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*American Antiquity*, Vol. 30, No. 3. (Jan., 1965), pp. 310-329.

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# INCISED SLATE DISKS FROM THE ATLANTIC WATERSHED OF COSTA RICA

DORIS STONE AND CARLOS BALSER

## ABSTRACT

Slate backs of iron-pyrite mirrors have been found in the southwestern United States, Mexico, Guatemala, Costa Rica, Panama, Ecuador, and Peru. Three engraved slate disks were recently excavated at two sites in Costa Rica, one at La Fortuna and two at Guácimo. Slate disks in this region are not unusual. Many have traces of the gum that was used for glue, and at least one fragment bears traces of the wooden frame. The significance of these three plaques lies in the designs they bear. These designs indicate that the disks were made between A.D. 435 and 500 in an area remote from lower Central America. Grave objects associated with the mirror backs include reworked jades; gold objects in Coclé, Quimbaya, and Guayas styles; and Incised Zoned Bichrome and Negative Painted Bichrome Incised wares. These disks and the objects associated with them provide insight into pre-Columbian interchange and trade routes in lower Central America, and they suggest that slate disks were important in commerce and perhaps served as ceremonial objects.

**T**HERE ARE THREE principal cultural divisions in pre-Columbian Central America. The first is linked with peoples of southern origin, the second is Maya, and the third is derived from northern sources and can be subdivided into what we term aboriginal and Mexican cultures. The third has roots in territory which today forms the Republic of Mexico. These divisions overlap one another and indicate long and constant pressures, particularly where Mexican elements are involved.

The southern cultural division embraces all of Panama and Costa Rica, the Caribbean or Atlantic coast of Nicaragua and Honduras to the Aguan River, southeastern Honduras, and eastern El Salvador. It is likely that at one time all of Nicaragua and southern Honduras were within this delimitation (Stone 1948; 1957: 123-5; 1958). The Maya area includes the Peten, northern and eastern Guatemala with most of the highlands, western El Salvador, and parts of western and northern Honduras. The aboriginal northern subdivision comprises the territory which corresponded originally to the historical Xinca, Lenca, and Sula-Jicaque tribes. This means central and part of northwestern Honduras, the Pacific coast of Guatemala at least to the heart of the Cordillera in the south, and much of western El Salvador and southern Honduras (Sapper 1897: 391-2; Lehmann 1920, 2:

723-32; Stone 1942; 1957: 3-4, 9-10). The first definite signs of Mexican elements appear in Guatemala around 500 B.C. in the Miraflores phase in Kaminaljuyú and the Chicanel phase at Uaxactun (Shook and Kidder 1952: 47, 124; Willey 1959: 189), but the great period of northern expansion and what we feel was the start in Central America of cultures dominated by Teotihuacán did not begin until approximately 1000 years later, around the 6th century A.D., with the advent of the Pipiles in western El Salvador and Guatemala (Sapper 1897: 391-2; Lehmann 1920, 2: 727-32, 793, 1023).

In order to understand some of the problems confronting archaeologists in Central America, it is necessary to review the postulated migrations of Mexican peoples from the first Pipiles in the 6th century to the eve of the Spanish Conquest. In itself, the term Pipil is ambiguous. Its literal translation is "prince" or "noble" (Jiménez Moreno 1959: 1077). What is more significant, however, is that the Pipiles were Nahuas who spoke Nahuatl and that in this particular case they were imbued with the culture of Teotihuacán. Other Pipiles influenced by the Totonaques and Huastecs also entered Central America about the same time (Jiménez Moreno 1959: 1071).

These migrations were closely followed by that of the Chorotega of Mangué speech who left their home in Chiapas around A.D. 600 and settled in Nequepio in eastern El Salvador. Between A.D. 700 and 800, the Chorotega-Mangué continued to move, reaching Nicaragua and Costa Rica, and a small group went as far as Panama shortly before the Spanish arrival (Lehmann 1920, 2: 792 [footnote], 832, 865; Andagoya 1865: 40).

The period from A.D. 740-800 was marked by the dominance of the Olmecs whose tyrannical actions caused Nahua groups or Pipiles to flee from Veracruz and Tabasco into northern Central America (Lehmann 1920, 2: 1060; Jiménez Moreno 1959: 1083, 1088). This of course resulted in the displacement of many of the original inhabitants. The effects of these movements can be noted on the Pacific coast of Guatemala, in El Salvador, and in Honduras, especially



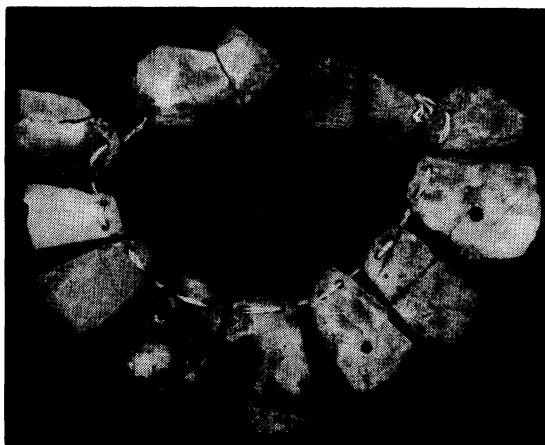


FIG. 2. Necklace made of slate mirror-back fragments.  
La Fortuna.

La Fortuna on the north bank of La Habana Creek, which empties into the River La Fortuna, a tributary of the San Carlos River in northeastern Costa Rica (Fig. 1). Moreno brought a mirror back incised with Maya hieroglyphs (Fig. 15) and five jades (Figs. 3, 5) to the National Museum in San José. Doris Stone and Carlos Balser, members of the Board of Directors of the Museum, went to La Fortuna, accompanied by Roger Stone and Moreno, for a preliminary investigation.

The two incised mirror backs associated with the site of Guácimo on the Línea Vieja, Costa Rica, were found about a month later by another professional pot hunter, Cayetano Espinoza, who brought them to San José to sell. He also brought the objects accompanying these disks in the grave, as well as the artifacts found in adjoining burials by Espinoza and his six companions.

#### THE SITE OF LA FORTUNA

*The Cemetery.* The burials at La Fortuna were in a ceremonial area with two large depressions similar to those at Numancia and Anita Grande on the Línea Vieja. There were four separate groups, and each group contained some 25 to 40 graves. As time was limited, we confined our excavations to the burial group which had yielded the incised slate disk. We examined 20 graves that had already been opened by Moreno before our arrival and excavated five additional graves.

All graves were unmarked on the surface except for an occasional depression. The graves

were placed side by side in rows of four to seven and were rectangular in shape. They were covered by a layer of stone (59 cm. thick), below which about 1 m. of yellow earth had been placed. The burials rested in gravel, which at

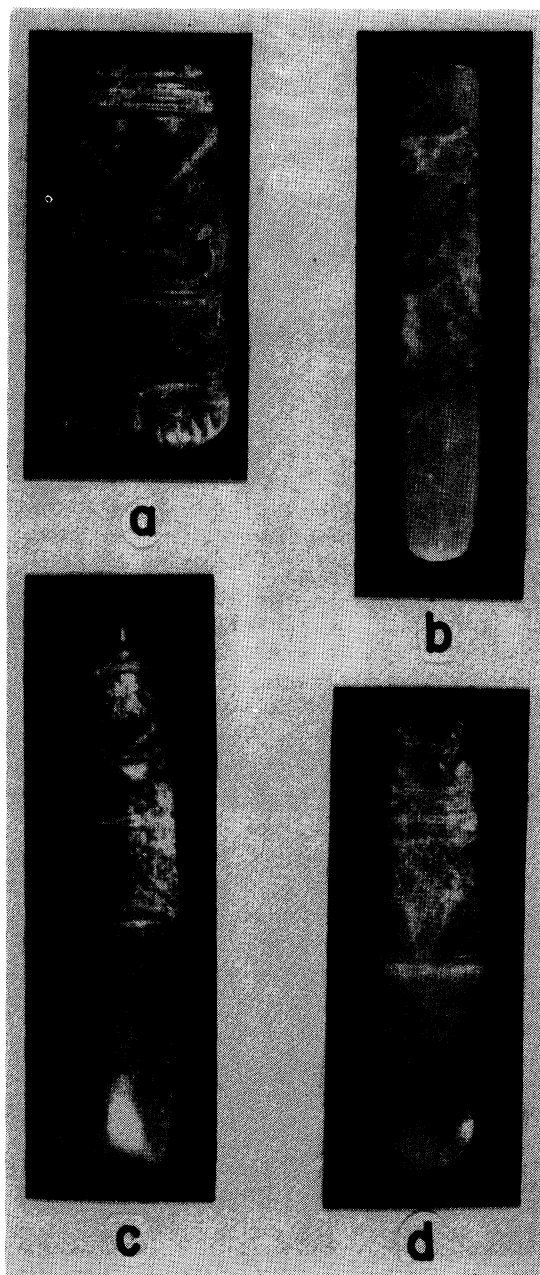


FIG. 3. Ax-god styles, La Fortuna. a, human form, string-sawed, length 5.7 cm.; b, reconditioned jade, length 7.3 cm.; c, reconditioned jade, length 8.5 cm.; d, length 6.7 cm.

