas the ceramics known as San Miguel Biscuit and Buenos Aires-Urabá Polychrome had a regional presence, most of them were present in more restricted areas.

Table 3. Different names proposed by Haberland for Chiriquí Period ceramic wares and types

1957a-1959a	1959b	1961a	1961b
Alligator Ware	Boruca Polychrome	Urabá Polychrome (Chiriquí)	Buenos Aires Polychrome (Diquís)
Negative Ware		Bugavita Negative (Black on Red) Montelirio Negative	
Black on Cream Negative		Huigala Negative	
Red on Red Negative		Chebo Negative	
Red on Orange		Lérida Red on Orange	
Red Line		Muertos Red Lined	
Redbrown Appliqué		Carbonera Appliqué	
Chocolate Incised		Cotito Incised	
	Brown Incised		Papayal Incised
Black Ware		Jucó Black	
Punched Band Ware		Divalá Punched	
Red Painted Ware		Foncho Red	
Red Brown Ware	Boruca Red Brown		Ceiba Red and Brown,

White Line ware	White Lined	Panteón White Lined	Panteón White Lined
Bisquit Ware	Bisquit	San Miguel Biscuit	San Miguel Biscuit.

In the Coto Brus Valley, Laurencich de Minelli and Minelli (1966), in their analysis of the ceramic assemblage from the funerary mounds at the El Zoncho site, used a particular nomenclature mixing denominations by Holmes, MacCurdy, and Haberland. For the purposes of this work, I did a correlation of the names employed by Laurencich de Minelli and Minelli with the nomenclature used by Haberland (1961a), Linares (1968), and Baudez et al. 1993 based on their descriptions and the illustrations provided (Table 4).

Table 4. Comparison of ceramic types by Laurencich de Minelli and Minelli (1966) with other nomenclatures

Laurencich de Minelli and Minelli 1966	Other authors
Biscuit Plain and Biscuit Polished	San Miguel Biscuit
Red and Brown Engraved with or without appliqué Red and Brown Plain with or without appliqué	Foncho Red
Chocolate Incised	Papayal Engraved
Red ceramic with beige paint	Silena Winged
White Line	Panteón White Line
Red streaks on buff Bright red paint on buff	Villalba Red Streaked
Negative paint	Bugavita Negative?
Red and black	Buenos Aires Polychrome
Lérida Red on Orange	Lérida Red on Orange
Red and yellow-beige	Ceiba Red Brown

In coastal Chiriquí, Linares (1968) renamed some of the types proposed by Haberland (Linares 1968:5) arguing that their value could not be ascertained for that area. This may be due to the fact that Linares used Haberland's 1959a wares, instead of the revised types proposed by him in his 1961a article. She proposed the following new types: Cavada Appliqué and Red Banded (related to the red lined types of San Lorenzo Phase), Villalba Red Streaked (a subdivision of Haberland's Foncho Red), and Tarragó Biscuit (same as San Miguel Bisquit) (see Appendix 3 for a description and discussion of the types). Other types with lesser presence were identified using old denominations such as Chocolate Incised, Alligator Ware, and Negative Ware (Linares 1968:43-44, Ranere 1968:117, Table 1).

Haberland's nomenclature would be the main reference in the subsequent research projects in Southern Costa Rica (Drolet 1983, Corrales 1984, 1985, 1986a,b,c,

Iwaniec 1986). An exception was the analysis by Finch and Honetschlager (1986) of the ceramic of Caño Island that was classified according to Lothrop (1963) and Linares (1968) nomenclatures.

However, the nomenclature by Haberland faced some application problems in relation with pottery from domestic deposits. For example, most of the pottery from domestic deposits in the Middle Térraba Basin was associated with the Ceiba Red and Brown type, even when some of them did not have the characteristic red and brown slips of this type (Drolet 1983:46, 1984). It was clear that Haberland's typology, based on funerary assemblages, did not reflect the variety existing in monochrome pottery. One solution was to resuscitate the Parallel Line Incised type, proposed by Lothrop (1963) to account for monochrome pottery with plastic decoration, as Rago (1988) did in her analysis of pottery from habitation sites in the Pacuar area, Upper General Valley. However, the distinction between the Parallel Line Incised type and Ceiba Red and Brown is blurry.

A major revision of the established typologies was undertaken by Baudez et al. (1993) based on the ceramic material obtained from their stratigraphic excavations in Palmar. From their revision they postulated two local phases: Sierpe (A.D. 800-1000) and Palmar (A.D. 1000-1500) as part of the Chiriquí Period (Baudez et al. 1993:114). The Sierpe Phase would be represented by Ceiba Red and Brown, Silena Winged and Sangría Red Fine types. These are monochrome types with plastic decoration that appear in this phase, but continue in the next Palmar Phase. The Palmar Phase would mark the appearance, along with material related to the mentioned types, of polychrome ceramics or Buenos Aires Polychrome, and bichrome pottery related to types such as Panteón White Line, Chánguena Black on Red and Turucaca White on Red. There are also engraved vessels identified as Papayal Engraved and Seúl Engraved. These internal divisions, as in the case of Bugaba A and Bugaba B, have the problem that they are based on tendencies rather than absences. As a result, ceramics considered "late" types might be found with the "earlier" ones in other contexts. However, some differences should have occurred in the long term of the different periods.

Baudez et al.'s revision has become the predominant source for recent analyses (Badilla 1994a, Quilter and Blanco 1995:209). At the Curré Site, a ceramic re-analysis using the typology postulated by Baudez et al. (1993) allowed the identification of a

wider variety of types from domestic contexts in comparison to previous analyses (Corrales et al. 1992). This was due to the fact that types such as Ceiba Red and Brown were divided into varieties or assigned to other types such as Sangria Red Fine and Silena Winged.

In the Coto Colorado Valley, some initial inspections (Guerrero et al. 1990, Herrera and Corrales 1997b, Corrales this volume) have reported the presence of vessels corresponding with types that are more typical of Western Panamá than those from the Térraba Watershed such as Villalba Red Streaked, San Miguel Biscuit, Negative Black on Cream, Negative Black on Red, Foncho Red, and Urabá Polychrome.

G. Bocas Phase (A.D. 900-)

Linares (1980a) proposed the Bocas Phase (A.D. 900-) based on excavations in different localities of the Cerro Brujo Site in the Caribbean part of the Talamanca Range. Most of the ceramic material was associated with two wares made locally: Bocas Brushed-Pinched (the same Lérída Red on Orange of Haberland), and Bocas Smooth-Polished. Stirling and Stirling (1964b) reported a similar assemblage from their excavations of several sites on the islands of Almirante Bay, providing general descriptions and illustrations.

Besides the local wares, there was a significant presence of Biscuit pottery that would have been obtained from the Pacific side. At the same time, the painted type Bocas Brushed-Pinched-Lérída Red on Orange has been recorded as a funerary offerings in graves located in the Coto Brus Valley (Laurencich de Minelli and Minelli 1973) and in Chiriquí (Haberland 1976), presumably imported from the Caribbean area. This exchange or adoption of ceramic associated with these types establishes some links of the Bocas Phase with the Chiriquí Period (Kudarauskas et al. 1980).

Table 5. Ceramic Types proposed for the Chiriquí Period (AD 800-1500): Subregional Affiliations

DIQUÍS	WESTERN PANAMA	BOCAS DEL TORO
Ceiba Red Brown (1)		
Sangría Red Fine (3)		
Silena Winged (3)		
Turucaca White on Red (3)		
Chánguena Black on Red (3)		
Seúl Engraved (3)		
Papayal Engraved (1)	Cotito Incised (1)	
Foncho Red (1)	Foncho Red (1)	
Carbonera Appliqué (1)	Carbonera Appliqué (1)	
Buenos Aires Polychrome (1)	Urabá Polychrome (1)	
Panteón White Lined (1)	Panteón White Line (1)	
San Miguel Biscuit (1)	San Miguel-Tarragó Biscuit (1,2)	Bocas Biscuit (2)
	Villalba Red Streaked (2)	
Black on Red Negative (1)	Huigala Negative (1)	
	Bugavita Negative (1)	
	Chebo Negative (1)	
	Montelirio Negative (1)	
	Cavada Appliqué and Red Banded (2)	
	Divalá Punctuated (1)	
	Jucó Black (1)	
	Muertos Red Lined (1)	
Lérida Red On Orange (1)	Lérida Red on Orange (1)	Lérida Red on Orange (1)
		Bocas Brushed Pinched (2)
		Bocas Smooth-Polished (2)

Bold letters indicates probable area of manufacture

1. Haberland (1961a,b)
2. Linares (1968, 1980)
3. Baudez et al. 1993

H. Contact Period

The Spaniards at their arrival documented some of the archaeological elements of the Diquís Subregion during the Chiriquí Period. Others are missing or mentioned very briefly (Corrales 1996a). For example, Europeans such as Gil González Dávila, who presumably crossed the Diquís Delta in 1522, did not mention observing stone balls, one of the most conspicuous elements of the subregion. Unfortunately, the references about the use of ceramic by the indigenous groups in the Spanish chronicles are minimal. For Southern Costa Rica, the only reference to pottery is in one of the letters of Vázquez de Coronado, who mentions the quality of the "loza" (pottery) of the Indians of Coctu (Fernández 1976:108). The location of Coctu in the Middle Térraba Basin suggests that the "loza" may refer to Chiriquí complex pottery. Some pottery can be clearly dated to the sixteen century. Stone (1958) reported European artifacts in tombs containing vessels associated with the Buenos Aires Polychrome and Ceiba Red Brown types.

The obtaining of more efficient instruments such as axes and knives, together with the economic and ideological dominion by the Spaniards, would have helped to transform most of the indigenous practices (subsistence, settlement patterns, technology). A replacement of the stone or wood instruments with the new artifacts was likely because of their greater effectiveness. Clay receptacles could have been replaced or at least declined in their quality.

Excavations in several sites of Southern Costa Rica have provided evidence for the incorporation of European artifacts in the indigenous system (Stone 1966, Corrales 1986b, 1989, Quintanilla 1986). Some archaeological sites can be seen as examples of the process of disruption of the indigenous system, but also of its survival. In a site dated to the 17th century, the pottery present is very coarse compared with the Precolumbian ceramics. At Paso Real, a cemetery in the middle basin of the Térraba River, Quintanilla (1986) excavated a burial with offerings consisting of coarse pottery, glass beads, and iron tools (spear heads, knives, and scissors). A carbon sample (280±80 B.P., Beta Analytic 15112) allowed dating the site to the 17th century, although those recent dates have problems of reliability. The burial showed the continuity of some practices such as the use of hilltops, and the presence of offerings. But, at the same time reflects the

process of change. The ceramics are coarse with no decoration, and the presence of iron artifacts in substitution of stone artifacts reflects technological changes (Quintanilla 1986:132).

Another report of coarse pottery in the Potrero Grande area has been related to the Postcolumbian Period (Corrales 1986b). These technological and artistic changes in pottery suggest to Quintanilla (1986:132) changes in both the economic and ideological level. The quality of pottery decreased with the presence of iron pots, and symbolic representations, closely linked to mythology and "cosmovision", were lost due to the disruption of the socio-economical structure of the indigenous societies and the imposition of new beliefs. The importance of pottery, the most frequent archaeological material in Southern Costa Rica, diminished significantly after the impact of conquest and colonization. Today, there are no reports of pottery making by indigenous groups in Southern Costa Rica.

Table 6. Chronological chart showing Diquís Subregion periods and local phases.

	DIQUÍS SUBREGION PERIODS	General Valley	Middle Térraba Basin	Diquís Delta	Coto Brus Valley	Coto Colorado Valley
1500	CHIRIQUÍ	Chiriquí	Chiriquí	Sierpe Palmar	Chiriquí	Chiriquí
800						
	AGUAS BUENAS	Quebradas	Aguas Buenas	Camibar	Aguas Buenas	Abrojo
0						
300	SINANCRÁ		Curré	Curré		Darizara
1500						

Table 7. Chronological chart showing Diquís Subregion periods and Western Panamá local phases.

	DIQUÍS SUBREGION PERIODS	Chiriquí Highlands	Chiriquí Plains	Chiriquí Coast	Bocas del Toro				
1500	SINANCRÁ	Barriles Bugaba	La Concepción Bugaba	Burica San Lorenzo Chiriquí	Bocas Aguacate				
800						AGUAS BUENAS	Chiriquí	Chiriquí	Chiriquí
300						CHIRIQUÍ	Chiriquí	Chiriquí	Chiriquí
1500									

**Table 8. Radiocarbon dates associated with the Aguas Buenas Period
(Modified from Hoopes 1996:26, Fig. 2.6)**

Lab. No.	Years BP	Years BC/AD	Site	Reference
I-6835	1130±85	A.D. 690-1040	Barriles	Linares et al. 1975:144
I-6834	1220±85	A.D.660-1010	Barriles	Linares et al. 1975:144
Gif-8514	1310±40	A.D. 656-784	Diquís Delta	Baudez et al. 1993:115
I-7260	1350±85	A.D. 550-880	Pitti-González	Linares et al. 1975:144
B-35855	1430±65	A.D. 540-695	Curré	Corrales this volume
I-7259	1495±85	A.D. 410-680	Pitti-González	Linares et al. 1975:144
B-35854	1510±65	A.D. 420-660	Curré	Corrales this volume
I-6836	1515±90	A.D. 380-680	Barriles	Linares et al. 1975:144
TEM-144	1580±90	A.D. 260-650	San Vicente	Shelton 1984:169
TEM-154	1600±140	A.D. 130-680	San Vicente	Shelton 1984:169
I-6523	1635±90	A.D. 230-630	Pitti-González	Linares et al. 1975:144
I-6537	1655±90	A.D. 220-610	Pitti-González	Linares et al. 1975:144
I-6536	1655±95	A.D. 150-620	Pitti-González	Linares et al. 1975:144
SI-1831	1685±105	A.D. 120-610	Pitti-González	Linares et al. 1975:144
B-106295	1800±40	A.D. 130-350	Ni-Kira	Herrera and Corrales 1997
I-7262	2010±275	790 B.C.-A.D. 620	Barriles	Linares et al. 1975:144
B-21106	2050±120	380 B.C.-A.D. 240	Sitio Monge	Drolet 1988:167
SI-1834	2065±75	350 B.C.-A.D. 110	Pitti-González	Linares et al. 1975:144
B-21107	2260±90	510-60 B.C.	Sitio Monge	Drolet 1988:167
GrN-1516	2290±45	400-200 B.C.	El Volcán	Haberland 1978:414
SI-1846	2300±75	520-180 B.C.	El Trapiche	Ranere 1980:27
I-7261	2365±210	910 B.C.-A.D. 70	Barriles	Lange and Stone 1984:394
SI-1835	2380±60	760-270 B.C.	Pitti-González	Linares et al. 1975:144
SI-1833	2380±60	760-270 B.C.	Pitti-González	Linares et al. 1975:144
I-5871	2685±110	1110-530 B.C.	Pitti-González	Linares et al. 1975:144

Dates in "Years BP" are uncorrected, and presented with 1-sigma error ranges.

Dates in "Years BC/AD" represent a 2-sigma, 95% confidence interval

Calibrations are based on dendro-corrected, bidecadal curves (Stuiver & Pearson 1993),

Radiocarbon Calibration Program Rev. 3.0.3c, University of Washington,

Quaternary Isotope Lab, Stuiver, M. and Reimer, P.J. 1993, Radiocarbon 35:215-230

Table 9. Radiocarbon dates associated with the Chiriquí Period

Lab. No.	Years BP	Years BC/AD	Site	Reference
B-21102	190±80	*	Murciélago	Drolet 1988:19-20
B-20109	210±80	*	Murciélago	Drolet 1988:19-20
B-21100	340±60	*	Murciélago	Drolet 1988:19-20
B-21103	580±60	A.D.1290-1440	Murciélago	Drolet 1988:19-20
B-54747	660±70	A.D.1250-1420	Rivas	Quilter and Blanco 1995:216
B-65947	690±70	A.D. 1225-1410	Rivas	Quilter and Blanco 1995:216
B-54748	710±70	A.D. 1220-1400	Rivas	Quilter and Blanco 1995:216
I-7263	740±150	A.D. 1063-1076	Barriles	Linares et al. 1975:144
B-65943	820±50	A.D. 1060-1080 A.D. 1125-1130 A.D. 1160-1290	Rivas	Quilter and Blanco 1995:216
B-15111	830±120	A.D. 990-1400	Curré	Corrales this volume
B-54743	870±80	A.D. 1010-1290	Rivas	Quilter and Blanco 1995:216
I-5766	875±90	A.D. 1000-1290	La Pitahaya	Linares 1977:319
B-54745	900±80	A.D. 1010-1290	Rivas	Quilter and Blanco 1995:216
B-65945	900±110	A.D. 900-910 A.D. 960-1300	Rivas	Quilter and Blanco 1995:216
B-54744	920±110	A.D.890-1290	Rivas	Quilter and Blanco 1995:216
B-54742	970±60	A.D. 980-1220	Rivas	Quilter and Blanco 1995:216
B-65944	980±70	A.D. 900-910 A.D. 960-1220	Rivas	Quilter and Blanco 1995:216
B-35856	1025±65	A.D. 890-1170	Curré	Corrales this volume
Gif-85-12	1030±50	A.D. 895-920 A.D. 950-1050 A.D. 1080-1120 A.D. 1140-1160	Diquís Delta	Baudez et al. 1993:115
Gif-8511	1040±60	A.D. 890-1065 A.D. 1070-1130 A.D. 1130-1160	Diquís Delta	Baudez et al. 1993:117
I-5767	1120±150	A.D. 650-1230	La Pitahaya	Linares 1977:319
I-5879	1120±170	A.D. 620-1280	La Pitahaya	Linares 1977:320
Gif-8515	1150±50	A.D. 780-1010	Diquís Delta	Baudez et al. 1993:115
Gif-8513	1180±70	A.D. 680-1010	Diquís Delta	Baudez et al. 1993:115
M-1470	1190±100	A.D. 660-1030	La Pitahaya	Linares 1977:319
B-65946	1250±70	A.D. 670-970	Rivas	Quilter and Blanco 1995:216
B-54746	3380±60	1870-1840 B.C. 1780-1520 B.C.	Rivas	Quilter and Blanco 1995:216

Dates in "Years BP" are uncorrected, and presented with 1-sigma error ranges.

Dates in "Years BC/AD" represent a 2-sigma, 95% confidence interval

Calibrations are based on dendro-corrected, bidecadal curves (Stuiver & Pearson 1993),

Radiocarbon Calibration Program Rev. 3.0.3c, University of Washington,

Quaternary Isotope Lab, Stuiver, M. and Reimer, P.J. 1993, Radiocarbon 35:215-230

* too recent to calibrate

CHAPTER IV

THEORETICAL CONSIDERATIONS

During the 1980's, theorists began to criticize the diffusion models that identified Southern Central America as the backward recipient of influences from Mesoamerica or the Andean Region. As a result, Southern Central America and the "Intermediate Area" in general began to emerge as an area characterized by cultural individuality and adaptability as primary stimuli for development (Linares 1979, Bray 1984, Hoopes 1987, 1992, Sheets 1992).

To counteract diffusion models that emphasized central places or the large-scale migration of populations, alternatives were suggested such as down-the-line transmission or a chain model, "a sort of cultural osmosis" for the spread and adoption of techniques and ideas (Bray 1984:308- 309). Interaction spheres (Myers 1978, Hoopes 1987, Abel-Vidor 1981) were presented to evaluate the area from its own achievements and the different trajectories of sociopolitical development. Some specific achievements were the early emergence of an efficient agricultural adaptation accompanied by village life, the "avoidance" of processes leading to the emergence of the state, greater societal stability, smaller polities (both geographically and demographically), maintenance of egalitarian and simple ranked societies, significant artistic achievements in certain categories, more localized economic systems emphasizing independence, and adaptive systems based on diversity (Sheets 1992:36). Central to these propositions was the notion of long term stability. Archaeological phase duration averages range from 625 years for the Central Region of Costa Rica to 875 years for the Arenal area. While this is partly the result of research methods that have conditioned chronological resolutions, it reflects the relative absence of dramatic change in material culture complexes. Those long spans without major changes were consistent with the idea of gradual change, representative of gradual, cumulative processes in relatively stable conditions (Sheets 1992).

These new views have gained additional support from the fields of genetics and linguistics. There is a growing body of genetic and linguistic evidence for an *in situ* process of change from a common ancestor, of modern indigenous groups. These

groups would have occupied the same territories for long periods without major disruptions, a situation already suggested for the archaeological record of specific regions. As mentioned in Chapter II, these insights led to the proposition of the Chibchan-Chocó Historical Area (Cooke 1992), to designate a territorial division based in the ancestral territory occupied by related Chibchan-Chocó-speaking groups. This calls for the reconsideration of the ambiguous "Intermediate Area" between Mesoamerica and the Andean Area.

In Southern Central America, or the isthmian sector of the Chibchan-Chocó Historical Area, a multidisciplinary approach involving archaeology, ethnography, genetics, and linguistics is looking at the area from a local point of view instead of from the vantage of the nuclear areas (Barrantes et al. 1990, Barrantes 1993, 1998 Constenla 1981, 1991, 1995, Cooke and Ranere 1992, Fonseca and Cooke 1994, Ranere and Cooke 1996). The present study is considered within the efforts to evaluate the propositions of evolutionary history from the fields of genetics and linguistics using the archaeological record, particularly ceramics.

A. Evolutionary History of the Amerindians of Southern Central America

Genetic studies of modern indigenous groups in Southern Central America highlight the *in situ* character of their evolutionary history (Barrantes et al. 1990, Barrantes 1993, 1998, Batista et al. 1998). The indigenous groups of the area, identified as Chibchan because of their linguistic affiliation, are different from other Amerindian groups based on particular characteristics of their genetic structure. This singularity is most likely the product of an autochthonous development during thousands of years in the region where they live today.

The basis for these studies have been: analysis of population structures, including the study of biodemography, genealogy, kinship, genetic mixture, and natural selection, research on genetic variation through the analysis of markers, specifically blood groups, enzymes, plasma protein and dermatoglyphs, and biomedical and ecological aspects (Barrantes 1993:48-49). The study of genetic loci show that these groups are distinct from groups in Mesoamerica and northern South America because of

the presence or absence of particular allelic variants. In particular, the virtual absence of DI*A (or antigen Diego), the high presence of TF*D-CHI and GPGD*C, as well as polymorphic frequencies of TPI*3-BRI, TF*D-GUA, ACP*GUA1, LDHB*GUA1 and PEPA*2-KUNA (Barrantes et al. 1990:80).

According to the genetic results, there is a strong correlation between the modern and Precolumbian geographical territory of the Amerindians of Costa Rica and Panamá, with the exception of the Kuna, a Chibchan-speaking group that migrated from somewhere in northeast Colombia to their present location (Barrantes 1993:47, 166, Batista et al. 1998:23). Strong genetic connections among the Chibchan groups of Nicaragua (Rama), Costa Rica (Guatuso, Boruca, Bribri, Cabécar, Térraba, Hüetar), and Panamá (Ngawbé, Bocotá, Kuna) suggest that those groups (and their languages) have been differentiating for the last 7,000-10,000 years with little outside infiltration (Barrantes et al 1990:64, Barrantes 1993:170-171, 1998: 8). These results imply several assumptions in archaeological terms such as the evolutionary nature of cultural sequences and correlations between archaeological and ethnographical groups. As Barrantes (1993:22) pointed out, the biological evolution of those groups was closely linked to cultural change, a co-evolution trough time of cultural and biological variables; a proposition crucial in our attempt to evaluate continuity using the archaeological record.

Regarding the area of study, it is important to note the warning by Barrantes about the modern Borucas (the indigenous group more likely to have occupied the Térraba Watershed and surroundings), since their genetic composition suggests recent contacts with non-Chibcha tribes or their provenance from South American regions in a similar way to the Kuna, in particular the presence in low percentages (less than 5%) of the allele DI*A (antigen Diego), absent in the other Chibchan groups (Barrantes 1993:114, 128, Layrisse et al. 1995:75). Since the Boruca are located in the center of the Chibchan-Chocó Historical Area, their situation should have been different from the Kuna who had contacts with neighboring non-Chibcha groups. Barrantes (1993:136) suggests an early migration from South America or a mix with groups that occasionally visited the area. For Barrantes et al. (1990:67), it is not clear whether the current Boruca population is a localized remnant of a more extensive population or a collection of extinct

tribal groups such as the Cotos, Quepos, and Borucas that occupied the area at the arrival of the Spaniards.

Despite the presence of the Diego antigen, the Boruca show close genetic relationships with the Bokotá and Guaymí and close relationships with the Bribri and Cabécar (Barrantes 1993, Layrisse et al. 1995:79). For the geneticists, the separation of the Boruca from the Bokotá-Guaymí could have happened around 2000 years B.P. and the separation from the Bribri-Cabécar around 4000 years B.P. (Barrantes et al. 1990:79, Fig. 4). Furthermore, an issue to evaluate is the changes (particularly in ceramics) that appear around 300 B.C. or A.D. 800 in the archaeological record. Could those changes be explained by the arrival of new groups, by contact (including genetic and cultural exchange) with other groups as insinuated by Barrantes, or by internal changes in local ceramic traditions? Those questions are critical in our assessment of the ceramic record of Southern Costa Rica to evaluate the archaeological counterpart to the genetic and linguistic information.

B. A Linguistic Common Ancestor and Its Archaeological Implications

The genetic situation is paralleled by the genealogical classification of indigenous languages. Constenla (1981, 1991, 1995), has established several linguistic families that cluster the languages of the indigenous groups living in Nicaragua, Costa Rica, and Panamá based on the results of the comparative method (using phonological and grammatical traits) and lexico-statistics (based on percentages of shared cognates). The Misquito and Sumu languages belong to the Misumalpa family, the Emberá and Wounaán to the Chocó family, and the rest to the Chibchan family or stock (Constenla 1991:29.). The peoples speaking languages of those families would have been in the areas where the Spaniards found them since very ancient times (with the exceptions of Kuna and Emberá/Wounaán of Panamá), and there is no evidence of large migratory movements from other areas that would have resulted in linguistic disruptions (Constenla 1991:11). The proposal of the Central American-Colombian linguistic area (Constenla 1991:126-130) that included the Chibchan and Chocoan languages from Southern Central America and Colombia was the point of departure for the Chibchan-Chocó Historical Area (Cooke 1992). The Chocoan groups occupy and occupied

territories adjacent to or surrounded by Chibchan groups and maintained different relations with them through Precolumbian and Postcolumbian times (Bray 1984:328, Constenla 1991:146-48, Fonseca and Cooke 1994:217).

The Chibchan languages have been considered the more extended and the core of different proposals of a macro-Chibchan phylum, a clustering that could engulf all the Amerindian languages and therefore of little comparative value (Greenberg et al. 1986:478), and whose relations with other families and phylums have not been proved (Constenla 1991:31). Using glottochronology or "lexico-statistical dating", based on linguistic phylogenies and constant rates of replacement of core vocabulary to estimate the times of divergence from a common ancestor (Greenberg et al. 1986:479, Greenberg 1987:27-28), Constenla (1991, 1995) postulates that the beginning of the fragmentation of the Chibchan stock would have happened around the third and fourth millennium before Christ. The glottochronological method has been criticized for linguists that consider that the method is unreliable after only a few thousand years, even if the rate of language change is constant (Weiss and Woolford 1986:491), but in the opinion of Constenla (1995:18) the general validity of the method has been defended by numerous studies. Greenberg et al. (1986:479) consider that the method is not appropriate for dating of times of origin of ancestral languages, but it can be used for arriving at the subgroupings of a linguistic stock.

The territory from Southern Nicaragua to Western Panamá is postulated as the best candidate for the original territory of the protoChibcha speakers. In Southeast Costa Rica and Western Panamá there is the greatest degree of diversity and intercrossing of isoglosses, or lines that mark the limits of diffusion of linguistic traits (Constenla 1991:43). From there very early migrations to the north and south should have originated the Paya language in Eastern Honduras and the Chibchan languages of Colombia (Constenla (1995:44). This implies that groups that occupy Southern Costa Rica and Western Panamá (our study area) such as the Boruca, Movere, Dorasques (extinct) and Chánguena (extinct) are located in the original core of the Chibchan Stock.

Constenla (1991) initially distinguished two superfamilies within the Chibchan Stock: A. for the isthmian languages and B. for the languages to the west of the Magdalena River in Colombia and the northern languages Guatuso, Rama and Paya. At some time the expansion of speakers of the dialect type A, that gave origin to the

Boruca and their occupation of Southern Costa Rica, would have broken with the speakers of the dialect type B. The barrier of the Talamanca Range is suggested to represent a key factor that encouraged the division. However, the Talamanca Range was not a barrier for the Precolumbian groups of Greater Chiriquí, whose material culture extended over both sides of the range as we have seen in Chapter III.

In a revision of his initial classification, Constenla (1995) established two large subgroups: a. Isthmian, constituted by the Kuna and all the languages to the west, including southern Costa Rica and b. Magdalenian for the languages to the west of the Magdalena River in Colombia and the frontier with Venezuela. The Guatuso and Rama of northern Costa Rica and Southern Nicaragua formed an additional Votic group. The Paya in Eastern Honduras constituted an isolated case, probably the first language that separated from a protoChibchan ancestor (Constenla 1995).

The rough correlation of the beginning of agricultural practices in the Isthmus (5000-3000 B.C) (Ranere 1980a, Cooke 1984) with the suggested glottochronological division of Chibchan languages by 5000 B.C. has prompted the suggestion that the circumscription of groups to specific territories related to incipient horticulture would have been a factor in the acquisition of a distinctive identity after internal fissions from a common ancestor (Constenla 1991:45, Fonseca and Cooke 1994:221).

Fonseca and Cooke (1994:241) have proposed a spatial differentiation in archaeological assemblages related to linguistic separations in Southern Central America during the first millennium before Christ. They proposed that a cultural distinction between the Costa Rican Northern Plains and the Greater Nicoya to the north and the Greater Chiriquí and Central Panamá to the south could have been related to: 1. A division between speakers of the Chibcha and Misumalpa languages, or 2. A northern Chibcha group (Guatuso, Rama) and a southern Chibcha group (Viceita, Guaymí). Another idea proposed by Fonseca and Cooke (1994:248) and Ranere and Cooke (1996) is that the division between Greater Chiriquí and Central Panamá could be related to an increasing cultural distance between a groups whose descendants would be the Borucas and Dorasques (Greater Chiriquí) and another group whose descendants would be the Ngawbes and Buglés (Central Panamá).

C. Continuity and Change in the Archaeological Record of Southern Central America

New data from Southern Central America tend to support the *in situ* development of different material manifestations. In areas such as the Turrialba Valley in Caribbean Costa Rica (Snarskis 1978), the Arenal Basin, in the Highlands of Tilarán (Sheets 1994, Hoopes 1994b) and Central Panamá (Cooke 1984, 1986, Ranere and Cooke 1996) different studies have defined long spans of continuous occupation since the Paleoindian Period, around 10,000-8000 B.C. until European contact in the 16th century, although some portions of the sequence are poorly documented.

The new perspective has propelled evaluations taking into account the evolutionary history of the indigenous groups (Cooke 1986, Ranere and Cooke 1996, Fonseca and Cooke 1994). Ranere and Cooke present an evaluation of data from Central Panamá that support a model for local evolution, and counters diffusionist models by demonstrating chains of connections throughout the sequence of occupation. For Cooke "...the evident interrelation among modern indigenous groups can be explained better with models of agglutination and fission from an ancient society, distributed along the region than from an hypothetical epicenter in Colombia and a population movement to the Central American Isthmus" (Cooke 1986:89).

In Greater Chiriquí, in the core of the Chibchan-Chocó Historical Area, diffusion models have been used to explain geographical gaps and chronological transitions. Similarities among selected traits of ceramic complexes, statuary and other materials, were the pretext to bring groups, via migrations or invasions, from other areas (Stone 1977, Linares 1980a, Haberland 1984a, Shelton 1984a).

More recently, some scholars have called attention to local development reflected in the ceramics and other materials (Corrales 1989, Hoopes 1992, Baudez et al. 1993). However, these considerations are still preliminary and incomplete. In this work, the emphasis is on long term changes in the ceramic sequences, since pottery is one of the better elements of material culture for reflecting change and cultural identity.

Taking the above into consideration, the main objective of this work is to evaluate the general model for *in situ* development, based on genetic and linguistic data, that has been proposed for Southern Central America. This will be addressed by a

comparative evaluation of the ceramic record of five selected zones in Southern Costa Rica (or the Diquís Subregion of Greater Chiriquí). The focus is in continuity or change among the ceramic assemblages of three different periods, ranging from 1500 B.C. to A.D. 1500, to address topics such as cultural change in the long term, the extension of territories, and models for regional political stability and their correlation with the evolutionary history of Chibchan related indigenous groups.

The following hypotheses and generalizations were utilized to guide the study:

1. In the Diquís Archaeological Subregion there was a process of long term cultural continuity since at least the appearance of sedentary agricultural villages until the arrival of the Europeans in the 16th century. That continuity is reflected in the ceramic record of the subregion.
2. A ceramic tradition in the Diquís Archaeological Subregion can be established from the Sinancrá Period (1500 -300 B.C.) to the Chiriquí Period (A.D. 800-1500). Distinct lines of continuity in terms of vessel forms, appendages and decorative modes can be established.
3. The different ceramic complexes from the Diquís Archaeological Subregion had formal and stylistic similarities with other contemporaneous complexes in Southern Central America that can be explained in terms of horizons and interaction spheres as well as diffusionist models.
4. Within the Diquís Archaeological Subregion there were internal differences in terms of distribution, presence, and absence of vessel forms, appendages, and decorative modes. However, there were more similarities among ceramic complexes within the Diquís Archaeological Subregion than between them and those of other areas.

1. Cultural change in time and space

In using the ceramic record to evaluate the proposition of *in situ* processes of change and continuity of indigenous groups in Southern Central America, unit concepts for grouping the information along the dimensions of form, time and space are essential. They can be discussed in combination or broken down into subsets that enable the archaeologist to make generalizations about the behavior of ancient peoples. In general, it is accepted that unit concepts are classificatory terms devised for the convenience of

the scholar (Renfrew and Bahn 1991:407). However, there are still strong echoes of the debates of whether or not the unit concepts are imposed on the archaeological record or discovered as something natural or real, especially the famous Ford-Spaulling debate about the "invention" or "reality" of the ceramic type (Willey and Sabloff 1993:165-168).

After World War II, there was a marked interest in American archaeology for chronology building. Several concepts were developed to deal with the dimensions of form, space and time, the working framework for any attempt at explanation. This was part of the interest in context and function of the second part of the Classificatory-Historical Period (1940-1960) as defined by Willey and Sabloff (1993:152, 154). Proponents of the New Archaeology criticized the "normative" nature of the approach, one which assumed shared ideas or templates expressed in typical artifacts, features and sites, and the spatial-temporal transmission of ideas. Watson et al. (1971:64) considered that the assumption by culture historians that ceramic variability was caused solely by change through time ignored other possible causes of variation such as geographic distance, social differences, or functional differences. They sought a more analytic approach, instead of the search of the typical artifact or site; the attempt was to discover the range of variation in the prehistoric record and to interrelate the causal variables (Watson et al. 1971:65).

While the culture history approach with its establishment of developmental sequences, historical continuity, and cultural relationships has been rejected as an ultimate goal, most of the concepts are valid and still at the core of the archaeological practice (Teltser 1995:53, Neff 1996:260, Lyman et al. 1997a:1). Advocates of "Evolutionary Archaeology", who propose that archaeological phenomena can be considered as products of Darwinian evolution, have criticized the Culture History approach because of its failure to distinguish analytically between homologous similarity, representing some common ancestry, and analogous similarity, the products of functional convergence, but consider that the emphasis in relationships of common descent (homologous similarities) was not erroneous but partial (Neff 1996:269, Lyman et al. 1997b:6, 11).

Since my objective is to evaluate the proposition that indigenous groups of Southern Central America remain in similar territories through long periods of time and that their population history may have a cultural counterpart, I have opted for an

approach centered in distribution, frequency and comparison of formal and decorative ceramic traits from assemblages associated with different periods and the use of unit concepts with historical and evolutionary dimension. Since pottery, the most common and abundant archaeological material preserved in the Diquís Subregion sites, is one of the archaeological materials that best reflect variation through time and space, it may provide a parallel situation to the linguistic and genetic analyses that use comparative and geographic distribution analyses (Constenla 1981, 1991, Barrantes 1993).

Evolutionary archaeologists sustain that while functional variants influence adaptive fitness and are subject to natural selection, stylistic variants or styles are adaptively neutral and not subject to natural selection (Lippo et al. 1997:304-305, Lyman and O'Brien 2000:42). In this sense, the complexity of stylistic features, and their neutrality with respect to selection, reduce drastically the probability of convergent or analogous similarity, in contrast with the greater possibility of similar functional forms (Jones et al. 1995:24, Teltser 1995:63). However, we must keep in mind the consideration by Bettinger et al. (1996) that a style-function rigid dichotomy can be a simplification of complex processes of evolution. Concerning this warning, vessel forms are an example of style and function conjunction.

Ceramic style continuity or change over time is discussed using the concept of tradition and particularly ceramic tradition. The tradition concept, as originally defined, emphasized in the persistence of certain cultural traits or elements in the same area over a relatively long period of time (Willey and Phillips 1958:37, Willey and Sabloff 1993:205). Specifically, a pottery tradition refers to the continuous lines of pottery development through time (Willey 1945:53).

Evolutionary archaeologists consider ceramic traditions as historical phenomena in the same way as Willey and Phillips (1958), since "Commonality of cultural descent can be recognized in distinctive form, paste, color, surface treatment, decoration, or other phenotypic traits expressed in pottery vessels" (Neff 1996:251). In this sense ceramic traditions are temporally continuous and spatially bounded entities responsible for perpetuating information related to pottery production (Neff 1996:246). Central in this definition is the concept of transmission of cultural information related to pottery making. Transmission processes indicate modes of social learning by which some kind of phenotypic traits are communicated among individuals indicating lineages or lines of

heritable continuity (Jones et al. 1995:25, Lyman and O'Brien 2000:42). While genetic information is transmitted only to offspring, cultural information may be transmitted to genetically related or unrelated individuals of immediately succeeding and subsequent generations (Neff 1996:248). Interruptions of the transmission of cultural information are related to "sorting" or the chance processes or large scale events that affect the ability to transmit pottery-making knowledge of all individuals working within a ceramic tradition (Neff 1997:246, 251).

The variable of space is addressed using the concept of horizon (Willey and Phillips 1958:33, Willey and Sabloff 1993:154) to analyze the spatial continuity of cultural traits and assemblages during contemporaneous periods and the establishment of diffusional or genetic connections between such forms. The concepts of horizon and tradition were formulated and widely used in connection with the culture area and chronological synthesis, but I am interested in their historical and evolutionary dimensions to deal with formal-decorative modes and their value for cross-cultural comparisons (Willey and Sabloff 1993:154, 204-206).

While I attempt to review the whole ceramic sequence focusing in frequency of vessel forms and decorative motifs, I do not try to discuss internal change within periods but rather change or continuity between periods. The period concept emphasizes in a generalized cultural panorama of the main traits that characterized cultural stages and do not have a precise spatial delimitation and can include a group of local sequences based on phases (Willey and Phillips 1958:28, 65-69). In the summary presented in Chapter III, I grouped some local phases within major periods arguing that there are not marked differences between associated phases to establish clear cut "late" and "early" manifestations within periods,. This is consistent with the idea of groups living in the same areas without major disruptions. While this may be due in part to lack of research in certain areas, restricted radiocarbon dates, and poor stratigraphic information, the fact is that at this point it is difficult to establish internal change within the proposed periods and their associated ceramic traditions for the area.

Three periods are proposed for Southern Costa Rica in which the different phases related to populations that produced ceramics can be placed; Sinancr (1200 years), Aguas Buenas (1100 years) and Chiriqu (700 years). The average duration of the periods is 1,000 years. These are longer than the averages from other Costa Rican

regions: (875 for Arenal, 625 for the Central Region), but they are also congruent with the idea of stability and gradual change gained through geneticists and linguists. Ceramic traditions in the absence of higher-level historical processes are particularly conservative and stable (Neff 1996:267).

Ceramics will be described in terms of modes and types. Ceramic types are used to evaluate spatial distribution, and their associated set of formal and decorative attributes to evaluate continuity or lack of it. In Greater Chiriquí, most of the ceramic analyses have used taxonomic classifications based on wares and types, including the type-variety system (Krieger 1944:277-278, Wheat et al. 1958:34-35, Sabloff and Smith 1969:278-279). Analytical classifications based on modes have been considered complementary rather than exclusive. Constructed descriptive units such as wares and types may be characterized as "cross sections" of a continuous flow at some moment of time (Lyman et al. 1997:5). They can also be seen as analytic constructs to group together phenotypic representations of the shared information within specific ceramic traditions (Neff 1996:251-252). As Dunnell (1995:35) has mentioned the objects that belong to types are empirical, but the rules by which they are associated as a type are supplied by the archaeologists.

Modes are more adequate than types for reflecting comparisons at the regional level and continuity or change through time. To evaluate the change or continuity among periods, I will use modes as proposed by Rouse (1960:313) as the customs or standards that are transmitted from generation to generation and that may spread spatially. The modes are reflected in the artifacts as attributes and can have time-space significance (historical) or refer to the nature of the artifacts (descriptive) (Rouse 1960:317). Modes or modal attributes can be considered asystematic elements abstracted from the sociocultural context of the archaeological unit under study. They can be understood as representing a historical-dialectic continuum (evolution within the lines of a same tradition), but also spatial-historical contacts or relations among different ethnic groups (grouping within the same cultural horizon) included in a region or cultural area (Sanoja 1979:22-23).

In this study, vessel forms, appendages and decorative modes have been selected since previous studies have shown that paste and surface attributes were not always the best indicators of variation or continuity within Greater Chiriquí ceramic

assemblages (Shelton 1984a:108, Baudez et al 1993:52). They also provide the basis for distribution and statistical studies of selected traits and regional comparison. Hoopes (1987) has suggested that characteristics of form, surface finish, and firing, more closely tied to technology, may have been less susceptible to externally influenced change than decoration, which was more closely linked to symbolic systems.

The state of current knowledge, which characterizes the sequence as one of long periods without dramatic internal changes but with sharp differences in the ceramic assemblages of different periods, makes this approach suitable until we have data from more stratigraphic contexts. Were changes between periods the result of gradual, cumulative processes or abrupt punctuated changes after long periods of stability, possibly the result of important external intrusions? I will use the interaction sphere concept to consider these issues

2. The Interaction Sphere Concept and Its Relevance to Regional Relations.

The interaction sphere concept has been used to counteract diffusion models in explaining the emergence of economic, social and political complexity. Here, I consider its application for using archaeological horizons and traditions in a non-diffusionist way to address change in time and space of ceramic assemblages in Southern Costa Rica. Ceramic interaction spheres are defined here in terms of different levels of geographical proximity and assemblage similarities in Southern Central America.

The interaction sphere concept is considered appropriate to evaluate the situation where several regional traditions are linked by common elements, forming, in some instances, horizons (Caldwell 1964). The concept of "interaction sphere" in the opinion of Willey and Sabloff (1993:229), partakes of some of the properties of both a tradition (in the broader sense of the definition) and a horizon style. It is considered a highly useful way of looking at the obvious results of trade, other forms of communication, and common cultural bonds. In this sense, its definition is different from other unit concepts of form, time and space. It particularly tries to avoid some of the limitations of the horizon and tradition concepts (Willey and Sabloff 1993:229).

Caldwell (1964) introduced the term to provide an alternative model to diffusionist explanations of the Hopewell phenomenon. The Hopewell "culture" extends

over a large portion of the Eastern United States. Despite regional differences in secular, domestic and mortuary aspects, a short list of exact similarities in funerary usages and mortuary artifacts are shared over great distances (Caldwell 1964:138). Instead of centers of diffusion, he proposed "an interaction sphere embracing a number of distinct societies and separate cultures" (Caldwell 1964:137). In this view there are no single sources for widespread diagnostic artifacts and usages, but various separate societies interacting within and beyond their respective regional traditions (Caldwell 1964:138). Struever (1964:88) elaborating upon the term, conceived the Hopewell interaction sphere as comprising relations of still undetermined nature, though involving ideas and goods exchanged between groups scattered over a broad area of eastern North America. He also proposed different levels of participation, since "...societies on quite different levels of complexity participated in the interaction sphere, albeit differentially" (1964:89). The interaction sphere can also be used to address micro-regional situations (Altschul 1978, Blanton 1976, Friedel 1979:50, Abel-Vidor 1981, Hoopes 1987).

The interaction sphere concept has proved to be flexible in its applications. Since its initial definition by Caldwell (1964), it has been applied to different situations that include regional cultures linked by particular ideological and economic aspects (Caldwell 1964, Struever 1964, Struever and Houart 1972, Seeman 1979), links at the religious level (Smith and Heath-Smith 1980), and economic and cultural exchange and trade networks (MacNeish et al. 1975, Myers 1978, Hoopes 1987), among others. A disadvantage is the lack of an absolute definition, which can result in contradictions, and misunderstandings of its application, meaning, and limits. One example is the contrasting position of Altschul (1978 and Friedel (1979) concerning the relation of interaction sphere with culture area. Altschul (1978) considers the interaction sphere as the equivalent of an extinct culture area. On the other hand, Friedel considers that the notion of culture area must be tested and questioned by using the concept of interaction sphere (Friedel 1979:36).

Myers (1978), Smith and Heath-Smith (1980), Abel-Vidor (1981), and Hoopes (1987, 1992), have suggested that this non-nuclear model is more suitable for understanding the situation in the "Intermediate Area" than the diffusion-from-a-central-place models. Myers (1978) used the concept to address the Formative Period in the "Intermediate Area". He looked at the relationships of that area and the areas of

Mesoamerica and the Andes as a series of overlapping circles that linked the civilizations at each end of the Intermediate Area. Each circle can also be considered a funnel-circle, which concentrates and selects cultural traits (Myers 1978:205). Myers' approach included the identification of several traditions and horizons based upon a variety of comparative evidence. He establishes three levels of comparison for ceramics: vessel forms, decorative style and specific motifs. The degree of similarity in those levels establishes the degree of cultural proximity among different groups (Myers 1978:209).

Abel-Vidor (1981) in her review of the ethnohistorical situation in Greater Nicoya (Northwestern Costa Rica and Pacific Nicaragua), considers that this area can be equated to an interaction sphere where "...Pacific Nicaragua and adjacent Nicoya share certain archaeological identifiable cultural elements, but were also characterized by a diversity of languages and ethnic identities" (Abel-Vidor 1981:88). With this approach she attempted to counteract the tendency to seek indications of direct contact with, or "influence" from, Postclassic Nuclear Mesoamerica or Central Mexico that excluded considerations about the unique and innovative character of the Precolumbian groups of Greater Nicoya" (Abel-Vidor 1981:91). However, she recognizes that by the late Precolumbian times there was a reorganization and reorientation of society, including a tighter integration of Greater Nicoya with the broad trade-articulated Mesoamerican interaction sphere (Abel-Vidor 1981:91). In a similar way, Smith and Heath-Smith (1980:24) had argued against "waves of influence" from Central Mexico to Nicoya. They see an "in situ" developmental sequence and gradual addition of symbols and suggest the non-nuclear interaction sphere model to understand the late "mesoamericanization" of the area.

Hoopes (1987, 1992) in his discussion of the Formative Period in the Intermediate Area echoes the ideas of Myers and suggests a series of interaction spheres based on the discussion of technological, formal and decorative elements and associated radiocarbon dates. In his position, diffusionist models (e.g. Ford 1969) are not the answer to explain the spread of Formative ceramics. Instead of a dendritic pattern with a single point of origin and increasing number of successive branches and sub-branches as ideas spread across populations, he suggests a latticework pattern with several regional 'interaction spheres' where ideas originated whose spread and

communication does not appear to have been regular or predictable (Hoopes 1987:443).

Ceramic interaction spheres will be discussed first at the microregional level of Southern Costa Rica. A more regional scope will be pursued in terms of related local traditions in order to discuss the variants in the ceramic sequence and the already proposed diffusionist or migrations explanations vs. *in situ* cultural processes. This concept, as well as horizons and traditions are used to determine whether or not cultural phenomena as represented by pottery reflect the continuity in time and space of indigenous population in Southern Costa Rica suggested by linguistic and genetic data. The question of *in situ* population and the relation of cultural and biological evolution is also of relevance for the history and identity of the indigenous groups of Southern Costa Rica.

CHAPTER V

METHODS AND CERAMIC RESULTS

Four different sources were used to obtain data for the ceramic analysis: publications, unpublished reports, analysis of collections stored in laboratories, and analysis of collections obtained through limited fieldwork.

In the case of unpublished reports and stored collections, the author has relied more on information from his previous studies. Stored collections obtained for other researchers were analyzed for the first time by the author. Unpublished reports are used with permissions of the authors or the National Museum of Costa Rica where they are stored.

A. Literature Review from Published and Unpublished Reports

A review of the published and unpublished reports about ceramic analyses done in the different zones proposed for Southern Costa Rica was undertaken to gather information about ceramic modes and types. The review was extended to the published information for Western Panamá because of the close relations between the two subregions and to try to standardize comparisons. Preliminary lists of modes and types for each period were prepared summarizing the descriptions provided by the different authors. For the Sinancrá Period, a major synthesis has sought; a summary of the main characteristics of related complexes at the Southern Central America level was done. Charts with the original information were prepared for reference. They include the total and percentage presence of modes and sherds related to types by specific complexes in the different sites of the established zones. They were later summarized in charts by period and the specific zones under study.

Some limitations were found in the literature review. In many cases there are only descriptions of the ceramic with no quantitative information about modes or types, or quantitative information was given in the text but not in tables, or described information did not match the numbers in tables. In some cases, only select information was provided. Some categories were too general (for example, from the description one could establish that the "bowl" category included both tecomates and open bowls). In many cases, none graphic information was given to compare with the description of

particular attribute. However the descriptive information (and comments about their presence or importance) was useful for establishing the modes and charts of presence-absence of the modes and types. Also information for regions is uneven because of the differences in the number and detail of studies that have been undertaken.

From the modal attributes established for the study it was possible to re-analyze the information provided in the reports and publications. Because of the limitations with quantitative information, charts with presence or absence of modes and types were also prepared, by site, by zone and by period. For the comparison of the ceramic of the Sinancrá Period with other complexes in Southern Central America, illustrations of the different modes and their representations in the complexes were prepared, so it is possible to see the similarities and differences among them and to justify the grouping of attributes.

A compilation of the descriptions of all ceramic types and wares postulated for the different subregions of Greater Chiriquí was done to deal with the history of changes on nomenclature. That information is provided in the Appendix 3. When different types can be grouped, the basis for the re-grouping was noted.

B. Fieldwork

This research was more oriented to literature review and analysis of stored collections. A significant part of that information was the product of the author's previous fieldwork that remained unpublished or without laboratory analysis (see Table 10). Limited fieldwork was undertaken and targeted to the zones where the available information was very limited. This was done with the purpose of evaluating and comparing the results obtained from the literature review and the collection analysis. The fieldwork comprised two major activities:

1. Exploratory surveys

Given the information already available, the fieldwork was oriented to the location of sites that could help fill gaps in the information. Given the previous knowledge of the area, visits to selected areas were conducted. A team of three persons

including the author conducted what Flannery (1976:132) has called “purposive” surveys, but given the previous knowledge of the area I have preferred to denominate them “predictive” surveys (Corrales 1986b:55). These surveys included interviews with local people who have a first hand knowledge of the areas, and reconnaissance of suitable areas to contain archaeological remains to complement the knowledge from previous research. The exploratory surveys were conducted particularly in the Coto Brus and Coto Colorado Valleys.

2. Surface Recollections

Several sites were located, but in most of the cases the evidence was too scant or would require major excavations. The activities at the sites were restricted to surface or profiles collections rather than extensive excavations. The surface collections were oriented to “complete” collections of samples as large as possible, particularly “diagnostic” material (rims, decorated sherds and appendages) to test and complement the results obtained from the literature review and collection studies.

C. Analyses of Collections

Ceramic collections obtained by other researchers and by the author during previous projects and the collections obtained through this study’s fieldwork were analyzed following modal and typological criteria. In the case of very large collections, a sampling process was implemented. Stored collections were selected from sites: a) with samples of the different ceramic assemblages under analysis, b) with reports of the ceramic context, and c) from the zones under study. The analysis was done using only diagnostic sherds, because the focus was vessel forms, appendages and decorative modes. These have been considered appropriate for evaluating change or continuity through time and space in the pottery of Greater Chiriquí.

1. Modal analysis

A modal analysis using the established categories from the literature review and the preliminary analysis of the different collections was first conducted. Then, when a precise view of the regional distribution of modes was available, a review of the first analysis was done to obtain a more standardized result. I followed the categories and descriptions established by the various authors as much as possible. In some cases, the categories were slightly modified to fit general descriptions of particular modes. Also, I combined some categories if they could be grouped in a more general category. When the information provided could not be fit in the master lists accurately, the categories established by the author were followed.

The different ceramic samples were analyzed using the diagnostic attributes (rims, decorations, handles and supports) in order to fit the data within these modes and conduct regional comparisons. Decorative modes usually refer to specific designs that could have executed with a combination of techniques or with a single one. In some cases, due to the absence of whole vessels a decoration technique may be postulated as a single mode, but there is the possibility that the technique forms part of a more complex design. The list of modes and illustrations are provided in Appendix 1.

2. Typological analysis

Parallel to the modal analysis, a typological classification was also undertaken since most of the authors have used this method. Both classifications systems are considered complementary. In cases where it was possible, a typological association was made using a correlation of the classifications by Haberland (1976), Linares (1968), Spang et al. (1980), and Baudez et al. (1993). But, since there are some problems with the degree of inclusiveness of each type, this remains problematic for regional comparison. So, instead of establishing a single category types that are very closely related or just have different names were grouped together. I prefer this approach until an agreement is reached among the different researchers. As it was shown in Chapters II and III, individual efforts have often made matters worse. A discussion of each type and the reasons for grouping are given in Appendix 3.

D. Statistical Analyses

1. Cluster Analysis

A cluster analysis using the percentages of the different vessel form and decorative designs modes was employed to determine relationships among the different complexes in Southern Central America during the Formative Period (1500-300 B.C.). The analysis was done with the SPSS statistical package (Version 10.0 for Windows). The idea behind these analyses is that variables or categories "can be similar to one another in different levels, so that the results can be represented in the form of a dendrogram: a tree diagram representing the relationships between individuals and groups" (Shennan 1990:212).

The relevance of this analysis is the use of quantitative data to avoid the bias of presence-absence qualitative analysis where the degree of importance of the different traits would be masked. The results were contrasted with the assessments of grades of relationship between complexes based on general comparisons and used to propose different interaction spheres among those groups. A major goal of this analysis was the opportunity to compare it with the results from similar analyses using genetic and linguistic information (Constenla 1991, Charts 4,5, Barrantes 1993, Fig. 6.4, 6.5). Any parallels in these analyses could then be assessed.

E. Sites Studied by Zone

The following is a summary of the sites or groups of sites that served as reference for the present study. In the case of published information only a brief discussion is given. For unpublished sites a relatively more detailed discussion about the context of the sample is provided. The sites are organized according to the different study zones. Their location is showed in figures 5, 6 and 7.

1. Upper General Valley

a. Hidalgo Site

The Hidalgo Site (SJ-18-Hd) is located in a small range at 550 m. overlooking the Pejibaye Valley, an intermontane valley in the Coastal range. The site remains little studied, still scarcely investigated. It is unicomponent from the Aguas Buenas Period and covers an area of about 1 ha. This site was particularly important because a clear association between "typical" Aguas Buenas material and sherds identified as the Quebradas type was first observed there. The evidence for the site was key to the recognition of Quebradas as a new ceramic type.

Some ceramic refuse was found at the top of the small range; but most of the material was located from the slopes of the ridge, probably eroded from the top. Several test pits located at the base of the slope showed that the material were superficial. A ceramic collection from those pits as well as unsystematic surface collections have been re-analyzed for this study.

b. Quebradas Site

The Quebradas Site (SJ-211-Qb) is located in the small valley of Quebradas, along the piedmont of the Talamanca Range (900-1000 m.), Upper General Valley. It consists of ceramic and lithic deposits occupying an area of approximately 9 ha. on terraces associated with the Quebradas River, a tributary to the General River. It has components associated with the Aguas Buenas and Chiriquí Periods. I carried out an evaluation of the site using stratigraphic pits and a general survey in 1984 (Corrales 1986c, 1988). Later, Henderson (1986) conducted another survey of the same area. Henderson and I focused our ceramic analyses on typological identifications without quantification of modes.

Drolet (1992) presented additional information with a summary of his typological identification of material from Quebradas. The ceramic samples came from controlled surface collections and test excavations (Drolet 1992). The quantitative information used here are from Table 2 (Drolet 1992:213).

Since this is the site where the Quebradas pottery was initially identified, a new modal analysis was considered pertinent to a comparison of the results with other sites

in the subregion. Ceramic material comes from several test pits and surface collections (Locality 1, Op.2, Locality 2, Op. 2, Locality 6, pit 5) obtained by Corrales (1988).

c. El Cholo

El Cholo is a site that was affected by agricultural activities and the construction of the Inter-American Highway, near the town of Repunta at 590 m. In 1992, the leveling of about 5000 m² for construction in one sector of the site prompted an effort to rescue an area where ancient alignments of cobblestones appeared (Corrales 1996b). Excavations revealed a funerary zone from the Chiriquí Period. Systematic surface recollections using a grid with units of 2 by 2 m, also revealed that the area was an habitation zone during the Aguas Buenas Period and probably during the Chiriquí Period. The ceramic material of the Aguas Buenas Complex came from surface collections while the material from the Chiriquí Complex came from several altered and unaltered tombs and surface collections (Corrales 1996b).

I conducted a typological analysis of the ceramics (whole vessels and sherds), with drawings and description of all diagnostic sherds recovered (Corrales 1996b). From that information, it was also possible to conduct a modal analysis using the categories established for this study.

d. Herradura

Kantner (1988) conducted a survey in the small high mountain valley of Herradura (1300-1900 m.a.s.l.) and registered several sites associated with the Aguas Buenas Period. Besides surface collections, he excavated test pits in the site SJ-304. This was a habitation site covering an area of 18,750 m² at 1460 m. He conducted a classification of the ceramic material from the site using existing typologies. A summary of his data was used for comparative purposes (Kantner 1988: Figs. 2, 5-13,16). Based on Kantner's comments, plain sherds were added to the Quebradas type (Kantner 1988:62).

e. Las Brisas-Monge

Drolet (1992) presented a table with a summary of his typological identification of the ceramic material from three principal sites in the Upper General Valley: Las Brisas-

Monge-Quebradas. Quebradas was already mentioned. Las Brisas was a large village (4000 m²) with refuse concentrations located at an altitude of 620 m. At Monge the evidence suggested the use of natural elevations as house platforms. The ceramic samples came from controlled surface collections and testing excavations (Drolet 1992). The quantitative information came from Table 2 (Drolet 1992:213).

f. Rivas Site

Rivas is located in a restricted zone on narrow river terraces at the confluence of the Chirripó and Buena Vista rivers at 900 m. The site covers 2 km² and presents different structures related to socio-ceremonial and habitation areas. These are clusters of circular and oval foundations of cobblestones from 10 m. to 40 m. in diameter, artificial causeways, quadrangular structures, and plaza-like areas. There are at least three separate cemeteries within the site. The burials present cobble pavements with pottery and occasional stone artifacts as offerings (Quilter and Blanco 1995:209).

Drolet (1992) conducted an initial survey and estimation of its internal composition. Since 1992, it has been the center of attention of a long term and multidisciplinary project (Quilter y Blanco 1995). The main occupation of the site was during the Chiriquí Period, with some traces of the Aguas Buenas Period. Quilter and Blanco (1995:209) reported the presence of sherd associated with several ceramic types from controlled excavations; but they did not give quantitative information.

For the purposes of quantification of a sample from a late site in the Upper General Valley, a collection from Operation A was analyzed by the author. Operation A consisted of a group of test pits, horizontal excavations and surface collections in an area with circular foundations and refuse deposits. Because the excavations were not very deep, the amount of material from individual units was too small for comparative purposes; for this reason all were grouped in a single sample.

g. Pacuar

Rago (1988) in her study of the Peñas Blancas-Pacuar area focused her excavations in refuse areas of the sites SJ-295-PB (570 m. of altitude, 34 500 m²) and SJ-34-PB (650 of altitude, 17 350 m²). She conducted typological and modal analyses of ceramic obtained from those sites (Rago 1988:76, Table 3). Her information about types

and description of modes was used but, not the quantitative information about modes. This is because she did not associate specific modes with particular types or separate them by period.

2. Térraba Middle Basin

a. Boruca Project

Drolet (1983), in his survey of the impact area of the Boruca Hydroelectric Dam registered a considerable number of sites associated with the Aguas Buenas and Chiriquí Periods. Most of the ceramic material came from surface collections. Drolet (1983, 1992) has provided a description of the principal modes but he did not present information about absolute number of their frequency.

b. Murciélago

Murciélago is located on a broad terrace next to a wide stretch of alluvial soils next to the conjunction of the Térraba River and Coto Brus River at 120 m. (Drolet 1983). The site covers approximately 32 ha., with six residential sectors that contain cobble house foundations forming clusters of two to three units. Around the perimeter of the house structures are dense clusters of refuse pits and built-up daily work areas. A causeway links probably public structures to house structures in one sector (Drolet 1984:258). Cemeteries of two types located in hilltops surrounded the site (Drolet 1986:327).

Drolet (1983) conducted horizontal excavations and test pits in different residential sectors. Information for the frequency of types identified in residential sectors came from Drolet (1984:138, Table 1, 1992:228, Table 3).

c. La Pista Site

La Pista is a small cemetery located in a hill next to Murciélago. Iwaniec (1986) found offerings in single tombs consisting of ceramic vessels and lithic artifacts. She analyzed the ceramic vessels using a typological classification and her results were adapted for this study.

d. Potrero Grande

I conducted systematic and exploratory surveys of the Potrero Grande area recording sites associated with the Aguas Buenas and Chiriquí Periods (Corrales 1986b). Potrero Grande is located in the Middle Térraba Basin between 180 and 310 m. The area is drained by the Coto Brus River and other secondary rivers such as Platanillal and Guineal.

To describe ceramics from surface recollections I used modal attributes, but failed to give quantitative information. However the information was used for presence-absence charts.

e. Curré Site

Curré covers about 6 ha. with deep stratified deposits containing sherds, lithic debris, and different structures located in the narrow valley formed by the Térraba River in its crossing of the Costeña Range and occupies a flat alluvial terrace at 100 m. There are three artificial mounds with cobble stone walls. A wall constructed with cobblestones also delimited the west section of the site. There are burials within the living area and a cemetery in an artificial mound (Corrales 1985, 1989).

Curré is a unique multicomponent site in Southern Costa Rica. Besides the evidence of three different phases, the presence of glass beads and metal tools in the domestic area and surrounding cemeteries suggest that Curré was occupied at the moment of Conquest. The earliest ceramic material came from the lower levels of stratigraphic excavations that I conducted during 1994 and 1995 (Corrales 1985, 1989). The modal classification of the ceramic material associated with the Curré Complex was adapted to this study. Specific information about modal description, total and percentages of the different ceramic modes comes from Charts 1, 2 and 3 (Corrales 1989).

Material from the Aguas Buenas Complex was identified in the middle levels of the excavations. Large amounts of Chiriquí complex materials were recovered from the upper levels. I used a modal analysis (Corrales 1985), but the information published was suitable only for the presence-absence approach.

Later, I, Borgnino y Lauthelin (1992) reclassified the ceramic from Curré using the typology proposed for the Diquís Delta (Baudez et al. 1993). Our results are used

here to document the presence and frequency of sherd related to ceramic types during the Aguas Buenas and Chiriquí Periods.

Information also came from the analysis by Badilla (1994a) who used the Baudez et al. (1993) classification in his analysis of a group of stratigraphic pits designated "Operation. 3". These excavations were located in the peripheral areas of the site.

f. Buenos Aires

Buenos Aires Site consisted of two funerary mounds in the current location of the city of Buenos Aires (360 m. of altitude). It was excavated by Haberland (1961b, 1984) who presented the information of total and percentages of ceramic types identified as offerings in the different graves associated with the mounds (Haberland 1961b:40,1984b:273, Table 1).

3. Diquís Delta

a. Palmar Sierpe

The site is located in an extensive alluvial delta formed by the Térraba and Sierpe Rivers averaging an altitude of 10 m. It is considered a "megasite" with extensive deposits of ceramic sherds and lithic debris over an area of approximately 900 ha. (Badilla et al. 1997). There is presence of structures built up with cobblestones: circular foundations, circular, quadrangular and rectangular mounds with cobblestone walls, pavements, empty areas (plazas), and ramps. Monumental statuary is also present, particularly stone balls and peg-based anthropomorphic and zoomorphic statues (Lothrop 1963, Stone 1977, Badilla 1996, Badilla et al. 1997, Stirling and Stirling 1997, Fernández and Quintanilla in press). There are also reports of cemeteries with gold, ceramic and stone artifacts.

Information about sherds with Curré-like characteristics is present in the unpublished report by Quintanilla (1992); sherds decorated with plastic techniques (shell, punctation, incision) and small globular vessels and flat plates with a thick rim or "budares" were found in surface collections in the lowlands of the Térraba-Sierpe Delta,

Lothrop (1963), in his ceramic analysis obtained from stratigraphic cuts, established several general wares and specific types. He described them in detail, providing quantitative data that was limited in utility for specific comparisons because of the mixing of different types and modes from Aguas Buenas and Chiriquí Periods, but useful for establishing presence-absence charts. There is no quantitative data associated with specific modes.

Baudez et al. (1993) presented information about types, modes and their total frequency from their stratigraphic excavations that were extensively used for this study. They provided detailed descriptions and quantitative information for the types established and some specific information about particular modes associated with the different types.

b. Finca 4

This site forms part of the cluster of sites associated with the large settlement of Palmar-Sierpe (Badilla et al. 1997). It occupies roughly the same area studied by Lothrop (1963) and Baudez et al. (1993). Its is located at 10 m. and measures about 70 ha.

A sample obtained by Badilla (1996) from a stratigraphic cut associated with the excavation of a cobblestone structure was selected for the analysis of the late occupation in the area. The sample comprised material from the labeled Concentration 4, column 2 (11 levels) and column 3.

c. La Olla

Stone (1943) in her report of excavations of some artificial mounds from La Olla area at the start of the foothills of the Coastal Range described the ceramics in a general way without providing quantitative information. Her descriptions were used for the presence-absence charts.

d.. Ojo de Agua

Quintanilla (1992) recorded several sites in her survey of the area between Palmar and Sierpe. One of the sites, Ojo de Agua was located in an extensive alluvial plain at 10 m. A long narrow mound (almost 1 km. long and 20-50 wide) presented

ceramic material on surface. The material of this site was selected because of its association with the Aguas Buenas Complex. A surface collection was analyzed using the modes established for this study.

e. Grijalba II

The site is located in the edge of the Diquís Delta plains in a rugged area, at the base of the Brunqueña Range at 30 m. of altitude. It was studied by De La Fuente (1994), the principal sector (with an extension of approximately 3.7 ha.) consists of a group of mounds (structures 5 and 6) 20 meters of diameter and 1.5 m. height and circular foundations with adjacent cobble stone pavements. It also has two concentrations of ceramic material, a stone ball 1.20 m. in diameter, causeways between structures, and artificial walls delimiting natural terraces (De La Fuente 1994, 1995). Work at the site included cleaning of vegetation to expose the structures and collecting of surface materials. The deposit was very shallow, no more of 25 cm. in depth. A sample from the Concentration 1, SW sector was selected for this study and it is complementary to the sample of Finca 4 and the analyses of Baudez et al. (1993) from the alluvial plain.

f. Jalaca

Stone (1963a,b) reported the findings of a graveyard from Jalaca, in the eastern sector of the Diquís Delta. Along with metal, stone, resin, bone, and shell ornaments she mentioned the presence of ceramic offerings. She did not provide quantitative information, only descriptions of the pottery.

Barrantes (1988) recorded 31 sites from surface evidence on the Jalaca area (Jalaca-Villa Colon-Finca Guanacaste). The area comprised lowlands associated with the Sierpe River, the piedmont and slopes of the Coastal Range. Corrales and Badilla (1988, Charts 1,3,4,5, and 6) conducted the ceramic analysis and provided modal and typological information that was adapted to this study.

g. Caño Island

The site occupied most of the island's area. The island is high and flat (100 m. of altitude). It measures 3 km. long west-east and 1,5 km. maximum width. Seventeen

locations were recorded with ceramic sherds (Finch and Honetschlager 1986:192), but they can be considered as a single site (Corrales and León 1987). Most of the concentrations were shallow (no more than 50 cm.), but in some areas the deposits were deeper. There are stone tools, especially manos and metate fragments, some broken statues and three stone balls. Cemetery areas have been severely looted.

Caño Island was occupied during different periods. Finch and Honetschlager (1986) were able to distinguish different localities with Aguas Buenas and Chiriquí occupations and collected ceramic samples from these localities. The results of their ceramic analysis were used for this study (Finch and Honetschlager 1986:198, Table 13.1).

Corrales and León (1987) reported several sherds with Curré-like characteristics from stratigraphic excavations in Caño Island. Later, Badilla (1994b) identified two other sherds in a collection reported initially by Finch and Honetschlager (1986).

4. Coto Brus Valley

a. El Tigre

Haberland (1959b) recorded El Tigre, a site with stratified deposits located in Finca Aguas Buenas, near the border with Panamá. Stratigraphic excavations at this site led to the postulation of the Aguas Buenas Complex. Haberland (1959b) described the material in terms of wares. However, from his description of the different wares it was possible to correlate them with his typological classification (Haberland 1961a). His information on totals and percentages of sherds linked with ceramic types were used for this study.

b. San Vito

Based on their excavation of several habitation sites in the San Vito area, Laurencich de Minelli and Minelli (1973:219-224), provide descriptions of the ceramic types and varieties established by Haberland (1961a) and added a third variety to the Moravia Red type; but they did not provide quantitative data.

c. Zoncho Site

The Zoncho Site consisted of a cluster of funerary mounds next to the Zoncho Lagoon (Laurencich de Minelli and Minelli 1966). It was possible to update the typological classification and use the charts with the quantitative information of each type provided by Laurencich of Minelli and Minelli (1966:421-424).

d. Las Tablas

A report of a survey of the Las Tablas Protective Zone (between 1200 and 1800 m.) provided information on proportions of several Chiriquí modes found in limited surface collections of looted tombs (Corrales and Morales 1982, Corrales 1984). León (1986) included a collection of the site in her functional analysis of the Aguas Buenas pottery in the area and described functional categories of vessels.

e. Cotoncito Site

Cotoncito is located in the slopes of the Talamanca Range at 1580 m.a.s.l., in the terraces of the Cotón River (Corrales 1984). Since Cotoncito is a single component site, with relatively deep deposits (1 m.) covering 3 ha. It was considered a representative sample of the Aguas Buenas complex in the Coto Brus Valley. I conducted stratigraphic excavations there in 1982 (Test Pit 1) and 1985 (Test Pit 2). The analysis of the Test Pit 2 was presented in a 1986 report (Corrales 1986a). Material from the Test Pit 1 was analyzed for the purposes of this work.

f. El Paraíso

El Paraíso is located in the slopes of the Fila Anguciana at 1150 m. of altitude. Technically, it is in the Diquís Valley since the rivers and quebradas present in the area are tributaries of the Limón River, which goes to the Térraba River. But, the site is just 5 km. from the division line with the Coto Brus Valley. Since we were not able to locate a Chiriquí site in the core of the Coto Brus Valley, I am taking this site as an example of the Chiriquí Period in the Coto Brus Valley, because of its proximity.

El Paraíso contains ceramic deposits in some terraces at the base of slopes of a range. A minimum area of 5,000 m² was observed. The material is associated with a

deep humic layer. The material was collected mostly from a profile on the side of a road that divides the site in two sectors. Local informants reported a funerary sector.

5. Coto Colorado Valley

a. Ni Kira Site

The evaluation of the archaeological impact of a wood chip plant in Coloradito, led to the discovery of the Ni Kira Site and the presence of ceramic sherds with characteristics similar to Curré in stratified deposits with no structures (Herrera 1996). The Ni Kira site is located in the base of the slopes of the Costeña Range or Fila de Cal at 50 m. of altitude. The site, encompassing around 10 ha., occupies a low altitude hill and a terrace next to the Coloradito River.

Herrera and Corrales (1997a) conducted rescue excavations consisting of stratigraphic pits excavated in arbitrary 10 cm. levels. The stratigraphic pits were located in selected areas in the upper part and at the base of the hill to enable a better sample of the site's ceramic sequence. They had as an additional purpose that of obtaining a ceramic sample for this study. The results of the excavations and the ceramic analysis led to the formulation of the Darizara and Abrojo Ceramic Complexes (Herrera and Corrales 1997b). The material of the Darizara Complex came mostly from the lower levels of the different stratigraphic pits, while material from the Abrojo Complex (Aguas Buenas Period) tend to be in the upper levels. Descriptions and quantitative information was adapted from Herrera and Corrales (1997b, Cuadros 1 and 2).

b. Los Araica Site

For the purposes of this work, the author did a reconnaissance of the Coto Colorado Valley, where very few sites have been located. As a result, the Los Araica Site was located in a flat area, used for an oil palm plantation, between the India and Mariposa quebradas at 15 m. A reconnaissance of an area of about 3 ha. allowed observation of material from the surface and in profiles. The ceramic deposits were associated with a superficial humic layer of about 20-30 cm in thickness.

Within the area there was a funerary zone heavily looted. The graves were located in flat areas and also in artificial mounds according to accounts of local informants. An artificial mound (25 x 15 m., 1 m. height) present in the area probably had a funerary function. A sample of sherds was obtained from the banks of the India quebrada, and the cut of an internal road. Some discarded sherds and fragmented vessels left behind by looters were collected from the funerary zone. This collection was analyzed using modal categories established for this study.

c. La Chiva

Guerrero et al. (1990) reported from La Chiva, a cemetery that was being looted. The site occupies an area of 2000 m² at an elevation of 20 m. Several vessels were identified typologically and their descriptions were used in the study for presence-absence of ceramic types

d. Altos de San Antonio

Herrera and Corrales (1997) reported the presence of several vessels and their typological identification from Los Altos de San Antonio. This is a looted cemetery located on top of a hill and measuring approximately 1750 m². It is located at 280 m. in a zone close to the border with Panamá.

Table 10. Sites or groups of sites used in this study.

