THE FORMATIVE ZONED BICHROME PERIOD IN NORTHWESTERN COSTA RICA (800 B.C. TO A.D. 500), BASED ON EXCAVATIONS AT THE VIDOR SITE, BAY OF CULEBRA

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ABSTRACT

Excavations at the Vidor Site (3047I-227-1) have resulted in important new data on the Formative Zoned Bichrome period, the earliest ceramic period in Guanacaste and an enigma because of lack of greater time depth. Data from the Vidor excavations extend the regional chronology to approximately 800 B.C., and permit a further refinement in the Formative regional sequence. Limited settlement pattern and socio-economic data are also presented, and the overall Formative picture in Greater Nicoya is compared with data from the interior valleys of the northern Costa Rica volcanic chain, and with data from the Atlantic watershed.

RESUMEN

De las excavaciones en el sitio Vidor (3047I-227-1) se obtuvieron datos importantes, relativos al período Bicromo en Zonas y la Etapa Formativa en general. El Bicromo en Zonas es el período cerámico más temprano de Guanacaste, y a su vez enigmático a causa de la falta de profunidad cronológica. Con los datos obtenidos en sitio Vidor se extendió la cronología regional hasta aproximadamente 800 a.C. y se logró un mejoramiento de la secuencia cultural formativa. Aunque limitados, también hay datos de patrones de asentamiento y socioeconómicos. Se compara brevemente el cuadro general para sitios formativos de la Gran Nicoya con datos de los valles interiores de la cordillera de Guanacaste, y la Vertiente Atlántica.

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THE Zoned Bichrome Period, initially defined temporally from 300 BC to AD 300, was first described for Guanacaste Province on the basis of research in the Tempisque Valley and on the Santa Elena Peninsula by Coe and Baudez (1961). The period was named after the dominant ceramic decorative technique, generalized by Healy (1974:472) as: 1) incising, engraving, ridging, and punctating which generally outline or demarcate black, red or unpainted zones; 2) bichrome painting, particularly black on a red base slip; 3) multiple brush and/or resist (negative) painting.

The broad definition or "Zoned Bichrome" implies the general characteristics of zoning and use of two colors. Nowhere has the zoning technique been explicitly limited to engraving or incising; zoning also may be accomplished by painting, as seen on Tola Trichrome (Fig. 5). For many years, a whole range of ceramics reflecting temporal and geographical variation has been designated "zoned bichrome" without emphasizing that this technique is utilized in differing combinations with interpretative significance. The Zoned Bichrome Period remained an enigma, continuing to be the earliest known ceramic period in the sub-area despite later research in other Pacific coastal locations and the knowledge of substantially earlier ceramics both north and south. This paper, based primarily on research at the Vidor Site (3047I-226-1) on the Bay of Culebra, with comparative data from the Atlantic Watershed, gives insights into cultural patterns and processes during this period, and divides the Zoned Bichrome Period in Guanacaste into three phases.

There were some prior attempts to expand the sequence. Haberland (1969:232) proposed an Angeles phase on Ometepe Island prior to the Aviles phase that was coeval with the Chombo, Catalina, and Monte Fresco phases in Costa Rica (Baudez and Coe 1962:369); he also suggested that the Catalina phase be divided into two parts. I also proposed (Lange 1971a:138) that Schettel Incised in the San Dimas-Rio Sapoa area represented an earlier Zoned Bichrome VINCULOS

phase there. Neither this nor Haberland's Angeles phase was based on sufficient data to win acceptance. Healy (1974:473) suspected a division in the period as well, stating that "The Aviles phase... appears, in the sequence graph... to be half complete in its theoretical evolution". The suggestion of earlier material was clearly felt, a feeling echoed by Baudez (1967:187-188), but hard data or published proof remained elusive.

Recently Snarskis reported five dates clustering around 500 B.C. for the La Montaña complex on the Atlantic Watershed of Costa Rica (1978:104). A single date of 800 B.C. was obtained from a feature at the Vidor Site (UCLA-2177A:2830 \pm 80) and supporting dates have also come from Rio Naranjo along the Guanacaste-San Carlos continuum (Norr 1978). These dates (Fig. 1) provide a developmental sequence leading to the high quality ceramics available by 300 BC.