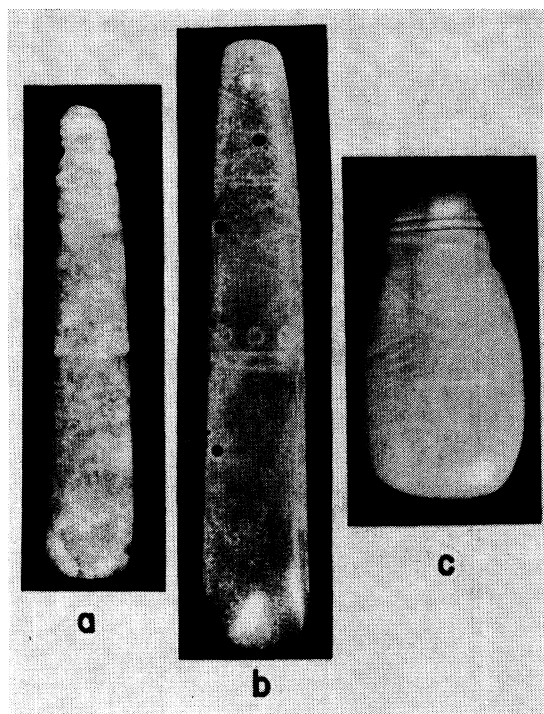


FIG. 4. Ax-god styles, La Fortuna. *a*, length 10 cm.; *b*, suspension holes made with tubular drill, length 13 cm.; *c*, length 6.6 cm.

La Fortuna is a natural formation remaining from ancient riverbeds. The positions of the objects in the burials indicated that the head lay at the west, but no skeletal material was preserved. Heavy rainfall (4280 mm. per year) and porous soil make this quite usual.

Below is a list of the contents of six graves. This includes Grave 1, which was excavated solely by Moreno, and the five graves excavated by us.

*Grave 1.* Incised disk (Fig. 15) and reworked jade ax-god with zoomorphic motif (Fig. 5).

*Grave 2.* Fragments of disk with remnant of wooden frame; two raised-rim grinding stones; one Mesoamerican-type grinding stone; and fragments of a polychrome vessel with geometric and glyphlike designs (Fig. 13).

*Grave 3.* Fragments of disk with remnants of red and white stucco; two vessels of Red Monochrome ware; one Black straight line on Red ware; and three pieces of White Band ware with vertical red stripes (Fig. 10).

*Grave 4.* One plain slate disk; two raised-rim grinding stones; one jadeite ax-god; three Red Monochrome fragments incised with a simple geometric pattern (Fig. 6); and one Monochrome fragment with appliqué motif (Fig. 7 *h*).

*Grave 5.* Incised Bichrome vessel, negative painted in red and black, with beveled base and with appliqué (Fig.

8 *b*), and another vessel without appliqué (Fig. 8 *a*), and fragments of a Black-on-red globular vessel with undulating lines painted with a multiple brush (similar to the one shown in Fig. 9).

*Grave 6.* One raised-rim grinding stone; two fragments of Black-on-red globular vessels with undulating lines painted with a multiple brush; and one Red Monochrome incised fragment.

The contents of the 19 graves, with the exception of Grave 1 mentioned in the above list, were taken out before our arrival. We record them together according to the material.

*Jades.* Nineteen jade objects were found. Four of these are long tubular beads, two of which are decorated with an alligator motif. The rest are stylizations of ax-gods (Figs. 3 *d*, 4 *a-c*, 5), although some (Fig. 3 *a*) have the form of human beings. The specimen shown in Fig. 3 *a* was string-sawed. The elongated jade in Fig. 4 *b* shows tubular drilling and has both vertical and horizontal suspension holes similar to those seen on "winged pendants."

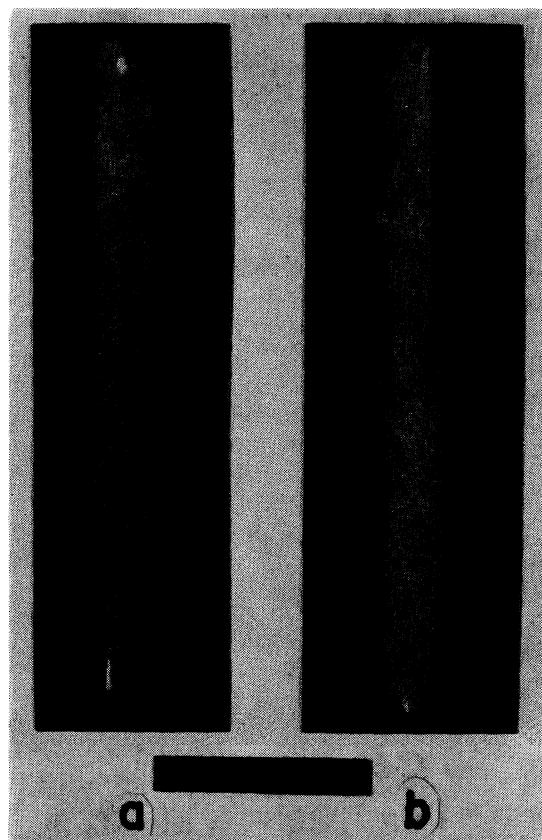


FIG. 5. Reworked zoomorphic jade, La Fortuna. Two views (note suspension holes).

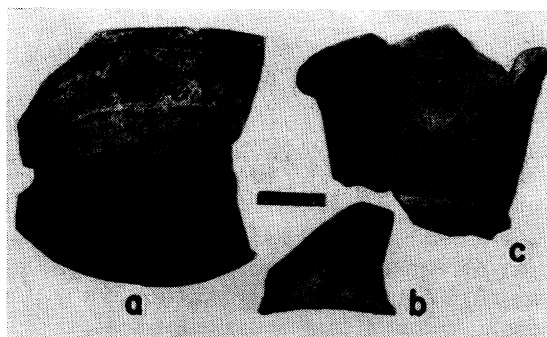


FIG. 6. Incised Red Monochrome ware, La Fortuna.

**Stone Objects.** At one side of most graves were one to three grinding stones. We saw 18, six of which were of the Mesoamerican type designed for maize and lacked a raised border, while the rest had a low rim and were suitable for the preparation of tubers and the fruit of the pejibaye palm (*Guilielma utilis* Oerst), which require more water and are staples of peoples associated culturally with South America (Stone and Balser 1957).

**Ceramics.** The most common ware associated with the disks is incised Red Monochrome with simple geometric patterns (Fig. 6). This was followed by globular Black-on-red vessels with straight lines; Monochrome and Incised White Line pottery with effigy legs and appliqué motifs (Fig. 7); Incised Bichrome vessels negative painted in red and black with and without appliqué motifs (Fig. 8); globular Black-on-red vessels with undulating lines applied with a multiple brush (Fig. 9); and Alligator ware. Other styles include White Band ware with vertical red stripes, including one vessel with an appliqué motif (similar to Fig. 10 b); Zoned Bichrome ware (Fig. 11); one vessel with decoration that combines the Alligator motif, Type A, with a grooved design under the slip comparable in technique to Underslip Incised ware (Fig. 12). One cylindrical clay seal is perforated lengthwise and is carved with a hand-and-fret motif (Fig. 14). Another seal is flat and represents a snake.

**Mirror Backs.** The outstanding items from the La Fortuna burials are the 12 slate disks (no grave yielded more than one). Included in this number are fragments of one or more disks that had been reconditioned to form a necklace (Fig. 2). Some of the disks still bear traces of polygonally cut iron pyrites that were attached to the

slate with vegetable glue. Each plaque has two opposed pairs of suspension holes (edges beveled toward the back) similar to disks from the Guatemalan sites of Kaminaljuyú, Nebaj, and Zaculeu, and indicative of Early Classic mirrors (Kidder and others 1946: 131-2). In addition to the three disks already mentioned from Graves 1-3, two show traces of stucco and the rest are plain slate disks.

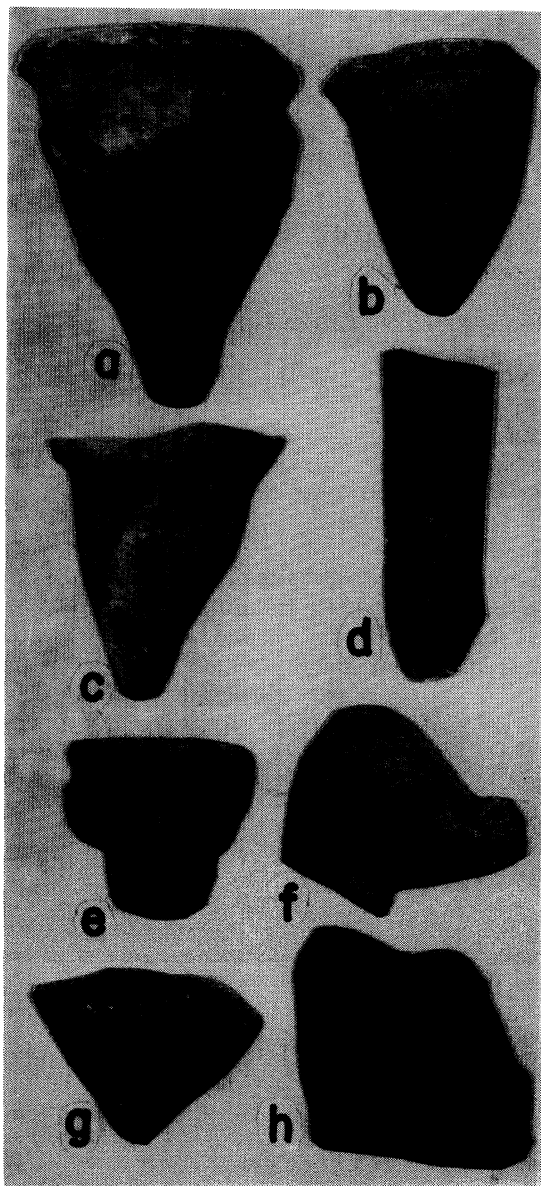


FIG. 7. Effigy legs and appliqué decoration from Monochrome and Incised White Line ware, La Fortuna. Length of a, 9.25 cm.