Site	Code	Type	Zone	Period	Activity	Altitude m.a.s.l.	Size m. ²	Source
Quebradas	SJ-211- Qb	H	Upper General	AB-CH	E-SR	950	90,000	Corrales 1986 Henderson 1988 Drolet 1992
El Cholo	SJ-59- ECH	H-F	Upper General	AB-CH	E-SR	590	5000**	Corrales 1996b
Herradura	SJ-304- Hd	H	Upper General	AB	E	1460	18,750	Kantner 1988
Las Brisas	SJ-250- LB	H	Upper General	AB	E-SR	620	4000**	Drolet 1992
Monge	SJ-251- Mg	H	Upper General	AB	E	780		Drolet 1992
Rivas	SJ-148- Rv	H	Upper General	CH	E	900	4,000,0 00	Quilter and Blanco 1995
Pefias	SJ-295-	H	Upper	AB-CH	E	570	34,500	Rago 1988

Blancas	PB SJ-34- PB	H-F	General	AB-CH	E	650	17,350	
Hidalgo	SJ-18- Hd	H	Upper General	AB	E-SR	550	10,000* *	Corrales 1988
Curré	P-62-Ce	H	Middle Térraba	S-AB- CH	E	100	60,000	Corrales 1985, 1988
Buenos Aires		F	Middle Térraba	CH	E	360		Haberland 1961b, 1984a
Murciélago	P-107- Mc	H	Middle Térraba	CH	E	120	320,000	Drolet 1983
La Pista	P-220- LP	F	Middle Térraba	CH	E			Iwaniec 1986
Potrero Grande*		H-F	Middle Térraba	AB-CH	SR	180-310	400- 37,500	Corrales 1988
Palmar- Sierpe *		H	Diquís Delta	AB-CH	E	10	9,000,0 00	Lothrop 1963 Baudez et al. 1993
Ojo de Agua	P-283- OA	H	Diquís Delta	AB	SR	10		Quintanilla 1992
La Olla		F	Diquís Delta	CH	E			Stone 1943
Finca 4	P-254- F4-6	H	Diquís Delta	CH	E	10	700,000	Badilla 1996
Grijalba II	P-260- Gbil	H	Diquís Delta	CH	SR	30	37,000* *	La Fuente 1994
Jalaca *		F	Diquís Delta	CH	E SR	10-380		Stone 1963 Corrales and Badilla 1988
Caño Island		H	Diquís Delta	S-AB- CH	SR E	100		Finch and Honetschlag er 1986 Corrales and León 1987 Badilla 1994
Zoncho	UCR-68	F	Coto Brus	CH	E	1200		Laurencich de Minelli and Minelli 1966
Las Tablas *		H	Coto Brus	AB	SR	1200- 1800		Corrales and Morales 1982 León 1988
Cotoncito	P-115-Ct	H	Coto Brus	AB	E	1580	30,000* *	Corrales 1984
El Paraíso	P-343- EP	H-F	Coto Brus	CH	SR	1150	5000 **	Corrales this volume
Ni Kira.	P-331-	H	Coto	S-AB	E	50	100,000	Herrera and

	NK		Colorado					Corrales 1997
Los Araica	P-341-LA	H-F	Coto Colorado	CH	SR	15	30,000* *	Corrales this volume
Altos de San Antonio	P-106-ASA	H-F	Coto Colorado	CH	SR	280	1750**	Herrera and Corrales 1997
La Chiva	P-159-LCh	F	Coto Colorado	CH	SR	20	2000	Guerrero et al. 1990

* group of sites

** partial estimation

H Habitation

F Funerary

S Sinancrá

AB Aguas Buenas

CH Chiriquí

E Excavation

SR Surface recollection

F. Frequency and Distribution of Modes by Zones

The different ceramic samples were analyzed using the established ceramic modes (Appendix 1, Figs. 12-14). The analysis was oriented to characterize the modes of each period, for this reason there is not a general list for all periods. To keep the particular lists of modes by period will facilitate changes in future investigations. The results are presented according to period and the different zones and in terms of their total and percentages. There is not an evaluation of internal change within periods since the current purpose is to evaluate change among periods. Present limitations to these studies are the lack of stratified deposits in most of the sites and the problems in distinguishing early and late components. Internal change studies within periods may be pursued in future works.

1. Sinancrá Period (1500-300 B.C.)

The information of this period is scant and limited to only three regions, since there is no information for the Upper General Valley and the Coto Brus Valley. Data about the Curré and Darizara ceramic complexes comes from reports of excavations restricted to single sites in the Middle Térraba Basin (Corrales 1985, 1989) and the Coto Colorado Valley (Herrera and Corrales 1997a,b). Corrales and León (1987),

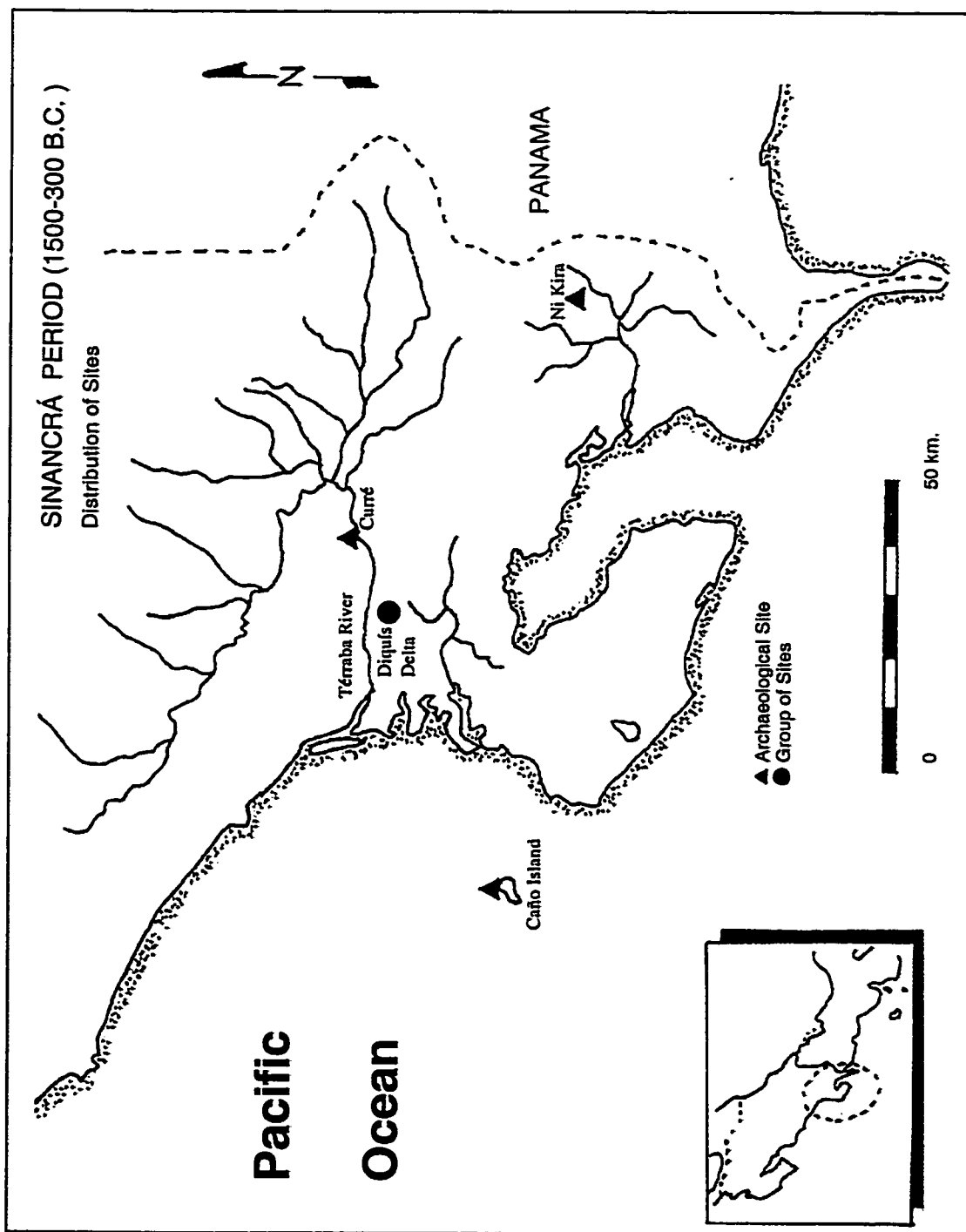


Figure 5. Distribution of Archaeological Sites, Sinancrá Period (1500 - 300 B.C.)

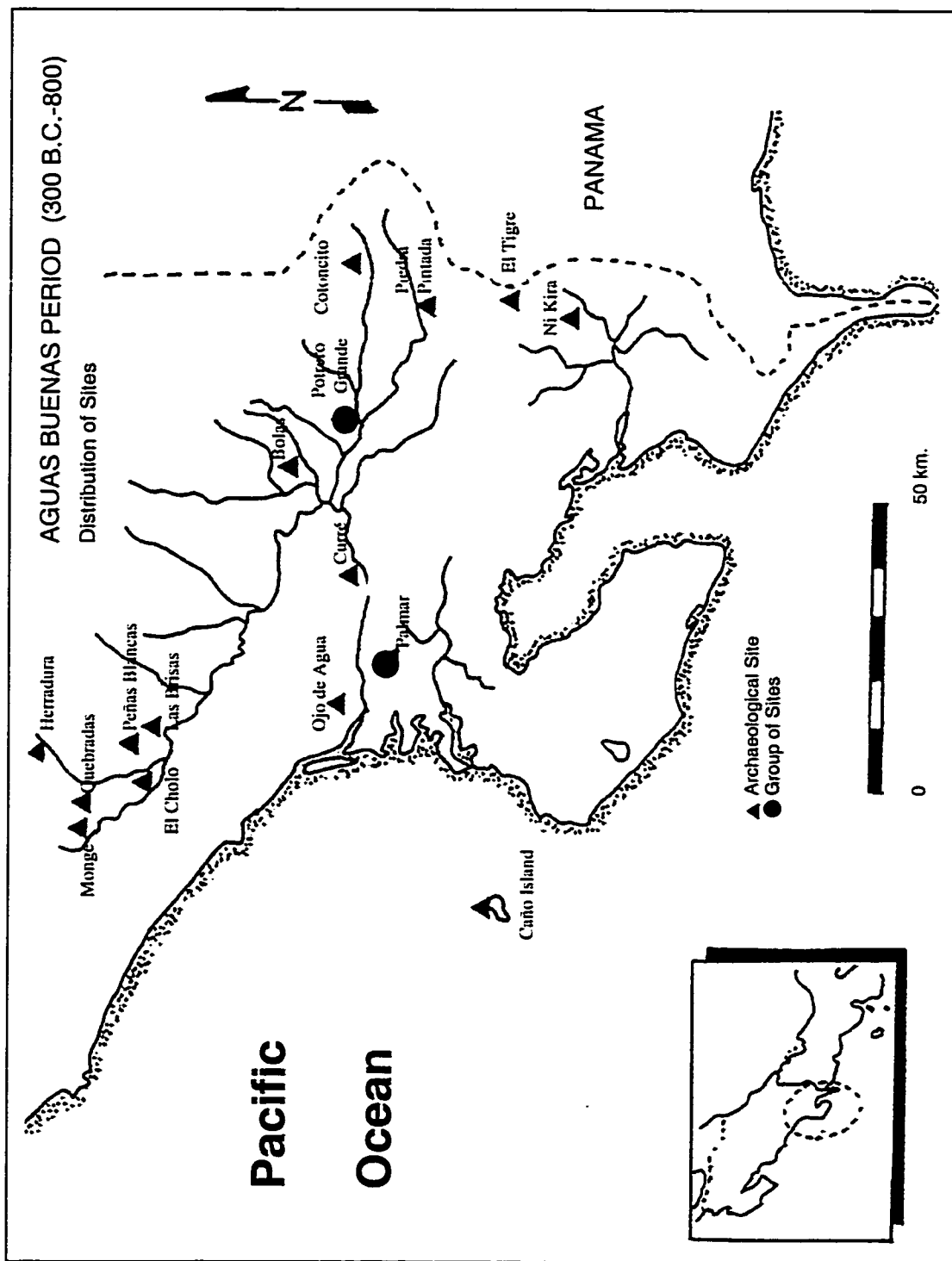


Figure 6. Distribution of Archaeological Sites Aguas Buenas Period (300 B.C. - 800 A.D.)

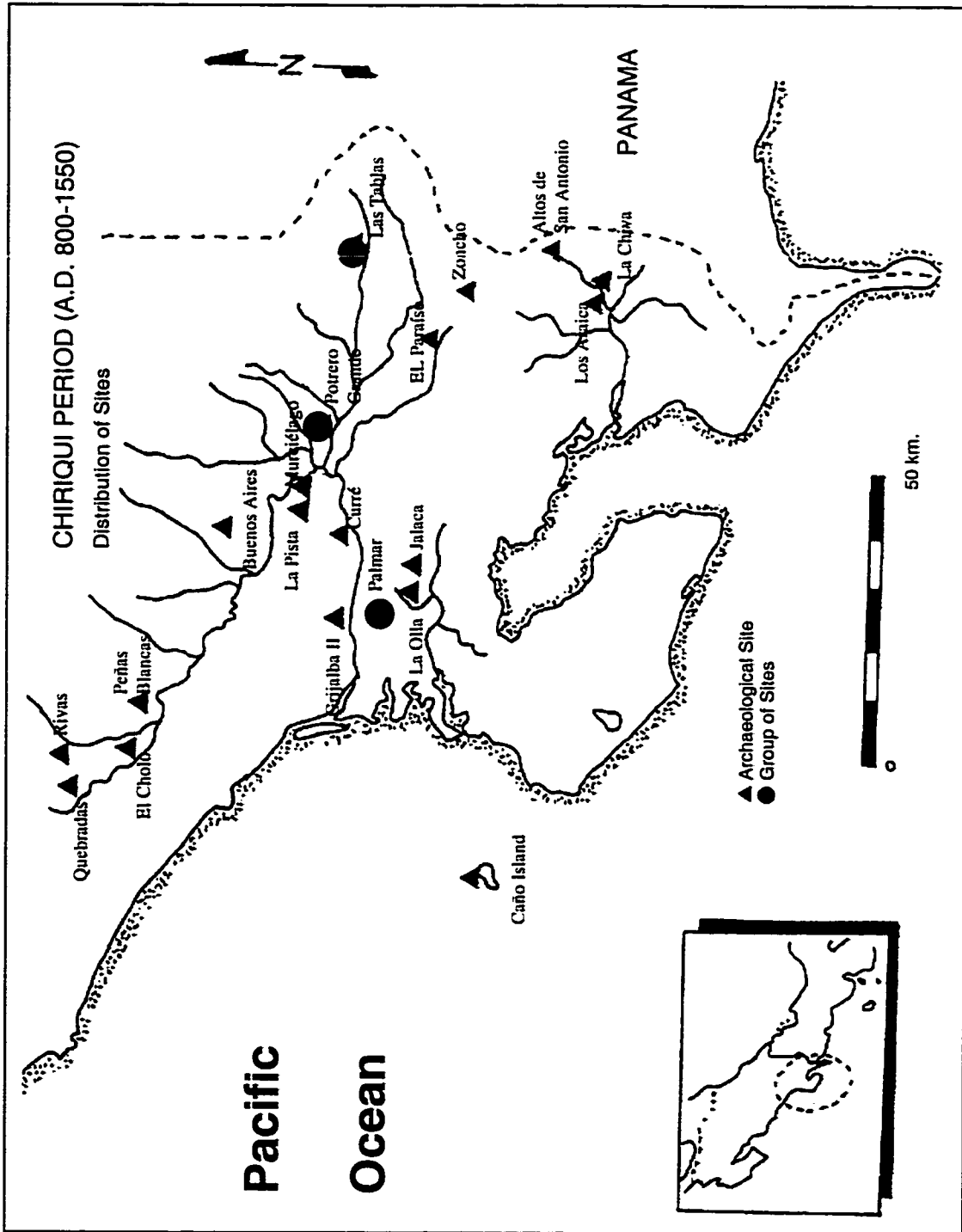


Figure 7. Distribution of Archaeological Sites, Chiriquí Period (A.D. 800 - 1550)

Quintanilla (1992) and Badilla (1994b) report some additional information for the Diquís Delta and Caño Island.

a. Térraba Middle Basin

i. Vessel Forms:

The Curré Complex shows a predominance of globular jars. From a sample of 302 rims, globular jars were the most frequent with 72.35% (212 rims) (Table 12). Other common form was bowls with flared lips with 16.04% (47 rims). Cylindrical vessels, mostly with flat bases and vertical walls, were infrequent (5.11%, n=15), but very conspicuous. Other forms were semiglobular jars, a category that can be included within the globular jars, with 4.09% (n=12), and open bowls (3.41%, n=10). Tecomates, a form that is very common in other contemporaneous complexes in Southern Central America and other regions, were minimally represented with just 2.04% (n=6) (Table 12).

ii. Decorative modes

A total of 1037 sherds presented some form of plastic decoration (Table 12). The most frequent decoration motif was incised lines (D13) that accounted for the 56.7% (n=588). This refers to the presence of group of parallel and/or convergent incised lines, since it is also frequent to find incised lines associated with other decoration techniques.

Other modes with significant presence were fingernail stamping (D4) with 8.70% (n=91), incised lines cut with incisions and stamping (D8) with 8.29% (n=86) and oblique shell stamping (D2) with 7.5% (n=78). Also common were fillets appliqué with stamping (D7) with 5.40%(n=57), drag and jab (D5) with 4.1% (n=43) and short strokes shell stamping (D1) with 3.9%(n=41). Less common were punctuation (D10) with 1.73% (n=18), appliqué pellets (D6) with 1.6% (n=17), crosshatching (D9) 1.6% (n=17), cuneiform stamping (D11) 0.48% (n=5) and reed stamping (D12) with only 0.19% (n=2). Most of these modes were located in the shoulder of the vessels. Association with specific rims was difficult because of the small size of the sherds.

b. Diquís Delta.

i. Vessel forms:

For the Diquís Delta only one sherd was associated with a vessel form. It corresponded to a tecomate rim (F1) (Table 11). Quintanilla (1992) also reported the presence of a small complete globular vessel that can be associated with this period.

ii. Decorative modes

Several decorative motifs are present in a small sample of only seven sherds (Tables 11,12). Punctuation (D10) accounted for the 44.85% of the sample (3 sherds). The others decoration motifs are limited to only one example each or 14.28%. They are; oblique shell stamping (D2), fingernail stamping (D4), crosshatching (D9) and incised lines (D13).

c. Coto Colorado Valley

i. Vessel forms:

The different vessel forms (Herrera and Corrales 1997) were grouped into two main forms: globular jars or F4, with a percentage of 70.58% (36 out of 51 specimens), and bowls with flared lips or F3 representing 29.41% (n=15) Cylindrical vessels, tecomates and open bowls were absent in Darizara (Table 12).

ii. Decorative modes

Three hundred and forty two sherds exhibited some kind of plastic decoration (Table 12). As in Curré, the most frequent decoration motif was incised lines (D13), but with a lesser predominance (28.07%, n=96). Also important were several modes that were not present in Curré such as roller stamping (D15) with 14.9% (n=51), rocker stamping (D3) with 11.9% (n=41) and rounded stamping (D14) with 11.1% (n=38).

Other decorative motifs, although less common, have a significant appearance: fillets appliqués with stamping (D7) with 9.9% (n=34), cuneiform stamping (D11) with 6.4% (n=22), fingernail stamping (D4) with 5.8% (n=20), short strokes shell stamping (D1) with 4.9% (n=17), incised lines cut by incisions and stamping (D8) with 4.3% (n=15), and oblique shell stamping (D2) with 2.3% (n=8).

d. Comment

Within the Diquís Subregion several differences can be discerned between the two ceramic complexes established, but in general they are very close. Darizara has a general similarity with Curré in terms of vessel forms, decoration techniques and decoration designs. However, there are differences in the representation of those elements.

In Darizara the range of vessel forms are limited in comparison to Curré, but they share the preeminence of globular jars. Globular jars and bowls with flared lips are present in both complexes. Globular vessels the most common form are also a particular trait for early complexes in Southern Costa Rica that distinguishes them from other northern complexes. Tecomates, cylindrical vessels and open bowls are not present in Darizara, while in Curré they are present but in small quantity and percentage.

In term of decoration, both are very similar. The predominant decorative technique is parallel-incised lines. Decorative motifs created with stamping of different classes are common in both complexes. However, there are some differences. Pellets appliqué and drag and jab decorations were not registered in Darizara. Rocker stamping is more frequent in Darizara in contrast to Curré where short strokes with the dentated edge of shells are more common.

2. Aguas Buenas Period (300 B.C.-A.D. 800)

For this period, there is more information available in publications and unpublished reports. The list of modes is shown in Appendix 1, (Figs. 15-22). Some collections previously obtained by the author (Hidalgo, Quebradas, El Cholo, Cotoncito, Ni Kira, and Curré) were revised and in some cases re-analyzed. There is no quantitative data for the Middle Térraba Basin since it was not possible to fully adapt the analyses available to the modal classification. However, it was possible to identify the modes in term of presence-absence.

Table 11. Presence or absence of modes in the different zones, Sinancrá Period

Vessel forms

	General	Térraba	Diquís	Coto Brus	Coto Colorado
F1: tecomates		X	X		
F2: open bowls		X			
F3: bowls flared lip		X			X
F4: globular jars		X			X
F5: semiglobular jars		X			
F6: cylindrical vessels		X			

Decorative modes

	General	Térraba	Diquís	Coto Brus	Coto Colorado
D1: shell stamping/incision		X			X
D2: oblique shell stamping		X	X		X
D3: rocker stamping					X
D4: fingernail stamping		X	X		X
D5: jab and drag		X			
D6: modeling		X			
D7: fillet applique/stamp		X			X
D8: incising/stamp/punct.		X			X
D9: crosshatching		X	X		
D10: punctuation		X	X		
D11: cuneiform stamp		X			X
D12: reed stamping		X			
D13: incised lines.		X	X		X
D14: rounded stamping					X
D15: roll stamping					X

Table 12. Totals and percentages of ceramic modes by site, Sinancrá Period, Diquís Subregion

Vessel Forms

Mode	Curré		Diquís		Darizara	
	Total	%	Total	%	Total	%
F1	6	2.04	1	100		
F2	10	3.41				
F3	47	16.04			15	29.41
F4	212	72.35			36	70.58
F5	12	4.09				
F6	15	5.11				
Total	302		1		51	

Decorative modes

Mode	Curré		Diquís		Darizara	
	Total	%	Total	%	Total	%
D1	41	3.9			17	4.9
D2	78	7.5	1	14.28	8	2.3
D3					41	11.9
D4	91	8.7	1	14.28	20	5.8
D5	43	4.1				
D6	17	1.6				
D7	57	5.4			34	9.9
D8	86	8.29			15	4.3
D9	11	1.06	1	14.28		
D10	18	1.73	3	42.85		
D11	5	0.48			22	6.4
D12	2	0.19				
D13	588	56.7	1	14.28	96	28.07
D14					38	11.1
D15					51	14.9
Total	1037		7		342	

a. General Valley

i. Vessel Forms

In the combined sample of 246 rims from three different sites, Quebradas, Hidalgo and El Cholo, the most common form was big bowls with thickened lips and composite silhouette (F5) associated with the Quebradas type with 40.24% (n=99). The other two most common forms were the characteristic bowls with a groove under the lip with 17.89% (n=44) and composite silhouette bowls (F3) with 12.20% (n=30) (Table 14).

Forms that are also present in the other zones appear here as minor percentages such as open bowls (F2) with 6.91% (n=17), jars with everted rims (F7) 5.69% (n=14), and tecomates (F1) with 4.88% (n=12). Other forms present were jars or beaker with everted thickened lip (F8) with 3.66% (n=9), bowls with straight walls (F6) and jars or bowls with outcurved rims (F9) with 2.44% (n=6) each one, bowls with flared lip (F11) with 2.03% (n=5), chimney vessel, characterized by flat bases and vertical walls (F12) with 0.81% (n=2) and jars with projected lips (F14) with only one specimen (Table 14).

ii. Decorative modes

The most prominent mode of decoration was geometric designs with wide incised lines or D1 (47.25%, n=266), associated with F5. Vertical and/or oblique incised lines or D2 represented 33.39% (n=188) and in most of the cases were associated with zoned bichroming. (Table 14). These two modes accounted for a little more than 80% of all decorations.

Fine engraved lines (D7), with 7.82% (n=44) and its commonly associated negative painting (D14) with 2.84% (n=16) were also well represented. Zoned bichroming or D6 (3.73%, n=21) is commonly associated with other modes of decoration, generally located in the unslipped sections. Other modes are represented in this sample by less than 2% (1 or 2 examples). They are: zoomorphic modeling (D4) with 1.42%, appliqué pellets (D12) with 1.07%, appliqué fillets (D13) with 0.71%, shell stamping (D9) with 0.36%, fingernail stamping (D10), only present in this sample, with 0.18% and incised lines cut by other incisions (D11) with 0.18% (Table 14).

iii. Supports-Handles-Adornos-Figurines

In the General Valley all the support modes established were present. The most common was long solid supports, sometimes with pellets (S2) with 46.25% (37 specimens out of 80) (Table 14). Also well represented were hollow supports with incisions and appliqué (S4) with 23.75% (n=19). Tabular supports or S5, one of the most characteristic modes of the Aguas Buenas Complex, was present with 16.25% (n=13). Solid short supports (S3) was present with 7.5% (n=6), supports with a flat end (S7) was present with 3.61% (n=3). Hollow anthropomorphic (S1) was represented with only one example or 1.20%. A particular solid zoomorphic support (S8) was only present at El Cholo Site with only one example (1.20%) (Table 15).

Handles were not very common. In the nine specimens classified, eight were tabular handles or H1 (88.89%) and there was an example (11.1%) of ring handles (H3). Twelve zoomorphic adornos and five figurines representing human heads with conical hats, similar to the ones present in stone sculptures from Barriles Site, were identified in the sample of the General Valley (Table 14).

b. Térraba Middle Basin

i. Vessel Forms

No sample was analyzed using the modal classification. From the types identified and the illustration provided by Drolet (1983) and Corrales (1985, 1986) the following modes are present: tecomates (F1), open bowls (F2), bowls with composite silhouette (F3), bowls with a groove under the lip (F4), bowls with composite silhouette and thickened lip (F5), jars with everted and thick lip (F7), jars or beakers with slightly thickened lip (F8), jars or bowls with outcurved rim (F9), s-shaped jars (F10), and chimney vessels (F12) (Table 13).

ii. Decorative motifs

The most common decorative modes in other zones were also present in sites such as Murciélago and Curré including geometric incised designs (D1), vertical and oblique incised lines delimited by horizontal incised lines (D2), punctuation (D3),

zoomorphic modeling (D4), engraving (D7), pellets appliqué (D12), and zoned bichroming (D6) (Table 13).

iii. Supports-Handles-Adornos

The following support modes were identified in the descriptions and illustrations from Curré, Murciélago and Potrero Grande: long solid (S2), solid short pointed (S3), hollow with appliqué and incision (S4), and tabular (S5) (Table 13).

Handles identified in the samples from sites located in this zone are: tabular (H1), strap (H2) and ring handles(H3) (Table 13).

Zoomorphic adornos were very common in the sites of the Middle Térraba Basin as illustrated by Drolet (1983) and Corrales (1985) (Table 13).

c. Diquís Delta

i. Vessel Forms

Only a small sample of the Ojo de Agua site was classified following the modal classification, but additional information came from the data provide by Baudez et al. (1993) in their typological analysis (Tables 13,14,15).

In Ojo de Agua, from a total of 66 rims, most of them (57.47%, n=38) were associated with the jars with everted and thickened lip (F7). The bowls with thickened lips and composite silhouette (F5) are also important with 22.72% (n=15). Open incurved bowls (F2) are represented by 10.6% (n=7). The conspicuous bowls with a groove under the lip (F4) and plates (F13) were represented equally with 4.54% (n=3).

Additional vessel forms were recognized in the typological classification. F5 associated with the Quebradas type was very common, perhaps the most common in the sample obtained by Baudez et al. (1993). Composite silhouette vessels (F3) were also present and open bowls (F2) are dominant in several of the established types. Jars with everted rims and thickened lips (F7, F9) also have a significant presence. Forms such as tecomates (F1), and bowls with straight walls (F6) were present but in small quantities. Forms such as s-shaped jars (F10), chimney-vessels (F12) and plates (F13) are not mentioned nor illustrated.

ii. Decorative modes

In the Ojo de Agua sample, only three decorative modes were identified. Vertical and oblique incised lines (D2) accounted by the 50% (6 from 12 sherds). Appliqué pellets were present with 4 for a 33.33%. Shell stamping (D9) was represented with 2 sherds (16.67%). Because of the small size of the sample these percentages must be considered with caution (Tables 14,15).

Other decorative motifs identified in the typological analysis (Baudez et al. 1993) included broad incised lines in geometric designs (D1) that was very common and punctuation (D3). Engraved lines (D7) and negative painting (D14) associated with the Bugaba type have a significant presence as well as zoned bichroming (D6) (Table 13).

iii. Supports-Handles-Adornos-Figurines

Only hollow anthropomorphic (S1) and long solid supports (S2) were identified in Ojo de Agua. The first by one example (there are only two examples in the entire study area, the other is from the Upper General Valley) and the second with 3 specimens. In the collection from the Diquís Delta (Baudez et al. 1993). There are also hollow supports with incisions and appliqué (S4), and tabular supports (S5) (Tables 13,14,15).

Only one example of tabular handle was identified. They are also present in the sample of Baudez et al. 1993:100 (12 examples including tabular handles and supports). There are no reports of other types of handles in the typological analyses.

Two of zoomorphic adornos were found in Ojo de Agua. In the Diquís sample there were eight representations of animals and two anthropomorphic, one of them with conical hat (Baudez et al. 1993: 102).

d. Coto Brus Valley

i. Vessel forms

Most of the vessel form modes were present in the sample of 219 sherds from two test pits excavated at the Cotoncito site (Tables 14,15). The exceptions were F5 (associated with the Quebradas type), predominant in the other areas, F13, and F14. The most common form in Cotoncito was jars with everted and thickened lip (F7) with 31.05% (68 out of 219 specimens). The bowls with a groove under the lip, a very

particular form of this period, were also very important (24.66%, n=54). Also present in considerable percentages were: bowls or jars with s-shaped rims (F10), not very common in other areas with 10.04% (n=22) and tecomates (F1) with 9.59% (n=21). Other jars or bowls with thickened lips as F8 and F9 were both represented with 6.85% (n=15). Open bowls (F2) comprise 5.48% (n=12). Other forms were under 2% (4 or less sherds): bowls with flared lip (F11), bowls with straight walls (F6), chimney vessels (F12), composite silhouette bowls (F3) and jars with projected lips (F14) (Table 14).

ii. Decorative modes

Vertical or oblique incised lines delimited by horizontal incised lines (D2) was the predominant mode of decoration with 69.07% (67 of a total of 97). Appliqué pellets (D12) at 13.40% (n=13) and fine engraved lines (D7) at 10.31% (n=10) were also important. Other modes were represented by 4 or fewer sherds: appliqué pellets (D13) with 4.12%, zoomorphic modeling (D4) with 2.06% and negative painting (D14) with 1.03% (Table 14). Most of these decorative modes were associated with zoned bichroming.

iii. Supports-Handles-Adornos-Figurines

The most well represented support was S5 (tabular supports) with 69.23% (9 of a total of 13). Other modes represented were: supports with a flat end (S7) with 15.38% (n=2), and solid short (S3), hollow with incisions and appliqué (S4) and tabular (S5) all with 7.69% (one of each).

Strap handles were very common with 65.22% (30 examples out of 46), tabular handles accounted for the 32.61% (n=15) and ring handles were represented by one example (2.17%).

Nine of zoomorphic adornos are reported including avian and mammal representations. They are usually associated with F4, or bowls with a groove under the lip (Table 14).

e. Coto Colorado Valley

i. Vessel Forms

In the Ni Kira site, unlike other sites, the most common form was bowls with a groove under the lip (F4) at 47.51% (200 out 421). Jars with everted and thickened rims (F7) are also important with 27.55% (n=116). Open incurved bowls (F2), jars or beakers with everted thickened lip (F8) were equally represented by 5.93% (25 specimens each). Jars with projected lips (F14) were represented by 4.27% (n=18). This forms was almost absent in the other zones. Tecomates (F1) were represented by 3.80% (n=16) and restricted bowls or jars with s-shaped rim (F10) by 3.08% (n=13). S-shaped jars were common here and in the Coto Brus Valley zone, but absent in the other zones. Plates (F13) with 1.18% (n=5) and chimney vessels (F12) with 0.71% (n=3) were less well represented. There was no evidence of the composite silhouette bowls (F5), which are dominant in the zones to the north, bowls with composite silhouette (F3), jars or bowls with outcurved rims (F9) or bowls with flared lips (F11) (Tables 14,15).

ii. Decorative modes

Vertical or oblique incised lines delimited by horizontal incised lines (D2) was the most well represented mode of decoration with 46.15% (54 out 117 specimens). Other important modes were appliqué pellets (D12) with 14.53% (n=17). Punctuation and stamping in an unslipped area below the rim (D5) with 11.11% (n=13) was only present in Ni Kira. Less common were: combing (D15) 9.40% (n=11), zoomorphic modeling (D4) 7.69% (n=9), D3 (punctuation rows) with 5.13% (n=6), shell stamping (D9), very rare in this complex with 3.42% (n=4), appliqué fillets (D8) and incised lines cut by incisions (D11) with 0.85% (1 example each). Neither negative painting (D14) or fine engraved lines (D7), which is associated with the Bugaba Engraved type (and composite silhouette bowls), were present (Tables 14,15).

iii. Supports-Handle-Adornos

In the sample of the Ni Kira site, supports are very rare. This can be attributed to the lack of composite silhouette vessels on which they are most likely to occur. Of the small sample of supports (n=8), five or 62.50% corresponded to tabular supports (S5). One short solid support is reminiscent of the paw-shaped supports of La Concepción

(S6, 12.50%), one example of S2 or long solid supports and another of S4 (the end section of a double-leg shaped support).

Handles as in the case of Coto Brus are more frequent than in the other areas. Strap handles (H2) represented 54.54%, 18 of a sample of 33 handles. H1 or tabular handles have a 30.3% (n=10), and H4 (handles in the form of a fist or pawn) for 15.15% (n=5).

Zoomorphic adornos were more common. A large sample of forty-two of zoomorphic adornos usually associated with the bowls with a groove under the lip or Form 4. There was one example of human head with conical hat (Table 14).

f. Comment

In the different zones there are some common modes. Particularly the bowls with a groove under the lip with their associated incised decorations and zoomorphic adornos, and the zoned bichroming with plastic decorations in the unslipped area. But there are also differences. The restricted distribution of the large composite silhouette bowls and s-shaped jars are the most evident. Other modes with small appearance are restricted to one site or zone.

Vessel forms such as jars with thickened lips, tecomates, open bowls, jars or bowls with s-shaped rims, bowls with a groove under the lip and even the chimney-like vessels, are highly distinctive and present in all the zones.

An internal distinction is provided by the restricted distribution of the large bowls with composite silhouette (F5) associated with the Quebradas type. This form was only present in three of the zones: Upper General Valley, Middle Térraba Basin and Diquís Delta, all connected by the Térraba River. Besides, it was the most popular form. Its absence in the Coto Colorado and Coto Brus seems to reflect some internal differentiation that can be related to a process of internal differentiation among close related groups. The more northern zones could have been developing some locally specific traits while sharing with the rest of the zones some regional characteristics.

As in the case of the vessel forms, most of the decorative modes are present in the different zones. A unifying zone bichroming is the most relevant trait. Plastic decorations with incised lines, fillet and appliqués and modeling are also common. But,

Table 13. Presence or absence of ceramic modes by zone, Aguas Buenas Period, Diquís Archaeological Subregion

Vessel Forms

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
F1: tecomates	X	X	X	X	X
F2: open incurved bowls	X	X	X	X	X
F3: bowls comp.silhouette	X	X	X	X	
F4: bowls/groove under lip	X	X	X	X	X
F5: bolws thick/lip/comp/sil	X	X	X		
F6:bolws straight walls	X		X	X	
F7: jars everted thick lip	X	X	X	X	X
F8: jar/beaker everted/thick lip	X	X	X	X	X
F9: jars/bolws/outcurved rim	X	X	X	X	
F10: s-shaped bowls/jars		X		X	X
F11: bowls flared lip	X			X	
F12: chimney vessel	X	X		X	X
F13: plate					X
F14: jar projected lip					X

Decorative modes

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
D1:geometric/broad incis.lines	X	X	X		
D2:vertical/oblique incis.lines	X	X	X	X	X
D3:punctuation	X	X	X		X
D4:zoomorphic modeling	X	X	X	X	X
D5:punctuation/drag and jab					X
D6:zone bichroming	X	X	X		
D7:engraving	X	X	X	X	
D8:chain like applique	X				X
D9:shell stamping	X		X		X
D10: nail stamping	X				
D11:incision/incision	X				X
D12:applique pellets	X	X	X	X	X
D13:applique fillets	X		X	X	X
D14:negative painting	X		X	X	
D15:combing					X

Adornos-Figurines

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
zoomorphic adomos	X	X	X	X	X
human figurines hat	X		X		X

Supports

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
S1:hollow anthropomorphic	X		X		
S2:long solid	X	X	X	X	X
S3:solid short pointed	X	X		X	
S4:hollow supports/insic/appli.	X	X	X	X	X
S5:tabular	X	X	X	X	X
S6:paw shape	X				X
S7:solid flat end	X			X	
S8:solid zoomorphic	X				

Handles

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
H:tabular	X	X	X	X	X
H2:strap		X		X	X
H3: ring	X	X		X	
H4:fist or pawn					X

Table 14. Total and percentages of ceramic modes by zone, Aguas Buenas Period, Diquís Archaeological Subregion

Vessel Forms

Mode	General		Diquís		Coto Brus		Coto Colorado	
	Total	%	Total	%	Total	%	Total	%
F1: tecomates	12	4.88			21	9.59	16	3.8
F2: open incurved bowls	17	6.91	7	10.6	12	5.48	25	5.93
F3: bowls comp. silhouette	30	12.20			1	0.46		
F4: bowls/groove under lip	44	17.89	3	4.54	54	24.66	200	47.51
F5: bowl/thick/lip/comp/sil.	99	40.24	15	22.72				
F6: bowls straight walls	7	2.85			3	1.37		
F7: jars everted thick lip	14	5.69	38	57.57	68	31.05	116	27.55
F8: jar/beaker/everted	9	3.66			15	6.85	25	5.93
F9: jars/bowls/outcurved	6	2.44			15	6.85		
F10: s-shaped bowls/jars					22	10.04	13	3.08
F11: bowls flared lip	5	2.03			4	1.83		
F12: chimney vessel	2	0.81			3	1.37	3	0.71
F13: plate			3	4.54			5	1.18
F14: jar projected lip	1	0.41			1	0.46	18	4.27
Total	246		66		219		421	

Decorative modes

Mode	General		Diquís		Coto Brus		Coto Colorado	
	Total	%	Total	%	Total	%	Total	%
D1: geometric/incis. lines	266	47.25						
D2: vertical/obliq/ncis. lines	188	33.39	6	50	67	69.07	54	46.15
D3: punct+A66ation	5	0.89					6	5.13
D4: zoomorphic modeling	8	1.42			2	2.06	9	7.69
D5: punct/drag and jab							13	11.11
D6: zone bichroming	21	3.73						
D7: engraving	44	7.82			10	10.31		
D8: chain like appliqué	1	0.18					1	0.85
D9: shell stamping	2	0.36	2	16.67			4	3.42
D10: nail stamping	1	0.18						
D11: incision/incision	1	0.18					1	0.85
D12: applique pellets	6	1.07			13	13.40	17	14.53
D13: applique fillets	4	0.71	4	33.33	4	4.12	1	0.85
D14: negative painting	16	2.84	6		1	1.03		
D15: combing							11	9.40
Total	563		18		97		117	

Adornos-Figurines

	General		Diquís		Coto Brus		Coto Colorado	
zoomorphic adomos	12		10		9		42	
human figurines with hats	5		2				1	

Supports

	General		Diquís		Coto Brus		Coto Colorado	
Mode	Total	%	Total	%	Total	%	Total	%
S1:hollow anthropomorphic	1	1.25	1	25				
S2:long solid	37	46.25	3	75	1	7.69	1	12.5
S3:solid short pointed	6	7.50			1	7.69		
S4:hollow/insic/appli.	19	23.75			1	7.69	1	12.5
S5:tabular	13	16.25			9	69.23	5	62.5
S6:paw shape							1	12.5
S7:solid flat end	3	3.75			2	15.38		
S8:solid zoomorphic	1	1.25						
Total	80		4		13		8	

Handles

	General		Diquís		Coto Brus		Coto Colorado	
Mode	Total	%	Total	%	Total	%	Total	%
H1:tabular	8	88.89	1	100	15	32.61	10	30.3
H2:strap					30	65.22	18	54.54
H3: ring	1	11.11			1	2.17		
H4:fist or pawn							5	15.15
Total	9		1		46		33	

Table 16. Total and percentages of ceramic modes by site, Aguas Buenas Period, Diquis Archaeological Subregion

Vessel Forms	Hidalgo		Quebradas		El Cholo		Ojo de Agua		Cotoncito		Ni Kira		
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
F1: tecomates	3	2.60	9	9	9				21	9.59	16	3.8	
F2: open/incurl/bowls	5	4.34	8	8	8	4	12.90	7	10.6	12	5.48	25	5.93
F3: bowls comp.silh.	20	17.39	5	5	5	5	16.12		1	0.46			
F4: bowls/groove/lip	32	27.82	9	9	9	3	9.67	3	4.54	54	24.86	200	47.51
F5: bowl/comp/sil.	50	43.47	38	38	38	11	35.48	15	22.72				
F6: bowls straight walls	1	0.86	4	4	4	2	6.45		3	1.37			
F7: jars everted thick lip	1	0.86	8	8	8	5	16.12	38	57.57	68	31.05	116	27.55
F8: jar/baaker/everted	3	2.60	6	6	6				15	6.85	25	5.93	
F9: jars/bowls/outcurved			6	6	6				15	6.85			
F10: s-shaped bowls/jars									22	10.04	13	3.08	
F11: bowls flared lip			5	5	5				4	1.83			
F12: chimney vessel			1	1	1	1	3.22		3	1.37	3	0.71	
F13: plate								3	4.54		5	1.18	
F14: jar projected lip			1	1	1				1	0.46	18	4.27	
Total	115		100		31		66		219		421		

Decorative modes	Hidalgo		Quebradas		El Cholo		Horradura		Ojo de Agua		Cotoncito		NI Kira		
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
D1:geometric/incis.lines	107	78.10	103	79.23	9	79.23	47	16.55							
D2:vertical/obliq/incis.	24	17.52	16	12.31	2	16.87	146	51.41	6	50.00	67	69.07	54	46.15	
D3:punctuation	3	2.19	2	1.54									6	5.13	
D4:zoomorphic modeling	3	2.19	2	1.54	1	8.33	2	0.70			2	2.06	9	7.69	
D5:punct/drag and jab													13	11.11	
D6:zone bichroming							21	7.39							
D7:engraving			2	1.54			42	14.79			10	10.31			
D8:chain like appliqué			1	0.77										1	0.85
D9:shell stamping			2	1.54					2	16.67				4	3.42
D10: nail stamping			1	0.77											
D11:incision/incision			1	0.77										1	0.85
D12:applique pellets							6	2.11			13	13.40	17	14.53	
D13:applique fillets							4	1.41	4	33.33	4	4.12	1	0.85	
D14:negative painting							16	5.63			1	1.03			
D16:combing														11	9.40
Total	137		130		12		284		12		97		117		

Adornos-figurines

Mode	Hidalgo		Quebradas		El Cholo		Herradura		Ojo de Agua		Cotoncito		NI Kira	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
zoomorphic adorns	9		2	1						2		9		42
figurines/conical hats	3		1	1				1						1

Supports

Mode	Hidalgo		Quebradas		El Cholo		Herradura		Ojo de Agua		Cotoncito		NI Kira	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
S1:hollow anthrop.	1	3.57							1	25				
S2:long solid	5	17.86	2	18.18	5	55.56	25	78.12	3	75	1	7.14	1	12.5
S3:solid short pointed	5	17.86			1	11.11					1	7.14		
S4:hollow/insic/appil.	11	39.29	4	36.36	2	22.22	2	6.25			1	7.14	1	12.5
S5:tabular	6	21.43	2	18.18			5	15.62			9	64.28	5	62.5
S6:paw shape													1	12.5
S7:solid flat end					3	27.27					2	14.28		
S8:solid zoomorphic					1	11.11								
Total	28		11		9		32		4		14		8	

Handles

Mode	Hidalgo		Herradura		Ojo de Agua		Cotoncito		NI Kira	
	Total	%	Total	%	Total	%	Total	%	Total	%
H1:tabular	4	100	4	80	1	100	15	32.61	10	30.3
H2:strep							30	65.22	18	54.54
H3: ring			1	20			1	2.17		
H4:flst or pawn									5	15.15
Total	4		5		1		46		33	

restricted to the Ni Kira site, in the Coto Colorado Valley. Zoomorphic adornos are another shared element in all zones. The geometric designs with broad incised lines associated with the F5 are also restricted to some of the zones.

The distinctive tabular supports and handles are present in all zones. This is a very characteristic mode of the Aguas Buenas Complex. Strap and ring handles were also common in the different areas.

Long solid supports are widely distributed while others such as the long solids with flat ends (probably associated with chimney vessel) were not recorded in some zones.

Those differences in frequency and distribution may be due to sample problems rather than to behavioral or cultural patterns. Some differences may be related to spatial variances or they can be the product of chronological changes within the period.

3. Chiriquí Period (A.D. 800-1500)

Information for the Chiriquí Period came from published information (Haberland 1961b, 1984b, Laurencich de Minelli and Minelli 1966, Drolet 1983, Corrales 1985, 1986, 1988, Lothrop 1963, Baudez et al. 1993) and unpublished reports or thesis (Rago 1988, Corrales 1996b, Corrales and Morales 1982, Corrales and Badilla 1988, Iwaniec 1986). The author conducted analysis of collections from Quebradas, Rivas, El Cholo, Finca 4, Grijalba II, Los Araica, and El Paraíso sites. For the Térraba Middle Basin there is no quantitative data for modes, because most of the analyses were oriented to type identifications. The list of modes established is shown in Appendix 1 and illustrated in figures 23-32.

a. General Valley

i. Vessel forms

The sample (891 sherds) came from the Quebradas, El Cholo and Rivas sites, but most of the material came from Rivas (94.72%). Almost all vessel forms were present (Tables 17, 18). The predominant vessel form was jars or bowls with thickened lips (F16), with its variants, for a 27.38% (n=244). Also common were bowl forms such

as open bowls (F3) with 12.01% (n=107) and bowls with variants in the rims (F4) with 10.21% (n=91). The other forms were present in small percentages: jars with slightly thickened lips (F14) with 8.19% (n=73), tecomates (F1) with 7.30% (n=65) and jars with outcurved rims (F15) with 7.07% (n=63). Other variants of bowls such as bowls with slightly thickened lips (F8) with 5.95% (n=53), bowls with projected rims (F5) and composite silhouette bowls (F2) with 5.84% (52 specimens each) followed in importance (Table 17).

Other forms are less well represented: jars with projected lips and short necks (F11) with 3.25% (n=29), bowls with thin walls and slightly thickened lips (F7) with 2.92% (n=26), jars with thin walls and outcurved rims (F13) with 1.68% (n=15). Representing less than 1% (8 or less) were: jars with long necks (F12) with 0.90%, bowls with flared lips (F6) with 0.90%, and bowls with thin walls (F9) with 0.56% (Table 17).

ii. Decorative modes

Decorative modes in general were associated with specific ceramic types. The most common decoration mode was polychromy with 75.59% (418 of 553). A reason for this was the inclusion of a large number of sherds with the white base color, typical of this type. Other painted decorative modes were: D9 (white band on red) with 2.71% (n=15), D11 (red and brown) with 1.45% (n=8), D10 (black lines on red) and D12 (white lines on black or brown) with 0.36% (2 each) (Table 17). These modes have been associated with specific ceramic types.

The more common plastic decorations were parallel incised lines (D1) with 7.78% (n=43), and geometric designs with fine engraved or incised lines (D2) with 6.33% (n=35). Less common were punctuation rows associated with incised lines (D3) with 2.53% (n=14), appliqué pellets (D5) with 1.63% (n=9), appliqué fillets (D6) with 0.72% (n=4) and chain-like fillets (D7) with 0.54% (n=3).

iii. Supports-Handles

Long solid supports (S1) with 28.87% or 28 of a sample of 96 supports, were the most common. Hollow supports with slits, appliqué and incision (S5) with 21.65% (n=21) was second most common. Also important were: pointed solid supports (S3) with

16.49% (n=16) and hollow supports (S7) with 13.40% (n=13), hollow, pointed or mammiform supports (S4) with 7.22% (n=7), and solid zoomorphic (S2) with 6.19%, (n=6). Hollow anthropomorphic and zoomorphic (S6) and solid with a central depression supports (S8), both represented 3.09% (3 specimens each) (Table 17).

Armadillo-shaped handles (H1) were the most common with 67.50%, or 27 out of 40 specimens. H3 or ring handles were also common with 22.50% (9). Less common are strap handles (H2) (5.50%, n=3). Zoomorphic handles (H7) with only one example (2.50%) has a single appearance at El Cholo site and must be evaluated with further works (Tables 17,18).

b. Middle Térraba Basin

No quantitative analysis was possible for this zone. However from the information available it is possible to establish the predominant ceramic modes.

i. Vessel Forms

Almost all vessel forms established have been reported (Drolet 1983, Corrales 1985). Jars with thick lips (F16), associated with the Ceiba Red and Brown type, are predominant. Open bowls (F3), composite silhouette bowls (F2), tecomates (F1), and globular jars (F11-F15) are also present (Table 16)

ii. Decorative modes

Plastic decoration motifs such as incised parallel lines (D1), punctuation rows associated with incised lines (D3) and engraved incised lines(D2) are among the most common motifs found in this zone (see distribution and description of types in Appendix 3). Polichromy (D8) is very common in sites as Curré, and very uncommon in others such as Murciélago. Other painted modes such as black on red (D10), white on red (D9) are present in domestic deposits, but mainly in funerary offerings (Table 16).

iii. Supports-Handles

Solid zoomorphic (S2), pointed solid (S3), hollow with lateral or frontal slits (S4) and hollow supports in the shape of zoomorphic or anthropomorphic representations have been described or illustrated for the zone.

Armadillo-shaped handles (H1) are the most common along with strap (H2) and ring handle (H3) (Table 16).

c. Diquís Delta

i. Vessel forms

The most common form was jars or bowls with thickened lips with its variants (F16) for a 49.44% (533 out of 1078), followed by open bowls (F3) with 17.63% (n=190), and jars with projected lips and short necks(F11) with 9.65% (n=104) (Table 17).

The other forms have smaller percentages: bowls (F4) with 6.03% (n=65), composite silhouette bowls (F2) with 3.34% (n=36), jars with slightly thickened lips (F14) and tecomates (F1) with 3.06% (33 specimens each), bowls with slightly engrossed lips (F8) with 2.69% (n=29), jars with long neck (F12) with 1.95% (n=21) and bowls with thin walls and thickened lips (F7) with 1.21% (n=13) (Table 17).

With less than 1% (7 specimens or less) were: plates (F10) with 0.65%, jars with thin walls and outcurved rims (F13) with 0.56%, jars with outcurved rims (F15) with 0.28%, bowls with projected rims (F5) with 0.28%, and bowls with flared lips (F6) and bowls with thin walls(F18), associated with San Miguel Bisquit, with 0.09%.

ii. Decorative modes

Again, the most common decorative mode was polychromy (D8) with 42.13% (75 specimens out of 178). Other painted decorative modes were white lines on brown (D12) with 5.06% (n=9), black lines on red (D10) with 4.49% (n=8), red and brown (D11) with 1.69% (n=3) and white band on red (D9) with 1.12% (n=2) (Table 17).

For the plastic decorations parallel incised lines (D1) was the most common with 20.79% (n=37), followed by punctuation rows and incised lines (D3) with 12.92% (n=23) and appliqué pellets (D5) with 6.18% (n=11). Less represented were appliqué fillets (D6) with 3.37% (n=6), geometric designs with fine engraved or incised lines (D2) and combing (D4) with 1.12% (2 specimens each).

iii. Supports-Handles

Pointed solid supports (S3) was the most common mode of support with 28.26% (26 out of 92). Hollow zoomorphic and anthropomorphic supports (S6) with 22.83% (n=21) and hollow supports with slits (S4) with 20.65% (n=19) were also common. In lesser percentages are the following modes: hollow supports (S7) with 8.70% (n=8), solid zoomorphic (S2) with 6.52% (n=6), long solid (S1) and solid supports with central depression (S8) with 4.35% each (n=4), hollow supports with appliqué and incisions (S5) with 3.26% (n=3), and solid short (S9) with 1.09% (one example) (Table 17).

Strap handles (H2) and ring handles (H3) were equally represented with 45% each (9 specimens of 20). Two specimens of armadillo-shape handles (H1) accounted for 10% (Table 17).

d. Coto Brus Valley

i. Vessel Forms

The only sample, from El Paraiso, showed a distinctive panorama. Different from the other zones, the most popular vessel forms were jars with slightly thickened lips (F14) with 37.04% (20 out of 54) and open bowls (F3) with 24.07% (n=13). Jars or bowls with thickened lips (F16) the predominant form in the other zones accounted only for the 11.11% (n=6) (Table 17).

The other forms present have only small percentages. Bowls (F4) with 5.56% (n=4), composite silhouette bowls (F2), projected rim bowls (F5), bowls with thin walls and slightly thickened lips (F7), jars with long necks (F12) and jars with outcurved rims (F15) all with 3.70% (2 specimens each). Finally, tecomates (F1), and jars with projected lips and short necks (F11) share 1.85% (1 example each).

ii. Decorative modes

In a sample of 40 sherds, 39 were associated with polychromy (F8) for 97.5% and only one sherd associated with black lines on red (D10) (Table 17). This is an interesting pattern since the collection came from the profile of a stratified deposit.

iii. Supports-Handles

Only two supports, associated with S7 (hollow supports) were recorded. No handles were found in the sample of El Paraíso Site (Tables 17,18).

e. Coto Colorado Valley

i. Vessel forms

In the Los Araica sample several forms not previously registered were postulated. The most common was globular jars with sharp everted rims (F17) with 36.67% (22 out of 60). Bowls with projected rims (F5) accounted for 11.67% (n=7). Open bowls (F3), bowls (F4), jars with long neck (F12) and jars with outcurved rims and rounded thickened lips (F20) all appeared with 8.33% (5 sherds each). Tecomates (F1) with 6.67% (n=4), bowls with flared lips (F6) and jars with everted rim, very slanted (F19) with 5% (n=3). Finally bowls with thin walls (F18) with 1.66% or 1 example (Table 17). Most of the forms present in other zones were not present.

ii. Decorative modes

The most common decoration was orange-red bands or streaks on red (D13) with 81.63% (40 examples out of 49) and not present in the other zones. Other modes present were polychromy (D8) with 10.20% (n=5), appliqué pellets (D5) with 4.08% (n=2), punctation rows associated with incised lines (D3) and appliqué fillets (D6), both with 2.04% or 1 example each (Table 17).

iii. Supports-Handles

Of eight supports, three (37.5%) were associated with S4 or hollow supports pointed or mammiform, two (25%) with long solid supports (S1), another two (25%) to hollow supports (S7) and one (12.5%) with hollow supports with appliqué and incision (S5).

Seven handles were divided in the following manner twisted handles: (H5) with 42.85% (n=3), strap handles connected to the lip (H4) with 28.57% or two examples, One specimen of strap handles (H2) and another of projected tab (H6) for 14.28% each (Table 17).

Table 16. Presence or absence of ceramic modes by zone, Chiriquí Period, Diquís Archaeological Subregion

Vessel Forms

	General	Térraba	Diquís	Coto Brus	Coto Colorado
F1. tecomates	X	X	X	X	X
F2. Composite silhouette bowls	X	X	X	X	
F3. Open bowls	X	X	X	X	X
F4. bowls	X		X	X	X
F5. Bowls with projected rims	X	X	X	X	X
F6. Bowls with flared lips	X	X	X		X
F7. Bowls with thin bowls	X	X	X	X	
F8. bowls/slightly thickened lips	X	X	X		
F9. Bowls/interior thick lips	X	X			
F10. Plates		X	X		
F11. Jars with projected lips	X	X	X	X	
F12. Jars with long necks	X	X	X	X	X
F13. Jars/thin walls/outcurved rim	X	X	X		
F14. Jars/slightly thick lips	X	X	X	X	
F15. Jars with outcurved rims	X	X	X	X	
F16. Jars/very thick lips	X		X	X	
F17. Globular jars/sharp everted					X
F18. Bowl/thin straight walls			X		X
F19. Jar very slanted everted rim					X
F20. Jar/outcurved/rounded lips					X

Decoration motifs

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
D1:incised parallel lines	X	X	X	X	
D2:engraved incised lines	X	X	X	X	
D3:punctuation rows/incised lines	X	X	X		X
D4:combing		X	X		
D5:applique pellets	X	X	X		X
D6:applique fillets	X	X	X	X	X
D7:fillet chain-like	X	X			
D8:polichromy	X	X	X	X	X
D9:white on red	X	X	X	X	
D10:black on red	X	X	X	X	
D11:red and brown	X	X	X		
D12:white lines or bands	X	X	X		
D13: orange streaks or bands				X	X

Supports

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Mode					
S1: long solid	X		X		X
S2: solid zoomorphic	X	X	X		
S3: pointed solid	X	X	X	X	
S4: hollow with slits	X	X	X	X	X
S5: hollow, slits/applique/incision	X		X		X
S6: hollow anthro and zoo	X	X	X	X	
S7: hollow	X		X	X	X
S8: solid with central depression	X		X		
S9: solid with grooved lines			X		

Handles

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Modes					
H1: armadillo shaped	X	X	X	X	
H2: strap	X	X	X		X
H3: ring	X	X	X	X	
H4: strap to the lip					X
H5: twisted					X
H6: projected tab					X
H7: zoomorphic	X				

Table 17. Total and percentages of ceramic modes by zone, Chiriquí Period, Diquís Archaeological Subregion

Vessel Forms

Mode	General		Diquís		Coto Brus		C. Colorado	
	Total	%	Total	%	Total	%	Total	%
F1. tecomates	65	7.30	33	3.06	1	1.85	4	6.67
F2. Comp. silhouette bowls	52	5.84	36	3.34	2	3.70		
F3. Open bowls	107	12.01	190	17.63	13	24.07	5	8.33
F4. bowls	91	10.21	65	6.03	3	5.56	5	8.33
F5. Bowls/projected rims	52	5.84	3	0.28	2	3.70	7	11.67
F6. Bowls with flared lips	8	0.90	1	0.09			3	5.00
F7. Bowls with thin bowls	26	2.92	13	1.21	2	3.70		
F8. bowls/slightly thick lips	53	5.95	29	2.69				
F9. Bowls/interior thick lips	5	0.56						
F10. Plates			7	0.65				
F11. Jars with projected lips	29	3.25	104	9.65	1	1.85		
F12. Jars with long necks	8	0.90	21	1.95	2	3.70	5	8.33
F13. Jars/thin walls/outcurv.	15	1.68	6	0.56				
F14. Jars/slightly thick lips	73	8.19	33	3.06	20	37.04		
F15. Jars with outcurved rims	63	7.07	3	0.28	2	3.70		
F16. Jars/verythick lips	244	27.38	533	49.44	6	11.11		
F17. Glob. jars/everted							22	36.67
F18. Bowl/thin straight walls			1	0.09			1	1.67
F19. Jar/slanted/everted rim							3	5.00
F20. Jar/everted/rounded lips							5	8.33
Total	891		1078		54		60	

Decoration motifs

Mode	General		Diquís		Coto Brus		C. Colorado	
	Total	%	Total	%	Total	%	Total	%
D1:incised parallel lines	43	7.78	37	20.79				
D2:engraved incised lines	35	6.33	2	1.12				
D3:punctuation/incised lines	14	2.53	23	12.92			1	2.04
D4:combing			2	1.12				
D5:appliqué pellets	9	1.63	11	6.18			2	4.08
D6:appliqué fillets	4	0.72	6	3.37			1	2.04
D7:fillet chain-like	3	0.54						
D8:polychromy	418	75.59	75	42.13	39	97.5	5	10.2
D9:white on red	15	2.71	2	1.12				
D10:black on red	2	0.36	8	4.49	1	2.5		
D11:red and brown	8	1.45	3	1.69				
D12:white lines or bands	2	0.36	9	5.06				
D13: orange streaks/bands							40	81.63
Total	553		178		40		49	

Supports

	General		Díquís		Coto Brus		C. Colorado	
Mode	Total	%	Total	%	Total	%	Total	%
S1: long solid	28	28.87	4	4.35			2	25
S2: solid zoomorphic	6	6.19	6	6.52				
S3: pointed solid	16	16.49	26	28.26				
S4: hollow with slits	7	7.22	19	20.65			3	37.5
S5: hollow/ slits/applique/inc.	21	21.65	3	3.26			1	12.5
S6: hollow anthro and zoo	3	3.09	21	22.83				
S7: hollow	13	13.40	8	8.70	2	100	2	25
S8:solid/central depresion	3	3.09	4	4.35				
S9: solid with grooved lines			1	1.09				
Total	97		92		2		8	

Handles

	General		Díquís		C. Colorado	
Modes	Total	%	Total	%	Total	%
H1: armadillo shaped	27	67.50	2	10		
H2: strap	3	7.50	9	45	1	14.28
H3: ring	9	22.50	9	45		
H4: strap to the lip					2	28.57
H5: twisted					3	42.85
H6: projected tab					1	14.28
H7:zoomorphic	1	2.50				
Total	40		20		7	

Table 18. Total and percentages of ceramic modes by site,
Chiriquí Period, Diquís Archaeological Subregion

Vessel Forms	Quebradas		Rivas		El Cholo		Finca 4		Grijalba		Jalaca		El Paraiso		Los Arauca	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
F1			62	7.35	3	8.11	3	1.06	27	6.32	3	0.62	1	1.85	4	6.67
F2			47	5.57	5	13.51	9	3.18			27	7.34	2	3.70		
F3			100	11.85	7	18.92	28	9.89	23	5.39	139	37.77	13	24.07	5	8.33
F4			88	10.43	3	8.11	31	10.85	34	7.86			3	5.56	6	8.33
F6			52	6.16			2	0.71	1	0.23			2	3.70	7	11.67
F8			7	0.83	1	2.70	1	0.35							3	5.00
F7			28	3.08			1	0.35	12	2.81			2	3.70		
F8			53	6.28			4	1.41	25	5.85						
F9			5	0.59												
F10							1	0.35								
F11	4	40	25	2.98			3	1.06	1	0.23	6	1.63				
F12			7	0.83	1	2.70	13	4.59	8	1.87	100	27.17	1	1.85		
F13			12	1.42	3	8.11	4	1.41	2	0.47						
F14			68	7.92	7	18.92	16	5.65	17	3.98						
F15			61	7.23	2	5.41	3	1.06								
F16	6	60	233	27.61	5	13.51	163	57.60	277		93	25.27	6	11.11		
F17																
F18							1	0.35							22	36.87
F19															1	1.67
F20															3	5.00
Total	10		844		37		283		427		368		54		60	

Decorative modes		Quebradas		Rivas		El Cholo		Finca 4		Grijalba		Jalaca		El Paraiso		Los Arauca	
		Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
D1				38	7.62	4	10.52	14	11.86	5	27.77	18	42.85				
D2	1	33.33	32	6.25	2	5.26	1	0.84				1	2.38				
D3	1	33.33	12	2.34	1	2.63	10	8.47				13	30.95			1	2.04
D4										2	11.11						
D5	1	33.33	8	1.56			1	0.84	5	27.77	5	11.9				2	4.08
D6			3	0.59	1	2.63	3	2.54				3	7.14			1	2.04
D7			2	0.39	1	2.63											
D8			398	77.93	19	50	73	61.86				2	4.76	39	97.5	5	10.2
D9			14	2.73	1	2.63	2	1.69									
D10			1	0.20	1	2.63	2	1.69	6	33.33				1	2.5		
D11			1	0.20	7	18.42	3	2.54									
D12			1	0.20	1	2.63	9	7.62									
D13																	
Total	3		512		38		118		18		42		40		40	81.63	49

Supports

Mode	Quebradas		Rivas		El Cholo		Finca 4		Grijalba		Jalaca		El Paraiso		Los Arauca	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
S1			28	32.55			4	17.39								
S2	1	25	2	2.32	3	42.85	2	8.69			4	10.25				
S3	1	25	11	12.79	4	57.14	7	30.43	8	26.68	11	28.2				
S4			7	8.13			5	21.73	14	46.66					3	37.5
S5			21	24.41			1	4.34	2	6.68					1	12.5
S6			3	3.48			1	4.34			20	51.28				
S7			13	15.11			3	13.04	5	16.66					2	25
S8	2	50	1	1.16							4	10.25				
S9									1	1.33						
Total	4		86		7		23		30		39		2		8	

Handles

Modes	Rivas		El Cholo		Finca 4		Grijalba		Jalaca		Los Arauca	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
H1	25	69.44	2	50					2	22.22		
H2	3	8.33			5	55.5	2	100	2	22.22	1	14.28
H3	8	22.22	1	25	4	44.4			5	55.55		
H4											2	28.57
H5											3	42.85
H6											1	14.28
H7			1	25								
Total	36		4		9		2		9		7	

f. Comment

In the Upper General Valley, Middle Térraba Basin and Diquís Delta there are a lot of similarities in the vessel forms. The Coto Brus has most of the forms, but since the

The polychromy decoration is present in all the zones being the most panregional trait. Bichromy decorative modes associated with types such as Turucaca White on Red, Ceiba Red and Brown and Panteón White Lined are also common except in the Coto Colorado Valley. The Coto Colorado Valley differ from the other zones in the presence of mostly orange streaks or bands associated with the type Villalba Red Streaked. This mode, together with modes of decoration associated with the San Miguel Bisquit type and Foncho Red, is the most common in this zone. The Coto Brus Valley while maintaining relations with the other zones shows also the presence modes associated with types such as Villalba Red Streaked and Lérída Red on Orange that are not present in the other zones.

Armadillo shape handles are a distinctive mode of the Chiriquí Complex, usually associated with the Ceiba Red and Brown type, it is present in all zones with the exception of the Coto Colorado Valley. Ring handles and strap handles show a similar distribution. In contrast, strap handles that connect with the lip, present in Coto Colorado were not recorded in the other zones. The same is true for twisted handles, characteristic of the Foncho Red type.

The zoomorphic hollow and solid supports associated with types such as Buenos Aires Polychrome, Papayal Engraved, Sangria Red Fine and Turucaca White on Red are also present in most of the zones.

G. Frequency and Distribution of Ceramic Types by Zone

To complement the modal analysis a typological identification was carried out based on publications and the collections analyzed. Ceramic types are presented by period and zone. Within each period, some types are presented together, since it is common that the same kind of pottery has two or more names. To facilitate the comparison among the different analyses, they have been grouped according to their degree of relationship (see Appendix 3 for comments and history of each type, controversial aspects, spatial distribution and other issues). There are no ceramic types

defined for the Sinancrá Period, therefore the presentation is restricted to the Aguas Buenas and Chiriquí Period.

1. Aguas Buenas Period

Some groups of types are postulated based on the revision of the different types and wares postulated for this period in Southern Costa Rica and Western Panamá (Appendix 3). Different authors established categories and different names to essentially the same material. In an effort to establish a common ground the following groups are proposed:

Group A. Moravia Red-Guarumal v. Cebaca-Corral Red. v. Coronado and v. Corral-Cerro Punta Orange v. Cotito and v. Cerro Punta

Group B. Barriles Zoned- Zoned Bichrome-Guarumal v. Guarumal

Group C. Cañas Zoned-Bugaba Engraved v. Bugaba and v. Lacoste

Group D. Quebradas v. incised and plain

a. General Valley

In the Upper General Valley, the Quebradas type in its two varieties was the most common type identified accounting for the 96.06% (19,495 out of 20295 specimens) (Table 20). The Monochrome or Plain variety was predominant (78.16%) over the incised variety, but this can also be related to the use of fragments with no decoration in the identification. This high predominance of the Quebradas type is a diagnostic trait of this zone. Group A is usually considered as the "typical" Aguas Buenas Complex, but represented by only 3.54% (n=719). Other types are represented with small percentages, in which is a constant in the different regions. Group C (Cañas Zoned-Bugaba Engraved) was represented by 0.30% (n=60) and Group B. (Barriles-Zoned Bichrome) by 0.10% (21 examples) (Tables 20, 21).

b. Térraba Middle Basin

In the Curré Site, the Quebradas type (Group D) diminished in importance (21.05%, 12 out of 57 specimens) while Group A was the most numerous with 45.61%

(n=26). The Group B had an important representation with 21.05% (n=12). The Group C accounted for 14.03% (n=7) (Tables 20, 21).

c. Diquís Delta

Based on the data for the Diquís Delta and Caño Island (N=733), it is possible to recognize a more balanced presence of sherds related to the different types or groups of types. The Quebradas type with its two varieties (Group D) for a combined percentage of 36.15% (n=265) was the most common. The Group A accounted for 30.28% (n=222). The Group C had its higher presence here with 28.10% (n=206) and the Group B was represented by 5.45% (n=40) (Tables 20, 21).

d. Coto Brus Valley

Haberland proposed the Aguas Buenas Complex using the sample obtained at El Tigre site (N=556). Using his typology he established that 91.01% (n=506) of the material was associated with the type Moravia Red. The variety Red accounted for a 31.83% and the variety Bambito for 59.17%. He recognized two other types present in small percentages: Barriles Zoned (Group B) represented the 3.42% (19 examples) and Cañas Zoned (Group C) the 5.58% (n=31) (Tables 20,21). Neither he nor Corrales (1984), Laurencich de Minelli and Minelli (1973) or León (1988) recognized the presence of the Quebradas type (Group D) in the samples of the area. This contrasts with the higher presence of Quebradas in the other zones.

e. Coto Colorado Valley

At the Ni Kira, the Group A dominated completely the sample with 95.90% (234 out of 244) (Tables 20, 21). Some sherds (10) with red rim and no decoration were associated with the Group B accounting for 4.10%, but they can be also associated with the variety Bambito of Moravia Red (Group A).

The absence of Bugaba Engraved (Group C) in the sample of this site is remarkable but the absence of Quebradas is no surprise since it has not been identified in the previous analyses of Haberland or Shelton in adjacent areas of Chiriquí.

**Table 19. Presence or absence of ceramic types by zones,
Aguas Buenas Period, Diquís Archaeological Subregion**

	General	Térraba	Diquís	Coto Brus	Coto Colorado
Quebradas	X	X	X		
Moravia Red	X			X	X
Guarumal v. Cebaca	X	X	X		
Corral Red v. Coronado	X	X	X		X
Corral Red v. Corral	X		X		X
Cerro Punta v. Cotito	X	X	X		X
Cerro Punta v. Cerro Punta	X		X		X
Barriles Zoned				X	
Zoned Bichrome	X		X		
Guarumal v. Guarumal		X	X		X
Guarumal		X			
Cañas Zoned				X	
Bugaba v. Bugaba	X	X	X		
Bugaba v. Lacoste		X	X		

Table 20. Total and percentages of ceramic types by zones, Aguas Buenas Period, Diquís Archaeological Subregion

	General		Térraba		Diquís		Coto Brus		Coto Colorado	
	Total	%	Total	%	Total	%	Total	%	Total	%
Quebradas	19495	96.06	12	21.05	265	36.15				
Moravia Red	628	3.09			27	3.68	506	91.01	90	36.89
Guarumal v. Cebaca	5	0.02	8	14.04	75	10.23				
Corral Red v. Coronado	31	0.15	4	7.02	10	1.36			129	52.87
Corral Red v. Corral	13	0.06			24	3.27			7	2.87
Cerro Punta Orange v. Cotito	8	0.04	14	24.56	33	4.50			7	2.87
Cerro Punta v. Cerro Punta	34	0.17			53	7.23			1	0.41
Barriles Zoned					10	1.36	19	3.42		
Zoned Bichrome	21	0.10			10	1.36				
Guarumal v. Guarumal			11	19.30	20	2.73			10	4.10
Guarumal			1	1.75						
Cañas Zoned					2	0.27	31	5.58		
Bugaba Engraved v. Bugaba	60	0.30	6	10.53	178	24.28				
Bugaba Engraved v. Lacoste			1	1.75	26	3.55				
Total	20295		57		733		556		244	

Table 21. Total and percentages of ceramic types by site, Aguas Buenas Period, Diquis Archaeological Subregion

	Quebradas	Hidalgo	Pacuar	El Cholo	Herradura	Las Brisas
	Total	Total	Total	Total	Total	Total
Quebradas			337			
Quebradas Incised	213	107		30	191	2,554
Quebradas Monochrome	584	29		10		13,346
Moravia Red	4		5		146	432
Moravia Red v. Moravia						
Moravia Red v. Bambito						
Guarumal v. Cebaca	1	4				
Corral Red v. Coronado	9	19		3		
Corral Red v. Corral		13				
Cerro Punta Orange v. Coitito	3	3		2		
Cerro Punta v. Cerro Punta	8	20		6		
Barriles Zoned						
Zoned Bichrome					21	
Guarumal v. Guarumal						
Guarumal						
Cañas Zoned						
Bugaba Engraved v. Bugaba	2				58	
Bugaba v. Lacoste						
Total	824	195	342	51	416	16332

% Monge	% Total	%	Curre	% Total	%	Palmar-Sierpe	% Total	%	Caño Island	% Total	%	El Tigre	%	NI Kira	Total	
15.64	200	9.37	3	5.26	18	2.59										
81.72	1,894	88.71	9	15.79	247	35.59										
2.65	41	1.92							27	69.23				90	36.89	
												177	31.83			
												329	59.17			
			8	14.04	75	10.81								129	52.87	
			4	7.02	10	1.44								7	2.87	
					24	3.46								7	2.87	
			14	24.56	33	4.76								1	0.41	
					53	7.64			10	25.64		19	3.42			
					10	1.44										
			11	19.30	20	2.88								10	4.10	
			1	1.75												
									2	5.13		31	5.58			
			6	10.53	178	25.65										
			1	1.75	26	3.75										
	2135		57		694				39			556		244		

f. Comment

The "typical" assemblage of the Aguas Buenas ceramic complex as postulated by Haberland was predominant in the Coto Brus and Coto Colorado Valleys. In the other zones the strong presence of material associated with the Quebradas type in its two varieties seems to mark a spatial difference within this period. It is not completely clear whether or not Quebradas also reflects a temporal distinction since it is found with material considered "late" by some authors.

Another type that has been related to chronological distinctions is Bugaba Engraved (Group C). Its identification with the rest of the types in most of the sites casts doubts about the proposition that it reflects a late appearance, however it could have had a later flourishing. Its absence in the Ni Kira sample is noteworthy for reasons that do not exclude the temporal explanation.