In addition to the restrictive chronology, another difficulty with the Zoned Bichrome Period is that much of our knowledge has been derived from cemetery or stratigraphic test contexts, with little domestic data. The size of the cemeteries (for example, Las Pilas, La Vigia) suggested large villages, but the latter were not readily apparent. At Vidor we encountered cultural remains at deep levels, essentially underlying the entire site, and demonstrating for the first time an extensive habitation site contemporaneous with the cemeteries.

Coastal sites in Guanacaste are dominated by large shell middens, and it is the intermixed mass of shell, potsherds, adobe, faunal material and other cultural debris that is most impressive as excavation progresses downward. At the point representing roughly AD 400 to 500 the shell ceases to occur, and without the protective context of the midden, faunal material (both marine-estuarine and terrestrial) ceases to be preserved; the cultural sequence, however, continues deeper and it is from these levels the newer data have come. The initial impression is of very disperse remains, verging on sterile, compared with the midden density created by the shells and encrusted earth.

In evaluating the Vidor site sequences in comparison with previously published sequences (Fig. 2), Toya Zoned Incised was repeatedly and clearly stratified below Rosales Zoned Engraved, Zelaya Bichrome, Tamino Incised and Ballena Incised, even though it has been commonly represented as post-Rosales in most other regional sequences. Only limited amounts of ceramics classified as Bocana Zoned Incised were present at the Vidor site, and none in the sequences used as examples. Different researchers have reported sharp differences in the regional distribution of Bocana Incised Bichrome and Toya Zoned Incised. These differences suggest either that there is a marked geographical importance to both, or that they have been mistakenly classified in some of the small samples available. Given that they share the characteristics of pre-slip parallel incised grooves and reddish or cream paint on unslipped surfaces, I am inclined to believe that erroneous identification is part of the problem, although geographical variability probably plays a part. Toya Zoned Incised is consistently earlier, however, and Bocana Incised continues somewhat later. That both types are members of the same ware group and have common decorative characteristics, and that most typed and classified samples have been small and fragmentary, also contributes to confusing the issue. This in turn highlights the problem that the ceramic sequences we have worked with to date in Guanacaste are derive primarily from research on potsherds and partial vessels, with very limited input from whole vessels. The intensive research on the Gillen collection from Hacienda Tempisque being carried out by Day (1980; Day and Abel-Vidor 1980) offers hopes of getting past some of the limitations of sherds and incomplete vessels. A ceramic conference on Guanacaste/Greater Nicoya seems a necessity at this time, and hopefully one will be organized in the near future.

Part of the problem in interpreting the various regional sequences has been in the nature of the excavation data. In re-examining Baudez (1967), Healy (1974), and Sweeney (1975) in connection with the problem of deep testing midden deposits, it seemed likely thay had not reached the bottoms of their cultural strata. (This was difficult to judge in the latter two cases; both Healy and Sweeney were reporting data from relatively rapid tests conducted by others more than a decade previously). The Toya Zoned Incised they reported (in small frequencies) was likely brought upward in the sequence by subsequent disturbance of the ground surface. In short, an artificial truncation at the beginning of the sequence compressed a number of types into unnatural relationships, of which Bocana Incised and Toya Zoned Incised are perhaps the best examples.

Based on analysis of the Vidor ceramic sample, and re-evaluation of other data, there seemed to be only slight difference between Bocana Incised Bichrome, Toya Zoned Incised,