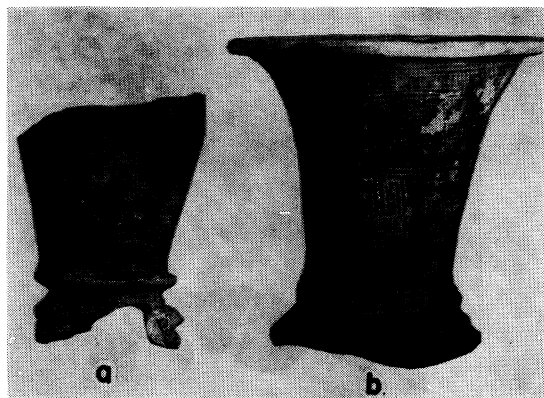


FIG. 8. Negative-painted Incised Bichrome ware, La Fortuna. Height of b, 16 cm.

One disk is incised and has a diameter of 15.5 cm. Some of the incised Maya hieroglyphs of the Early Classic period which adorn one side bear traces of red cinnabar (Fig. 15). The reverse face of this plaque shows traces of yellow oxidation, which indicates the corrosion of iron pyrites. It is probable that the disk broke while in use because two long slats are found where the break occurred. A third slat, the two halves of which are off center and do not pierce the slate, was started but not finished, perhaps because the repair was initiated separately before the plaque was pieced together. The carving clearly shows that it was done to fit the curves of the slate disk and that the plaque was not made around an already incised design. The

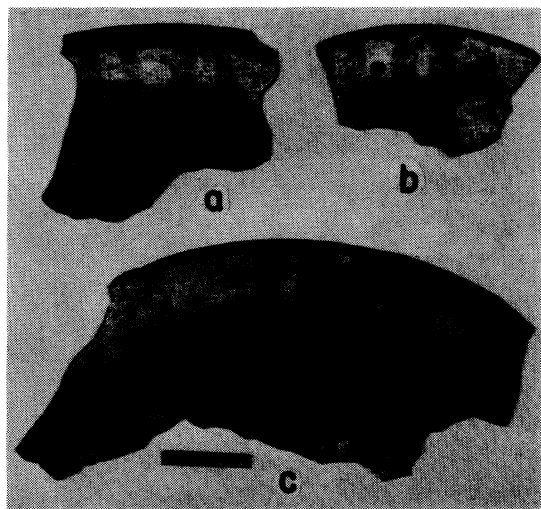


FIG. 10. White Band ware with vertical red stripes, La Fortuna.

only object accompanying this disk in the grave was a reworked jade ax-god with the zoomorphic motif shown in Fig. 5.

Various experts in Maya epigraphy were consulted regarding the significance of the glyphs. As the general consensus of opinion was the same, we give the interpretation of J. Eric S. Thompson who has written the most detailed report on this mirror back. Thompson believes that the inscription was used for its esthetic



FIG. 9. Globular red-ware vessel with black undulating lines on shoulder, La Fortuna.



FIG. 11. Zoned Bichrome vessel, La Fortuna. Height 13 cm.





FIG. 12. Vessel that combines the underslip grooved technique with the alligator motif, La Fortuna. Height 8.7 cm.

value only, that is, for pure decoration, because in its entirety it makes nonsense.

Thompson lettered the columns A and B, placing the numbers 1–3 in column A and 1–5 in B (Fig. 15). His conclusions are quoted below, but he adds this warning: "Really I would like to study contemporary texts with more care."

A 1 and A 3 are Initial Series Introductory glyphs, but with no following Initial Series. No normal text would have two of these, neither with an Initial Series. As its name implies, the Initial Series Introductory glyph is followed by an Initial Series. The only exceptions to this rule are two or three late texts at Copan, but even these are followed by a date. On this slate back the Introductory glyphs introduce nothing. It is as though a speaker said "Ladies and Gentlemen" twice and then sat down. The comb element on each side of each head is missing. That is an early trait. The comb on each side of the head of the Initial Series Introductory glyph is absent, to the best of my knowledge, only on the Leyden Plate, the new Tikal Stela 31, and possibly on one or two badly eroded Cycle 8 dates at Uaxactun, but they are too eroded to make the matter clear.

A 2 is the month sign Yaxkin (early form) but without a number and without an accompanying day sign, something no Maya scribe would ever dream of doing.

B 1 is a jaguar head glyph of a form quite different in early texts, particularly on early pottery (e.g., on the stuccoed tripod cylindrical jar illustrated in Kelemen [1943], Plate 128 c at the head of both sets of columns of glyphs between the seated figures; Glyph 788 in my "Catalog of Maya Hieroglyphs"). This is confined to Tikal, Uaxactun, and a celt from Mountain Cow, British Honduras, and is early. It disappears in Tzakol times.

B 2 is Glyph F usually attached to the Lunar series, and should never stand alone, but is always with Glyph G and always with a Calendar Round date. None of these are present here.

B 3 is my glyph compound 21.573 with the coefficient of 9. Only two other examples are known of this compound, one from Tikal, one from Uaxactun, and both are early. In Tikal it appears on the new Stela 31 of uncertain dating, but probably 9.3.0.0.0., perhaps earlier. The Uaxactun example is from the same stucco tripod vessel mentioned above.

B 4 is a head. All I can say is that it gives me the impression of being early.

B 5 looks like a monkey head. It conveys nothing to me one way or the other.

I think it is significant that two of the glyphs were used on (early) pottery. As I have noted in the introduction to my catalog, there was a general stock in trade of decorative glyphs on pottery and potters used them over and over again, almost surely as pure decoration. If you are going to use decorative glyphs on a disk, it is not unreasonable to suppose that you would use the same ones as potters used.

My guess is that the slate disk in the National Museum of Costa Rica was made around 9.0.0.0.0., A.D. 435 Goodman-Thompson correlation, but perhaps a century or so earlier; or more likely, up to fifty years later. I think that it is a reasonable conclusion that it was made in the Central Peten area in the vicinity of Tikal, and 95% certain that the glyphs are purely decorative. I repeat, I would really like to study contemporary texts with more care. For instance, my recollection is that the earliest known texts do not have Glyph F usually attached to the Lunar series (your B 2) and that would tend to favor a date around A.D. 500 and B 1 and B 3 have at present associations only with about that date or a bit earlier.

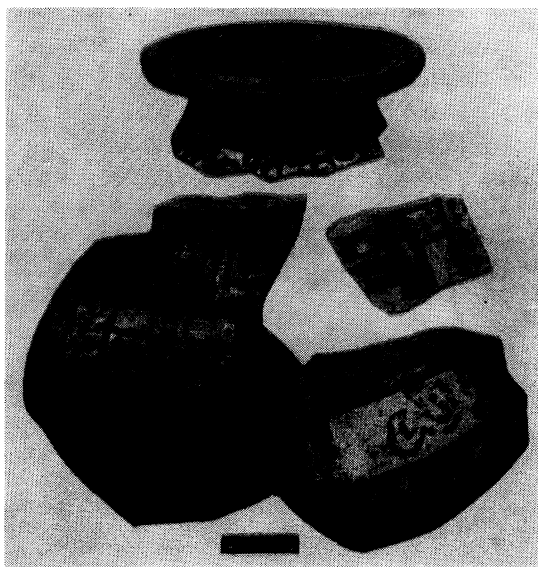


FIG. 13. Fragments of a polychrome vessel with glyphlike designs, La Fortuna.



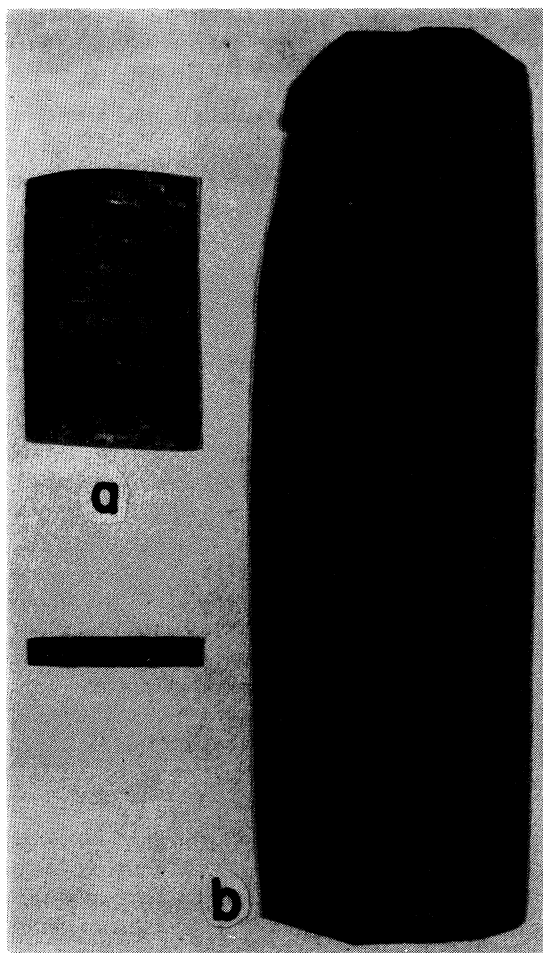


FIG. 14. Cylindrical clay seal (a) and print (b),  
La Fortuna.

#### THE SITE OF GUÁCIMO

In the Atlantic watershed and within easy reach of the San Juan River through inland waterways are the Lagoon of Tortuguero and the Línea Vieja. The Línea Vieja is literally covered with archaeological sites and seems to have been a great trading center in pre-Columbian times. At the northern end of this area is the town of Guácimo (Fig. 1), to the north of which is an indigenous cemetery between the Jiménez and Guácimo rivers.