2. Chiriquí Period

For this period, the problems with ceramic types derive from the different names given to very similar material in Southern Costa Rica and Western Panamá. Another problem is that some subdivisions were made from very general types. In this sense, the absence of material related to some types or their small percentages in some zones can be due to the fact that they were not identified in previous analyses.

A final problem is that in this period domestic assemblages differed from funerary assemblages. Some types are recognized more commonly in one of the contexts, while some types are identified in only domestic or funerary assemblages. Most of the cases analyzed are from domestic deposits (Table 10), but not all. It is also clear that some types have a restricted spatial distribution while others can be considered panregional.

a. General Valley

From the combined sample (N=1250) of Rivas, Pacuar and El Cholo sites the most common type identified was Ceiba Red-Brown with 48.64% (n=608) followed by Buenos Aires Polychrome with 36.24% (n=453) (Tables 23, 24). Buenos Aires Polychrome is found as funerary offering, but it can be very common in some stratified

deposits. Materials related with other types were present in small percentages: Papayal Engraved with 6.32% (n=79), Sangría Red Fine with 5.92% (n=74), Turucaca White on Red with 2.80% (n=35). Chánguena Black on Red represents only 0.08% (1 example from a tomb in El Cholo) (Tables 23, 24).

b. Térraba Middle Basin

The combined sample (N=90,345 sherds) of the Buenos Aires, Murciélago and Curré sites show a predominance of the pottery postulated as the Ceiba Red-Brown type with 95.10% (n=85,914), but this number is skewed by the sample of Murciélago site (Table 24) where all monochrome pottery was identified as Ceiba. The polychrome pottery named Buenos Aires Polychrome was represented by 4.26% (n=3849) in general, but in the deposits of the Curré site it was dominant with 71.05%. In contrast, at the Murciélago site it only represented 0.62% of all diagnostic sherds (Table 24).

The other types are minimally represented in the overall sample, but excluding Murciélago, they have higher proportions in the other sites. The Sangría Red Fine type has a percentage of 0.25% (n=224) based on its identification in Curré (where it accounted for 4.82% of the local sample, Table 24). Some of the identified as Ceiba Red and Brown in Murciélago by Drolet (1983) must have been Sangría, therefore there is a bias in the identification (Table 24).

Turucaca White on Red accounted for 0.18% (n=165), Silena Winged, another type that probably was identified as Ceiba Red and Brown in Murciélago, with 0.05% (n=45). Papayal Engraved with 0.09% (n=7) and Seúl Engraved with 0.01% (n=8) form a group of types formerly identified only as Papayal.

Ceramic vessels that are most common as funerary offerings have small appearances in domestic deposits: That is the case of those related to Panteón White Lined with 0.02% (n=14), Chánguena Black on Red with 0.04% (n=38), San Miguel Biscuit with 0.01% (n=7) and a Negative painted type with 0.004% (n=4) (Tables 22,23,24).

c. Diquís Delta

The combined sample (N=1283) of the sites in Palmar-Sierpe area, Jalaca and Caño Island rendered the following results. Pottery classified as Ceiba Red and Brown

type was dominant with 58.22% (n=747), followed by Buenos Aires Polychrome ceramics with 17.07% (n=219) and Sangría Red Fine with 13.09% (n=168). The other types were recognized with smaller percentages, Turucaca White on Red was present with 4.13% (n=53), Papayal Engraved with 2.65% (n=78), Silena Winged with 2.42% (n=31), Seúl Engraved with 2.18% (n=28), Chánguena Black on Red with 0.16% (n=2) and finally San Miguel Bisquit, most likely a exchange pottery, with only one example or 0.08% (Tables 22,23,24).

d. Coto Brus Valley

The situation in the Coto Brus Valley changed markedly, but the fact that the main sample came from funerary contexts (El Zoncho cemetery and probably El Paraíso site), instead of habitation deposits introduced a bias (Tables 10, 24). Here the most common sherds were associated with Foncho Red (usually not found at habitation sites) with 27.66% (n=289), Buenos Aires Polychrome with 24.02% (n=251) and San Miguel Bisquit (another rare type in domestic contexts) with 17.61% (n=184). In contrast Ceiba Red and Brown was present only with 2.49% (n=26) (Tables 23,24).

Other important types identified in the sample were Negative type (probably Bugavita Negative) with 8.52% (n=89), Papayal Engraved with 7.46% (n=78); Panteón White Lined with 5.55% (n=58). Villalba Red Streaked a type absent in the other zones was identified with 2.01% (n=21). Sangría Red Fine with 1.72% (n=18), Silena Winged with 1.82% (n=19) and Chánguena Black on Red with 0.10% (only one example) maintain their low but stable appearance. Lérida Red on Orange, possibly a type imported from the Caribbean is represented by 1.05% (n=11).

e. Coto Colorado Valley

The situation at Los Araica Site was different from the zones associated with the Térraba Watershed. In a sample of 76 sherds, the predominant type was Villalba Red Streaked with 63.15% (n=48). The material associated with this type is also the most common in the domestic deposits of the Gulf of Chiriquí (Linares 1968). Foncho Red represented 11.84% (n=9) and San Miguel Bisquit 17.10% (n=13). The only type represented in the sample that is also common in the other zones is Buenos Aires

Polychrome (that can also be identified as Urabá Polychrome) with 7.89% (n=6) (Tables 23, 4).

f. Comment

Ceiba Red and Brown and its divisions (Sangría Red Fine, Silena Winged) is the predominant pottery in the Upper General Valley, Middle Térraba Basin and Diquís Delta, all areas connected by the Térraba River. As in the previous period, the situation in the Coto Colorado and Coto Brus Valleys differ from the other zones. These valleys have a closer geographical link with the zones of Western Panamá. They present material of some ceramic types uncommon in the other zones that probably are of local manufacture such as Villalba Red Streaked and San Miguel Bisquit and the absence or small numbers of ceramics identified as the most common types in those zones.

Buenos Aires Polychrome despite the fact that is very common in funerary contexts is also very common in some domestic deposits such as Curré and Rivas. Those sites could have been centers of manufacture, but the great number of broken sherds associated with that type also reflect its use in more quotidian activities.

Table 22. Presence or absence of ceramic types by zone, Chiriquí Period, Diquís Archaeological Subregion

	General	Middle Térraba	Diquís	Coto Brus	C. Colorado
Type					
Buenos Aires Polychrome	x	x	x	x	x
Papayal Engraved	x	x	x	x	
Ceiba Red and Brown	x	x	x	x	
Sangría Red Fine	x	x	x	x	
Turucaca White on Red	x	x	x		
Panteón White Line		x		x	
Silena Winged		x	x	x	
Negative		x	x	x	
Seúl Engraved		x	x		
Chánguena Black on Red	x	x	x	x	
San Miguel Biscuit		x	x	x	x
Villalba Red Streaked				x	x
Foncho Red	x	x	x	x	x
Lérida Red on Orange				x	

Table 23. Totals and percentages of ceramic types by zones, Chiriquí Period, Diquis Archaeological Subregion

Type	General		Middle Térraba		Diquis		Coto Brus		Coto Colorado	
	Total	%	Total	%	Total	%	Total	%	Total	%
Buenos Aires Polychrome	453	36.24	3849	4.26	219	17.07	251	24.02	6	7.89
Papayal Engraved	79	6.32	77	0.09	34	2.65	78	7.46		
Celba Red and Brown	608	48.64	85914	95.10	747	58.22	26	2.49		
Sangría Red Fine	74	5.92	224	0.25	168	13.09	18	1.72		
Turucaca White on Red	35	2.80	165	0.18	53	4.13				
Panteón White Line			14	0.02			58	5.55		
Sitena Winged			45	0.05	31	2.42	19	1.82		
Negative			4	0.004			89	8.52		
Setij Engraved			8	0.01	28	2.18				
Changuena Black on Red	1	0.08	38	0.04	2	0.16	1	0.10		
San Miguel Biscuit			7	0.01	1	0.08	184	17.61	13	17.1
Villaiba Red Streaked							21	2.01	48	63.15
Foncho Red							289	27.66	9	11.84
Lérida red on Orange							11	1.05		
Total	1250		90345		1283		1045		76	

Table 24. Totals and percentages of ceramic types by site, Chiriquí Period, Diquís Archaeological Subregion

Type	Rivas		Pacuar		El Cholo		Buenos Aires		Murciélago		Curré		Palmar-Sierpe	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%
Buenos Aires Polychrome	434	40.04			19	31.15	18	21.69	527	0.62	3304	71.05	202	30.42
Papayal Engraved	77	7.10			2	3.28	19	22.89			58	1.25	26	3.92
Celiba Red and Brown	467	43.08	117	100	24	39.34	38	45.78	85086	99.38	790	16.99	153	23.04
Sangría Red Fine	72	6.64			2	3.28					224	4.82	168	25.30
Turucaca White on Red	34	3.14			1	1.64					165	3.55	53	7.98
Panteón White Line							1	1.20			13	0.28		
Silena Winged											45	0.97	31	4.67
Negative											4	0.09		0.00
Seül Engraved											8	0.17	28	4.22
Chánguena Black on Red					1	1.64					38	0.82	2	0.30
San Miguel Biscuit							6	7.23			1	0.02	1	0.15
Villalba Red Streaked														
Foncho Red														
Lerida red on Orange														
monochrome					10	16.39								
incised n.id.					1	1.64								
white paint n.id.					1	1.64								
no id.							1	1.20						
Total	1084		117		61		83		85613		4650		664	

Jalaca Total	%	Cafio Island		Zoncho		El Paraiso		Los Aralca	
		Total	%	Total	%	Total	%	Total	%
17	2.74	93	53.45	212	21.70	39	57.35	6	7.89
8	1.29	1	0.57	78	7.98				
594	95.96			17	1.74	9	13.23		
					0.00	18	26.47		
					0.00				
				58	5.94				
				19	1.94				
		14	8.05	89	9.11				
					0.00				
					0.00	1	1.47		
		21	12.07	183	18.73	1	1.47	13	17.1
				21	2.15			48	63.15
		45	25.86	289	29.58			9	11.84
				11	1.13				
619		174		977		68		76	

CHAPTER VI

REGIONAL COMPARISONS, CERAMIC HORIZONS AND TRADITIONS

The spatial distribution of ceramic modes and types by period can be used to discuss horizons, traditions and interaction spheres. Southern Costa Rica is compared with Western Panamá, and other neighboring areas in Southern Central America.

A. Regional Comparisons and Horizons

In general, territorial proximity may result in closer ceramic similarities with local traditions linked by particular characteristics or horizons. In Southern Costa Rica, adjacent zones tend to present closer relationships. However, zones that are closer to Panamá tend to differ from the ones in the Térraba Watershed in the last two periods and especially during the Chiriquí period. The information is presented according to period and with increasing levels of inclusion.

1. The Sinancrá Period and a Formative Ceramic Horizon

During the Sinancrá Period, in overall, there is a stylistic and formal connection between Curré and Darizara that point to the existence of spatial relationships or a ceramic horizon in the first millennium before Christ in Southern Costa Rica. Unfortunately, large territorial gaps must await for more research to reach a more conclusive result. Comparisons with scant data from Western Panamá suggest similar occupations in that subregion.

A ceramic comparison at the level of Southern Central America for the Sinancrá Period was pursued due to the restricted information available in Greater Chiriquí and the objective of assessing similarities and differences among Formative ceramic complexes in the Southern Central America region. Several authors (Myers 1978, Hoopes 1987, 1994, 1995, Meggers 1997, Fonseca 1997) have conducted regional comparisons of early ceramic complexes within the limits of the Intermediate area and beyond. However, they have relied on the comparison of selected trait lists with no

reference to the frequency of those traits. I prefer to restrict my comparisons to neighboring complexes in Southern Central America with quantitative data from percentages of frequency of formal and decorative modes. This is, I believe, a more valid approach than assuming relationships based only in presence or absence of traits. Further works must include data from other areas of the Chibchan-Chocó Historical Area.

Assuming the proposition by Constenla (1995) that linguistic division were roughly coincident with establishment of agriculture, the evidence about early ceramic complexes may reflect that process of division, but at the same time reflect some degree of similarity, what Fonseca (1997:56) has called "...the difference within the similarity..."

a. Comparison with Western Panamá

Before the Curré ceramic complex was proposed (Corrales 1985), some ceramics in Western Panamá were reported by several investigators under the label of "miscellaneous" or "non identified". A reassessment of ceramics from the San Felix and Remedios Districts, Trapiche and Horacio Gonzalez rockshelters and Volcán Barú sites suggests some relationships with the Curré and Darizara complexes. However, those relationships must be tested with new excavations and ceramic analysis.

Ranere (1968: 114-116), in his analysis of pottery from surface collections in the San Felix and Remedios districts on the Chiriquí Plains, reported several modes of decoration that he did not associate with any of the established phases. His modes include several forms of appliqué, (ridging, ridge notching, raised knobs) fine-line incising, broad-line incising, slash punctation and shell stamping (Ranere 1968:114-115, fig. 54 a-o, 119, Table 4). These modes are substantially the same as the ones present in Curré and Darizara. I have considered this as an indication of similar occupations for the lowlands of Chiriquí (Corrales 1989), but this must be confirmed with additional fieldwork.

Linares and Ranere (1971:351,354; 1980:95) reported ceramics from the upper levels of the Trapiche and Horacio González rockshelters, in the middle range of the Chiriquí River Watershed that they associated with the La Concepción-Aguas Buenas-Burica horizon. Haberland has argued that this association is erroneous and that a

radiocarbon date (SI-1844), around 3000 B.C. can be associated with this pottery (Haberland 1984a:237). Cooke (personal communication) has mentioned that this pottery is similar to Curré, although the date would be too early for Curré. There are no illustrations available of this specific ceramic for a more objective evaluation.

Another possible association is the "miscellaneous surface treatments" reported by Spang et al. (1980:370-371), for their analysis of Volcán Barú region ceramics. They include under this category multiple small punctation, rows of raised "buttons", jab and drag, stamped circles and shell impressions that appeared in combination with grooved lines and/or red slip in certain portions of the vessels (specimens k, m, n, o and p, fig. 9/8, p.370). They did not give specific quantities for these modes. Similar decorations have been documented at the Ni Kira site for the Abrojo Complex (Aguas Buenas Period) and can be considered as continuation of the modes from Curré and Darizara, with the exception of red slip. This characteristic also suggests relations with La Concepción Complex (Shelton 1995).

Based in this information we can propose the existence of Formative populations at the level of Greater Chiriquí. While the evidence from Western Panamá must be confirmed, the location of Darizara provides additional support for the presence of those occupations in the lowlands of Western Panamá.

b. Comparisons with other ceramic complexes at the Southern Central American Level

Strong similarities among ceramic complexes of different zones of America have been postulated for the first and second millennia B.C. Current discussions about a postulated "Chibchan Historical Area" regarding whether there was one center of invention or multiple independent centers of invention highlight the strong resemblance among the assemblages (Hoopes 1994c, Meggers 1997, Fonseca 1997).

Early ceramic complexes recorded in Southern Central America, share different modes of vessel forms and decoration. However, there are also significant differences, both in the presence or absence of modes and in the absolute and proportional presence of them. A list of vessel forms and decorative modes was prepared for quantitative comparison, based on the information available for the complexes of the

Formative Period in Southern Central America (see Appendix 2). Some of the modes are very general since the information available is uneven. Some bias can be expected from the differences in the terms employed for the different researchers. To reduce such bias a comparison of the different modes was done using the descriptions and illustrations provided (Figs. 33-50). In the discussion of the different complexes, quantitative information for vessel forms and decorative modes presented by the different authors was adapted to the modes established for this study.

i. Central Panamá

From Central Panamá, two ceramic complexes, Monagrillo and Sarigua merit comparison with Curré and Darizara. Sarigua, in particular, has been mentioned as having close relationship with Curré (Corrales 1989, Hoopes 1995, Fonseca and Cooke 1994:240). Monagrillo and Sarigua have been postulated by Hoopes (1987:480) as forming an interaction sphere during Formative times.

Monagrillo

The Monagrillo Ceramic Complex from Central Panamá is the oldest recorded for Southern Central America (Willey and McGimsey 1954, Cooke 1995:179). Cooke, based on the discussion of series of radiocarbon dates available for several sites, proposes a 2-sigma time span of 2900-1200 B.C. (Cooke 1995:180). Monagrillo vessel forms are simple, including globular and semiglobular open bowls. Decoration is limited to red paint represented only 2.1% (432 out of 20189 sherds) and incised lines (0.33% or 67 sherds) (Willey and McGimsey 1954:52-53, Table 4). It includes random bands or zones of red pigment on the exterior, usually parallel bands under the rim, pendant triangles, pendant semicircles and rectangular or vertical areas pendant from the rim but without the rim band. Incised lines can end in punctation or be convoluted (spiral). There are also short parallel incised lines (Willey and McGimsey 1954:67).

Monagrillo has been interpreted to reflect an independent invention of pottery. It dates later than other developments in South America, but appears to be stylistically unrelated to them (Cooke and Ranere 1992:270, Cooke 1995:179). However, Meggers (1997:22) and Fonseca (1997: 53) disagree arguing that most of the decorative motifs of

Monagrillo had prototypes in the Valdivia and Puerto Hormiga complexes of South America. However, they do not address vessel forms and the relations that they proposed are based on general similarities that can be more of the analogous type.

Monagrillo, the oldest ceramic complex in Southern Central America whether its origins were product of local invention or diffusion, precedes the next Sarigua Complex in Central Panamá. Its role as the ancestral complex to a series of local Formative complexes, including Curré and Darizara, from Panamá to Nicaragua is still open to debate and the results of future research.

Sarigua

Willey and McGimsey (1954) postulated the Sarigua complex in the littoral of Central Panamá. They characterized it as a monochrome style, with plastic decorations such as incised lines, appliqué, pellets, shell stamping, punctation and striation. The typical form is a deep bowl with recurved rim that is not known for Monagrillo. Also present are globular jars and small bowls. Sarigua has been dated to the first millennium before Christ and is considered partly coeval with or descendant from Monagrillo (Cooke 1995:169, 174). Isaza (1993:41) considers that this pottery together with cylindrical and subglobular vessels from the Guacamayo site (Harte 1966) can be considered transitional between Monagrillo and the painted pottery of the La Mula Group.

Similarities with Curré and Darizara are specific motifs with shell stamping, striation, punctation and appliqué. There are also similarities at the formal level with the globular jars, and bowls with exterior recurved rims (Willey and McGimsey 1954:108, fig. 29, Cooke 1995:175). "Guacamayo" vessels, associated with the Sarigua Complex are also similar in their cylindrical forms and use of fine incising and scarification (Cooke 1976:127, 1995:175). Quantitative data came from the information provided by Willey and McGimsey about the Sarigua Complex (1954:107-110). No information is provided about vessel form frequencies. Decorative modes numbers are based in the samples for the Sarigua Appliqué, Sarigua Shell Stamped, Sarigua Punctated and Sarigua Striated types.

Materials from the Limón Site, Coclé, and Taboguilla Site, Taboguilla Islands (Stirling and Stirling 1964a, c) and site T11 from Azuero Peninsula (Mitchell and Heidenreich 1965) seems to be related with Sarigua. Stirling and Stirling reported a

tomb from the Limón Site containing six ceramic offerings, four cylindrical vessels and two globular jars with incised decorations (1964a:251-252, Fig.17, Plate 27). From the Taboguilla Site, (Stirling and Stirling 1964c:312-326, Figs. 33-47, Plates 59-69, 74, 84-86, 88-89) reported a series of sherds and restored globular jars exhibiting incising patterns, narrow line combing, multiple line combing, shell stamping, fillets plain or stamped with shells similar to the attributes of Sarigua.

Mitchell and Heidenreich (1965:13-16) reported sherds from the Azuero Peninsula decorated with incising, modeling, punctation, shell and fingernail stamping and red slips. This pottery was compared with Sarigua, Momil (Colombia), Guayas (Ecuador) and la Victoria (Guatemala), all of them Formative components. Similarities with Curré and Darizara are found in illustrations 7, 8, and 9 (a,b) that show shell and fingernail stamping. These early ceramics from Central Panamá would reflect the local developments from the common ancestor represented by Monagrillo.

ii. Costa Rica Central Pacific

The earliest pottery from the Central Pacific Coast of Costa Rica is the Los Sueños Ceramic Complex that was formulated based on stratigraphic excavations and surface collections made at Los Sueños, in the Herradura Valley, Central Pacific Coast of Costa Rica (Corrales 1997, 1998, 1999a). Information came from Corrales (1998: Charts 2 and 3, 1999a:, Charts 2 and 3) and adapted to the categories established for this study (Tables 25-28). In a sample of 360 rims, the predominant vessel forms are tecomate-jars (49.72% or 179 specimens); globular jars are also present in significant percentage (24.16% or 87 specimens). Other forms include bowls with flared rims (7.22%, 26 specimens), incurving bowls (4.44%, 16 specimens), tecomates (1.38%, 5 specimens), cylindrical vessels (2.77%, 10 sherds) and budares (0.55%, 2 examples) (Table 26). Decoration with incised lines was the most common (64.49%, 138 specimens out of 214), Other plastic motifs were done using appliqué fillets with stamping (9.35%, 20 specimens), pellets appliqué (5.14%, 11 specimens), shell stamping (3.27%, 7 specimens), rocker stamping (2.80%, 6 specimens), fingernail stamping (1.87%, 4 specimens), punctation (2.34%, 5 specimens). There are also bands of red pigment (6.54%, 14 specimens) producing zoned bichroming (Table 28). It was dated by comparison between 1500-300 B.C.

Based on the presence and percentages of the different attributes, I suggest that the complex was in an intermediate position between southern complexes as Curré and Darizara and northern complexes such as La Pochota and Tronadora (Corrales 1998, 1999a).

Similarities with Curré and Darizara are the globular jars, incised lines, cuneiform stamping, fingernail stamping, incised lines enclosing stamping and shell stamping in short strokes. Los Sueños also shares flat bases for cylindrical vessels with Curré. Rocker stamping is present in Los Sueños and Darizara. In contrast, tecomate-jars, the predominant vessel form in Los Sueños, are absent in Curré and Darizara, as well as incurving bowls, red bands, and red slip.

iii. Costa Rica Central Valley

In the Central Valley of Costa Rica, the oldest pottery is known as the Barva Complex (Snarskis 1981) with a limited appearance at several sites, usually only a handful of sherds. Attributes of form and decoration are similar to those of the complexes formulated in the Caribbean and Northern Plains. In a small sample (17 sherds) from several surface collections, twelve sherds correspond to rim fragments associated with tecomate jars (58.33%, 7 specimens), globular jars (16.66%, 2), cylindrical vessels (16.66%, 2) and incurving bowls (8.33%, 1). Parallel incised lines (36.84%, 7), were the predominant motif. Others included zone bichroming (3 examples), shell stamping (1), rocker stamping (1), punctation (4), pellets appliqué (2) and fillets appliqué (1) (Tables 26,28). (Snarskis 1978, Corrales 1999b). The evidence is admittedly limited, but the sherds analyzed have a closer resemblance to the material of the Chaparrón and Tronadora complexes.

iv. Costa Rica Eastern Caribbean

The Black Creek complex was reported by Chávez et al. (1996), based on surface collections, from the site of the same name in the Caribbean Coast and dated between 1000-500 B.C. by regional comparison. They reported a sample of 93 sherds with 22 diagnostics (rims, decorated). Analyzing the small sample according to our categories, tecomates are the predominant vessel forms (83.33%, 10 specimens) and much less common are globular jars (16.66%, 2 specimens) (Table 26). However, those

percentages can be misleading because of the size of the sample. New research is being conducted by Norberto Baldí, so the available information may be modified by his results. The vessels were decorated with plastic decorations such as incision-punctuation (1 specimen), appliqué pellets (1 specimen), shell stamping (1 specimen), and fingernail stamping (3 specimens) and crosshatching (1 specimen) (Table 28). Despite its small size, the sample is very valuable since the information from the area is scarce and it is one of the few sites located in the Caribbean coastline. It shares with Curré and Darizara decorative motifs done with shell stamping, fingernail stamping, fillets appliqué, sometimes stamped, and incised lines enclosing or cut by incised lines or stamping. They also have in common the presence of globular jars; but they are different in the presence of tecomates, the most common vessel form in Black Creek and very rare in Curré and Darizara.

v. Costa Rica Central Caribbean

One of the first ceramic complexes dated to the first millennium B.C. in Costa Rica was La Montaña. Snarskis (1978, 1981:40, 1982:84-89, 1984:201, 203) defined the La Montaña complex from materials at the type site of La Montaña, located in the Turrialba Valley, Central Caribbean of Costa Rica. This complex was dated between 1000 and 500 B.C. based on stylistic associations and radiocarbon dates with a range from 1575±60 B.C. (UCLA-2113A) to 550±50 B.C. (UCLA-2113N) (uncalibrated).

An assignment of the data provided by Snarskis (1978: 358, fig.86, 405, fig, 120) to our categories show that the predominant forms are globular jars (29.53%, 158 specimens out of 535) and tecomates (21.68%, 116 specimens). Squat necked jars (13.64%, 73 specimens), open bowls (11.40%, 61 specimens) and incurving bowls (9.53%, 51 specimens) are also important. Budares have the highest presence in this complex (6.54%, 35 specimens). Tecomate-jars are present in small percentages (1.50%, 8 specimens) as well as bowls with flared lips (1.12%, 6 specimens), plates (0.93%, 5 specimens) and bowls (1.87, 10 specimens) and tecomates (2.24%, 12 specimens) with composite silhouette, all under 3% (Table 26). Diagnostic decorative modes of La Montaña include pellets appliqué associated with incision (50.55%, 136 specimens out of 269), parallel incised lines (10.41%, 28 specimens), fillets appliqué (7.43%, 20 specimens), red bands, sometimes associated with incision (19.37%, 52

specimens), punctation (4.83%, 13 specimens), incised and excised lines filled with red pigment (2.23%, 6 specimens), rocker stamping (1.11%, 3 specimens), drag and jab (0.74%, 2), and cord stamping (1.48%, 4) (Table 28). Most of the ceramic is monochrome light brown (95%) (Snarskis 1978:72).

The closest similarities with Curré are the plates with truncated rims (Snarskis 1978 fig. 7:m; fig.68 R1; fig.110 D18-D19). However, this form is predominant in La Montaña while in Curré is rare and absent in Darizara. There are also similarities in the rim profiles of globular jars, R.5 of Snarskis and F5 from Curré and F10 from Darizara (Fig. 69 R5, fig.104 D1). In terms of decorations, the least frequent in La Montaña are those more similar to Curré and Darizara. For example drag and jab (fig.13; fig.108 D14), and hachure motifs (fig.11, tt; fig. 13 b). Other similar motifs are incised lines (fig.13: a,f,g, h,i,m,n,o,) and rocker stamping (fig. 10: n; fig. 105 D7).

vi. Northern Costa Rica

Several early ceramic complexes have been reported for the northern sector of Costa Rica (Northern Plains, Northwest) dated to the first millennia B.C, all of them sharing close affinities (Snarskis 1978, 1981, Hoopes 1984, 1985, 1987, 1994d, Norr 1986, Odio 1992).

Chaparrón

In the Northern Plains, the Chaparrón complex was defined from material from the site of the same name (Snarskis 1978: 358, fig.86, 405, fig, 120). From a sample of 132 rims, the following vessel forms were identified. Simple tecomates accounted for 52.67% or 69 specimens, and tecomate-jars for 33.59% or 44 specimens. Other forms were globular jars (5.34%, 7 specimens), open bowls (4.58%, 6 specimens), incurving bowls (3.05%, 4 specimens), and bowls with flared lips (0.76%, 1 example) (Table 26). The more frequent decorative modes are zoned bichromy delimited by incised lines (54.76%, 161 specimens out of 294), shell stamping (11.90%, 35 specimens), drag and jab (7.14%, 21 specimens), fingernail stamping (4.76%, 14 specimens), broad incision (4.76%, 14 specimens), punctation (0.34%, 1 example) and excision filled with red pigment (0.34%, 1 example) (Table 28). This complex has been associated with the

Middle Formative from Mesoamerica, especially with the Conchas Phase (950-750 B.C.) from the Pacific Coast of Guatemala (Snarskis 1984: 206).

In general terms this complex is very different from Curré and Darizara, specially the predominance of red slip and tecomate-jars absent in the Diquís complexes. It shares some decorative techniques such as drag and jab (Snarskis 1978, fig. 1-08-D14), fingernail stamping (fig. 109-D16), oblique punctation (fig.109 D17; D17; fig.235-u), shell stamping (fig.110, D18, fig.23 m-r) and reed stamping (fig.24:dd).

Tronadora

In the ceramic sequence of the Arenal Area, the Tronadora Complex was the oldest recorded. The complex has been dated to 2000-1000 B.C. based on several radiocarbon dates and considered close to the Chaparrón Complex (Hoopes 1987, 1992, 1994d). From the data provided by Hoopes (1987: 169, 203, Table 5.3) the complex is characterized by the predominance of tecomate-jars with rims painted in red (62.04%, 108 specimens out of 173). The other forms included incurving bowls (15.02%, 27 specimens), cylindrical vessels and squat necked jars (10.04% each, 19 specimens) (Table 26).

Zoned bichroming associated with incision was the most common decorative design (35.50%, 136 specimens out of 382), followed by general grooved incisions (20.16%, 77 specimens), wide incision or gouging (13.09%, 50 specimens), punctation and incision (12.83%, 49 specimens), shell stamping (8.12%, 31 specimens), and rocker stamping (5.76%, 22 specimens). Pellets appliqué, cord stamping and reed stamping are all represented by only 1.05%, or 4 specimens each, and incision and excision filled with red pigment with 1.31% (5 specimens) (Table 28).

Modes shared with Curré and Darizara are rounded incisions, sometimes with shell stamping, and multiple punctation. Modes that are not shared are the combination of wide grooves and red paint, the fugitive red paint in bands over cream without slip, and appliqué in the rims (Hoopes 1985: fig.3 a-f).

Tronadora has some similarities with subsequent Arenal Phase in the Arenal area, especially with material of the type Mojica Impressed, varieties Mojica and Laguna of the Arenal Phase (500 B.C.- A.D. 500) (Hoopes 1984, fig.2 a-h).

La Pochota

This complex was postulated for the lowlands of Guanacaste, based on surface and profile recollections from an artificial mound at La Pochota Site and dated by comparison between 1500-500 B.C. (Odio 1992). Despite the small size of the sample (38 diagnostic sherds, Odio 1992:5, Charts 1 and 2), it still provides useful information concerning Formative pottery between the Guanacaste volcanic range and the Tempisque River Valley.

From a sample of only 9 rims, 4 (33.33%) correspond to incurving bowls, 4 (33.33%) to cylindrical vessels, 2 (22.22%) to tecomate-jars and 2 (22.22%) to squat necked-jars (Table 26). In terms of decorative modes, parallel incised lines was the most common (67.74%, 21 specimens out of 31), followed by punctations (25.81%, 8 specimens). Pellets appliqué and shell stamping, all with 3.23% (1 case each) were also used (Table 28).

La Pochota shares with Curré and Darizara incised lines enclosing stamping, convergent and parallel incised lines, pellets and incised lines associated with punctations. Vessel forms are different with the exception of cylindrical vessels, also present in Curré.

Rio Naranjo

In the Méndez Site, located in the Rio Naranjo-Bijagua Valley, Norr (1986) recovered sherds in test excavations that she assigned to the Naranjo Phase (800-300 B.C.). The phase was dated based on the similarity of the pottery with the Chaparrón and La Montaña Complexes established by Snarskis (1978). She reported the presence of sherds identified as the Chaparrón Zoned Red on Brown and Atlantic Red Filled Black types (Norr 1986:142). She illustrated some of the sherds (a profile of an incurving rim bowl, and sherds with incisions and punctations); but, she does not give quantitative data (1986:153, Fig. 9.9).

vii. Pacific Nicaragua

The evidence from Pacific Nicaragua for ceramic complexes during the first millennia B.C. is still scant, but there is clear evidence for the presence of early pottery-making groups in the area.

Dinarte

The first report for Formative occupation in Nicaragua came from the Ometepe Island, Lake Nicaragua. Haberland (1992) established the Dinarte Phase (ca. 2000-500 B.C.) based on the finding of 111 ceramic sherds from the bottom of test pits at Los Angeles Site. The sherds were isolated from later ceramics by a 55 cm. thick sterile volcanic ash layer. Only seven sherds were not undecorated body sherds. As Haberland mentioned those sherds are related with the Chaparrón and Tronadora Complexes of Northern Costa Rica (Haberland 1992:70-73, Fig. 4.5). The sherds are examples of tecomates (2), tecomate-jar (1), cylindrical vessel (1) and globular jars (1) decorated with incised lines (1), red slip (3) and drag and jab punctation (1) (Tables 26,28).

Tiscapa

From the Managua area some sherds similar to the Tronadora Complex have been reported at Villa Tiscapa (Brown et al. 1996:23). They report the presence of one sherd classified as Tajo Gouge Incised (1996:23, Table 2.14) and illustrate three sherds considered as the Tronadora Incised type (1996:23, Fig. 2-7). The evidence, despite the small size, points to relations with the complexes located in Northern Costa Rica.

c. Cluster Analysis

A cluster analysis using the percentages of vessel forms and decorative modes from the different complexes dated between 2000-300 B.C. in Southern Central America was conducted to test the degree of similarity among the different complexes (Table 29, Figs. 9,10,11). Since most of the previous comparisons have been based on qualitative assessments, cluster analysis provides the opportunity to conduct the comparison using more quantitative information. The results were contrasted with information from linguistics and genetics that used a similar technique for linguistic and genetic markers (Constenla 1991, Barrantes 1993).

The cluster analysis was conducted using the SPSS statistical package (Version 10.0 for Windows). A chart with all the percentages of the different modes of vessel forms and decoration (Table 29) was analyzed using all different methods of clustering

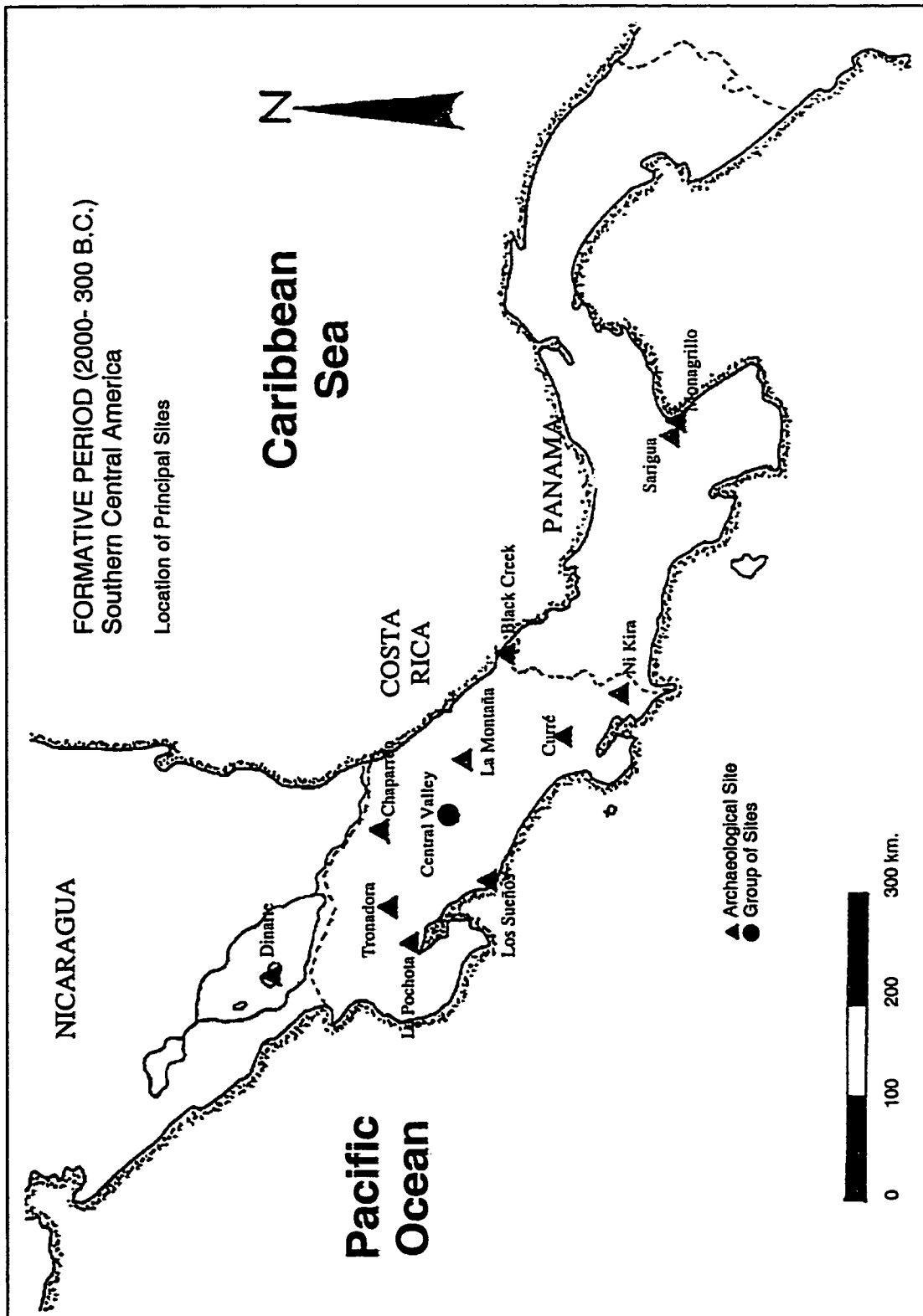


Figure 8. Distribution of Principal Archaeological Sites, Formative Period (2000-300 B.C.) Southern Central America

Table 25. Presence or absence of vessel form modes by ceramic complex, Southern Central America

	Dinarte	Tronadora	La Pochota	Chaparrón	Los Sueños	Barva	La Montaña	Black Creek	Curré	Darizara
Form 1:Tecomates	X			X	X		X	X	X	
Form 2:Incurving rim bowls		X	X	X	X	X	X			
Form 3:Tecomate-jar	X	X	X	X	X	X	X			
Form 4:Open bowls				X			X		X	
Form 5:Bowl with flared lip				X	X		X		X	X
Form 6:globular jars	X			X	X	X	X	X	X	X
Form 7:cylindrical vessels	X	X	X		X	X			X	
Form 9:Flat plates or budares					X		X			
Form 9:squat necked jars		X			X		X			
Form 10:tecomate/comp/silh.							X			
Form 11:plate							X			
Form 12:bowl/comp./silhouette							X			

Table 26. Total and percentages of vessel form modes by ceramic complex, Southern Central America

	Dinarte	Tronadora	La Pochota	Chaparrón	Los Sueños	Barva	La Montaña	Black Creek	Curré	Darizara		
	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %	Total %		
Form 1:Tecomates	2	40		69	52.67		116	21.68	10	83.33	6	1.98
Form 2:Incurving rim bowls		27	15.02	3	37.5	4	3.05	16	4.44	1	8.33	
Form 3:Tecomate-jar	1	20	108	62.04	2	25	44	33.59	179	49.72	7	58.33
Form 4:Open bowls				6	4.58							
Form 5: Bowl with flared lip				1	0.76							
Form 6: Globular jars	1	20		7	5.34							
Form 7: Cylindrical vessels	1	20	19	10.04	3	37.5						
Form 8: Flat plates or budares												
Form 9: Squat necked jars			19	10.04								
Form 10: Tecomate comp. silh.												
Form 11: plate												
Form 12: bowl comp. silh.												
Total	5	173	8	131	360	12	535	12	302	61		

Table 28. Total and percentages of decorative modes by ceramic complex, Southern Central America

	Dinarte		Tronadora		La Pochota		Chaparrón		Los Sueños		Barva		La Montaña		Black Creek		Gurré		Darizara		Sargua		
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	Total	%	
D1. Geometric incised designs			77	20.16	21	67.74			138	64.49	7	36.8	28	10.41			588	56.7	96	28.1			
D2. Appliqué fillets/stamping									20	9.35	1	5.26	20	7.43					57	5.4	34	9.9	
D3. Pellets appliqué/incision			4	1.05	1	3.23	2	0.68											10	1.7			
D4. Red bands/zone bicrome/incision	3	60	138	35.80			161	54.76	14	6.54	3	15.8	52	18.33									
D5. Incised lines/ punctuation	1	20	48	12.83	8	25.81	1	0.34	5	2.34	4	21.1	13	4.83									
D6. Shell stamping short / incised lines			31	8.12	1	3.23	35	11.90	7	3.27	1	5.26					10	1.73	25	7.3		10	
D7. Rocker stamping			22	5.76					6	2.80	1	5.26	3	1.12			10	1.19	41	11.9		25	
D8. Nail stamping/incised lines							14	4.76	4	1.87									91	8.7	20	5.8	
D9. Incised-gouged/excision			50	13.09			14	4.76															
D10. Incisions filled with red pigment			5	1.31			12	4.08					6	2.23									
D11. Crosshatching																	1	10	11	1.06			
D12. Cord stamping			4	1.05																			
D13. Rounded instrument stamping							6	3.06															
D14. Cuneiform stamping							22	7.48															
D15. Reed stamping			4	1.05			2	0.68	1	0.47									5	0.48	22	6.4	
D16. Dreg and jab/incised lines							1	0.34															
D17. Incised lines/stamping/incision	1	20					21	7.14					2	0.74					43	4.1			
D18. Roll stamping									8	3.74			5	1.86			3	30	86	8.28	15	4.3	
D18. Striation																					51	14.9	
Total	5		382		31		294		214		19		269		10		1037		342			40	32

(Average Linkage (Between Groups), Average Linkage (Within Group), Single Linkage (Nearest Neighbor), Complete Linkage (Furthest Neighbor), Centroid Method, Median Method, and Ward Method. These methods are agglomerative. They start with a series of individuals and then build up groups from these, the groups are linked together at decreasing levels of similarity until finally they are all joined in a single group (Shennan 1988:212). Different cluster methods were applied since it is not a simply matter to distinguish between right and wrong methods. Shennan (1988:229) has pointed out that one way of trying to ensure the validity of clustering results on a particular data set is to analyze it by a variety of different methods. It is also clear that the different results are not a final indication of clustering, they are more the basis to suggest hypothesis or trends (Shennan 1988:197-198, 228).

A clear limitation of the analysis is the size of some of the samples that rendered percentages that can be misleading. However, they were kept with the purpose to see exploratory trends.

d. Results of the cluster analysis

The results using the different methods show clusters of the same complexes that, in general, also show geographical proximity (Figs. 9,10 and 11). Darizara and Curré were always together. Dinarte and Chaparrón were grouped in all cases. A close relation was observed between Tronadora, Los Sueños, and Barva and between them and La Pochota. La Montaña was associated in several cases with Dinarte and Chaparrón, but showing a distant agglomeration, and in other cases with other "southern" complexes. Sarigua and Black Creek showed different associations depending of the method used. This is probably related to absences due to the small size of the samples

The group of Curré and Darizara was next linked to the group of Tronadora, Los Sueños, Barva and La Pochota in the Average Linkage (Between Groups and Within Group), Ward, Single and Complete Linkage. In the Median and Centroid Methods Curre and Darizara tend to be apart from the other complexes, although closer to La Montaña, Black Creek and Sarigua.

The Single Linkage (nearest neighbor), Centroid, and Median method produced clusterings that roughly followed the division between "northern" complexes (Los Sueños, Central Valley, La Pochota, Chaparrón, Tronadora and Dinarte) and "southern" complexes (Curré, Darizara, La Montaña, Black Creek, Sarigua).

Two major groupings were observed in the Average Linkage (Between groups and Within groups), Complete Linkage and Ward Method. One formed by Tronadora, Barva, Los Sueños, La Pochota, Curré, Darizara and Sarigua and the other by Dinarte, Chaparrón, La Montaña and Black Creek. These clusters also present similarity among adjacent complexes and followed a north-south association.

The cluster analysis results can be used to support the proposition of relationships among the different ceramic complexes, but at the same time confirm differences among them. As Myers (1978) has mentioned adjacent cultures tend to resemble each other more closely than they resemble more distant cultures. These results are also in agreement with the chain model suggested by Bray (1984) and the separations and associations proposed by Hoopes (1995:187-188) and Fonseca (1997:53). The results based on ceramic comparisons can be seen as a parallel situation to the genetic and linguistic relationships proposed for modern groups (Constenla 1991, Barrantes 1993) that cluster groups in similar geographical areas and show a territorial alignment from south to north or viceversa, with a general division between "northern" and "southern" groups.

Constenla (1995) have proposed a linguistic division of Votic and Isthmian subgroups. The first is formed by the Guatuso and Rama of northern Costa Rica and Southern Nicaragua and the second is by the Kuna and all the languages to the west until southern Costa Rica. These subgroups have some resemblance with the division proposed for the northern and southern ceramic complexes in Southern Central America. Another major linguistic subgroup was the Magdalenian for the languages to the west of the Magdalena River in Colombia and the frontier with Venezuela. An interesting fact to be contrasted with archaeological data is that there is not an ethyme for pottery common to all Chibchan stock languages. There is one shared by the Votic and Isthmian languages and another for the Magdalenic languages (Constenla 1995:45). This initial analysis has to be tested with more information and additional

Table 29. Frequencies of ceramic modes used for cluster analysis.
Formative Period, Southern Central America.

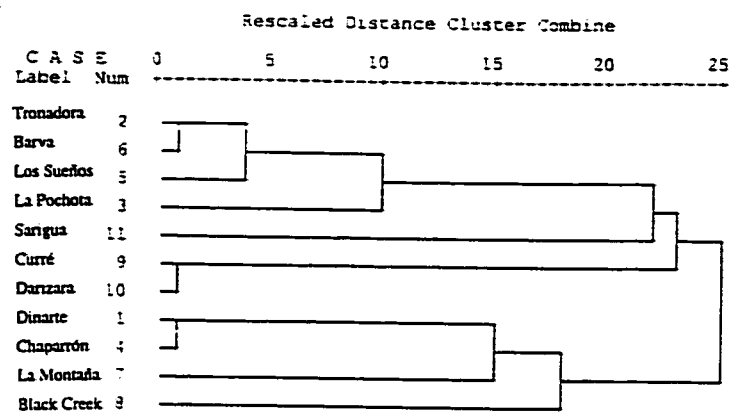
	incision	fillets	pelletin	zonebicr	punctinc	shellsta	rockerst	nailsta	incisgou
1	.00	.00	.00	60.00	20.00	.00	.00	.00	.00
2	20.16	.00	1.05	35.60	12.83	8.12	5.76	.00	13.09
3	67.74	.00	3.23	.00	25.81	3.23	.00	.00	.00
4	.00	.00	.68	54.76	.34	11.90	.00	4.76	4.76
5	64.49	9.35	5.14	6.54	2.34	3.27	2.80	1.87	.00
6	36.84	5.26	10.52	15.78	21.05	5.26	5.26	.00	.00
7	10.41	7.43	50.56	19.33	4.83	.00	1.12	.00	.00
8	.00	.00	10.00	.00	10.00	10.00	.00	30.00	.00
9	56.70	5.40	1.60	.00	1.73	11.47	.00	8.70	.00
10	28.07	9.90	.00	.00	.00	7.30	11.90	5.80	.00
11	.00	40.00	.00	.00	8.00	20.00	.00	.00	.00

	inexredp	crosshat	cordstam	roundst	cuneif	reedst	dragjab	instamin	rollstam
1	.00	.00	.00	.00	.00	.00	20.00	.00	.00
2	1.31	.00	1.05	.00	.00	1.05	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	4.08	.00	3.06	7.48	.68	.34	7.14	.00	.00
5	.00	.00	.00	.00	.47	.00	.00	3.74	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	2.23	.00	1.49	.00	.00	.00	.74	1.86	.00
8	.00	10.00	.00	.00	.00	.00	.00	30.00	.00
9	.00	1.06	.00	.00	.48	.19	4.10	8.29	.00
10	.00	.00	.00	11.10	6.40	.00	.00	4.30	14.90
11	.00	.00	.00	.00	.00	.00	.00	.00	.00

	striatio	tecomate	incrvbo	tecjar	openbowl	bowiflar	globjar	cyfindri	budare
1	.00	40.00	.00	20.00	.00	.00	20.00	20.00	.00
2	.00	.00	15.02	62.40	.00	.00	.00	10.04	.00
3	.00	.00	37.50	25.00	.00	.00	.00	37.50	.00
4	.00	52.67	3.05	33.59	4.58	.76	5.34	.00	.00
5	.00	1.38	4.44	49.72	.00	7.22	24.16	2.77	.55
6	.00	.00	8.33	58.33	.00	.00	16.66	16.66	.00
7	.00	21.68	9.53	1.50	11.40	1.12	29.53	.00	6.54
8	.00	83.33	.00	.00	.00	.00	16.66	.00	.00
9	.00	1.98	.00	.00	3.31	15.56	74.17	4.96	.00
10	.00	.00	.00	.00	.00	29.41	70.58	.00	.00
11	32.00	.00	.00	.00	.00	.00	.00	.00	.00

	squatnec	teccosil	plate	bowicsil
1	.00	.00	.00	.00
2	10.04	.00	.00	.00
3	.00	.00	.00	.00
4	.00	.00	.00	.00
5	4.72	.00	.00	.00
6	.00	.00	.00	.00
7	13.64	2.24	.93	1.87
8	.00	.00	.00	.00
9	.00	.00	.00	.00
10	.00	.00	.00	.00
11	.00	.00	.00	.00

A Dendrogram using Average Linkage (Between Groups):



B Dendrogram using Average Linkage (Within Group):

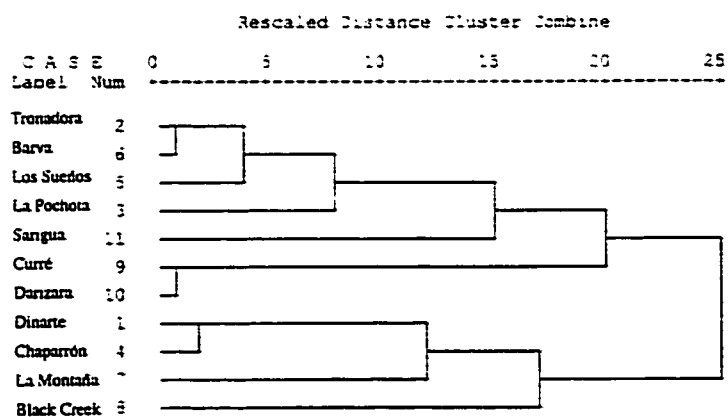


Fig.9 Dendrograms based on vessel forms and decorative modes frequencies. Formative Period. A. Average Linkage (Between group), B. Average Linkage (Within Group).

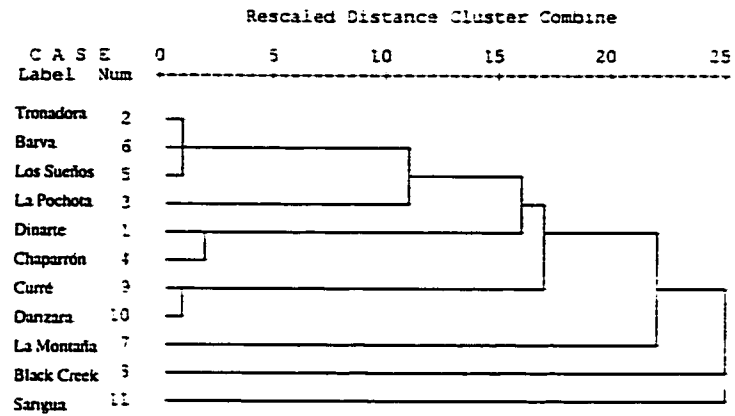
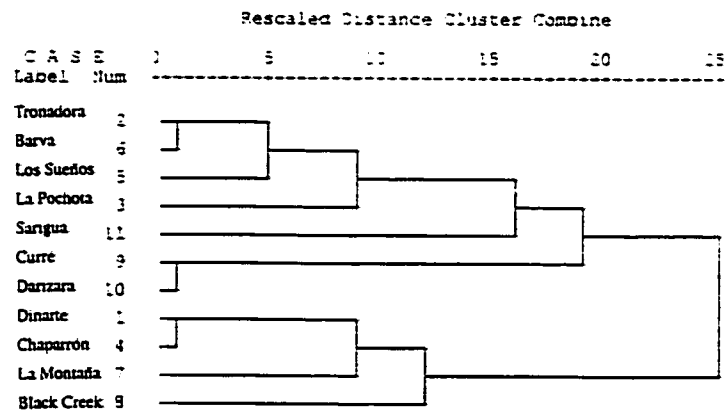
A Dendrogram using Single Linkage**B** Dendrogram using Complete Linkage

Fig. 10 Dendrograms based on vessel forms and decorative modes frequencies. Formative Period A. Single Linkage (nearest neighbor), B. Complete Linkage (furthest neighbor).

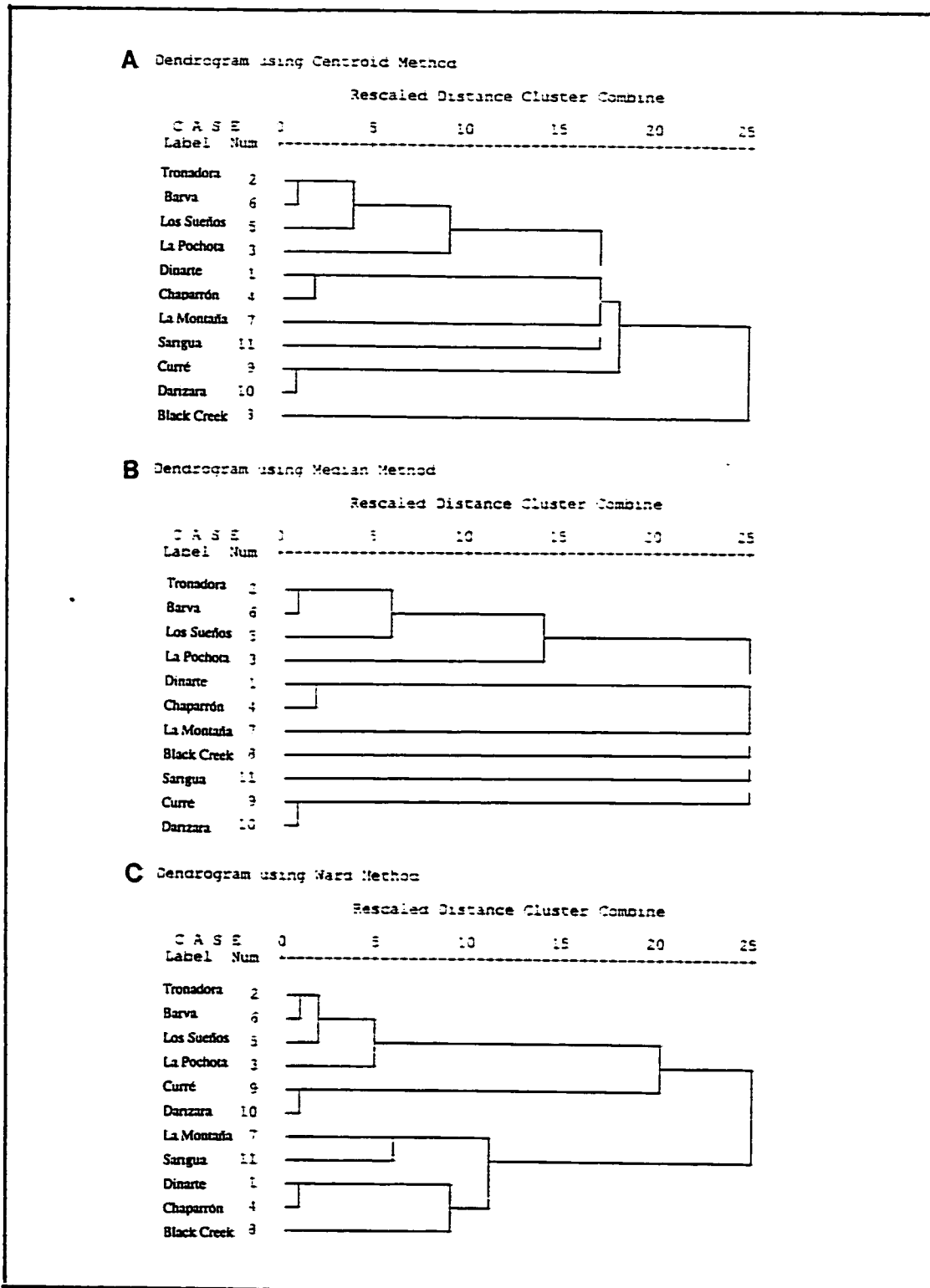


Fig. 11 Dendrograms based on vessel forms and decorative modes frequencies. Formative Period A. Centroid Method, B. Median Method, C. Ward Method.

categories. It is also necessary to compare the Formative ceramic complexes of Southern Central America with the ceramic complexes of Colombia.

The existence of a Formative Ceramic Horizon in Southern Central America supports the idea of cultural proximity that echoes the proximity in genetic and linguistic terms. Hoopes (1992:47), in his analysis of Formative period ceramics, proposed a polythetic model for the emergence of sedentary societies instead of population expansion and point to point diffusion. In this model, each region is characterized by only a subset of the universe of "Formative" characteristics at any given time. This would be an autochthonous, regionalist model for population growth and cultural development. The results from the cluster analyses are in line with those propositions. From the comparison and the cluster analysis we can propose a degree of inclusiveness for all complexes, but at the same time there are differences in the presence/absence and percentages of the different ceramic modes established in this study.

2. The Aguas Buenas Period and The Zoned Bichrome Horizon 300 B.C-A.D. 300

The Formative Ceramic Horizon in Southern Central America was the antecedent for subsequent interactions reflected in later horizons such the Zoned Bichrome Horizon. The Zoned Bichrome Horizon is characterized by the presence of alternated red slipped and unslipped areas, plastic decoration usually in the unslipped areas and zoomorphic adorns in complexes from Pacific Nicaragua to Western Panamá dated between 500/300 B.C. and A.D. 300/500. Central Panamá, that was considered within the Formative Horizon, presents the development of a separate painted tradition. This ceramic horizon has also been associated with the presence of greenstone ornaments and ritual metates as funerary offerings. Myers (1978) referred to a Zoned Bichrome Horizon in the Intermediate Area. However, his discussion is based on the presence or absence of traits with no consideration of their relative importance within whole assemblages. It is important to emphasize this point. Qualitative assessment of differences and similarities are fundamental, but several authors (Myers 1978, Fonseca 1997) have built their arguments based on the presence, sometimes isolated, of particular traits while ignoring others. They also have paid little attention to quantitative presence. As a result, interpretations of correspondence or continuity can be

seriously biased. However, quantitative analyses also face problems. For example a single broken pot can produce dozens of sherds! Biases in reporting, illustration, and collection are other issues.

In the Diquís Subregion, the zoned bichrome pottery is associated with the Aguas Buenas Period. Most of the ceramic modes established for this period are present in the different zones established for Southern Costa Rica making a clear case for a horizon and a tradition during 300 B.C. to A.D. 800. The temporal extension is longer than in other areas of Southern Central America.

In terms of the ceramic types, the group formed by Moravia Red-Guarumal v. Cebaca-Corral Red-Cerro Punta Orange is identified in the whole area. Barriles Zoned-Zoned Bichrome-Guarumal v. Guarumal and Cañas Zoned-Bugaba Engraved while having small percentages, are also regional markers. The Incised and Plain varieties of Quebradas reflect a distinctive process in the Térraba Watershed as contrasted with the other zones and the related complexes of Western Panamá.

a. Comparison with Western Panamá

The Zoned Bichrome Horizon in Greater Chiriquí included the zoned bichrome complexes from Chiriquí (Bugaba-Burica-Barriles Complexes) and the Caribbean Bocas del Toro (Aguacate Complex). The La Concepción Complex, partially contemporaneous, with a restricted distribution within Chiriquí also forms part of this horizon.

Haberland (1984a: 240-241) had argued for a single denomination for the Aguas Buenas and Bugaba pottery based on their similarities. I agree in this equivalency based on the panregional distribution of most of the ceramic modes and similarity of ceramic types established in both subregions. The geographical continuity of the Coto Brus Valley and Coto Colorado Valley zones with Western Panamá contributed to the territorial spread of common technological and symbolical codes. There are some local variants, like the observed in the Térraba Watershed with the presence of the Quebradas type, but most of the ceramics are strikingly similar. The Aguacate Complex in Caribbean Bocas del Toro represents the extension of the horizon to the other side of the Talamanca Range. The presence of Aguas Buenas-like sherds and pots in the

Talamanca Valley also extends the presence of this horizon to the Caribbean side of Costa Rica.

i. La Concepción Complex

La Concepción Complex defined for the lowlands of Chiriquí also presents a predominantly zoned bichrome decoration. Haberland (1962), Linares (1968), and Shelton (1984a) have noted the close similarities between La Concepción Complex and the Aguas Buenas-Bugaba-Barriles-Burica Complex. Both complexes share zone bichroming with plastic decoration in the unslipped zones, vessel forms such as open bowls, tecomates, large jars (burial urns) and chimney vessels with flat bottoms and three cylindrical supports (Haberland 1976:117, Fig. 1, Shelton 1984a: 295-306, Figs. 4-1/4-12).

The dates of La Concepción are contemporaneous in part with Aguas Buenas. Shelton (1995:83) suggests dates between 300 B.C.- A.D. 400 (based on radiocarbon) that coincide with the early part of the Aguas Buenas-Bugaba Period (300 B.C.-A.D. 300). The continuity of some wares in both complexes (Shelton 1984a) also gives support to the inclusion of La Concepción in a regional zoned bichrome horizon.

b. Comparison with Costa Rica Central Region

A Zoned Bichrome Period was established by Snarskis (1978) for the Central Caribbean zone of Costa Rica. This period is represented by the El Bosque Complex. In the Central Valley, the Pavas Complex is thought to have close relations with El Bosque (Aguilar 1976). From the Central Pacific zone, the Jacó Complex (Herrera 1999) is also related.

i. El Bosque-Pavas-Jacó

El Bosque (Caribbean Subregion), Pavas (Central Valley) and the recently postulated Jacó (Central Pacific) complexes are similar to one another in the use of colors disposed in zones (zoned bichromy) with incised decoration separating them (Aguilar 1976, Snarskis 1978, 1982, Herrera 1999). There is great variety in size and shape of vessels with polished red lips, and a collar of naturally buff-colored clay

smoothed around the vessel shoulder and neck. The unslipped area can be without decoration or decorated with stamping (shell and reed stamping), fluting, scarifying, appliqué motifs (pellets, adornos), painted linear patterns or a combination of treatments. Adornos include zoomorphic representations such as monkeys, coatis, owls, lizards and others.

A distinctive trait shared by those complexes is the use of a dark red-purplish slip, but they contrast in the use of a dark red slip as a background in the Caribbean Subregion and a more orange base color on the Central Valley and Central Pacific subregion (Snarskis 1992, Corrales 1992). The pattern of zoned bichroming, the plastic decoration in the unslipped area, the zoomorphic adornos, supports with zoomorphic attachments, double-legged supports, human figurines with conical hats, and cylindrical vessels are among the elements shared with Aguas Buenas/Bugaba.

The El Bosque Complex also shares some similarities with La Concepción Complex such as the presence scarification alternated with plain areas and red lips, and looped supports. These similarities have led several authors (Linares 1980a, Haberland 1984a, Shelton 1984a) to suggest a common origin of La Concepción and Aguas Buenas-Bugaba pottery from Central Costa Rica. However, they appear to be contemporaneous (300 B.C.-A.D.300) and there are elements in La Concepción and Aguas Buenas-Bugaba that are very particular, so it is better to understand them as part of a regional Zoned Bichrome Horizon related by interaction spheres.

c. Greater Nicoya

The first formulation of a Zoned Bichrome Period came from the works of Baudez and Coe (1962) to distinguish the decoration in zones present in the Santa Elena Peninsula and Tempisque Valley, in Northwestern Costa Rica. The Zoned Bichrome Period was renamed as the Tempisque Period in the Cuajiniquil Conference (Vázquez et al. 1994). There is continuity of decoration into the following Bagaces Period.

i. Tempisque Period

Linares (1968, 1980c, 240-241) extended the ties of the La Concepción-Bugaba tradition to the Zoned Bichrome Period or Tempisque Period, as was re-named in the Cuajiniquil Conference (Vázquez et al. 1994), of Greater Nicoya. She echoed the statement by Coe and Baudez (1961) who considered that there were close relationships between Scarified Ware of Western Panamá and material identified as the Bocana Zoned Incised type of Guanacaste.

Tempisque Period pottery, especially the proposed Toya Zoned Incised, Bocana Zoned Incised and Rosales Zoned Engraved types, is characterized by a zoned decoration that consists of the use of alternating colors (red slip and the natural buff or brown color of the paste), separated by incised lines. Some ceramics exhibit black painting (Bonilla et al. 1990). Bowls, globular jars, anthropomorphic and zoomorphic representations are common, realistic and stylized. Human figurines and avian-shaped ocarinas are also common.

The postulated zoned bichrome types of the Tempisque Period can be related to the Aguas Buena-Bugaba ceramics forming a regional horizon along with the Jacó-Pavas-El Bosque complexes. Engraving is considered a marker of types such as Rosales and Bugaba (Snarskis 1982). As Linares (1968:89) mentioned, there are similarities in slipped surfaces alternating with zones of irregularly spaced parallel incisions, but there are also marked differences, specially the appearance of black painting in Tempisque.

ii. Bagaces Period

Decorations such as the use of red slip on thickened lips, associated with some ceramic types from the Bagaces Period (A.D. 300-800) of Greater Nicoya such Los Hermanos Beige, are related to the preceding period. Another proposed type, Guinea Incised, characterized by complex silhouette bowls with tall tripods and engraving, has been considered by Hoopes (1994b:79), along with Bugaba Engraved as part of a broad horizon of pottery with geometric incision in Southern Central America associated with long distance alliances and common ritual traditions among disperse cultures. The relations of this period with Aguas Buenas can be explained by the persistence of the zoned bichrome tradition in Greater Chiriquí until A.D. 800.

d. Central Panamá

The early development in Panamá of a painted tradition distinguishes this region from the rest of Southern Central America, characterized by the zoned bichrome pottery. There was an early presence of black paint during the first millenium B.C. in Central Panamá. Designs of black lines on the natural color of the paste or black lines to delineate zones painted in red were recorded at La Mula-Sarigua (Cooke and Ranere 1992, Sánchez 1995). The introduction of trichromy represented by the La Mula Trichrome Ceramic Group (200 B.C.-A.D. 400) with plastic decoration along with the use of red and black paint for geometric designs on white or cream base had important implications for the development of later styles (Sánchez 1995). The Aristide Group (A.D. 250-650) with black paint on red slip and the Tonosí group (A.D. 400-650) with black and red paint on white, and black and white on red slip led to the Cubitá Stylistic Horizon (A.D. 550-700) (Cooke 1976, Sánchez 1995). None of these ceramic groups show evident relationships with the Zoned Bichrome Horizon present from Western Panamá to Pacific Nicaragua. They are part of an evolving tradition that lasted until Contact (Fonseca and Cooke 1994:248, Ranere and Cooke 1996).

e. Comment

After A.D. 300/500 zoned bichrome pottery was no longer dominant in the Central Region of Costa Rica and Greater Nicoya, however, in Greater Chiriquí the Aguas Buenas Period and associated phases with zoned bichrome pottery continued until A.D. 800. This reflects one of the longest ceramic traditions in Southern Central America. Further research is needed to address the reasons behind such long persistence in the transmission of vessel forms, appendages and decorative modes.

3. The Chiriquí Period and Regional Differentiation: A.D. 800-1500

During the late period of occupation, we can see the emergence of subregional differences as well as the appearance of a complex (San Lorenzo) with a restricted distribution. At the level of Southern Central America, the regional differences are more

marked. Instead of common elements, relations of exchange (ritual, goods) were apparently used to acquire fancy pottery from other regions.

In Greater Chiriquí Period ceramics related to types such as the Buenos Aires/Urabá Polychrome, and San Miguel Bisquit have a panregional distribution, but others show a more restricted distribution. Within the Diquís Subregion, excluding the Coto Colorado Valley, the different zones shared most of the decorative modes and proposed types. The Coto Brus Valley, because of its proximity to the mid altitudes of Chiriquí, shows the presence of ceramic material related with some types considered local to that subregion. During the Chiriquí Period the Coto Colorado Valley, based on these initial data, seems to have a closer relation with the Gulf of Chiriquí than with the Térraba Watershed.

a. Comparison with Western Panamá

During the Chiriquí Period, regional differences between Southern Costa Rica and Western Panamá appeared. In Western Panamá after A.D. 800 a new ceramic complex appears, San Lorenzo, which is restricted to the coastal areas. The Chiriquí Period exhibits some general relationships with its counterpart in the Diquís Subregion but also has some differences.

i. San Lorenzo

While some red lined pottery has been documented in Chiriquí contexts in Western Panamá, that has not been the case for Southern Costa Rica. Ranere (1968) has documented the presence of some red lined pottery in the Burica Peninsula, but there are no reports of anything similar in the adjacent Coto Colorado valley. Evidently, eventual relations may have been circumscribed to the Gulf of Chiriquí and Chiriquí lowlands and did not reach the Diquís Subregion.

ii. Chiriquí

Within Greater Chiriquí during the Chiriquí Period subregional differences are more apparent. Some ceramics have a regional distribution, while others are restricted to particular areas or subregions. Those different patterns of distribution during the late

period of occupation support the existence of territorial divisions and exchange networks among related groups that were becoming increasingly distinct

Ceramic materials identified as San Miguel Bisquit and Buenos Aires Polychrome have a panregional distribution and reflect the links among the different subregions. Some pottery could have been manufactured in one or very few centers in a restricted area, with regional distribution (Buenos Aires Polychrome, San Miguel Bisquit), or subregional distribution (Villalba Red Streaked, Panteón White Lined). Bisquit pottery could have been copied in an area outside of the center of manufacture, especially in the Diquís Subregion.

Some types are considered distinctive of the Western Panamá Subregion, while others are associated with the Diquís Subregion. The ceramics named as Ceiba Red Brown, Silena Winged and Chánguena Black on Red are considered typical of the Térraba Watershed, while Villalba Red Streaked, Divalá Punched, and Cavada are found mostly in Western Panamá (Linares 1968, Haberland 1976, Baudez et al. 1993)

Variants for some types have been proposed for the different subregions, such as Buenos Aires Polychrome (Diquís) and the related type Urabá Polychrome (Chiriquí), or the ovoid vessels with tall supports classified as Foncho Red (Chiriquí) and Carbonera Appliqué (Diquís).

b. Comparisons with Central Region of Costa Rica

The material associated with some ceramics types of the Chiriquí Complex resemble pottery from the Central Region of Costa Rica. For example the pottery identified as Panteón White Lined has formal and stylistic similarities with the pottery known as Mercedes White Lined from the Caribbean Subregion. Vessels of the Papayal Engraved shared composite silhouette shapes and incised or engraved friezes under the lip with vessels of Tayutic Incised. Both types were previously named Chocolate Incised.

The type Turrialba Bicromo with its associated thin walls, and fragile paste have been considered inspired by the delicate vessels of San Miguel Biscuit (Snarskis 1981:69-72). This pottery was exchanged to the Central region as attested by findings in sites such as Guayabo (Aguilar 1972) and Williamsburg (Corrales and Gutiérrez 1986).

There are also similarities between the tall tripods of Foncho Red and Carbonera Appliqué with vessels known as Africa Tripods from the preceding La Selva Phase.

Snarskis (1981:69) considers that bichrome pottery related to the Irazú Yellow Line and Cot Black Line types could have had Diquís or Chiriquí stylistic influence, since their geometric designs recall those associated with Chiriquí polychromes (Buenos Aires Polychrome).

Since both regions shared geographic boundaries they could have had relationships of different types that allowed the exchange of vessels or the copy of motifs. Ibarra (1990) has documented exchange among the different subregion in the 16th century, but conflict also occurred between the different chiefdoms located in both regions.

c. Central Panamá

Relations with Central Panamá seems restricted to the acquisition, probably by exchange, of polychrome vessels. Central Panamá had a distinct ceramic tradition, as the result of a process of differentiation which began in the first millenium B.C. (Fonseca and Cooke 1994:248). The evidence of contact is very scant and limited to some polychrome sherds that have been identified as from Central Panamá based on their decoration. These have been reported from sites such as Rivas (Quilter and Blanco 1995) and Finca 4 (Badilla et al. 1997).

d. Greater Nicoya

Relationships with Greater Nicoya were more likely in the form of exchange to obtain polychrome and bichrome vessels that are characteristic of the Sapoá-Ometepe Period. Polychrome pottery from Greater Nicoya has been found in some sites in the Diquís Subregion, specially in Caño Island. Snarskis (1981:81) suggested that the Buenos Aires-Urabá Polychrome could be the result of northwestern Costa Rica stylistic influence. Here, we have to consider the possibility that the Sapoá-Ometepe pottery was the result of new "cosmovisions" and symbolic codes brought by the supposed arrival of

Mesoamerican groups in Northwestern Costa Rica and therefore its influence would have gone through a local interpretation.

By the same token, Baudez et al. (1993:121) comment that the ceramics known as Papayal Engraved was inspired, "without doubt", from the Belén Incised type from Greater Nicoya. However, pottery identifiable as that type has not been recorded in Greater Chiriquí, making it difficult to support that notion.

B. Ceramic Traditions

Neff (1996:246), from an evolutionary point of view, considers ceramic traditions as entities that are temporally continuous and spatially bounded and are responsible for perpetuating information related with pottery production. Form, decoration, surface treatment, paste color can be considered phenotypic traits that can be transmitted within generations to genetically related or unrelated individuals or to related or unrelated individuals of succeeding generations (Neff 1996:248). Disruption in the transmission of information can be related to chance processes or large-scale events.

This approach is pertinent to discuss the existence or not of ceramic traditions in Southern Costa Rica and Greater Chiriquí in general where genetic information has been used to suggest a local evolutionary history of the indigenous groups since very ancient times.

1. Is there a Ceramic Tradition in the Diquís Subregion?

In different regions of Southern Central America such as Arenal (Sheets 1994, Hoopes 1994), Central Caribbean Costa Rica (Snarskis 1978) and Central Panamá (Cooke 1984, Ranere and Cooke 1996) long local traditions from Archaic to Conquest times have been proposed. In those relatively restricted territories, vessel forms, decorative techniques and designs can be traced from one period to another. The groups of the area kept a distinctive identity while maintaining different levels of contact at the micro and macroregional level. This is consistent with long-term stability process suggested for Southern Central America (Bray 1984, Hoopes 1987, 1992, Sheets 1992, Ranere and Cooke 1996).

In the case of the Diquís Subregion, some authors have suggested continuity among different periods (Corrales 1989, Baudez et al. 1993). In this study, modal attributes from the ceramic complexes of the three major periods are used to address the presence of or lack of a local ceramic tradition.

In discussing the vessel forms we must be aware of the distinction between analogous or functional similarity and homologous or ancestral similarity (Lyman et al. 1997a:8-11). Globular jars, for example, would be very similar in any assemblage, so the presence of that form is not a direct sign of continuity between two complexes. Other explanations besides continuity of the same group or their descendants, such as function, can account for such parallels.

