



Panamá Viejo. *Upper*, Paneled urn cover; *lower*, side view. Approximately $\frac{1}{6}$ natural size. Courtesy Dr. Russell H. Mitchell.

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THE PREHISTORY OF PANAMÁ VIEJO

By LEO P. BIESE

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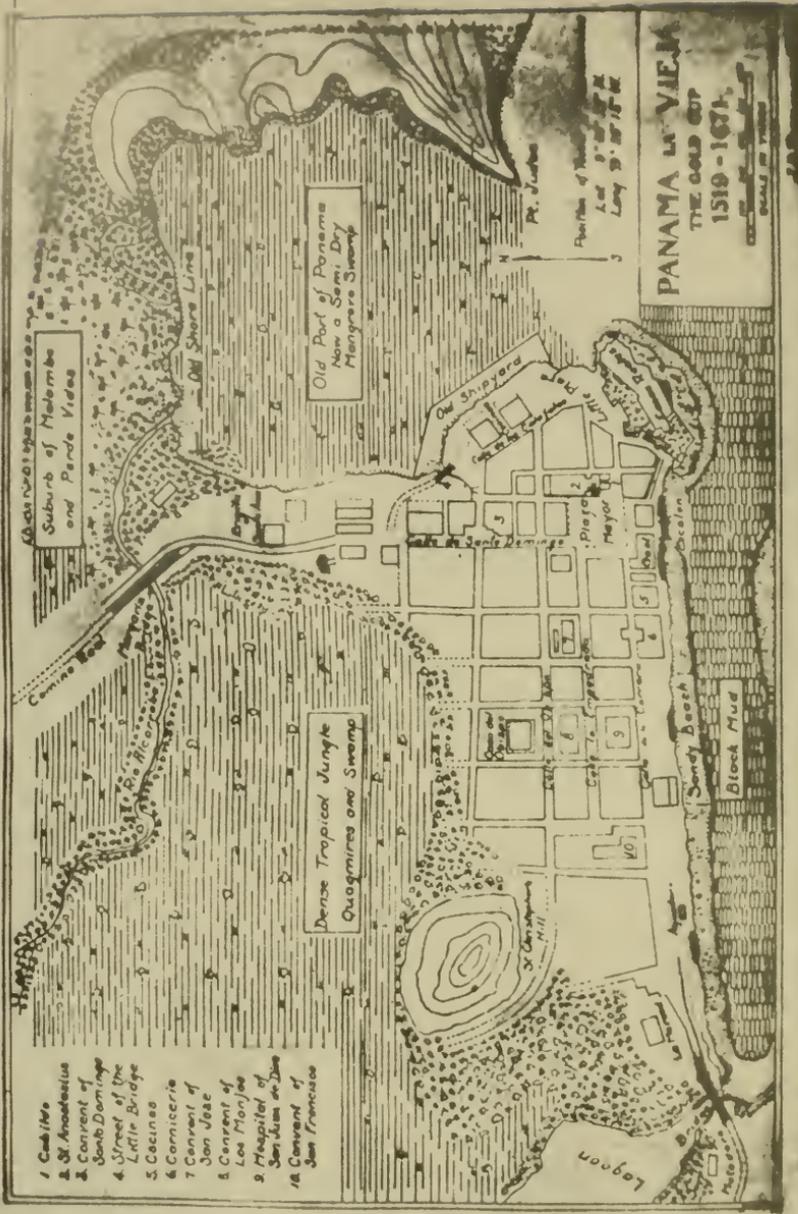
PREFACE

The nature of the countryside surrounding Panamá Viejo has been changed radically by industrialization. Originally it was a broad and grassy plain surrounded by multiple low hills and fronted by the sea. The climate was milder and always had less rainfall than the Atlantic side of the Isthmus. Food was easily obtainable the year round from the abundant deer, peccary and other small game, and easily caught fish of the gulf. Numerous shell heaps of prehistoric sites bordering the gulf attest to the importance of mussels and clams in the native diet. Fresh water was available from many nearby streams although the Río Abajo itself was foul and contaminated by salt water at high tide. As a dwelling site it suffered from the 20-foot high tides of the gulf which twice daily left half a mile of mud flat and rotting organic matter exposed. Additionally, the evil surrounding mangrove swamps served as a breeding place for mosquitoes and other noxious insects. It afforded, however, adequate conditions for the support of life and the establishment of a sedentary culture which maintained peace through trade or tribute and did not require a militarily defensible position.

I wish to thank especially Dr. Alejandro Méndez and the Museo Nacional de Panamá for their support and encouragement, and for the loan of the Museum's Panamá Viejo collection for study and photography. To no lesser extent do I thank the landowner, Sr. Enrique LeFevre, for permission to collect from this site. Thanks are also especially due Dr. Russell H. Mitchell for permission to use the material illustrated in the frontispiece and plates 10, 24, *b*, and 25, as well as for his encouragement and helpful advice based on long experience in the Isthmian area. Dr. Mitchell also provided much of the valuable reference material. I also wish to thank Sr. Dan Sander for the material used for plate 24; the Canal Zone Library for permission to use the historical map (map 1); and the "Panama Archaeologist" for permission to reprint the spindle whorl figures (pl. 22). Mr Gerald A. Doyle, Jr., prepared the site map; my wife, Lucinda T. Biese, did the ink drawings; and I took the photographs.

Special thanks are due to my wife for suffering through innumerable mosquito-ridden field trips, sherd-sorting periods, and manuscript revisions.

L. P. B.,
Panama Canal Zone.



- 1 Cashiwo
- 2 St. Anthonis
- 3 Convent of Santo Domingo
- 4 Street of the Little Bridge
- 5 Cacinas
- 6 Corniserte
- 7 Convent of San Jose
- 8 Convent of Los Monjes
- 9 Hospital of San Juan de Dios
- 10 Convent of San Francisco

MAP I.—Historical map of Panamá Vieja (Old Panama).

THE PREHISTORY OF PANAMÁ VIEJO

By LEO P. BIESE

INTRODUCTION

Panamá Viejo is the name I have applied to a combined residence and burial site situated adjacent to the well-known Spanish ruins of the same name approximately 6 miles northeast of the present Panama City.

The Spanish ruins (map 1) occupy an area approximately 1 mile long by $\frac{1}{2}$ mile wide with the long axis parallel to, and fronting on, the Pacific Ocean at the Gulf of Panama. To the northeast of the ruins are several acres of mangrove swamp containing a few isolated shacks. On the east is the old port, now a semidry mangrove swamp. Directly south is the Bay of Panama. Traveling southwest from the ruins one passes through an area of several acres, sparsely populated by settlements of ramshackle houses, which is followed by the suburb of San Francisco de Caleté and modern Panama City. The northernmost portion of the ruins is delimited by the Río Abajo over which passes the Punta Del Rey (King's Bridge) and the beginning of the Portobelo Trail. Farther north and northwest lies the large modern cemetery of Parque LeFevre. The archeological site herein discussed lies on the property of Sr. Enrique LeFevre, at the back of the ruins proper, in an angle formed by Diagonal 10 (a modern roadway which bisects the ruins) and the Río Abajo and bordered by the cemetery (map 2). It first was discovered in 1958 during grading operations preparatory to the expansion of the cemetery.

HISTORICAL ACCOUNTS OF OLD PANAMA

There is a great wealth of descriptive source material available to the interested reader on the later history of "Old Panama." Because of its position of importance in the development of the New World, many eyewitness accounts have been preserved and their value increased by lengthy modern English summaries. In order to establish the presence of a historical Indian village on the excavation site, however, it will be sufficient to reconstruct only the story of Old Panama's founding and early years.

Under the Emperor Ferdinand of Spain, Antigua was established as the first stronghold on the Atlantic coast of the New Continent. In 1513 the governorship of the eastern half of Panama was given to Pedro Arias de Avila (Pedrarias the Cruel) under whom Captains Diego de Albites and Antonio Tello de Guzman were sent forth, toward Balboa's newly discovered "South Sea," to obtain gold and to establish a string of outposts for possible settlement. In the latter months of 1515, the captains arrived at the Pacific coast near a small Indian village which the local inhabitants called "Panamá." The name is generally accepted now to mean "Place of Many Fishes," but at least one chronicler, Herrera, states that the name referred to the huge local trees which the natives termed "Panamas."

Two years later, Licentiate Gaspar de Espinosa had been appointed to replace the beheaded Vasco Nuñez de Balboa in the work of exploring the Pacific coast. The expedition of Espinosa camped at this same Indian village while awaiting the return of Governor Pedrarias from a pillaging trip to the Pearl Islands and Taboga Island in the Gulf of Panama.

It is possible that this village was in the vicinity of the present Venado Beach, although the exact site is not known. The actual city was founded on a site a few miles farther east where the land was firmer and afforded better grazing for the cattle. There is no record of any Indian inhabitants at this latter location. In 1519, Pedrarias officially founded the city of Panamá with characteristic pomp and ceremony, and in 1521 he was granted a charter and coat of arms. Thereafter, the story is first one of slow development and then of rapid growth after the conquest of Peru by Pizarro. A transcontinental trail was constructed from the city of Portobelo and Nombre de Dios over which the gold of Panama and Peru was transported for shipment to Spain. For the next century or so the story wanes and finally closes with the destruction of the city in 1671 by the buccaneer Sir Henry Morgan.

DESCRIPTIONS OF OLD PANAMA

The city had small beginnings and was relatively stable for the first 75 years. The first extant report is provided by the historian Oviedo, who visited the site in 1529, after 10 years of its existence, and stated that it was composed of 75 shacks which "were narrow and long, and sometimes the tide will wash right into their homes. To the North [the archeological site] was an environment of mud and swamps, which caused the lack of sanitation."¹

Twelve years later, Jeronime (Girolamo) Benzoni, an Italian historian, remarked that there were 112 wooden houses and calculated

¹ Oviedo y Valdes: *La historia general de las Indias*, Seville, 1535 (in Sosa, 1955).

about 4,000 people, including the much more numerous Indians and African slaves (Sosa, 1955, p. 29). It may be mentioned here that the expansion of the city to its present ruined outlines and establishment of the permanent stone structures dates from a much later period, at least the early 17th century.

Carles (1960), in compiling various sources, says that the city had two important disadvantages. The first was the rather poor harbor which, because of high tides, made it necessary to anchor ships at some distance. Secondly, the water supply, except for a few brackish wells, was a half league distant at the Lavenderas (now Juan Días) and was itself frequently dry. Because of these disadvantages, in 1534 a warrant was issued by Queen Juana (Joanna) ordering the city to change its location. However, this warrant was overthrown by the inhabitants because of the consequent loss of property and the abundant food supply from nearby mussel spawning grounds. From later sources we know that this place was an important food source for the prehistoric Indians as well.