*The Cemetery.* The cemetery lies within the area known as the Tres de Guácimo on property which in 1963 belonged to Ismael Antonio Bermúdez Mora. There were about 125 graves at this site and two types of burials. In the center were some 25 stone mounds .75 to 1.5 m. high.

Below the stone was yellowish earth, and at a depth of 1.5 to 2 m. were the artifacts. The underlying natural formation of stone was utilized to make the walls of the graves. There was no gravel.

These mounds were surrounded by approximately 100 graves similar to those at La Fortuna. They lay at a depth of about 60 cm. under the present surface. Each grave varied in size from 1.7 by 2.5 m. to 1 by 2 m. In the bottom of each shaft was a layer of fine gravel capped by rocks and yellowish sandy soil that was not as dark as the volcanic sandy soil used for fill. As at La Fortuna, there was no skeletal material, but grave objects indicated that the head had been placed at the west or northwest.

Because we arrived after most of the graves had been emptied, we list in detail the contents of the two that contained incised mirror backs and three that we excavated. Certain objects recovered from other burials in this cemetery are described separately. These are specimens that we consider important in understanding the cultural picture of the area. The two graves which yielded the mirror backs we refer to as Grave 1 and Grave 2, respectively, and those opened by the Museum are referred to as Graves 3, 4, and 5.

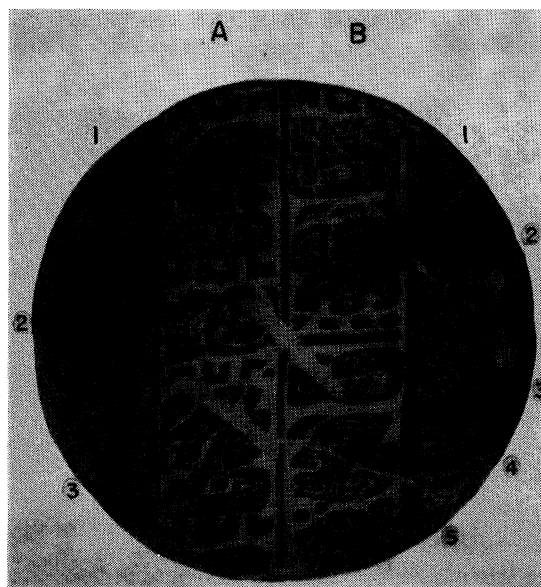


FIG. 15. Mirror back incised with Maya hieroglyphs,  
La Fortuna. Diameter 15.5 cm.

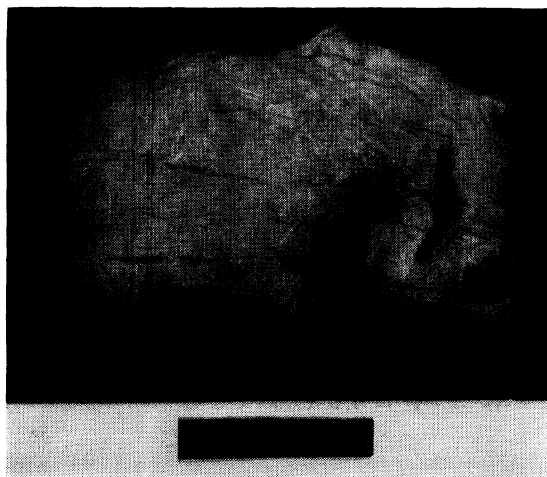


Fig. 16. Stone mace head with Antillean motif, Guácimo.

*Grave 1.* One engraved disk 8.8 cm. in diameter; 12 stone mace heads, two with projecting points, three plain, and the rest adorned with a bird having a long beak; one jadeite curly-tailed animal; three small clay vessels that include a pot with an annular base and a frog effigy with vertical white stripes on the interior (Fig. 24 a), a Red Monochrome tripod vessel with projecting head and tail of an animal and with incisions painted white (Fig. 24 b), and an unpainted bowl representing a double motif: a bird resting on his back (Fig. 25 a) and a man holding his arms behind (Fig. 25 b); and in gold alloyed with copper (tumbaga) a frog of Tairona style, a parrot of Coclé type (Fig. 23 b), a pectoral made of laminated gold but with coiled springlike ends (Fig. 23 a), a technique typical of the province of Guayas in Ecuador, two amulets in the form of a curly-tailed animal, and three heads from curly-tailed animals.

*Grave 2.* An engraved disk 15.7 cm. in diameter; two stone club heads, one plain but the other having a bird's head that holds a human head in its beak (Fig. 16), a concept associated with South America and the Antilles (Balser 1955; Stone 1958: 25; 1961: 202); a rectangular tripod grinding stone; a staff head made of green slate with an inlay of iron pyrites (Fig. 27); a small cylindrical vessel adorned with the effigy of a human face separated from a frame of intertwined frets by a deeply incised line (Fig. 28); and the following articles in gold alloyed with copper (tumbaga): the remains of two curly-tailed animal heads (Fig. 26 b), a double-headed bird (Fig. 26 c), beads (all Coclé style), two frogs (Fig. 26 d), and one human figure, Quimbaya style (Fig. 26 a).

*Grave 3.* A Red Monochrome ware vessel with appliqué; an unpainted vessel decorated with appliqué monkeys painted red, incised lines, and punctate dots; an Orange Monochrome pot with red bands and red brush strokes; and seven raised rim grinding stones with conventionalized heads as rim decoration.

*Grave 4.* This grave yielded nothing but a few sherds of Red Monochrome ware that were scattered between the layer of river stones.

*Grave 5.* A large broken beveled jar of Red Monochrome ware bearing an appliqué bird with long beak; a small bird effigy of Red Monochrome ware with annular base and incised lines indicating feathers on the wings; and a broken grinding stone bearing a flying panel decorated with the long-beaked bird.

*Jades.* This cemetery contained numerous jadeite pendants; 150 outstanding pieces are reported, almost all from the stone mound graves. Included in this group are curly-tailed animals, birds, and reworked ax-gods (Figs. 18, 19, 29, 30). There were many small jade beads, but only six large tubular beads are known to have been found.

*Stone Objects.* Most of the stone objects are grinding stones of lower Central American type, the rim often decorated with heads so conventionalized that they give the impression of scallops, and usually with a flying panel showing a long-beaked bird. We counted over 60, and many had been carried away before our arrival. Also found were two finished grinding stones with raised rim and jaguar heads. Next in frequency are maces decorated with the long-beaked bird holding a human head. Out of 15 seen, all have the long-beaked bird motif except two which show the bat; one depicts an owl and another has raised nubbins.

*Ceramics.* The common ceramic types are incised Red Monochrome ware with appliqué motifs similar to those at La Fortuna; unpainted vessels decorated with red bands or stripes, appliqué figures, and incised and punctate patterns; Orange Monochrome ware adorned with red bands or red brush strokes and appliqué nodules; and Incised Bichrome vessels negative-painted in red and black with annular base like those from La Fortuna.

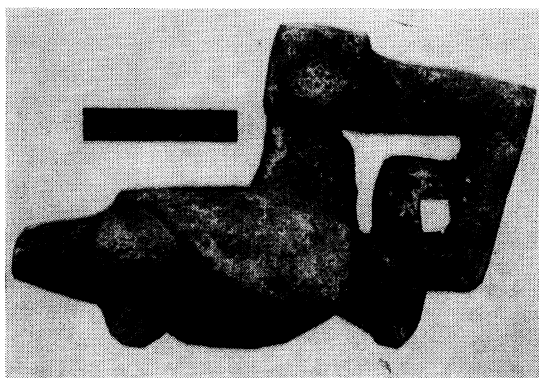


Fig. 17. Stone mace head with Antillean motif, Guácimo.

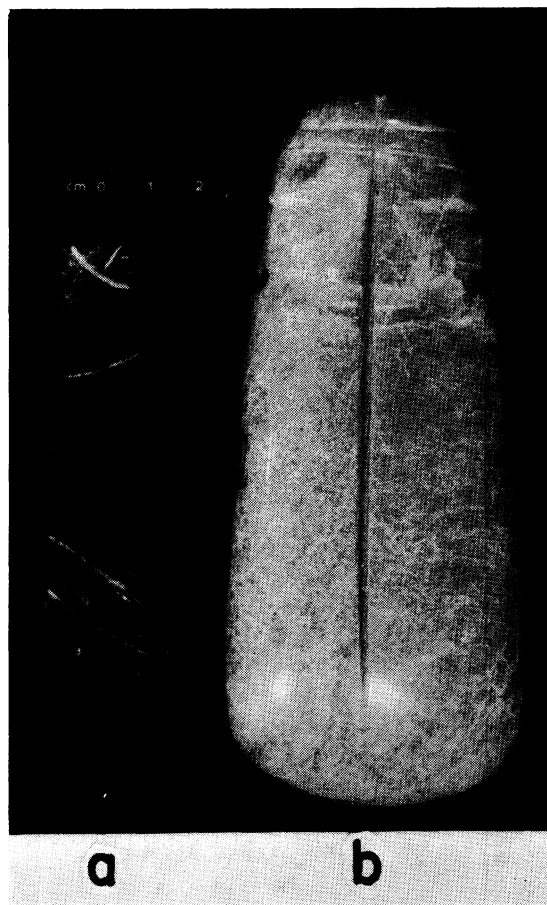


FIG. 18. Reworked ax-gods, Guácimo.