Decorative motifs are also relevant for the discussion of continuity because usually they reflect distinct mental and behavior patterns and are less susceptible to analogous similarity (Jones et al. 1995:24, Teltser 1995:63), so the continuity can be more certain. There are two levels, one the continuity of decoration techniques and the other is the continuation of motifs. For example, incision as a technique is very common in all complexes, but the designs have significant variation. Incised and stamped patterns are the predominant in Curré, while zoned bichroming is the most "visible" in Aguas Buenas, and bichromy and polychromy are the distinction for Chiriquí. Appendages can also be used to distinguish between continuity and change. Their presence or absence and particular shapes and decoration can also be an indication of continuity or change.

To discuss the continuity between periods a discussion of vessel forms, decorative modes and appendages is presented.

a. Sinancrá-Aguas Buenas

i. Vessel Forms

In the general sense, all vessel forms established for the Curré and Darizara complexes of the Sinancrá Period continued into the next Aguas Buenas Complex (Table 30). The most significant relationship is the presence of cylindrical "chimney-like" vessels in the Aguas Buenas assemblage that can be considered a derivation of the cylindrical vessels present in Curré but also a distinctive marker of the early ceramic

assemblages in Southern Central America. However, the totals and percentages of those forms in both periods are very small.

The relationship is not as clear for the other forms. Some forms are present in similar percentages, but this can be misleading because of the size of the samples. For example, tecomates are rare in Curré and absent in Darizara. They appear in more or less similar percentages at Aguas Buenas sites, but with a more consistent distribution. Open bowls are rare in Curré and absent in Darizara. In Aguas Buenas they become a popular form and continue into the Chiriquí Complex. Globular jars as a general category are present in Curré and Darizara complexes, but the predominant globular jars with outcurved rims and waterdrop-shape lips are not continued into the Aguas Buenas Complex. Globular jars in Aguas Buenas complexes are not as outcurved as the Sinancrá ones. In this sense it is not clear whether we have a homologous similarity (based on common ancestry) or an analogous similarity (based on functional convergence). On the other hand, the bowls with a groove below the lip of Aguas Buenas, a very important and distinctive vessel form that only appeared in this period, does not have an antecedent in Sinancrá.

ii. Decorative modes

Most of the plastic techniques and decorative modes of Sinancrá do not continue into Aguas Buenas (Table 30). However, some Aguas Buenas bowls present patterns of stamping or punctation in the unslipped area that are reminiscent of the ones in Sinancrá, but are very rare in the overall assemblage and mainly present in the Coto Colorado Valley zone.

The same is true for techniques such as shell stamping and fingernail stamping. For the former, only four specimens have been recorded in all zones. For the latter, only two examples were identified in the Upper General Valley zone. In this sense, their presence can not be attributed completely to a ceramic tradition, but rather to coincidence or isolated occurrence. Pellet and fillet appliqués and punctation as decoration techniques are present in both periods, but the motifs are different.

The bichrome zonation of Aguas Buenas does not have a clear antecedent in Sinancrá, where a brownish slip usually covers the whole surface. In other early ceramic complexes of Southern Central America there is the use of red bands that can be seen

as a prelude of zoned bichrome, as discussed later, but that is not the case of Curré-Darizara.

iii. Handles and supports

Appendages are rare or absent in the Sinancrá assemblages. Some examples of supports were postulated for Curré, but they are very scarce (one example each) and their association is not completely certain. The use of supports and handles, most common in the Aguas Buenas Period, developed in its own or from another inspiration source. Tabular handles and supports are highly distinctive. They are diagnostic spatial and temporal markers within the limits of Greater Chiriquí during the Aguas Buenas Period.

b. Aguas Buenas-Chiriquí

i. Vessel Forms

For the Chiriquí Period, there is a dramatic increase in the variety of vessels made mostly for funerary offerings (Table 30). There is an increase in variety of forms and decorative motives, associated with a larger number of ceramic types, that can be related with the development of regional identities.

A strong argument for continuity can be made with regard to the composite silhouette bowl with straight walls and thickened lips already suggested by Baudez et al. (1993: 117). They first appeared related with the Quebradas type. It can then be traced to the distinctive form of Ceiba Red and Brown large bowls with very thick lips. This continuity can be related to the suitability of the form for domestic purposes because of the large size, thick walls and bold lips useful to lift and carry the vessels. Functional analysis must be pursued in the future. They also suggest that the bowl forms and the dark red slip employed for Sangria Fine Red can be compared with the characteristics of Bugaba Engraved. Open bowls, bowls, composite silhouette bowl, plates and tecomates are present in both complexes.

Globular jars were more popular in Chiriquí than in Aguas Buenas, but they can be seen as another element of continuity because of the similarity of rims. Again, the distinction between homologous and analogous similarity must be kept in mind. On the

other hand, there is no continuity for the bowls with a groove below the lip, the most distinctive of Aguas Buenas forms. These grooved bowls with their zoned bichrome and plastic decoration can be considered a cultural marker for the Aguas Buenas Period groups.

ii. Decorative Modes

Several plastic techniques that began in Sinancrá are present in Aguas Buenas and Chiriquí (Table 30). Those include pellet appliqué, sometimes with punctation or reed stamping and fillet appliques and punctation associated with incised lines. Baudez et al. (1993:117) considered that the incised decoration associated with Ceiba Red and Brown are related with decorative modes already present in Aguas Buenas and related to types such as Cerro Punta Orange v. Cerro Punta and Guarumal Incised v. Cebaca. However, the particular arrangements are different and their mutual presence can be attributed more to the general nature of the technique than to cultural transmission.

Zoned bichroming, the most distinctive trait of Aguas Buenas, is not present in Chiriquí. However, one can argue that the bichrome painting of a white band under the rim (Turucaca White on Red), derived from the same pattern in Aguas Buenas where that zone was left unslipped. The red slip present in Chiriquí sherds is similar to that employed in Aguas Buenas vessels such as bowls and jars, but this is a very broad treatment.

Engraving is also present in both periods. The fine engraved lines associated with the Bugaba Engraved type of Aguas Buenas could have continued in the engraving designs of Chiriquí types Papayal and Seúl Engraved. Bugaba has been considered a late type within the Aguas Buenas period and prelude the Chiriquí types.

iii. Handles and Supports

Tabular supports and handles characteristic of Aguas Buenas are not present in Chiriquí unless we accept the vertical plaques identified as part of the Silena Winged Type as related to the tabular and paw-like handles of Aguas Buenas. Strap and ring handles are present in both complexes. Armadillo-shaped handles, very common in Chiriquí can be seen as a derivation of the zoomorphic adornos attached to the rims of bowls in Aguas Buenas.

Hollow anthropomorphic supports should be related as should long solid supports. The presence of small zoomorphic adornos on top of tall hollow tripods is also a trait common in both periods (Table 30).

iv. Adornos-figurines

In both periods there are figurines with zoomorphic representations. Human figurines with conical hats are present in the San Miguel Bisquit types as well as in Buenos Aires Polychrome. This motif has a widespread distribution through the Chibchan-Chocó Historical Area. On the other hand, ocarinas, “maracas” and whistles that are very common in the Chiriquí Period have not been documented in the Aguas Buenas Period.

c. Comment

The proposition of a ceramic tradition in the Diquís Subregion that represents continuity or continuous transmission of information from Sinancrá to Aguas Buenas to Chiriquí faces some obstacles. There are some significant discontinuities on the transmission of elements. While it is clear that during the long spans of the different periods there should have been a lot of continuity; the same is not true from one period to another. In each case, striking differences appear that cannot be traced in a sequential form to the precedent period. In a ceramic tradition, while the forms and decorative motifs of each period may vary widely, commonality of cultural descent can be recognized in the different phenotypic traits expressed on the vessels (Neff 1996:251). In our case, most of the similarity is present in domestic pottery, but the most diagnostic traits of each period seem to have no clear antecedents in the precedent one. Many of the similarities could be analogous instead of homologous since they happen in basic forms and the use of common decoration techniques.

2. From anywhere but here. Is there a ceramic tradition in Greater Chiriquí?

Before the recording of the Curré and Darizara complexes, several authors had postulated that La Concepción and Aguas Buenas-Bugaba complexes have their origins in areas outside of Greater Chiriquí. Linares (1980c:241) suggested that, starting about

**Table 30. Seriation of ceramic modes,
Diquís Archaeological Subregion**

Vessel Forms

	Sinancrá	Aguas Buenas	Chiriquí
Cylindrical-chimney vessels	X	X	
Semiglobular jars	X	X	
Tecomates	X	X	X
Open bowls	X	X	X
Bowls flared lip	X	X	X
globular jars	X	X	X
Jars everted thick lip		X	
Bowls with groove under the lip		X	
S-shaped bowls/jars		X	
Bowls thick/lip/comp/sil		X	X
Bowls straight walls		X	X
Bowls comp.silhouette		X	X
Jar/beaker everted/thick lip		X	X
Plates		X	X
Jars with projected lip		X	X
Bowls interior thick lip			X
Bowls flat top			X
Bowls/thin walls/interior thick lip			X
Restricted bowls			X
Jars long neck			X
Jars thin walls/outcurved rim			X
Jars outc.Rim/round thick lip			X
Jars thick lip, large			X
Large bowls, thick walls			X
Tecomate interior thick lip			X
Jar sharp everted			X
Bowl thin walls straight rim			X
Jar slanted rim			X
Jar outcurved, thick lip			X

Decorative Modes

	Sinancrá	Aguas Buenas	Chiriquí
Incising/shell est/incis/punct.	X		
Shell stamping/incision	X		
Cuneiform stamping	X		
Reed stamping	X		
Rocker stamping	X		
Rounded stamping	X		
Roll stamping	X		
Oblique shell stamping	X	X	
Fingernail stamping	X	X	
Jab and drag	X	X	
Crosshatching	X	X	
Pellets applique	X	X	X
Fillet applique/stamping	X	X	X
Punctuation	X	X	X
Incised lines parallel/conv.	X	X	X
Vertical/oblique incis.lines		X	
Human figurines hat		X	
Zoned bichroming		X	
Zoomorphic modeling		X	X
Zoomorphic adornos		X	X
Engraving		X	X
Chain-like applique		X	X
Negative painting		X	X
Combing		X	X
Polichromy			X
White on red paint			X
Black on red paint			X
Red and brown			X
White lines or bands			X
Orange streaks or bands			X

Supports

	Aguas Buenas	Chiriquí
Mode		
Tabular	X	
Paw shape	X	
Solid flat end	X	
Hollow anthropomorphic	X	
Long solid	X	X
Solid short pointed	X	X
Hollow supports/insic/appli.	X	X
Solid zoomorphic	X	X
Hollow with slits		X
Hollow anthro and zoomorphic		X
Solid with central depression		X
Solid with grooved lines		X

Handles

Mode	Aguas Buenas	Chiriquí
Tabular		
Fist or pawn	X	
Strap	X	
Ring	X	X
Armadillo-shaped	X	X
Strap to the lip		X
Twisted		X
Projected tab		X
Zoomorphic		X

500 B.C., there was an expansion of seed-crop agriculture (and/or agriculturists) from Eastern Costa Rica into Western Panamá. Shelton (1984a:211, 1995:86) asserted that La Concepción had its origin in an Eastern Costa Rican version of the Zoned Bichrome pottery from Greater Nicoya. According to her, a migratory wave entered the Chiriquí Highlands around 300 B.C. Haberland (1984a:239), while agreeing on a “foreign” origin, identifies the source in Central Panamá. There is also consensus on a foreign origin for the Aguas Buenas-Bugaba complexes. After the arrival of La Concepción groups, a second wave of colonization around A.D. 200, from the Central-Caribbean Region of Costa Rica would have been the origin of Bugaba A in Highland Chiriquí and the introduction of agriculture based on maize (Linares 1980c:241, Shelton 1984a:214, Haberland 1984a:239).

According to Linares and Ranere’s adaptive radiation model, the settlers of Chiriquí Highlands moved to coastal areas because of a major eruption by the Barú Volcano around A.D. 600. Groups from the Bugaba B Phase (A.D. 400-600) gave origin to the Aguacate Phase (A.D. 700-900) in the Caribbean coast and the Burica Phase (A.D. 600-800) in the Pacific. This adaptive radiation model assumed that there were no previous agricultural groups in the areas (Cooke 1984:84). However, I have suggested that several ceramic groups reported by Ranere (1968) for the plain of Remedios and San Felix can be related to Curré and therefore signal previous agricultural occupations (Corrales 1989). Haberland (1984a:241) proposed an alternative explanation. Highland Aguas Buenas (he does not accept the term Bugaba) people moved to the coast after they have conquered La Concepción people.

With a different perspective, Shelton (1984a:216-217) proposed two options: 1) Bugaba A populations moved to mid elevations, partially displacing earlier La Concepción populations. They evolved into Bugaba B, adopting a maize variety from the highlands and living in larger, more abundant and more complex villages. Then, they displaced Bugaba A remnants from almost all the territory. 2) an expansionist Bugaba A population moved to the midlands, absorbing La Concepción people and adopting some of their characteristics and from this combination emerged Bugaba B, whose populations occupied all of Chiriquí around A.D. 500.

However, these “migratory” explanations where the origin of the occupations is outside Greater Chiriquí can be contested via several lines of evidence. A particular

situation arises from the presence of Aguas Buenas ceramics in the Talamanca Valley, on the Caribbean side of Costa Rica (Corrales 1993) suggesting trans-range contacts or expansions and a larger geographical distribution than that assumed by Linares and Ranere (1980). This probably dates before the eruption of Volcán Barú. Also, the regional distribution of ceramic related with specific types or wares (Corrales 1989, Corrales and León 1987) does not support chronological differentiation of earlier highland groups and later midslopes and lowlands groups with variation in the ceramic styles

The Aguas Buenas Period is not the only one for which there have been migration proposals. For Stone (1977:107), the stability of the area seems to have suddenly given way to outside pressure around A.D. 800. She suggested that "Cultural extensions, more likely due to the actual penetration of people than to trade, occurred at that time between the Caribbean Watershed of Costa Rica and the Chiriquí Highlands" (Stone 1972:182). Haberland (1984a:247) has suggested the possibility that a new group, Chibchan-speaking, from Central Panamá or beyond, invaded the area, imposing a more advanced culture. In contrast, Linares (1980:245-247) suggests that the origin of the late occupations of Coastal Chiriquí had its origins in population movements from Highland Chiriquí after A.D. 600. At this time there were close contacts with Central Panamá (Linares 1968:86, 1980, Cooke 1980: 376-384). Linares (1968:87) considers that San Lorenzo has features present in Veraguas pottery (strapped feet, tall pedestal bases and effigy vessels), She proposes a "wave of influence" from Veraguas into the Gulf of Chiriquí affecting both San Lorenzo and Chiriquí complexes. To address all of these suggestions for both the Aguas Buenas and Chiriquí periods it is necessary to look at the continuity or change between the different ceramic complexes at the Greater Chiriquí level.

a. Curré/Darizara- La Concepción

The Sinancrá complexes, Curré and Darizara, may be discussed first in relation to La Concepción Complex that has been considered the earliest of the zoned bichrome complexes (Linares 1980a, Shelton 1984a). Sinancrá complexes share with La Concepción pottery one of its most common decoration motifs parallel diagonal incised lines (fern pattern and chevron motif) that is also a characteristic element for La

Concepción Ware B (Shelton 1984a). There is also continuity in the presence of cylindrical vessels, that in La Concepción can be legless or with tripod solid supports. Linares (1968:85) considers that the cylindrical vessels of La Concepción have close relationships with the Guacamayo tall vases with flat bottoms that have been related with Sarigua. However, while there are similarities in form and plastic decorations, the zoned bichrome decoration can not be traced to the Curré and Darizara complexes. Nevertheless, instead of bringing a new population into the area, I propose that after 300 B.C. there was participation in interaction spheres with groups who already used zone bichroming from areas such as the Central Caribbean, Central Valley and Central Pacific, Northern Plains, Arenal and Northwestern Costa Rica. Interaction with one or more areas led to its implementation in Greater Chiriquí.

b. La Concepción-Bugaba-Aguas Buenas

Continuity between La Concepción and Bugaba have been suggested by Linares (1968:85) and Shelton (1995), despite the assertion by Haberland (1984a:238) that these complexes do not share any mode. The La Concepción Complex presents scarified decoration and some unique forms different from the following Aguas Buenas-Bugaba-Barriles-Burica complexes (Haberland 1962, Shelton 1984a). However, it has some general elements that suggest a close relationship with those complexes.

Similarities include zone bichroming with plastic decoration in the unslipped zones, vessel forms such as open bowls, tecomates, large jars (burial urns) and chimney vessels with flat bottom and three cylindrical supports. Many of these similarities were already noted by Stone (1977:100), drawing upon Haberland, who considered that "...the oldest phase recognized in the (Diquís) region, Aguas Buenas contains traits derived from a still older one known as Concepción, 300 B.C.-0 and identified with Panamá".

Linares (1968:86) stated that Scarified Ware is frequently indistinguishable in paste composition and slip from Isla Palenque Maroon Slipped. She later concluded that "...all indications are that Scarified and Bugaba Ceramics are part of a single, evolving tradition..." (Linares 1980c:241). Shelton has been ambivalent in her opinions about continuity between La Concepción and the Bugaba Style. She established several wares (D, E and F) that she considers transitional between La Concepción and Bugaba

phases (Shelton 1984a). She even presented a series of modal characteristics that continue from one complex to the other (Shelton 1984a:356, Tables 4-5). However, she suggests that there was a clear break between La Concepción and Bugaba A (Shelton 1984a:212-213). For her, in general terms La Concepción is less finished than Bugaba (Shelton 1984a:90, 211). But, she accepted similarity in technological attributes such as paste, slip color and even in some shapes and incising between La Concepción and the assumed Late Bugaba pottery, especially the Valbuena Ware (Shelton 1995:86).

c. Aguas Buenas-Bugaba and San Lorenzo

In terms of the relations of the Aguas Buenas/Bugaba complexes with the San Lorenzo complex, there seems to be not clear relationship. San Lorenzo red banded types do not have an apparent connection with the Aguas Buenas tradition. San Lorenzo has been associated more with adjacent Veraguas than to occupations to the west. Linares (1968:68) stated that none of the forms, decorative techniques or paste composition of Isla Palenque Maroon carried over the types proposed for the following San Lorenzo and Chiriquí Phases. The geographic distribution of San Lorenzo was restricted to the coast and islands of the Gulf of Chiriquí and did not extend to the slopes of the Talamanca Range or to Costa Rica.

d. Aguas Buenas-Chiriquí

In most of the area the Chiriquí Complex replaced the Aguas Buenas Complex. As mentioned above there are some elements of continuity in vessel forms and decorative techniques between Aguas Buenas-Bugaba and Chiriquí. While some, as the thickened lips of composite silhouette bowls of Quebradas and Ceiba Red and Brown, may represent a continuous development, other resemblances can be more analogous than homologous similarities.

Zoned bichroming, tabular handles or supports, and bowls with a groove below the lip, some of the most characteristic elements of Aguas Buenas, do not continue in Chiriquí. The appearance of polychromy and bichrome painting has more antecedents in neighboring areas than in Greater Chiriquí. However, the immigration hypotheses fail to account for the local developments that can not be traced to other areas.

e. San Lorenzo-Chiriquí

Linares (1968) has proposed continuity between the pottery of the San Lorenzo red banded types and Chiriquí types. She suggested that some types of the San Lorenzo Complex could have continued into the Chiriquí Phase, at least in the coastal area. However, the distribution of sherds associated with the different types in stratigraphic pits shows mixing of the different complexes. While a tendency for sherds associated with late types to concentrate in the upper levels is clear, the red banded sherds may appear in all levels. She considered the Cavada Appliqué and Red Banded type, a local type from coastal Chiriquí, to be a late development of the red banded types of the San Lorenzo phase, particularly Zapote Red Banded. However, based on its similar stratigraphic distribution as the material of the other red banded types, one can argue that Cavada is not late but part of the San Lorenzo Complex.

A few red banded vessels have also appeared in Chiriquí Phase graves in the lowlands (Haberland 1976). But, along with the proposition of continuity between the two complexes, other alternative to continuity must also be considered. For example, the presence of exchange, since they were partially contemporaneous, or even the possibility that they were "heirlooms", may account for the presence of those vessels.

In general, San Lorenzo represents an occupation restricted to the coast and islands of the Gulf of Chiriquí. It has been associated with waves of influence from Veraguas and with some links to Central Panamá (Linares 1968:72,87).

f. Comment

As in the case of the Diquís Subregion it is difficult to argue for a clear continuity among the major periods in Greater Chiriquí. Internal continuity is more evident within the long periods. In this sense is possible to recognize an Aguas Buenas Tradition or Chiriquí Tradition, specially since those periods span more than a thousand years.

However, those major changes between periods can be related to the participation of local groups within interaction spheres rather than the arrival of new populations, a point made by other authors (Linares, Shelton, Haberland, Stone). However, it is evident that some kind of sorting took place that affected the transmission of information related to pottery production and symbolism.

CHAPTER VII CONCLUSIONS

Based on the distribution of ceramic modes and types and the regional comparisons a discussion of the different interaction spheres is present as well as different comments in general and specific aspects of the study.

A. Ceramic Interaction Spheres

Interaction spheres provides a concept for study and interpretations of the relations among societies that interacted beyond their respective regional traditions. Myers (1978) and Hoopes (1987) consider the term as relatively loose associations of contemporaneous phases and complexes whose associations have merit for broad regional comparisons. Here the concept is used to discuss local ceramic traditions in Southern Costa Rica and their relations with Western Panamá and other occupations in Southern Central America. For this reason is more appropriate to refer to them as "ceramic interaction spheres".

The discussion in terms of interaction spheres can also help to supercede the limitations of traditional territorial and cultural divisions such as the Diquís Subregion and Greater Chiriquí, by putting emphasis in the different level of relations that the local zones maintained during the different periods instead of comparing whole subregions based on arbitrary limits.

One of the limitations in the formulation of interaction spheres is the lack of information. There are considerable geographical gaps in Southern Central America with no information for some of the periods. This can potentially misguide the formulation of limits and discussion of the dynamics of the interaction spheres (Myers 1978, Hoopes 1987: 443, 1992, Lange 1996). As Hoopes (1992:48) has mentioned, the boundaries of the interaction spheres established so far have resulted from the lack of data rather than actual cultural boundaries. Future fieldwork in strategic areas will help to solve the problem.

Current cultural divisions (e.g. Greater Chiriquí, Southern Central America) can serve as a point of reference, but eventually different boundaries will emerge from the

different levels of interaction among groups. The increasing levels of local and regional interaction spheres will make clear the spatial dimensions considered. Local interaction spheres will be established before addressing larger units, following the recommendation by several authors that the interaction spheres must be relatively restricted in territorial range (Blanton 1976, Friedel 1979:50, Abel-Vidor 1981, Hoopes 1987).

1. Ceramic Interaction Spheres during the Sinancrá Period

For the Formative Period the sites recorded are very few and in the case of ceramic complexes most of the information comes from type-sites. This limits the discussion of interaction spheres; however the similarities among those complexes allow the proposition of various level of interaction. It is expectable that new information from areas, which now represent data gaps, will provide a better foundation to propose more accurate limits for interaction spheres.

a. Térraba Watershed-Coto Colorado Valley Ceramic Interaction Sphere

Similar vessel forms and decoration suggest close relationships between the groups that inhabited specific zones of the Diquís Archaeological Subregion during the two first millenniums before Christ. Despite similarities with other complexes, especially in decorative techniques, it is clear that Curré, located in the Middle Térraba Basin and Darizara in the Coto Colorado Valley were more closely linked to each other than to other early ceramic complexes in several ways. Vessel forms, especially the predominance of globular jars, presence (or absence) of some decorative techniques and specific designs are the basis for this observation.

The evidence for this interaction is still limited but very suggestive. Groups from inland (Curré-Ni Kira Sites) were interacting among them and with coastal people (Diquís Delta-Caño Island). The inland and coastal groups shared a similar technological level and had similar artistic codes that clearly demonstrate group interactions between these sedentary and agricultural peoples. They had enough mobility to allow communication and exchange among them. At least mangrove shells,

or ceramic vessels, were obtained or exchanged among the different groups, as showed in the shell stamping decoration. However, we must look for more evidence from other sites in the different zones to better understand the nature of the interactions.

b. Southern Costa Rica-Western Panamá Ceramic Interaction Sphere

The similarities between Curré and Darizara and the scant evidence from Western Panamá suggest very similar symbolic codes of decoration for both Diquís and Western Panamá archaeological subregions at this period.

The lack of data for vessel forms, decorative modes and material context does not, unfortunately, permit further elaboration. Stylistic concepts and the dissemination of ideological rationalizations for the use of specific decorative techniques were part of interaction spheres, however, these elements probably underwent local modifications (Struever 1964:88-89). Future findings in Western Panamá will allow further elaboration of a possible local horizon based on globular jars more than on tecomates, as is the tendency in other early complexes of Southern Central America.

c. Greater Chiriquí-Central Panamá Ceramic Interaction Sphere

Monagrillo looks like the logical antecedent for the local ceramic traditions in Greater Chiriquí and Central Panamá. The rudimentary characteristics of the ceramic, the chronological information and the geographical proximity are the basis for this assumption. However, we can not rule out the presence of an equivalent complex in Greater Chiriquí, Central or Northern Costa Rica, which is not recorded yet.

Monagrillo has been considered part of the Initial Ceramic Complexes including San Jacinto and Puerto Hormiga in Colombia and Valdivia in Ecuador (Meggers 1997, Fonseca 1997). There is no agreement whether it was a product of local development (Cooke 1995, Hoopes 1995) or diffusion from the other initial complexes (Meggers 1997, Fonseca 1997), but for Southern Central America it represents a point of departure for the ceramic complexes dated to the second and first millennia B.C. Monagrillo or its equivalent in Greater Chiriquí would have been the antecedent of Sarigua, Curré, and Darizara.

The Sarigua Complex presents several similarities with Curré and Darizara in terms of forms, especially the presence of globular jars, the Guacamayo cylindrical vessels, and the plastic decorative techniques. However, recent works at La Mula-Sarigua shows that during the first millenium B.C. black line painting was important along with the plastic decoration (Cooke 1995). Painting was not present in Greater Chiriquí until A.D. 800.

This is an example on how groups can have interactions in some levels or characteristics but remain distinct in others. There was a level of interaction between Central Panamá and Greater Chiriquí that can explain the appearance of plastic decoration and the presence of globular jars and cylindrical vessel in both regions, but at the same time both areas were in the process of developing distinctive ceramic traditions.

d. Southern Central America Ceramic Interaction Sphere

We can relate the different ceramic complexes from Pacific Nicaragua to Central Panamá in another interaction sphere sharing similar vessel forms, decoration techniques and motifs along the natural corridors connecting these areas. Hoopes (1987) looked at the Tronadora, Chaparrón, La Montaña, Dinarte (Nicaragua) and Curré complexes as a regional tradition, which was not strongly influenced by cultures to the north or the south. He proposes that they are largely indigenous phenomena arising from a much older cultural substrate with roots in local Archaic populations (Hoopes 1987:507, 1992:70)

As Fonseca (1997:56) has suggested, there was no dependency among the complexes, but they shared similar conventions of forms and decoration. While in the process of beginning distinct trajectories they still kept important connections. However, from this study, I propose that some separation can be recognized between northern and southern complexes in Southern Central America. The Tronadora, Dinarte, La Pochota, Chaparrón, Barva and Los Sueños complexes can be labeled as a "northern" group. They share several traits, in particular the predominance of tecomate-jars and the presence of zoned bichroming. La Montaña, Black Creek, Darizara, Curré and Sarigua can be related in a "southern" group where red slip or red bands were absent or rare,

globular jars were conspicuous and tecomate jars were less common. Cylindrical vessels and a whole range of plastic decoration are common across these different complexes of Southern Central America.

The distinction between a "northern" and a "southern" group has been extended even further. In the case of the northern group it has been correlated with complexes in Mesoamerica (Hoopes 1987, Fonseca 1997), and in the case of the "southern group" with the earliest complexes of northern South America (Snarskis 1978). Fonseca (1997) suggests a central group to account for the ceramic complexes from Central Costa Rica, Greater Chiriquí and Central Panamá, while the ceramic complexes from Colombia would form a southern group.

e. Comment

The review of regional data shows that early ceramic and agricultural groups expressed similarities at the phenomenal level of their ceramic assemblages. This has led to the establishment of relations of origin, dispersion and interrelation among those groups. The argument here is that those developments were the product of local groups participating in regional interactions and not the diffusion from nuclear centers in Mesoamerica and the Andes.

To suggest simple diffusionist explanations do not help to explain the process of local differentiation. We must see the initial appearance of pottery in the region, whether adopted from other area or by independent invention as suggested for Monagrillo, in the context of groups already established in the area since Paleoindian and Archaic times that kept different grades of interaction (Ranere and Cooke 1996). In this sense, Hoopes (1995) has suggested a model for the appearance of pottery in the context of hunters-gatherers/horticulturalist interaction in the tropical forests of Southern Central America in which ceramic production would have been a strategy for intensive utilization of tree and root crops for groups that had a great deal of mobility (Hoopes 1995:196). These connections would have helped the adoption and local modification of pottery technology and decoration techniques.

2. Ceramic interaction spheres during the Aguas Buenas Period

For this period several authors have proposed different options to explain the origin of ceramic complexes that rely in the migration of groups from neighboring areas. However, alternative options such as interaction spheres can also account for the adoption of new traits such as the appearance of zoned bichroming in the region.

a. Térraba Watershed-Coto Colorado Valley Ceramic Interaction Sphere

The interaction among the different zones during this period reflects two levels. There was one level of interaction among the Upper General Valley, Middle Térraba Basin and the Diquís Delta based on the presence of the pottery denominated the Quebradas type and its two varieties. This reflects an internal grouping among those areas based on the production of a distinctive pottery that is not present in other areas, representing a local development. Communication along the General and Térraba River systems favored the use of that distinctive ceramic in those zones and reflects a differentiation with the rest of Greater Chiriquí.

A second level includes the other ceramic types or groups established. Zoned bichroming in bowls, bowls with a groove below the lip, and jars are present in all five study zones. The spatial distribution of those ceramic traits, vessel shapes, decoration techniques and motifs, from the borderlands with Chiriquí to the northern limits of the General Valley are the basis to postulate that these populations during the period from 300 B.C to A.D. 800 were closely related.

The appearance of the Quebradas type pottery in some zones, could be related to the development of a zonal identity, but the evidence is still premature to establish its association with ethnic differentiation. The Coto Brus Valley and Coto Colorado Valley show a predominance of ceramics related to other ceramic types. Therefore, the traditional borders of the Diquís Subregion must be revised to account for the differences in this period.

b. Southern Costa Rica-Western Panamá Ceramic Interaction Sphere

Almost all elements postulated for the Bugaba Style, Barriles and Burica Phases have been recorded in the Diquís. Common vessel shapes are bowls with a groove below the lip, composite silhouette bowls, decoration techniques and decorative designs with predominance of zone bichroming with modeling and plastic techniques, tabular supports and handles. These elements among others formed part of a ceramic interaction sphere that functioned at the regional level.

There is variability in the presence of some traits in some sites or zones, which can be related to temporal and functional differences and to the fact we should not expect identical assemblages in the different zones. But, in general there is a remarkably similar ceramic technology and style through the region during this long period.

The Coto Brus Valley and the Coto Colorado Valley have a closer relationship with the different zones of Western Panamá, as might be expected by their physiographic continuity. A more realistic division during this period will relate those zones with Western Panamá, and reduced the Diquís Archaeological Subregion to the Térraba Watershed. An analysis to include other aspects of the cultural assemblage is necessary before that step is taken.

c. Greater Nicoya-Central Region-Greater Chiriquí Ceramic Interaction Sphere

In the previous period it was possible to recognize an interaction sphere that extended from Pacific Nicaragua to Central Panamá. During the Aguas Buenas Period the scope of that interaction sphere is reduced because in Central Panamá there was the development of a distinctive tradition with early presence of painted pottery. That contrasts with the Zoned Bichrome Horizon that is present in the rest of the area.

Aguas Buenas/Bugaba presents close relationships with the Jacó-Pavas-EI Bosque Complexes from Central Costa Rica. They share several elements in terms of vessel shapes, techniques and decorative designs, but at the same time have particular local traits. This was consequence of a process of differentiation that can be related to

continuous occupation of a given territory and the development of distinctive styles, which reinforced the groups' particular identities.

The Zoned Bichrome Horizon can be extended to Greater Nicoya where a Zoned Bichrome Style was postulated for approximately 500 B.C to A.D. 500. This style is present in Northwestern Costa Rica and parts of the Pacific band of Nicaragua, Ometepe Islands and Chontales. However, along with the presence of zoned bichroming, plastic decoration techniques and zoomorphic representations, there are also marked differences with the ceramic of this region. Particularly the use of black paint which established the basis for the development of polychromy

Since there are no antecedents of red slip or zoned bichroming during the precedent Sinancrá period in Greater Chiriquí, the contacts and interactions with groups from Central Costa Rica or even Northern Costa Rica could be the explanation for the appearance of zoned bichroming around 300 B.C. in the region. The similar dates for the appearance of the complexes that possess zoned bichroming, along with the local expressions or conventions used to decorate the vessels with that style, suggest that there were early contacts or interactions among the groups. This is opposed to migrations as has been postulated by several authors. The technique or formal-decorative style could have gone through a rapid adoption, a process almost unrecognizable in the archaeological record, and led to the formation of a Zoned Bichrome Horizon that extended over the territories of Northern Costa Rica-Pacific Nicaragua, Central Costa Rica and Greater Chiriquí.

d. Comment

There is no clear evidence of groups migrating from neighboring areas into Greater Chiriquí around 300 B.C. The appearance of zoned bichroming is not convincing evidence of invading groups from Central Costa Rica or Northwest Costa Rica. In those regions, zoned bichroming, along with plastic decoration began in the previous period, but it was after 500-300 B.C. that a clear Zoned Bichrome Horizon appears. This corresponds to the dates for its appearance in Greater Chiriquí.

Since there is no use of red slips or pigments during the Sinancrá Period, we can assume that instead of a local development of zoned bichroming, it came from the

mentioned areas. Interaction with those groups is a viable alternative explanation to bringing populations from those areas. The adoption of zoned bichroming could have gone through a rapid process of modification to fit with local conventions and as consequence a distinctive local style developed that keeps a level of similarity but not direct copying.

However, we must remember that the migration explanations were proposed in the absence of information from older complexes. Documentation of the Curré and Darizara complexes served to expand our perspective and established the presence of ceramic occupations before 300 B.C. We must await some new information before taking a definitive position on the issue of these historical relationships.

3. Ceramic Interactions Spheres during the Chiriquí Period

During this period we see the appearance of distinctions based on the distributions of proposed ceramic types. Some pan-regional pottery, however, reflect a regional relationship. The differences in the territorial distribution of specific forms and decorative modes reflect processes of local divergence.

a. Térraba Watershed Ceramic Interaction Sphere

As in the previous period there were closer relations and contacts in the zones associated with the Térraba River. The Upper General Valley, the Middle Térraba Basin and the Diquís Delta present similar ceramic modes and types. Pottery associated with the types Ceiba Red and Brown, Papayal Engraved, Silena Winged, Turucaca White on Red, Chánguena Black on Red, Sangría Red Fine and Buenos Aires Polychrome was present in those zones. The similar distribution and frequencies make it difficult to establish an area or focus of origin. Communication along the Térraba River must have helped in the spread, sharing and standardization of ceramic assemblages.

The situation in the zones associated with the Térraba Watershed contrast with the Upper Coto Brus Valley and particularly with the Coto Colorado Valley. In the highlands of Coto Brus, which is part of the Térraba Watershed but has physiographic continuity with the Chiriquian slopes of the Talamanca Range, there are ceramics more

typical of Western Panamá and even from the Caribbean zone such the one identified as Lérica Red on Orange. Some types identified for the other Térraba Watershed zones also were recognized.

The situation in the Coto Colorado Valley is distinctive; most of the ceramic types documented are more typical of Western Panamá than the Diquís. Types such as Villalba Red Streaked and San Miguel Bisquit were predominant in a pattern similar to the one documented by Linares (1968) in the Gulf of Chiriquí. Again, the current limits for the Diquís Archaeological Subregion must be revised, since it is not an accurate reflection of the Precolumbian patterns. However, the information is still limited and more studies in that zone are necessary.

b. Térraba Watershed-Western Panamá Ceramic Interaction Sphere

During the Chiriquí Period, in Western Panamá there was the development of local ceramics that are not present in the Térraba watershed. Pottery related to types such as Villalba Red Streaked, Jucó Black, and some negative types were of local manufacture. As mentioned, the Coto Colorado Valley seems to be related with Western Panamá in a local ceramic interaction sphere. Some proposed panregional types or at least local versions of the same type suggest that the two subregions kept a degree of interaction while developing a distinct identity. Buenos Aires Polychrome and its Chiriquian counterpart Urabá Polychrome are part of a regional horizon. San Miguel Bisquit pottery, most probably of Chiriquian manufacture, is commonly found in the Diquís, and there is the probability that coarser copies were made. Negative painting of black on red is present in both areas, but in Chiriquí there are other styles not present in the Diquís. Tall ovoid tripods seem to have local versions, Foncho Red in Chiriquí and neighboring Coto Brus and Coto Colorado Valley and Carbonera Appliqué in the Térraba Watershed and Osa Peninsula.

For the late period, there is a differentiation in the domestic assemblages and increasing similarity in the more elaborated pottery, some with a distinctive funerary orientation. It is possible that the interaction reflects more the presence of panregional ideological, ritual or religious similarities, but with localized differences in the domestic

aspects of life. This would be analogous to the Hopewell interaction sphere situation as proposed by Struever (1964)

c. Greater Nicoya-Central Region-Greater Chiriquí Ceramic Interaction Sphere

It is not possible to establish regional ceramic horizons in Southern Central America based on ceramic similarities for the Chiriquí Period. There was a process of differentiation in each area with local traits, what Snarskis (1981:84) has called a process of "balkanization" or regional or local agglomeration around centers for political control and defensive strategy. Some other elements such as goldworking and some forms of stone working (e.g. feline-shaped metates) may provide better evidence for horizons during this period. Instead of a widespread distribution of formal-decorative styles there were relations of exchange to obtain desirable pottery from neighboring areas. It is common to find foreign pottery in the different regions. The acquisition of extra local pottery with technological and stylistic innovations could have led to the adoption and transformation according to local conceptions. Change on the ceramic record could have occurred via the interaction with other areas in technological and social spheres that include the exchange of fancy pottery, gold objects, stone work and other objects of perishable nature.

Interaction spheres can account for the appearance of polychromy in Greater Chiriquí. It has been suggested that Buenos Aires Polychrome may have some relationships with ceramic types from the Greater Nicoya Region, in particular Mora Polychrome but the relation is not apparent. Buenos Aires has been considered a late type during the Chiriquí Period, although there is no conclusive evidence. It could have its origin in the observation and copy of foreign pottery obtained by exchange. For example, in Caño Island there is evidence of polychrome pottery from Greater Nicoya since 300 A.D. This exposure of the local potters to other styles and forms could be the source of the appearance of bichromy and polychromy in the ceramic record of the Diquís and Greater Chiriquí.

There are also elements of interaction with the Costa Rican Central Region. The similarities between proposed types such as Mercedes White Lined and Panteón White Lined, Tayutic Incised and Papayal Engraved and San Miguel Bisquit and Turrialba

Bichrome have been acknowledged (Snarskis 1982). We can also see some correspondence between the vessels associated with the types Cot Black Line and Chánguena Black on Red. In the first two cases the tendency has been to consider the Diquís types as copies of the Central region types since they seem to be of greater antiquity. But, in the case of San Miguel Bisquit the opposite would be the case.

d. Comment

After A. D. 800 there is a process of regional divergence in Southern Central America. Each region and even each subregion developed a particular identity. Local ceramics reflect a process wherein each group distinguished themselves from their neighbors.

The connections within the different zones of regions such as Greater Chiriquí are more on the level of panregional forms and decorative modes, associated with specific types, or local types with regional distribution. These can be related with similar ideological or religious beliefs while going through a process of differentiation in the other material aspects.

Instead of extended horizons, there were exchange relations to obtain pottery from other areas, perhaps as prestige goods or as symbols of social ties. These exchange activities could have been the origin of local changes in the local ceramic traditions through adoption and transformation of new elements.

B. The Archaeological Record and the Linguistic and Genetic Information for Southern Central America

Linguistic and genetic evidence suggests that the area from Pacific Nicaragua to Western Panamá, including the Diquís Subregion, was the ancestral territory of the Chibchan speaking groups that survive until today (Constenla 1991, Barrantes et al. 1990). Around 5000–4000 B.C. a process of differentiation began that appears related to the transition from hunting and gathering to agriculture.

We may assume that the process of linguistic and genetic differentiation would have a correlation in the material culture. This because the groups would be developing

a particular identity, technology and establishing territorial boundaries related to agricultural activities. In terms of the archaeological record, we should expect a great deal of similarity in the assemblages of the older periods across the region, followed by a process of divergence through time. Hence, the first place to look for regional patterns would be the Archaic lithic assemblages as suggested by Ranere and Cooke (1996), who proposed that the establishment of the Chibchan-Chocoan languages groupings occurred about the time of the Pleistocene-Holocene transition.

Unfortunately, the Paleoindian (10,000-7000 B.C.) and Archaic periods (7000-2000 B.C.) are poorly documented in most of the regions. In the case of the Diquís Subregion there is no information for the Paleoindian and Archaic Periods. In Western Panamá, two Archaic phases have been established for the Chiriquí Viejo Basin. According to the radiometric dates available, these occupations, characterized as hunters and gatherers occupying rockshelters and open sites, began around 5000 B.C. with the Talamanca phase (5000-2300 B.C.) and extended until the second millennium B.C. with the Boquete Phase (2300-1500 B.C.). The two phases are distinguished on the basis of differences in the lithic assemblages that could be related to an incipient cultivation of tubers during the Boquete Phase (Ranere 1980a).

The initial Talamanca Phase represents groups that, according to the available information, did not know pottery or agricultural practices. The following phase, Boquete (2300-1500 B.C.) is also aceramic and presents instruments that continued from the previous phase, but there was the appearance of new artifacts associated with early cultivation. Despite the differences in lithic assemblages, it is considered that the Boquete Phase represented an evolutionary development from the Talamanca Phase. The variations present in the Boquete lithic assemblage appear to have been introduced as an integrated whole. According to Ranere (1980a:32) this pattern remains unaltered until the consolidation of agricultural practices that modified the lithic assemblage. This information is concordant with a model of local processes of sedentism and change. Ranere and Cooke (1996:74) consider that the lithic assemblages from Western Panamá during the Archaic are different enough from Central Panamá to propose a "Pre-Dorasque" and "Pre-Guaymi" division.

What would be the possibility that Boquete or other Archaic populations had some knowledge of pottery? This is an open issue. While generally pottery was

produced by sedentary and agricultural societies, there are examples where hunters and gatherers with some degree of sedentism produced pottery (Hoopes and Barnett 1995:2). Pottery containers could have substituted perishable containers in the context of hunting and gathering especially at repeatedly occupied or semi-permanent sites. But, those initial pottery containers may be not reflected in the archaeological record if they disappeared due to poor manufacture affected by soil conditions or other environmental factors, or they may not have been documented due to their rarity or limited contexts of use.

The Boquete Phase hunters and gatherers could have been practicing some kind of horticulture. Contemporary groups like Monagrillo in Central Panamá were already producing pottery and had a subsistence economy, which incorporated agricultural practices complemented by seasonal fishing and collecting of marine and estuarine foods (Cooke 1995).

The earliest dates suggested for the sedentary and agriculturally based Curré and Darizara Phases (1500 B.C.) are based on regional comparisons. This date overlaps the dates for the previous hunting-gathering Boquete Phase (2300-1500 B.C.) which may have had some degree of horticulture. The lack of radiocarbon dates and the few sites limit the interpretation of the data, but it is suggested that the incipient cultivation of tubers practiced by preceramic groups could have continued into an agricultural system based on tubers as proposed for Curré by Corrales (1989).

A critical issue is the origin of pottery in Diquís-Western Panamá and in Southern Central America in general. The eventual contacts or interactions between hunters and gatherers with some degree of horticulture with groups that already were producing pottery elsewhere would have facilitated its adoption in Greater Chiriquí. This would also mark the beginning of participation in regional ceramic interaction spheres. If it is deduced that there was a late transition from preceramic hunters and gatherers with incipient horticulture to sedentary agricultural ceramic-using groups, it means that pottery technology was most probably adopted from other areas. Curré and Darizara, while simple in their forms and decorative styles, are not as rudimentary as would be expected if these ceramics were entirely locally developed.

It has been postulated that Monagrillo represents the earliest ceramic complex in Southern Central America. The next complex in Central Panamá, Sarigua, has been

considered to have close relationships with Curré and Darizara (Corrales 1989, Herrera and Corrales 1997b). If it is accepted that the ancestor of the Chibchan languages would have been in this area, we must leave open the possibility that a ceramic complex equivalent to Monagrillo has not yet been found. This possibility is especially reasonable if it is also accepted that Chocoan speaking groups occupied Central Panamá since early times. Monagrillo would represent the logical progenitor of those Chocoan groups since it is considered ancestral to the ceramics produced in Central Panamá until contact (Ranere and Cooke 1996:74).

What remains open to debate is whether there was an initial ceramic complex in the area from Western Panamá to Pacific Nicaragua to account for the Chibchan groups. The earliest ceramic complexes in that area have been dated between 2000-300 B.C. (Hoopes 1987). All of them have relatively well developed pottery so we must wait for further information to clarify the point. Alternatively that ceramic complex may have been adopted from Central Panamá in what would be a interaction of earlier Chibchan and Chocoan groups. Once pottery appeared in the record it plays a more evident role in the evaluation of processes of differentiation as well as regional interactions.

An initial horizon based on the relationships of the ceramic complexes from 2000 to 300 B.C. has been proposed with regional similarities, but with some degree of regional variance. A more restricted and diversified Zoned Bichrome Horizon that excluded "Chocoan" Central Panamá is present from Western Panamá to Pacific Nicaragua from 500/300 B.C. to A.D. 300/500. After A.D. 800 there was a regional diversification with the development of regional styles.

In the Diquís Subregion, we see some degree of internal homogeneity in the zones associated with the Térraba Watershed, but a process of differentiation with the zones next to Western Panamá. In terms of Greater Chiriquí the gradual differences between Western Panamá and Diquís followed the regional pattern of diversification from common roots.

C. Cluster Analysis of Linguistic, Genetics and Archaeological Traits

By recording the total and percentages of the appearance of vessel forms and decorative modes in the different complexes an attempt was made to develop a cluster analysis similar to the ones used in genetics and linguistics. The underlying assumption was that those traits would represent a parallel situation to the linguistic and genetic markers. Ceramic modes can be used to trace relationships of origin, continuity (tradition) and spatial (horizons) relationships among ceramic complexes. Their quantification was useful to establish relationships of stylistic proximity through cluster analysis.

The results support the interpretation that during the period between 1500 and 300 B.C. in Southern Central America there were significant relationships among the different ceramic groups in terms of vessel forms and decorative modes. Dendrograms based on the percentages of traits show groupings among complexes located in adjacent areas, and in some cases clustering according to the geographical alignment of the complexes in a manner similar to that obtained using linguistic and genetic traits.

The parallel situation is also reflected in the fact that a distinction, which echoes the linguistic division of Isthmian group and Votic groups of languages (Constenla 1995), can be postulated. A northern group of ceramic complexes (characterized by the predominance of tecomates, zoned bichrome, incurved bowls) is contrasted with a southern group of ceramic complexes (with predominance of globular bowls and the absence of zoned bichrome). Indigenous groups living in the area were in the process of genetic and linguistic differentiation that has a counterpart in the material culture. Based on the results of our analysis we can support the proposition by Barrantes (1993:22) of a biologic, linguistic and technological co-evolution occurring in the area.

D. Change, Continuity and Dependent Invention in the Diquís

It is not possible to demonstrate continuity for many of the form and decorative modes from period to period in the ceramic record of the Diquís Subregion. This is in contrast to the continuity postulated for other areas in Southern Central America. In this sense there were disruptions in the transmission of information that can be related to

some kind of sorting or external factors that affected the continuity and transmission of pottery knowledge (Neff 1996). However, the matter of continuity is a controversial issue. Meggers (1997) sustains that since several factors such as the founding effect and evolutionary drift can affect the continuity of formal and decorative traits, ceramic complexes with common ancestors may share only a small number of ancestral characteristics. It also depends of the relevance attributed to continuing elements versus the rising differences. It is also clear that the changes from one period to another could not be satisfactorily explained simply by migrations of groups from neighboring areas. Changes and innovations can also be explained by the interaction that local groups maintained at the level of Southern Central America and even beyond.

The appearance of zoned bichroming around 300 B.C. seems not to have local roots in Greater Chiriquí, but it is a trait present since 1500 B.C. in ceramic complexes in Central and Northern Costa Rica. Its acquisition and modification reflects interaction but not necessarily migration. In this sense, there are clear distinctions between Aguas Buenas/Bugaba and Pavas or El Bosque pottery. The same is true for the appearance of polychromy around A.D. 800. In the other archaeological regions to the north and the south, early developments in painted pottery led to the appearance of trichromy and polychromy in precedent periods. Its adoption in Greater Chiriquí after A.D. 800 has been restricted to one type, Buenos Aires-Urabá Polychrome, with a particular style that cannot be traced convincingly to other regions. Again, these assertions point more to the influence of cultural contacts and borrowings rather than imposition by conquering or invading groups. Regional networks, exchange mechanisms, and different type of contacts at the borders or in special places as part of interaction spheres would have enhanced the acquisition of new traits.

The concept of "dependent invention" as proposed by Clark and Gosser (1995:210-211), can be used to explain the adoption of new elements. For them, the borrowing or adoption of technology could have gone almost immediately through a process of application and modification in ways distinct from the use by the donor group. As they mention, the transformation in archaeological time is essentially instantaneous and to trace the source of the innovation could be very difficult. Those imported elements would be adapted to local conventions in an expeditious manner (Clark and Gosser 1995:217).

This can explain the appearance of elements in the Diquís and Greater Chiriquí record that are similar to those present in neighboring areas but whose specific origins is difficult to establish. Returning to the example of zoned bichroming, it could have been adopted from Central Costa Rica or Greater Nicoya, but the similar dates and the localized styles which are more in tune with borrowing and transformation, make it difficult to trace a precise origin.

Acts of exchange and contact between neighbors could be responsible for the acquisition of new elements. As Renfrew (1975) has mentioned there are a great range of exchange alternatives. Those alternatives provide settings for the exchange and acquisition of new technological and stylistic ideas. Caño Island, for example, is a place where an unusual number of Greater Nicoyan pottery sherds from different periods have been found (Finch and Honetschlager 1986, Corrales and León 1987). In the same way, pottery from Central Panamá has been documented in the Diquís Delta (Badilla et al. 1997:125) and pottery from Central Valley was found at the Rivas Site (Quilter and Blanco 1995:215).

These contacts and the acquisition of foreign pottery could have led to the incorporation of motifs or as inspiration for the development of new motifs and forms. However, as Bray (1984:338) has mentioned, those changes were in the context of local ideologies. There was, as in the present, strong resistance to incorporate elements considered foreign to local beliefs or artistic conventions. In her discussion of models of decoration in Tarascan and Zuni groups, Hardin (1984:583) mentions that potters would appreciate a new design, but they will take it apart, reassemble it and modify it to suit a preconceived structure. The differences between styles involved not only individual preferences but also learned associations between design features and cultural meanings (Hardin 1984:600). We should not consider Greater Chiriquí as a passive receptor. Most of the elements in the archaeological record appear to be of local origin and some of them are inter-related in regional networks. We can mention the biscuit pottery, gold objects and stonework as highly appreciated goods that were exchanged among areas.

Another issue is related to internal change. There could have been internal movements within Greater Chiriquí. This has been suggested in the case of the relationships of La Concepción occupations with the Aguas Buenas-Bugaba Style. La

Concepción was partially contemporaneous with Aguas Buenas-Bugaba populations and some degree of displacement, absorption or conquering could have happened. It is also clear that innovations occurred in local areas such as in the case of the Térraba Watershed. The restricted territorial distribution of the material associated with the Quebradas type during the Aguas Buenas period is one example. A distribution of stone balls centered in the Diquís Delta and some ceramic types during the Chiriquí period is another. These changes could have related to ethnic and linguistic differentiation within specific territories. Constenla (1991, 1995) and Barrantes (1993) have considered that in the case of the Borucas, they could be the amalgam of different groups living in the area, closely related but with their own characteristics. When we look at the appearance of elements with restricted boundaries (ceramic types, stone balls) we must remember the situation documented by the Spaniards when they referred to groups that considered themselves different from their neighbors and having some degree of conflict. Cotos, Borucas, Quepos were part of different territorial and political entities. However, the archaeological record reflects a similar material culture. Particular traits could be related to the development of distinct identities.

E. Continuity of Other Elements of the Archaeological Record

I have focused in this study in the ceramic record as a point of departure. However, to address the objectives and hypothesis of this study we must eventually incorporate the analysis of the other elements of the archaeological record. It is true that for the Sinancrá Period ceramics are the most visible element and in that way constituted a logical point of departure. But, for the Aguas Buenas and Chiriquí Periods and La Concepción, San Lorenzo and Bocas Phases there are additional information from lithics, special industries (greenstone work, goldwork, shellwork, etc.), settlement patterns, burial patterns and subsistence patterns.

During the Sinancrá Period almost all the information comes from the ceramic assemblage. However, lithic instruments and debris such as siliceous microlithic chips and bipolar cores present in Curré, can be related with the precedent pre-ceramic assemblage of Boquete, where bipolar cores are present. These lithic instruments do not have continuity in the next Aguas Period in the Diquís. Their possible use as grater

chips to process tubers or roots (Corrales 1989), an activity that would have declined through time with the incorporation of maize, could be an explanation for the discontinuity. However similar instruments were documented in La Pitahaya site, Gulf of Chiriquí (Shelton 1980a:444) for later occupations. These could also reflect mixed economies.

For the Aguas Buenas Period, it has already been noted that stone "barrels" could be the antecedent of stone balls (Stone 1977:105-106, Quintanilla 1992), but further evidence is needed. The stone "barrels", that gave the Barriles site its name, have been considered a typical element of Aguas Buenas Period. They have been reported especially in the Coto Brus zone and around the Bay of Golfito in the Diquís Subregion. In some cases, they were associated with stone balls. The stone balls may have originated as an evolution from the "barrels" in the Aguas Buenas Phase. Stone balls that appeared during the Aguas Buenas Period continued during the Chiriquí Period and became one of the most significant cultural markers especially for the territory centered on the Diquís Delta (Quintanilla 1992). This local development is also an argument against migration after A.D. 800. It would be surprising for a foreign group arriving new to the area to have adopted that particular trait. Lothrop (1963:24) notes that the Diquís spheres represent a span of many centuries and "this suggests a stable population and cultural continuity over a long period of time".

Other aspect of continuity can be seen in the representations, in pottery and stone, of personages with conical hats. During the Aguas Buenas Period, the famous stone statues of "master over slave" from the Barriles site, Western Panamá depicting an upper personage wearing a conical hat, a probable sign of authority, have a counterpart in the Diquís Archaeological Subregion in representations in pottery, as shown by this study. In the Chiriquí Complex, anthropomorphic figurines with conical hats are present and associated with Buenos Aires Polychrome and San Miguel Bisquit in collections from the Diquís Delta (Lothrop 1963:73, 75) and Western Panamá (MacCurdy 1911,167, Linares 1968:39). These other elements of continuity complement the information from the ceramic record and support the idea of local continuity as a whole. There was a local process of development with important additions, which were a product of interaction with other areas.

F. The Role of Diffusion.

It is undeniable that some external factors had a role in the local process of development in Diquís and Greater Chiriquí during the different Precolumbian periods. Their importance varied from period to period and from region to region and their specific roles must be considered in local evolution models. In this sense interaction spheres or "cooperation without domination" (Lange 1992b: 434) is a useful concept to understand some of those external factors. It cannot be discerned at this moment the nature of the contacts. They could be economical (exchange of products), ritual, social (intermarriage) or conflictive. But, by these contacts the different groups were aware of the developments of the others and adopted what they considered to fit with their particular culture.

As mentioned, these interactions do not imply that local groups played a passive role. Sharer (1984:84) mentions the change or effect was not unidirectional. Acculturation is always a reciprocal process. Local groups were integrating elements from outside in their developments, but at the same time contributing to regional processes and changes. As Willey (1996:300) has mentioned, the processes of culture change moves horizontally in space as well as vertically through time and it is in the context of the interplay between in situ evolution and external stimuli that we can understand and explain culture growth and change.

We must be aware also that everything cannot be explained by local development. Local groups in Southern Central America were affected by or received elements from other societies via diffusion, participation in exchange or trade networks, interaction spheres and even migration of groups as in the case of Greater Nicoya. The isthmian configuration of the territory and its position as borderland with Mesoamerica and Northern South America favored the arrival of ideas from the north and the south. This does not mean that the area was just a corridor or a recipient of influences, ideas and peoples from "more advanced" areas as suggested by authors such as Stone (1966, 1972, 1977), Baudez (1970), and Coe (Coe 1962, Coe and Baudez 1961).

Alternative approaches discuss the relationships with other areas in terms of artistic or technological "influences", trade or exchange networks, particularly down-the-line-trade, and interaction spheres (Abel-Vidor 1981, Lange 1984, 1992a, 1992b,

Sharer 1984, Bray 1984, Day 1984, Creamer 1984, Sheets 1992, Hoopes 1992, Graham 1996). For each period, the interaction changed and each archaeological region participated to varying degrees in regional contacts. We can address briefly some examples of how external elements played an important role in the suggested local evolution process.

Some early developments must be explained as a function of regional scale phenomena. For example, the occupation of the territory during Paleoindian and Archaic times. Migration at the continental level explained the initial colonization during Paleoindian times. Northern and southern affiliations based on formal and technical aspects of projectile points have been proposed for that period (Snarskis 1981, Bray 1984:309).

Internal movements of hunters and gatherers in more restricted territories of Southern Central America are postulated for the Archaic Period. During these periods, group movements and diffusion of technological and formal elements can be seen having a close relationship with the development of local traditions (Bray 1984:314, Ranere and Cooke 1996). Interaction between mobile groups with sedentary groups could be the scenario for the appearance of pottery in the Isthmus (Hoopes 1995).

The Formative in Southern Central America is one of the periods characteristically explained with more diffusionist approaches. Since the earliest developments of agriculture and ceramics have been documented in other areas, the trend has been to explain the appearance of those traits by migration of peoples or diffusion from nuclear areas. South America has been repeatedly proposed as having the donor cultures of those aspects (Lathrap 1977, Ford 1969, Sharer 1984:69, Willey 1996:299).

New data for initial appearance or development of ceramics and agriculture in Southern Central America, that shows an innovative role for the Isthmus, is the basis for recent reviews of strong diffusionist positions (Hoopes 1992, 1995, Ranere and Cooke 1996). However, diffusion, borrowing or adaptation of ideas and technology from other areas are still complementary explanations for this period. It is clear that a central-core diffusion is difficult to sustain. But, alternative approaches such interaction spheres imply a kind of diffusion in the sense of the spread and adoption of ideas or technology. The same is true for other alternatives such as down-the line-trade controlled by elites

as has been suggested by Snarskis (1984:36) Creamer (1984:184) and Vázquez et al. (1994) for the acquisition of objects from Mesoamerica and elsewhere.

With regard to South America, particularly Colombia, Bray (1984:337) states that contacts between the various regions of Colombia and the Isthmus were virtually continuous. This could be related with the historical relations of the groups inhabiting the Chibchan-Chocó Area. However, large-scale occurrences and territorial encroachments were rare occurrences and a good deal of trade contact may have been of the indirect down-the-line type (Bray 1984:338). An example of relatively well documented diffusionism is the introduction in later periods of metalworking (after 300 A.D). Goldworking came from the south, specifically Colombia (Snarskis 1984:37, Bray 1984:318, Willey 1996:301) and copper technology according to Lange (1992b:431) was derived from the north. But, there has been an overemphasis in the external elements, linking the evidence of goldworking with an increasing influence from the south, manifested in circular houses, paved causeways, and artistic styles (Lothrop 1963, Stone 1966, Snarskis 1984, 1992). A more active role is advocated by Bray (1984:376) who has said "When borrowing does occur, what is usually taken over is the technology (metalworking, pottery painting, crop complexes), but the technology is used for purely local ends. There is surprisingly little direct copying". The "passive" character attributed to the area by diffusionist approaches has denied the importance of local achievements and active participation at the regional level and beyond.

G. Concluding Remarks

At the end of a study, researchers usually look back to assess what they could have done differently, the weakness of some of the methodological steps followed or the success in answering or at least attempting to answer the research questions. This final reflection is too late to make significant changes in the work done but it is important for future works. I will make some comments in that regard since I am planning to continue doing research in the study area.

In the evaluation of cultural change or continuity in the Diquís Subregion, I used a mixed approach of Cultural History (a more familiar ground) and Evolutionary Archaeology. I consider Evolutionary Archaeology as a useful approach to deal with

cultural continuity and change, especially in an area as Southern Central America where genetics and linguistics strongly signal evolutionary processes. Recent papers explore the validity of several methodologies to apply Darwinian evolution to the archaeological record that can be implemented in future works. Particularly, the re-application of frequency seriation (Teltser 1995, Lippo et al. 1997) and clade-diversity diagrams (Lyman and O'Brien 2000). Frequency seriation can provide an assessment of variation or heritable continuity within and between ceramic traditions. This has been already suggested by the frequency seriation conducted by Baudez et al. (1993:111-114) with ceramic material from stratigraphic contexts in the Diquís Delta.

Cluster analysis using vessel forms and decorative modes frequencies was used in this study to contrast information from linguistic and genetic analysis in an exploratory way. The results, in general, were positive and permit a correlation with linguistic and genetic results. However, some limitations such as agglomeration based on absence rather than presence of ceramic traits due to the size of the samples might be affecting the results. It is also necessary to experiment with other kind of information, besides vessel form and decorative traits, such as different kind of vessel measurements.

As mentioned above it is also necessary to include other elements of the archaeological record in the assessment of evolutionary processes. Lithics, particularly, would be very important because it could provide even longer temporal ranges. Other elements to discuss are special industries, subsistence, funerary and settlement patterns. The agreement among researchers about description criteria and quantification is fundamental. The first step for an agreement on the ceramic typology nomenclature of Greater Chiriquí is provided in the collection of information presented in Appendix 3.

Finally, I consider that archeological studies must be linked with current issues. The evaluation of long term cultural continuity or change and its correlation with genetic and linguistic information from modern indigenous groups may have some positive result in their struggles to subsist, although it also could be the other way around. Modern Boruca, the most likely descendants of the Precolumbian groups presented in this study, face a myriad of problems, and some of them can mean a forced abandonment of ancestral lands. The projected construction of a hydroelectric dam in

the Middle Térraba Basin will result in the re-location of some indigenous communities and the flooding of numerous archaeological sites. This is a situation faced by local groups all over the world, and in this sense archaeological studies with the aim of evaluating history of occupation of specific territories may provide with elements for a more objective considerations of the impact of infraestructural development in archaeological patrimony and indigenous communities, and their rights to stay in their territories or at least treated with fairness.

I am also concerned with the relation of archaeological information with national identity and heritage protection, without being unaware of the negative or dangerous connotations. Costa Rica population, as many other countries, is mestizo, as genetic studies have proven. In this sense, the study of evolutionary processes that links remote Precolumbian occupations with modern Costa Ricans may be crucial in the protection and study of archaeological remains (sites, objects) and their consideration as ancestral heritage.

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APPENDIX 1
VESSEL FORMS, APPENDAGES AND DECORATIVE MODES, SINANCRÁ, AGUAS BUENAS AND CHIRIQUÍ PERIODS, DIQUÍS ARCHAEOLOGICAL SUBREGION

A. SINANCRÁ PERIOD

1. Vessel Forms Modes:

- F1 tecomates, vessels with very restricted mouths, rims with comma shape, rounded lips.
- F2 open bowls, with direct rims, in some cases slightly thickened on the exterior, open mouths and not very deep.
- F3 bowls with flared lips; the lips are folded and projected to the exterior.
- F4 globular jars with curved necks, the rims can be everted or slightly everted, usually the lips was thickened.
- F5 semiglobular jars with slightly everted rims, rounded lips.
- F6 cylindrical vessels, flat bases with reinforcement, and vertical walls, other bases present an angle, not being completely flat.

2. Decorative Modes

- D1 short shell stamping, it can be separated by vertical or horizontal incised lines, or the stamping cut incised.
- D2 oblique shell stamping usually located in the neck.
- D3 rocker stamping, stamping with the edge of a shell usually covering large surfaces.
- D4 fingernail stamping, sometimes associated with incised lines or crosscutting them.
- D5 jab and drag lines.
- D6 modeling using pellets connected by fillets. Pellets can be reed stamped. Sometimes associated with incised lines.
- D7 fillets appliqué that can be simple or stamped with fingernail, shell, or V pointed instrument, sometimes associated with incised lines straight or semicircular.
- D8 incised lines enclosing or cut by shell stamping, short incised lines or punctuation.
- D9 crosshatching incised lines.
- D10 punctuation in lines or rows, some tear-shaped.
- D11 cuneiform stamping with a rhombus or triangular pointed instrument.
- D12 reed stamping, circles stamped with hollow reeds.

- D13 parallel or convergent incised lines
- D14 rounded stamping, made with a rounded pointed instrument covering large surfaces
- D15 stamping with triangular or rounded instrument in rows, maybe in a rolling or rocking motion

B. AGUAS BUENAS PERIOD

1. Vessel Forms Modes

- F1 tecomates, restricted mouths, comma shaped rims, rounded lips.
- F2 open incurved bowls.
- F3 composite silhouette bowls, rounded lips.
- F4 bowls, under the lip there is a groove or depression.
- F5 bowls, with thickened lips, composite silhouette.
- F6 bowls with straight walls.
- F7 jars with everted and thickened lips.
- F8 jars or beakers with everted thickened lips.
- F9 jars or bowls with outcurved rims.
- F10 restricted bowls or jars with s-shaped rims.
- F11 bowls with flared lips.
- F12 chimney vessels, flat base and straight walls.
- F13 plates.
- F14 jars with projected lips.

2. Decorative Modes:

- D1 geometric designs, parallel vertical, horizontal or oblique broad incised lines.
- D2 vertical or oblique incised lines, They can be associated with punctuation or appliqué pellets and delimited by horizontal incised lines.
- D3 vertical and oblique rows of punctuation associated with incised lines, in a natural color zones above vessel's angle.
- D4 zoomorphic modeling, low relief representations appliquéd on the walls of vessels.

D5 punctation and drag and jab punctation rows below the rim of bowls with a groove below the lip.

D6 zoned bichroming. Slipped areas are alternated with unslipped areas. Usually the unslipped area is located in the shoulder of the vessel. Plastic decorations are usually executed in the unslipped area.

D7 vertical, oblique and horizontal fine engraved lines associated with zone bichroming. In some cases they represent alligators.

D8 appliqué fillets with chain-like punctation.

D9 shell stamping, oblique short strokes on unslipped areas under the lip.

D10 fingernail stamping associated with incised lines.

D11 incised lines cut by short fine incised lines, or crosshatched fine incised lines.

D12 appliqué pellets, some with stamping or punctation, cluster of pellets in an unslipped area above vessel's angle.

D13 appliqué fillets.

D14 negative painting black on red, located in the interior part of vessels, usually associated with D7.

D16 combing, produce by the use of a multiple teeth instrument.

3. Supports

S1 hollow anthropomorphic supports.

S2 long solid supports, in some cases with zoomorphic modeling in the upper part or pellets or band in middle front.

S3 solid, short, and pointed supports.

S4 hollow or solid supports with incised lines and/or appliqué ending in protuberances, in some cases double leg shaped.

S5 tabular supports, projection of a tab or tongue.

S6 short solid supports (pawn?).

S7 solid or hollow cylindrical supports with flat end.

S8 solid zoomorphic supports.

4. Handles

H1 tabular handles.

H2 strap handles.

- H3 ring handles.
- H4 handles in the form of a fist or pawn.

C. CHIRIQUÍ PERIOD

1. Vessel Forms Modes

- F1 tecomates.
- F2 composite silhouette bowls.
- F3 open bowls, in some examples the lips are thickened interiorly.
- F4 bowls with different orientations, straight, incurved or excurved. Generally with rounded lips, but in some cases the lips are flattened on the top.
- F5 bowls with projected rims.
- F6 bowls with flared lips.
- F7 bowls with thin walls and slightly thickened lips.
- F8 bowls with slightly thickened lips.
- F9 bowls with thin walls and interiorly thickened lips.
- F10 plates or "comales".
- F11 jars with projected lips and short necks.
- F12 jars with long necks, thickened or projected lips and sharp shoulder angles.
- F13 jars with thin walls and outcurved rims.
- F14 jars with slightly thickened lips.
- F15 jars with outcurved rims and rounded or slightly thickened lips.
- F16 jars or bowls with thickened lips. There are different variants in the form and size of the rims. Bowls can be large, medium or small, lips can be rounded projected, flattened at the top.
- F17 globular jars with sharp everted rims.
- F18 bowls with thin walls, straight rims.
- F19 jars with everted rims, very slanted.
- F20 jars with outcurved rims with rounded thickened lips.

2. Decorative Modes

D1 incised parallel lines, vertical or horizontal.

D2 frieze with incised geometric designs The outside of the rim above the vessel shoulder is decorated with a frieze made by fine shallow incisions after the application of slip and polishing before the firing. Among the single elements: triangles around the vessel delimited by a single or double lines, triangle may be facing down or facing up, plumed triangles, alternated or joined at the tip, oblique lines opposed or alternated, limited by plumed rectangles, triangles with dots inside.

D3 punctuation in rows usually associated with vertical incised lines.

D4 combing.

D5 appliqué pellets, in some cases with reed stamping or punctuation.

D6 appliqué fillets, usually with punctuation.

D7 fillet appliqué with punctuation, chain-like.

D8 polychromy (red and black on cream). Red bands form friezes and panels, black lines, bands and dots form the designs. Usually a frieze in the exterior upper half part, in the interior usually lines (2-3) red and black under the lip. Friezes can be continuous or divided in rectangular panels, with enclosed designs: triangles with dots inside, hooks, semicircles, alligator stylized designs, other geometric designs ("guiloché").

D9 white band on red, white cream or white band under the rim, and red slip in the rest of the vessel. It can be present in supports that are covered completely or with bands of white. Sometimes a wide band in the interior of the vessel.

D10 black lines on red, motifs include a frieze with triangles facing down with dots inside enclosed by double lines, the V motif enclosed by an upper single line and lower double line and black lines in solid supports background.

D11 red and brown, usually the lip and the lower half of vessels are covered with red slip, while the upper half and neck are covered with brown slip.

D12 white lines on black or brown, wider than the Panteón White Line.

D13 orange-red bands or streaks. Either bright orange-red bands or streaks are painted on the exterior walls. They can be: a. wide carelessly drawn bands applied singly or in pairs, encircling the vessel at its maximum diameter; large loops or triangles, facing up or down, are drawn from the horizontal bands to the neck of the vessel; b. a series of short streaks or smudges.

3. Supports

S1 long solid supports, tubular, thicker at the upper part.

S2 solid zoomorphic supports, generally represents the head of the animal (jaguar, coati, etc.). The supports can be plain or decorated and the head is modeled. In the case of polychrome vessels the features of the head can be modeled and painted or only painted.

- S3 pointed solid supports.
- S4 hollow supports with frontal and lateral slits, pointed or mammiform.
- S5 hollow supports with central and lateral slits and appliqué and incised lines.
- S6 hollow anthropomorphic and zoomorphic supports.
- S7 hollow supports, it includes all fragments of hollow supports that could not be associated with the above categories.
- S8 solid supports, with a frontal central depression, usually flattened.
- S9 solid short support with deep grooved lines, only one example.

4. Handles

- H1 armadillo-shaped handles, realistic and stylized representations of armadillos, it combines incised lines, pellets and punctuation.
- H2 strap handles, in some cases the edges of the handle are raised.
- H3 ring handles, sometimes with pellet appliqués.
- H4 strap handles connected to the lip, they can be decorated with appliqué pellets with punctuation.
- H5 twisted handles, usually connecting the shoulder with the lip.
- H6 projected tab with pellets with punctuation, a single example, it looks more decorative than functional.
- H7 zoomorphic handle (only one example), this handle seems more decorative than functional.