INDIAN SETTLEMENT OF MALAMBO

It is from this point that confusion begins about the actual details of the city. The controversy centers about the location of the historical settlements of "Malambo" (Indian) and "Pererdevidas" (Negro). It is of importance because Malambo has been variously placed directly within the boundaries of our present archeological report as well as across the road and consequently out of the immediate area. The only authentic map is that made by the engineer Roda in 1609 and reproduced by Sosa (1955) from the original in the Council of the Indies. This map shows only swamp in the site area with no mention of fringe settlements. A detailed description sent to Spain at this time does not mention the settlements.

It is probable that the Spanish Archives contains, among the many reports and letters of the time, some which specifically mention Malambo, but these unfortunately are unavailable to me. Both Anderson (1911) and Bancroft (1882) contain translations of extensive excerpts from these letters which describe accurately every street and house over various periods of time, but neither of these authors mentions Malambo. On the other hand, Sosa gives:

To the North the city prolonged the margins of the port, extending to the settlements of Malambo, to the King's Bridge and a few steps further to the rocky road leading to Porto Bello; on the other hand, the city extended behind the convents of San Francisco and La Merced, and with the suburbs of Pierde Vidas it reached the Matanza. [Sosa, 1955, p. 29.]

Matanza is now called St. Christopher's Hill and this account would place Malambo on the opposite side of the Portobelo Trail and out

of the area in question. Unfortunately, however, Sosa does not give the reference from which he derived this account. Carles (1960), too, locates Malambo to the northeast but also gives no references and presumably took some of his material from the Sosa report.

The Canal Zone Library possesses a copy of a late 18th-century map which is a modification of the original Roda map with additions of the later structures. It is used herein, with permission, as map 1, as it affords a good view of the entire site. It places Malambo on the other side of the trail and marks the present area of investigation as "dense tropical jungle, quagmires and swamp." Unfortunately, the name of the map's maker is obscured and no further references are available. Quite possibly the references of Sosa and, later, Carles, were to this map. Much later Shafroth prepared a map, which is also in the Canal Zone Library and forms a portion of his book (Shafroth, 1953), describing Malambo as being directly over the areas of investigation. He gives no reference for this location and, in addition, places the Río Gallinero under the King's Bridge and the Río Algarrobo to the far west, whereas Sosa and Carles interchange these names.

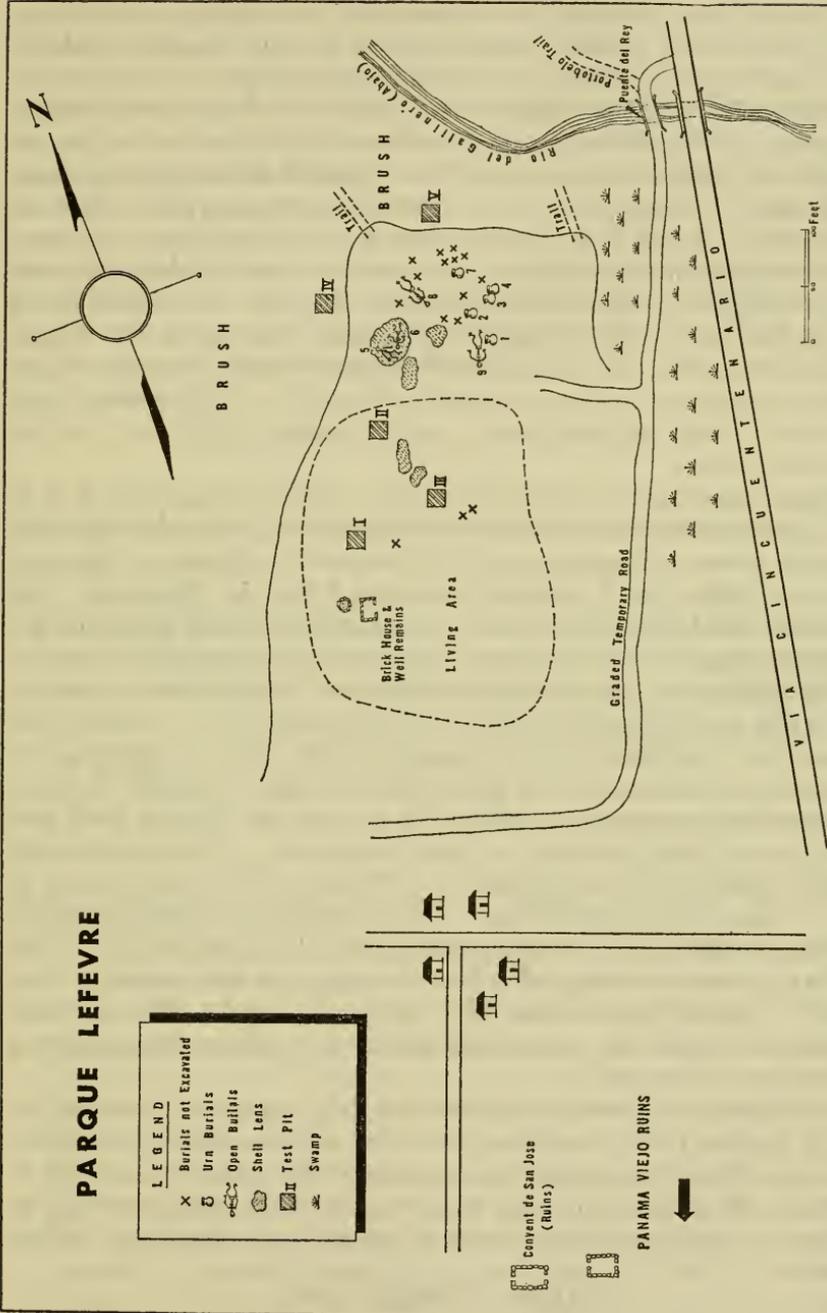
At least one investigator of this site (Smith, 1960) suggests the remains belong to those Indians present at the site before the first Spanish occupation. Definite information will not be available without radiocarbon dates or at least stratigraphic links with adjacent cultures, but, as will be seen from the discussion to follow, the ceramic relationship to other finds in Panama even at this early stage of knowledge would tend to indicate a tentative date of at least 400 years prior to the first Spanish settlement. It is my contention that this archeological site represents a new culture to be reported from Panama and that it existed in the period immediately preceding the Coclé polychrome period. The site was abandoned, reclaimed by tropical jungle until the period of Spanish occupation, again "lost," and only rediscovered during the leveling operations in 1958.

THE SITE

(Map 2)

DESCRIPTION

The area investigated measured approximately 500×1,000 yards. This portion was discovered when preparations were made to expand the adjacent cemetery and the earth was cleared of growth by means of heavy earth-moving machinery. During the leveling operations, multiple burial urns were torn through and redistributed across the surface. The land is a densely overgrown tropical semiswamp which remains fairly dry during the months of December through May but,



MAP 2.—Map of the site.

because of poor drainage, has a great deal of standing water during the rainy season. The surrounding area, from which the site is isolated by a series of low hills, is an essentially level plain 2 miles wide. St. Christopher's Hill is a hillock within the area about 2,000 yards to the west. It is a solitary outcrop now somewhat lower than in Spanish times as a result of erosion and the erection of several structures on its summit. Isolated sherds are scattered throughout the region as far as the hill, and it is possible that diffuse occupation may have occurred at least to this point. The region is private land and was not investigated. The area north of the site also contains scattered sherds for another 500 yards on the opposite side of the Río Abajo. In the latter portion there is a higher concentration of Spanish rubbish and the remains of a large colonial pottery kiln. This portion also has been cleared and from surface surveys apparently is not a part of the major site.

The soil is composed of approximately 6 feet (ranging from 4 to 8) of a brown sandy clay which affords somewhat better drainage and ceramic preservation than might be expected. There are isolated lenses of higher sand content averaging 1 foot in thickness. The strata are underlain throughout by a calcareous shell conglomerate known as coquina. Except for isolated burial pits partially excavated in the coquina or its natural depressions at Venado Beach, this is a culturally sterile layer present at approximately the same depth throughout the entire Pacific littoral of the Gulf of Panama. A significant difference is that areas closer to the sea reflect the geochronological changes in shoreline by a series of differing shell and sand layers. Such layering is absent at this site. There is presently a deep brown-black homogeneous humus topsoil of approximately 1-foot thickness in the burial area. It is impossible to assess accurately the degree of soil disturbance, but a general inspection of the site indicates that an average of 3 feet was removed and pushed to one side for partial construction of a temporary road. The southern portion of the site has less topsoil and in some places the underlying sandy clay is exposed.

In addition to the clearing operations, daily exposure of the land to heavy tropical rains throughout two rainy seasons has further eroded the land. Many of the sherds and at least two urns were exposed as a result. In poor runoff areas, however, the heavy rains succeeded in pooling an additional few inches of topsoil and obscuring surface finds.

FORMER INVESTIGATIONS

The site was partially investigated in 1960, with surface collections and several test pits, under the joint efforts of the Museo Nacional de Panamá and an Air Force employee, H. Morgan Smith. The material

recovered is presently in the possession of Mr. Smith at Albrook Field, Canal Zone, and has not been published. Since its discovery, the site has unfortunately been subjected to the daily raids of children and an occasional local citizen. While these raids have been confined to the immediate subsurface reachable with a machete, at least 5 burials have been demolished in my presence by upward of 15 children at a time. As a result, undoubtedly many whole vessels of the utility class have been lost for future study. In addition to the material presented here, I have located eight vessels which were purchased from local scavengers, in collections among Panama residents and Canal Zone personnel. As these vessels were all of the simplest kind represented by other material in the collection, they were not included in this report.

METHOD OF PRESENT INVESTIGATION

Soil disturbance and lack of time while the site was being prepared for expansion of the cemetery precluded extensive trenching. The method, then, consisted of the following program:

Burials.—Excavation of undisturbed burials exposed on the surface or found by probing the immediate subsurface. Testing pits which yielded burials are recorded as such rather than as pits. Dense accumulations of urn fragments and skeletal material uninvestigated because of their derangement are indicated on the map.

Shell lenses.—Two lenses indicated on the map were cleared completely to the sterile coquina, yielding three burials discussed below.

Surface collections.—All artifacts with the exception of plain red ware sherds and burial urn fragments were collected for later analysis as described under the section on ceramics.

Test pits.—Five pits measuring 1 meter square and 1 meter deep were placed about the periphery in an attempt to determine the limits of the cemetery and heavy artifact concentrations.

Purchases.—All of the whole vessels mentioned were purchased from children at the site; thus only an approximate location is known, i.e., sector of the burial area. In addition, several more elaborate vessels are shown from other collections.