*Mirror Backs.* Seven graves contained a single slate mirror back. All but one show traces of polygonally cut pyrites, as at La Fortuna. Some of the pyrites have underlays or wedges of stone to raise the polygons to an even surface (Fig. 20 a), a method used at Kaminaljuyú, Guatemala (Kidder and others 1946: 127). One disk has a small jade monkey head encrusted in the oxidized pyrite (Fig. 20 b); four have traces of red and white stucco (Fig. 20 c); and two (Graves 1 and 2) have incised decoration.

The disk in Grave 1 has a diameter of 8.8 cm. (Fig. 21) and, according to Espinoza, was found where the chest of the dead person should have been. The design is an engraved scroll motif consisting of alternating large and small units. Each unit appears twice and the design encircles the plaque, suggesting the tail and body of a serpent.

The plaque from Grave 2 (15.7 cm. diameter) was found close to where the left foot would have been. This disk (Fig. 22) bears signs of the gum used to hold the original polygonal pyrites that covered the reverse side before it was reconditioned. At the time of excavation, however, a plaque of iron pyrites, the surface of which was not beveled toward the back, was attached to the disk. This plaque has a hole on each side which must have served for suspension before the disk was joined to the engraved slate, but this hole was later plugged with iron pyrites. The pairs of holes furthest from the edge probably also were made later to accommodate fastening to the slate, which is a



FIG. 19. Reworked ax-god, Guácimo. Length 6.6 cm.

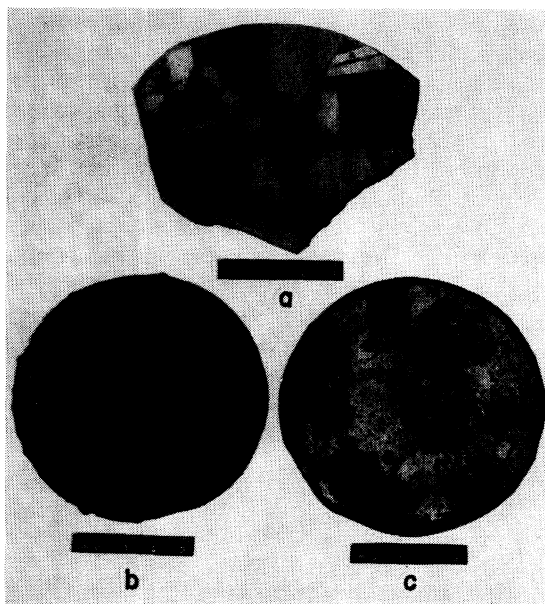


FIG. 20. Slate disks, Guácimo. *a*, with stone wedges; *b*, with encrusted jade; *c*, with painted stucco.

trifle smaller and is beveled toward the back. More precisely, the single pyrites plaque was re-conditioned with holes to fit those of the incised slate disk. On top of the engraved design there are traces of white stucco, which indicate that the slate disk had been covered and re-used according to the reigning fashion.

The adornment consists of an incised pattern divided into two scenes separated by an undecorated space. Both divisions have four design units. The lower units include the two pairs of suspension holes and are covered with a pointed symbol directed upward. It is possible that these symbols represent butterfly wings, which at the same time might signify the brilliancy of the feathers of the plumed serpent, or they could be a corruption or degeneration of the Mexican glyph for water or blood (Caso 1962: 65, Fig. 12), or a symbol for vegetation such as a flower (Enciso 1957: 46, Fig. 4). Between these lower divisions and the principal engraved strip are undulating lines. At the left of one main band is a ball player, his right arm outstretched as if in the act of catching or throwing and his left arm extended toward the back. The eyes, hair, and speech scroll are missing, but a round earplug is shown, and there is a suggestion of the headband. Around his waist is a yoke with a fringe and a hooklike ornament hanging in the rear, and in front the end of a

loin cloth. On the extreme right (facing toward the center) is a standing man, also eyeless, with his left arm extended upward and holding a paddlelike (palmate?) object in his hand. He wears an elaborate headdress which might represent the feathered serpent and a loin cloth terminating in a fringe, one end hanging in front and the other in the rear, where a hooklike object similar to that on the first figure projects from the cloth belt. In front of the man's head is a speech scroll pointing toward the center of the disk and ending in two tassels. The space between the two figures is covered with the same symbols that are used in the lower portion. On top of this scene and acting as an undulating border is a conventionalization of the plumed serpent with bold markings.

If the disk is turned around and we examine the second division, the space containing the two suspension holes is filled with emblems that might represent butterfly wings or signify water or blood or vegetation. These are directed toward the center of the plaque. At the left is the right profile of a seated figure clothed in a loin cloth, holding a ball-game hand stone in his outstretched right arm and with his left arm raised. He has short hair which stands straight up, a rectangular eye, and an ear formed by a scroll with a round plug below. A long speech scroll descends beyond his foot. Facing this man (at the extreme right) is the left profile of an-

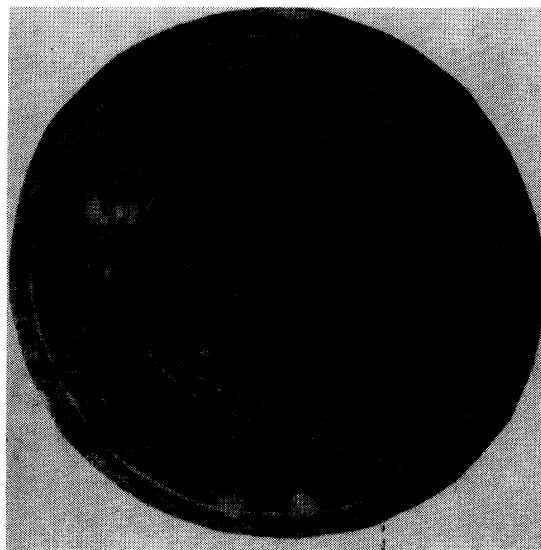


FIG. 21. Smallest engraved disk, Guácimo. Diameter 8.8 cm.

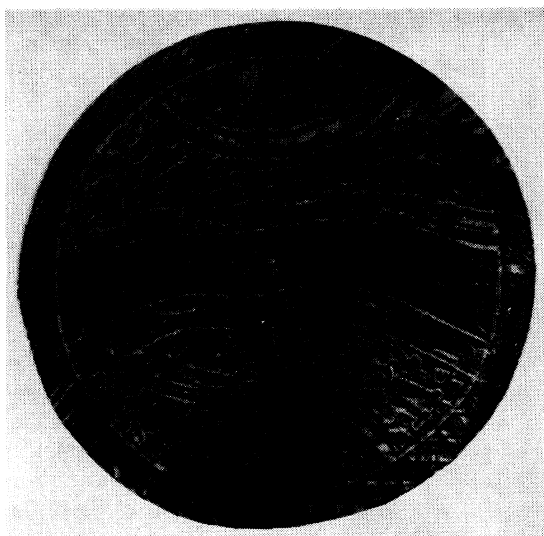


FIG. 22. Largest engraved disk, Guácimo.  
Diameter 15.7 cm.

other seated figure with the same stylization of hair, eye, and ear. The left hand is raised to the front of the face, but no right hand is shown. In the center between the two men is a rectangular symbol with an interlocking-L motif that reminds one of a serpent conventionalization. The remaining space is filled with the same symbols as the lower space. Undulating lines follow this band, and on top of these the serpent body with bold markings is repeated.

#### DISCUSSION

There is little doubt that iron-pyrite mirrors backed by slate plaques were coveted articles of trade even in a land so remote from their point of manufacture as lower Central America. It is possible that at one time they might have been used as heirlooms. It seems clear that they were highly esteemed and perhaps served as ceremonial objects or as symbols of rank. All three incised plaques belong stylistically in the Classic period, that is, around A.D. 500. The disk from La Fortuna indicates the Peten Maya, while the two from Guácimo suggest a Classic Veracruz culture. However, the small mirror back from Grave I in Guácimo not only recalls Classic Veracruz scroll designs but also representations of the feathered snake from Tlaxcala, Mexico, which date from the 12th or 13th century (Seler 1961, 2: 294, Fig. 6 a).

The actual time of arrival in Costa Rica of these mirrors with incised slate backs opens a

controversial problem. They may not have reached lower Central America until many years after their manufacture. It is possible that they arrived at an early date through trade or were captured in battle and were used over a considerable period, until some were reconditioned because of fashion or new religious ideas. It is even possible, as Thompson has suggested, that they were looted from early burials and put once more into circulation. One mirror back was made into a necklace, which suggests that the slate itself had acquired a value, but the painted stucco over the engraved design of the large Guácimo plaque points to reconditioning by members of a society distinct from that of its creators and naturally at a later period.

Many of the grave furnishings connected with the slate disks also indicate varied and remote associations. Mexican cultures were responsible for the importance of jade in Central America. The cult of gold went from east to west or

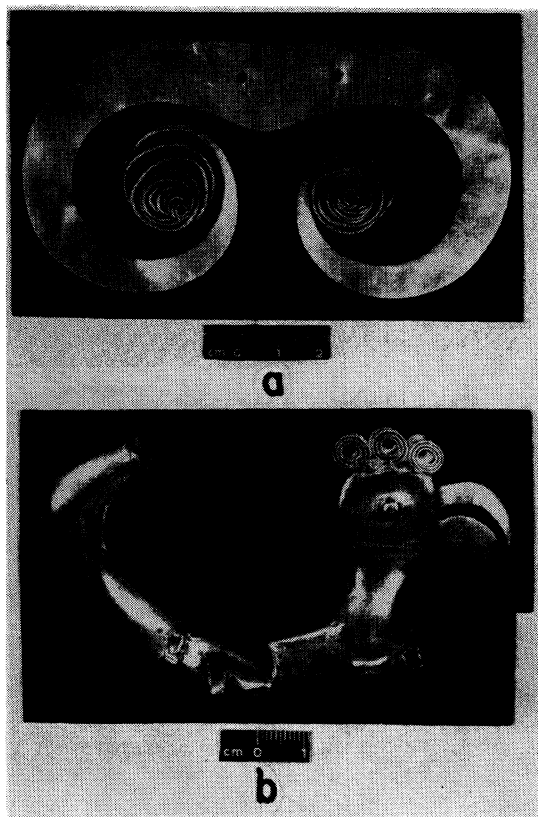


FIG. 23. Gold objects found in grave with disk shown in Fig. 21, Guácimo. a, pectoral, Guayas style; b, parrot, Coclé type.