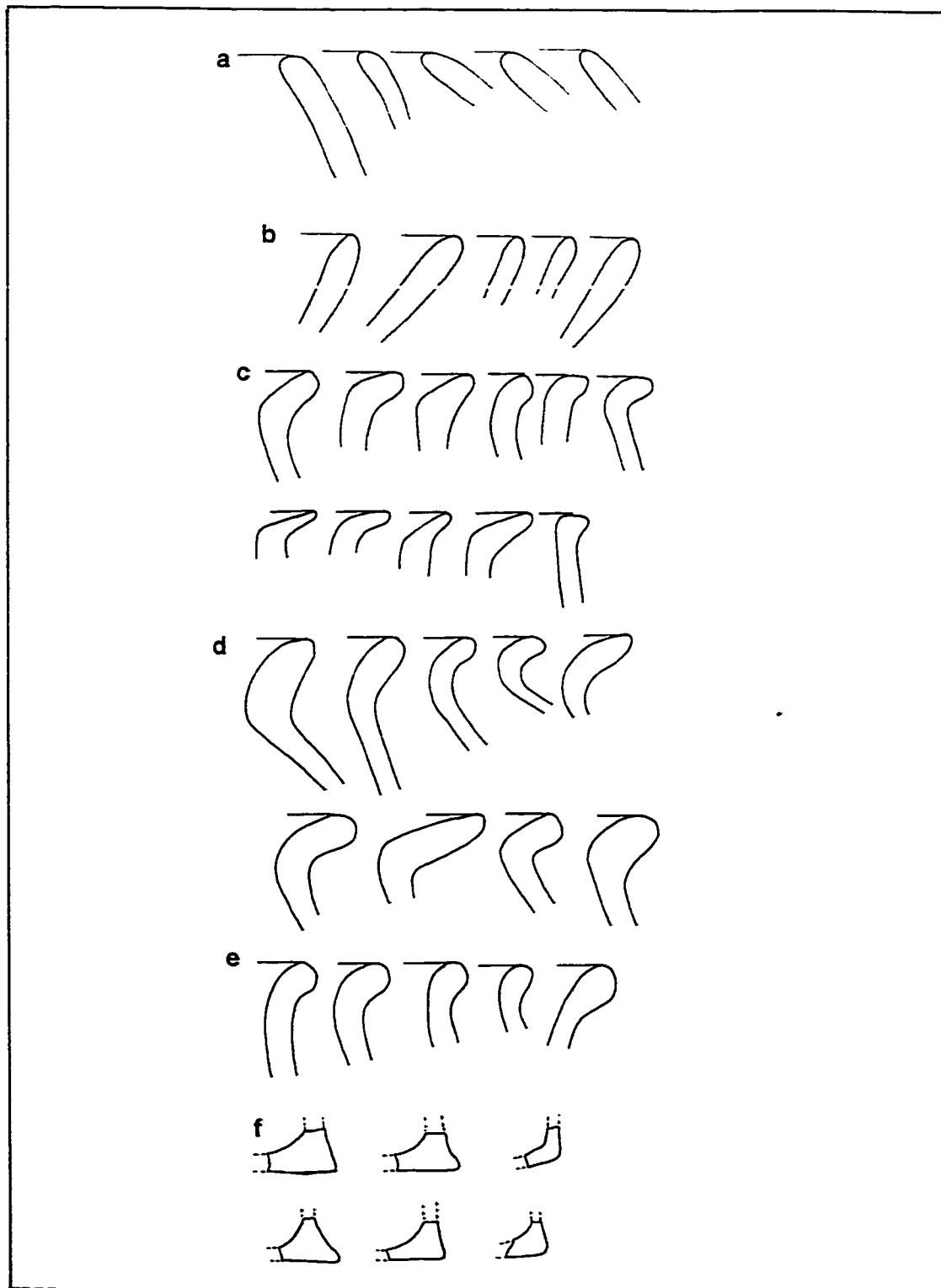


Fig. 12. Vessel Forms Modes, Sinancrá Period, a. F1, b. F2, c. F3, d. F4, e. F5, f. F6

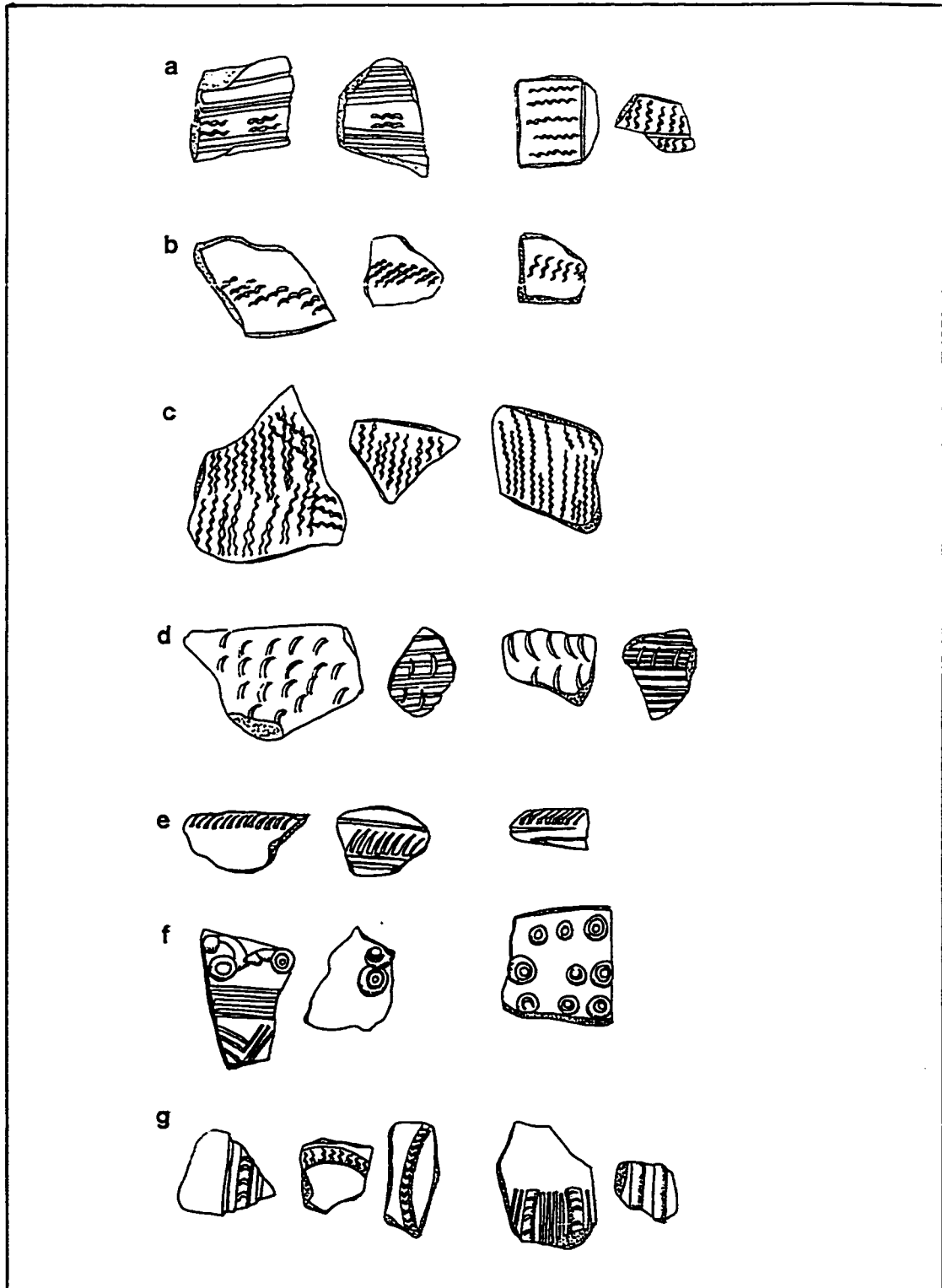


Fig.13 Decorative Modes, Sinancrá Period, a. D1, b. D2, c. D3, d. D4, e. D5, f. D6, g. D7.

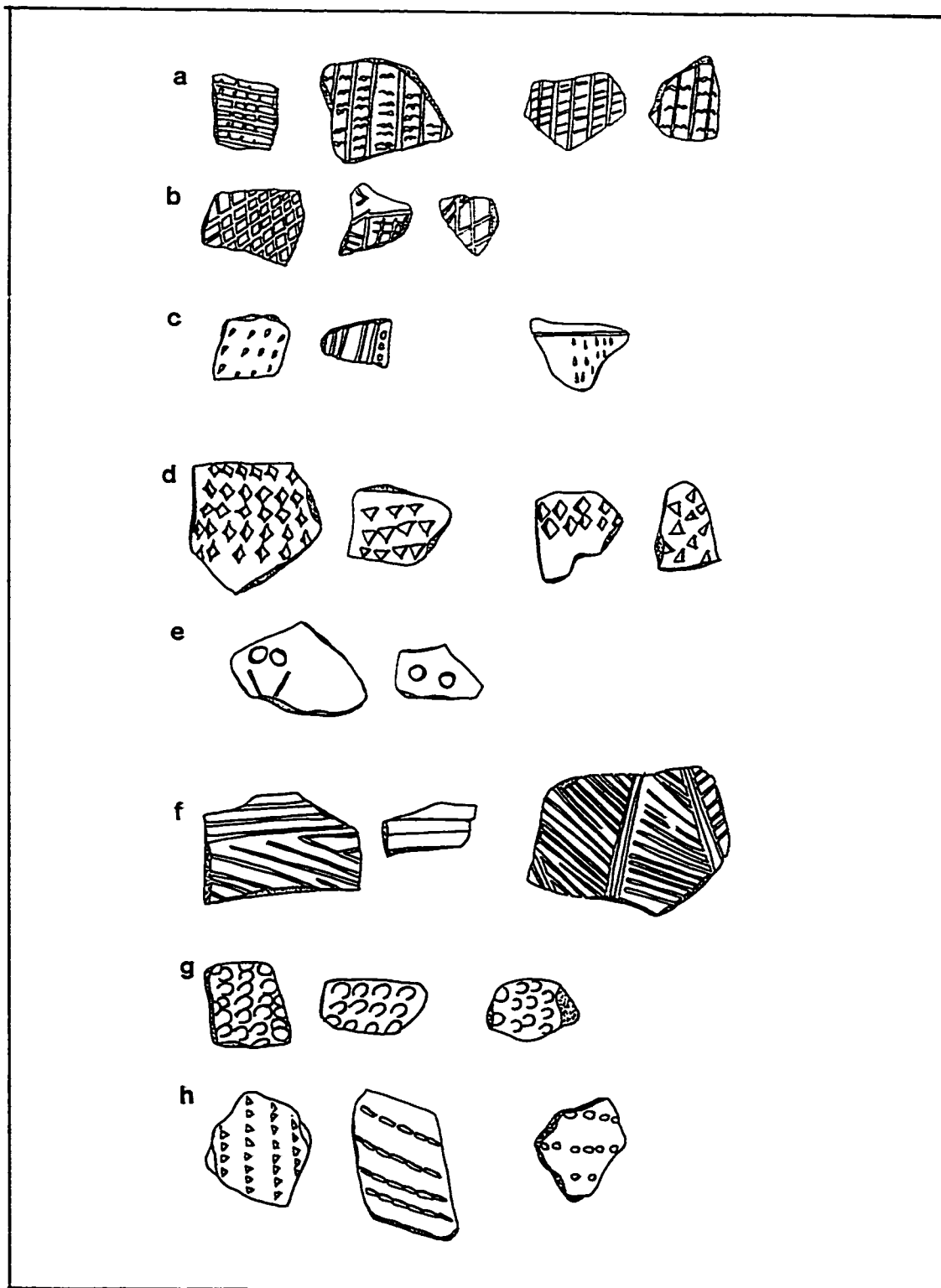


Fig. 14. Decorative Modes Sinancrá Period, a. D8, b. D9, c. D10, d. D11, e. D12, f. D13, g. D14, h. D15.

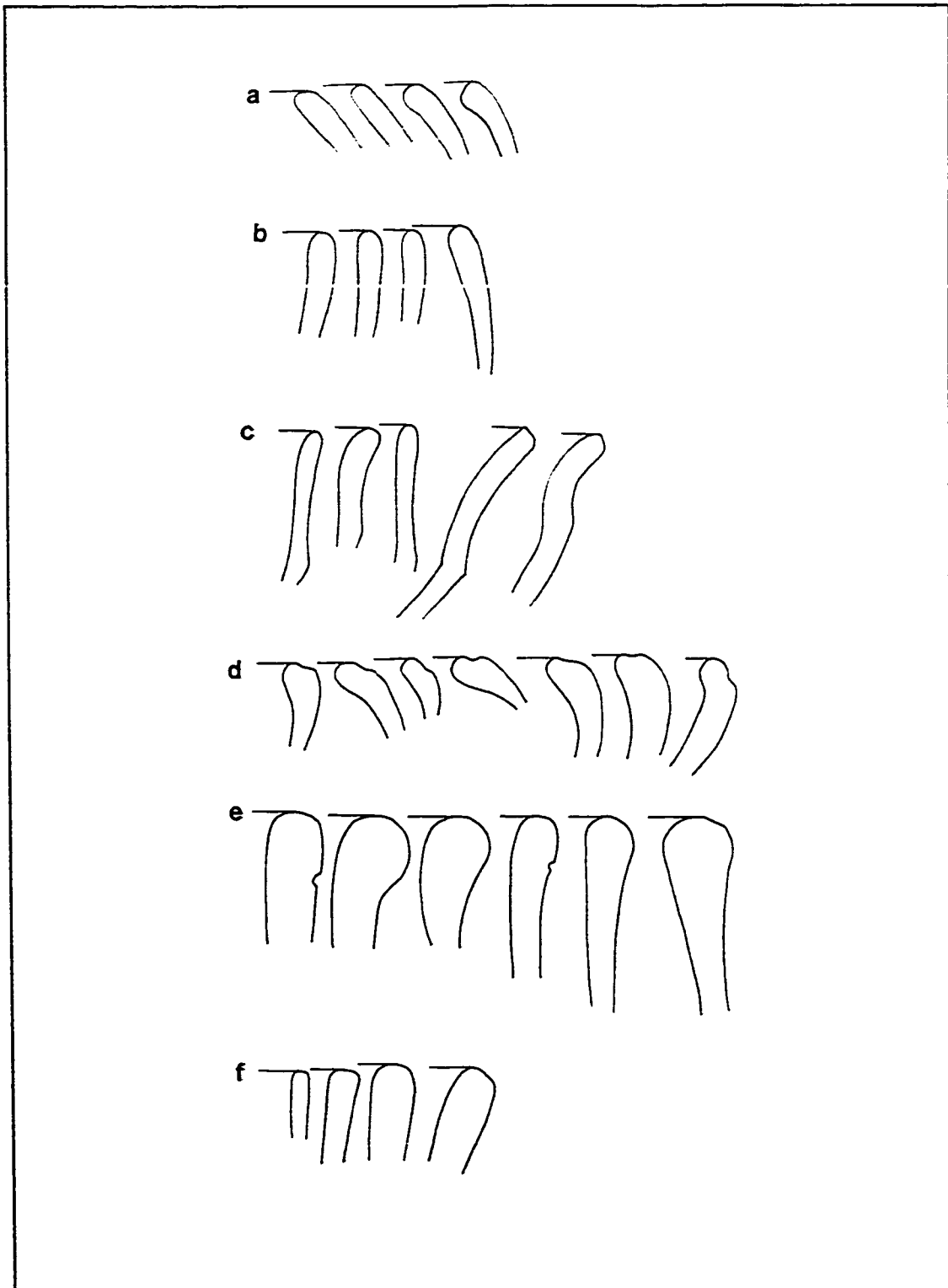


Fig. 15. Vessel Forms Modes, Aguas Buenas Period, a. F1, b. F2, c. F3, d. F4, e. F5, f. F6.

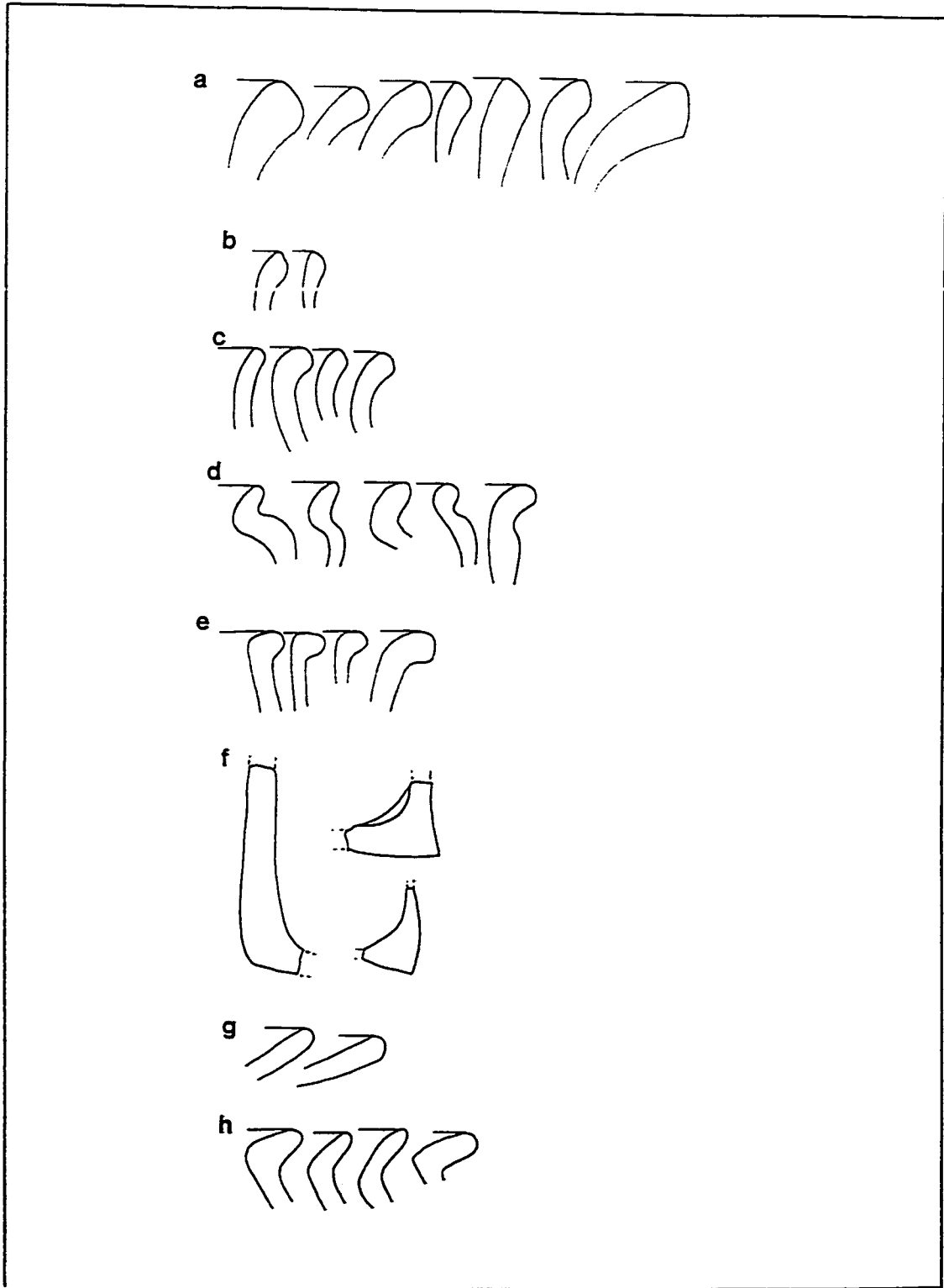


Fig. 16. Vessel Forms Modes, Aguas Buenas Period, a. F7, b. F8, c. F9, d. F10, e. F11, f. F12, g. F13, h. F14.

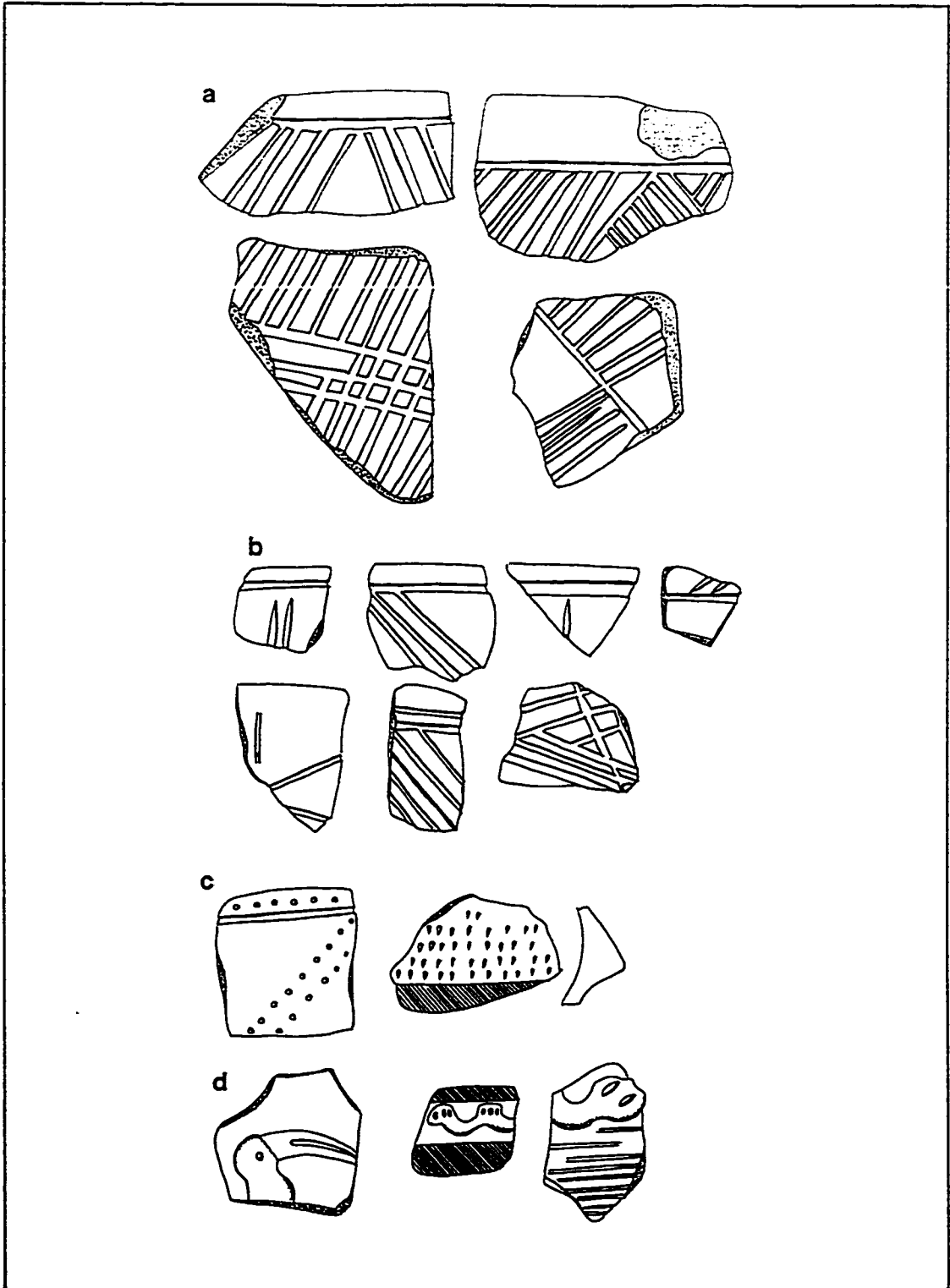


Fig. 17. Decorative Modes, Aguas Buenas Period, a. D1, b. D2, c. D3, d. D4.

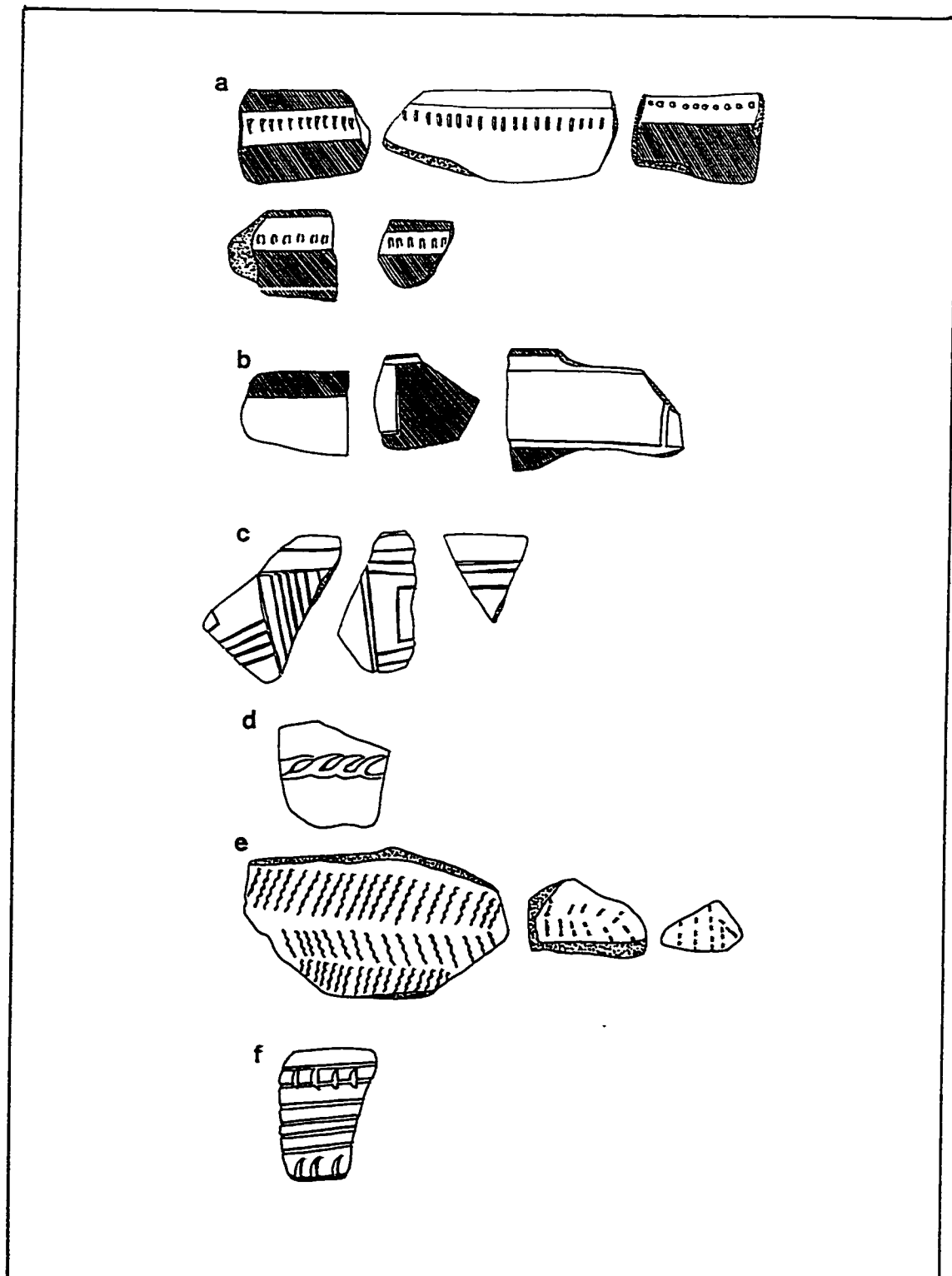


Fig. 18. Decorative Modes, Aguas Buenas Period, a. D5, b. D6, c. D7, d. D8, e. D9, f. D10.

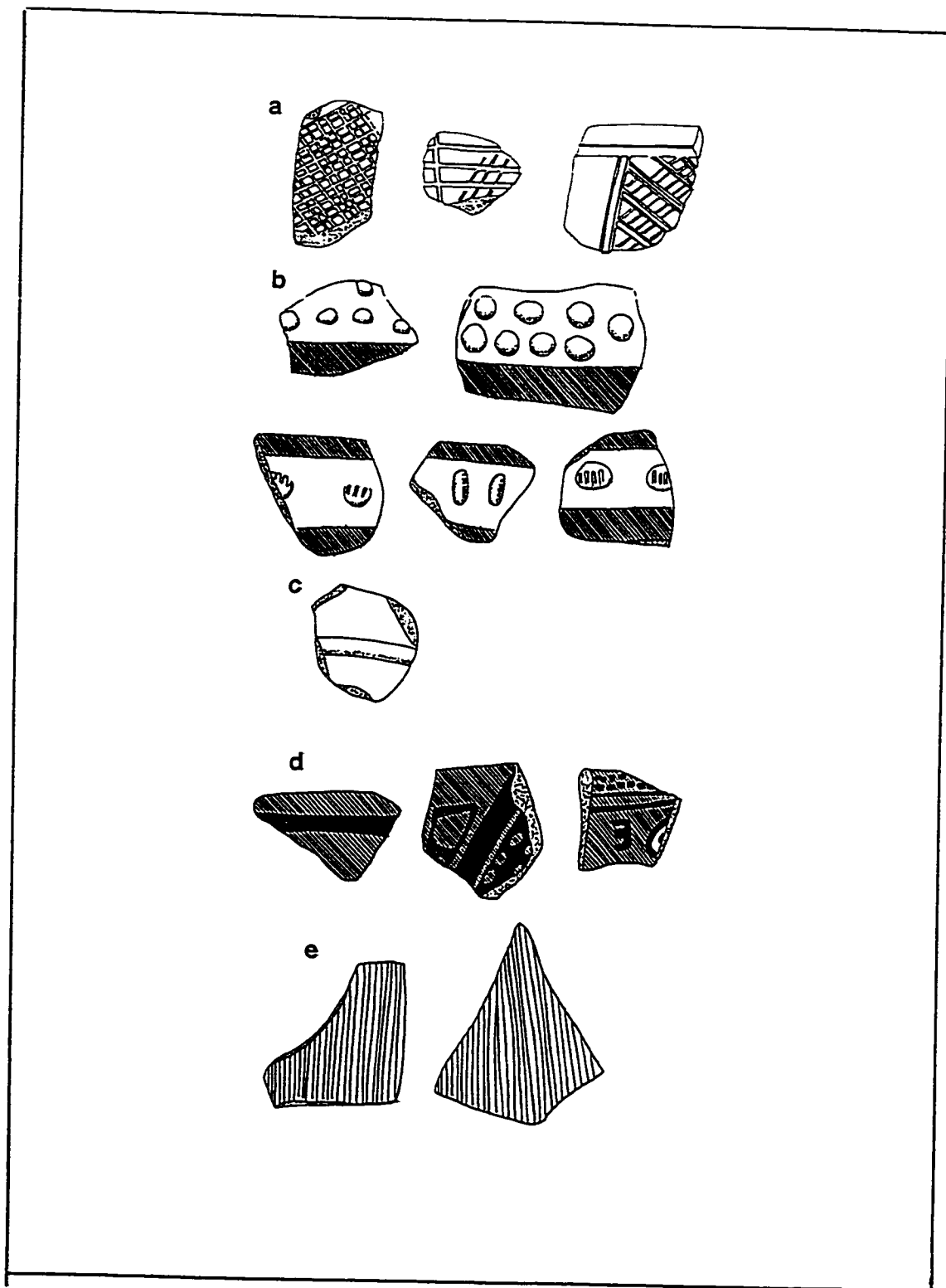


Fig. 19. Decorative Modes, Aguas Buenas Period, a. D11, b. D12, c. D13, d. D14 (two sherds redrawn from Baudez et al. 1993, Fig. 21:e, Haberland 1959b, Tafel XIV:c), e. D15.

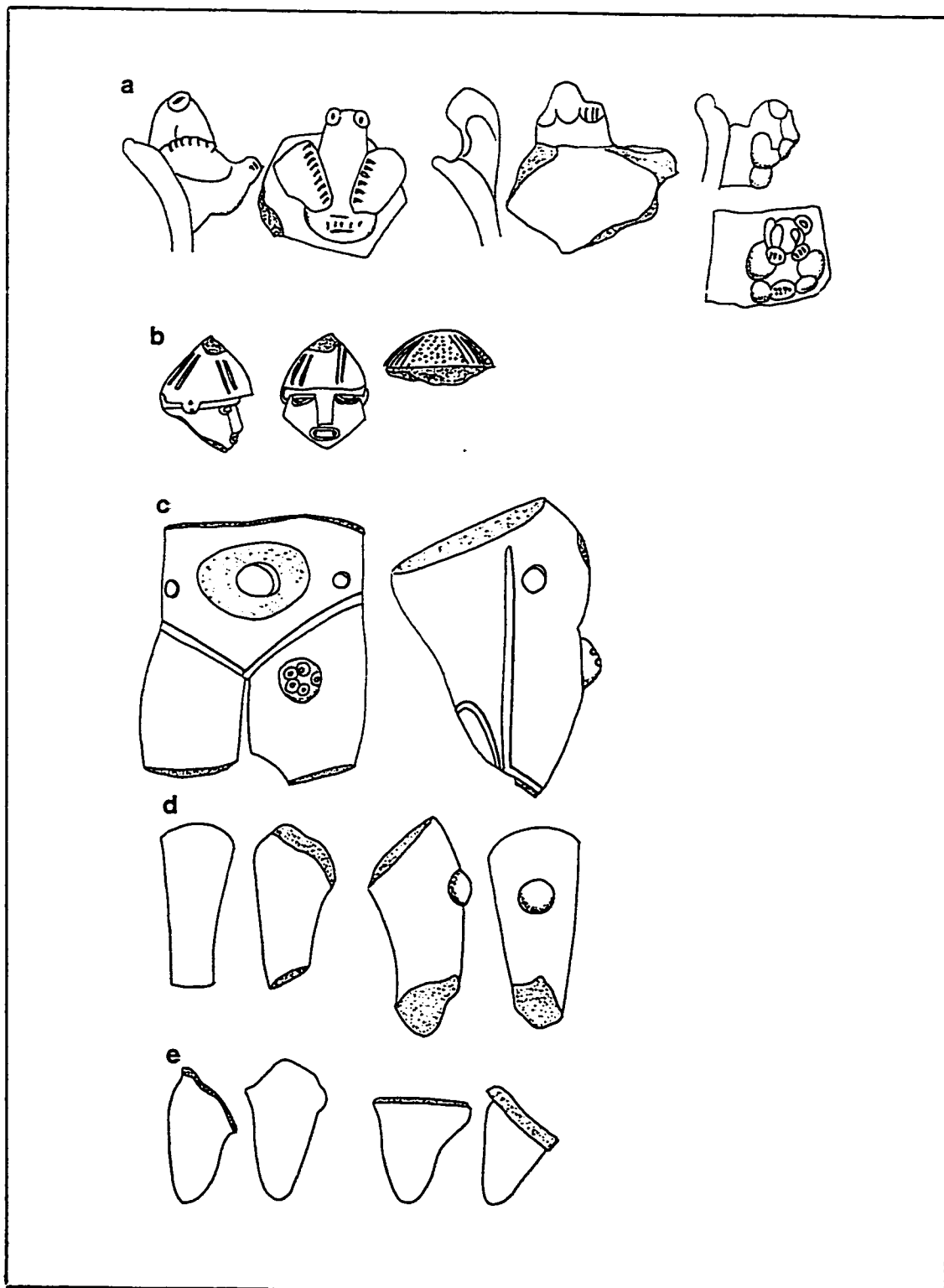


Fig. 20. Figurines and Supports Modes, Aguas Buenas Period, a. zoomorphic adorns, b. figurines with conical hats, c. S1, d. S2, e. S3.

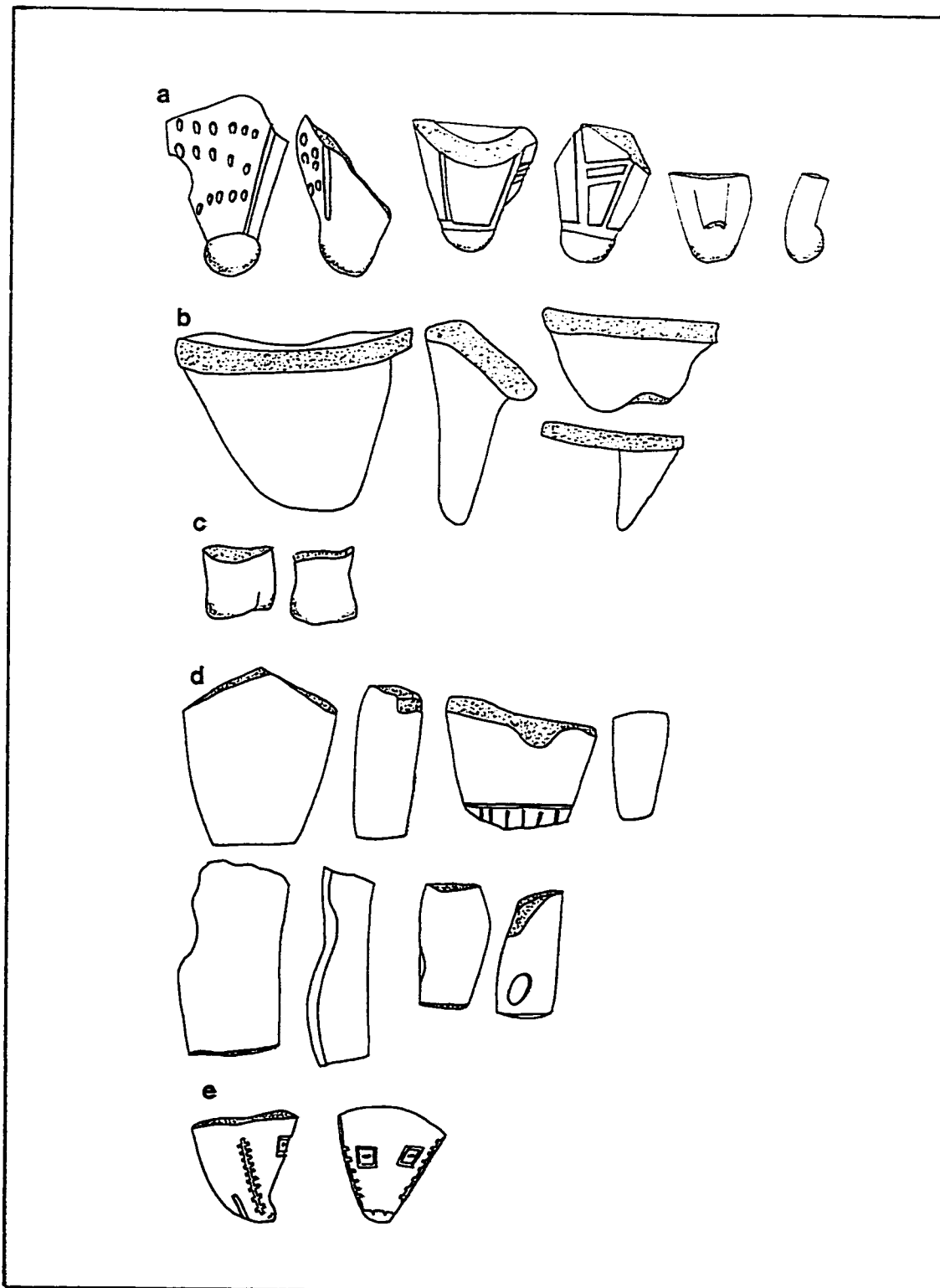


Fig. 21 Support Modes, Aguas Buenas Period, a. S4, b. S5, c. S6, d. S7, e. S8.

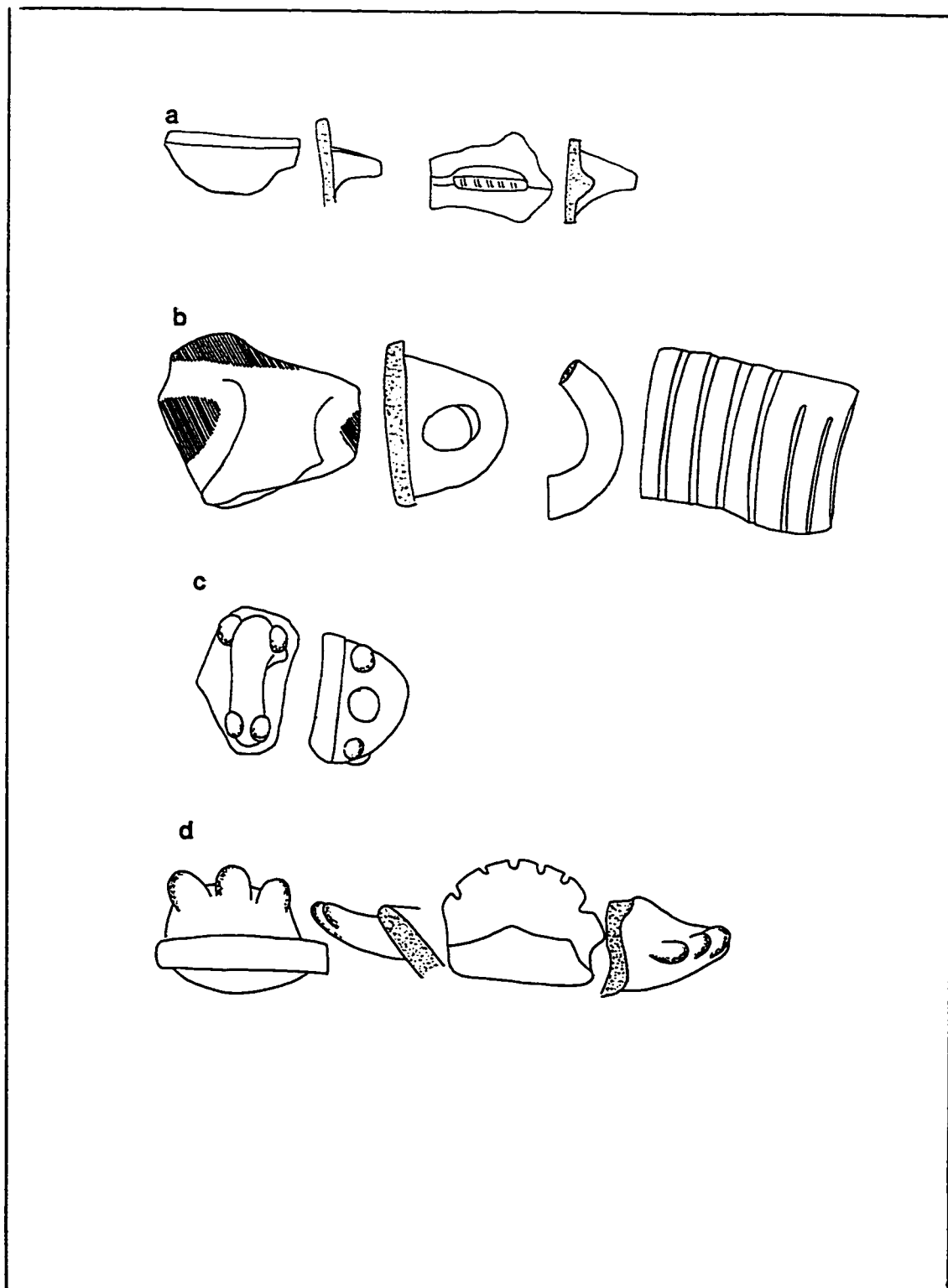


Fig. 22. Handles Modes, Aguas Buenas Period, a. H1, b. H2, c. H3, d. H4.

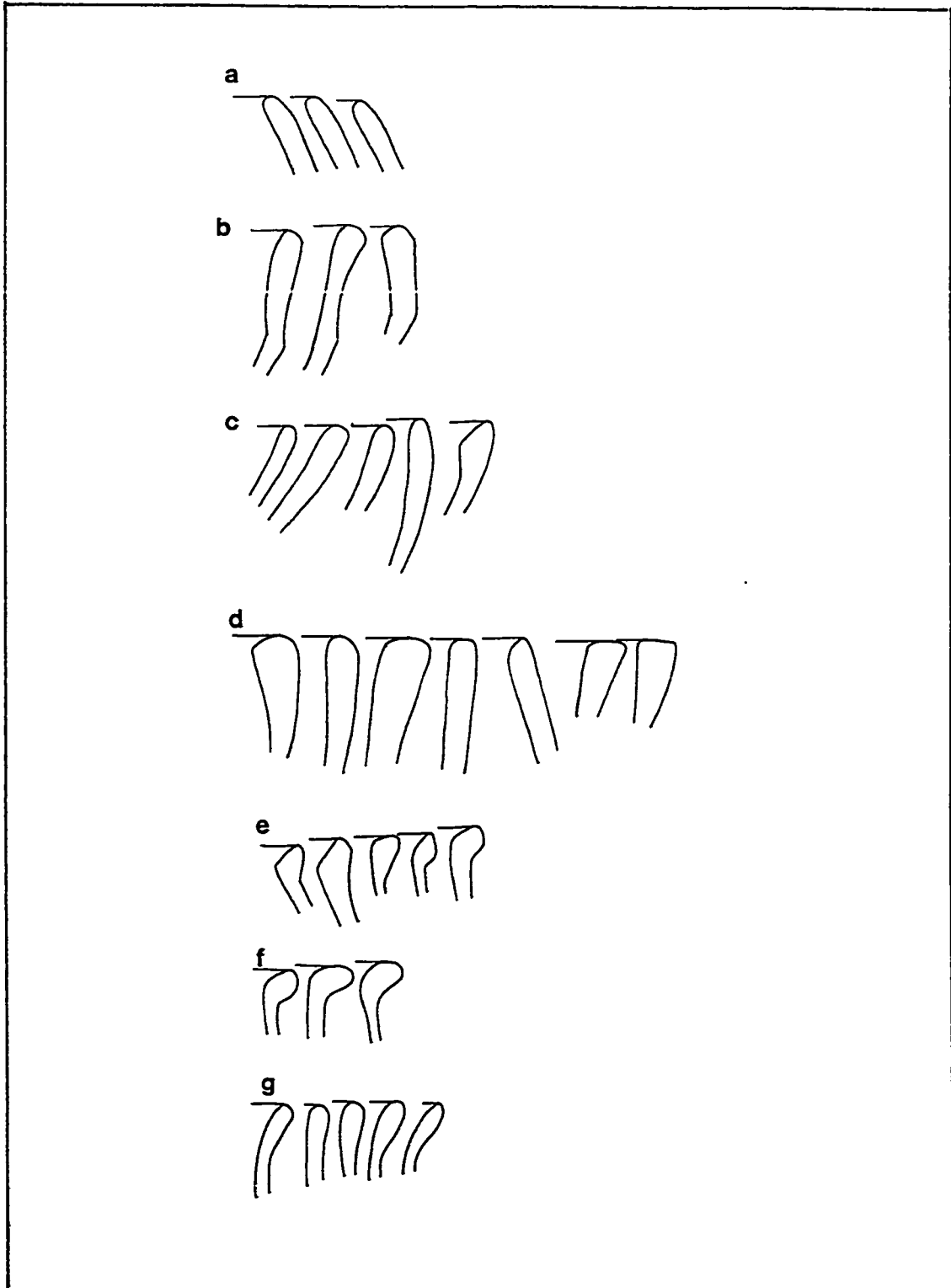


Fig. 23. Vessel Forms Modes, Chiriquí Period, a. F1, b. F2, c. F3, d. F4, e. F5, f. F6, g. F7.

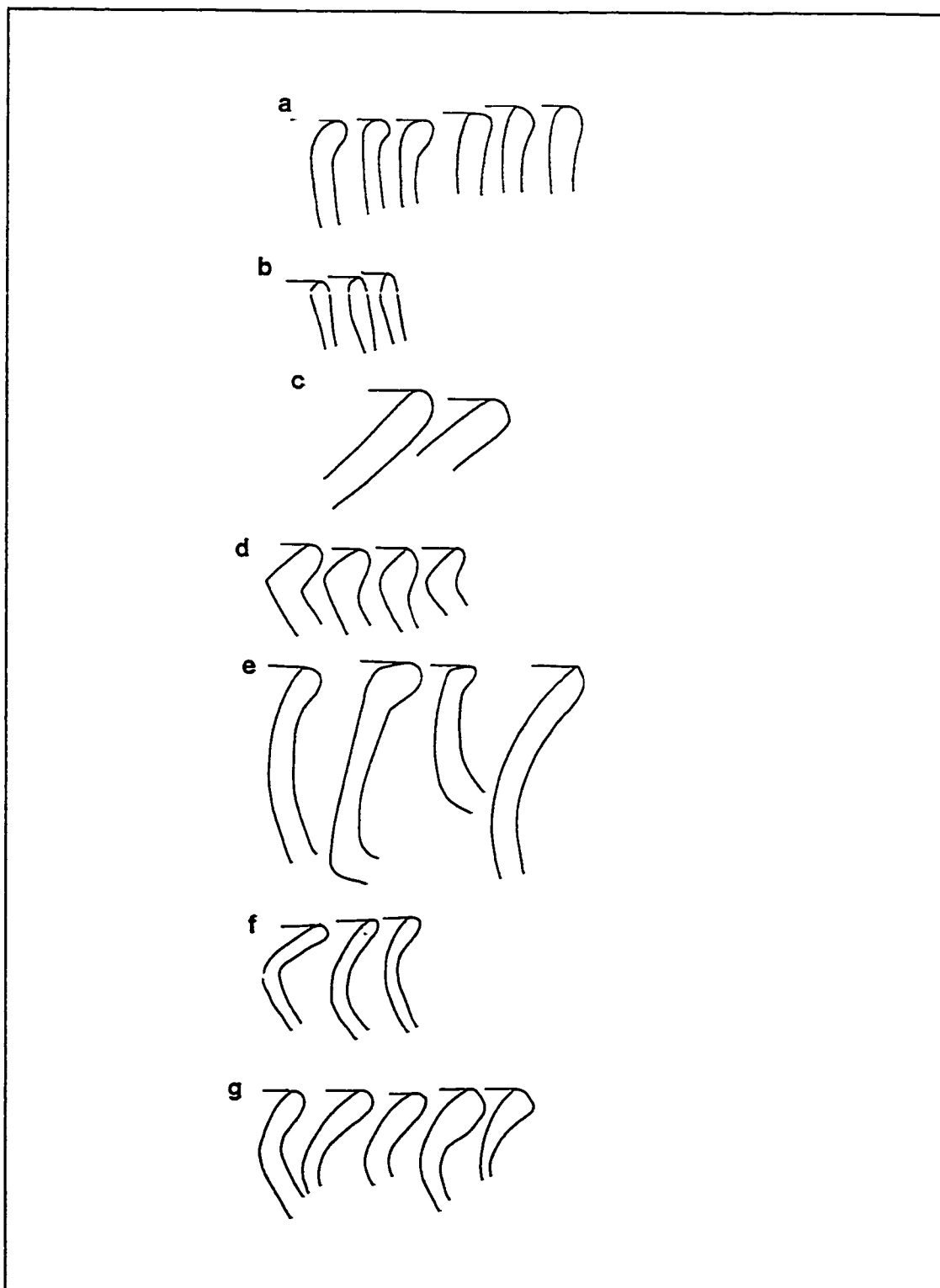


Fig. 24. Vessel Forms Modes, Chiriquí Period, a. F8, b. F9, c. F10, d. F11, e. F12, f. F13, g. F14.

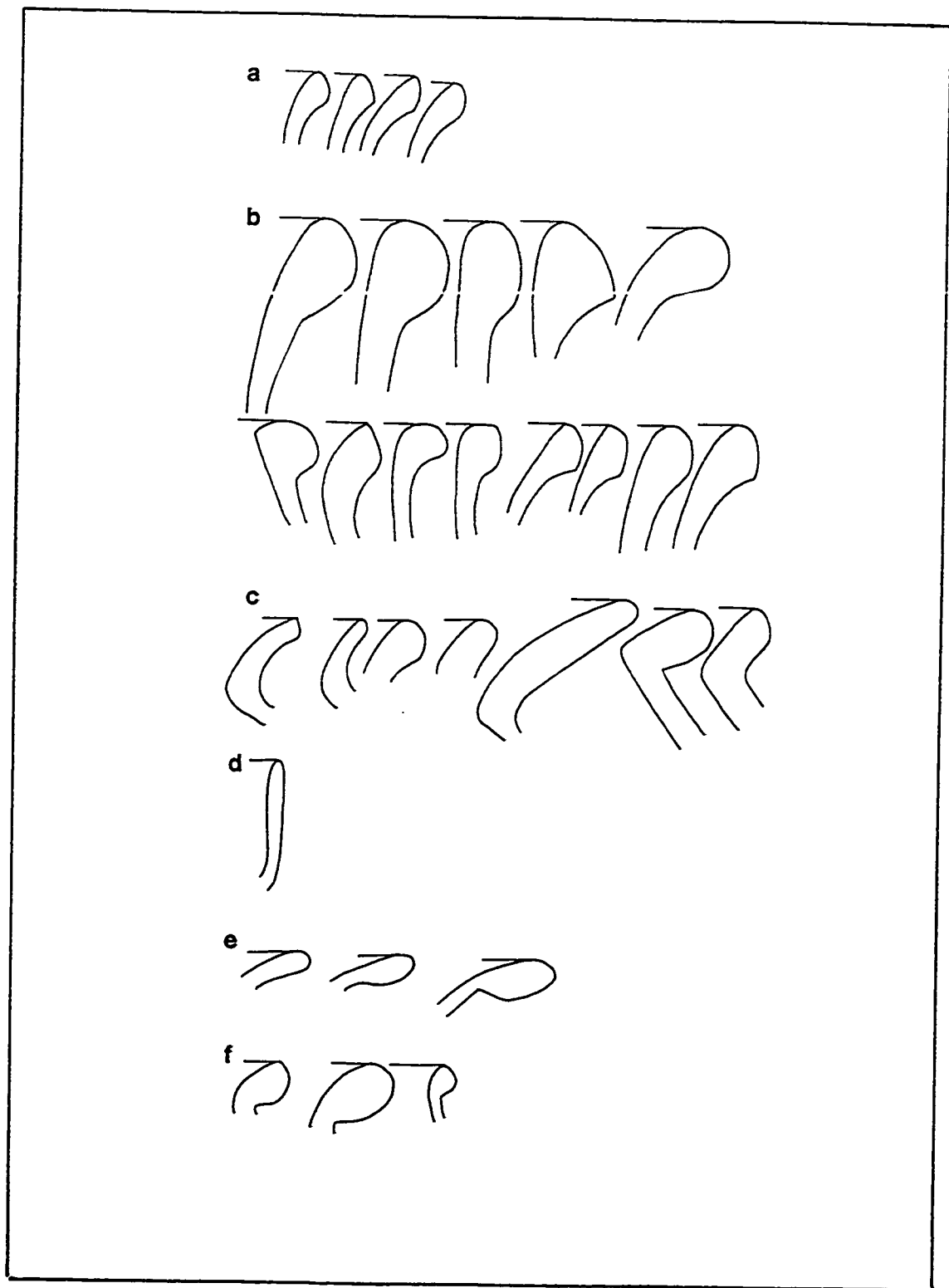


Fig. 25. Vessel Forms Modes, Chiriquf Period, a. F15, b. F16, c. F17, d. F18, e. F19, f. F20.

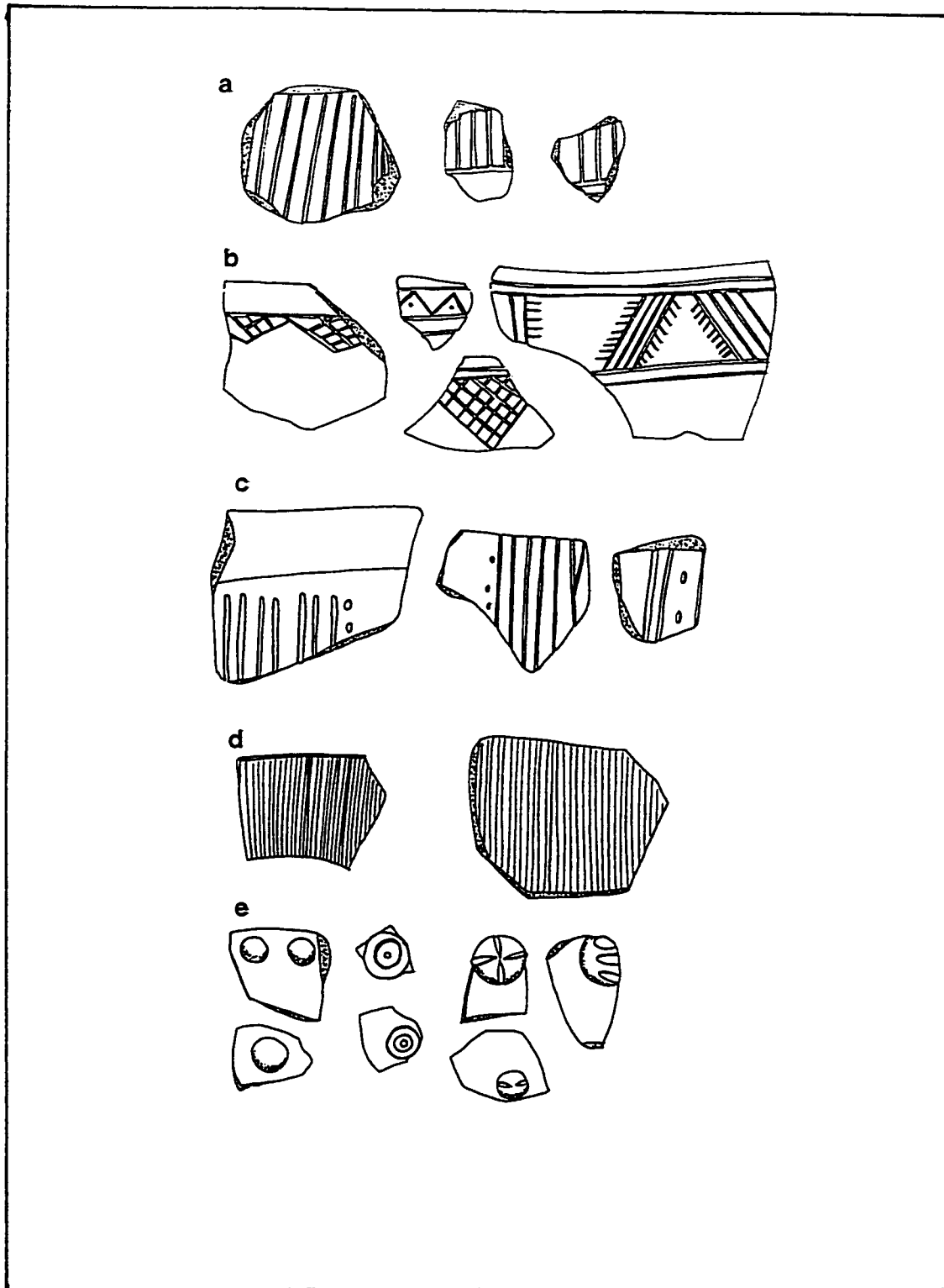


Fig. 26. Decorative Modes, Chiriquf Period, a. D1, b. D2, c. D3, d. D4, e. D5.

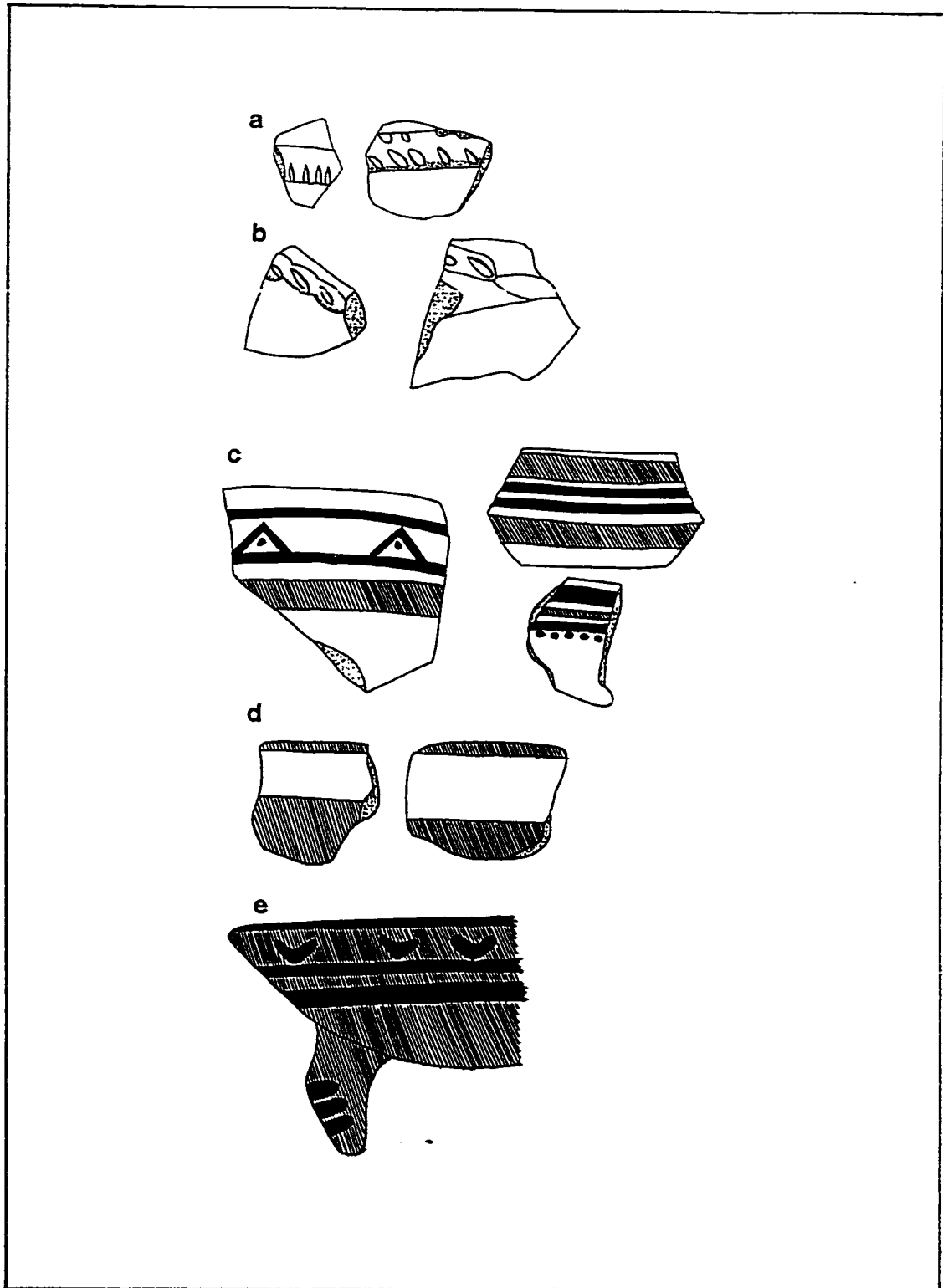


Fig. 27. Decorative Modes, Chiriquí Period, a. D6, b. D7, c. D8, d. D9, e. D10.

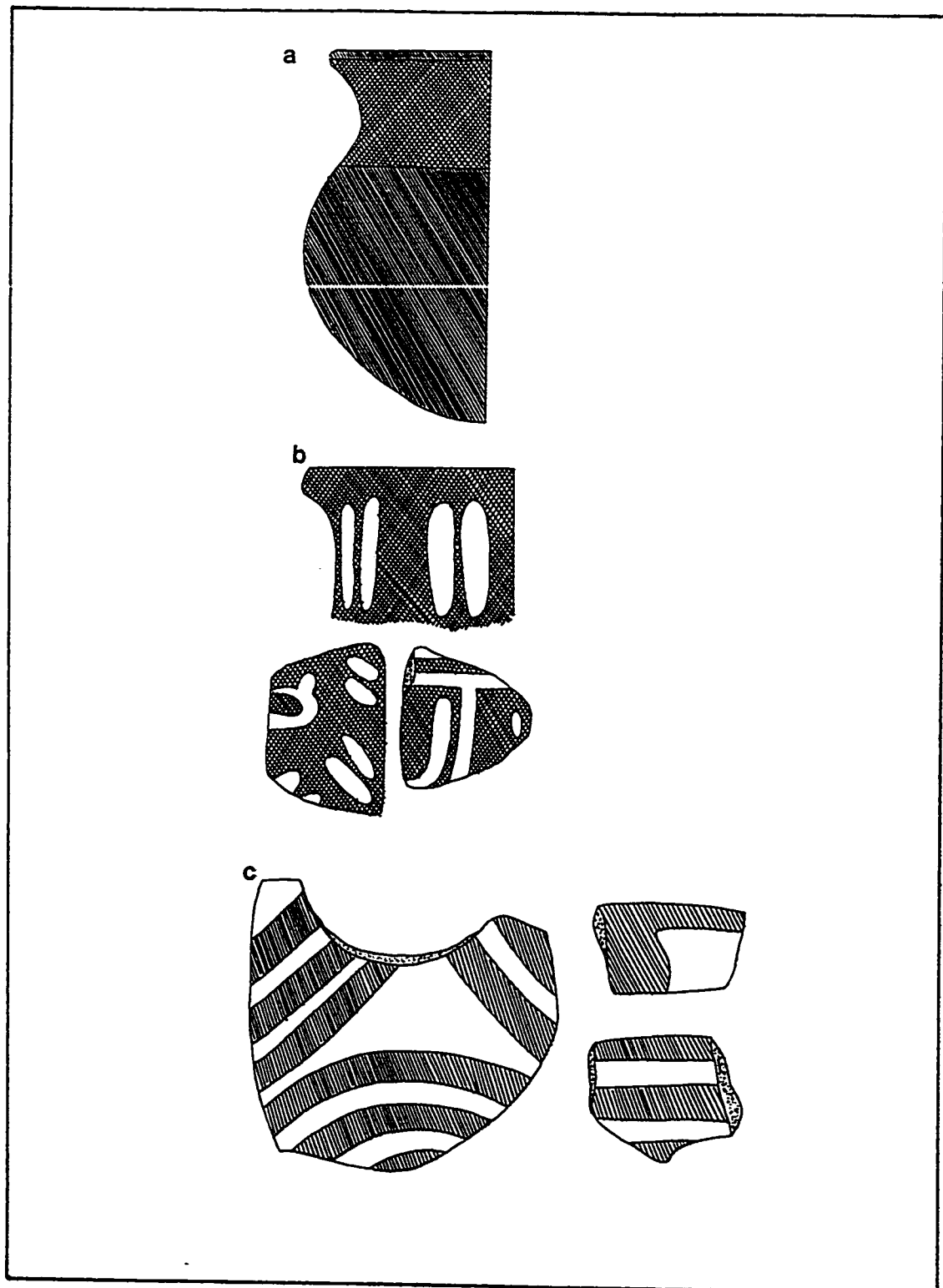


Fig. 28. Decorative Modes, Chiriquí Period, a. D11, b. D12, c. D13.

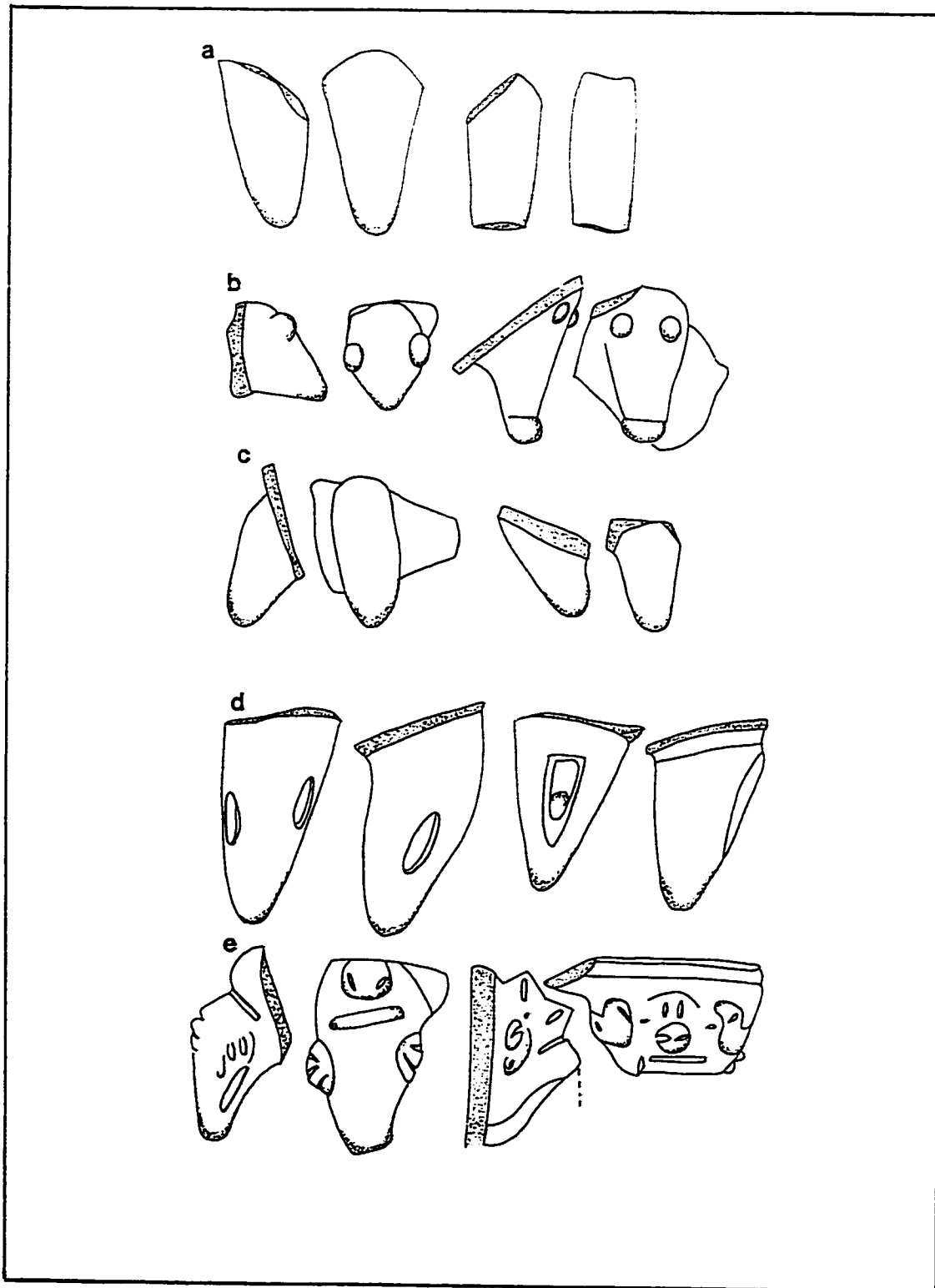


Fig. 29. Supports Modes, Chiriquí Period, a. S1, b. S2, c. S3, d. S4, e. S5.

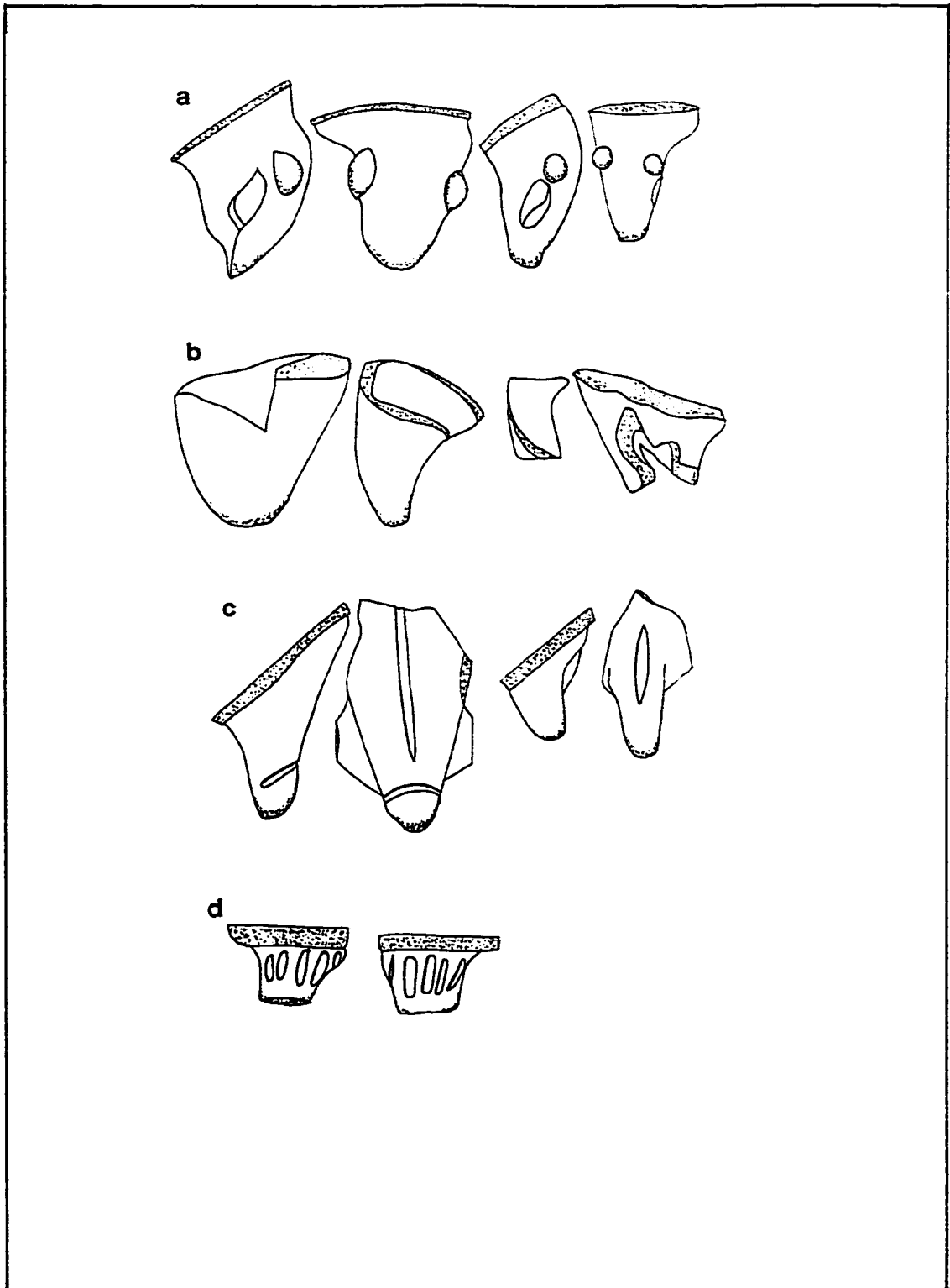


Fig. 30. Supports Modes, Chiriquf Period, a. S6, b. S7, c. S8, d. S9.

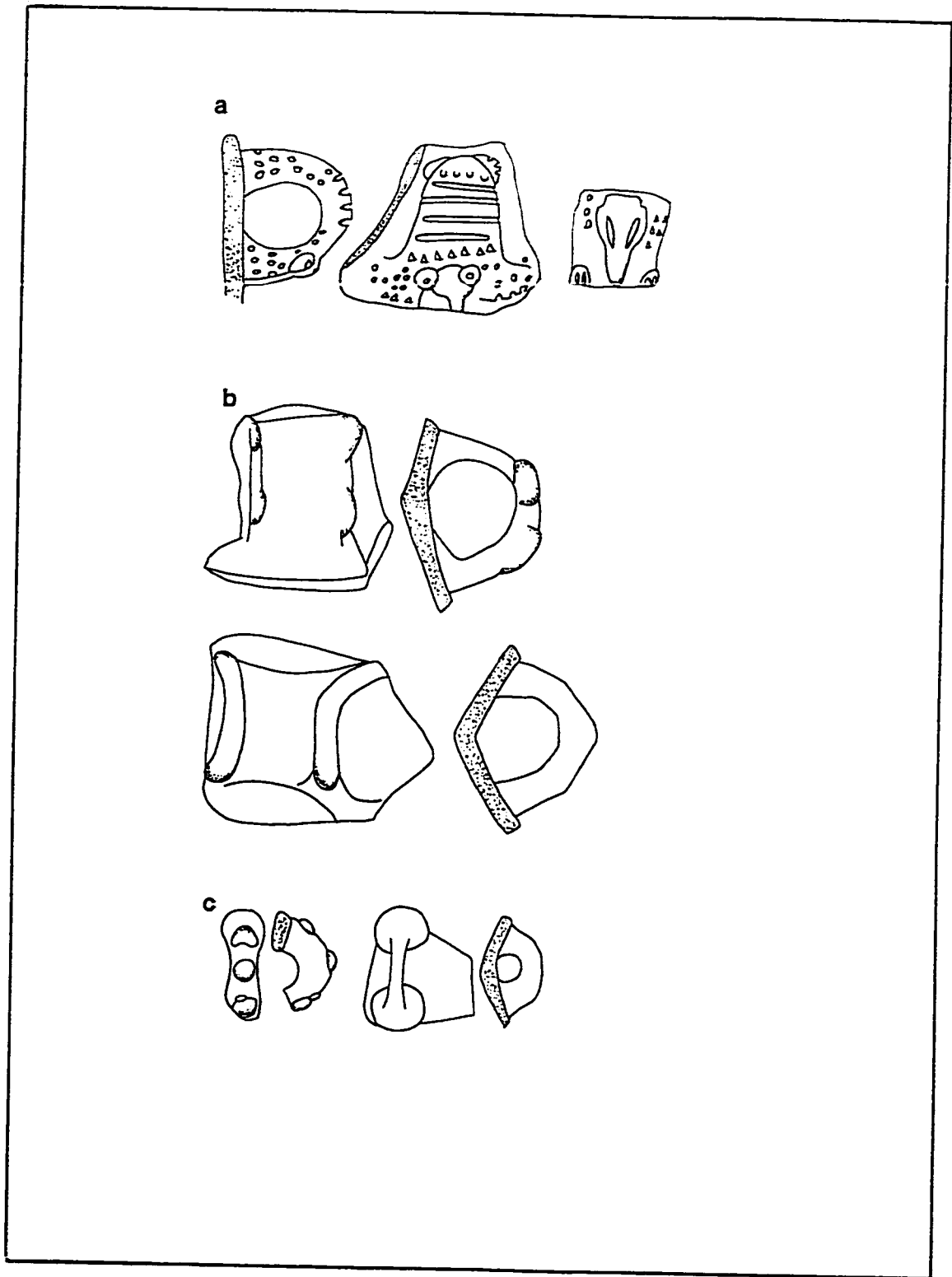


Fig. 31. Handles Modes, Chiriquf Period, a. H1 b. H2 c. H3.