Pertinent material has been included from the large collection of the Museo Nacional de Panamá. These artifacts are present without context and either were purchased or brought to the museum during the active seasons.

Sporadic finds have led to the reasonable assumption that the site proper actually extends considerably farther to the north and west, but these adjacent areas presently are closed to investigations. There is evidence of probable discontinuous occupation as far as the present day Vina del Mar and San Francisco de Caleta suburbs, where similar utility vessels have been discovered during excavations for house foundations. Map 2 shows only the extent of the present investigation.

BURIAL PRACTICES

The widespread surface derangement made it impossible to define a precise plan of either the concentration or configuration of burials. The entire west end of the site literally was paved with sherds from undecorated urns which had been crushed by the earth-moving machinery. From this extensive litter of bone and urn fragments it could be seen that the western sector was primarily a burial area containing a slight admixture of living debris. The eastern sector was a dwelling site containing only sporadic burials. The distribution did not change gradually, but rather there appeared to be a sharp demarcation between cemetery and residence areas. Test pits established the size of the cemetery to be about 100 × 200 yards. Distribution of fragments further suggested a maximum of 100 burials in the concentrated area; probably considerably fewer. There well may be many more isolated burials in the peripheral area and outside the clearing, but this would appear to be a rather small cemetery in comparison with the usual Panama site.

Burials were of two major types: open burial in a simple trench or interment in urns.

Within this cemetery, burials were mainly those of the urn type. Only six open burials were identified with any degree of certainty. The large number of intact utility ware vessels 2-4 feet under the present surface of this area, would seem to indicate the sites of other open burials lacking skeletal remains because of climatic conditions.

Almost all the urns were located at approximately the same level but, by random shallow trenching between the smashed urns, several were found undisturbed in situ. Some of these were almost exposed after the rains and were only a few inches under the present surface. In each case they were within 3 feet of the new surface, representing the deepest "average depth" of these urns and thus escaping the grading operations. All, however, were badly pressure broken and squashed to less than half of their original height. The condition of many fragments with rounded smooth breaks suggested breakage by earth pressure long before the present clearing operations.

Surface or subsurface grave indications in the form of soil markings usually were absent. Red clay pockets were discovered in the area; in one case surrounding a plain urn, in another, surrounding an open burial. Five others were investigated and found to disappear after 1-2 feet; these may have been open burials without offerings in which the skeletal fragments had disappeared completely. Soil underneath the red clay pockets was trenched down to the coquina, as were several test pits. No deeper burials, such as those of Venado Beach (Lothrop, 1954) were found.

Skeletal preservation was erratic, but in general exceedingly poor. A single section of femur might be well preserved, hard, and dense, while fragments a few feet away were little more than dust and could not be cleaned. Most of the harder fragments were in areas of high shell content, while bone material in the urns was uniformly unsalvageable. Tooth remains followed the general pattern of poor preservation and indicate a considerable antemortum wear of grinding surfaces, but they were not otherwise diagnostic.

Four open burials were found undisturbed. All skeletons were fully extended, face up, and oriented north-south. All were adults; three male and one unidentified. No flexed or secondary burials were found. None of the open burials were in clear association with funerary offerings. In the absence of distinctive soil markings there was no indication of the exact size or shape of the original graves.

The most remarkable burials, both in preservation and attitude, were two parallel skeletons found in a shell lens. Both of these demonstrated the wide-open mouth and had the head in hyperextension with the occiput touching the cervical spine (pl. 1). Preservation did not allow demonstration of a possible cervical fracture. Six additional open burials were present in wide random distribution as indicated by surface collections of skeletal fragments without urn sherds. None of these were identifiable as to sex or orientation, but all were adults.

BURIAL URNS

Almost all of the urns are plain; only two complete ones were recovered, both with raised designs. One incomplete set of sherds from a painted urn was also found. A large number of decorated fragments, however, indicated this type of urn to be by no means rare. The typical urn is globular with a rounded bottom. On the average they measure 50 cm. in height and 60 cm. in maximum diameter with a 30-cm. opening. The inflection point is about half-way up the vessel.

The urns are constructed of well-fired, coarse, granular clay tempered with coarse grit. In some cases this is a sand containing microscopic bits of silica and bearing minute gold particles which are visible under 10× magnification. The sherds are very strong and difficult to break by hand. The paste color is a medium brown with mottled black-to-green areas indicating irregular firing. There is often a reddish brown smooth surface exactly like that on the smaller utility vessels. Only the thicker areas show a central underfired zone. Thickness is greatest at the bottom (1.2 cm.) but is maintained fairly regularly up the vessel walls well above the inflection point. At the lip, thickness is approximately 0.7 cm. All lips have a plain, smooth

taper without evidence of secondary elaboration. Dry weight of the urns often runs as much as 30 pounds. There are no lugs or handles. There was insufficient evidence to corroborate prior burning of the bones, but the size of the vessel mouths would favor secondary burial.

LIDS

Several urns were capped with large fragments of other broken vessels but most were covered by shallow bowls with a flaring rim. These are generally about 40 cm. in diameter, 15 cm. in depth, and modeled of the same paste as the urns. Like the urns, they frequently were plain and given a red to orange-brown smooth slip. Unlike the urns, however, the lids were of thinner construction and hence somewhat better fired. A typical lid is shown (reconstructed) in plate 3. At first they might seem to be utilitarian basins, but their close fit, exact size, and absence from other parts of the site make it probable that they were constructed specifically for this purpose.

Fragments indicate that perhaps from 5-10 percent of the lids bore a white rim with overpainting of black geometric designs, contrasting sharply with the red-brown slip. A particularly good example is shown as the frontispiece. Several of the designs are shown in figure 1. The black-on-white coloration has been found on the inside and outside rims, but never on both rims on the same vessel. The inner rim is more commonly painted. In no case did the design extend onto the slipped surface of the vessel proper. Hence it is not a true polychrome since the design itself is in black on white bichrome. It is termed herein a "black-on-white-rimmed red ware" and may be stylistically related to the paneled red ware of Coclé. This coloration has not been found on vessels other than burial urn lids and represents not only the only painted ware found in any quantity on the site, but the only one which could be considered to be distinctive.

DECORATED URNS

One decorated urn was recovered with a raised serpent design on opposite sides of the vessel mouth. The head is applique, the remainder "raised." It is shown in situ in plate 2, and reconstructed in plate 3. A schematic drawing of the serpent itself is given in figure 2. This design is unusual both in size and in style and, to my knowledge, has not been encountered previously in Central America, though it may be related to the serpent design of Veraguas polychrome. It appears to be a stylized sea creature. Sherds of similar designs, all incomplete, are discussed under "Ceramics." The vessel contained a very poorly preserved fragmentary adult skeleton and a single plain plate of utility ware as described below, and it was

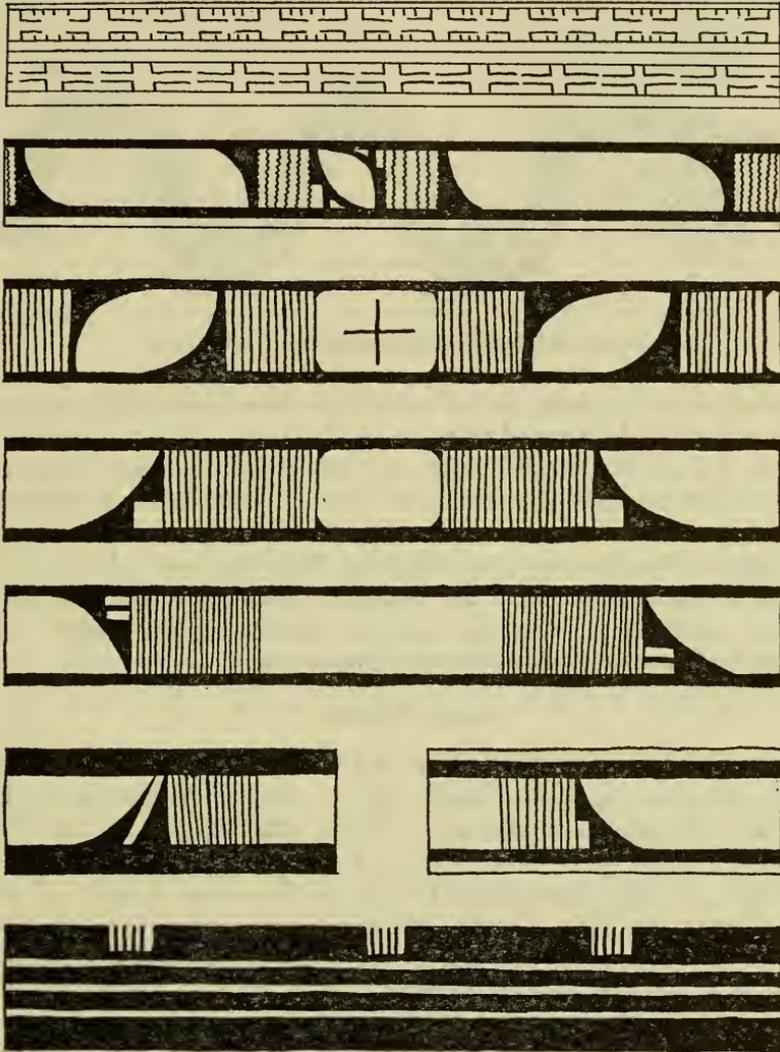


FIGURE 1.—Design index of black-on-white paneled burial urn covers.

closed with a typical undecorated lid. Sherd collections of similar fragments indicate other urns of the same type were present but rare.

A further burial vessel was uncovered bearing a striking double lizard design in raised red ware (pl. 12 and fig. 12). This particular ware is typical of the site and will be discussed in greater detail below. In size and shape the vessel was thought to represent secondary use of a cracked water- or grain-storage jar for burial. It contained a poorly preserved infant skeleton but no offerings, and it

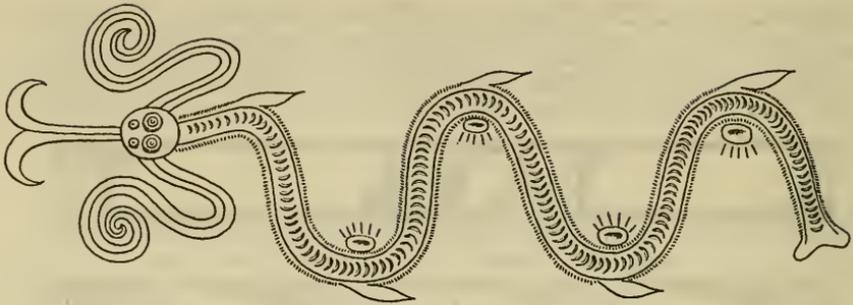


FIGURE 2.—Raised serpent design from burial urn.

was capped by the upper part of an identical vessel bearing fragments of the same double lizard design.