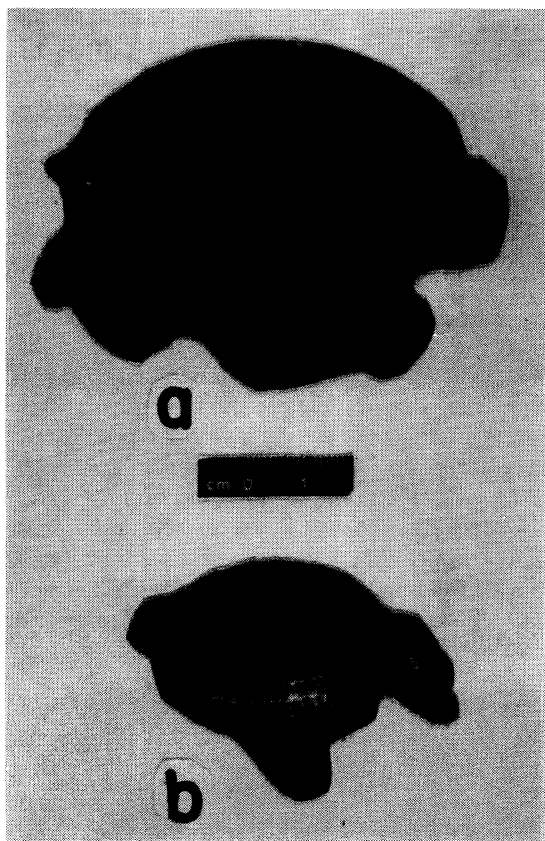


FIG. 24. Small pottery vessels, Guácimo. *a*, frog effigy; *b*, animal effigy.

from south to north, but the esteem for jade penetrated Central America from the other direction. Certain features of the ax-god recall the votive axes of the Olmecs (Balser 1961a: 72). Indeed, Olmec or Olmecoid pieces are not uncommon in Costa Rica (Balser 1961b: 211-13), and the many Costa Rican examples of bluish jadeite lead one to suspect that it is not at all improbable that an Olmecan group may have sought this region for such fine-colored stone. Stirling (1946: 297) has pointed out that their art styles penetrated Central America for at least 300 years after A.D. 500. It is possible that the people responsible for these styles may have pushed southward in different epochs. It is equally possible that jade pendants from La Fortuna, such as ax-gods or the representations of human beings, were due to the acceptance of this material by local groups. In other words, these artifacts played the role of treasures among many of the southern peoples who inhabited this region.

In the La Fortuna burials most of the jade pendants were reworked from amulets that had been used for some time. This suggests that they had been taken as spoil or acquired in trade from earlier owners. These reconditioned pendants occasionally show traces of the original sculpture. On the backs may be seen parts of the holes drilled for suspension or parts of the rough edge which remained when the first carving was separated from the block. The reworked jades shown in Figs. 18, 19, and 29, which are from the same cemetery as the slate plaques in Guácimo, like many other examples from the Línea Vieja, were converted or were in the process of being converted from ax-gods. The groove down the center of the specimen in Fig. 18 *b* demonstrates the start of reconditioning, while a finished piece is seen in Fig. 18 *a*. Likewise, the ax-god in Fig. 19 has been reworked into a zoomorphic figure connected with the head of a long-beaked bird. Here is an example of the acceptance of a new material, jade,

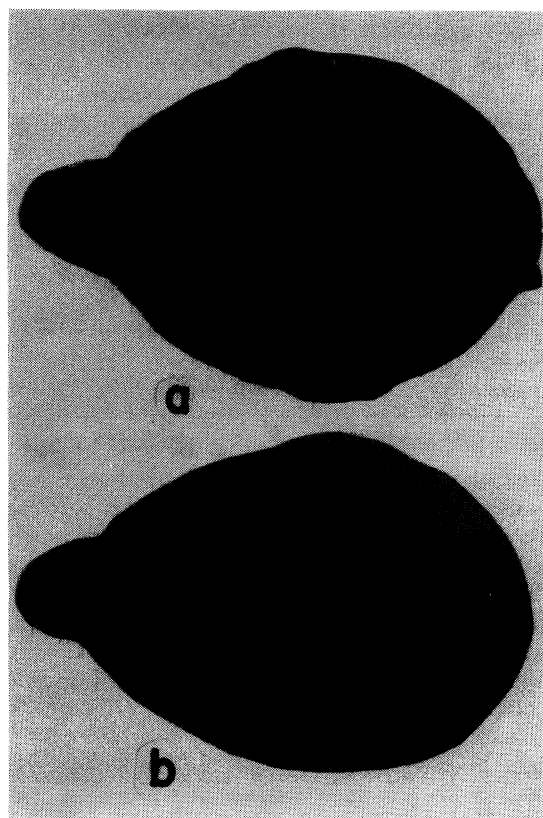


FIG. 25. Pottery vessel with double motif, Guácimo. Length 7 cm. *a*, bird motif; *b*, human motif.



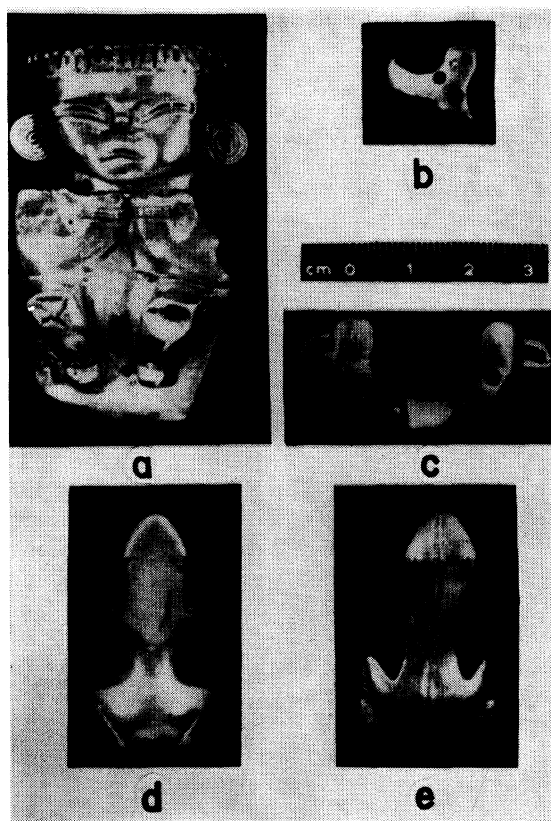


FIG. 26. Gold objects found with large disk, Guácimo.

which was reworked from a northern and foreign cult image by a people of southern extraction into one of their own religious motifs. Also in Figs. 29, 30, we see the process of converting an ax-god into a tubular bead. The lengthwise perforation for suspension was not finished when death took the artist or, what is probably more correct, the person who ordered the transformation of this figure. The incised hands of the original image have not been deleted, and the whole technique of string-sawing, cutting, and drilling is obvious.

The gold artifacts, particularly the curly-tailed animals (Fig. 23 *b*), which were probably copied from Panamanian objects (perhaps from Coclé), the frogs and human figures in Tairona and Quimbaya styles (Figs. 26 *a, d, e*), and the pendant reminiscent of Esmeraldas and Guayas, Ecuador (Fig. 23 *a*), also suggest a fairly late date. Root (1961: 255-6) thinks that Quimbaya gold work was developed between A.D. 400 and 700, and that evidence of its having been traded in Central America is seen in the fragments of

a figurine from Copan, Honduras, which dates from about A.D. 782. Interchange of gold objects in the isthmian region continued to the Spanish Conquest. Lothrop (1952: 108) points out that Quimbaya-style figures seem to have reached the Sacred Cenote of Chichen Itza, Yucatan, in the Mayapan-Tulum period or between A.D. 1200 and 1450. He also shows that the appearance of this type of ornament at Sitio Conte is contemporary with the ceramics of Early Coclé, which would be about A.D. 1330-1430 (Lothrop 1950: 78).

As for the Quimbaya-style gold objects found with the slate plaques, most show several drilled suspension holes that were made to replace older ones worn from use. In other words, it seems as if gold, like jade, had been an important item of trade or an heirloom material until it reached certain hands and eventually was buried with its last owner.