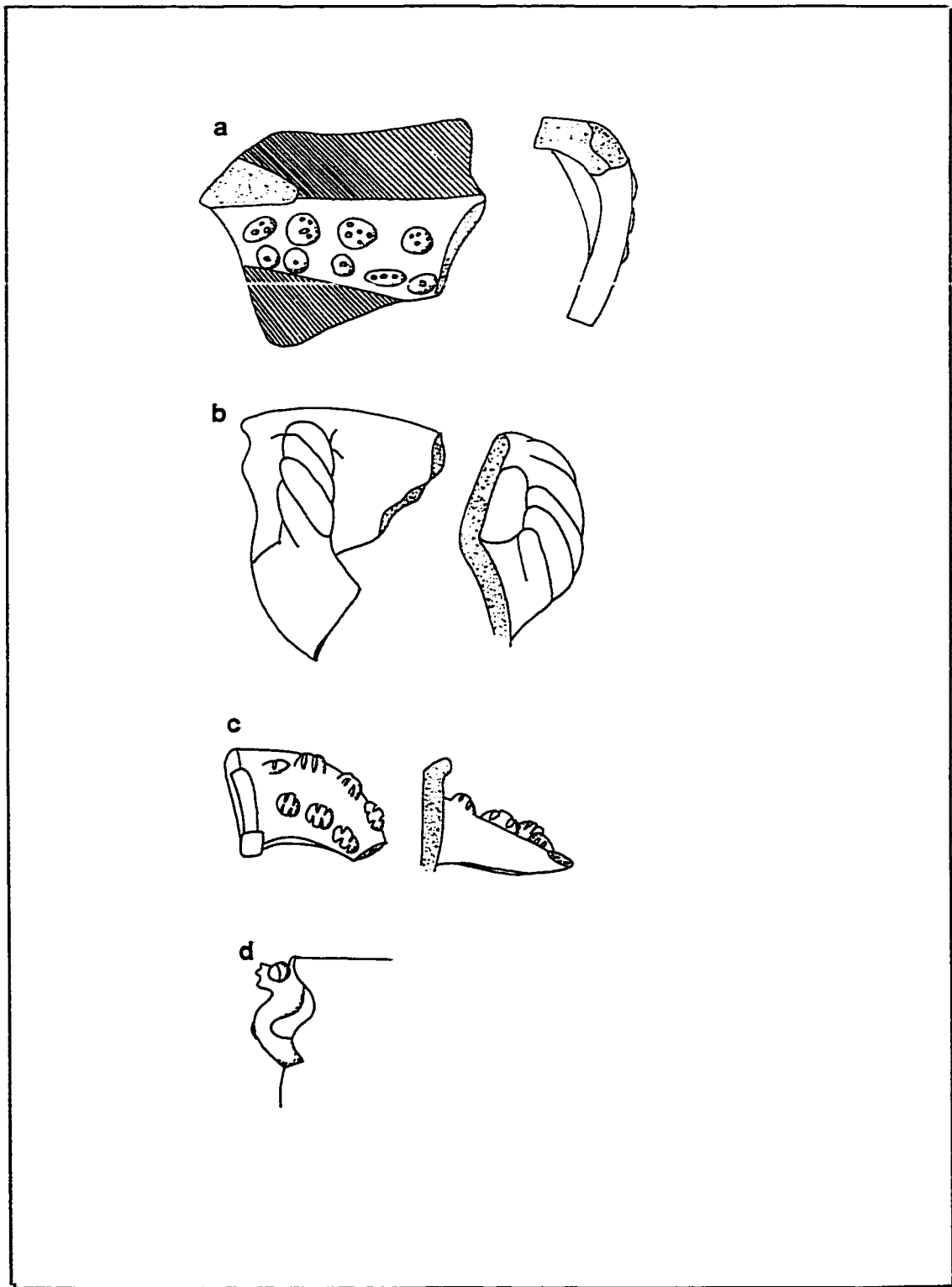


Fig. 32. Handles Modes, Chiriquí Period, a. H4, b. H5, c. H6, d. H7.

APPENDIX 2
VESSEL FORMS AND DECORATIVE MODES, FORMATIVE PERIOD (2000-300 B.C.),
SOUTHERN CENTRAL AMERICA

Vessel Forms

Form 1: Tecomates or restricted bowls with comma shape rims and rounded lips.

Form 2: Incurving rim bowls associated with incised lines.

Form 3: Tecomate-jars.

Form 4: Open bowls or escudillas with direct rims, open mouths and not very deep.

Form 5: Bowls with flared lip; the lip is folded and projected to the exterior

Form 6: globular jars with curved neck, the rims can be everted or slightly everted, usually the lip was thickened.

Form 7: Flat based cylindrical vessels with vertical walls.

Form 8: Flat plates or budares.

Form 9: squat necked jars.

Form 10: tecomates with composite silhouette.

Form 11: plates.

Form 12: bowls with composite silhouette.

Decorative modes

1. Geometric incised designs: parallel lines, chevron or fern motifs.

2. Straight or semicircular appliqué fillets or ridges with or without stamping with fingernail, shell, or V pointed instrument or cut with incised lines.

3. Appliqué pellets. Pellets can be reed stamped. Sometimes associated with incised lines.

4. Red bands or zoned bichromy usually associated with stamping and punctation.

5. Incised lines enclosing or associated with punctation, some tear shaped.

6. Shell stamping in short strokes, it can be separated by vertical or horizontal incised lines, or the stamping cut incised.

7. Rocker stamping, stamping with the edge of a shell usually covering large surfaces.

8. Fingernail stamping, sometimes associated with incised lines or crosscutting them.

9. Incised-gouged geometric designs.
10. Incision-excision filled with red pigment.
11. Crosshatching incised lines.
12. Cord stamping.
13. Stamping with rounded pointed instrument covering large surfaces.
14. Cuneiform stamping with a rhombus or triangular pointed instrument.
15. Reed stamping, circles stamped with hollow reeds.
16. Drag and jab with or without incised lines.
17. Incised lines enclosing or cut by shell stamping, short incised lines or punctuation.
18. Roll stamping, triangular, stamping rows, maybe in a rocking motion.
19. Striation.

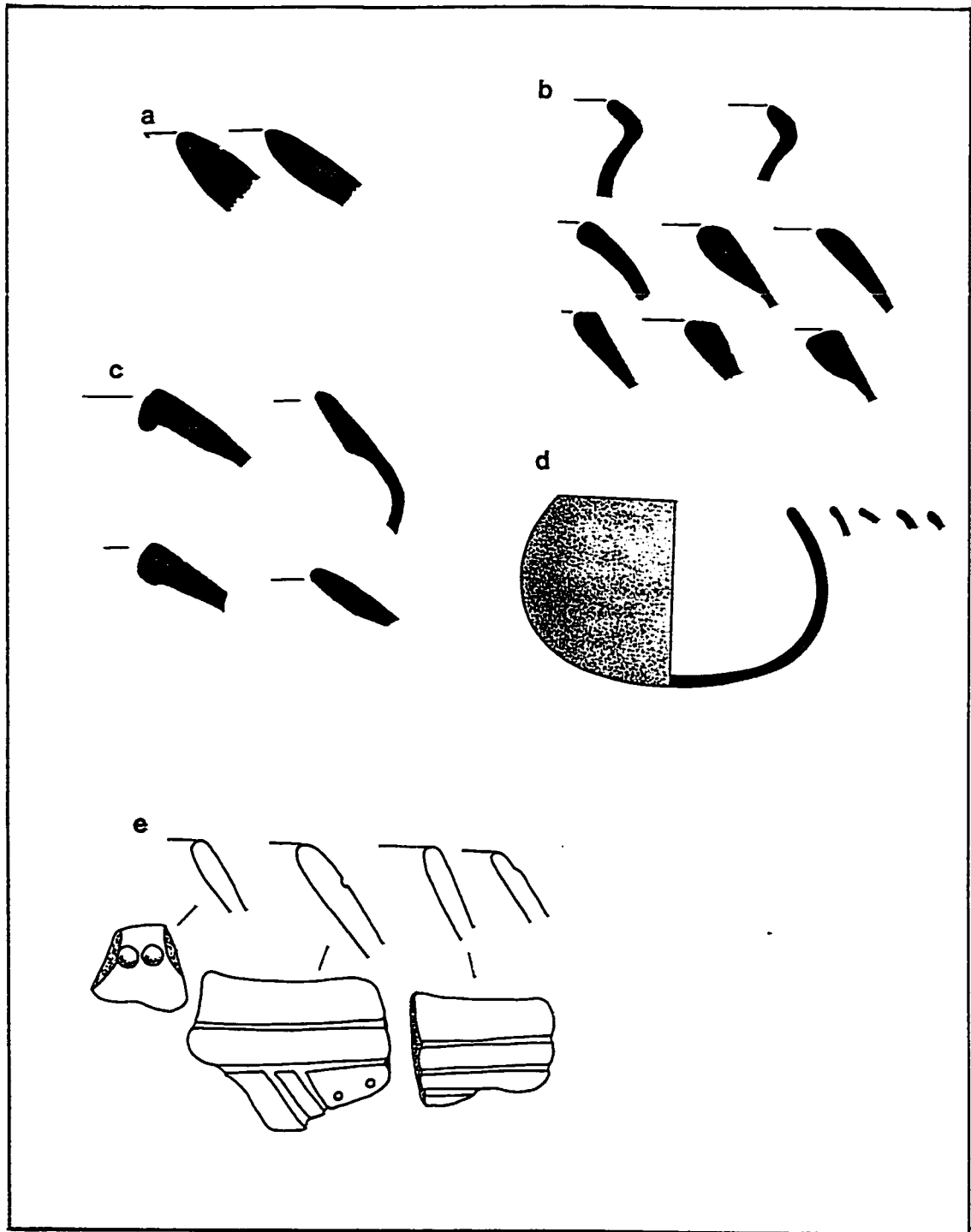


Fig. 33. Modal Comparison, Formative Period. Tecomates: a. Tronadora (Hoopes 1987, Fig.6.2:r-s), b. Chaparrón-La Montaña (Snarskis 1978, Fig. 68:R2, Fig. 70:R9, Fig.71:R10), 1989, Fig. 10:A), e. Los Sueños (Corrales 1999a, Fig.6).

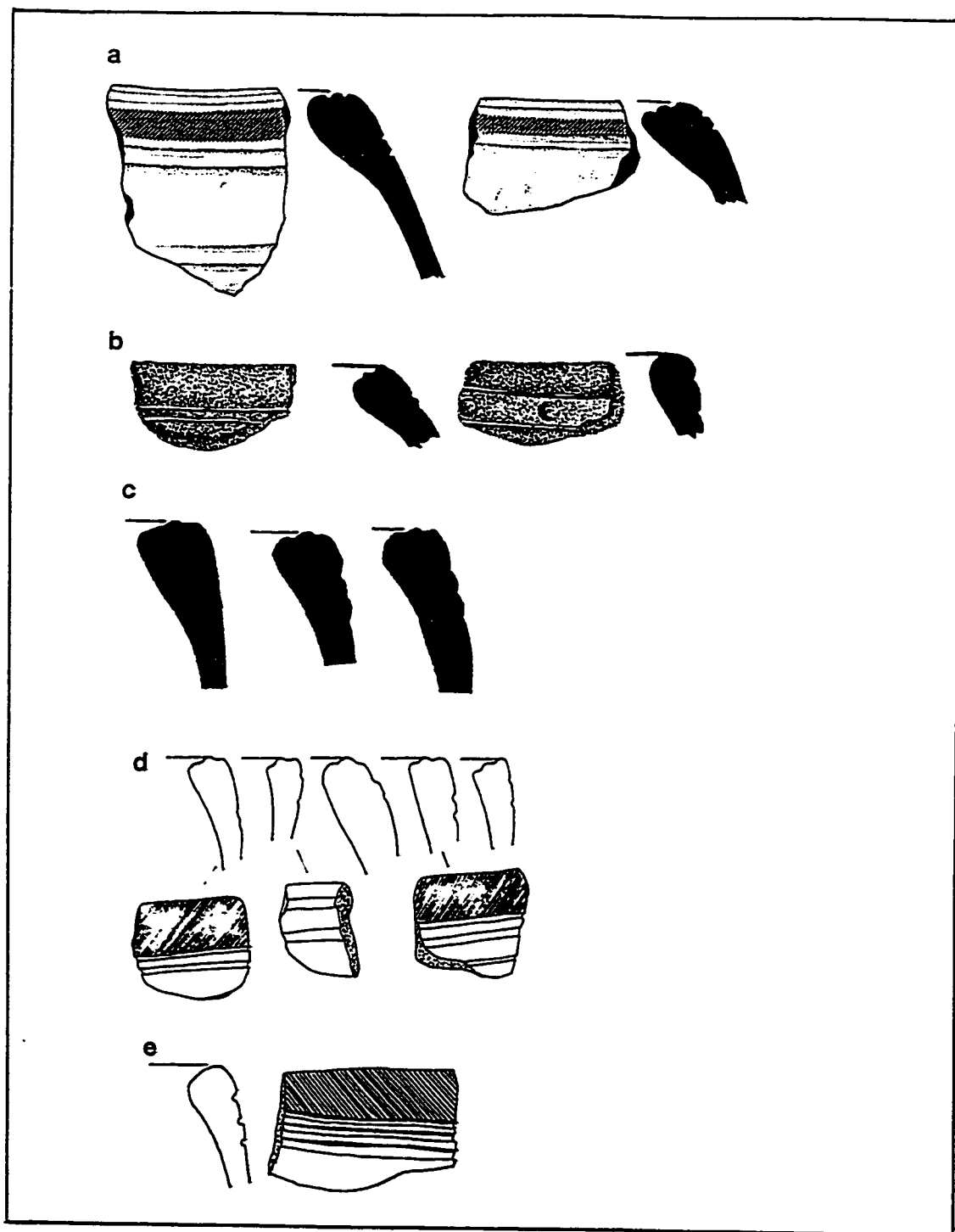


Fig.34. Modal Comparison, Formative Period. Incurving Bowls: a. Tronadora (Hoopes 1987, Fig.6.2:A,H), b. La Pochota (Odío 1992, Fig.3:B2), c. Chaparrón-La Montaña (Snarskis 1978, Fig. 69:R6), d. Los Sueños (Corrales 1999a, Fig. 10:F7), e. Barva (Corrales 1999b, Fig.4).

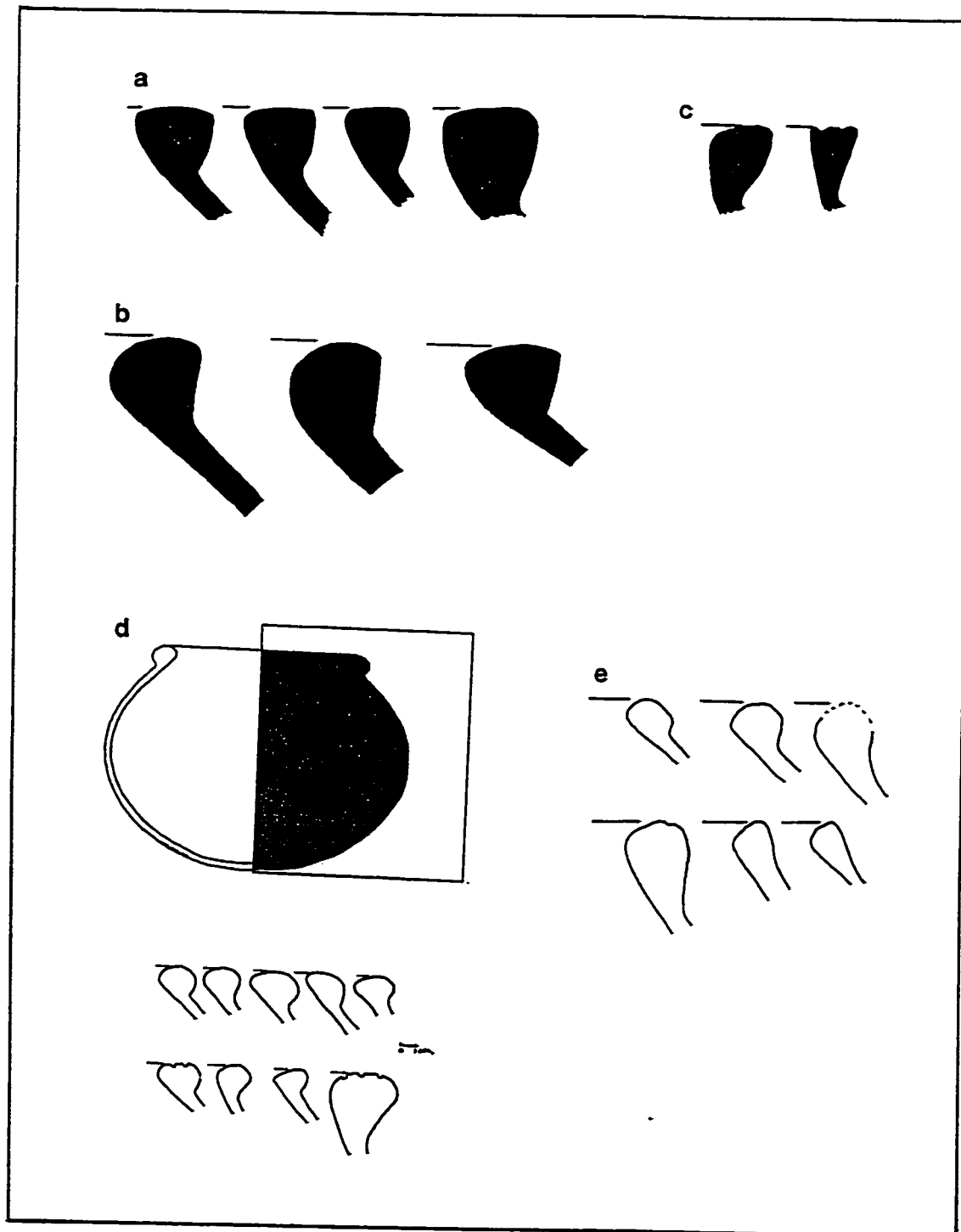


Fig. 35. Modal Comparison, Formative Period. Tecomate-Jars, a. Tronadora (Hoopes 1987, Fig.6.1:B-E), b. Chaparrón-La Montaña (Snarskis 1978, Fig. 71:R11) c. La Pochota (Odío 1992, Fig.3:B1), d. Los Sueños (Corrales 1998, Fig.3). e. Barva (Corrales 1999b, Fig. 2,4).

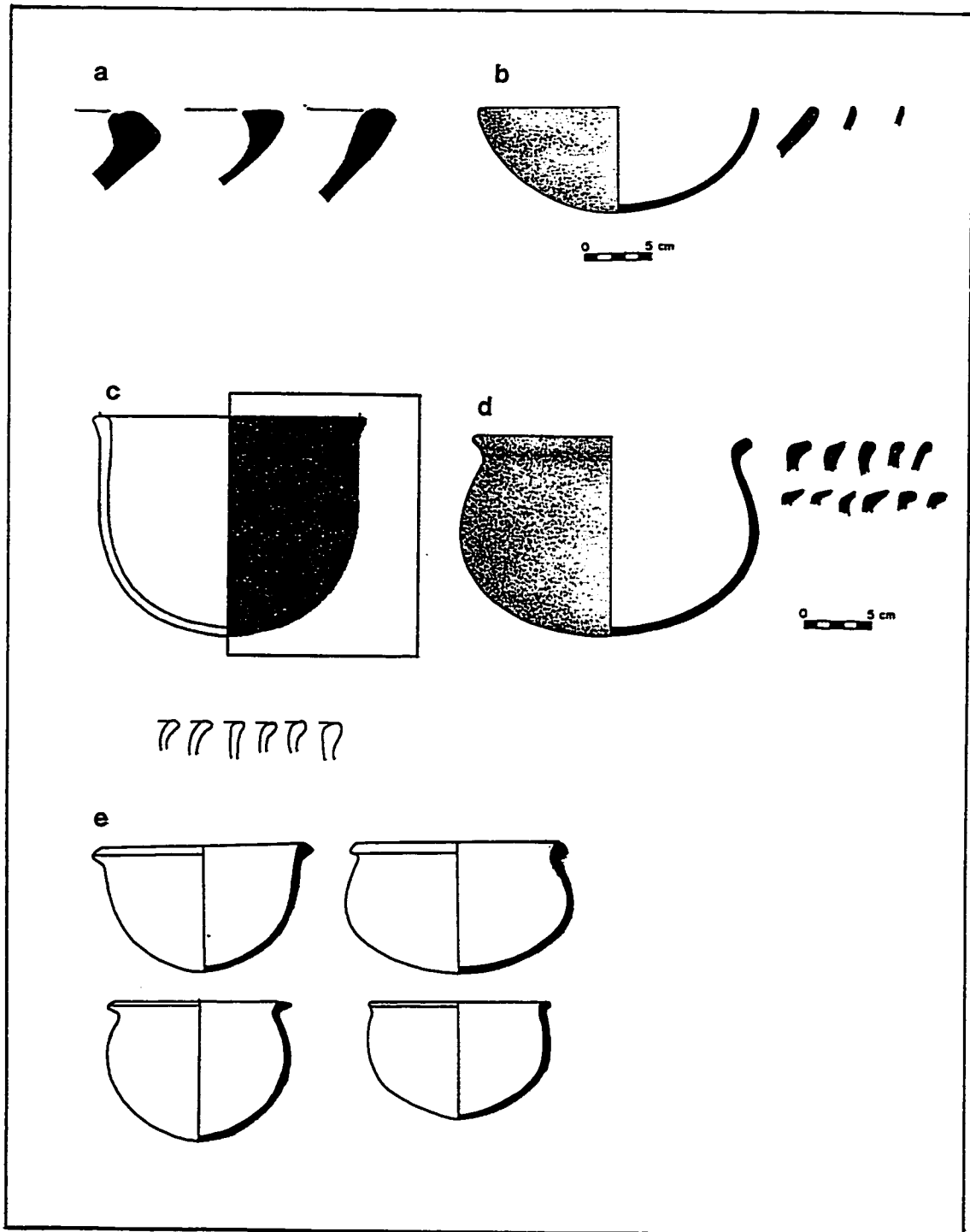


Fig. 36 Modal Comparison, Formative Period. Open Bowls, a. La Montaña (Snarskis 1978, Fig. 70:R8), b. Curré (Corrales 1989, Fig. 10:b); Bowls with flared lips, c. Los Sueños (Corrales 1998, Fig. 8). d. Curré (Corrales 1989, Fig. 6:A), e. Darizara (Herrera and Corrales 1997b, Fig.8:F13-14).

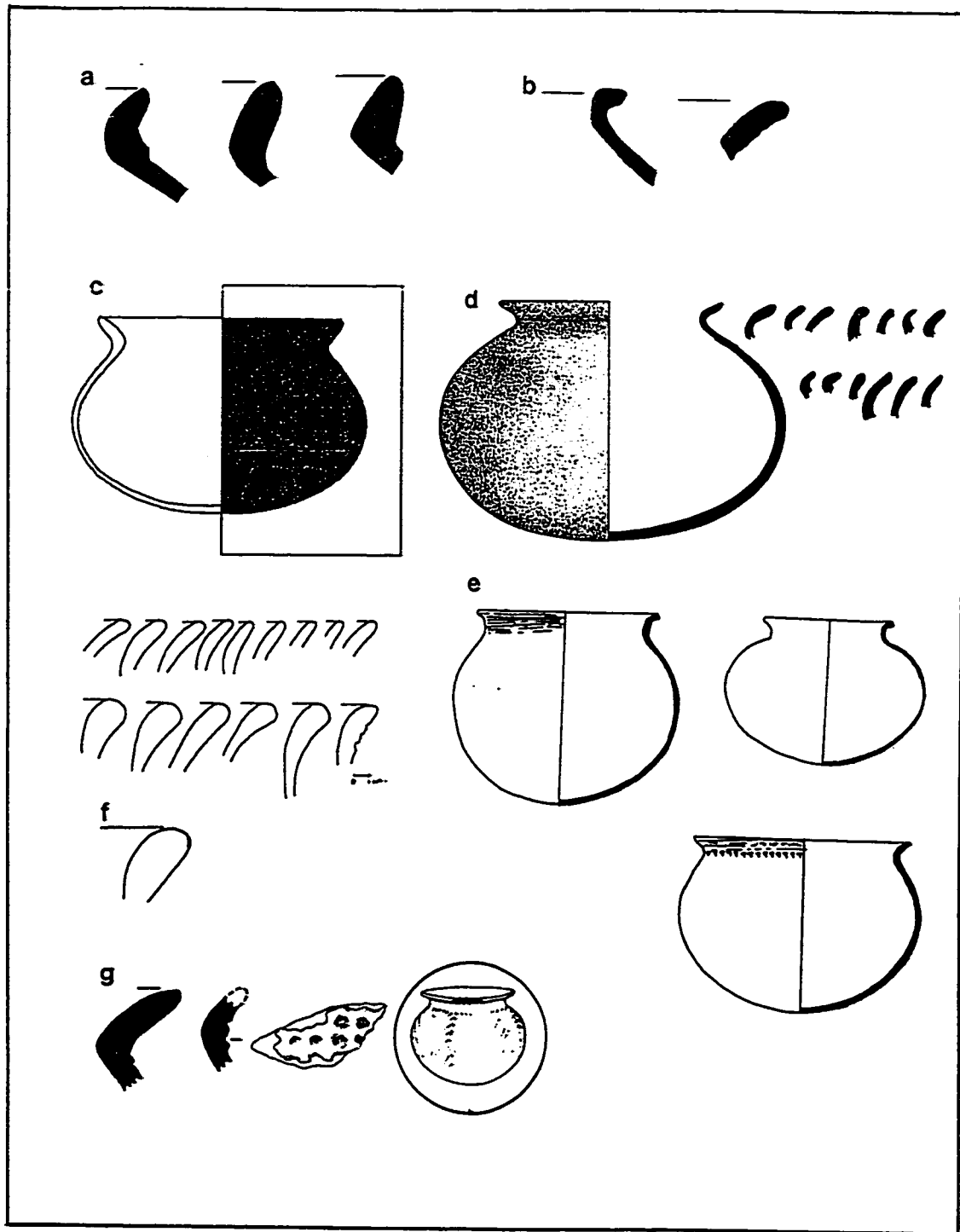


Fig. 37. Modal Comparison, Formative Period. Globular Jars, a. La Montaña (Snarskis 1978, Fig. 69:R5), b. Black Creek (Chávez et al. 1996:Fig. 1: B2,4), c. Los Sueños (Corrales 1998, Fig. 6,7), d. Curré (Corrales 1989, Fig.6), e. Darizara (Herrera and Corrales 1997b, Fig. 7:F11-12), f. Barva (Corrales 1999b, Fig.2), g. Sarigua (Cooke 1995, Fig. 14.3:a-b)

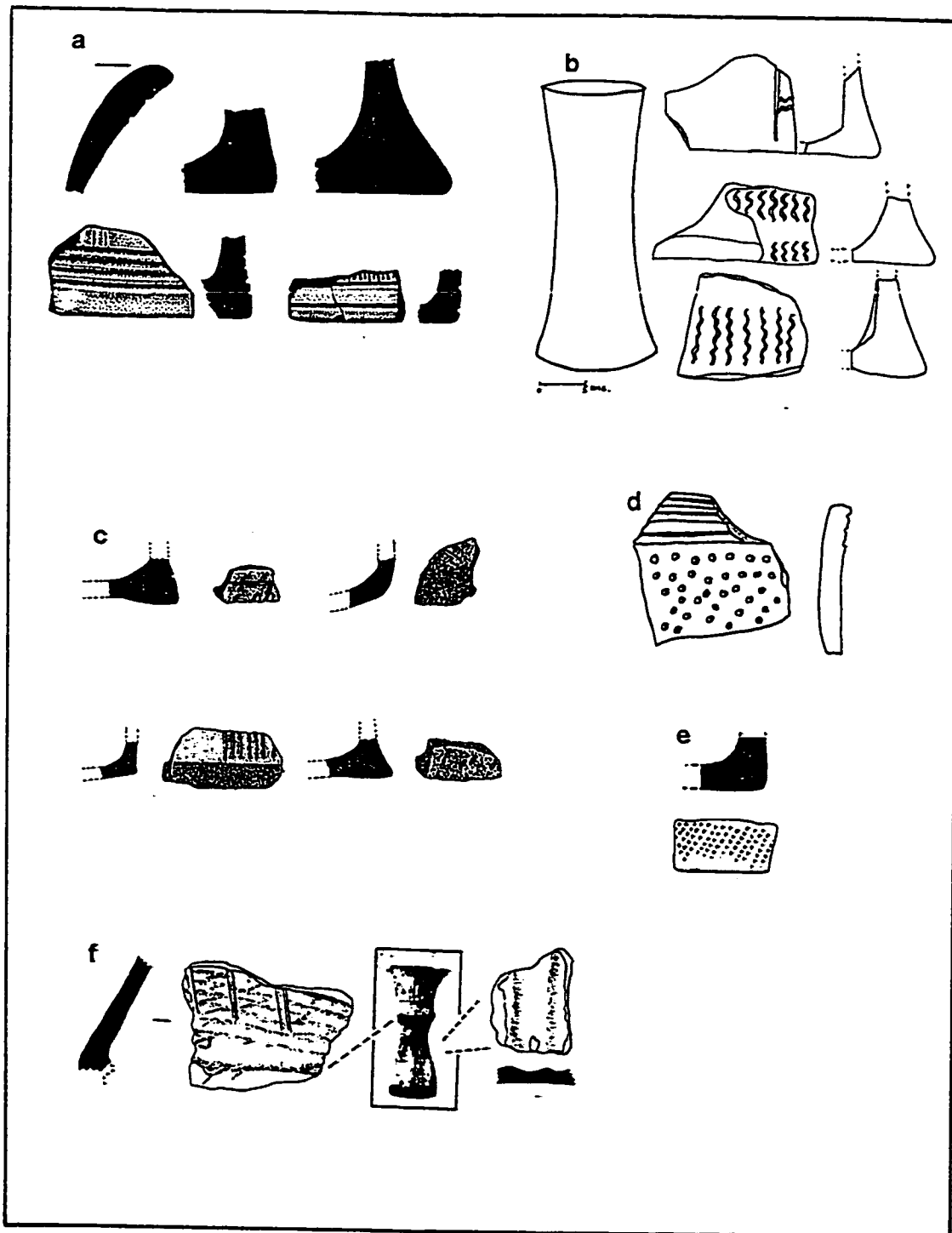


Fig. 38. Modal Comparison, Formative Period. Cylindrical Vessels, a. Tronadora (Hoopes 1987, Fig. 6-5:N-Q, C,D), b. Los Sueños (Corrales 1998, Fig. 13:A), c. Curré (Corrales 1989, Fig. 23:a-d), d. Barva (Corrales 1999b, Fig.4), e. La Montaña (Snarskis 1978, Fig. 105), f. Sarigua (Cooke 1995, Fig. 14.3:p-q).

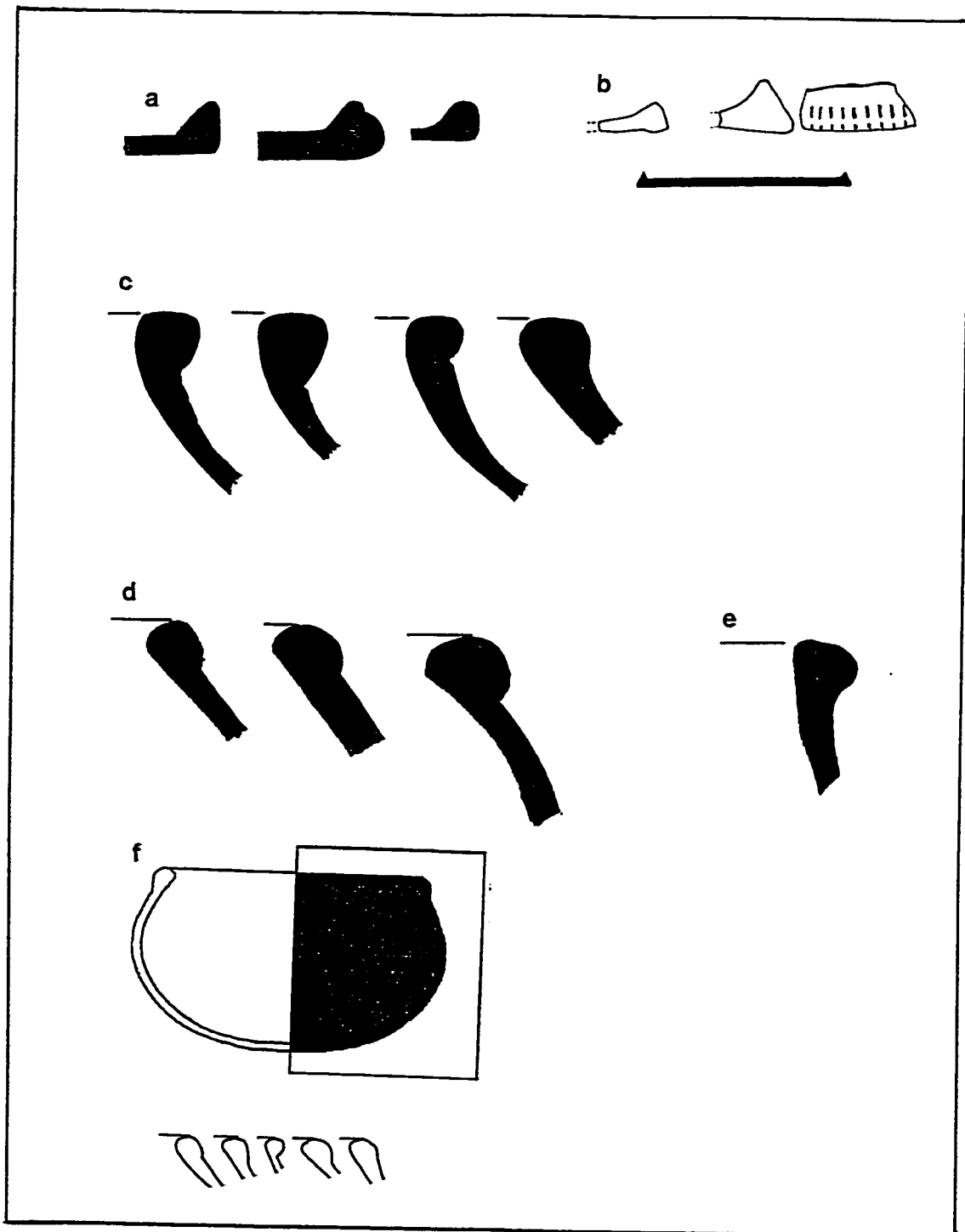


Fig. 39. Modal Comparison, Formative Period. Budares, a. La Montaña (Snarskis 1978:Fig. 68:R1), b. Los Sueños (Corrales 1998, Fig.13:B); Squat necked jars, c. Tronadora (Hoopes1987, Fig. 6-3:H,I,L,M), d. La Montaña (Snarskis 1978, Fig. 71, R12), e. Black Creek (Chávez et al. 1996:Fig. 1:B6), f. Los Sueños (Corrales 1998, Fig. 4).

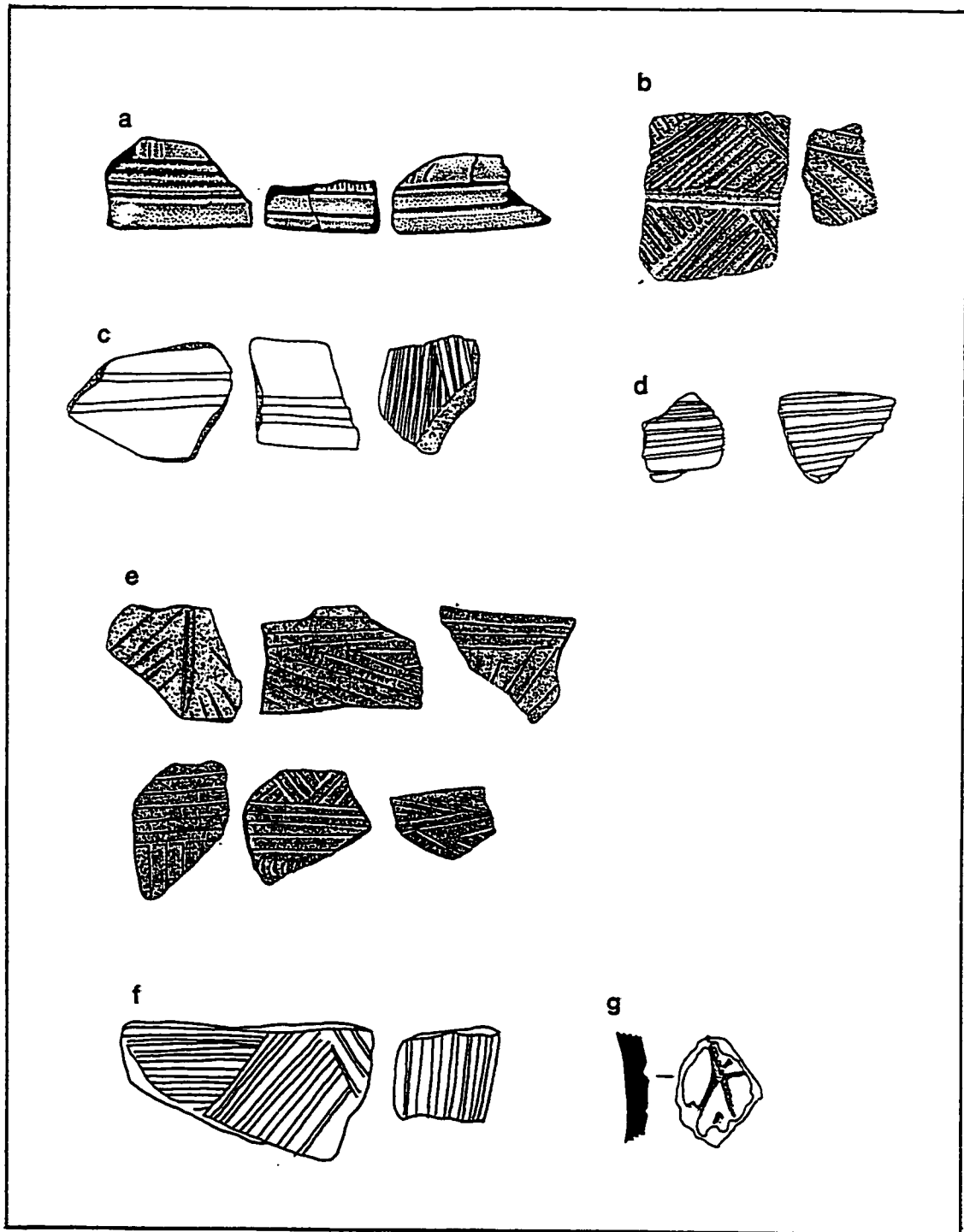


Fig. 40. Modal Comparison, Formative Period. Incised lines, a. Tronadora (Hoopes 1987, Fig. 6-5:C-E), b. La Pochota (Odio 1992, Fig. 3:D3,6), c. Los Sueños (Corrales 1999b, Fig. 13:A), d. Barva (Corrales 1999b, Fig. 2), e. Curré (Corrales 1989, Fig. 22), f. Darizara (Herrera and Corrales 1997b, Fig. 12:D12), g. Sarigua (Cooke 1995, Fig. 14.3:n).

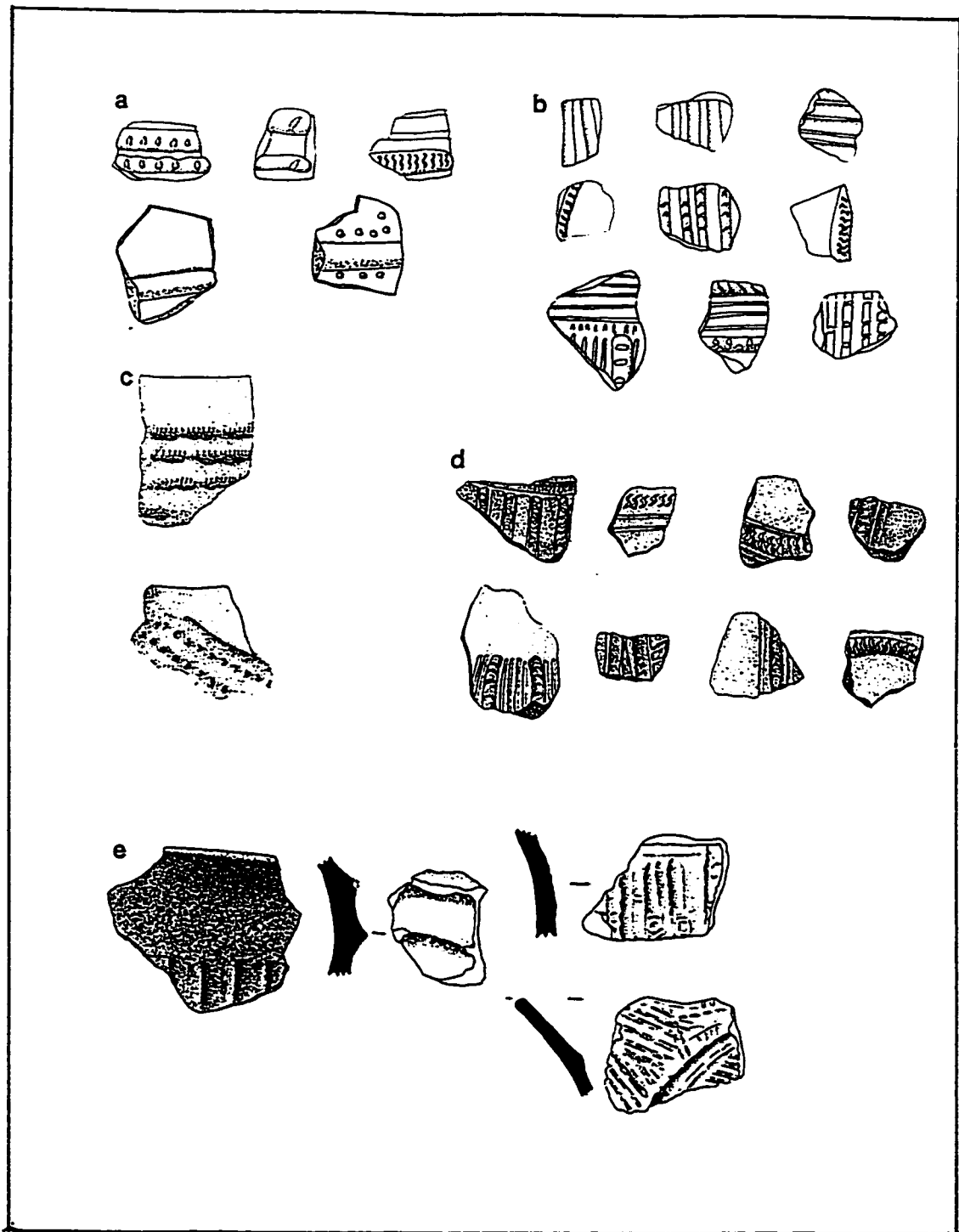


Fig. 41. Modal Comparison, Formative Period. Appliqué fillets with or without stamping, a. Los Sueños (Corrales 1998, Fig. 11:A, 1999b, Fig. 14:A), b. Darizara (Herrera and Corrales 1997b, Fig. 10:D4-6), c. La Montaña (Snarskis 1978, Fig. 105:D4-5), d. Curré (Corrales 1989, Fig. 19:A), e. Sarigua (Willey and McGimsey 1954, Fig. 19:d, Cooke 1995, Fig. 14.3:c,o).

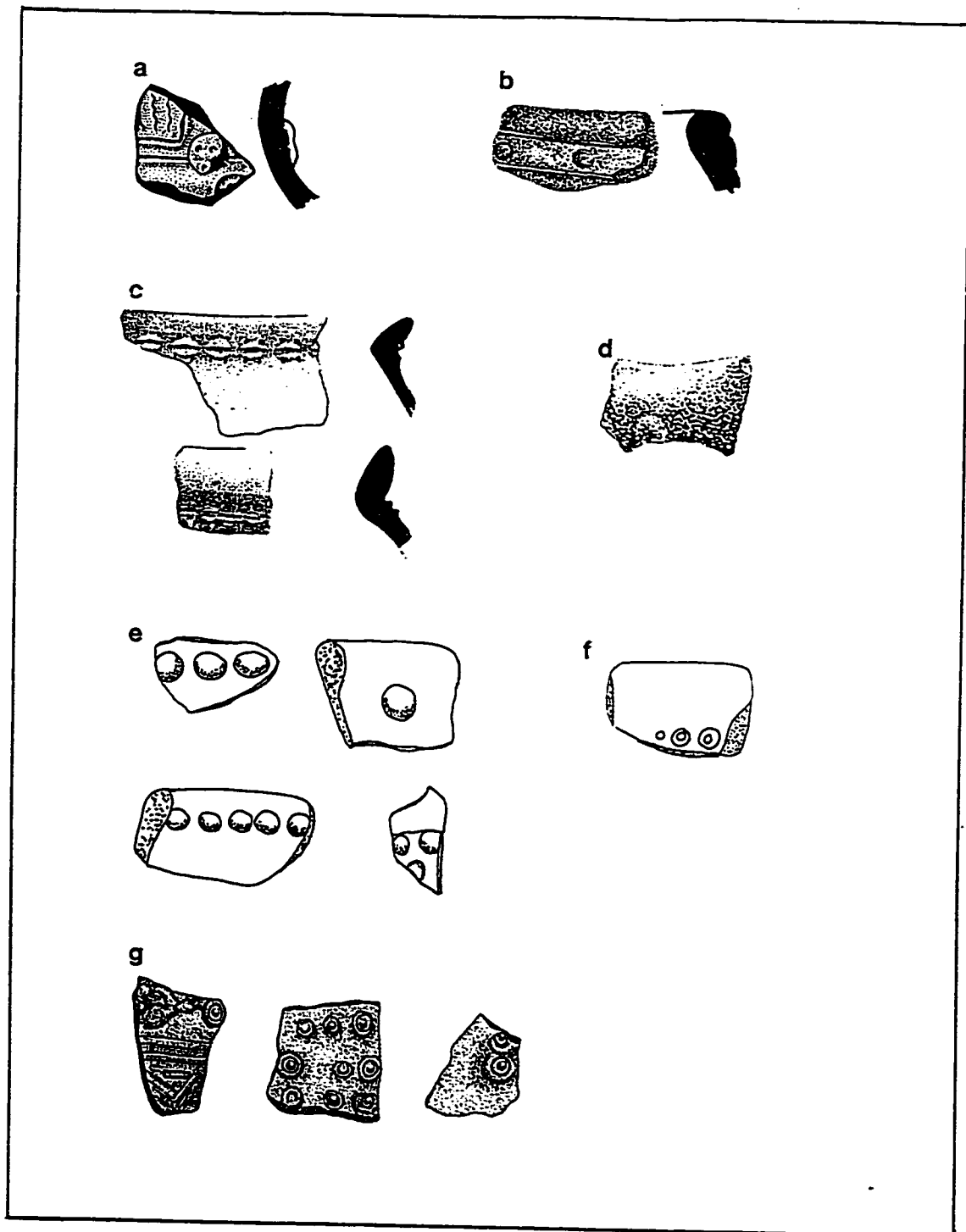


Fig. 42. Modal Comparison, Formative Period. Pellets appliqué, a. Tronadora (Hoopes198, Fig. 6-5:M), b. La Pochota (Odío 1992, Fig. 3:D5), c. La Montaña (Snarskis 1978, Fig. 104:D1), d. Black Creek (Chávez et al. 1996, Fig. 2:D6), e. Los Sueños (Corrales 1998, Fig. 11:B), f. Barva (Corrales 1999b, Fig.2), g. Curré (Corrales 1989, Fig. 18:B).

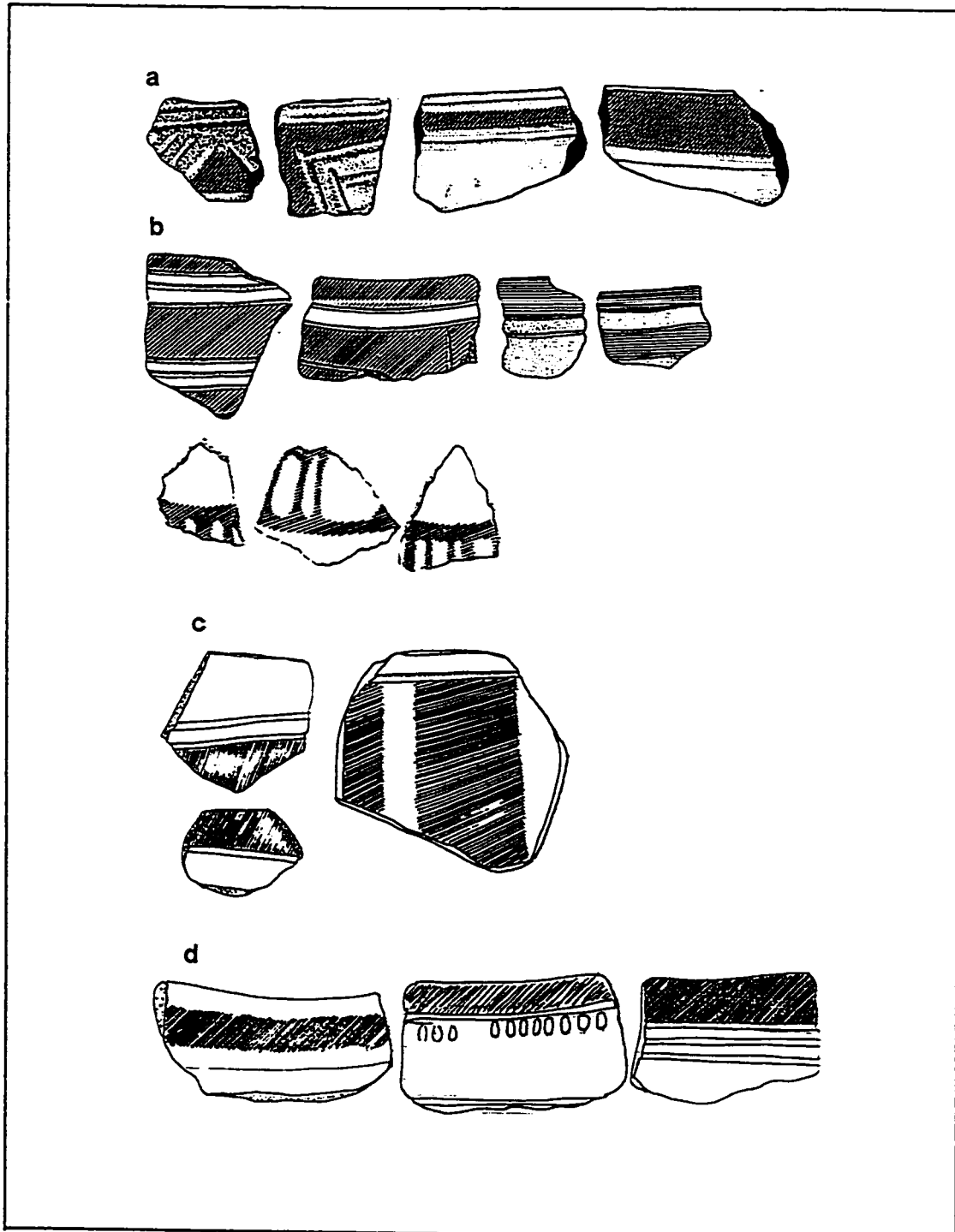


Fig. 43. Modal Comparison, Formative Period. Red bands/Zoned bichroming, a. Tronadora (Hoopes198, Fig. 6-2:H,I,L,N), b. La Montaña (Snarskis 1978, Fig. 105:D8, 106:D10), c. Los Sueños (Corrales 1998, Fig. 12A, 1999b, Fig. 13:A) d. Barva (Corrales 1999b, Fig.2,4).

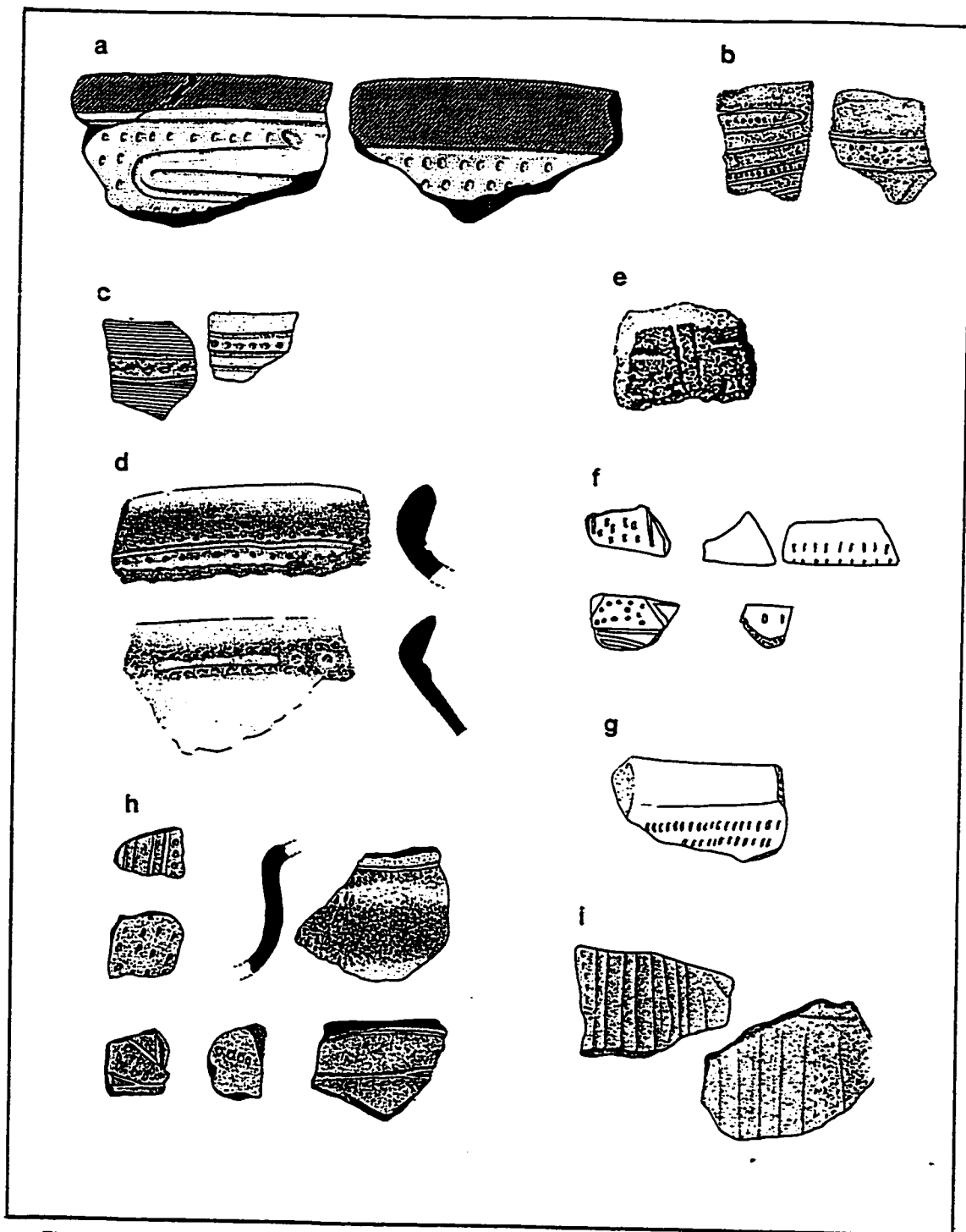


Fig.44. Modal Comparison, Formative Period. Punctuation and incision, a. Tronadora (Hoopes 198, Fig. 6-3:J,K), b. La Pochota (Odió 1992, Fig. 3:D2), c. Chaparrón (Snarskis 1978, Fig.106:D11), d. La Montaña (Snarskis 1978, Fig. 104:D2-3), e. Black Creek (Chávez et al. 1996, Fig. 2:D5), f. Los Sueños (Corrales 1998, Fig. 13:B, 1999a, Fig. 15:C), g. Barva (Corrales 1999b, Fig.2), h. Curré (Corrales 1989, Fig. 20.8:B), i. Sarigua (Willey and McGimsey 1954, Fig.19:e,f).

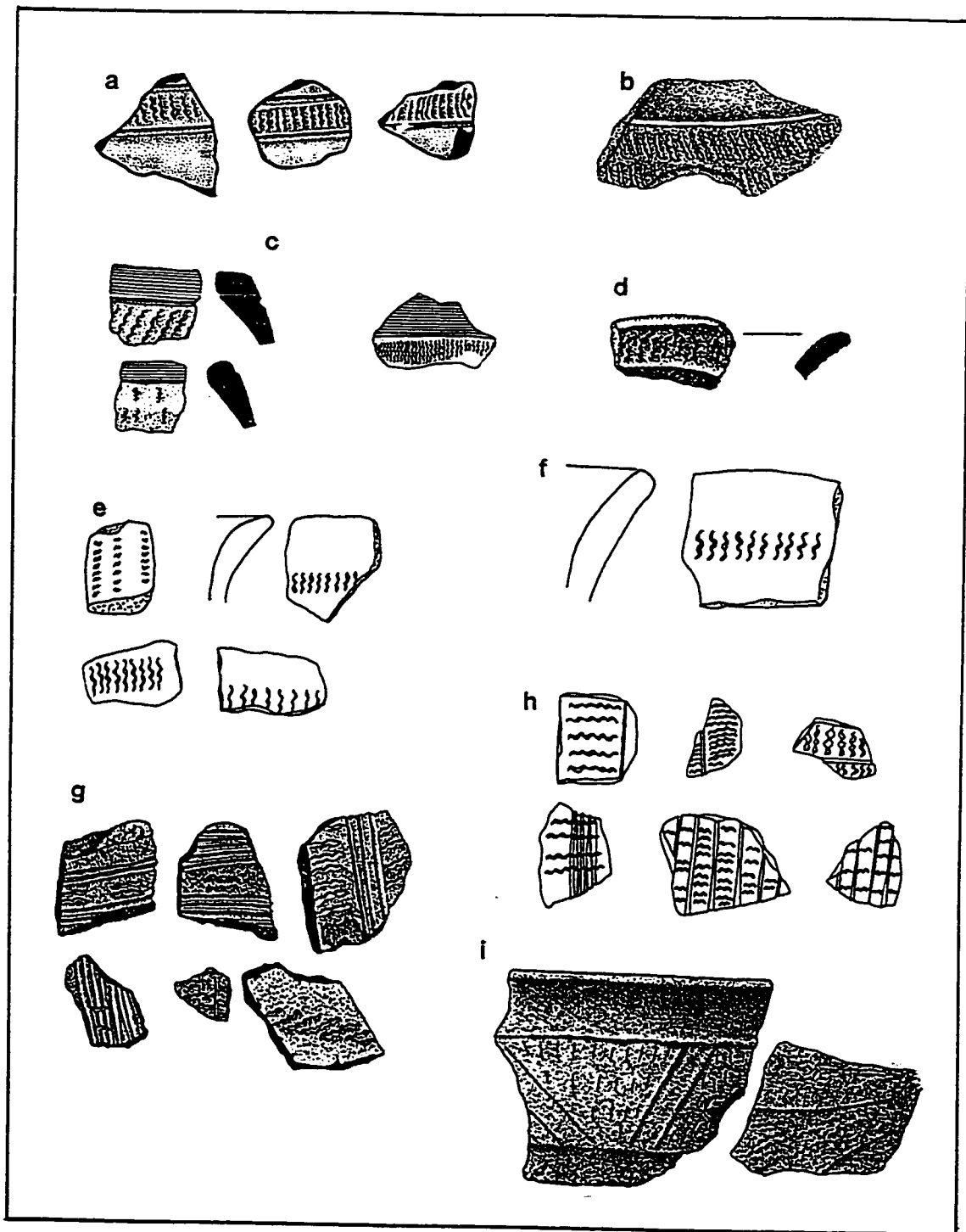


Fig. 45. Modal Comparison, Formative Period. Shell stamping, a. Tronadora (Hoopes 1987, Fig. 6.5:J,K,L), b. La Pochota (Odío 1992, Fig. 3:D4), c. Chaparrón-La Montaña (Snarskis 1978, Fig. 110:D18), d. Black Creek (Chávez et al. 1996, Fig. 2:D2), e. Los Sueños (Corrales 1998, Fig. 10:B, 1999a, Fig. 13:C), f. Barva (Corrales 1999b, Fig. 4), g. Curré, (Corrales 1989, Fig. 13:D1, 14:D2), h. Darízara (Herrera and Corrales 1997b, Fig. 9:D2-3), i. Sarigua (Willey and McGimsey 1954, Fig. 19:a,b).

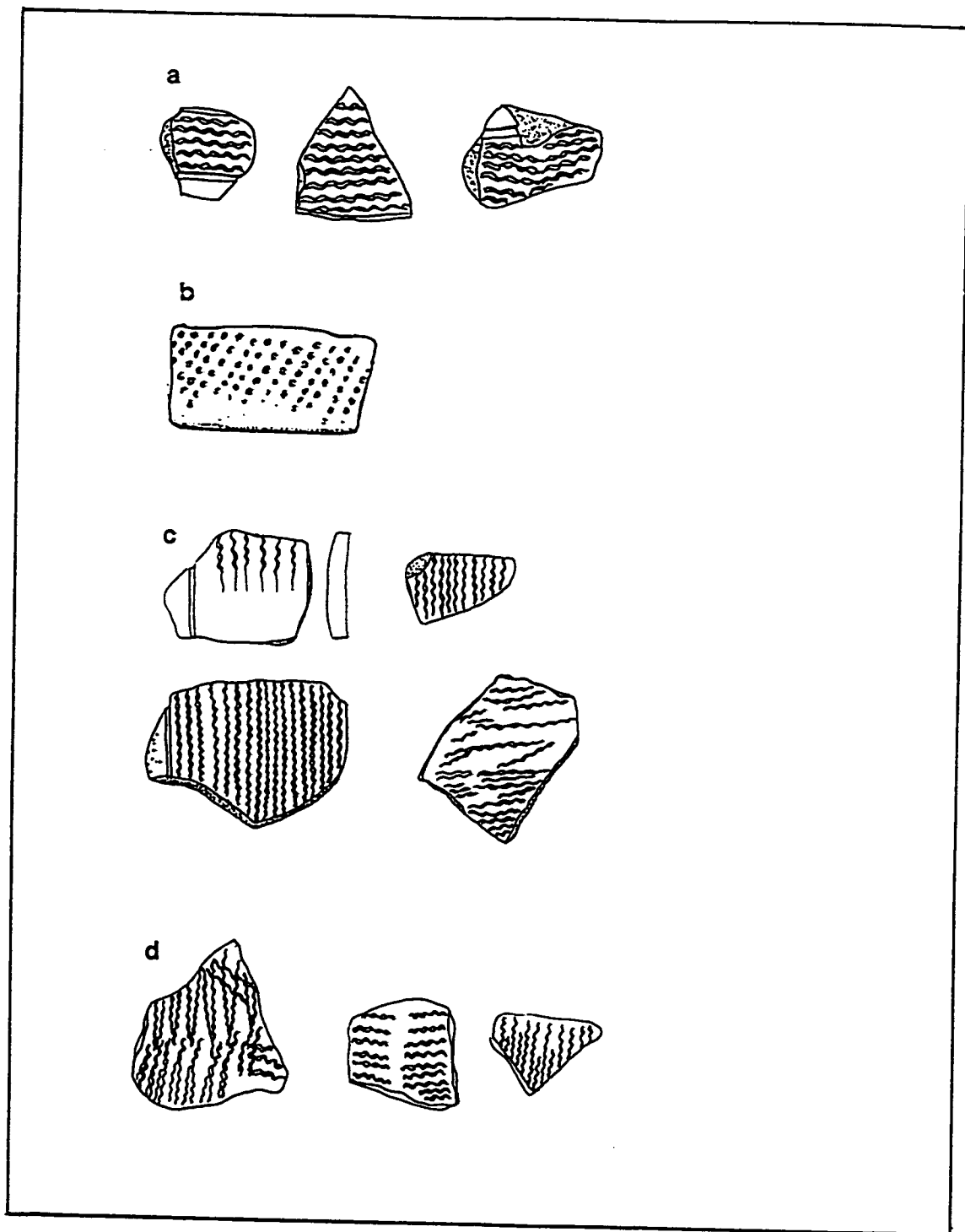


Fig. 46. Modal Comparison, Formative Period. Rocker stamping, a. Tronadora (Hoopes 1987:Pl. 6.3:q,r,s), b. La Montaña (Snarskis 1978:Fig. 105,D7), c. Los Sueños (Corrales 1998, Fig. 10:A, 1999 Fig. 13:B), d. Darizara (Herrera and Corrales 1997b, Fig. 9:D1).

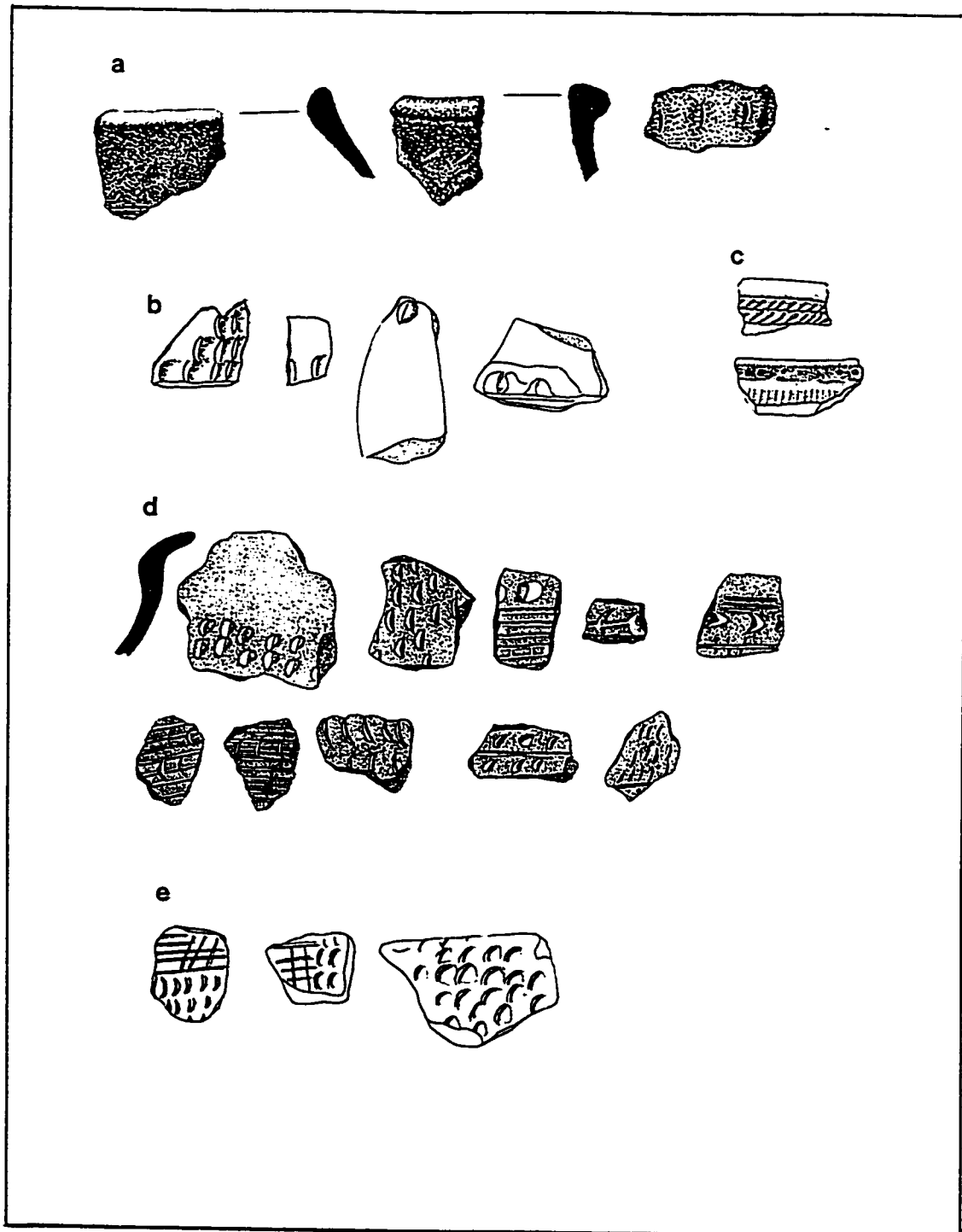


Fig. 47. Modal Comparison, Formative Period. Fingernail stamping, a. Black Creek (Chávez et al. 1996, Fig. 2:D1), b. Los Sueños (Corrales 1998, Fig. 10:C, 1999a, Fig. 14:A), c. Chaparrón (Snarskis 1978, Fig. 109:D16), d. Curré, (Corrales 1989, Fig. 16,17), e. Darizara (Herrera and Corrales 1997b, Fig. 11:D8).

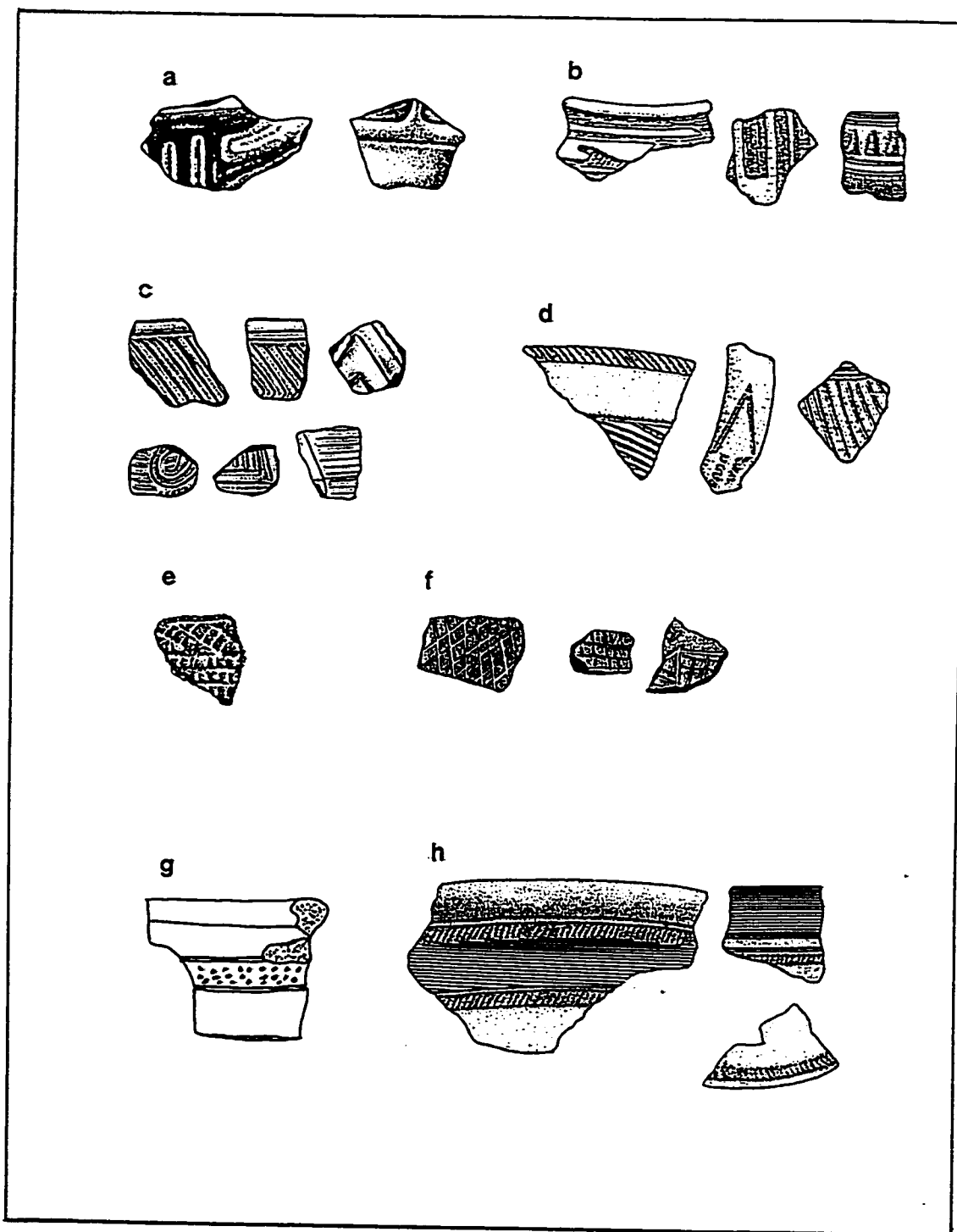


Fig. 48. Modal Comparison, Formative Period. Incised-gouged designs, a. Tronadora (Hoopes 1994b, Fig.1:g,h), b. Chaparrón (Snarskis 1978, Fig. 106:D12); Incision with red pigment, c. Tronadora (Hoopes 1987, Fig. 6.5, a-b, f-i), d. Chaparrón-La Montaña (Snarskis 1978, Fig. 106:D12); Crosshatching, e. Black Creek (Chávez et al. 1996, Fig. 2:D4), f. Curré (Corrales 1989, Fig. 20:D8), Cord Stamping, g. Tronadora (Hoopes 1987, Pl. 6.2:l), h. Chaparrón (Snarskis 1978, Fig. 107:D13).