A third complete decorated urn recently has been acquired by the Museo Nacional and is restored completely. This urn is of the same approximate size as the one just described and is elaborated on each side of the opening by a highly realistic monkey (pl. 4). Like several of the other designs, the body of the monkey was formed by pushing outward the soft clay from the interior of the vessel. The limbs are elaborated further by shell stamping.

PAINTED URNS

Approximately 75 percent of an urn-size vessel bearing a red and black on white geometric design (pl. 4) was in fragments on the surface of the central burial area. Three other fragments, not from the same vessel, also were found on the surface. There was no associated skeletal material, so the use of the vessel is only inferred from location and size. Again, this is a black-bordered red on white ware and not a true polychrome in the sense of having three or more colors as a primary design element. This type of design was not found on any other vessel, but similar designs are known from carafes and small bowls from Coclé Province. Simple bichrome geometric patterns of this type are common throughout the Americas.

The documentation of urn burials in southern Central America is especially important since this is considered to be primarily a later South American trait which may be an indicator of counter-migration. On the other hand, this burial custom is well known from the Southern United States, Mexico, and as far south as Nicaragua. From the latter there is a gap in the existence of the trait until La Gloria on the Atlantic coast of Colombia, near the Panama border (Linné, 1929). The urns recovered from Ancon Hill and presently in the Canal Zone museum previously were widely known but undocumented. Similar urns were also reported from Venado Beach

(Lothrop, 1954) and the custom is known throughout the Madden Lake area. I have found burial urns on the Azuero Peninsula containing typical El Hatillo polychrome and Veraguas-style tumbaga eagle pendants.

With future location of urn burials from southern Central America, particularly Costa Rica, and better age estimates, we well may be able to trace direct southward migrations from the cultures to the north.

BURIAL OFFERINGS

There is a general paucity of funerary offerings at this site. Most of the urns were devoid of pottery, and goldwork conspicuously is absent. Some of the urns contained simple utilitarian pottery, unornamented plates, and small to medium-sized red ware pots. Of these, three plates, two wide-mouthed bowls, and three narrow-mouthed pots were recovered from urns. In each case they were the only vessel in a given urn. Only 8 out of 20 definable urns contained even this type of offering. Since they differ in no way from the general refuse sherds throughout the site they are discussed below under "Ceramics." In only one case, grave No. 2, was a trace of food offering in the form of 6 gm. of carbon found within a wide-mouthed bowl. A few urns contained decorated ware. Metalwork, coral, jade, shell, or other jewelry materials were completely absent.

FUNERARY VOTIVE WARE

The most remarkable and locally distinctive ceramic type from this site is the brown incised ceremonial ware: exceptionally fine elaborate vessels which betoken a high degree of skill in pottery culture. With the sole exception of a tribowled candelabra, these objects all were found unassociated in the burial area. A combination of their elaborate nature, location, and scarcity is interpreted to indicate that they should be considered apart from the other artifacts as a special class of votive ware restricted to funerary use. Related unpublished specimens from Venado Beach and Madden Lake are present in the Museo Nacional and in several local private collections.

They are all light to medium chocolate brown in color with a fine-textured paste. The temper is of fine grit. Broken edges of the thicker (1 cm.) sections show a green to gray center zone of incomplete firing. Plate 5, the most complex piece, was actually in two separate fragments found more than a month apart and later reconstructed. It is a double-bowled fixture resembling a candelabra (14 cm. high and 24 cm. maximum width) and containing multiple effigies. Each bowl represents a turtle, while each supporting arm terminates in a humanoid face. The center junction of the arms and

base bears, on each side, a modeled head with four stylized limbs resembling a howler monkey. The base and underside of the bowls are elaborated with geometrical patterns in incised lines and punched dots. The hollow base is flat on the bottom and contains small pellets which rattle. There are five holes leading to the interior of the base. A record of a very similar vessel found at Venado Beach was published with a suggestion of its possible use as a type of oil lamp (Vinton, 1951). Plate 6 shows two views of a like vessel from the Museo Nacional collection. In this case there is only a single design, a bird. In plate 6, *a*, a slightly different type of bird head, evidently from the same class of vessel, is shown to illustrate the variation in feather elaboration.

A related "single candelabra" is shown in plate 7, *a*, presumably a crustacean or insect. The Museo Nacional has a double vessel in this pattern from Venado Beach and a third was recovered in situ with an open extended burial in Upper Madden Lake. A miniature candelabra is shown in plate 7, *f*, with further ornate brown ware effigies depicting an alligator, bird, and turtles.

Another candelabra type object with three symmetrical radial arms bearing recurved bowls and a central smaller bowl (8.5 cm. radial arm length) is shown in plate 8, *a*. It is decorated all over with an incised and punched geometric design and has a flat-bottomed rattle base. This object was found in situ in plain burial urn No. 1, held in the upraised right hand of an adult male skeleton. The bowl which was lowermost was pulverized and is shown reconstructed in the photograph. The object evidently had been broken and repaired in ancient times. The base was fractured cleanly and fitted together with a white substance which had the gummy consistency of contact glue when first removed from the damp earth, but which became quite hard and brittle after 2 weeks' exposure to the open air. There was no trace of the substance around the find and it is highly unlikely that it could have filtered into an in situ crack.

Small vessels resembling candlesticks are shown in figure 3, *a*. They have a hollow annular base and incised or punched designs (3.5 and 4 cm. high).

Plate 7, *f*, illustrates one of a series of miniature anthropomorphic bottles with covers in the so-called "poison-pot" class. These are of finely surfaced incised brown ware and have holes drilled in both the bottle and cover for the attachment of lids. The bottles hold about 1 fluid ounce, and though no traces of material have been identified from the interior they are thought to have been used for arrow poisons or some type of ritual substance. Some have an extra set of holes for suspension. They are known from this area and from Sitio Conte. A lid from a similar bottle of larger size is shown in plate 8, *d*.



FIGURE 3.—Incised brown ware.

Plate 8, *b*, illustrates a somewhat different effigy, not of brown ware but of a red-orange slipped red ware similar to that discussed under the consideration of decorated sherds below. This is a four-legged effigy bowl, 11.5 cm. high. It is a grotesque animal of compound type, possibly a jaguar with "spots" of reed punched design. Also notable is the indication of five toes on each foot and prominent (pectoral?) musculature. Realism is confused by the broken remnant of a "horn" immediately above the nose.

Figure 4 shows several other vessels of the various shapes and design patterns that occur. Incised chalices or pedestal bowls are

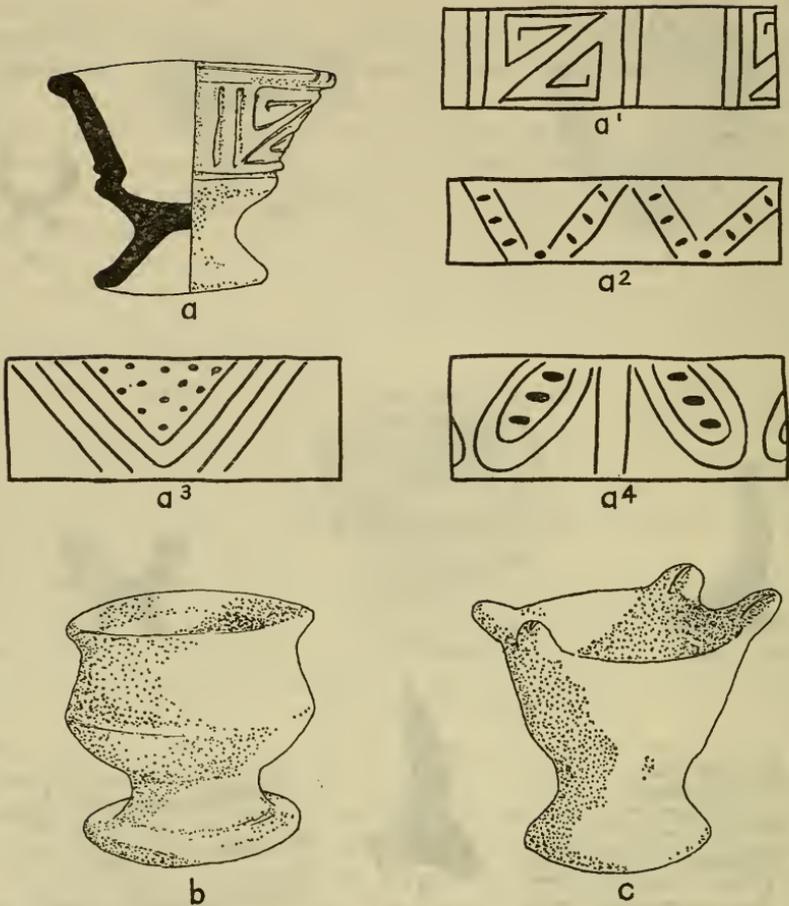


FIGURE 4.—Incised brown ware pedestal cups.

also present in larger versions, as depicted by plate 8, *c* (14 cm. high). Sherds from similar vessels, having diameters ranging from 12–14 cm., are shown in figure 3, *c, d*. Plate 8, *c*, illustrates an exceptionally fine incised sherd from a chalice-shaped vessel which would have a diameter of 16 cm. with 7 cm. outslowing side walls. The rim elaboration is similar to that found on sherds among the scattered debris at Sitio Conte (Lothrop, 1942, fig. 345).

STONWORK

There is a general paucity of stonework in Panamá Viejo. Only 27 such pieces, including a large celt from a private collection, were recovered during the course of the study. The objects were distributed throughout the site, isolated and without context, either on

the surface or immediate subsurface. Many of the points were found exposed on the surface after heavy rains. A single exception was a small polished celt found within a pottery vessel to be described later.

POINTS

Fourteen points were recovered of which typical examples are illustrated in figure 5, *a-f*. Most are made crudely of medium yellowish brown jasper, but several are of a rather poor grade of brown to red-brown agate. They consist of a highly irregular flake with a few simple secondary flakes struck off to form a tang, or even a tip.