Sample	Site	Uncorr. Date	S.D.	Range S.D.x1	(68%)	Range S.D.x2	(95%)	Phase Period	Coments from sterile sub-soil inmediately below initial
UCLA	Mendez	B.C.1560	80	1640	1480	1720	1400		cultural level. TR-4, N6W1, 200 cm below datum
2167A UCLA 2177A	Vidor	B.C.880	80	960	800	1040	720		N45-47, W13-14 Feature 13, associated with Toya "Loma B" Zoned incised ceramics RC N°22.
UCLA 2163	Mendez	B.C.300	60	360	240	420	180	Zoned Bichroime	Lot 129
UCLA 2177B	Vidor	B.C.250	60	310	190	370	180	Orso Zoned Bichrome	N 56.5-57.5 Level 3 RC N°30
CSY-100	Ortega	B.C.245	130	375	115	505 B.C	. A.D.15	Catalina Zoned Bichrome	From two separate runs Haberland 1978:405
UCLA 2167E	Mojica	B.C.160	80	240	80	20	B.C.1	oned Bichrome	Square 12, may be somewhat early RC N° 3-4
Y-850	Ortega	A.D.250	70	180	320	110	390	Zoned Bichrome	Coe and Baudez (1961) Haberland 1978:405 Catalina phase
Y-811	Matapalo	A.D.555	90	465	645	460	660	Early Polychrome	G11/1E cut 1, 60-75 cm Sweeney 1976:42 Matapalo, phase.
Y-1124	Ayala (Gr-5)	A.D.560	100	460	660	360	760	Early Polychrome	Cut 2, 285 cm (Haberland 1978:405)
Y-1122	Ayala (Gr-5)	A.D.570	70	500	640	430	710	Early Polychrome	Cut 2, 195 cm (Haberland 1978:405) Beginning of San Roque phase
P-2177	Matapalo	A.D.620	50	570	670	520	720	Early Polychrome	G11/2D and 2E (Sweeney 1976:42)
UCLA 2164	Vidor	A.D.665	60	605	725	545	785	Early Polychrome	Feature 36, IV 23-24, W 0-1, 66 b.s. Culebra phase
UCLA 2113A	Turrialba 18-LM	B.C.1515	160	1675	1355	1835	1195	La Montaña	Layer "D" "Too early" (Snarskis). Snarskis (1978:105)
UCLA 2113 N.D.	Turrialba 18-LM	B.C.550	60	610	490	670	430	La Montaña	Two identical dates. Layer "D" (Snarskis 1978:106)
UCLA 2113M	Turrialba 18-LM	B.C.280	60	340	220	400	160	La Montaña	Layer 'D''. Possibly contaminated from later La Selva phase cometery (Snarskis 1978:106)
UCLA 2175 b	Severo Ledesma 7.1-SL	B.C.50	90	B.C. 140	A.D. 40	B.C. 230	A.D. 130	El Bosque	M-1 Rectangular El Bosque house, sample from fill (Snarskis 1978:176)
Bl (from Haberland 1978:406	Mercocha	A.D.130	140	B.C. 10	A.D. 270	B.C. 150	A.D. 410	El Bosque	Grave, with some early La Selva ceramics, jade (Snarskis p.c.): Stirling (1968)
UCLA	Guacimo	A.D.150	60	90	210	30	270	EI	
2113 H	20-CB							Bosque	Corridor tomb (Snarskis 1978:176)
B2 (from Haberland (1978:406)	Porvenir	A.D.265	120	145	385	25	505	El Bosque	Grave, with some early La Selva ceramics, jade (Snarskis p.c.): Stirling (1968)

Fig.1. Radiocarbon dates from the Zoned Bichrome Period, Greater Nicoya and Atlantic Costa Rica; all done on charcoal.



Fig.2. Regional sequence, Bay of Culebra, Early Polychrome and Zoned Bichrome periods.

and Schettel Incised when decorative modes were considered. The coeval La Montaña ceramics recovered by Snarskis on Costa Rica's Atlantic Watershed, in which the range of decorative modes peculiar to the three Guanacaste types form a single ceramic complex, were an important body of comparative dsta. Also of significant comparative value was the fact that Snarskis characterized the La Montaña ceramics as having a highly distinctive paste not again repeated in the sequence; reflecting a similiar unity of paste, all the relavant Rivas ceramics were grouped into Palmar Ware by Healy (1974:XV).

Re-examination of earlier excavation data relative to more complete sequences, comparative analyses with similar ceramics, and a re-assessment of earlier typological designations hampered by small sample sizes, a lack of whole vessels, and lack of first hand knowledge of comparative samples from other areas, have led to division of the Zoned Bichrome Period into three phases for the Vidor site on the Bay of Culebra: the *Loma B* phase, dating roughly 800 BC to 300 BC on the basis of currently available dates and characterized by Palmar Ware (Fig. 3); the *Orso* phase dating from roughly 300 BC to AD 300 and being characterized by the Rosales Zoned Engraved, Ballena Incised, and Tamino Incised types, (Fig. 4) as well as Zelaya Bichrome (Fig 5 A-C); and the final *Mata de Uva* phase, dating from approximately AD 300 to AD 500 and characterized by Tola Trichrome, Guinea Incised and Zelaya Trichrome (Fig. 5). This new arrangement seems to fit well with what can be deduced from other sequences in the Greater Nicoya sub-area.