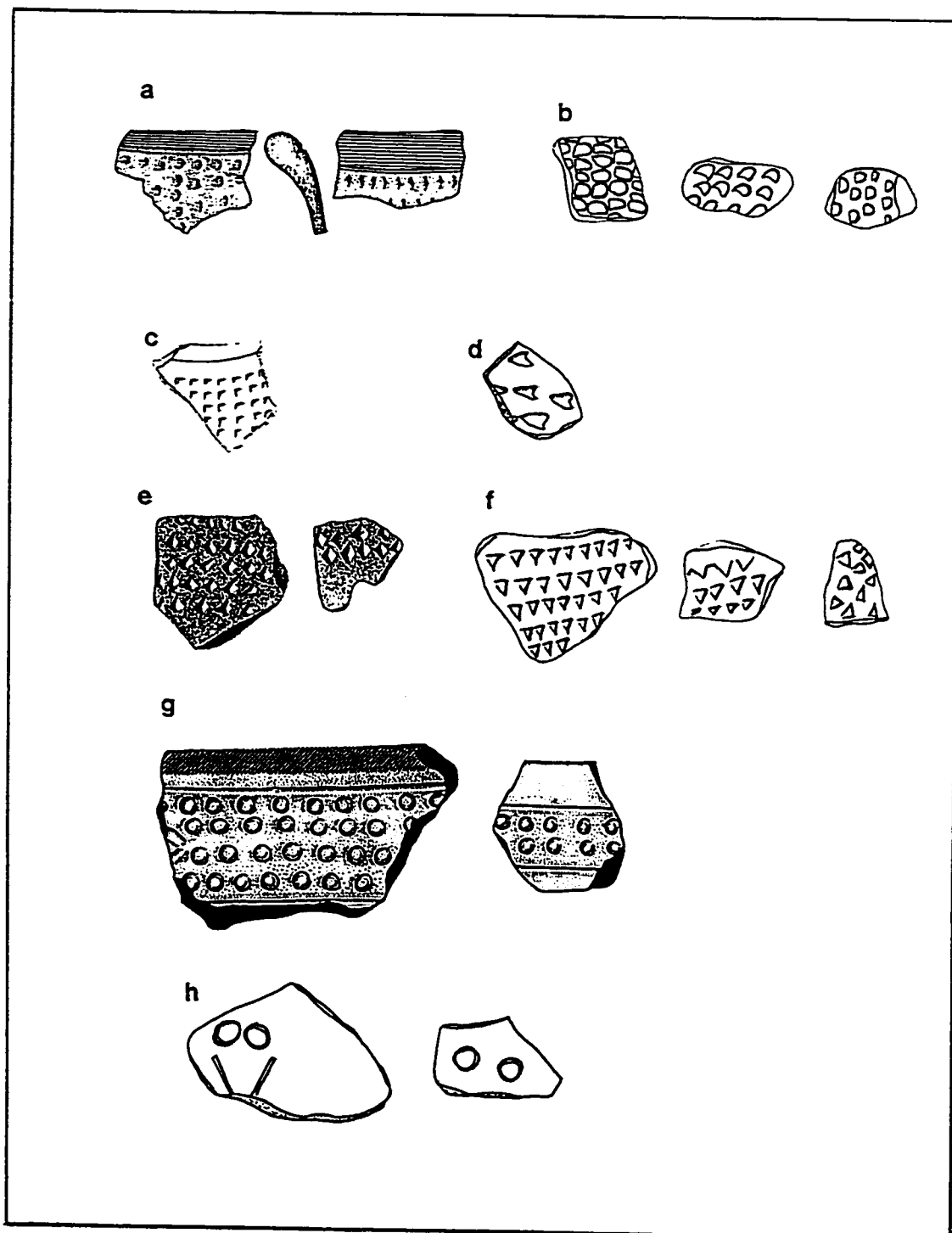


Fig. 49. Modal Comparison, Formative Period. Rounded stamping, a. Chaparrón (Snarskis 1978, Fig. 109:D17), b. Darizara (Herrera and Corrales 1997b, Fig. 11:D10); Cuneiform stamping, c. Chaparrón (Snarskis 1978, Fig. 111:D21), d. Los Sueños (Corrales 1998, Fig. 12:D), e. Curré (Corrales 1989, Fig. 21:D10), f. Darizara (Herrera and Corrales 1997b, Fig. 11:D9); Reed stamping, g. Tronadora (Hoopes 1987, Fig. 6.2:J, 6.3:H), h. Curré (Corrales 1989, Fig. 21:D11).

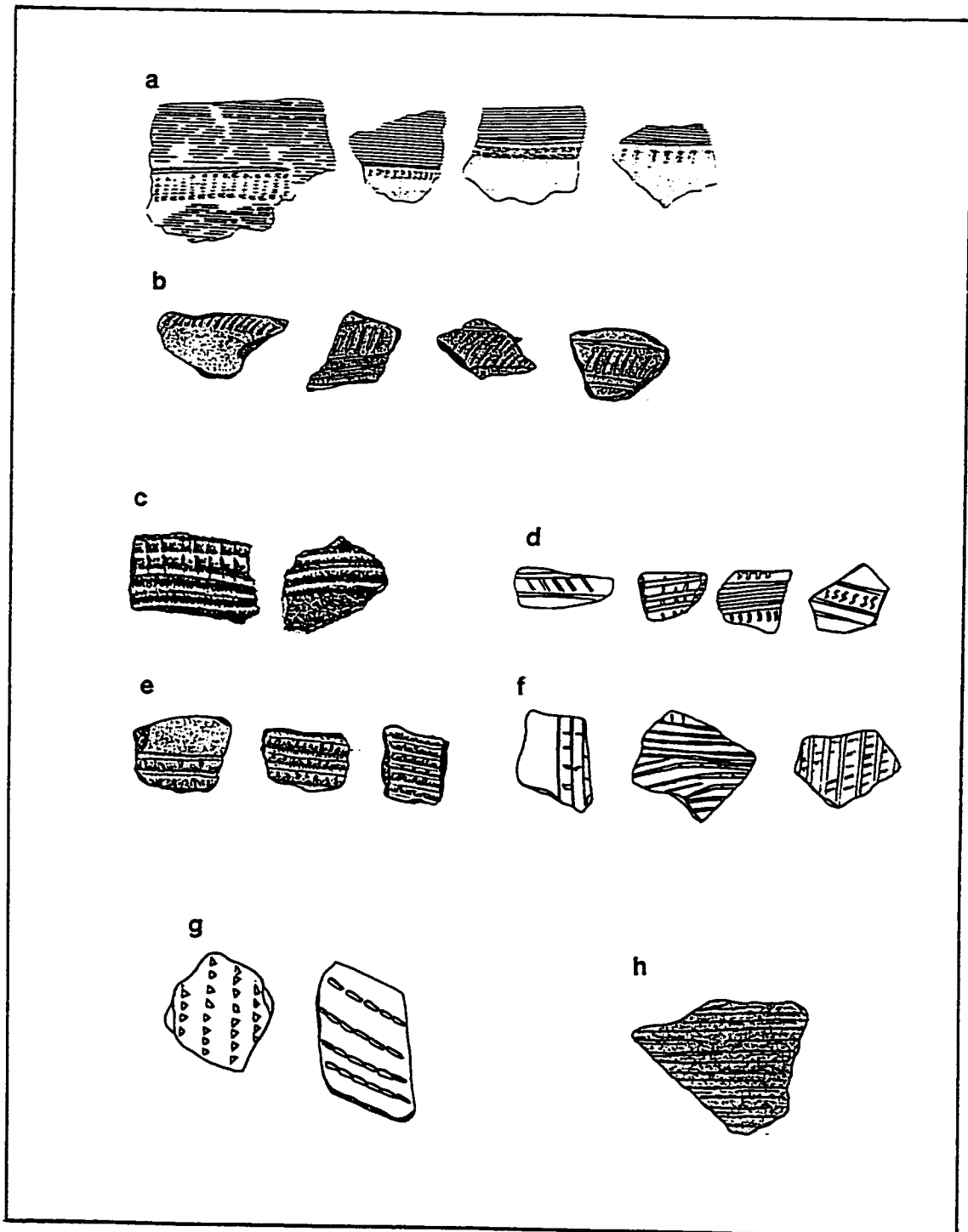


Fig. 50. Modal Comparison, Formative Period. Drag and jab, a. Chaparrón-La Montaña (Snarskis 1978, Fig. 108:D14), b. Curré (Corrales 1989, Fig. 18:D4); Incision/stamping, c. Black Creek (Chávez et al. 1996, Fig. 2:D3), d. Los Sueños (Corrales 1998, Fig. 12:B, 1999a, Fig. 15:B), e. Curré (Corrales 1989, Fig. 19:B), f. Darizara (Herrera and Corrales 1997b, Fig. 10:D7); Roll stamping, g. Darizara (Herrera and Corrales 1997b, Fig. 11:D11); Striation, h. Sarigua (Willey and McGimsey 1954, Fig. 29:c).

APPENDIX 3

CERAMIC WARES AND TYPES, GREATER CHIRIQUI ARCHAEOLOGICAL REGION

The presentation of the ceramic types and wares postulated for the different periods and phases in Greater Chiriquí is based on the description given by different authors, usually who proposed them, but in some cases, additional information from other authors is given to provide a more detailed presentation.

Since it is common that the same kind of pottery has two or more names, the most accepted is or are presented. In other cases, the one that is considered more appropriate was selected. More common will be that the different propositions are presented as independent cases. However, in the comment and history of the type an attempt to link the different postulations is supplied.

Some authors present wares and other types, with a similar level of generalization. At this point, both categories are presented following the same format for the different variables established. The quality and quantity of information is variable; for this reasons the detail of information for each type or ware is also variable. An attempt to fill some of the variables by inferring data from descriptions and illustrations was made; but, in a restricted way. The variables with no information were eliminated for reasons of presentation and economy of space.

A short comment is made before the description of the type(s) or ware(s) in relation to its history, controversial aspects, spatial distribution and other issues. In some cases the issue of whether there is a type, two types, a variety or varieties is raised. However, the author feels that a final decision must be reached by a workshop with the participation of researchers working in the area to avoid the increase of confusion that has prevailed.

Ceramic types and wares are clustered by phase or period. Within each period, related types or wares were put together to facilitate the comparison among them.

Ceramic types: Invented or discovered?

The situation in Greater Chiriquí echoes the famous controversy between James Ford and Albert Spaulding about whether the ceramic types were abstractions made at a point in time made by the archaeologists to deal with the archaeological material (Ford 1954) or were combinations of attributes favored by the makers, not an arbitrary procedure of the classifier, and should be discerned from the archaeological record (Spaulding 1953).

A brief look at the history of classification in the region shows how the same material has been the subject of different classifications resulting on different types and different attributes considered. The best example is the Aguas Buenas-Bugaba material, which has been divided in different types and wares by almost every different researcher. Who is correct in discerning the formal and stylistic segmentations on the material? Who is right in discovering the combination of attributes in the mind of the potters? Or are we in the presence of different ways to abstract the cultural continuum as proposed by Ford? How artificial or natural are these groupings? None of the classifiers has addressed the issue and it will surely take a combined effort to clarify the situation.

A. LA CONCEPCIÓN PHASE

Holmes (1888) and MacCurdy (1911) who provided the first descriptions and illustrations identified a distinctive "scarified" pottery. Haberland (1962) based on Holmes and MacCurdy identification and his own defined the Scarified or La Concepción complex. Initially he established several wares (1962); but later he grouped them into types and varieties. However, his descriptions are very limited. Shelton (1984a) based on her findings in the San Vicente and Concepción areas proposed several wares, including and expanding Haberland's classification.

In relation with the term "scarification", MacCurdy (1911:96) mentioned as "scratched" pre-firing. However, Haberland (1962) initially established a Scarified wares, but later he renamed his Scarified Ware as Solano Incised (Haberland 1976:116). Shelton established incised wares instead of scarified, e.g. Zoned Incise. In any case, the incision is pre-firing (Shelton 1984a:110).

Solano Incised-Zone Scarified Ware

Haberland (1962, 1976) tried to see variation within the most typical pottery of this complex. He postulated the Solano Incised type with several varieties. This type, together with the Solano Monochrome, included all variations of the complex. Shelton (1984a) maintained a ware classification. Her Ware B: Zoned Bichrome includes all types and varieties proposed by Haberland. Scarified or incised areas alternating with red slipped areas was the most significant decoration in this grouping.

Type: Solano Incised

Variety: Mata

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

- a. oval vases
- b. bowls with annular bases
- c. restricted bowls,
- d. chimney vessels with flat bottom and three cylindrical supports

Decoration:

- a. a number of parallel lines, rarely more than four, which alternate with red painted stripes. This pattern occurs frequently on wide-mouthed bowls and rarely in other shapes.
- b. larger areas of parallel incised strokes, interspaced by red painted ones. A great number of vessel shapes, more than in any other group, have been decorated in this way

Supports:

- a. solid in form of an animal leg with three toes or claws
- b. solid cylindrical, long, flat or conical

Type History:

Scarified Group (Holmes 1888, MacCurdy 1911)

Scarified Ware (Osgood 1935)

Zone Scarified Ware (Haberland 1962)

Solano Incised, variety Mata (Haberland 1976)

Ware B: Zone Incised (Shelton 1984a)

Chronology: 300 B.C.-A.D. 300 (Haberland 1976)

Geographical Distribution: Lowlands of Chiriquí (Haberland 1976)

Comparison: Haberland 1962:384, Figs.1,2,3,4C, 1976:Fig. 1:C,E,F;1984b: Fig. 9.2.

Type: Solano Incised

Variety: Bugaba

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

squat vessels with a marked shoulder or body angle, restricted necks, and out-curving lips.
jars with a sharp angle

Decoration: consists of a number of vertical incised lines covering the whole body, sometimes with space between them slightly raised. Either these spaces are filled with short horizontal strokes or the horizontal lines are longer and cross the vertical ones. In that case, the spaces between them are rarely raised

Type History:

Scarified Group (Holmes 1888, MacCurdy 1911)

Scarified ware (Osgood 1935)

Cross-hatched group (Haberland 1962)

Solano Incised variety Bugaba (Haberland 1976)

Ware B: Zone Incised (Shelton 1984a)

Chronology: 300 B.C.-A.D. 300 (Haberland 1976)

Geographical Distribution: Lowlands of Chiriquí (Haberland 1976)

Comparison: Haberland 1962:385, Fig. 4D, 1976:Fig.1:D.

Type: Solano Incised

Variety: Bongo

Complex: La Concepción

Sphere: Western Panamá

Vessel Form: ovoid-globular vessel

Body

Neck: short, outcurving neck

Decoration: Incision is the common decorating method. Sometimes decoration is somewhat like that of the Zoned ware, with only the alternating red areas missing. Sometimes only a few ornaments are incised, like rhomboids or a "herringbone" pattern. These occur on odd shapes. The most frequent pattern is a small vertical band, mostly incised crosswise, decorating the short, outcurving neck of an ovoid-globular vessel

Type History:

Scarified Group (Holmes 1888, MacCurdy 1911)

Scarified ware (Osgood 1935)

Incised Group (Haberland 1962)

Solano Incised, variety Bongo (Haberland 1976)

Ware B: Zone Incised (Shelton 1984a)

Chronology: 300 B.C.-A.D. 300 (Haberland 1976)

Geographical Distribution: Lowlands of Chiriquí (Haberland 1976)

Comparison: Haberland 1962:385, Fig.4B, 1976: Fig. 1.

Type: Solano Monochrome

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

straight walled vessels

wide-mouthed bowls

Decoration: raised appliqué stripes occurs rarely

Type History:

La Concepción Plain (Haberland 1962)

Solano Monochrome (Haberland 1976)

Ware B: Zone Incised (Shelton 1984a)

Chronology: 300 B.C.-A.D. 300 (Haberland 1976)

Geographical Distribution: Lowlands of Chiriquí (Haberland 1976)

Comparison: Haberland 1962:386, Fig.4A, 1976, Fig. 1:A.

Ware: Ware B: Zoned Incised

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

B1. deep open bowls with flaring to nearly straight sides

B2. restricted bowls, round (shallow or deep), with incurved rim and zoned incision

B3. oval bowls with incurved sides, ends raised through the use of a tab attached to the rim, also known as "boats"

B4. open bowls with nearly straight or slightly flaring sides or jars with short necks and rim slightly flared.

B5. jars with beveled mid-section or shoulder

B6 zoomorphic bowls or jars. Usually beveled and may have an outslanted simple lip or shorter rounded rim

B7 globular jar with rounded rim

B8 short-neck jars with maroon slip. The lip curves out slightly and is rounded or blunted

B9. large jars with exteriorly thickened outslanted neck

B.10 multiple chambered vessels, they can have up to four mouths

B. 11 hourglass or "chimney " jar with broad base and long neck

Body:

Wall thickness: 5-13 mm.

Rim diameter:

B1: 16-46 cm.

B.2 10-30 cm.

B.3 14-19.5 cm.

B.4 9-35 cm.

B.5 10.2-11.3 cm.

B.6 14.5 cm.

B.7 20 cm.

B.8 17-22 cm.

B.9 12.7-30 cm.

B.10 6.2 x4.8-6.4 x 4.5 cm.

B.11 9.8 cm

5. Paste:

Texture: coarse

Temper: visible inclusions, evenly distributed, gray white particles

Color: orange-buff, sometimes darkened with a grayish core

6. Surface:

Color: dark red or maroon slip, sometimes lighter (orange)

Finish: Most sherds are slipped on both surfaces, except zones with incisions. Vessel bottoms are not always slipped.

Decoration: Dark red or maroon slipping the interior and exterior with the exception of zones left unslipped and incised

Incising, vertical or horizontal panels (parallel bands in groups, or lines forming a triangle radiating from one point of the triangle or parallel within it) may cover the whole or portions of the vessel body, usually alternating with slipped areas, but in some cases the incision is placed in slipped areas. Occasionally lines are crosshatched.

modeling in form of head and tail appendages

zoomorphic adornos like lizards and snakes on the bodies of chimney or hourglass vessels

Handles: Tabs: some attached to rim. others as flanges or appendages on zoomorphic vessels.

Some of the tabs can have slight lobes, or indentations. A decorated tab in the form of a bird with indented eyes, throat and wings

Supports:

short, webbed or rounded on bowls and jars

long, cylindrical tapered, the bottom is flat, on hourglass vessels

Ware History:

Scarified Group (Holmes 1888, MacCurdy 1911)

Scarified Ware (Osgood 1935)

Zone Scarified Ware, Crosshatched group, Incised Group, La Concepción Plain (Haberland 1962)

Solano Incised, v. Mata, v. Bugaba, V. Bongo, Solano Monochrome (Haberland 1976)
Zoned Incised Ware (Shelton 1984a)

Chronology: 300 B.C.-A.D. 400 (Shelton 1984a)

Geographical Distribution: San Vicente-La Concepción (Shelton 1984a)

Comparison:

Holmes 1888, Fig. 127

MacCurdy 1911:Plate XXVI

Stone 1976,p. 99

Haberland 1976: Fig. 1:A-F

Friedman and de la Guardia (1966:Figs. 6-7)

Linares 1980a:Fig. 7.0-8:b

Shelton 1984a: Figs. 4-1, 4-2, 4-3, 4-4, 4-5; 1984b: Fig. 2:b-c, Fig. 3:a-g, Fig. 4; 1995: Fig. 3-4

Wares A and J

Shelton established two additional wares as part of La Concepción Complex that were not noticed by Haberland. One of them (Ware A) includes lobed vessels with incised chevron designs. The other one (Ware C) corresponds to vessels with smoothed unslipped shoulder or neck decorated with incised lines.

Ware: Ware A. Lobed Zoned Incised

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

wide mouthed jars or bowls with lobed bodies,

Body:

Rim and Lip:

outslanted rim

Wall thickness: 1-2 cm.

Rim diameter: 18 cm.

Paste:

Texture:

Temper: heavily tempered, with larger inclusions of coarse sand

Color: buff to orange

Surface:

Color: buff to orange

Finish: both surfaces are unslipped except the rim that was red slipped.

Decoration:

incised lines forming chevron motifs in each lobe, with plain channels separating the lobes. A single horizontal band of incision separates the slipped and unslipped zones of the vessel at the neck.

Supports:

webbed tripod feet

Ware History:

Scarified Ware (Holmes 1888, Osgood 1935)

Scarified Group (MacCurdy 1911)

Lobed and Incised Ware (Shelton 1984a)

Chronology:

300 B.C.-A.D. 400 (Shelton 1984a)

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison:

MacCurdy 1911:Plate XXVI: f

de La Guardia and Guerra (1966:Fig.5)

Baudez 1970:Plate 101
 Shelton 1984a: Fig. 4-6:a-b; 1984 b: Fig.2:a; 1995

Ware: Ware C. Smoothed unslipped shoulder or neck

Complex: La Concepción

Sphere: Western Panamá

Vessel Form:

C1. incurved bowls with possible shoulder bevel

C2. incurved vessel that seem to have a raised rim, "boat-like"

Body:

Rim diameter: 29 cm.

Surface:

Color: orange or red slip

Finish: Slipped on both surfaces

Decoration:

single line incision, widely unevenly spaced oblique lines in the shoulder

orange or red slip

Ware History:

Smoothed unslipped shoulder or neck ware (Shelton 1984a)

Chronology: 300 B.C.-A.D. 400 (Shelton 1984a)

Geographical Distribution:

San Vicente- Concepción (Shelton 1984a)

Comparison:

Shelton 1984a:4-6:c

Transitional Wares

Wares D, E and F are considered by Shelton (1984a) as transitional between La Concepción and Bugaba. Their quantities are very small and they can be just variants of the major wares of both La Concepción and Bugaba Complexes.

Ware: Ware D. Incised lines on smoothed body

Complex: La Concepción-Bugaba

Sphere: Western Panamá

Vessel Form:

D 1 Incurved bowls

D 2 Jars with outcurved rims and thickened lips

Body:

Rim diameter: 15-26 cm.

Paste:

Texture: Finer than Ware B

Temper: evenly distributed inclusions

Surface:

Color: orange red slip, buff-orange where unslipped

Finish: slip covers the interior and lip only, unslipped area smoothed

Decoration:

incised nearly vertical lines, or crosshatched designs made up of oblique and horizontal lines.

Ware History:

Scarified group (Holmes 1888, MacCurdy 1911)

Incised Lines on smoothed body ware (Shelton 1984a)

Chronology:

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison: Shelton 1984a: Fig. 4-6:d-h

Ware: Ware E. Dark fired with band of vertical lines on neck

Complex: La Concepción-Bugaba

Sphere: Western Panamá

Vessel Form:

Short-neck incised small jars.

Body:

Rim and Lip:

Lips are slightly thickened and rounded

Neck: slant out very slightly

Rim diameter: 10 cm.

Paste:

Temper: inclusions of varying density

Color: cores are buff to dark gray

Surface:

Color: slip is orange or dark maroon

Finish: exterior neck is unslipped and smoothed, rest is slipped

Decoration:

short horizontal band of irregular, more or less closely spaced vertical lines

Ware History:

Dark Fired with band of vertical lines on neck (Shelton 1984a)

Chronology:

Geographical Distribution:

San Vicente- Concepción (Shelton 1984a)

Comparison: Shelton 1984a: Fig. 4-6:i,j; 1984b: Fig. 10:d-e

Ware: Ware F. Plain Ware

Complex: La Concepción-Bugaba

Sphere: Western Panamá

Vessel Form:

F1. restricted bowl with very thick body, the shoulder is sharply beveled and the upper portion of body slants in.

Body:

Rim and Lip:

F1. lips are the breadth of the vessels and slightly rounded

F2. the rims slant out and are slightly tapered. The lips taper toward the exterior

Rim diameter:

32-40 cm.

F1. 32 cm.

F2 36 cm.

Paste: Similar to Ware B

Texture: coarse

Temper: gray inclusions

Surface:

Color: orange slip or dark red slip

Ware History:

Plain Ware (Shelton 1984a)

15. Chronology:

16. Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

17. Comparison: Shelton 1984a: Fig. 4-6: l-n, 1984b: Fig. 10:g-h; 1995: Fig. 8:m-o

B. AGUAS BUENAS PERIOD

The pottery of the Aguas Buenas Period has been classified into wares (Spang et al. 1980, Shelton 1984a) and types (Haberland 1976, Baudez et al. 1993). In both cases a similar level of generalization is presented. Both classifications are confusing since different authors have used different criteria to include the same pottery in different categories. The panorama is worse when a same name is used to refer to different components.

An attempt to provide some order is presented, however an agreement must be reached to come with a unified classification. The following grouping is proposed:

Group A . Moravia Red-Guarumal v. Cebaca-Corral Red. v. Coronado and v. Corral-Cerro Punta Orange v. Cotito and v. Cerro Punta

Group B. Barriles Zoned- Zoned Bichrome-Guarumal v. Guarumal

Group C. Cafias Zoned-Bugaba Engraved v. Bugaba and v. Lacoste

Group D. Quebradas v. incised and plain

Moravia Red

This type was postulated by Haberland (1961a) for the previous Red and Red Rimmed Wares (1959b). He divided the type in two varieties: Moravia, for all the pottery with red slip, and Bambito (red rimmed) for vessels with an unslipped area below the rim. Laurencich de Minelli and Minelli proposed a third variety: Pintada, to account for a particular decoration style in the Coto Brus Valley. Since most of the pottery would fall into the two first varieties, other authors attempt alternative classifications. Particularly, Linares (1980a) and Spang et al. (1980) ignored completely Haberland's classification and proposed a new one based on wares.

Baudez et al. (1993) considering that the type was very broad, subdivide it and established new types. Their Guarumal Incised variety Cebaca would correspond with the Bambito variety, Corral Red, in its two varieties, correspond also with the Moravia Red type.

Most of the identifications made in the Diquís area before Baudez et al.'s revision followed Haberland's nomenclature, usually without making distinctions between the two varieties (Drolet 1983, 1992, Corrales 1985, 1988, Rago, 1988, Kantner 1988).

Type: Moravia Red

Variety: Moravia

Complex: Aguas Buenas

Sphere: Diquís

Vessel Form:

1. globular vessels that may have or may not have three slab feet but do have a restricted neck, lightly outcurved rim and strap handles.
2. small legless and lugless globular bowls with a straight and restricted neck
3. small bowls that have three slab feet and incurved rim carrying a shallow pre-fired groove around the opening and three small human, animal or reptile figures appliquéd just below the rim groove.

Particular forms:

1. neckless bowls with incurved rim
2. large shallow plates with flat semicircular handles near the rim, which is vertical or incurved
3. ovoid high-necked and legless vessels with or without wide strap handles
4. a chimney-shaped pot, with or without three cylindrical legs.
5. Large burial urns

Decoration:

Completely red inside and out (characteristic)

Incised and appliqué motifs (pellet appliqué with incisions or punctation, zoomorphic adorns (raccoons, lizards, coatis, turtles, birds)

Handles:

strap handles

semicircular handles

Tab handles

Supports:

cylindrical legs.

tab supports

Type History:

Red Ware (Haberland 1955, 1959a)

Moravia Red, Moravia variety (Haberland 1961a 1976, Stone 1977)

Moravia Red variety Moravia (Laurencich de Minelli and Minelli 1973)

Corral Red, varieties Corral and Coronado (Baudez et al. 1993: 60)

Chronology: A.D. 300-500 (Haberland 1976:116)

300 B.C.- A.D. 300 (Laurencich de Minelli and Minelli 1973)

A.D. 0-300 (Stone 1977:100)

A.D. 600-800 (Baudez et al. 1993: 115)

200 B.C.-A.D. 600 (Drolet 1983:37)

Geographical Distribution:

Coto Brus Valley (Haberland 1955, 1959b, 1961, Laurencich de Minelli and Minelli 1973, Stone 1977:102-103).

Diquís Delta (Stone 1977:102, Baudez et al. 1993.)

Middle Térraba Basin (Drolet 1983)

Upper General Valley (Drolet 1983, Corrales 1986, Henderson 1986, Rago 1988, Kantner 1988).

Comparison:

Haberland 1955:226, Figs. 2 and 3, 1959b, Tafel. a-f, Tafel. XVI e-i, Tafel XVII: a-h, 1976:117, Fig. 1:G-S.

Laurencich de Minelli and Minelli 1973:220-222, Fig. 1:a, Fig. 2 a-b, Fig. 3:b, Fig.4.

Stone 1977: 103, Fig. 143

Baudez et al. 1993:61, Fig. 14:a-e

Drolet 1983:31-33, Figs. 5,6 and 7.

Kantner 1988, Plate I:B

Corrales 1986:95, Fig.3

Type: Moravia Red

Variety: Bambito

Complex: Aguas Buenas

Sphere: Diquís

Principal Modes

Vessel Form:

1. globular vessels that may have or may not have three slab feet but do have a restricted neck, lightly outcurved rim and strap handles.

2. small legless and lugless globular bowls with a straight and restricted neck

3. small bowls that have three slab feet and incurved rim carrying a shallow pre-fired groove around the opening and three small human, animal or reptile figures appliquéd just below the rim groove.

Decoration:

unpainted collar below the rim, red slip inside, in the rim and the lower half of the vessel.

Incised and appliqué motifs in the unslipped band, special appliqué ornaments in the form of a row of vertical rectangular stripes

Type History:

Red Rimmed Ware (Haberland 1955, 1959b)

Moravia Red, Bambito variety (Haberland 1961a, 1976, Laurencich de Minelli and Minelli 1973, Stone 1977)

Corral Red v. Corral and Coronado (Baudez et al 1993:58)

Guarumal Incised v. Cebaca (Baudez et al. 1993)

Chronology:

A.D. 300-500 (Haberland 1976:116)

300 B.C.-A.D. 300 (Laurencich de Minelli and Minelli 1973:219)

A.D. 0-300 (Stone 1977:100)

600-800 (Baudez et. al 1993: 115)

Geographical Distribution:

Coto Brus Valley (Haberland 1955, 1961c, Laurencich de Minelli and Minelli 1973, Stone 1977:102-103).

Diquís Delta (Stone 1977:102, Baudez et al. 1993:60-61)).

Comparison:

Haberland 1955:227, Fig. 4, 5 and 6., 1959b, Tafel XV:e-h, Tafel XVI:a-b

Laurencich de Minelli and Minelli 1973:220, Fig. 1:b

Stone 1977: 103, Fig. 143

Baudez et al. 1993:61, Fig. 14:a-e

Type: Moravia Red

Variety: Pintada

Complex: Aguas Buenas

Sphere: Diquís

Vessel Form:

small vessel with cylindrical solid legs

Decoration:

The interior and the exterior are painted reddish brown, the shoulders on the outside left colorless. Decoration is confined to parallel sharp incisions or vertical punctation rows in definite zones. The applied motifs are frogs or tadpoles, grouped in three equidistant positions on the vessel's shoulder, with vertical or parallel lines incised- punctuated and appliquéed adornos between the groups or simply incised appliquéed lines.

Handles:

Zoomorphic adornos could have been functioned as handles

Supports:.

Tripod solid cylindrical supports

Type History:

Moravia Red, variety Pintada, proposed by Laurencich de Minelli and Minelli (1973)

Stone 1977:105.

Chronology:

A.D. 0-300 (Stone 1977:105)

Geographical Distribution:

San Vito, Coto Brus Valley

Comparison:

Laurencich de Minelli and Minelli 1973: 221, Fig. 3:c

Stone 1977:105, Fig. 146

Type: Guarumal Incised

Variety: Cebaca

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 75 examples from stratigraphy

Vessel Form:

- a. composite silhouette bowls with vertical straight or slightly concave walls. Direct lip or gradually thickened on both sides. Round or flattened lip.
- b. shallow globular bowls with a raised vertical or everted rim, straight or concave
- c. jar with convergent and convex walls, direct lip and slightly flattened lip
- d. closed, simple, globular bowls. Direct rim, rounded or thin lip
- e. open bowls with straight or slightly concave walls, divergent silhouette composite. Direct rim or slightly thickened. Rounded lip
- f. composite silhouette open bowls, convex bottom, low everted and concave walls. Direct rim, thin or rounded lip.
- g. globular jars with slightly raised rim, but convergent, direct, thin lip.

Wall thickness.

- a. 5-12 mm.

Rim diameter..

- a. 14-26 cm.
- b. 11-22 cm.
- c. 12 cm.
- d. 7 cm.
- e. 30 cm.
- g. 6-14 cm.

Paste:

Texture: compact, regular fracture

Temper: medium tempered

Color: maroon to reddish maroon

Surface:

Color: yellowish maroon to reddish maroon

Finish: smoothed

Decoration: Panel in the upper exterior half of composite silhouette bowls, open and close bowls and jars. The convergent neck jar presents two panels, one on the neck and the other on the upper half. Incised lines (1-2 mm.). Two horizontal grooved lines enclosed groups of two or three oblique lines that delimited triangular or rhomboid areas. In some cases there is a dot at the beginning and end of the group of lines. It could be not a technical consequence but an intentional decoration. Very rare is the use of color in the delimited areas.

Type History:

Guarumal Incised v. Cebaca, proposed by Baudez et al. 1993:67-69

Bambito variety of Moravia Red (Haberland 1955, 1961, 1976)

Chronology: A.D. 600-700 (Baudez et al. 1993:69)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Térraba Middle Basin (Corrales et al. 1992)

Coto Brus Valley (Haberland 1959b)

Comparison: Baudez et al. 1993:68, Fig. 18:a-l

Cerro Punta Orange

Linares and associates proposed wares instead of types for the pottery of the Bugaba Style in Highland Chiriquí. Cerro Punta Orange was considered an earlier ware within the Bugaba Style based on tendencies in stratigraphic pits. However, this proposition is not valid in all sites or areas. A distinctive orange slip together with bowls with a groove below the lip and closed bowls were considered typical of this type. It combined characteristics of the Bambito and Moravia varieties of Moravia Red. The Ware H of Shelton (1984) is considered very similar to Spang et al.'s definition, but it also includes the s-shaped bowls considered typical of Valbuena.

Baudez et al. proposed the type Cerro Punta Orange with two varieties: Cerro Punta and Cotito, for the Diquís Delta, Costa Rica. They differ considerably from Linares and associates

proposition. Particularly remarkable is the exclusion of the bowls with a groove below the lip and the fact that in the Delta the orange slip is not present. In this sense, this type must be revised. The variety Cerro Punta corresponds to composite silhouette bowls with tall hollow tripods. The variety Cotito is equivalent to the Cotito Ware proposed by Spang et al. (1980) and therefore grouped together.

Ware: Cerro Punta Orange Ware

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

a. bowls with a groove below the lip (typical)

b. jars

c. restricted bowls

d. deep restricted bowls (typical)

Paste:

Texture: generally compact

Temper: numerous gray, angular particles larger than a pinpoint, often with dead-white, irregularly shaped inclusions evenly distributed throughout the paste

Color: buff to orange

Surface:

Color: buff to light brown to very dark gray

Finish: slightly smoothed, but never polished

Decoration:

a. Orange to red slip, either covers the interior and the exterior completely, or leaves an unslipped band in the exterior, below the lip.

Ornamentation occurs on some but not all vessels. Only certain portions of the vessel are decorated, usually the areas near the rim.

b. grooving (width greater than 2mm.), wide incising (1-2 mm.), narrow incising (less than 1 mm.), appear in single line, rectangular, triangular, parallel, curvilinear, or combination designs. In all vessel forms.

c. Fluting or wide square grooves (1-1.5 cm in width) on restricted bowls

d. appliqués: pellets, fillets, plain and incised lobes, on both necked jars and bowls. Zoomorphic and anthropomorphic representations on restricted bowls.

e. punctation: round and oval, in open and restricted bowls.

Ware History:

Proposed by Spang et al. (1980:355-356)

Chronology: A.D. 200-600

Geographical Distribution:

Highlands of Chiriquí (Linares 1980a)

Lowlands of Chiriquí (Linares 1980a)

Bocas del Toro (Linares 1980a)

Comparison:

Spang et al. 355, Fig.9/1:a-d

Moravia Red (Haberland 1961a, 1976)

Kudarauskas et al. 1980:387, Fig. 12/1:r-u, 391, Fig. 12/2: a-e

Ware: Ware H. Cerro Punta Orange

Complex: Bugaba

Sphere: Western Panamá

Body:

Rim and Lip:

H1. Restricted bowls with sharply incurved rim, The lip is plain and slightly tapered.

H2. restricted bowl with an exterior flange below the lip

H3. Restricted bowls, grooved lip (bowls with a groove below the lip), in some cases with adornos (birds, nubs) , tabs or flange.

H4. incurved bowl with a grooved lip, unslipped shoulder

H5. Incised bowls or short-necked jars with s-shaped rim

H6. open bowls with exteriorly thickened flattened lip. The lip may be flattened with interior thickening

H7. jars with simple rims and variable length necks. Rims curve or slant slightly outward at variable angles.

H8. globular and sub-globular jars with outslanted or outcurved thickened lip. Lip is rounded.

H9. jars with outslanted rims with exterior thickening formed by a flattened coil at the top of the rim

H10. Jars or bottles with an outslanted rims, angle close to vertical. The lips are thickened and usually rounded.

H11. jars with orange slip and outslanted rims.

H12. Deep neckless jars or tecomates

H13. miscellaneous

H14. open bowls with slightly incurved lips

H15. short thick necked jars

Base:

edge of a flat-bottomed vessel

Rim diameter:

9-21 cm.

H1. 18 cm.

H2. 23 cm.

H3. 12-25 cm.

H4. 18 cm.

H6. 10 cm.

H7. 23 cm.

H8. 26-27 cm.

H9. 28 cm.

H10. 15 cm.

H12. 17 cm.

H13. 26 cm.

Paste:

Texture: variable in texture. Sometimes it is quite a fine clean clay with few inclusions and at other times the paste has larger sandy inclusions visible in sections.

Temper: sandy inclusions

Color: buff color

Surface:

Finish: Both surfaces covered with orange slip, though the area below the lips on the exterior can be unslipped. Slip is usually thick and rather shiny, but not polished.

Decoration:

The unslipped shoulder of bowls with a groove below the lip may be decorated with: shell stamping, punctation, fingernail impressions or appliqué.

oblique incised lines and a groove below

horizontal band of raised nubs in the shoulder

three lobed tabs (birds)

realistic birds

zoomorphic and anthropomorphic figurines or adornos

Handles:

broad strap handles on urns

lobed, horizontally, modeled or decorated tabs

braided handles

Supports:

webbed foot
 anthropomorphic legs
 solid conical leg
 tabs
 ringstands

Ware History:

Ware H (Shelton 1984a)

Chronology: A.D. 200-400 (Shelton 1984a)

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison: Shelton 1984a:Figs. 4-7, 4-8, 4-9; 1984b:Fig. 5, Fig. 6:b, Fig. 7:a-e; 1995: Fig. 6:a-i

Type: Cerro Punta Orange

Variety: Cerro Punta

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 53

Vessel Form:

Large composite silhouette bowls, tripod

Body: everted, vertical, or concave

Base: convex

Rim diameter: 16-40 cm.

Paste:

Texture: homogenous, compact, regular fracture

Temper: very small particles, mostly quartz

Color: Maroon with a black core

Surface:

Color: cream, gray or maroon

Finish: red slip on the interior, less frequently on both sides. Most vessel has charcoal shadow on the interior. Smoothed surface

Decoration: Incised lines (2mm. width, 0.5 mm. depth), groups of vertical lines and a oblique line, groups of vertical lines with an horizontal line, or groups of straight horizontal lines located in a panel in the upper part of the vessel. When there are two panels, the upper consists of a line of punctuation between oblique lines or a double oblique line

Supports:

hollow wide conical supports (10 cm.) with raised tip, with incised lines, frontal hole and/or anthropomorphic and zoomorphic appliqués

Type History:

Cerro Punta Orange (Baudez et al. 1993:62-63)

Chronology: A.D. 600-800 (Baudez et al. 1993:63)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:63, Fig. 15a-j

Corrales and León 1987

Corral Red

Corral Red was considered a subdivision of Moravia Red (Baudez et al. 1993). It comprises bowls with a groove below the lip open and closed bowls, with two varieties: Corral for open bowls without decoration and Coronado for closed bowls sometimes with plastic decoration.

In one of the most confusing aspects of Greater Chiriquí ceramic classification, Haberland (1959a, 1976) considered the bowls with a groove below the lip, as part of the Moravia and Bambito varieties based on the presence or not of unslipped areas. For Spang et al. (1980)

the bowls with a groove below the lip were the typical vessel form of Cerro Punta Orange ware. For Shelton (1984) bowls with a groove below the lip were present in both Ware H (Cerro Punta Orange) and Ware I (Valbuena).

Type: Corral Red

Variety: Corral

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 24

Vessel Form:

open bowls with convergent bowls with a groove below the lip, rounded lip (22 examples)

open bowls with slightly raised rims, gradually engrossed in the interior or in both sides. Flat lip with or without groove (2 examples)

Rim diameter: 24-36 cm.

Paste:

Texture: homogenous but friable and irregular fracture

Temper: many antiplastics of small size (0.25 mm.), with predominance of quartz, and with some white opaque elements

Color: Maroon to reddish maroon

Surface:

Finish: red slip in all the surface, or only in the interior, or only in the rim

Type History:

Corral Red (Baudez et al. 1993)

Chronology: A.D. 600-700 (Baudez et al. 1993:60)

Geographical Distribution: Diquís Delta

Comparison:

Baudez et al. 1993:61, Fig. 14:a

Haberland 1955:227, Fig. 5,6

Haberland 1976:116

Type: Corral Red

Variety: Coronado

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 10

Vessel Form:

globular bowl very shallow. The rim presents a wide groove (1-5 mm. width, 2 mm. depth.)

Body:

Rim and Lip: Thickened lip in the exterior or in both sides. Rounded lip

Wall thickness: 7-12 mm.

Rim diameter: 26-34 cm.

Paste:

Texture: coarse, with some exceptions,

Temper: many antiplastics of diverse type and size.

Color: reddish maroon.

Surface:

Finish: unslipped or slipped only on the rim and the interior, or only on the rim and the exterior.

Smoothed

Decoration: Decoration in the upper part of the body, panel of incised lines executed when the clay was fresh zones with rough surface or scarified, slipped with the same color of the past and limited by an oblique line, contrasted with a red and polished surface in the upper part of the vessels.

area with combed lines limited with a vertical plain stripe

Handles:

Adornos than could have functioned as handles
possibly tab handles

Supports: tab or slab feet

Type History:

Baudez et al. 1993:60-61

Chronology: A.D. 600-700 (Baudez et al. 1993:60)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Comparison: Baudez et al. 1993:61, Fig. 14:b-e

Valbuena-Isla Palenque Maroon

The Valbuena ware was postulated for Spang et al. (1980) to account for s-shaped bowls and deep restricted bowls, but it also includes large jars or urns. It has the characteristic red slip considered by Haberland as the main trait of the Moravia variety, Moravia Red. This type has a close correspondence with Isla Palenque Maroon, the predominant type defined in the coastal areas by Linares (1968). But, Isla Palenque Maroon was also a very general type comprising for almost all the pottery of the Burica Phase.

Shelton (1984b:228) considered that her Ware I is much the same than Valbuena Ware. But, she proposes that her Ware I (Valbuena) and Ware H (Cerro Punta Orange) have very similar vessel shapes that differ principally in color. In her definition, Ware I also includes bowls with a groove below the lip, as Ware H includes s-shaped bowls or jars. Shelton's Ware J includes only s-shaped bowls thicker than those from ware I and with a unslipped buff decorated shoulder, therefore it must be considered a variant of Ware I.

Valbuena is considered a type more popular in the late part of the Bugaba Style (Linares 1980a), but this consideration is not supported by evidence of all sites, and, as in the case of Cerro Punta, the criteria used by the different authors will led to different conclusions.

Ware: Valbuena Ware

Complex: Bugaba

Sphere: Western Panamá

Vessel Forms

medium and long necked jars

simple, shallow bowls (typical)

S-shaped bowls (typical)

Deep restricted bowls (typical)

Paste:

Texture: compact; paste feels like sandpaper

Temper: small, fine, sand-like particles, which are evenly distributed throughout the paste.

Generally clay is finer than Cerro Punta Orange.

Color: buff to light beige when completely oxidized

Surface:

Color: buff to light beige

Finish: smoothed to an even surface

Decoration: Dark red (maroon) fugitive slip, it may cover the interior and the exterior completely, or leaves an unslipped band in the exterior, below the lip

Supports: low ringstands

Ware History:

Proposed by Spang et al. 1980:356

Moravia Red (Haberland 1961a)

Chronology: A.D. 200-600 (Linares 1980a)

Geographical Distribution:

Highlands of Chiriquí (Linares 1980a)

Lowlands of Chiriquí (Linares 1980a)

Bocas del Toro (Linares 1980a, Kudarauskas et al. 1980:389-390)

Comparison:

Spang et al. 1980:355:Fig. 9/1:e-h, 361:Fig. 9/2:a-b, d-f, g-h

Moravia Red (Haberland 1961a, 1976)

Linares 1968, Fig.11,12:i-j,k-m,1980:103, Fig. 7.0-5 Type 1,2,3, 1980b:373, Fig,10/1:b

Kudarauskas et al. 1980:387, Fig. 12/1:r-u, 391, Fig. 12/2: a-e

Ware: Ware I: Maroon Slipped/Valbuena

Variety: thin and thick varieties

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

11. shallow incurved bowls with simple lips. The lip is usually tapered.

12. restricted bowls with simple lips sometimes with flange on shoulder. The lips may be uniform or tapered.

13. incurved bowls with a shallow decorated shoulder or nubs. The lips are simple.

14. deep open bowls with slightly incurved shoulders. The lips may be incurved or almost straight, or with exterior thickening.

15. incurved vessels with a large groove below the rim

16. jars with outslanted rims and outslanted outcurved lips

17. jars with outslanted rims exteriorly thickened

18. jar with sharply outcurved rims. The lips are exteriorly thickened, rounded and almost horizontal.

19. open bowl of thick fine paste

110. bowls or jars with s-shaped rim

111 short neck jars that curves out slightly with a tapered lip.

112 jars with incised necks or rims

Body:

Rim diameter:

9.5-36 cm.

11: 11-30 cm.

12: 36 cm.

13. 12-15 cm.

14. 22 cm.

15. 12-25 cm.

16: 13-27 cm.

17: 26-29 cm.

18: 60 cm.

Paste:

Texture:

Thin variety: fine

Thick: like Ware H

Temper: fine inclusions

Color:

thin: buff in the edges and gray cores

thick: dark core

Surface:

Color: maroon or dark red

Finish: slipped in both surfaces, after lines of any kind are added, whether incised, fluted or raised

Decoration:

Incised horizontal bands with oblique lines radiating from them.

Shoulder decoration include :

"arm" motif appliqué

nubs forming figures

shell impression

raised punctuated circles

appliqué zoomorphic figures, multiple coils that are grooved

group of shallow vertically fluted lines

black negative painted lines

grooved lines

Handles:

Tabs

simple knobs, lobes

ringstand base

braided handles

Supports:

slab or short round legs

tapered solid leg

"male" legs support

ringstand bases

basal flange

Ware History:

Ware I: Slipped Maroon/Valbuena (Shelton 1984a)

Chronology: A.D. 400-600 (Shelton 1984a)

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison: Shelton 1984a:Figs. 4-10, 4-11, 4-12, 1984b: Fig. 6:a, Fig. 7:f, Fig. 8-9; 1995: Fig.7, Fig. 8:a,b,d,f

Ware: Ware J: Shoulder Decorated S-shaped Rims Bowls

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

Incurved short-neck vessels with s-shaped rims

Body:

Rim and Lip:

The lip curves out slightly or is almost straight

Rim diameter: 16-17 cm.

Paste:

Texture: medium to coarse with inclusions similar to Ware B

Temper:

Color: orange to red, in some cases there is a buff or orange band on the edges with the core a dark gray.

Surface:

Color: dark orange to dark red or maroon slip

Finish: Slipped on both surfaces, but the shoulder is buff and unslipped, appliqués are slipped

Decoration: raised appliqué strips on the shoulder

wide vertical incised lines (fluting) that give much the same appearance as the appliqué strips. In many cases the decoration may circle the entire vessel but in some cases the appliqués, specially the larger ones are more widely spaced.

Ware History:

Ware J (Shelton 1984a)

Chronology: A.D. 400-600 (Shelton 1984a)

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison:

Linares 1980a: Fig. 7.0-3:c

Shelton 1984a: Fig. 4-7 m; 1984b: Fig. 10:c; 1995: Fig. 7:p-t, Fig. 8:l.

Type: Isla Palenque Maroon

Complex: Burica

Sphere: Western Panamá

Vessel Form:

large, globular jars (burial urns)

small jars with thin-walled globular bodies

deep bowls with incurving rims

deep bowls on ringstands with short, fairly straight rims

shallow opened bowls

angular bowls with short s-shaped necks

bowls with incurving sides, constricted mouth and exteriorly thickened lips

Body:**Rim and Lip:**

Group 1. everted rims belonging to large globular jars with long necks (probably burial urns). Lips thickened exteriorly

Group 2. direct rims belonging to bowls: incurved rims, sharply incurved, opened, with a gradual outcurved and internally thickened lips

Group 3. rims belonging to bowls with curved, short necks, s-shaped

Group 4. sharply incurved rims belonging to bowls with constricted mouths

Base: concave

Wall thickness:

thick: 10-14 mm.

thin: 3-5 mm.

Rim diameter:

Group 1: 32-50 cm.

Group 2: 4-15 cm.

Group 3: 12-20 cm.

Group 4: 8 cm.

Paste:

Texture: compact and fine grained, sand papery feel

Temper: abundant, well rounded quartz sand, distributed homogeneously

Color: buff color when paste is completely oxidized, dark core when oxidation is incomplete

Surface:

Color: light buff to light brown

Finish: smoothed, some jar necks show in the exterior broad parallel striations

Hardness: 2-2.5

Decoration:

A dark maroon slip. it can cover all the exterior and part of the interior, or it can leave an unslipped area below the rim.

Most of the bowls present:

a. shallow parallel incision, placed on the exterior above the shoulder and below the lip

b. slightly raised parallel diagonal ridges of the same dimensions and placement as described above

c. curvilinear ridges and pellets, above the shoulder below the lip, arm motif.

Supports:

ringstand, small, thin-walled

tall, hollow tripod with a modeled anthropomorphic figure at the top

Type History:

Isla Palenque Maroon, proposed by Linares 1968:19-23

Chronology: A.D. 300/500-800 (Linares 1968:86)

Geographical Distribution:

Chiriquí Islands (Linares 1968)

Burica Peninsula (Ranere 1968)

Dolega and Tinajas (Miranda et al. 1966, de la Guardia 1966)

Comparison:

Linares 1968:18, Fig. 11, p.20 Fig. 12, p.22 Fig. 13, Plate 5.

Ranere 1968:116, Fig. 55

Cañas-Bugaba Engraved

A kind of pottery with fine engraved or incised lines in geometric patterns was first defined as Red Incised by Haberland (1959b) and later as Cañas Incised (1961a) or Cañas Zoned (1976). But, since its main description was in German and Haberland refers to it very briefly in his English and Spanish publications, his term was not very used. Linares and associates established the Bugaba Engraved Ware for this distinctive ceramic with fine engraved patterns on red slip, post-firing (Spang et al. 1980:357). It is the equivalent of Ware G established by Shelton who mentions engraving pre-firing (1984:131).

Baudez et al. (1993) established two varieties: Bugaba and Lacoste, based on differences on the geometric engraved or incised patterns. This type is also distinctive for the presence of negative painting in the interior of bowls. They also suggest that Bugaba was originated in the Chiriquí Highlands (Baudez et al. 1993:125), but this affirmation is contested by its apparition in other contexts.

Type: Cañas Zoned

Complex: Aguas Buenas

Sphere: Greater Chiriquí

Sample: 16 rims, 15 fragments

Vessel Form:

Open bowls

closed bowls

composite silhouette bowls

Body:

Rim and Lip:

incurving rims with rounded or interiorly thickened lips

vertical or slightly outcurved rims, with rounded or flattened lips

Surface:

Color: red on both surfaces, dark red to reddish brown

Decoration:

incised lines after firing

Geometrical engraved designs, groups of lines, triangles, and rectangles. The motif always presents a double horizontal line under the rim.

Also some rims and fragments show on the inside a weakly, hardly recognizable negative painting, black lines and dots on red

Type History:

Red Incised-Rote Ritzware (Haberland 1959b)

Cañas Incised (Haberland 1961a)

Cañas Zoned (Haberland 1976)

Bugaba Engraved (Spang et al. 1980)

Bugaba Engraved v. Bugaba, v. Lacoste (Baudez et al. 1993)

Chronology: A.D. 300-500 (Haberland 1976)

Geographical Distribution:

Chiriquí (Haberland 1959b)

Coto Brus Valley (Haberland 1959b)

Comparison: Haberland 1959b: Tafel XIV: c-d

Ware: Bugaba Engraved

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

Composite silhouette bowls (typical)

Paste:

Texture: compact

Temper: angular sand particles slightly larger than a pinpoint, evenly distributed throughout the paste

Color: buff to reddish brown.

Surface:

Color: buff to reddish brown

Finish: smoothed to an even surface

Decoration:

a. A red, sometimes orange, and infrequently maroon slip covers both the interior and exterior of the vessel. Occasionally different color slips occur on the same vessel to produce a zoned bichrome effect.

b. post-fire incising, very thin lines as if made with a sharp, pointed tool. Designs: rectilinear, triangular, curvilinear, parallel lines, or combinations of these. Dots and commas may be added. Representation of a man with conical hat at the bottom of some bowls. Lines occasionally filled with white pigment.

c. Interior-resistant painting in black on some vessels. Designs: black bands, honeycomb, oval triangular, bands and dots combined

Supports:

low ringstands

Ware History:

Rote Ritzware (Haberland 1959b)

Proposed by Spang et al. (1980:356-357)

Cañas Zoned (Haberland 1961a, 1976)

Bugaba Engraved, variety Bugaba, variety Lacoste (Baudez et al. 1993)

Chronology: A.D. 200-600

Geographical Distribution:

Highlands of Chiriquí (Linares 1980a)

Lowlands of Chiriquí (Linares 1980a)

Bocas del Toro (Linares 1980a)

Diquís Delta (Lothrop 1963, Baudez et al. 1993)

Upper General Valley (Corrales 1988, Kantner 1988)

Comparison:

Spang et al. 1980:355, Fig.9/1:i-i

Kudarauskas et al. 1980:387, Fig. 12/1:r-u., 391, Fig. 12/2: a-e

Haberland 1959b: Tafel XIV:c-e

Lothrop 1963:56, Fig. 31a-d

Baudez et al. 1993:73, Fig.21a-h

Kantner 1988:Plate I:E

Corrales 1988:95, Fig.3

Ware: Ware G: Bugaba Engraved

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

G1. Incurved bowls with simple lip

G2. open bowls with outcurved lip

G3. large urn

Body:

Rim diameter: 26 cm.

Paste:

Temper:

Fine with small inclusions evenly distributed. Occasional inclusions are somewhat coarser (orange slip)

Color: orange-buff in cross-section

Surface:

Color: orange to dark red

Finish: slip on both surfaces

Decoration: The exterior surface of the vessel has zoned incision. Zones may have one or two lines outlining them on the top of the lip. Within the zone the lines are sometimes clustered, but more often single lines are found. Several vertical or irregular oblique lines. Other designs grouped parallel multiple lines with large or small rectangles. Large areas within the zone are plain. Incision is added after the slip when the vessel is dry or fired. Some fragments have resist painting in black.

Ware History:

Cañas Zoned (Haberland 1976)

Bugaba Engraved (Linares 1980a)

Ware G. Bugaba Engraved (Shelton 1984a)

Chronology: A.D. 400-600 (Shelton 1984a)

Geographical Distribution: Highlands, Mid elevations of Chiriquí (Shelton 1984a)

Comparison:

Linares et al. 1975: Fig. 8c

Shelton 1984b: Fig. 10:a-b; 1995: Fig.8: j-k.

Type: Bugaba Engraved

Variety: Bugaba

Complex: Camibar/Agua Buenas

Sphere: Diquís

Sample: 69 rims, 107 body sherds

Vessel Form:

a. composite silhouette bowls, flat or convex base, tripods. Direct rim sometimes thinned or thickened on the exterior

b. hemispherical or close bowls, direct or tapered rim. Rounded thinned or flattened lip.

Body:

Rim diameter:

a. 10 and 30 cm.

b. 14-20 cm.

Paste:

Texture: homogenous and regular fractures

Temper: numerous translucent antiplastics, yellow, gray or black (quartz), of small size (80% clay). Some elements matte white

Color: reddish maroon

Surface:

Color: red to orange maroon

Finish: smoothed on natural color zones, red slip after the decoration on the exterior and interior.

Decoration: engraving when the clay was dry before the slip and polish, lines are fine (0.25 mm.) and shallow, sometimes filled with white pigment. Decoration located on the bottom of composite silhouette bowls and on the exterior of globular bowls. The motifs consist of an stylized crocodile

enclosed by a frame consisting of double line, sometimes with simple or plumed triangles. Also, rhombus and triangles. Some motifs are surrounded by lines of punctation.

Negative black on red paint on the interior, eroded. Motifs consist of a simple band or parallel streaks on the rim or a series of circles in panels.

Adornos: vertical rows of pellets in one bowl and fillets and pellets on the exterior of a composite silhouette bowl.

Supports:

solid anthropomorphic unslipped support.

Type History:

Red Incised (Haberland 1959b)

Cañas Incised (Haberland 1961a)

Cañas Zoned (Haberland 1976)

Bugaba Ware (Spang et al. 1980)

Bugaba Engraved (Baudez et al. 1993)

Chronology: A.D. 700-800 (Baudez et al. 1993)

Geographical Distribution:

Upper General Valley (Corrales 1988)

Chiriquí Highlands (Spang et al. 1980, Linares 1980a)

Chiriquí Mid-lands (Shelton 1984a)

Middle Térraba Basin (Corrales et al. 1992)

Coto Brus Valley (Haberland 1959b, Corrales 1988)

Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:73, Fig. 21:a-g

Haberland 1959b: Tafel XIV:c-d

Type: Bugaba Engraved

Variety: Lacoste

Complex: Camibar/Agua Buenas

Sphere: Diquís

Sample: 26

Vessel Form:

composite silhouette bowls, tripod, with convex base and vertical concave walls. Direct or gradually thickened rim. Round or flattened lip

Body:

Rim diameter: 18-26 cm.

Paste: slightly less coarse than Bugaba variety

Surface:

Finish: slip in the whole surface and traces of polishing

Decoration:

As in the Bugaba variety, but lines are less undulated, less deep and more regular. Panel on the upper exterior half. geometrical motifs, angular, with oblique or vertical lines that form triangles bordered with dots.

Type History:

Red Incised (Haberland 1959b)

Cañas Incised (Haberland 1961a)

Cañas Zoned (Haberland 1976)

Bugaba Ware (Spang et al. 1980)

Bugaba Engraved, v. Lacoste, proposed by Baudez et al. 1993

Chronology: A.D. 700-800 (Baudez et al. 1993)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:73, Fig. 21:h

Haberland 1959b: Tafel XIV:e

Cotito-Cerro Punta v. Cotito

This type established by Haberland was followed by Spang et al. (1980) who suggested that it could be a variety of Cerro Punta. Baudez et al. (1993) in fact established it as a variety of its Cerro Punta Orange type. It corresponds mainly to closed and open bowls with incised decoration and appliqué.

Ware: Cotito

Complex: Bugaba

Sphere: Western Panamá

Vessel Form: only body sherds

Paste:

Texture: compact

Temper: fine to medium grained, sand-like

Color: buff to reddish orange

Surface:

Color: buff or dark gray

Finish: smoothed to produce an even surface

Decoration:

a. thick, orange slip

b. parallel grooving or incising on the exterior

c. appliqué plain lobes arranged in a flower design or surrounded by round punctation may be superimposed on the parallel lines

Ware History:

Proposed by Spang et al. (1980:357)

Chronology: A.D. 200-600 (Linares 1980a)

Geographical Distribution: Highlands of Chiriquí (Linares 1980a)

Comparison: Spang et al. 1980:355, Fig.9/1:m-p

Type: Cerro Punta Orange

Variety: Cotito

Complex: Camibar/AB

Sphere: Diquís

Sample: 33 examples in stratigraphy

Vessel Form:

restricted bowls, convex convergent rim. Because of the form and position of appliqué they could be zoomorphic effigy vessels

Body:

Rim and Lip: direct rim, rounded lip or slightly thickened on the interior with flattened lip.

Rim diameter: 7-30 cm.

Paste:

Texture: from coarse to medium

Surface:

Color: Maroon

Finish: scaped on the exterior, smoothed to polished on the interior, sometimes with red slip on the interior

Decoration:

a panel, exceptionally two, on the exterior, upper half part, that combine incised lines and appliqué elements. Groups of 3 to 5 wide incised lines that enclosed the following appliqué motifs:

pellets with a central depression (coffee bean)

pellet with a T incision and dentated fillet (leg?)
 triangular element with short incisions in the superior part (wings or tail?)
 an arm or leg appliquéd parallel to the mouth
 a cone

Supports:

pedestal base

Type History:

Cerro Punta v. Cotito, proposed by Baudez et al. 1993:64

Cotito Ware (Spang et al. 1980)

Chronology:

A.D. 600-800 (Baudez et al. 1993:64)

A.D. 200-600 (Linares 1980a)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:65, Fig. 16:a-k

Spang et al. 1980:355, Fig. 9/1 m-n

Barriles-Guarumal-Zoned Bichrome Ware

Another distinctive pottery receiving different denominations. The initial Red on Brown (Haberland 1959a) and Red on Cream (1960b), renamed as Barriles Zoned (Haberland 1961a). It refers to pottery with slipped zones alternated with unslipped areas or zoned bichrome as in the definition of Spang et al. (1980). Shelton (1984) identifies her Ware K as equivalent of the Zone Bichrome Ware. Baudez et. al (1993) consider that their Guarumal Incised variety Guarumal corresponds with most of the initial Haberland Red on Brown Incised.

Type: Barriles Zoned

Complex: Aguas Buenas

Sphere: Greater Chiriquí

Sample: 6 rims, 13 fragments

Vessel Form:

jars with outflaring rims, direct or exteriorly thickened, rounded lips

Surface:

Color: brownish, interior red, to light brown red

Finish: polished

Decoration: Geometrical motifs, incised lines delimited areas with red slip from unslipped areas.

Type History:

Red on Brown (Haberland 1959a)

Red on Cream (1960b)

Barriles Zoned (1961a)

Zoned Bichrome Ware (Spang et al. 1980)

Guarumal Incised v. Guarumal (Baudez et al. 1993)

Chronology: A.D. 300-500 (Haberland 1976)

Geographical Distribution: Coto Brus Valley (Haberland 1976)

Comparison: Haberland 1959b: Tafel XIV:a

Ware: Zoned Bichrome

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

Urns

restricted bowls

jars

Paste:

Texture: fine tempered sherds are compact, fine grained and feel like sandpaper. Those sherds with larger grain, more angular temper are also compact, but rougher

Temper: fine to medium, gray, angular, sand-like particles evenly distributed throughout the paste

Color: fine tempered sherds are light beige, larger grain temper: buff to reddish brown

Surface:

Decoration: Red and orange slip, polished. Thin pigments of two colors may be applied: red with buff, orange-yellow with maroon, orange with red, and orange with buff. The differently colored pigments on the exterior are separated by grooves or wide incisions in geometric designs.

Ware History:

Red on Brown (Haberland 1959a)

Red on Cream (1960b)

Barriles Zoned (1961a)

Zoned Bichrome ware (Spang et al. 1980)

Ware K: Zoned Bichrome (Shelton 1984a)

Guarumal Incised v. Guarumal (Baudez et al. 1993)

Chronology: A.D. 200-600 (Linares 1980a)

Geographical Distribution: Highlands of Chiriquí (Linares 1980a)

Comparison:

Haberland 1959b: Tafel XIV:a-b

Spang et al. 1980:355, Fig.9/1:q-s

Ware: Ware K: Zoned Bichrome

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

Urns

jars

Body:

Rim and Lip: The slip slants outward and is slightly thickened

Rim diameter: 36 cm.

Paste: Similar to Ware H

Surface:

Color: pale orange

Finish: The lip is slipped a pale orange as in the interior. the exterior is unslipped and has a curvilinear design of uneven thickness with slip inside the design.

Decoration: The interior and the lip are slipped on pale orange. On the exterior curvilinear designs separate slipped from unslipped areas. Some designs look like birds. Some incised areas are filled with a second or third color, usually an orange or red.

Ware History:

Red on Brown (Haberland 1959a)

Red on Cream (1960b)

Barriles Zoned (1961a)

Zoned Bichrome ware (Spang et al. 1980)

Ware K: Zoned Bichrome (Shelton 1984a)

Guarumal Incised v. Guarumal (Baudez et al. 1993)

Chronology: A.D. 200-600 (Shelton 1984a)

Geographical Distribution: San Vicente- Concepción (Shelton 1984a)

Comparison:

Ichon 1968

Shelton 1984a: Fig. 4-6:k; 1984b: Fig. 10:f; 1995: Fig. 6:m.

Spang et al. 1980: Fig, 9/1:q-s.

Type: Guarumal Incised

Variety: Guarumal

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 20 specimens from stratigraphy

Vessel Form:

Jars or bowls in form of an inverted mushroom

Body: Globular

Rim and Lip: Lips are direct or gradually thickened on the exterior

Neck: everted concave, sometimes tall

Rim diameter: 30-40 cm.

Paste:

Texture: medium to coarse, compact or loose, regular or irregular fracture

Color: maroon to reddish maroon

Surface:

Finish: smoothed or polished, interior and rim slipped red

Decoration: wide incised lines, sometimes deep (more than 1 mm.), located in the upper half of the exterior, groups of two or three oblique or vertical lines delimiting zones, sometimes slipped on red, alternating with unslipped zones.

Type History:

Red on Brown (Haberland 1959a)

Red on Cream (1960b)

Barriles Zoned (1961a)

Zoned Bichrome Ware (Spang et al. 1980)

Ware K: Zoned Bichrome (Shelton 1984a)

Guarumal Incised v. Guarumal (Baudez et al. 1993)

Chronology: A.D. 700-800 (Baudez et al. 1993:67)

Geographical Distribution:

Diquís Delta (Baudez et al. 1993)

Middle Térraba Basin (Corrales et al. 1992)

Coto Brus Valley (Haberland 1959b)

Comparison:

Baudez et al. 1993:66, Fig.17 a-g.

Haberland 1959b: Tafel XIV:a

Plain and Combed Wares

Spang et al. (1980) proposed two wares: Plain and Combed for pottery related with the other ones, but without decoration in the case of the Plain Ware or with a distinctive combed exterior surface.

Ware: Combed

Complex: Bugaba

Sphere: Western Panamá

Paste:

Texture: compact

Temper: either fine, round or larger, angular sand-like particles are evenly mixed within the paste

Color: gray brown to dark gray

Surface:

Color: brown or dark gray

Finish: slightly smoothed. Surface remains rough in some places

...

Decoration:

- a. thick slip (orange, red or maroon) in the interior and over the lip. The exterior remains smoothed but unslipped.
- b. exterior combing or thin, incised lines running parallel to each other and slightly curved, or are cross-hatched
- c. one body sherd, unslipped, had traces of white paint in the exterior
- c. appliqué bands in zoomorphic motifs.

Ware History:

Combed Ware, proposed by Spang et al. (1980:358)

Chronology: A.D. 200-600 (Linares 1980a)

Geographical Distribution: Highlands of Chiriquí (Linares 1980a)

Comparison: Spang et al. 1980:355, Fig.9/1:t-x

Ware: Plain

Complex: Bugaba

Sphere: Western Panamá

Vessel Form:

bowls

jars

Paste:

Texture: compact to friable

Temper:

fine, round or larger, angular sand-like particles, well distributed throughout the clay

Color: buff, light brown, light gray, light beige.

Surface:

Color: buff, light brown or gray, light beige

Finish: smoothed or very rarely unsmoothed and rough

Decoration:

smoothing, no polishing on exterior and interior. Exterior more carefully finished

- a. lines, grooves, wide and narrow incisions on bowls and jars
- b. appliqué: plain lobes and a zoomorphic representation on body sherds.

Ware History:

Plain Ware, proposed by Spang et al. (1980:358-359)

Chronology: A.D. 200-600 (Linares 1980a)

Geographical Distribution: Highlands of Chiriquí (Linares 1980a)

Quebradas Plain-Incised

A particular type for the Diquís Subregion, with a remarkable presence in the Upper General Valley, where generally comprises most of the pottery in domestic sites. It could be a spatial and temporal marker. Corrales (1988) initially considered it as a new complex based on the coarser appearance than the already known Aguas Buenas pottery. But, its consistent association with other Aguas Buenas types led to his definition as type with two varieties: plain and incised (Drolet 1992, Baudez et al. 1993). This type has not been identified in the Coto Brus or in the Coto Colorado Valleys, or in Western Panamá. It is also considered one of the earliest types of the Aguas Buenas complex.

Type: Quebradas Tosco

Variety: Simple

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 247

Vessel Form: large composite silhouette bowls, like an inverted mushroom

Body: upper part more wider separated from the lower part by an incised band, straight walls

Rim and Lip: thickened

Neck: straight or slightly outcurved

Base: rounded, flattened

Wall thickness: 0.5- 3 cm.

Rim diameter: 8-46 cm., usually 20-40 cm.

Paste:

Texture: heterogeneous, friable, regular fracture

Temper: quartz particles

Color: reddish maroon with a gray or black core

Decoration: Red slip in the interior and exterior, on the rim and lower part of the body. Upper part is smoothed and unslipped. Few vessels are completely slipped.

Type History:

Quebradas Complex (Corrales 1988)

Quebradas Incised (Drolet and Siles 1988, Drolet 1992)

Chronology:

A.D. 600-800 (Baudez et. al 1993)

300 B. C.-A.D. 300 (Corrales et al. 1988)

Geographical Distribution:

Upper General Valley (Corrales 1988, 1996b, Henderson 1986, Kantner 1988, Rago 1988, Drolet and Siles 1988, Drolet 1992)

Curré (Corrales et al. 1992)

Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:57: Fig. 12:a-d

Corrales 1988:95, Fig. 3, 98: Fig.4

Type: Quebradas Tosco

Variety: Incised

Complex: Camibar/Aguas Buenas

Sphere: Diquís

Sample: 18

Vessel Form: large composite silhouette bowls, like an inverted mushroom

Body: upper part more wider separated from the lower part by an incised band, straight walls

Rim and Lip: thickened

Base: rounded, flattened

Wall thickness.

Rim diameter:20-40 cm.

Paste:

Texture: heterogeneous, friable

Temper: many

Color: maroon with a gray core

Surface:

Finish: red slip covers the whole vessel

Decoration: in the upper part of the body, wide incised lines 1 mm., executed before slip and, delimited by a single line below the rim, and two lines in the lower part, lines can be vertical or oblique, sometimes cross-hatched, groups of 3 to 4.

Type History:

Quebradas Complex (Corrales 1988)

Quebradas Incised (Drolet and Siles 1988)

Quebradas Incised, Monochrome (Drolet 1992)

Chronology:

A.D. 600-700 (Baudez et. al 1993)

300 B. C.-A.D. 300 (Corrales et al. 1988)

Geographical Distribution:

Upper General Valley (Corrales 1988, 1996b, Henderson 1986, Kantner 1988, Rago 1988, Drolet and Siles 1988, Drolet 1992)

Curré (Corrales et al. 1992)

Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:57: Fig. 12:a-d

Corrales 1988:95, Fig. 3, 98: Fig.4

Drolet and Siles 1988:9, Fig. 4

Type: Quebradas

Complex: Aguas Buenas

Sphere: Diquís

Sample: 166

Vessel Form:

Body: wide mouth bowls, semi-straight walls, angle with the lower part of the body

Semi globular jars, restricted neck, thickened lip

open bowls

Rim and Lip: exteriorly thickened rim

Neck: straight or slightly incurved

Base: rounded

Wall thickness. 1 cm.

Rim diameter: up to 40 cm.

Paste:

Temper: fine to large feldspatic sandstone particles, vegetal fiber (less than 3%)

Color: beige to reddish brown and dark brown

Surface:

Finish: smoothed

Hardness: 2.5-5 (Mohs scale)

Decoration: geometric designs with broad incised lines. The most frequent motif is groups of parallel incised lines in form of a rhombus or "V"s, sometimes alternated. They are located below the rim and extended until the angle. Other designs, less common, are fingernail stamping associated with incised lines, and punctuation.

Type History:

Quebradas complex (Corrales 1988)

Quebradas Incised (Drolet and Siles 1988)

Quebradas Incised, Plain (Drolet 1992)

Quebradas Plain, Incised (Baudez et al. 1993)

Chronology:

A.D. 600-700 (Baudez et al. 1993)

300 B. C.-A.D. 300 (Corrales et al. 1988)

300 B.C.-A. D.100 (Drolet 1992: 213,216)

Geographical Distribution:

Upper General Valley (Corrales 1988, 1996b, Henderson 1986, Kantner 1988, Rago 1988, Drolet and Siles 1988, Drolet 1992)

Curré (Corrales et al. 1992)

Diquís Delta (Baudez et al. 1993)

Comparison:

Baudez et al. 1993:57: Fig. 12:a-d, 59: Fig. 13

Corrales 1988:95, Fig. 3, 98: Fig.4

Drolet and Siles 1988:9, Fig. 4

Kantner 1988, Plate I:A

Drolet 1992:214: Fig. 4: 1-6.

C. SAN LORENZO PHASE

The ceramic types of the San Lorenzo Phase established for Linares (1968) for the coast of Chiriquí are characterized for polished surfaces and decoration using red bands or lines. Linares considered some of them restricted only to the San Lorenzo Phase (Banco Red Line, Castellón Red Slipped) while the others will be also present in the Chiriquí Phase. However, the distribution in stratigraphic pits of sherds associated with the different types show mixing of the different complexes. While tendencies for late types are clear, the red lined types may appear in all levels, as well as the Isla Palenque Maroon type of the Burica Phase, causing an overlap in ceramic frequencies (Linares 1980:107).

Red lined vessels have also appeared in Chiriquí graves, but not San Lorenzo cemeteries are known. Besides late versions of red banded ceramic, exchange with contemporaneous San Lorenzo populations or even heirlooms can account for the presence of those vessels.

Ranere (1968) postulated two types: Balsas Polished and Quebrada Baúles Brushed for the Burica District. They seem to be local variants of the types established by Linares (1968).

Type: Arayo Polished Line

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

globular jars without necks and with rims that flare out directly from the shoulder

effigy jar

vessels with tall necks and globular bodies

Body:

Rim and Lip:

1. long everted rims with an angle with the shoulder

2. short rims, sharply everted

3. inslanted direct rims belonging to deep bowls

4. straight rims to tall-necked jars

Base: rounded

Wall thickness: 0.7-1.0 cm.

Rim diameter:

1. 30-38 cm.

2. 8.5 cm.

Paste:

Texture: Compact, breaks along straight lines

Temper: A "dirty" clay with some natural impurities decomposed granitic sand, feldspar, quartz, hematite.

Color: buff to pale gray

Surface:

Color: buff to reddish brown on the exterior. Interiors may be pale gray

Finish: On globular jar both sides are polished. On short-necked jars the interior is unpolished

Hardness: 4

Decoration:

Narrow (2.5 mm.) and wide (1.2 cm.) polished red lines or bands in the upper half of the vessel

1. Sets of four to seven lines that meet or overlap. The outside lines have rows of ovoid dots. A wide band encircles the neck

2. A horizontal band or a set of thin horizontal lines with pendant triangles

3. sets of thin parallel lines meet each other at right angles and are separated by wide bands on the outside. This is the most common motif

4. additional decoration is appliqué coffee-bean eyes and appliqué strips in the form of a nose and two arms

Handles: strap handles

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Arayo Polished Line (Linares 1968)

Muertos Red Line? (Haberland 1976)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

Holmes 1888: Fig. 160

MacCurdy 1911: Plate XXV:c

Lothrop 1963: Fig. 69:a

Linares 1968: Fig. 15, Plate 7:g-o, 1980b: Fig. 10/1:f

Haberland 1976: Fig. 3:l?