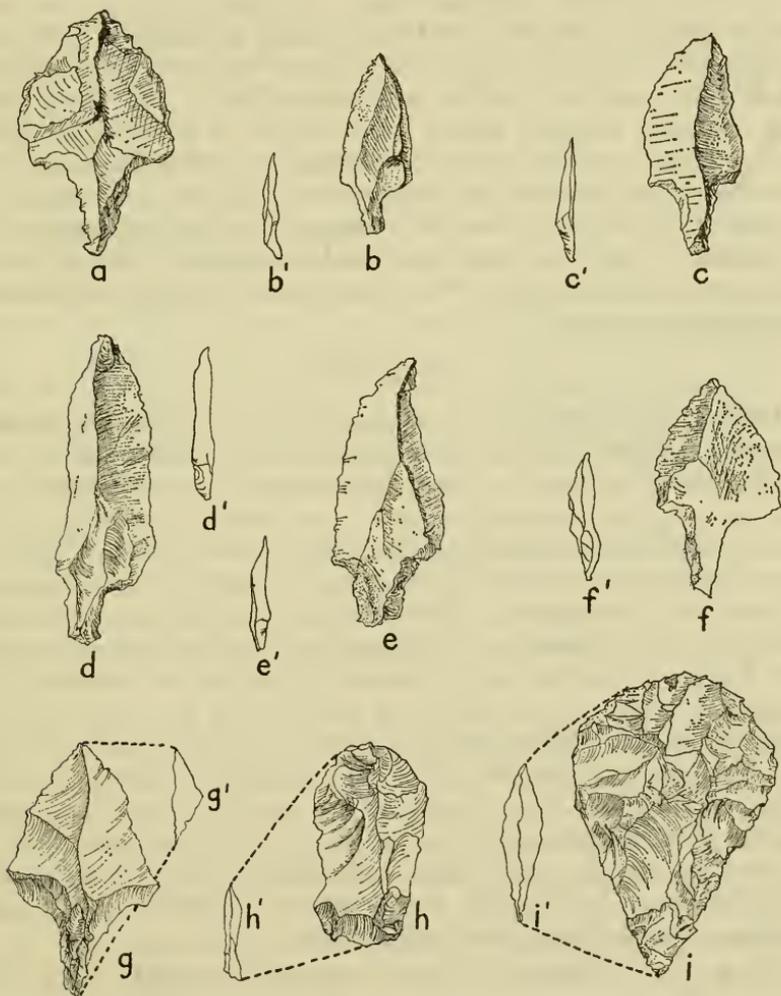


FIGURE 5.—Flaked stone weapon points.

There is no secondary working of the blade edges. Some examples (fig. 5, *a-f*) have a well-delineated tang on a short blade giving them the appearance of a broadhead arrow point which might be mistaken for the typical drill of this region were it not for the irregular bends of the tang. Cores were sought but not found. These points are identical to those described by Lothrop from Sitio Conte and also represent the typical blades found at Venado Beach and in the Madden Lake area. Unlike specimens from the latter, however, none were found of the petrified wood which represents such a common source of material at the lake, but which is relatively rare at Panamá Viejo. Figure 5, *g*, is an unusual point composed of white translucent chalcidony with a slight yellowish tinge. It is triangular in cross section and in profile, giving it an awkward, heavy appearance. The thickness at the base is almost half the length of the entire point so that it could not have been hafted very successfully. The under surface has the usual irregular planes which suggest a flake struck from a core. There is no secondary reworking except for the tang. As in the Coclé area, there is no evidence that any of these points were hafted to arrows, nor does their ungainly appearance suggest this. It is more likely that they were used as points for small throwing spears or used with wooden "throwing sticks" of which no archeological evidence remains.

SCRAPERS

Only three objects were recovered which could be considered as scrapers. Figure 5, *h*, shows a small, blunt object made of jasper, similar in all respects to the points described above except that it has no tang and the working end is rounded by secondary flaking. It may represent a reworked point. The object shown in figure 5, *i*, is so dissimilar to the remainder of the stonework that its origin may be seriously questioned. After rains it was found on the surface within the central portion of the burial area and without any adjacent urn fragments, which would indicate it was not an offering. It is composed of a dense medium-gray and slightly glossy agate type of material which exhibits well-delineated conchoidal fractures. It is of a not unusual pear shape, but is unique for this area in that its entire outline has been reworked by secondary parallel pressure flaking of medium-sized strokes, to give it a sharp symmetrical edge in contrast to the usual crude techniques. There is no evidence of either use or hafting, but the general shape and very sharp point suggest a double-faced woodworking adz.

Plate 9, *a'*, illustrates a large scraper of mottled orange-brown agate. The edge was reworked with secondary chipping and the entire piece is smoothly worn down from use. This piece is so nearly

identical to those in my collection from the Hopewell North American Indian site at Wakenda, Mo., that a photograph of the latter has been included (pl. 9, *a*). This is distinguishable from the former only in that it is composed of a very fine grade of light tan chert common to Missouri. At the Hopewell site such objects are typical of the culture and are believed to have been held with the flattened edge in the palm and used as deer and buffalo hide scrapers. Many of the celts common to Panama are found in patterns and, in many instances, materials identical to those found throughout the midwestern United States.

CELTS

Ten celts were recovered from the site, and an additional specimen was located in a private collection. They are all composed of various grades of basaltic rhyolite, but differ greatly in shape and will be described separately.

Figure 6, *b*, shows a pear-shaped celt which has been broken off at one corner. It is crudely polished at the distal end with a smooth wedge-shaped blade, and a proximal end of rounded cross section has been left rough. The specimen in the private collection is identical to the above except for its larger size of an overall 8 inches. These celts represent the most common type reported from Sitio Conte, and Lothrop considers the incurved sides as representative of that culture. A common variant of this type (unillustrated) has straight sides and a somewhat broader proximal end. Like the others, it is polished only in the lower half. All are composed of a basalt having a beautiful even pattern of whitish inclusions giving a "salt-and-pepper" appearance.

The object in figure 6, *a*, is apparently the proximal end of an oval celt of a basaltic syenite, smooth but unpolished evenly throughout, and perfectly symmetrical on both longitudinal axes. Lacking the distal blade end, it is possible that this is an unused mealing stone or similar object.

In figure 7, *a, b*, are shown medium-sized celts of gray rhyolite completely unlike the others and unreported from Panama. They are blunt and only roughly shaped out like the earliest hand axes of the European Paleolithic. It has been suggested to me that these are prepared blanks which awaited further finishing. Since little is known of the exact stages through which these celts were prepared, no definite hypothesis can be given. It is known, however, that the very earliest and the very latest Stone Age cultures produced similar celts: the earliest when grinding techniques were not developed, and the latest when availability of metals made the refinements of technique no longer worth the amount of labor involved. On the other hand, it

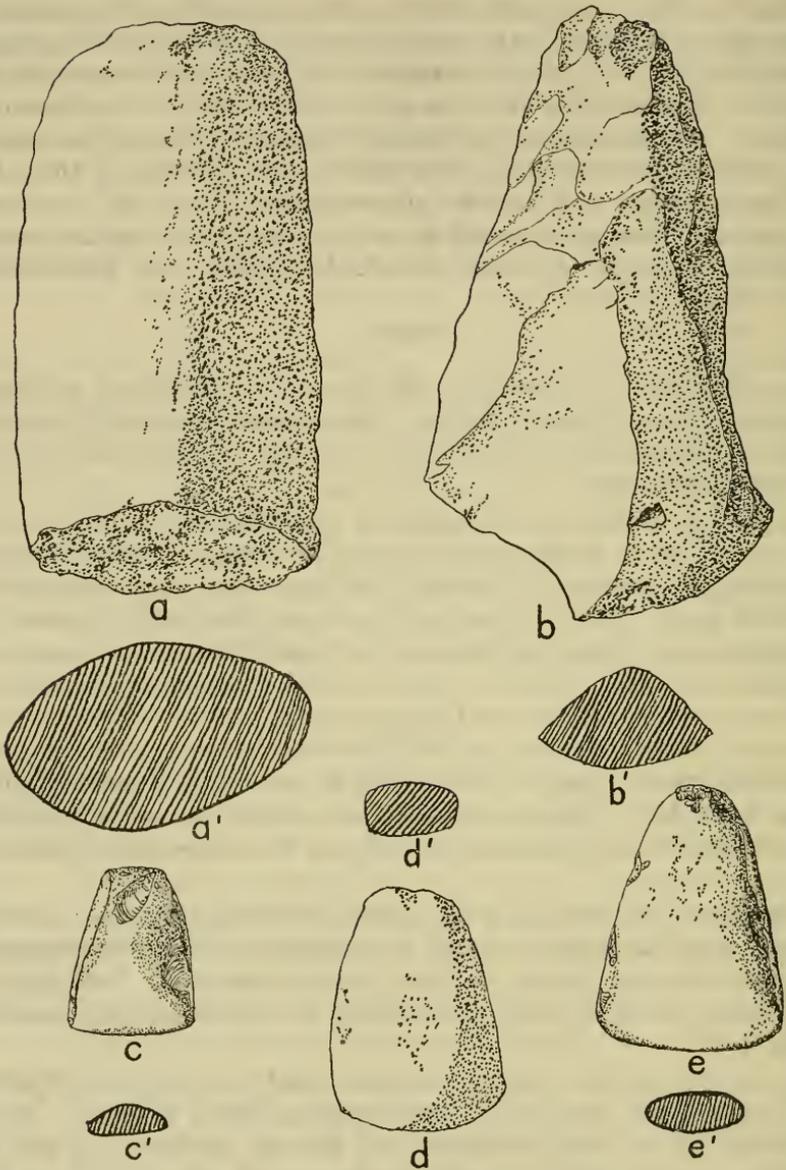


FIGURE 6.—Stone celts.

presumably is possible that they are artificial inclusions from some preceramic culture in the region. At any rate, definite statements will have to wait the development of further information on Panamanian stonework.

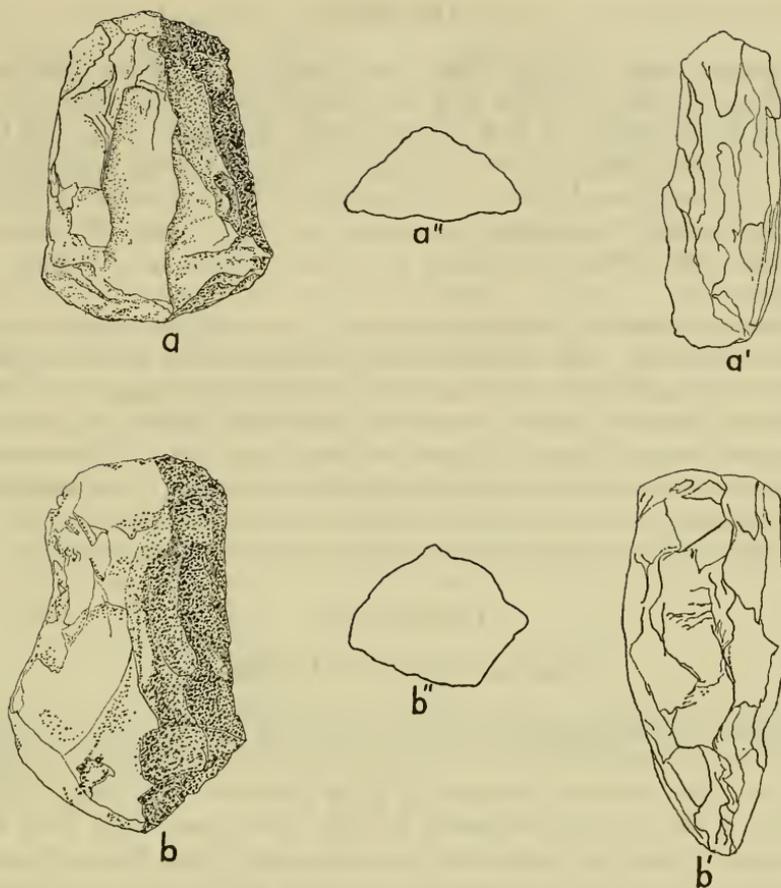


FIGURE 7.—Stone celts.