The gold pendant in the Esmeraldas and Guayas style is unique, so far as we know, in the entire isthmian region, and we suspect that it reached Costa Rica through trade. Although no definite statement can be made until we have an analysis of the metal, it is of course possible that merchants or traveling artisans brought the

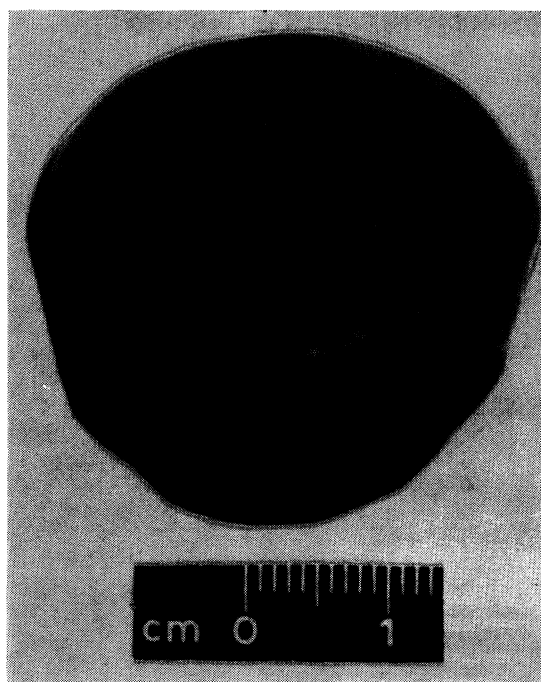


FIG. 27. Staff head of green slate inlaid with pyrite, Guácimo.



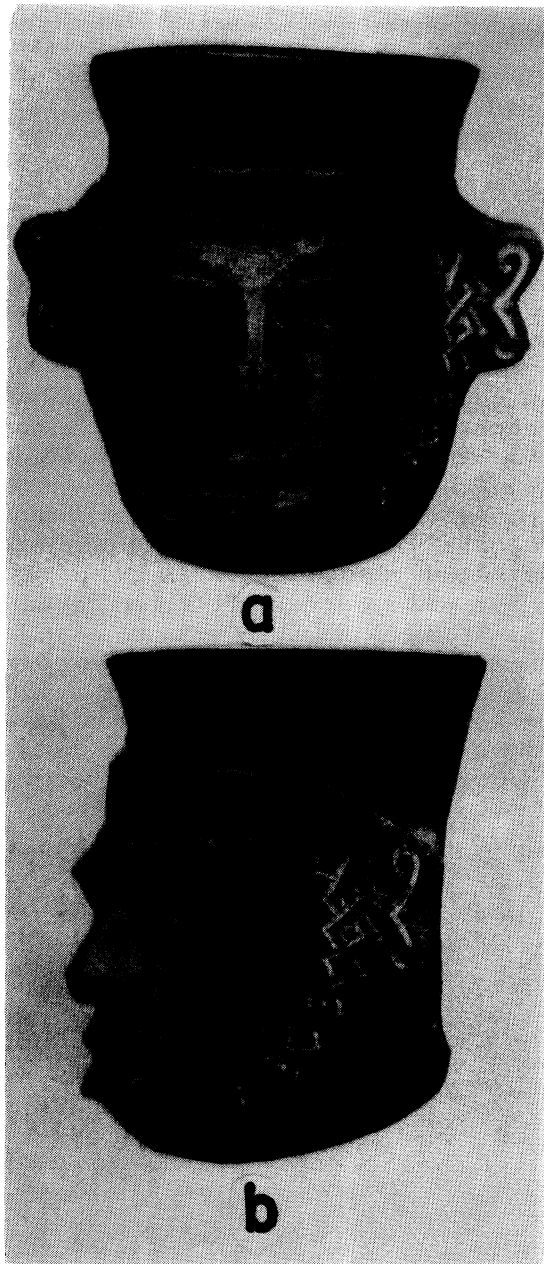


FIG. 28. Clay effigy vessel, Guácimo (front and three-quarter views). Height 8.1 cm.

concept of this technique to the isthmus and that it was made there. However, if this hypothesis is correct, we cannot explain why this is the only example of its kind yet to be found in either Panama or Costa Rica.

The long-beaked bird and the human head as depicted on the mace heads in Figs. 16 and 17

are definitely southern conceptions. The presence of two types of grinding stones, one with a raised border and the other without a border, suggests the mixture of northern or Mexican peoples with peoples of a southern origin. The use of slate as a staff head is not associated with the southern cultural division. If we accept the theory that Olmecan groups actually reached Costa Rica, this implies a 6th-century date. Historical documentation, however, deals only with the Chorotega-Mangue, the Nicarao, and the Aztec in Costa Rica, and thereby presupposes a date not earlier than A.D. 800 or 900 for the infiltration of northern tribes.

Incised pottery with geometric patterns (Fig. 6), Monochrome ware with engraved and appliqué decoration — at times with white paint in the incisions — and effigy legs (Fig. 7) are typical of the southern cultural division (Stone 1941, 1948), although some investigators have classified effigy legs as Mesoamerican (Wauchope 1941). In Costa Rica these forms of adornment are characteristic of a number of ceramic groups, among which are Maroon Incised, Chocolate, and Red wares (Lothrop 1926, 2: 324-7, 329-31). Many of these styles recall Venezuelan pottery types including Lake Valencia (Kidder 1944) and the Nericagua phase of the upper Orinoco region. Cylindrical seals also form part of the Orinoco complex (Evans and others 1959: 361, 368, Fig. 2). Bird-effigy vessels in Red Monochrome, unpainted vessels adorned with red paint, appliqué, incised and punctate designs, and Orange Monochrome ware with red stripes or brush strokes are likewise common on the Atlantic watershed of Costa Rica. The White Band ware with red vertical stripes (Fig. 10) is similar to the Curridabat ware associated with the Caribbean coast and which also forms part of the southern division (Lothrop 1926, 2: 333), as do the three small pots found in Grave 1 at Guácimo (Figs. 24, 25). These three vessels are typical of ceramic styles from the Atlantic watershed of Costa Rica and are related to certain wares from northeastern South America as far as the Amazon basin.

Outside of Línea Vieja and La Fortuna, Zoned Bichrome ware is known from the Nicoya Peninsula (Coe and Baudez 1961). According to Baudez and Coe (1962: 369), Zoned Bichrome is characteristic of Mesoamerica from the Middle to the Late Formative. One type of this ware, Toya Zoned Incised, has a counter-

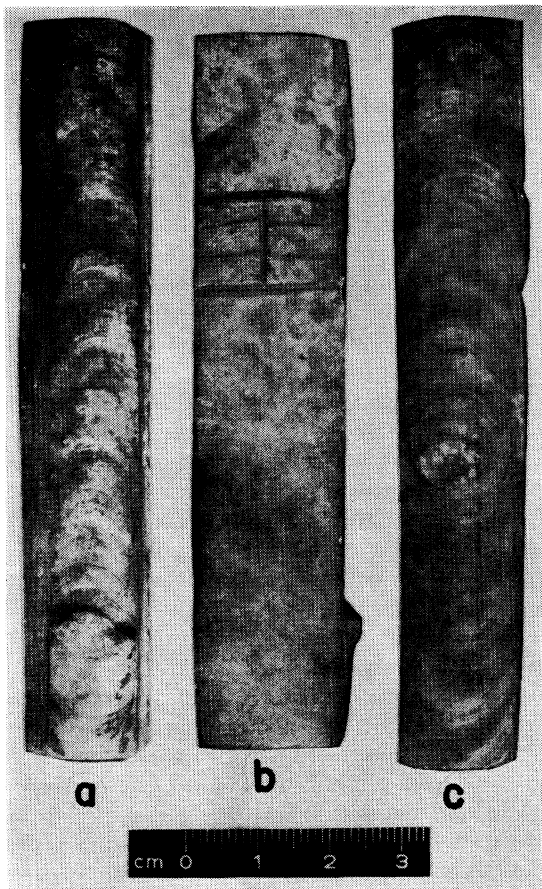


FIG. 29. Fragments of jadeite ax-god showing stages of reconditioning, Guácimo. *a*, vertical and horizontal string-sawing on left side of fragment shown at top of Fig. 30; *b*, front side of upper fragment in Fig. 30 showing positions of ax-god's hands; *c*, string-sawing on right side of upper fragment in Fig. 30.

part in Ancon Zoned Incised of the coastal Chavín period in Peru, while another style, Rosales Zoned Engraved, is compared with Utatlan ware from Guatemala. We point out that this technique is also known in ceramics associated with the Cupisnique culture of Peru (Larco Hoyle 1941: Figs. 19, 38). Whether decoration by incision and painting in zones belongs to the aboriginal subdivision of the northern cultural areas or whether it was the direct result of diffusion through trade or ideas from the southern continent, we cannot say. In the isthmic region it is known in Utatlan (Lothrop 1936: 21–23) and appears in the Miraflores period (Providencia phase) of Kaminaljuyú, Guatemala (Kidder and others 1946: 242), but the same decorative technique is seen in the Palmar

ware of Nicaragua and Costa Rica in territory associated with the historical Nicaraos (Lothrop 1926, 2: 249) and extended throughout a large area of Central America, probably in Classic times (Stone 1957, Fig. 40 *d*).