Type: Banco Red Line

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

globular jars

Body:

Rim and Lip:

everted rims with unmodified lips belonging to jars

Base: rounded

Wall thickness: 6-8 mm.

Paste:

Texture: ranges from very compact in sherds with "pure" clay to slightly porous in those containing small amounts of decomposed granitic sand. Breaks vary from regular to jagged edged

Temper: a fairly "pure" clay containing rounded nodules of hematite and a very small quantity of decomposed granitic sand

Color: orange buff to very light gray.

Surface:

Color: buff

Finish: low polish that compacts the surface

Hardness: 2.5-3.0

Decoration:

Between the neck and the shoulder, horizontal lines delimited the decorated area.

1. Intersecting sets of four parallel thin lines with outer lines decorated by a row of pendant dots

2. triangular motif made up of parallel lines connected by transversal lines. The area in the center is decorated with solid red splotches of paint

Handles: strap handles joining body and lip

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Banco Red Line (Linares 1968)

Chronology:

A.D. 800 1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

MacCurdy 1911:Fig.160

Linares 1968:Fig. 16, Plate 8:a-b

Type: Caco Red Slipped

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

Body:

Rim and Lip:

1. large rims with varying angles of eversion and lip treatment
2. short everted rims with rounded, pointed, thickened or flattened on the outside lips.
3. incurving rims belonging to deep bowls

Wall thickness: thick: 1.2-1.5 cm., thin: 6-8 mm.

Rim diameter:

1. 28-33 cm.
2. 16-18 cm.
3. 7-18 cm.

Paste:

Texture: gritty, breaks irregularly

Temper: "dirty" clay: particles of hard clay, decomposed granitic sand, quartz, hematite and feldspar, unevenly distributed.

Color: light buff in the surface, dark core in thicker sherds

Surface:

Color: buff, light orange to light gray

Finish: Exterior, polished with a pebble that leaves wide striation marks. Interior, smoothed

Hardness:4

Decoration:

Leathery red-brown slip applied to a previously polished surface

- a. slip covers the entire outer surface
- b. slip is applied in zones in the exterior
- c. interiors of the thick rims and some of the exteriors are slipped
- d. thin rims may be slipped in both sides or only in one

Type History:

Caco Red Slipped (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison: Linares 1968:Fig. 17

Type: Cangrejal Red Line

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form

variations of deep or shallow bowls with incurving side walls, constricted mouths and tripod feet in the shape of flat straps. . .

Body:

Rim and Lip:

direct rims belonging to deep bowls with sharp or gradual angle of incurving (composite silhouette). Lips can be rounded or tapered

Base: concave

Wall thickness:

thick; 8-10 mm.

thin: 4-8 mm.

Rim diameter: 15-26 cm.

Paste:

Texture: very compact, Regular fracture

Temper: fairly "pure" clay mixed with little, if any, tempering material. Natural inclusion are hematite nodules (0.5-3.0 mm.) and few feldspar particles.

Color: light buff to dark gray, depending in the degree of oxidation

Surface:

Color: bright orange to light buff or cream

Finish: polishing on both sides, surfaces varying from smooth to shiny

Hardness: 4

Decoration:

Thin red (bright rich red or leathery brown) lines painted on the polished, unslipped exterior, between the lip and the shoulder. The lip is painted with a band that extends into the interior. A thin band at the shoulder encircled the painted area.

1. several lines are arranged in sets that join alternately at the rim or at the shoulder to define a triangular area. The lines defining the triangles have pendant shorter lines

2. the number of parallel diagonal lines varies from 6 to 10 in a set. The space left between the sets of lines is filled entirely with paint, creating a motif of solid red triangles, alternately facing down from the lip or up from the shoulder.

3. A few of the shallower bowls present one or two small round nubbins in the center of the triangular space.

Supports: strapped feet

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Cangrejal Red Line (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

Holmes 1888, Fig. 158, 159

MacCurdy 1911: Fig. 156

Haberland 1960

Linares 1968: Fig. 18, Plate 9, 1980a: Fig. 7.0-5:Type 5, 1980b:Fig. 10/1:g-h

Type: Castellón Red Slipped

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

Deep open bowls: a. with insloping rims that probably rest on ringstands or low pedestal bases, b. straight-sided flaring bowls with outcurved rims and flat lips.

Body:

Rim and Lip:

1. slightly incurved rims, rounded or interiorly thickened lips

2. straight, outflaring rims with lips that are flat at the top

Wall thickness: 7-10 mm.

Rim diameter:

1. 18-24 cm.
2. 24-28 cm.

Paste:

Texture: compact, breaks regularly

Temper: little, if any, tempering material has been added to the clay.. Hematite and feldspar particles are natural inclusions

Color: red buff, gray core

Surface:

Color: bright orange, attenuated buff, lighter buff

Finish: both surfaces have been polished

Hardnes:4

Decoration:

Bright rich red slip applied thickly in a previously polished surface. After application the slip was polished.

- a. the slip covers the interior, the lip and a narrow (1 mm.) irregular band on the exterior.
- b. In a small number of outcurved bowls the slip covers both surfaces.

Supports:

Ringstands that are plain or slipped on the exterior and slipped brightly in red in the interior
low pedestal bases with an unslipped, incised exterior and a bright red slip in the interior

Type History:

Castrellón Red Slipped (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison: Linares 1968:Fig. 19, Plate 10:i-m, 1980b: Fig. 10/1:e

Type: Centeno Red Banded

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

effigy jars with a tall neck

Body:

Rim and Lip:

everted with lips that are gradually thickened and flat at the top

Base: rounded

Wall thickness: 0.7-1.0 cm.

Paste:

Texture: Compact, breaks cleanly

Temper: an almost "pure" clay with some hematite inclusions

Color: cream

Surface:

Color: cream

Finish: Polished when the clay was wet

Hardness: 3.5-4

Decoration:

Red painted bands on the polished unslipped exterior surface: wide: 0.7-1.0 cm., narrow: 2-3 mm. Wide bands divide the decorated area, between the base of the neck and the shoulder, into rectilinear zones containing straight, narrow lines. Occasionally wide bands meet to form a more extensive solid red area. The inner thin lines may have pendant ovoid blobs.

The neck may have pellets and fillets appliqué with punctation and incision to figure a face.

Handles: strap handles that join the shoulder with lip

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Centeno Red Banded (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison: Linares 1968: Fig. 20, Plate 7:a-f

Type: Horconcitos Red Banded

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

a large globular jar with rounded, slightly thickened base, a constricted mouth, and a sharply everted rim with a wide flat tip

Body:

Rim and Lip:

sharply everted, with a thick rim and a flat lip

Base: rounded slightly thickened

Wall thickness: 8-10 mm.

Paste:

Texture: ranges from very compact in sherds with "pure" clay to slightly porous in those containing small amounts of decomposed granitic sand. Breaks vary from regular to jagged edged

Temper: a fairly "pure" clay containing rounded nodules of hematite and a very small quantity of decomposed granitic sand

Color: orange buff to very light gray.

Surface:

Color: exterior range from a rich yellow to orange, interiors is either light buff or gray

Finish: exteriors are always polished, interiors were brushed leaving faint striations

Hardness: 2.0-2.5

Decoration:

Red bands, 1 cm. in width, painted in the shoulder below the lip. The interior of the lip may be painted with a wide band

The most characteristic decoration in this type is shallow incisions made on the rim interior below the painted band.

Wide painted bands may also occur on the exterior

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Horconcitos Red Banded (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

MacCurdy 1911: Plate XXV:d.

Linares 1968:Fig. 21

Type: Linarte Zoned Red Line

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

globular jars with rounded slightly thickened bases, a stepped vessel wall and outflaring rims that extend into strap handles

Body:

Rim and Lip:

everted rims with unmodified rims

Base: rounded bases slightly thickened to add stability, all vessels have a "stepped" body wall or break on the contour.

Wall thickness: 5-9 mm.

Paste:

Texture: ranges from very compact in sherds with "pure" clay to slightly porous in those containing small amounts of decomposed granitic sand. Breaks vary from regular to jagged edged

Temper: a fairly "pure" clay containing rounded nodules of hematite and a very small quantity of decomposed granitic sand

Color: orange buff to very light gray.

Surface:

Color: exteriors are a rich yellow to orange, interiors are either light buff or gray

Finish: exteriors are always polished, interiors were brushed leaving faint striations

Hardness: 2.0-2.5

Decoration:

Narrow (2 mm.) and wide (8 mm.) bands painted in red on previously polished surface.

The painted area is delimited by a red band around the base of the neck, and one or two lines at the shoulder line. The painted area is divided in two horizontal sections by a band under the shelf or depression on the vessel wall.

a. narrow line, in sets of four or five, meet each other at right angles, alternating first near the neck band, then at the shoulder band. The sets of narrow lines may also meet along a horizontal plane at the center of the vessel, an additional feature in some is a small, curving "tail". The thin outer line has a row of dots or pendant small blobs.

b. sections of narrow lines intersect rather than just meet. Sets of three parallel lines may crosscut, or the number of narrow lines in a set may be five or more. Several lines (often more than 10) may intersect to fill triangular spaces.

Handles:

strap handles that join the lip with the body. They have appliqué incised strips, punctuation and coffee-bean motifs.

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Linares Zoned Red Line (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

Lothrop 1963: Fig. 69:d

Linares 1968, Fig. 22, Plate 12

Type: Pan de Azúcar Red Line

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

Rounded bowls (tecomates) with curving or slightly angular shoulders, constricted mouth and unmodified base and rim.

Body:

Rim and Lip:

incurved direct rims, slightly thicker near the mouth

Base: rounded

Wall thickness: 5 mm.

Paste:

Texture: ranges from very compact in sherds with "pure" clay to slightly porous in those containing small amounts of decomposed granitic sand. Breaks vary from regular to jagged edged

Temper: a fairly "pure" clay containing rounded nodules of hematite and a very small quantity of decomposed granitic sand

Color: orange buff to very light gray.

Surface:

Color: buff

Finish: low polish that leaves faint horizontal striation marks

Hardness: 2.5-3

Decoration: thin red lines decorate the exterior between the shoulder and rim. A thin line encircles the bowl at the shoulder and around the lip. Parallel lines that are not equidistant are drawn between the lip and the shoulder band. They may cross over the band

Type History:

Red Line Wares (Holmes 1888, MacCurdy 1911)

Pan de Azúcar Red Line (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison: Linares 1968: Fig. 23.

Type: Zapote Red Banded

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

1. deep, outflaring, straight-sided bowls resting on ringstands or low pedestal
2. deep open bowls with concave walls terminating in rounded or flat lip
3. shallow open bowls with markedly thickened rims, ringstands or pedestal bases.

Body:

Rim and Lip:

outflaring direct rims with modified lips: rounded, flattened or thickened

Wall thickness: 0.6-1.1 cm.

Paste:

Texture: Compact, breaks regularly

Temper: Homogenous "pure" clay containing very little feldspar, but large amounts of small rounded hematite particles.

Color: buff to light gray

Surface:

Color: light buff or orange-red color in both surfaces, dark gray in both surfaces

Finish: both surfaces polished

Hardness: 4

Decoration:

Red bands (8-10 mm., 2-3 mm.) on the unslipped polished exposed interior surface.

Lips are always painted in red, paint occasionally continues over the lip and merges with a band 1 cm. wide painted on the exterior of the rim.

1. parallel bands drawn at right angles to the lip. In complete vessels the bands would meet at the center to form chevron designs.
2. red painted bands placed obliquely to the rim so that they meet before the center of the vessel to form concentric triangular designs.
3. Few sherds are slipped with a bright red on the exterior surface and on the lip.

Supports:

ringstands

pedestal bases

Type History:

Red Line Ware (Holmes 1888, MacCurdy 1911)

Zapote Red Banded (Linares 1968)

Chronology:

A.D. 800-1100 (Linares 1968:86)

A.D. 700-900 (Linares 1980a:107,108,116).

A.D. 700-1000 (Linares 1980e:76)

Geographical Distribution: Coast and Gulf of Chiriquí (Linares 1968)

Comparison:

MacCurdy 1911: Fig. 159

Linares 1968: Fig. 24, Plate 10 a-h; 1980a:Fig. 7.0-5:Type 6, 1980b: Fig. 10/1:i-k

Type: Balsa Polished

Complex: San Lorenzo

Sphere: Western Panamá

Sample: 50 sherds

Vessel Form:

open bowls was the only form identified

Body:

Rim and Lip:

Group 1: slightly outflaring rim, which is an extension of the body wall

Group 2: everted rim lightly thickened on the inside having an angular profile

Group 3: direct rim, extension of the body wall. The rim has a grooved lip like a sugar bowl. The vessel probably has a top.

Wall thickness: 5-13 mm.

Rim diameter:

Group 1: 17 cm.

Group 2: 14 cm.

Group 3: 22 cm.

Paste:

Texture: Uniform, fine and compact, breaks along straight lines

Temper: small rounded red (hematite) and black (magnetite?) particles (less than 1 mm.)

Color: Off-white to buff orange and more rarely, light gray

Surface:

Color: dirty white to buff, with some gray areas due to fireclouding.

Finish: exterior is very highly polished, the interior is sometimes lightly polished and sometimes smoothed

Hardness: 3.5-4

Decoration: A uniform red strip 1-2 mm. wide is painted along the rims. The rest of the exterior is polished, but not painted.

Handles:

flat strap handles, relatively small

Type History: Balsa Polished (Ranere 1968)

Chronology: A.D. 800-1100 (Ranere 1968)

Geographical Distribution: Only in collections from sites BA-8, BA-8a and BA-13, all located near the tip of the Burica Peninsula (Ranere 1968)

Comparison: Balsa Polished may simply be another one of the Red Line Wares (Ranere 1968:111) (See Zapote Red Banded).

Type: Quebradas Baúles Brushed

Complex: San Lorenzo

Sphere: Western Panamá

Vessel Form:

large globular jars with short necks and large openings

Body:

Rim and Lip:

Group 1: everted rims of large globular vessels with short necks. The contour of the lip is angular tending toward being rectangular

Group 2: vertical or slightly everted thickened rim, pointed lip

Wall thickness: 5-15 m.

Rim diameter:

Group 1: 20-45 cm.

Paste:

Texture: Coarse and somewhat friable, fractures irregularly

Temper: small angular quartz particles with minor inclusions of rounded, red particles (hematite) and other materials.

Color: buff to reddish brown

Surface:

Color: dirty buff to dirty brown.

Finish: exterior body was roughly scraped. The surface appears to have been roughed with either cording, or a stiff brush, or a scraping tool. Rough parallel striations, 2-4 mm., are visible in a number of sherds. Rim and neck lightly polished. Interior is smoothed but not polished

Hardness: 2

Decoration: Same as finish

Type History: Quebradas Baúles Brushed (Ranere 1968)

Chronology: A.D. 800-1100 (Ranere 1968)

Geographical Distribution: Only in collections from sites BA-8, BA-8a and BA-13, all located near the tip of the Burica Peninsula (Ranere 1968)

Comparison: Ranere 1968: Fig. 49

D. CHIRIQUÍ PERIOD

The typologies for the Chiriquí Period are more consistent, but they are still plagued with the same problems of double names and different ranges of generalization. Some types are very consistent in the definition by different authors while others need an agreement of their level of inclusion. Particularly, the Ceiba Red and Brown type remains one of the most problematic. Also, there are several types defined by Haberland based on single specimens that need a revision.

Some of the ceramic types have a regional distribution, while others are restricted to particular areas or subregions. Types such as San Miguel Bisquit and Buenos Aires-Urabá Polychrome functioned at the regional level and reflect the links among the different subregions. Other types, such as Ceiba Red Brown, Papayal Engraved and Villalba Red Streaked are restricted to certain areas and mark subregional differences.

San Miguel-Tarragó Bisquit:

San Miguel Bisquit is one of the most distinctive ceramic types of the Greater Chiriquí Region. Its thin walls, biscuit-like paste, and graceful forms make it one of the more elaborated examples of the achievements of Precolumbian potters. Its formulation by Holmes (1888) has been followed by all the archaeologist in the region, but using different names. It has been proposed that this pottery was manufactured in the Chiriquí Plains, near David, Panamá, and from there exchanged throughout the whole region and beyond (Central Costa Rica). Osgood (1935:240) reported information from Chiriquí collectors that established a main distribution of the pottery associated with this type in the Highlands of Chiriquí, in contrast with Buenos Aires Polychrome, more common in the lowlands.

Haberland (1984:248) mentioned that thin sections of San Miguel Bisquit are all identical, regardless of where the vessels have been found. However, Linares distinguished two kinds of pastes in the samples that she obtained from Isla Villalba and Las Secas Sites in the coast of Chiriquí. In the study sample, with the exception of a small vessel, the vessels' pastes were very similar.

In Western Panamá, vessels of this type is one of the most frequent as funerary offering. It has also been recorded with relatively low density at domestic deposits in coastal Chiriquí (Linares 1968). In Costa Rica, it is common as a funerary offering, but its presence in domestic contexts is very rare (1 sherd at the Curré Site, 1 sherd in Lothrop's Diquís excavation, and 1 sherd in Baudez et al.'s Diquís excavations). In Haberland's opinion, this kind of ceramic was imported to Southern Costa Rica from Chiriquí, where it was produced by specialists in one village or a small group of adjoining villages (1976:118, 1984:248). The same origin is suggested by Kudarauskas et al. (1980:385) for Bisquit sherds found in the Cerro Brujo area, in Caribbean Panamá. It seems that in the Coto Brus zone, local peoples were manufacturing coarse copies of this pottery, that it has been called Bisquit Coarse (Laurencich de Minelli and Minelli 1966, Stone 1977:111). This also reflects a restricted area of manufacture and the high regard for this type.

Type: San Miguel-Tarragó Bisquit

Complex: Chiriquí

Sphere: Greater Chiriquí

Vessel Form:

oval-globular jars with short or long, straight, or everted rims

deep bowls with insloping walls and either unmodified or thickened rims

shallow bowls with outsloping walls and either unmodified or thickened rims

jar miniatures

zoomorphic vessels

Body: oval, ovoid, ellipsoidal, globular

Rim and Lip:

outflaring short, everted and outcurved rims from globular jars: folded, thickened lips

outflaring rims slighter longer, unmodified, tapered and thickened lips

outslanting rims from fairly deep bowls

direct rims belonging to bowls: incurved, straight

Neck: short straight, short everted

Base: rounded, pointed

4. Physical Dimensions:

Thickness: Rim-Lip: 0.25-0.5 cm.

Wall thickness: 2.5-6 mm.

Rim diameter: 4-22 cm.

Paste:

Texture: porous and friable, breaks irregularly with jagged contours

Temper: minute particles of pumice, also small pinpoint inclusions of a black and shiny laminated material (probably magnetite) (Linares 1968:38, Corrales 1994)

b. particles of angular crushed quartz and other crushed rocks of different kinds (Linares 1968:38)

Color: Buff, reddish and grayer shades (Linares 1968), gray, pink, reddish yellow, light brown, gray, very pale brown (Corrales 1994)

Surface: San Miguel Bisquit is mainly an unslipped pottery, but in some cases a slip of the same material was added.

Color: Ranges from buff to reddish orange to pale gray, no fire clouds (Linares 1968), pink, light brown, very pale brown, pale brown-light yellowish brown (Corrales 1994)

Finish: exterior smoothed, sand papery feel, polished in some cases, interior no smoothed

Hardness: 2-2.5

Firing: very good oxidizing

Decoration: All decoration is plastic, consisting of small modeled and appliqué zoomorphic (frogs, armadillos) and anthropomorphic (squatting figurines in some cases with hairdresses or conical hats) adornos, appliqué fillets and nodes, incisions and punctuation

Handles: High handles, rare

Supports:

a. hollow mammiform with pellets inside

b. short pedestal bases.

Type History:

Terra-Cotta Group (Holmes 1888:67-80)

Armadillo Group and Salmon Colored subgroup (MacCurdy 1911:48-72)

Armadillo-Terra-Cotta Group (Osgood 1935)

Bisquit Ware (Haberland 1959a)

San Miguel Bisquit (Haberland 1961a, 1976)

Bisquit Pulido-Bisquit Tosco (Laurencich de Minelli and Minelli 1966:12-23)

Polished Bisquit-Crude Bisquit (Stone 1977:111)

Tarragó Bisquit (Linares 1968:40-41)

Bocas Bisquit Ware (Kudarauskas et al. 1980:388-389)

Chronology:

A.D. 1100-1500 (Linares 1968:86),

A.D. 1200-1500 (Haberland 1976:116)

A.D. 1000-1500 (Baudez et al. 1993)

Geographical Distribution:

Drainage Area of the Bay of David, north and west of David, 50 square miles (Holmes 1888) thousands of vessels

Divalá, Bugavita, Escaria (MacCurdy 1911) 1620 vessels

Bugavita, Divalá, near David (Osgood 1935), 1178 vessels

Highland and Lowland Chiriquí (Haberland 1961c)

El Zoncho, San Vito de Coto Brus (Laurencich de Minelli and Minelli 1966)

Coast and islands of Chiriquí (Linares 1968)

Osa Peninsula (Haberland 1960)

Diquís Delta (Stone, 1958, Lothrop 1963, Baudez et al. 1963)

Curré Site (Corrales 1985)

Punta Burica (Ranere 1968)

San Felix-Remedios (Ranere 1968)

Bocas del Toro ((Kudarauskas et al. 1980)

Comparison:

Holmes 1888: Figs. 54-56, 59-64, 66-68, 71-109

MacCurdy 1911: Figs. 55-115, Plates V-XVI

Haberland 1957, Fig. 4, 1959b: Tafel VII:i-l, Tafel IX:a-b, 1960 Fig. 12, 1961b Fig. 30; 1961c:

Tafel VI: b-i, Tafel XIII:j-n; 1976, Fig. 2:l, Fig. 3:C, 1984a, Fig. 1, 1984b, Fig. 9.5

Linares 1968:39, Fig. 26:a-aa, Plate 13, 1977: Figs. 151-152

Stone 1958, Fig. 6, d-g, 7a
Lothrop 1963: Fig. 69:c

Buenos Aires-Urabá Polychrome:

Polychrome pottery presents designs in red and black on cream or, in certain cases, reddish brown. It comprises a great range of forms. The design patterns are considered to be based on the alligator motif. It has a panregional distribution in Greater Chiriquí, but local differences and probably different centers of manufacturing have been suggested (Lothrop 1963:79, Haberland 1984a).

The original definition by Holmes (1888) as Alligator Ware were followed by other authors until the proposition by Haberland (1961a) of the Buenos Aires Polychrome type for Southern Costa Rica and the Urabá Polychrome for Western Panamá, subdividing the initial definition, based on vessel shapes and organization of motifs. Whether it is a whole different type or a variety is open to discussion, since the technique, colors and main motifs are very similar. A third variety, or a variety for the Urabá type, for naturalistic designs standing alone (alligator-like representations) can be proposed. Miniatures, figurines and ocarinas are included as part of Buenos Aires Polychrome.

Some of the differences were noted by Lothrop (1963:78), regarding size, shapes and designs for the Alligator Ware in Diquís and Panamá that correspond with the Buenos Aires and Urabá Polychrome types or varieties. He commented that in Chiriquí the dominant form (80%) is small globular jars with short necks, uncommon in Diquís. On the other hand, nearly 90% of vessels from the Diquís Delta, regardless of the shape, have tripod legs. In Chiriquí only 25% have legs and they are simpler than in the Diquís. Chiriquí pots are generally smaller than in Diquís.

Another difference suggested by Lothrop (1963:84) is that the decorations of the vessels in Chiriquí are more realistic representations of alligators (plumed with spines on its back or with conventionalized elements derived from them). In the Diquís, motifs are less realistic, with few vessels carrying the alligator designs. More common there are stylized motifs such as scales and crest symbols, V-elements, X-elements, triangles and dots, zigzags and dots, diamonds and dots. These are only recognizable as alligator motifs because intermediate stages are found in Chiriquí as noted by MacCurdy (1911). In Stone's opinion (1977:111), the Alligator Ware in Diquís represents an extension of Chiriquí culture with local variations.

The polychrome pottery could have been manufactured in local centers and then exchanged regionally. It is very common in graves, but almost absent in most of domestic deposits (Linares 1968, Drolet 1983). Exceptions are the Curré and Rivas Sites, where it was very abundant in domestic deposits. This sites could have been centers of manufacture. It is also very common in domestic deposits in the Diquís Delta Region (Lothrop 1963, Baudez et al 1963, Quintanilla 1992). Observations about the paste suggest different mineralogical compositions and therefore different centers of manufacture or different sources of raw material..

A final decision about the establishment of different types and varieties is beyond the scope of this work; it would be necessary a group discussion to avoid more confusions.

Type: Buenos Aires Polychrome

Complex: Chiriquí

Sphere: Greater Chiriquí

Vessel Form:

open bowls, rounded or slightly thickened lip

globular jars, thickened rim, rounded or slightly flattened lip

open bowls with thickened rims, rounded lip

composite silhouette bowls, rim slightly thickened on the interior, rounded lip

closed bowls (tecomates), rim slightly thickened on the interior, rounded lip

zoomorphic vessels

figurines

ocarinas

Body:

Rim diameter:

open bowls: 15-40 cm.

globular jars: 12-16 cm.

open bowls with thickened rims: 20-26 cm.

composite silhouette bowls: 18 cm.

closed bowls (tecomates). 8 cm.

Paste:

Texture: compact and homogenous, regular fracture

Temper: very fine temper particles (0.1-0.2 mm.), translucent and opaque white

Color: reddish maroon

Surface: white slip, polished

Color: light cream

Finish: polished

Decoration:

red and black on white or cream.

Red bands form friezes and panels, black lines and bands form the designs. The lip is usually covered with red

Usually a frieze in the exterior upper half part, in the interior there are usually two or three red and black lines under the lip. Friezes can be continuous or divided in rectangular panels, with enclosed designs: triangles with dots inside, hooks, semicircles, alligator stylized designs, other geometric designs ("guiloché").

Figurines and ocarinas are decorated with geometric designs on red and black, painted facial features, "tanga" or pubic cover in black.

In a possible variety, alligator motifs stand alone

Handles: ring handles

Supports:

zoomorphic (heads) solid or hollow, coatí representations

hollow, conical or cylindrical

anthropomorphic

pedestal bases

Type History:

Alligator Group (Holmes 1888, MacCurdy 1911, Osgood 1935)

Polychrome group (Black and Red Line), Diquís Polychrome Ware (Lothrop 1963: 78-87)

Boruca Polychrome (Haberland 1959b)

Buenos Aires Polychrome (Haberland 1961a, 1976)

Polychrome Group (Lothrop 1963)

Alligator Ware (Linares 1968:43-44)

Red and Black Line Ware (Stone 1977:110)

Chronology:

A.D. 800-1500 (Haberland 1976)

A.D. 1000-1500 (Baudez et al. 1993)

Geographical Distribution:

Drainage Area of the Bay of David, north and west of David, 50 square miles (Holmes 1888) thousands of vessels

Divalá, Bugavita, Escaria (MacCurdy 1911)

Bugavita, Divalá, near David (Osgood 1935), 137 vessels

El Zoncho, San Vito de Coto Brus (Laurencich de Minelli and Minelli 1966)

Las Secas Island Chiriquí, (Linares 1968:43) 1 sherd

Osa Peninsula (Stone 1958, Haberland 1960)

Diquís Delta (Lothrop 1963, Baudez et al. 1963)

Curré Site (Corrales 1985)
 Térraba Basin (Drolet 1983)

Comparison:

Holmes 1888: Figs.198:a-c, 226-229, 245, 249-256
 MacCurdy 1911: Figs. 244-249, 265-272, 275, 277-290, 294-297, 299, 303-313, 315-320, Plates XXXIX: a-e, XL: c-f, XLIII,XLVII,
 Lothrop 1963: Figs. 58,63
 Haberland 1957a: Fig. 4,7; 1959b: Tafel VI:a-l; Tafel XII:i,k; 1960b Figs. 12-13, 1961b Fig. 26, 1976:Fig. 2:H, 1984a Figs. 4-5.
 Stone 1958: Figs. 5:a-i, 6:a-b, 7: b, f-g, 1977: Figs. 144, 150.
 Linares 1968:Fig. 28
 Drolet 1983:fig.22
 Baudez et al. 1993:figs, 28,29
 Lothrop 1963, Figs. 56-64, Plates XXX, XXXII

Type Urabá: Polychrome

Variety: Urabá

Complex: Chiriquí

Sphere: Western Panamá

Vessel Form:

globular jars (bottle shaped)

double necked jars

closed bowls or tecomates (zoomorphic), very rare

Body:

Neck: outcurved, vertical

Base: rounded

Paste:

Temper: fine grained

Decoration:

Red and black on a white or cream, to red or beige ground color.

The main characteristic is that on a ground red color a wide cream band was painted on the shoulder or the upper half of the vessel, except the rim. In some exceptions the upper part of rims are painted.

On the cream or white area a frieze, continuous or with panels in the form of half circles or arches formed by red and black lines, enclosed geometric and alligator-like motifs.

Geometric designs include triangles with dots inside, ovals, groups of vertical lines, concentric circles, rectangles, arches

The rest of the vessel that does not have cream paint will have a ground red or beige slip. In some cases the bottom will be painted cream.

Two variations can be considered the basis for varieties:

- a. a pattern of four rosettes on raised nodes with geometric (circles, triangles, dots) designs.
- b. alligator or other zoomorphic representations standing alone, usually two representations in opposite sides of the vessels.

Handles:

absent or very rare, ring or zoomorphic handles

Supports:

very rare, short and solid

Type History:

Alligator Ware (Holmes 1888, MacCurdy 1911, Osgood 1935)

Urabá Polychrome (Haberland 1961a, 1976, 1984a)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution: Highland-Lowland Chiriquí (Haberland 1961c)

Comparison:

Holmes 1888: Figs. 194-197, 198:e,-202,
 MacCurdy 1911: Figs. 227-240, 250-25, 1Plates XXXIII-XXXVIII, XXXIX:f, XL:a-d
 Haberland 1957: Fig.7; 1961c: Tafel IV:a-d, Tafel V:a; 1976: Fig 3:J;1984:a, Fig. 3

Villalba Red Streaked:

Villalba Red Streaked formed part of the Handle Wares defined by Holmes, MacCurdy and Osgood. Haberland (1976) included it as part of the Foncho Red type. The definition by Linares (1968) is more appropriate. Its distinctive feature is the use of red paint to execute careless triangles and bands. It has a dominant distribution in Panamá. Its presence in the Costa Rican sector is limited the Coto Brus and Coto Colorado Valleys. It is common in graves, but also in domestic deposits (Linares 1968, Ranere 1968, Laurencich de Minelli and Minelli 1873). Villalba Red Streaked can be considered as the counterpart of Ceiba Red Brown in Western Panamá.

Type: Villalba Red Streaked

Complex: Chiriquí

Sphere: Western Chiriquí

Vessel Form:

globular jars, wider than they are tall, with rounded thickened bases

tall tripods (20-30 cm.) with small bodies and tall hollow legs, short, sharply everted rims

Body:

Rim and Lip:

a. large, everted rims curving outward directly from the vessel shoulder, lips thickened exteriorly by the addition of a coil.

b. shorter rims everted at a sharper angle than larger rims and thicker in Comparison:

Base:

concave, rounded bases

Wall thickness:

a. thin (5-7 mm.)

b. thick (9-13 mm.)

Rim diameter: 22-28 cm. larger rims, 16-20 cm. shorter rims

Paste:

Texture: Friable, crumbly and loosely packed, breaks irregularly

Temper: Coarse, sand-sized fractions added to the clay compose about 10% of the paste.

Pinpoint particles of quartz and feldspar, minor amounts of hornblende and magnetite.

Color: ranges from orange-red to gray-buff or dark gray.

Surface:

Color:

a. charcoal gray to almost black

b. buff to light gray

Finish: unpolished, exterior smoothed, interior left almost untouched

Hardness: 2.5-3

Firing: variable, dark cores

Decoration:

a. Either bright orange-red bands or streaks are painted on the exterior walls . They can be: a. wide carelessly drawn bands applied singly or in pairs, encircling the vessel at its maximum diameter; large loops or triangles, facing up or down, are drawn from the horizontal bands to the neck of the vessel; b. a series of short streaks or smudges

b. The interior of the rim is always decorated, either covered entirely with red, or with a wide (1.5 cm.) band of red that extends over the lip. Some rims have intercrossing bands or parallel bands

Handles:

round handles

strap handles, sometimes a continuation of the rim, or placed horizontally twisted handles

Supports: tall hollow tripod feet in the shape of a fish

Type History:

Villalba Red Streaked (proposed by Linares 1968:43-44)

Handled Group-Tripod Group (Holmes 1888:90-107)

Painted-unpainted handled group, Fish Tripods (MacCurdy 1911:76-92)

Fish-Tripod Handled Ware (Osgood 1935:237)

Red Painted Ware (Haberland 1959a)

Foncho Red (Haberland 1961a)

Chronology:

A.D. 800-1500 (Haberland 1976)

A.D. 1100-1500 (Linares 1968)

Geographical Distribution:

Drainage Area of the Bay of David, north and west of David, 50 square miles (Holmes 1888)

Divalá, Bugavita, Escaria (MacCurdy 1911, Osgood 1935)

El Zoncho, San Vito de Coto Brus (Laurencich de Minelli and Minelli 1966)

La Concepción, Lowland Chiriquí (Haberland 1961c)

Coast and islands of Chiriquí (Linares 1968)

Punta Burica (Ranere 1968)

San Felix-Remedios (Ranere 1968)

Coto Colorado Valley

Comparison:

Holmes 1888 Fig. 128, 132, 136-137, 146

MacCurdy 1911, Figs. 122-123, 125, 128-129, 140, Plate XX-XXII

Osgood 1935, plate 6

Linares 1968:42, fig. 27, Plate 13:j-m

Haberland 1961c: Tafel XVI: f-g

Ceiba Red Brown:

The Ceiba Red Brown type has been very ambiguous in its definition. Initially, it formed part of the Brown and Red Wares defined by Lothrop (1963). Haberland (1961a, 1976) first proposed the type based on the presence of two different slips (red and brown) and plastic decoration. But, after his definition, almost all the monochrome utilitarian pottery in the Middle Basin of the Térraba River was associated with this type (Drolet 1983:50, Corrales et al. 1988: 88). Baudez et al. (1993:81-85) did a revision of the type. They established a incised variety, and created two new types Sangría Fine Red and Silena Winged, already noted by Lothrop (1963). Ceiba Red Brown seems to be more restricted to the Diquís Subregion. Some forms (globular jars) are very frequent in graves as offerings, while the large vessels or bowls with thick lips (some of the with red slip in the rim, so being red and brown) are found largely in domestic deposits (Haberland 1976, Drolet 1983).

However, the large bowls or jars with thick exterior rims, included into the Ceiba Red Brown for several authors, were not considered by Haberland in his definition of the type (based on funerary offerings). In his article of 1960:84, about the Osa Peninsula he refers to the big vessels with almost vertical walls and thick lips and crude incisions, but he did not include them as part of Ceiba Red Brown

A decision must be made whether to use the name in its original definition or to expand it to include most of the coarser (red lip, monochrome) domestic pottery. In this work the broader definition is used.

Type: Ceiba Red Brown

Complex: Chiriquí

Sphere: Diquís

Vessel Form:

globular jars,

closed bowls

open bowls

composite silhouette bowls

Paste:

Texture: fine to coarse

Surface:

Color: This type typically presents two slip colors (red and brown)

Finish: smoothed and polished

Hardness: 3-4

Decoration:

a. the lip and the lower half covered with red slip, upper half and neck covered with brown slip

b. the lower half and the lip covered with red slip, upper half unslipped, with groups of 3-11 fine incised lines (0.05 cm.) delimited with rows of punctuation

Handles:

a. armadillo handles

b. strap handles

c. ring handles, usually with pellets

d. knobs

Supports:

short solid pointed

hollow

Type History:

Handled Group (Holmes 1888:90-97)

Fish-Tripod-Handled Ware (Osgood 1935)

Rotbraune Gefasse (Haberland 1959b)

Boruca Red Brown (Haberland 1961b)

Ceiba Rojo-Cafe (Haberland 1961b, 1976)

Ceiba Rojo Cafe Grabado-Ceiba Rojo Cafe Liso (Laurencich de Minelli and Minelli 1966)

Brown Ware-Parallel Incised type, Red Ware (Lothrop 1963)

Ceiba Rojo Cafe v. Incisa (Baudez et al. 1993)

Chronology: A.D. 800-1500 (Haberland 1976, Drolet 1983, Baudez et al 1993.)

Geographical Distribution:

Chiriquí 1 vessel (Holmes 1888)

Diquís Delta (Lothrop 1963, Stone 1977, Baudez et al. 1993)

Térraba Middle Basin (Haberland 1959b, 1961b, Drolet 1983, Corrales 1985, 1988)

Upper General Valley (Stone 1977, Rago 1988, Quilter and Blanco 1995)

Osa Peninsula (Haberland 1960)

Coto Brus Valley (Laurencich de Minelli and Minelli 1966)

Comparison:

Holmes 1888 Fig. 130, p. 92

Haberland 1959b: Tafel IX: c-q, Tafel X:a-v; 1961c Tafel XVI: e,h,i; 1961b: Figs. 27-28; 1976 Fig 2:B-C

Lothrop 1963, Figs. 27, 29-30, 32-37

Drolet 1983: Fig. 27, 28

Baudez et. al 1993:figs. 26, 27

Corrales 1985, 1996b

Type: Ceiba Red Brown

Variety: Incised

Complex: Chiriquí

Sphere: Diquís

Sample: 153 examples

Vessel Form:

jars with cylindrical necks and folded rims
 closed globular bowls (tecomates)
 globular jars with rims everted in an angle
 open composite silhouette bowls
 large composite silhouette bowls with thickened rims
 bowls with flaring rims
 globular bowl with everted rims

Body:

Rim diameter:

jars with cylindrical necks and folded rims, one case direct rim: 14-32 cm.
 closed globular bowls (tecomates): 10-16.7 cm.
 globular jars with rims everted in an angle: 10-16 cm.
 open composite silhouette bowls: 15-19 cm.
 large composite silhouette bowls with thickened rims: 40-55 cm.
 bowls with flaring rims: 10 cm.
 globular bowl with everted rims: 7 cm.

Paste:

Texture: Coarse

Temper: Lots of temper with predominance of translucent quartz of homogenous size

Surface: usually unslipped, with some example in dark red

Color: maroon to yellowish maroon, light cream to dark maroon

Decoration: combination of groups of incised lines, punctation and pellets in the upper part of vessels. Red slip on the rim. Groups of oblique or vertical incised lines delimited empty spaces, incised zones often are surrounded by punctation columns. Also present, rows of coffee bean pellets or vertical fillets decorated with incision or punctation

Handles:

horizontal handles in triangular form with a pellet in the tip
 strap handles located in the neck, they can be simple or decorated with fillets, pellets, incisions and punctation
 armadillo handles

Supports: solid anthropomorphic, tall and thick, decorated with pellets and punctation

Type History:

Ceiba Red and Brown, v. Incised, proposed by Baudez et al. 1993

Chronology: A.D. 800-1150 (Baudez et al. 1993)

Geographical Distribution: Diquís Delta (Baudez et al. 1993)

Comparison:

Haberland 1961c Tafel XVI: e,h,i

Baudez et al. 1993:Figs. 26, 27, 31, 32, Lam. VIII: c-d

Turucaca White on Red

The type Turucaca White on Red was initially defined by Lothrop (1963:69) as the White on Red Type of the Red Ware. However, his definition was very vague and incomplete. Haberland included it as part of Ceiba Red Brown. Later, this particular kind of ceramic was identified as Yellow on Red mode in Curré (Corrales 1985). Finally, Baudez et al. (1993:88-91) established it as Turucaca White on Red Type. Its characteristic mode is a white band on a red background encircling the vessel. Its comparison with collection specimens helped to establish that this type presents in some cases negative painting. It seems to predominate in the Diquís Region. Linares (1968:49, Plate 16c) found some sherds of this type in the Coast of Chiriquí that

she related to exchange with Costa Rica. There is no evidence of this type in the collections analyzed by Holmes and MacCurdy.

Type: Turucaca White on Red

Complex: Chiriquí

Sphere: Diquís

Sample: 53 examples in stratigraphy

Vessel Form:

composite silhouette bowls, direct rims or gradually thickened, rounded or slightly flattened lips

open bowls, direct rims or slightly thickened on the interior, tapered or rounded lips

very open bowls direct or tapered rims, rounded or flattened lips

globular jars with rims slightly everted

globular jars with cylindrical necks

Body:

Rim diameter:

composite silhouette bowls: 14-30 cm.

open bowls: 8-24 cm.

very open bowls: 20-28 cm.

Paste:

Texture: homogenous, regular fracture

Temper: fine, with very fine and abundant antiplastic

Color: reddish maroon

Surface:

Finish: slipped on red and polished

Decoration: white cream or white band under the rim, and red slip in the rest of the vessel.

Supports are covered completely or with bands of white. Sometimes a wide band in the interior, below the rim. In some cases in the bottom of vessel there are remains of black paint on red that seems to be fugitive positive paint

Handles:

horizontal ring handles, flat with zoomorphic adorns

vertical, zoomorphic handles

Supports:

solid short zoomorphic

solid conical, pointed zoomorphic (coatis?)

hollow zoomorphic.

Type History:

Red Ware-White on Red type (Lothrop 1963:69)

Redbrown Appliqué (Haberland 1959a)

Ceiba Rojo Café (Haberland 1976)

Turucaca White on Red (Baudez et al. 1993:88-91)

Chronology: A.D. 1000-1150 (Baudez et al. 1993)

Geographical Distribution:

Diquís Delta (Lothrop 1963, Baudez et al. 1993)

Upper General Valley

Térraba Middle Basin (Corrales 1985, Corrales et al. 1992)

Comparison:

Lothrop 1963, Fig. 46:c-f, h, 47, 55

Corrales 1985

Baudez et al. 1993 (fig. 30)

Linares 1968:Plate 16:c

Negative Types

The specific identification of this kind of pottery decoration is still confusing. Holmes (1888), MacCurdy (1911) and Osgood (1935) established the Lost Color Group, and Lothrop (1963) the Negative Painting on Red type to include all the variations of negative painting.

Haberland established several negative types, most of them for Western Panamá, based on the differences of ground colors and motifs, but all of them with similar vessel forms. He distinguishes Montelirio (black on cream with a red bottom), Bugavita (black on red), Chebo (red on red), and Huigala Negative (black on cream). Another negative type is only mentioned in Haberland (1984a), as Sánchez Negative (black-over-red-and cream), but some examples can be identified, tentatively, in MacCurdy (1911). For the Diquís area, the reports are only of black on red negative.

Vessel forms are predominantly globular jars with restricted necks (bottle shapes) with a great variety of geometric designs. Negative painting (particularly black on red) may have its origins in the preceding Aguas Buenas Phase where it is associated with the Bugaba Engraved type (Stone 1977:115, Baudez et al 1993). There is also negative painting associated with the Sangría Red Fine (black on red) and Turucaca White on Red types (black on red and black on cream).

Since Haberland's distinctions between his different negative types are restricted to ground colors and motifs all are reported together.

Type: Negative

Complex: Chiriquí

Sphere: Greater Chiriquí

Decoration:

Montelirio Negative: designs (lines and filled triangles) black on a cream upper half, with a red bottom

Chebo Negative: geometric designs, red on red ground

Huigala Negative: circles, scrolls, and triangles, Black on Cream

Bugavita Negative: groups of radiating lines from the neck or bottom, arches enclosing intercrossed or parallel lines, plant-like adornment, zoomorphic representations, black on red

Sánchez Negative: hachuring, dots, undulated bands and parallel lines (black over red and cream)

Handles: absent or very rare

Supports: absent or very rare

Type History:

Lost Color Group (Holmes 1988:113-120, MacCurdy 1911:103)

Lost Color Ware (Osgood 1935:237)

Negative painting on Red method (Lothrop 1963:70)

Negative Ware, Black on Cream Negative, Red on Red Negative (Haberland 1959a)

Montelirio Negative (Negative ware black on cream with a red bottom),

Chebo Negative (Red on Red),

Huigala Negative (Black on Cream),

Bugavita Negative (Black on Red) (Haberland 1961a)

Black on Red Negative (Linares 1968:44)

Sánchez Negative (black over red and cream) (Haberland 1984b:267)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

Bay of David, Divalá Bugavita, Escaria, Coast of Chiriquí (Holmes 1888, MacCurdy 1911, Haberland 1976)

Las Secas Island, Chiriquí (Linares 1968)

Diquís Delta (Lothrop 1963)

Coto Brus Valley (Laurencich de Minelli and Minelli 1966)

Potrero Grande (Stone 1958)

Diquís (Stone 1958)

Comparison:

Holmes 1888 Figs. 163-193

MacCurdy 1911, Fig. 179-205, Plates XXVII-XXXII

Stone 1958: Fig.6:c, 1977: Fig. 154:a-b, e-g

Lothrop 1963: Fig. 49

Montelirio Negative: MacCurdy 1911: Fig. 182-183, 186-187, Plate XXVII:b, XXX-XXXI;

Haberland 1961c: Tafel V:e; 1976: Fig. 3: p,

Chebo Negative: Haberland 1961c: Tafel V: b-c; 1976: Fig. 3:s

Huigala Negative: MacCurdy: 1911:Fig. 190, 194-199; Haberland 1961c: Tafel XIII: b-c; 1976: Fig. 3:k-l

Bugavita Negative: MacCurdy 1911: Fig. 180, Plates XXVIII-XXXIX; Haberland 1961c: Tafel XIII: d-g, 1976: Fig. 3:m-o, 1984: Fig. 6; Linares 1968:44, Fig. 29

Sánchez Negative: MacCurdy 1911: Fig. 184-185

Foncho Red-Carbonera Appliqué (Tripod-Fish):

The original Tripod and Fish Groups, very common in Greater Chiriquí as funerary offerings, as described by Holmes (1888) and MacCurdy (1911) were divided by Haberland (1961a) into the Foncho Red and Carbonera Appliqué types. Foncho Red corresponds with the tall, outcurved and pointed tripod-fish vessels with twisted handles and rounded bases, while Carbonera Appliqué includes the ones with zoomorphic applications on the shoulder of more vertical tall tripods with ovoid bases and handles in the shoulders (Haberland 1976:120).

However, similarities between them can be sometimes confusing and there are examples that combined characteristics of both.

Haberland included some tall tripods in the Ceiba Red Brown type (Haberland 1976: 118-119), but it is better to separate the tall tripods from Ceiba to avoid confusions with the already mentioned types. Some tall tripods, with figurines on the shoulder also present white lines typical of Panteón White Lined.

Tall tripods from Diquís tend to be more of the Carbonera type, while in Panamá predominates the Foncho Red fish tripods. Some fish tripods present decoration typical of Villalba Red Streaked (Haberland 1976, Stone 1977:115, Linares 1968) and they may be included into Villalba.

Type: Foncho Red

Complex: Chiriquí

Sphere: Greater Chiriquí

Vessel Form:

tall tripod jars with outflared rims

Body:

Base:

rounded

slightly pointed

Decoration: usually at the base of the neck there is an appliqué band or strip that encircle the vessel, decorated with incision or punctation, on the neck there is, usually, plastic decoration such as pellets appliqué and scrolls

Handles: usually handles are fused with the rim, twisted handles are the most typical

Supports: tall hollow tripods in the form of a fish, but also there are examples with anthropomorphic representations

Type History:

Tripod Group (Holmes 1888:97-107)

Fish Group (MacCurdy 1911:80-92)

Fish Tripod Handled Ware (Osgood 1935:237)

Brown Tall Tripod Type (Lothrop 1963:63)

Red Painted Ware (Haberland 1959a)

Rotbraune Schalen (Haberland 1959b)

Foncho Red (Haberland 1961a, 1976)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

Bay of David, Divalá, Bugavita, Escaria (Holmes 1888, MacCurdy 1911, Osgood 1935)

Highland and Lowland Chiriquí (Haberland 1961c)

Buenos Aires (Haberland 1959b)

Comparison:

Holmes 1888, Figs. 143-145, 147-149

MacCurdy 1911, Figs. 133-139, 141-147, Plate XXIII-XXIV

Osgood 1935, Plate 6

Haberland 1957b, Fig. 4, 1959b: Tafel XI:l, 1961c: Tafel VII, VIII:a-h, Tafel XIV: n-0, Tafel XV: a-j,

Tafel XVI: a-d; 1976 Figs 2:C, 3: A-B

Lothrop 1963, Fig. 21:b-d, 38, Plate XXIX

Type: Carbonera Appliqué

Complex: Chiriquí

Sphere: Diquís-Western Panamá

Vessel Form:

tall ovoid vessels with outflaring rims

Body:

Base: pointed or ovoid

Decoration: fillets and pellets appliqué marked with incision and punctation at the base of the neck, an appliqué band or strip that encircles the vessel, decorated with incision or punctation, pellets appliqué, and scrolls on the neck

Handles: usually they are located on the neck, not fused with the lip as in the case of Foncho ring handles with pellets appliqué

Supports:

tall hollow tripods, they tend to be vertical, with a zoomorphic figurine or attachment at the shoulder. The body of the support can be decorated with fillets and pellets appliqué, incision and punctation

Type History:

Tripod Group (Holmes 1888:97-107)

Fish Group (MacCurdy 1911:80-92)

Fish Tripod Handled Ware (Osgood 1935:237)

Brown Tall Tripod Type (Lothrop 1963:63)

Red Brown Appliqué (Haberland 1959a)

Carbonera Appliqué (Haberland 1961a, 1976)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

Osa Peninsula (Haberland 1960)

Chiriquí (MacCurdy 1911, Haberland 1961c)

Comparison:

Holmes 1888:Fig. 150, 152, 162

MacCurdy 1911:Fig. 144

Haberland 1959b: Tafel XI: b-g, i-k, m-r, Tafel XXV, 1976: Fig. 3:G

Stone 1958 Fig. 1 j-k

Lothrop 1963, Fig. 21:b-d, 22:a,c, i,k 39, Plate XXIX

Panteón White Lined:

Panteón White Lined is a type formulated by Haberland (1961a, 1976), with antecedents in the White Line Group (Holmes 1888, MacCurdy 1911). It is a type characteristic of the Diquís Subregion, but it also appears in Chiriquí. It included mostly small jars with restricted mouths, but also, tall vessels with fish tripod legs, with groups of four or less vertical lines in the neck-shoulder area, the distinctive marker of this type.

Osgood (1935:235), Haberland (1984a), and Stone (1977:114) consider that this type, as Papayal Engraved, has relationships with types in the Central Caribbean Watershed of Costa Rica, specifically the Mercedes White Line type (Snarskis 1978).

Type: Panteón White Line

Complex: Chiriquí

Sphere: Diquís

Vessel Form:

small globular jars in some cases with solid short tripods

Decoration:

groups of vertical lines (3-4) in white, each group is accompanied by one or two rows of white spots

designs similar to characters in the shoulder of the vessels

Supports: solid pointed short supports

Type History:

White Line Group (Holmes 1888:111-113, MacCurdy 1911:102-103)

White Line Ware (Osgood 1935:237)

White Lined Ware (Haberland 1959a, 1961c)

Panteón White Lined (Haberland 1961, 1976:118)

White on Brown (Lothrop 1963)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

David, Divalá, Bugavita, Escaria (Holmes 1888, MacCurdy 1911, Osgood 1935)

Highland Chiriquí (Haberland 1961c)

Coast of Chiriquí (Linares 1968)

Térraba Middle Basin (Haberland 1961b, Drolet 1983)

Comparison:

Holmes 1888, Fig. 161-162

MacCurdy 1911, Fig. 176-178a-b

Haberland 1959b: Tafel VI:m, p-q; 1961b: Fig. 31, 1961c: TafelIV:d; 1976 Fig.2:D, Fig. 3:N

Lothrop 1963, Fig. 26:a-d

Cavada Appliqué and Red Banded

A local type from coastal Chiriquí proposed by Linares (1968). It is considered a late development of the red band types of the San Lorenzo phase, particularly Zapote Red Banded (Linares 1988). However, its distribution on stratigraphic pits is no significant different of other red lined types and one can argue that is part of the San Lorenzo Phase. It is no present in the Diquís area.

Type: Cavada Appliqué and Red Banded

Complex: Chiriquí

Sphere: Western Panamá

Vessel Form:

deep, outflaring, straight-sided or curved sided bowls

shallower bowls of the same contour

Body:

Rim and Lip: Rims modified on the exterior. The lip is flattened on the outside so as to form a short perpendicular shelf (or a sort of a neck) around the rim

Thickness: Rim-Lip: 6-12 mm.

Wall thickness: 6-10 mm.

Decoration:

Red paint: narrow bands 4-6 mm. crosshatched that covers part of the vessel interior and extend over the lip to cover the flat band on the rim exterior

appliqué: narrow rolls and pellets of clay pressed and incised to form zoomorphic designs (crab-like animal, bird)

Supports: Vessels may rest on ringstands and (or) pedestal bases, but this has not confirmed

Type History:

Cavada Appliqué and Red Banded (proposed by Linares 1968:37)

Chronology: A.D. 110-1500 (Linares 1968:86)

Geographical Distribution:

Coast of Chiriquí (Linares 1968)

Bocas del Toro (Stirling 1964)

Comparison:

Linares 1968: 36, Fig. 24:a-h, Plate 11:f-j

Stirling 1964, Fig. 23, p. 274

Papayal-Cotito Engraved:

This type seems to be original from the Diquís Subregion, with some appearance in Western Panamá. Vessels identified as Papayal are common as funerary offering; but it is also found in domestic deposits. It was part of the Chocolate Incised Ware of Holmes (1888) and MacCurdy (1911), and the Chocolate Ware formulated by Lothrop (1963). Haberland (1961a, 1976) established it as a type. He proposed the Cotito name for a similar pottery in Chiriquí, but there are not major differences and in fact may have been imported from Costa Rica. Baudez et al. (1993) established the Seúl Incised type to account for a different pattern of decoration.

Type: Papayal-Cotito Engraved

Complex: Chiriquí

Sphere: Diquís

Vessel Form:

shallow open bowls

open composite silhouette bowls

closed composite silhouette bowls

closed bowls-tecomates

small globular jars

Body:

Rim and Lip: direct or slightly thickened rims belonging to open and closed bowls, rounded lip, sometimes flattened

Wall thickness: 4-6 mm.

Rim diameter:

open bowls: 26-32 cm.

closed bowls: 10-16 cm.

Paste: compact, homogeneous, breaks irregularly

Texture: fairly smooth, breaks cleanly

Temper: fine, with small maroon inclusions. Some examples are coarser.

pinpoint particles of angular quartz distributed homogeneously

Color: even light buff caused by complete or almost complete oxidation

Surface:

Color: light gray to beige, reddish maroon slip

Finish: smoothed or polished to produce an even surface

Hardness: 2.5-3

Decoration:

very thick reddish chocolate slip in both surfaces. The outside of the rim above the vessel shoulder is decorated with a frieze made by fine shallow incisions after the application of slip and polishing, before the firing. Among the motifs:

triangles around the vessel delimited by a single or double lines, triangle may be facing down or facing up.

plumed triangles, alternated or joined at the tip,

oblique lines opposed or alternated, limited by plumed rectangles

triangles with dots inside

The front part of the tripod foot is usually decorated with shallow incisions

Supports: tripod feet conical or in the shape of feline heads

Type History:

The Chocolate Incised Group (MacCurdy 1911:95-96)

Chocolate Ware (Osgood 1935, Lothrop 1963)

Chocolate Incised (Haberland 1959a)

Cotito Incised (Haberland 1961a, 1976)

Brown Incised (Haberland 1957b, 1959b)

Papayal Engraved (Haberland 1961b, 1976)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

Buenos Aires (Haberland 1959a,b)

Diquís Delta (Lothrop 1963, Baudez et al. 1993)

Curré (Corrales et al. 1992)

Térraba Middle Basin (Drolet 1983)

Highland Chiriquí (Haberland 1961c)

Las Secas Island (Linares 1968)

Bocas del Toro (Kudarauskas et al. 1980)

Comparison:

Holmes 1888, Fig.114

MacCurdy 1911, Fig. 161-163

Haberland 1957b, Fig. 5, 1959b: Tafel VII:a-i, Tafel VIII:a-h, 1961b, Fig. 29, 1961c: Tafel V:f-h; 1976, Fig. 2:E-F, Fig. 3:F, 1984a, Fig. 2

Lothrop 1963 Fig. 20:a-k, Plate XXIX

Linares 1968: Fig. 30:u, Plate 16:d

Linares 1980a: Fig. 7.0-4:l

Baudez et al. 1993: Fig.:33, Lam VIII:a-b

Kudarauskas et al. 1980: Fig. 12/1:v-y

Seúl Engraved

A variation of the Papayal Engraved established by Baudez et al. in their revision of the established typology. Variations in the technique and designs led to its definition as a new type. Previously includes in Papayal.

Type: Seúl Engraved

Complex: Chiriquí

Sphere: Diquís

Sample: 28 examples

Vessel Form:

composite silhouette bowls, exverse walls

composite silhouette bowls, vertical walls
closed bowls-tecomates

Body:

Rim and Lip: direct or slightly thickened on the exterior, rounded lip

direct or slightly thickened on the interior, rounded lip

Paste

Texture: compact, homogeneous, regular fracture

Temper: medium to fine, abundant small antiplastics.

Color: reddish maroon

Surface:

Color: red slip, sometimes absent

Finish: smoothed, polished

Decoration:

engraved lines after the slip and polishing, irregular drawing (0.25-1 mm.)

Designs located on the exterior bottom of open bowls, upper half of vertical bowls and in frieze on the upper half of closed bowls. They consist of a cross composed by five parallel lines intercrossed, enclosed by a circle formed by three lines.

A spiral with plumed triangles, arcs or semi-circles, squares and rectangles with enclosed vertical or horizontal lines, sometimes plumed. In occasions the lines are non enclosed .

Supports: hollow long supports with a slit in the front

Type History:

proposed by Baudez et al 1993

Papayal Engraved (Haberland 1961b, 1976)

Chocolate Ware (Lothrop 1963)

Seúl Engraved (Baudez et al. 1993)

Chronology: A.D. 1000-1150 (Baudez et al. 1993)

Geographical Distribution: Diquís Delta

Comparison:

Lothrop 1963, Fig. 20:l

Baudez et al. 1993: Fig. 34

Sangria Red Fine

A subdivision of monochrome pottery. It is distinguished by its shiny red slip. It was formulated by Baudez et al. 1993, but already noticed by Lothrop (1963) who established a Red ware in the Diquís Delta. Previously, it was considered part of Ceiba Red Brown.

Type: Sangria Red Fine

Complex: Chiriquí

Sphere: Diquís

Sample: 168 examples in stratigraphy

Vessel Form:

a. tecomates

b. tripod hemispherical or closed bowls

c. tripod open composed silhouette bowls, vertical or outcurved rims

d. tripod open bowls

e. closed composed silhouette bowls

f. plates

g. globular jars with exteriorly thickened rim

Body:

Rim diameter:

closed bowls-tecomates 10-20 cm,

open bowls, composite silhouette: 16-30 cm. most 20-25 cm.

open bowls: 20-30 cm.

closed bowls composite silhouette: 7-11 cm.

plate: 36 cm.

globular jar: 11 cm.

Paste:

Texture: compact and homogenous

Temper: small particles (0.2 mm.) with predominance of quartz.

Color: reddish maroon and regular fracture

Surface:

Color: red slip

Finish: very polished

Decoration:

Besides decoration on the supports, very rare, limited to pellets or fillets on the rims of open and closed bowls.

In some cases in the exterior bottom there are remains of negative painting (black on red)

Supports:

solid short with a wide incision in the front

zoomorphic solid

solid very short and flattened (1.2 cm.)

conical hollow with a wide rectangular or triangular incision in the front, some can be zoomorphic with appliqué

conical hollow with a triangular wide incision in the back, on example showed a flange in one side

Type History:

Red Ware (Lothrop 1963)

Ceiba Red Brown (Drolet 1983, Corrales 1985)

Sangria Red Fine (Baudez et al. 1993)

Chronology: A.D. 800-1150 (Baudez et al. 1993)

Geographical Distribution:

Diquís Delta (Lothrop 1963, Baudez et al. 1993)

Curré Site (Corrales et al. 1992)

Chiriquí coast (Linares 1968)

Comparison:

Lothrop 1963, Fig. 43,44, Plate XXVII

Linares 1968, Plate 16:a-b

Baudez et al. 1993 Figs. 24-25, Lam VIII:e

Silena Winged

Another subdivision established by Baudez et al. (1993) of the monochrome pottery. Previously, it was subsumed into Ceiba Red Brown. This type includes very open bowls with tall tripod and distinctive almost vertical plaques-handles; it seems to be another Diquís Subregion product, but it has also been reported from the Coto Brus Valley (Laurencich de Minelli and Minelli 1966) and Panamá collections (Holmes 1888, MacCurdy 1911).

Type: Silena Winged

Complex: Chiriquí

Sphere: Diquís

Sample: 31 examples in stratigraphy

Vessel Form:

Plates or very open bowls, tripods

Body:

Rim and Lip: rims gradually thickened, lips are rounded or flattened

Rim diameter: 26-40 cm.

Paste: Coarse

Texture: Friable and irregular fracture

Temper: quartz, and opaque white particles

Color: reddish maroon

Surface:

Finish: polished red slip

Decoration:

Handles: Trapezoidal plaques almost vertical attached to the rim (6-11 cm.). They can be decorated with incisions, punctuation and appliqué.

Supports: hollow tall, with a slit in the front

Type History:

Tripod group (Holmes 1888)

Fish Group (MacCurdy 1911)

Brown ware, Tall Tripod Type (Lothrop 1963)

Red pottery with beige paint (Laurencich de Minelli and Minelli 1966)

Silena Winged, proposed by Baudez et al. 1993

Chronology: A.D. 800-1000 (Baudez et al. 1993)

Geographical Distribution:

Chiriquí (Holmes 1888, MacCurdy 1911)

Diquís Delta (Lothrop 1963, Baudez et al. 1993)

Curré Site (Corrales et al. 1992)

San Vito, Coto Brus (Laurencich de Minelli and Minelli 1966, Stone 1977)

Comparison:

Holmes 1888, Figs. 14-142

MacCurdy 1911, Figs. 153-154

Lothrop 1963, Fig. 23, Plate XXVIII

Laurencich de Minelli and Minelli 1966, Fig. 11

Stone 1977, Fig. 159

Baudez et al. 1993, Fig. 22, Lam. VII:i

Chánguena Black on Red

This type is similar in form and designs to Buenos Aires Polychrome; but it is bichrome with black lines on red slip. It was noticed initially as a mode in the Curré site (Corrales 1985), and later postulated as a type (Corrales et al. 1992, Baudez et al. 1993). So far, it is restricted to the Térraba Watershed

Type: Chánguena Black on Red

Complex: Chiriquí

Sphere: Diquís

Vessel Form:

tripod open bowls

closed bowls or tecomates

disks

Body:

Rim and Lip: slightly thickened, rounded lips

Wall thickness: 4-5 mm.

Rim diameter: 14-18 cm

Surface:

Color: red slip

Finish: polished

Decoration: black lines on red, a frieze with triangles facing down with dots inside enclosed by double lines. V motif enclosed by an upper single line and lower double line

black lines in solid supports

Supports: solid pointed

Type History:

Red on black (Corrales 1985)

Chánguena Black on Red (Corrales et al. 1992, Baudez et al. 1993)

Chronology:

A.D. 800-1500 (Corrales 1985)

A.D. 1000-1150 (Baudez et al. 1993)

Geographical Distribution:

Diquís Delta (Baudez et al. 1993)

Curré Site (Corrales et al. 1992)

El Cholo Site, Upper General Valley (Corrales 1996b)

Comparison:

Baudez et al. 1993, Fig. 35:d, 39:d, Lam. VIII:f

Corrales 1985, Fig. 6:E

Corrales 1996b, ART. 15

Divalá Punched

Haberland (1961c) found one example in La Concepción cemetery, Lowland Chiriquí. It seems to correspond with the Black Incised group by Holmes (1888) and Serpent Ware of MacCurdy (1911). Pottery of this type has a rare appearance, only in Chiriquí, and probably it was confined as a funerary offering.

Type: Divalá Punched

Complex: Chiriquí

Sphere: Western Panamá

Vessel Form:

small globular jars, sometime with composite silhouette, short necks, everted or vertical

Body:

Rim and Lip: exteriorly thickened rim, rounded lip

Neck: short everted or vertical

Surface:

Color: black, brown or dark gray.

Decoration:

lines incised while the clay was still moist

lines were scratched when the clay was dry, lines are filled with a white substance

designs can be in the upper half or extend beyond,

ribbon-like dotted bands of incised or engraved lines enclosing punctuation, ending in a serpent head with forked tongue or coils. The band is folded to produce geometric designs (zigzag, triangles, angles, undulations)

alternated horizontal bands surrounding the vessel with dots inside, in the intermediate bands chevron or triangles with dots inside.

Handles:

zoomorphic handles between the rim and the shoulder

ring handles connecting the rim and shoulder, some with appliqué

Type History:

Black Incised Group (Holmes 1888)

Serpent Ware (MacCurdy 1911)

Punched Band Ware (Haberland 1959ba:343)

Divalá Punched (Haberland 1961a)

Divalá Punteado (Haberland 1976)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution:

Chiriquí (MacCurdy 1911)

La Concepción, Lowland Chiriquí (Haberland 1976)

Comparison:

Holmes 1888: Figs. 110-117

MacCurdy 1911: Figs. 116-118, Plate XVII:a-f

Haberland 1961c: Tafel XIII: i, 1976:Fig. 3:E

Jucó Black

A type defined by Haberland (1959a, 1976), for a single small vessel, painted deep black and lacking any other decoration, from a burial near La Concepción (Haberland 1959a:344). No reported by other authors; however, Linares (1968:45) reported a polished black plain pottery that may correspond to this type.

Type: Jucó Black**Complex:** Chiriquí**Sphere:** Western Panamá**Sample:** 1 vessel**Vessel Form:**

small composite silhouette globular jar

Body:**Rim and Lip:** thickened in the exterior, rounded lip**Neck:** vertical**Base:** rounded**Surface:****Color:** black**Decoration:** painted black no other decoration**Handles:** small projections in the middle of the body**Type History:**

Black ware (Haberland 1959a)

Jucó Black (Haberland 1961a, 1976)

Polished Black Plain? (Linares 1968)

Chronology: A.D. 800-1500 (Haberland 1976)**Geographical Distribution:** La Concepción, Chiriquí (Haberland 1959a, 1976)**Comparison:** Haberland 1961c: Tafel XIII:0, 1976, Fig. 3: D**Muertos Red Lined**

Another type proposed Haberland (1961a,c) based on a single vessel from La Concepción cemetery. It can be related to the Arayo Polished Line and Banco Red Line or the red lined Cavada Appliqué proposed by Linares (1968). Whether is a late version of the red banded types from San Lorenzo phase or product of exchange or a heirloom is still open to discussion.

Type: Muertos Red Lined**Complex:** Chiriquí**Sphere:** Western Panamá**Sample:** 1 vessel**Vessel Form:**

globular jar with high handles

Body:**Rim and Lip:**

Neck: curved

Base: rounded

Decoration: red lines forming a panel enclosing double lined Xs

Handles: high handles connecting the shoulder with the rim

Type History:

Red-Line ware (Haberland 1959a, 1961c)

Muertos Red Lined (Haberland 1961a, 1976)

Chronology: A.D. 800-1500 (Haberland 1976)

Geographical Distribution: La Concepción, Chiriquí (Haberland 1961c)

Comparison:

Holmes 1888, Fig. 160

Haberland 1961c: Tafel XIII:h, 1976: Fig. 3:l

Lérida Red on Orange

This type was defined by Haberland in 1961a, with previous references in 1957 and 1959a. He considered that its origins were at Bocas del Toro (1976:118). This is confirmed by the works of Stirling and Stirling (1964b), and Kudarauskas et al. (1980). Laurencich de Minelli and Minelli (1966), excavated nine whole vessels related to this type from the El Zoncho cemetery in Coto Brus. Stone (1977) highlighted the "scarification" presented in the vessels excavated by the Minellis.

Stirling and Stirling (1964b)'s description of the predominant ware at three sites in the Almirante Bay Islands corresponds clearly with the type. Linares (1980) and Kudarauskas et al. (1980) re-named it as Bocas Brushed Pinched based on their excavations at Cerro Brujo, where it was also the predominant ware. Whole vessels are known from funerary contexts in Highland Chiriquí-Coto Brus (Haberland 1976, Laurencich de Minelli and Minelli 1966). At the Caribbean Coast, Stirling and Stirling (1964b) found some almost complete vessels in a funerary context; but, most of the evidence corresponds to fragments from stratified deposits.

Type: Lérida Red on Orange-Bocas Brushed Pinched

Complex: Chiriquí

Sphere: Bocas del Toro

Vessel Form:

short necked jars with gentle everted rims (2 cm. in length), tall tripods rims form a sharply angle with the body or shoulder

long necked jars with everted rims (5-7, 13-15 cm. in length, 1-2 thick), tall tripods rims form a sharp angle with the body or shoulder

globular jars or bowls, with gently curved but vertically placed rims

open bowls, some almost plates

closed bowls with incurved rims, pointed bottom, with tall tripods

composite silhouette jars, curved in outline instead of being outflared or everted, from small to quite large, with tall tripods and plastic decoration

Body:

Rim and Lip: necked jars: everted direct, rims can be unmodified, tapered or blunt lips.

composite silhouette jars: lip can be tapered or flat, rim can be simple or decorated

Base: in the tall tripods, ovoid bases or most common pointed, markedly thickened, probably to balancing the vessel

Wall thickness:

a. very thick 91-2 cm.)

b. thin (0.3-0.5 cm.), a marked thickening to the base

Rim diameter:

short necked jars: 18-24 cm.

long necked jars: as much as 40 cm.

globular jars or bowls: as large as 36 cm.

open bowls: 20-30

closed bowls:

composite silhouette jars: 12-24 cm.

Paste:

Texture: most sherds are coarse and crumbly, breaking easily and unevenly. Some are more compact

Temper: very coarse, angular particles

Color: orange to medium brown or gray, with a marked dark core

Surface:

Color: buff to light gray

Finish: the exterior, including necks and supports were brushed, maybe with a dentate shell. Interior is usually smoothed, with a thin wash. Some sherds present wide "corrugations" made by pinching the clay when it was wet. Brushed and pinched areas do not usually overlap, but pinching occurs only on thick brushed vessels, and is found on rims as well as on the body.

Hardness: 2.5

Decoration:

groups (3-7) of horizontal bands of red paint on orange, located in the tall supports,

vertical bands (4) on the interior of rims from necked jars and plate-like bowls

fillets appliqués notched or incised, and some representational appliqué depicting a fish, octopus, and a iguanid

Handles:

parallel sided straps

wide simple straps

double handles, nearly circular and placed horizontally on the shoulder and connected to the rim ring or round handles

twisted vertical handles

Supports:

solid tubular tripods, tapered from top to bottom, (3.5-8 cm., long), ending in a thick blunt tip. Brushed or painted with red horizontal bands

small solid tubular tripods, decorated with a face motif, or with a small appliquéd figurine and transverse fillets

tall hollow tubular supports (25 cm., or more) with one or two slits on the body, in some cases with zoomorphic attachments in the shoulder. They can be brushed or decorated with red bands.

Type History:

Stirling and Stirling (1964b)

Red on Orange (Haberland 1957a, 1959a)

Lérida Red on Orange (Haberland 1961a, 1976, Laurencich de Minelli and Minelli 1966)

Lérida on Orange Scarified (Stone 1977)

Bocas Brushed Pinched (Linares 1980a, Kudarauskas et al. 1980)

Chronology:

A.D. 800-1500 (Haberland 1976)

A.D. 900-? (Linares 1980a)

Geographical Distribution:

Highland Chiriquí, Huacal de Montelirio (Haberland 1957b, 1959a)

El Zoncho, San Vito, Coto Brus (Laurencich de Minelli and Minelli 1966, Stone 1977)

Almirante Bay Islands, Bocas del Toro (Stirling and Stirling 1964b)

Aguacate Peninsula, Bocas del Toro (Linares 1980a, Kudarauskas et al. 1980)

Comparison:

Wassén 1949, Figs. 8J,10

Haberland 1957b:Fig. 8;1976: Fig. 3:H

Laurencich de Minelli and Minelli 1966:Fig. 18

Stone 1977: Fig. 153

Stirling and Stirling 1964b: Figs. 18-24, Plates:28,37, 39

Linares 1980a: Fig. 7.0-4:a-d,f,h

Kudarauskas et al. 1980: Fig. 12/1:a-g, 12/2:f-h, j-l, 12/3:a,e, f-o,q-r.

Bocas Smooth-Polished

A local type of Bocas del Toro. Stirling and Stirling (1964b) in their excavations of various sites in Almirante Bay, described a very thin paste ware with polished surface painted red on buff. Since they did not described wares, it was not separated of the predominant ceramic (that corresponded to the Lérída-Bocas Brushed Pinched ware). Kudarauskas et al. (1980), noticed it from the collections from Cerro Brujo Site, Aguacate Peninsula and named it as a ware. There is no evidence of trade to the Pacific area, as in the case of Lérída-Bocas Brushed Pinched. There is no evidence of complete vessels; only fragments from domestic or refuse deposits. Some of the decoration techniques such as slashes and punctation, considered typical of the type by Kudarauskas et al., are present in coarser pottery illustrated by Stirling and Stirling (1964b:Plates 28).

Type: Bocas Smooth-Polished

Complex: Chiriquí

Sphere: Bocas del Toro

Vessel Form: small globular jar with a short, straight to sharply everted rim

Body:

Base: rounded and no visibly thickened

Wall thickness: 0.4-0.8 cm.

Rim diameter: 10-16 cm.

Paste:

Texture: fairly compact, breaks regularly

Temper: fine-grained light colored, small rounded particles

Color: buff to reddish, an occasional dark-colored core

Surface:

Color: light gray to black to red

Finish: highly polished, with visible polishing striations, interiors may be left rough or smoothed, or in some cases highly polished

Decoration: a band of slashing or punctation in the area below the neck or in small strap handles

Handles:

parallel sided straps

small narrow strap handles, extending from lips to shoulders, decorated with punctation or slashes

Type History:

some description by Stirling and Stirling 1964b:265, 274

proposed by Kudarauskas et al. (1980)

Chronology: A.D. 900-? (Linares 1980a)

Geographical Distribution:

Almirante Bay Islands, Bocas del Toro (Stirling and Stirling 1964b)

Aguacate Peninsula, Bocas del Toro (Linares 1980a, Kudarauskas et al. 1980)

Comparison:

Stirling and Stirling 1964b: Plate 29 :a-i?

Linares 1980a: Fig. 7.0-4:b,j

Kudarauskas et al. 1980:Fig. 12/1:h-n, 12/3:a-b