However, not all significant cultural changes are paralleled by ceramic changes. During the northwestern Costa Rican Formative important shifts in settlement and subsistence were occurring, while ceramic changes evolved rather slowly.



Fig.3. Zoned Incised/Loma B phase, Vidor site. All are Palmar Ware as defined by Healy (1974); A has been previously defined as Schettel Incised, and the rest as Toya Zoned Incised.



Zoned Bichrome/Orso phase, Vidor site. A-C, Rosales Zoned Engraved; D, Ballena Incised; E, Tamino Incised. Fig.4.



Fig.5. Zoned Painted/Mata de Uva phase, Vidor site. A-C, Zelaya Bichrome; D-E Guinea Incised; F-H, Tola Trichrome.

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The Formative (Zoned Bichrome) Ceramic Sequence in Northwestern Costa Rica, as Seen from the Bay of Culebra

Zoned Incised/Loma B phase (800 BC to 300 BC): While the chronology for this phase is only tenuously supported by one date from Vidor Feature 13 and cross-dating from the highland Mendez Site (Norr 1978), the associated ceramics clearly antedate and contrast with the following 300 BC to AD 300 ceramics. The dates may subsequently be adjusted, but the stratigraphic and temporal precedence of this phase to currently recognized "Zoned Bichrome Period" phases is evident. The ceramic technique at this time separated zones by the use of heavy, broad incising on vessel bodies, or legs of vessels. In contrast to the following phase, many of the zoned areas were subsequently left in the natural buff clay color. The earlier named "Palmar Ware" (Lothrop 1926: 248-249) is characteristic of this period, and Healy (1974: XV) maintained the term. Palmar Ware includes Bocana Incised Bichrome, which is also present in the succeeding Orso phase.

Material from this phase was present in the Tempisque Valley and in Chahuite Escondido, but was not recognized as separate from other Zoned Bichrome materials present. Haberland's suggestion (1969) that the Catalina phase in the Tempisque area be subdivided appears to have been correct.

No evidence of the Loma B phase was found during excavations in the Bay of Salinas and Rio Sapoa areas during 1969-70 (Lange 1971a). The only examples of Toya Zoned Incised recovered came from disturbed contexts at the looted Las Pilas cemetery (Lange and Schiedenhelm 1972). Stratigraphic testing and surface collecting at the Las Marias site on the Bay of Salinas did not yield any ceramics from this period. Whether insufficient depths were reached in the excavations, or whether comparable materials were simply absent, is not known.

Zoned Bichrome/Orso phase (300 BC to AD 300): This was the Zoned Bichrome Period or Catalina and Chombo phases as initially established by Coe and Baudez (1961). Ceramic emphasis in this period was on much finer line incision or engraving than in the preceding phase, separating red and black or buff painted areas. Human, anthropomorphic, and zoomorphic figurines seem to have become essential elements in the ceramic complex at this time. Perhaps the best known type from this phase is Rosales Zoned Engraved, whose geographical distribution throughout the area and region seems limited to the Pacific coast, and suggests correlation with coastally oriented peoples. Some Bocana Incised Bichrome also occurs during this period.

Material similar to that of the Orso phase was present in the Bay of Salinas-Rio Sapoa areas, at the Las Pilas cemetery, and in surface material collected at one site on the Bay of Salinas and at five sites in the Sapoa Valley (Lange 1971a).

Zoned Painted/Mata de Uva phase (AD 300 to AD 500): This represents the major shift in the alignment of the sequence and replaces the Linear Decorated Period as defined by Baudez and Coe (1962) and Baudez (1967). In Tola Trichrome, one of the most distinctive ceramics of the phase, the use of red and black or red and buff is maintained, and indeed many of the same vessel forms and symbols are also maintained. There is the distinct impression of continuity, but the zoning is accomplished by outlining black zones with painted white lines. This phase is best incorporated as the final Zoned Bichrome Formative phase, rather than as a separate period, a possibility also entertained by Baudez (1967: 188-89). A major division in the ceramic tradition occurs at about AD 500, between this phase and the succeeding Early Polychrome phase, rather than at AD 300 as postulated by Baudez and Coe.