Coe and Baudez (1961) maintain that a radio-carbon date of A.D.  $90 \pm 200$ , obtained from a charcoal sample, aligns the Zoned Bichrome period in Costa Rica with the Formative in Mesoamerica and Peru. Tentatively they put the duration of this period between 300 B.C. and A.D. 200 (Baudez and Coe 1962: 369–70). Ni-

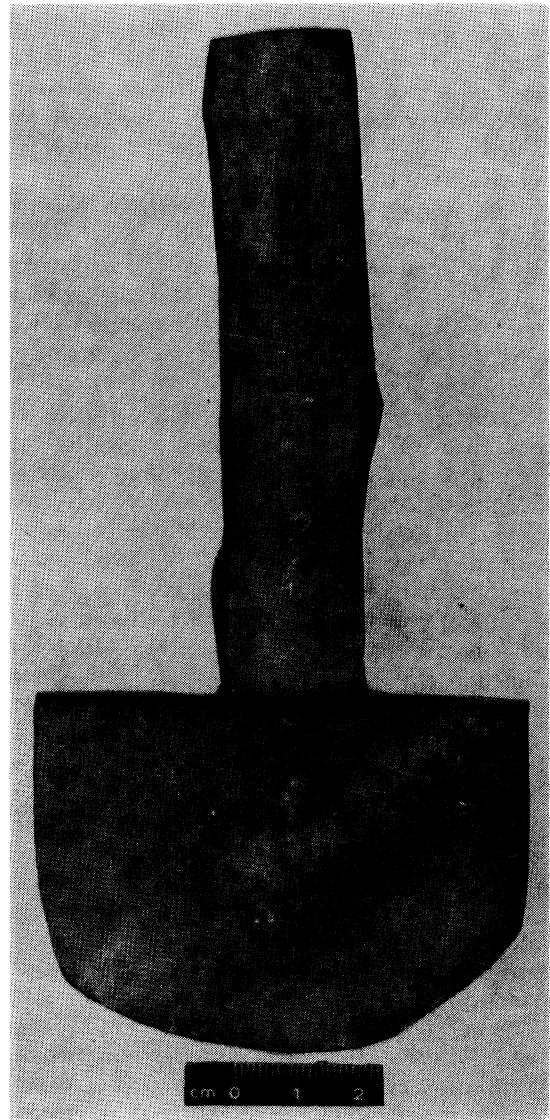


FIG. 30. Reverse side of fragments of center and lower portion of ax-god (see Fig. 29), Guácimo.

cuya Polychrome ware and the cylindrical seal, according to the same authors (Baudez and Coe 1962: 37, 368), should represent a time lapse between A.D. 450 and 800. They do not use Lothrop's term "Nicoya Polychrome" but place this ware under the name "Early Polychrome Period" (Baudez and Coe 1962: 368; Coe 1962: Fig. 1 *k-l*; Lothrop 1926, 1: 105-89). The evidence from La Fortuna, however, indicates that Zoned Bichrome ware and the cylindrical seal belong in the same time span and that they are contemporaneous in part with gold figures in Coclé, Quimbaya, and Guayas styles. It is difficult to conceive that the manufacture of these ceramic types extended from 300 B.C. even to the date of the manufacture of the slate disks which, according to their designs, seem to indicate approximately A.D. 500. It is even more difficult to believe that the period of manufacture lasted until A.D. 1200 or 1430.

Globular red vessels adorned with undulating black lines applied with a multiple brush (Fig. 19) are known from Tortuguero Lagoon, parts of Línea Vieja, and La Fortuna, and they extend into the Peninsula of Nicoya (Coe and Baudez 1961, Figs. 2 *s*, 4 *f*). The style seems to be a local Costa Rican development.

The ceramic types that are not common on the Línea Vieja or in the Atlantic watershed are negative-painted Incised Bichrome with beveled annular base and with or without applications (Fig. 8), the combined underslip technique with the alligator motif, Type A, (Fig. 12), and the polychrome pottery with geometric and glyphlike motifs (Fig. 13) from La Fortuna, as well as the small effigy vase from Grave 2, Guácimo (Fig. 28 *a, b*). These examples hint at a mixture of cultures, which we discuss below.

Incising with appliqué points southward, as does negative painting. All three techniques are characteristic of the upper Orinoco region of Venezuela, even though they may not have been combined during the Nericagua phase to which a minimum date of A.D. 500 has been given (Evans and others 1959: 361, 365, 368). The underslip incised technique is associated with the historical Nicaraó and is late in Central America, appearing approximately from A.D. 100 and probably extending to the Spanish Conquest (Lothrop 1926, 1: 191-3). The alligator motif, Type A, has a southern origin and is related to designs found on vessels from the province of Chiriquí, Panama (Lothrop 1926, 1: 172-7). The two separate styles have been

classified by Lothrop under Nicoya Polychrome ware. In fact, Lothrop illustrates a vessel which looks as if it might be a combination type, grooved but not incised, such as is shown in Fig. 12 (Lothrop 1926, 1; Fig. 71; compare this with Lothrop's Fig. 91).

The term Nicoya Polychrome includes ware associated with more than one culture. Some of the pottery types it embraces could date from A.D. 800, the approximate time of arrival of the Chorotega-Mangue in lower Central America, but no earlier, while the Nicaraó style had its beginning around A.D. 1100.

The polychrome ware with geometric designs and glyphlike motifs strongly suggests the influence of certain types of Nicoya Polychrome pottery, in particular the alligator motif and geometric patterns (Lothrop 1926, 1, Plates 75, 80). The coloring and the manner of painting, as well as the overall design, place this style in a distinct category.

The concept of a face within a frame adorned with serpent symbols might signify that the artist was motivated by a religious idea foreign to him. In other words, he interpreted a concept that did not form part of his religion. The vase in itself reminds one of a Peruvian kero, while the manner of separating the face from the frame gives the impression that the artist tried to convey the idea of a face within serpent jaws with the interlaced frets representing the reptile's body.

It seems as if archaeological evidence reinforces the scant historical documentation referring to trade in lower Central America and increases our knowledge of the geographical extent and time periods of such enterprises. There are various ways by which the apparently foreign objects from La Fortuna and Guácimo might have reached Costa Rica. One route, perhaps the earliest, points to the north and extends from the state of Veracruz, Mexico, through the Isthmus of Tehuantepec and Chiapas. Another route is from the Peten of Guatemala, perhaps passing such Mexican colonies on the Caribbean coast of Honduras as Naco, Papayeca, and Chapagua, and then crossing the Valley of Olancho to what today is Nicaragua (Lehmann 1920, 2: 912, 987, 996-7). On the Pacific coast were more people of northern descent, and at least one colony formed by traders is known to have existed in Nicaragua at the Desaguadero or San Juan River. From there inland waterways extended to Tortuguero La-

goon and rivers such as the Reventazón, Suerre, Parismina, and Torro Amarillo in Costa Rica, and stone and earth roads led through the valleys of San Carlos and Sarapiquí (the ancient Jori) to the Línea Vieja, part of the indigenous province of Suerre (Lehmann 1920, 2: 379; Stone 1958, Fig. 25 a, b). From the Peten, trade routes also led up the Motagua Valley in Guatemala, southward through the Pacific coast of Honduras, Nicaragua, and the Peninsula of Nicoya, to the sites on the Atlantic watershed of Costa Rica reported in this paper.

Archaeological evidence suggests likewise that from South America there was more than one route leading to Costa Rica. On the Caribbean side, we have the report of Columbus (Colón 1947: 286) concerning a large trading area near Chiriquí Lagoon (Almirante Bay). There is also archaeological evidence which suggests that trade routes led from the Línea Vieja to the west (Stone 1958: 26).

Another passage is indicated by existing trails through the Nicoya Peninsula where the traders most probably arrived by canoe. A stone road, portions of which have been excavated by the authors, seems to have led to Bagaces, a Nicarao town (Oviedo 1855: T. 4: 108), La Fortuna, Las Huacas, Río Cuarto, Guácimo, Pocora, and Las Mercedes, as far as Cairo on the Línea Vieja. Meanwhile, another route went through the same peninsula to Santa Clara de Upala near the border of Lake Nicaragua. In connection with such routes, we should remember that iron-pyrite mirror backs apparently related to Mexican types, although demonstrating local characteristics, were known in Peru in relatively late pre-Columbian times.

#### CONCLUSIONS

From the Línea Vieja to La Fortuna, artifacts are found which point to two directions: the north and the south. Outstanding among these objects and associated in tombs are slate mirror backs, jade amulets, and gold figures, including Quimbaya and Coclé styles, and one piece which reflects Esmeraldas and Guayas in Ecuador. We feel that the slate disks arrived in Costa Rica as items of trade and that they emphasize how important and far-reaching the interchange was that took place in pre-Columbian times. Whether they came as early as the 6th century, the probable date of their manufacture, we cannot say. It might be that travelers searching for bluish jade were responsible for their

presence in Costa Rica and that these plaques had been looted from early burials and re-used. There is always the possibility that they were taken as spoils from traveling merchants or people who, like the Chorotega-Mangue or the Nicarao, reached Costa Rica from three to five centuries later. The reconditioning of the large Veracruz-type plaque suggests such a possibility.

During the period of A.D. 700–800, there seems to have been great activity that led to a widespread diffusion of ideas and artifacts of trade. Mexican groups had been moving back and forth in Central America since the 6th century A.D., if not earlier. One people, the Chorotega-Mangue, between 700 and 800, had continued their push eastward, settling in the 9th or 10th century in Pacific Nicaragua and the Nicoya Peninsula of Costa Rica. A little later another group, the Nicarao, began their long trek to the south. The names of both these peoples are closely connected with the term trader (Juarros 1936: 260; Lehmann 1920, 2: 825). In this period also the South American cult of gold took a new surge in popularity. Local styles developed among the Muisca, Sinu, and Tairona in Colombia, and evidence of this spread began to show in Panama and Costa Rica (Root 1961: 255). In Tazumal, El Salvador, and Copan, Honduras, metal objects appeared for the first time. These are few in number, but their style indicates trade with the south and points again to the coming and going of Mexican peoples in the isthmian area (Boggs 1945: 33–6; Boggs, personal communication; Longyear 1952: 8, 112).

Grave associations with the incised mirror backs from La Fortuna and Guácimo in Costa Rica tend to indicate a later period for the arrival of these plaques than the time suggested by their decoration. It is evident that they were used during many centuries, from A.D. 500 at least until the 9th century, judging from the ceramics and the gold objects connected with them. Whether these disks were in Costa Rica or in more northern regions during most of this period cannot be answered at this time.

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October, 1963