Figure 6, *e*, represented in the collection by two examples, shows a more or less standard wedge-shaped celt, polished in the lower three-fourths. The celt in figure 6, *d*, is composed of a somewhat more loosely textured basalt and has vertical edge faces so that only the distal end is a cutting edge and the successive cross sections are progressively larger rectangles which have very slightly bowed sides. It has a diagonal cutting edge like some of those also found at Sitio Conte, and is smoothly polished throughout.

The remaining two celts, of which one is illustrated (fig. 6, *c*), are small, dense, dark black basaltic material, wedge-shaped and given a high polish throughout. The cutting edges are quite sharp and without evidence of use. One of these was found inside a small pottery vessel described under "Ceramics" (pl. 10, *b*).

METATES

A single metate and its mano were found in the Museo Nacional collection (pl. 9, *b*). This is a three-legged type, not uncommon farther to the west. It is of a coarse badly weathered tufa, and the legs have been partly broken. It should be noted that in the Madden Lake area simple oval metates are common. They are usually without legs and consist of a shallow depression worn in the naturally shaped irregular rock without secondary reworking. None were present at this site.

It may be remarked again that there is a general paucity of stonework at Panamá Viejo in comparison to similar sites in this region. There were no chisels, drills, smoothers, polishing stones, or arrow-shaft straighteners present as at Sitio Conte or Venado Beach, and no carved stone objects are known to have been found. There were many smooth waterworn stones distributed throughout, one weighing approximately 10 pounds and roughly mano-shaped, but they in no way differed from those found randomly in the creekbed nearby.

CERAMICS

NATURE OF THE SAMPLE

Because of the deranged nature of the site it was felt that accurate sherd counts would not yield sufficient valid information to compensate for the inordinate amount of time involved. In fact, a brief testing of this method indicated it might yield completely false information unless the entire site was excavated down to sterile soil. In places where the earth grader removed high spots and turned around to make a new pass, there might be hundreds of burial urn parts, while in the furrows a few feet away there would be scarcely any. Similarly, it was evident that no stratigraphic analysis was possible. Accordingly, only those sherds having decoration were collected from the surface, the immediate subsurface during the investigation of burials, and several random pits about the periphery of the site.

In the burial area, almost all the sherds were from large urns but with a slight admixture of both decorated and undecorated portions of smaller vessels. Presumably they were from both burial offerings and general debris. In the residence area there were many more sherds from smaller vessels. The sherds in both areas, exclusive of burial urns, were predominantly (50:1) undecorated red ware. Those that were decorated in no way differed from their counterparts in the other areas. Several 2-foot squares were dug to a depth of 3 feet around the periphery of the site in order to get an idea of its extent. They are indicated in the site diagram (map 2). In

general, sherds from these pits were very sparse, often less than five in each hole, so they were added to the general pool.

The pooled sample consisted of 450 decorated sherds of which 339 were body sherds, 32 were rim pieces, and 79 were miscellaneous painted sherds. These will be analyzed in detail during the discussion of their respective pottery types.

SIZE AND SHAPE OF VESSELS

Only one vessel was recovered complete, though it was severely broken by earth pressure. The restored piece is a very large, round-bottom, squat pot measuring 40 cm. in diameter. It is discussed in detail below. Several of the larger sherds would seem to belong to a vessel of approximately the same size. Modern day undecorated examples can be seen in almost every hut in the mountains throughout Panama, where they are used for water and grain storage or to prepare the alcoholic "chicha." Of the smaller sherd pieces, the majority have so little curvature that they must certainly have come from at least moderate-sized vessels of unknown shape; the contours are shown with the sherd figures. The size is also attested to by identifiable portions of incised effigies which must have occupied an area at least the size of our intact example. It would be very interesting to know the range of shapes and uses of these pottery types and why they alone were given the distinctive stylistic treatment not found on smaller vessels.

RED WARE

The general, and presumably utilitarian, pottery is a plain, undecorated, hard, dense vessel of medium red-brown color. It is tempered with fine grit often bearing minute siliceous deposits. The slip varies from red-brown to a decidedly red-orange color and is easily washed off in water. Refiring of sherds in excess oxygen at 500° C. for 30 minutes causes no color change, indicating a state of full oxidation.

The most common shapes are the small globular "beanpot" with a rounded bottom, a larger and more stable wide-mouthed bowl, and a rather thick and heavy plate of very shallow form. There is a simple recurved rim without secondary elaboration or decoration so that cross sections are of uniform width. Thickness averages about 0.6 cm. Typical shapes are shown in figures 8, *a-f*, and 9, *a, b*.

Surface finish varies from a smooth to a rather roughened appearance with undiagnostic tooling marks on both the interior and exterior. These at least indicate the use of some type of stone or wood object or, in some instances, corncobs to smooth the vessel surfaces before drying. Firing is often uneven with isolated black smudges

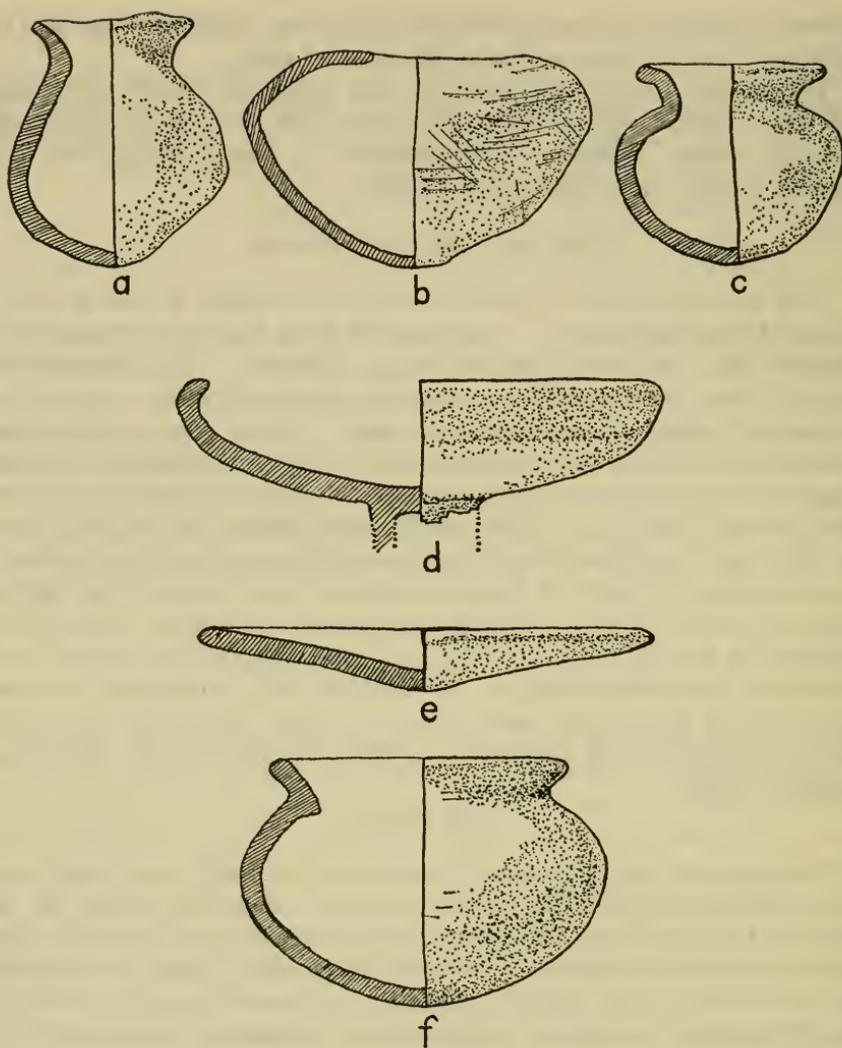


FIGURE 8.—Red ware.

on surface areas. Many of the vessels show charring on the rim or interior, indicating their contact with fire while in use. Most of the intact examples illustrated were recovered from the burial area, and several from inside urns. These in no way differed, however, from the thousands of fragmentary samples found throughout the site. Red-ware vessels were obtained both in average utility sizes of 1-2 quart capacity and in miniature sizes identical in shape but having a capacity of from 2-4 ounces.

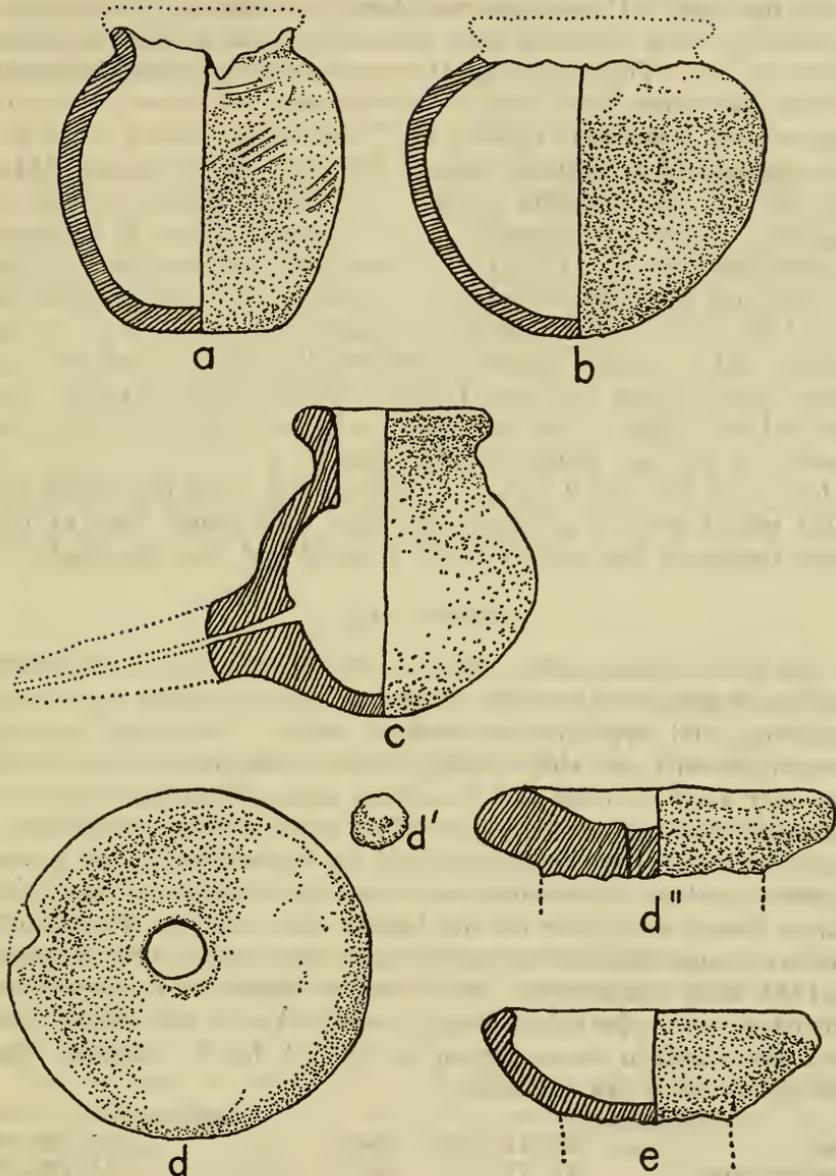


FIGURE 9.—Red ware.