In the material Accola (1978a) reported from the 1973 Vidor Site excavations, frequency tables and graphs (pp. 84-87) indicate that his sequence basically began with Mata de Uva phase materials. The absence of Loma B or Orso phase materials, present in other areas of the site, was probably due to the locations of Mound 1 and Mound 2 on the periphery of the site.

Ceramics similar to those of the Mata de Uva phase on the Bay of Culebra were present in lower testing levels both in the Bay of Salinas and Rio Sapoa Valley. This material was not found in the Las Pilas cemetery salvage.

In other temporal schemes, the debate has been whether to: 1) separate this phase as a period in its own right, or 2) attach it to the beginning of the succeeding Early Polychrome Period. Baudez and Coe (1962) initially favored the bi-partite Early Polychrome A and B, but Early Polychrome A eventually became the separate Linear Decorated Period in Baudez's (1967) summary of his Tempisque research. Baudez himself was uneasy with a definite

periodization of what he saw as a gradual transition (1967: 188-89), and it has become apparent that this phase most appropriately represents a continuation, or termination, of Zoned Bichrome patterns. As Sweeney (1975:370) noted for Matapalo: "There is not a heavy component of the Linear Decorated Period at Matapalo or Chahuite Escondido... A number of types carried over from the Zoned Bichrome period". Continuity is stressed.

No clear-cut radiocarbon determinations are yet available to delimit the Mata de Uva phase (as there were none to delimit the Linear Decorated Period). However, in terms of cultural continuity, the ceramics from the phase are most clearly seen as an evolution from the preceding Orso phase, and not as the initial phase of the succeeding Early Polychrome Period.

From the point of view of Formative development, the Mata de Uva phase also correlates with the shift to exploitation of coastal subsistence resources and significant increases in coastal populations. In developmental terms, this phase marks the culmination of subsistence and settlement trends in which the bases for further regional developments were firmly laid.

Settlement and Subsistence Data

During the Loma B phase (800 BC to 300 BC), the ceramics in the basal levels at Vidor are very similar to the earliest so far identified in the intermontane area along the Guanacaste-San Carlos corridor, on the Atlantic watershed, and in the Tempisque Valley. As noted above, this component at Vidor precedes utilization of marine resources, and insufficient artifactual evidence exists to indicate agricultural or other subsistence practices. No mortuary data are available.

The succeeding Orso phase (300 BC to ca. AD 300) at Vidor is also well represented at other sites along the coasts, although it does not appear in the intermontane zone.

In the Monte Fresco phase in the Tamarindo/Matapalo zone, the Chombo phase on the Santa Elena Peninsula, and the Catalina phase of the Tempisque Valley, Baudez and Coe (1962:372) felt that large numbers of metates and manos in debris of this period and with the burials, reflected the importance of maize agriculture. Re-examination of the data indicates that in reality very few manos and metates were present, and then almost exclusively fragments. Artifacts relevant to subsistence practices continue to be rare during this period and we have little real idea of what subsistence patterns were practiced.

Mortuary sites such as the Las Pilas and La Vigia cemeteries are relatively rich and suggest stable populations with well-developed social structure and artisan groups. From the contemporary Monte Fresco phase in the Matapalo-Tamarindo zone, Baudez and Coe (1962:271) reported no adult skeletons, but interments of small children in inverted jars. Similar infant, or even fetal, interments were found at Vidor, and these burials probably date to this phase, or to the following Mata de Uva phase.

In the final Formative Mata de Uva phase (ca. AD 300 to ca. AD 500) at Vidor we see not only the ceramic shift described above, but a subsistence change characterized elsewhere as perhaps one of the most important adaptive changes to occur in this area (Lange 1978b), the exploitation of marine resources. This shift in subsistence base provided a firm foundation for coastal settlement, population growth, and cultural elaboration. It also made possible the accumulation of shell middens which provided us with a much fuller picture of pre-columbian life from this time onward. A badly damaged cemetery from this phase was located on a hill-top to the northwest, overlooking the Vidor Site.