Several vessels with unusual shapes for the area were recovered. They all were present, though infrequent, at Sitio Conte. Plate 10, *a* (left), shows a broken-rimmed gourd effigy vessel or fluted bowl of a somewhat finer paste and smoother finish than is usual. At Sitio Conte they occurred in both red and in smoked wares (Lothrop,

1942; figs. 266, 271) and were considered to be primarily a late characteristic. They have also been found at Cupica, Colombia (Linné, 1929; fig. 53). Plate 10, *a* (right), shows a spouted vessel somewhat cruder than those from Coclé. Another vessel, of coarse brown unslipped clay, is shown in figure 9, *c*. This bottom-spouted vessel also was represented in Coclé by a single identical vessel (Lothrop, 1942; fig. 337, *a*). It resembles many of the classic "baby feeders" of Europe. A red ware pedestal plate, or *frutera*, 22 cm. in diameter, is shown in figure 8, *d*. Plate 10, *b*, shows a small red ware beanpot with several rows of applied nubbins. It was found in juxtaposition to burial No. 5 in the shell lens and contained a small, polished, wedge-shaped celt, described under "Stonework." This type of pot has been described from Veraguas (Lothrop, 1950; fig. 62). A rather massive red ware tripod, differing from the usual variety in the outcurving position of the legs, is illustrated in plate 10, *c*.

One small dish (fig. 9, *d*) had a neatly drilled center hole which was filled with a plug of unbaked, buff clay. The rough base of this piece suggested that some form of pedestal had been attached.

BROWN WARE

The characteristic pottery type of this site is a brown ware with decoration applied by a variety of combinations of incising, mechanical punching, and applied or modeled relief. The group includes several related types which employ more or less the same techniques but vary widely in color and, to a lesser extent, in the physical characteristics of the paste mixture. The color is most commonly a medium brown or red brown (5/4 and 4/4 Munsell scale), but a considerable portion of the sample runs toward a redder tone (5/6) or to darker browns and lighter red-free browns (4/2 and 6/3). Presumably this is a characteristic of the particular paste on hand at the moment, and the firing temperature, rather than of distinctive pottery types. Sherds of each major color variation were broken in half and one portion was refired in excess oxygen at 500° C. for 30 minutes. The changes of color are as follows:

	Munsell color		Refired color
Red	2.5 YR: 4/6	Red	2.5 YR: 4/8
Reddish brown	5.0 YR: 4/4	Red	2.5 YR: 4/8
Dark reddish brown	5.0 YR: 3/3	Yellowish red	5.0 YR: 4/6

Similarly, there is variation in the surface texture. Most of the material is a fine-textured, fine-grit tempered paste which was smoothed on the surface to a moderate polish, leaving no surface pits visible to the naked eye and impervious to water. A substantial number of sherds, however, have a more open grainy surface texture which appears to be of the same paste material left unpolished.

None of the brown wares are covered with slip. There does not appear to be enough evidence to break this ware down into subgroups on the basis of consistent variations.

PAINTED WARES

Black and white on red ware.—Fifty-six isolated sherds were recovered which fall into a group of black, white, and red simple geometric designs in various color combinations. For the most part these consist of rim pieces with concentric bands of white and black on the edge of a red ground (pl. 11, *a*; fig. 10, *b*). The bands may be from less than 1 cm. to more than 6 cm. in width and may be single or multiple. This ware is probably related directly to the paneled urn covers. Several variants were found. Four sherds were from white vessels bearing alternating red and black bands, the reverse color sequence of the above (fig. 10, *e*). Another four sherds (fig. 10, *a, h*) were of red ware which was decorated with concentric black bands only; no white was present. Three sherds are present from the near center of plates or shallow bowls having a white panel with black geometric designs (fig. 10, *c, i, k*). Some or all of the rims may belong to this style, but unfortunately none of sufficient extent were recovered to justify this conclusion. The ceramic paste in both these and the rim sherds is identical to that of the usual red ware. The red paint appears to have been applied first as a slip, somewhat heavier than on the simple vessels. Whites range from a pure white to a cream white and appear to be the most labile.

All of the sherds in this group appear to be related and, by the number of them recovered, represent a possible "type" painted ware of this culture. Not enough sherds of the variants are present to warrant classification at this time. None are true polychromes, since the design proper utilizes only two colors superimposed on a self-color background. As such, they are related to the paneled red ware of Coclé and presumably represent cultural acquisition earlier than true polychromes.

Red on brown.—Two sherds were recovered of the same brown ware present throughout the site, but having a narrow red band. Both of these are rim sherds (pl. 11, *d*). Their place in the pottery classification is unknown.

RIMSHERDS

The 32 rimsherds recovered can be divided conveniently into three groups on the basis of profiles (fig. 11).

The first group (*a-l*) shows a slight inward curve. Shapes are those of plates and shallow bowls. All except one are slipped red ware and all have some manner of plastic decoration.

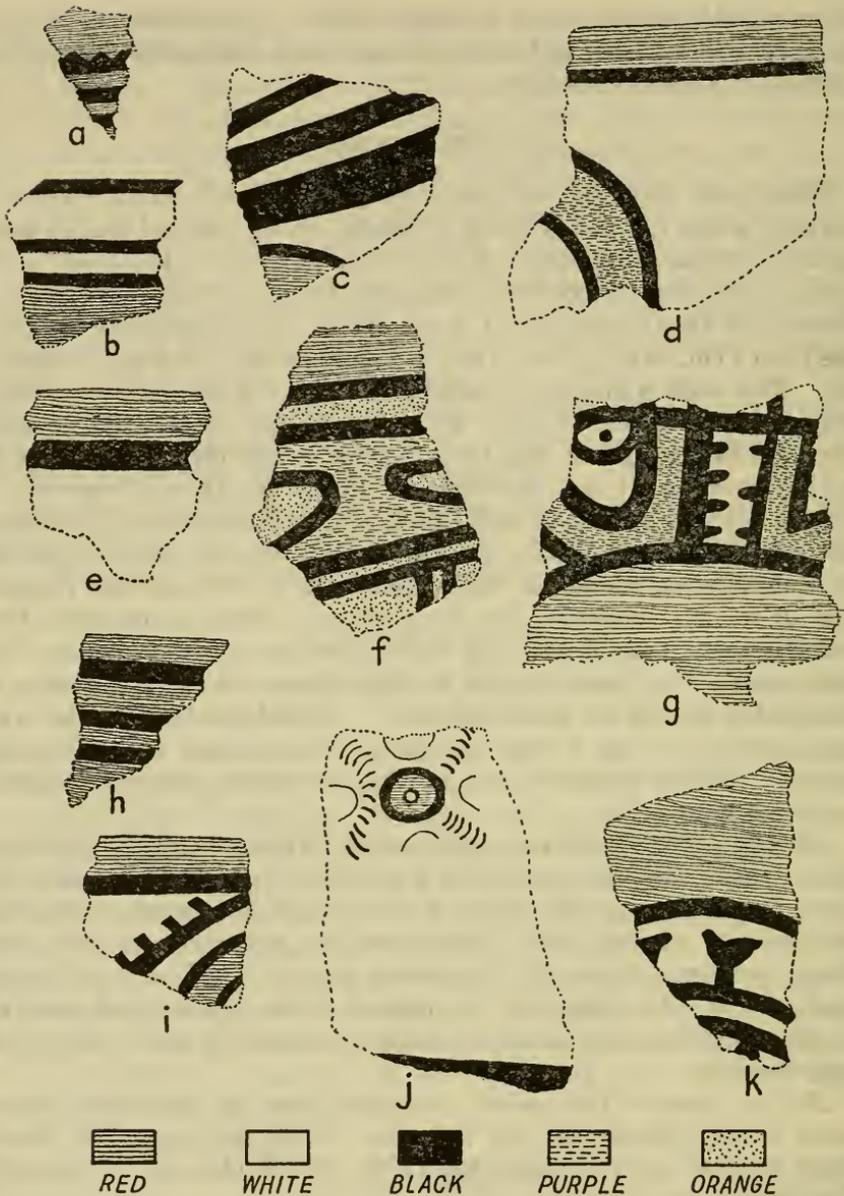


FIGURE 10.—Painted wares.

Group two (*m-u*) has vertical rims and the vessel sides may slope outward to an inflection point before recurving inward. The shapes are narrow, and wide-mouthed, globular vessels of medium size. Only two are slipped; the remainder are incised brown ware. All have more elaborate designs than the former group.