Brief Regional Comparisons from the Atlantic Watershed of Costa Rica, Pacific Coastal Nicaragua, and Western Panama

In Pacific Nicaragua Healy also faced the problem of the transition between Zoned Bichrome and Early Polychrome periods. His San Roque phase, approximately contemporary with Baudez's Ciruelas (Linear Decorated) phase, and equivalent to the terminal Zoned Bichrome Mata de Uva phase on the Bay of Culebra, was not seen as a separate period: "We do not feel that San Roque (first half of the succeeding Early Polychrome phase) is so markedly different from Palos Negros to warrant a separate period designation" (1974:475). Here once again, the final Zoned Bichrome phase was appended to the succeeding period, despite the fact that "Zoned Bichrome types...overlap, and continue in reduced quantities, suggesting cultural continuity" (Healy 1974:476). Consistent with our placement of the Mata de Uva phase as the rinal Zoned Bichrome phase on the Bay of Culebra, I would also suggest San Roque be viewed as the final Zoned Bichrome phase in the Isthmus of Rivas region.

Snarskis (1978) reported sites coeval with the Guanacaste Zoned Bichrome Period on the Atlantic watershed. His La Montaña complex, similar in time to the Loma B phase in Guanacaste, was identified at two different sites (1978:63), and the apparently related Chaparron complex was identified at yet a third (1978:109). While Snarskis dated this period from 1000 BC to 500 BC, the cluster of available dates is around 500 BC and more recent, and 500 BC seems a reasonable initial date; comparisons with Guanacaste materials might make this another two to three hundred years earlier. A somewhat later beginning for La Montaña would push the sequence forward, and help to fill what at the moment is a a hypothetical Zoned Bichrome I Period with an arbitrary range of 500 BC to 1 BC). Numerous site components which Snarskis feels date to AD 1-500, in the Zoned Bichrome II Period (roughly coeval with the later half of the Orso phase and the Mata de Uva phase on the Bay of Culebra), were designated the El Bosque complex. The apparent contradiction between large cemeteries and absence of habitation sites commented on earlier for Guanacaste also prevails on the Atlantic, as Snarskis wrote of (1978:164): "...at least five cemeteries measuring approximately 20,000 m^2 each, if one can judge by looting activities. Yet, to date, only one barely noticeable living mound has been discovered".

Similar to our Guanacaste-San Carlos continuum, Linares also has carried out research linking the two sides of the lower Central American isthmus, in the Bocas and Chiriqui regions of western Panama (1977). Our results on the Guanacaste-San Carlos continuum bore a striking similarity to those she obtained: early occupations appear to have been in the highlands, and although so far we lack a comparable preceramic stage, the appearance of pottery prior to 33.5 BC is clearly demonstrated. As in Guanacaste, the earliest Panamanian coastal sites have ceramics similar to those in the highland, and "they are always found in the lowest levels of habitation sites; they are not associated with shellfish remains, such as characterized later occupations... and ceramic decorative techniques also include zoned bichroming" (Linares 1977-311).

Conclusion

Recent research on the Bay of Culebra has improved our understanding of the earliest known occupation of the region. The division of the Formative period in this area into three phases, although they are defined ceramically, yields significant implications for interpreting shifts in subsistence practices and social organization, and furthers our understanding of prehistoric cultural development in the region. There remain many gaps explicitly noted, or indirectly implied, suggesting directions for future research. It is important to note that despite ceramic similarities, the relevant data were obtained from various ecological settings. The present data, evaluated in comparison with studies from adjacent regions of Costa Rica, Panama and Nicaragua, clearly point out the need for more detailed analysis of the development of coastal-inland-highland systems.

ACKNOWLEDGMENTS

Our recovery of data from deep levels in different locations at the Vidor site was the result of the patience of the Vidor family, who permitted us to return for repeated seasons. In 1977 they allowed us to place a large 5 m x 5 m excavation in the Mound B (Loma B) area of the site. This excavation was a direct result of limited deep stratigraphic excavations by Holley Lange in the same area in 1976, revealing the clearly defined strata containing the Toya Zoned Incised ceramics. Discussions with Michael J. Snarskis and Lynette Norr were of significant help.