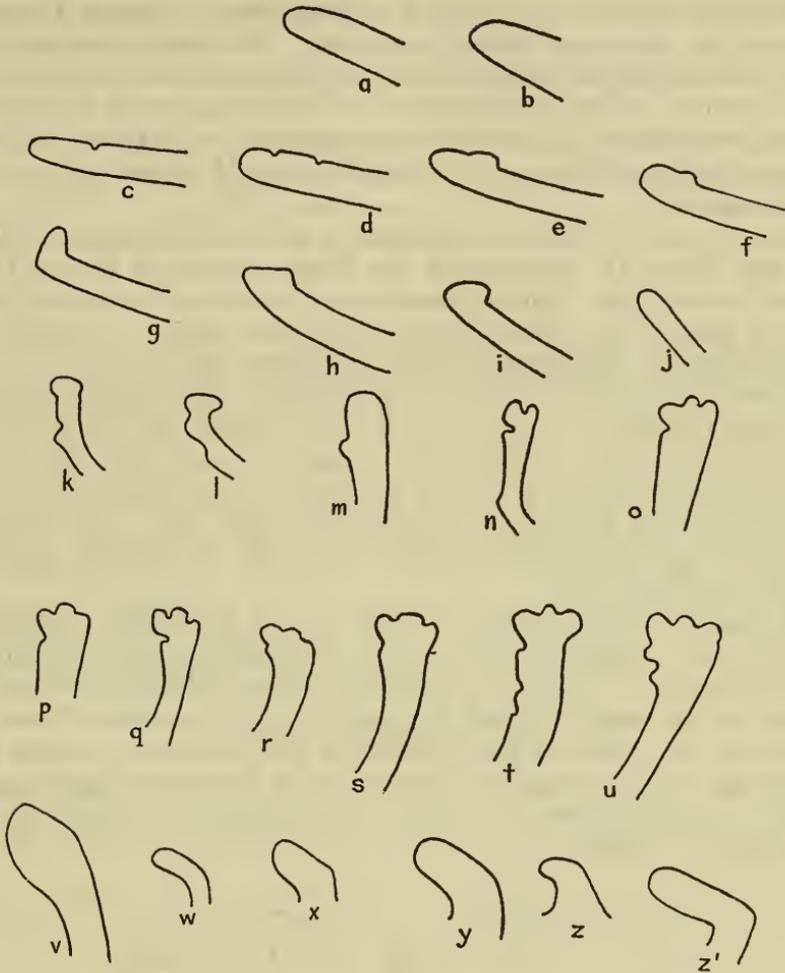


FIGURE 11.—Rim profiles.

Group three (*v-z'*) consists of severely recurved rimsherds, sometimes flattened along the inner edge. They are of slipped red ware and either not decorated or decorated by simple shell stamping along the edges. They represent conventional wide-mouthed globular pots.

DECORATIVE TECHNIQUES

DESIGN MOTIFS

Segments of serpents and lizards are the most common design motifs of the brown wares. From the sherd material, it is impossible in most cases to distinguish between the two. A serpent from a large burial urn is illustrated in plate 3 and figure 2. This particular

serpent appears to be a variety of sea creature; the illusion is created mainly by the long curling "antennae." No truly representative creatures are known in Panama or its waters, but one is reminded of the common yellow-bellied sea snake (*Polamis platuria*) which may have been elevated by prehistoric imagination to the level of some superstitious significance. Several sherds would appear to be of the same pattern.

A very realistically executed lizard or iguana is illustrated in plate 12 and figure 12, representing the finest example of incised relief ware from the site. The backward-facing position of the head appears rather unusual for Panama and gives the whole design an appearance reminiscent of Quetzalcoatl motifs in Mexico such as that on the facades of Xochicalco. This is also frequently the position in which Chinese dragons are portrayed. Lothrop (1942; figs. 43-44) illustrates a bird in this position from a painted Coclé plate, but there does not seem to be any relation between the above and the serpent or lizard motifs from Sitio Conte or Veraguas. The collection also includes fragments of other similar designs, all of which are approximately the same size.

A nearly complete parrot was found (pl. 13, *a*), which, judging by its curvature and thickness (10 mm.), originally formed a portion of a very large urn. This is an example of the modeled-relief technique in which the body is formed by pushing the clay outward from the inside of the vessel so that the actual wall thickness remains unchanged. Again, one is reminded more of Mexican motifs than of the polychrome phases of Panama. A similarly formed monkey urn was discussed earlier.

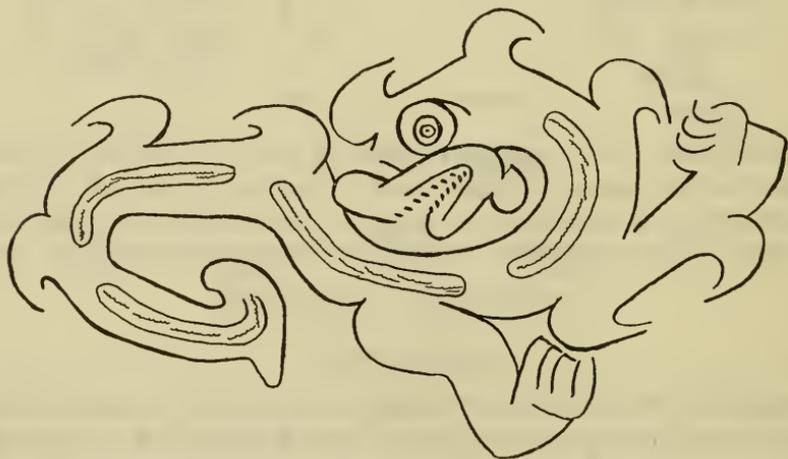


FIGURE 12.—Detail of lizard effigy jar.

A water bird is shown in plate 13, *b*, in a much cruder, but accurate, simple linear incising. It probably represents the white heron which may be seen on the beach next to the site and is common through the Panama Gulf region.

Other animal motifs are present in the ceremonial ware mentioned in connection with burials. These are the turtle, alligator, and monkey, and humanoid three-dimensional figures. Several portions of such figures are present in the collection.

LOCATION

From the few restorable vessels it appears that the biological motifs usually were placed separately on opposing sides of the vessel. In all cases the same pattern was present on both sides of the upper half to one-third of the vessel. On some, the jar was divided into four vertical panels by applied ridges into four alternating blank and decorated vertical panels similar to the sections of an orange.

On the other hand, pots with geometrical designs appear to be filled across the entire visible outer surface leaving only the bottom and interior undecorated. The rims were further elaborated on the top or either side, but the rim and body decorations are not contiguous. There is no evidence of any zoning of decorative fields.

ANTHROPOMORPHIC EFFIGIES

Four polychrome vessels were found which have humanoid features. They are basically similar and have in common the ridging to indicate hair style and the painted "mask." Beyond these features, however, they are quite dissimilar in ceramic type, paint quality and color, and in stylistic execution. They do not appear to be the product of a single artist, nor to have the unity of similar vessels to the west.

Plate 15, *b*, is unquestionably a typical "Coclé-type" humpback effigy in coarse slipped red ware with white panels to indicate face and arms. The face is elaborated by a purple mask and the arms and breastplate are decorated with geometric black lines in the typical Sitio Conte manner, but they were too poorly preserved to photograph well. The protruding mouth and nose as a single unit makes it resemble a monkey more than a human; an interesting combination when combined with the humpback. There are small raised breasts and no evidence of masculine structure.

In plate 21, *b*, is shown a miniature vessel in which the body is barrel-shaped without arms. This is a better grade of slipped, polished red ware with a soft white slip over most of the body. The decorations in red and the mask in purple are edged with black material

and all are applied over the white. In paint, this resembles the Coclé specimens, but the style is different.

Figure 13 is a very fine vessel from the Museo Nacional collection. It is a red ware vessel with elaborate panels which relate it more to

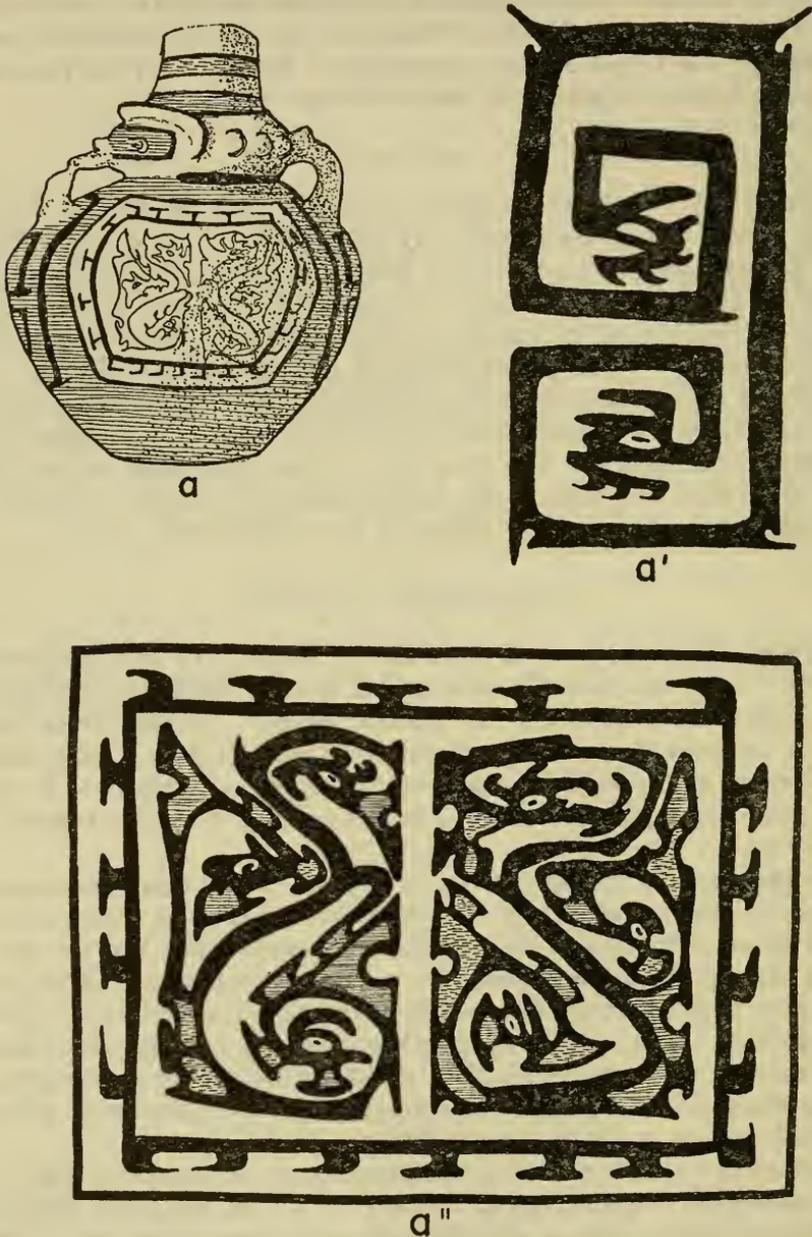


FIGURE 13.—Polychrome effigy jar (Museo Nacional).

the Azuero Peninsula than to Coclé. Both modeled hands are placed to the mouth. The head is white slipped with a ridge to indicate the hairline and a high conical hat decorated with alternating red and purple stripes. There are six symmetrical body panels, redrawn flat in the illustration. The front panel (*a'*) is repeated on the back and consists of scrolls in black on the natural background. The inner portions of the scrolls end in stylized "alligator god" heads. The side panels (*a''*) are placed over a white background and consist of elaborate convolutions ending in alligator god heads and having fillers of small red and purple wedges.

The vessel shown in figure 14 is made of a finer buff paste, completely slipped with a hard, polished cream-white surface. It is

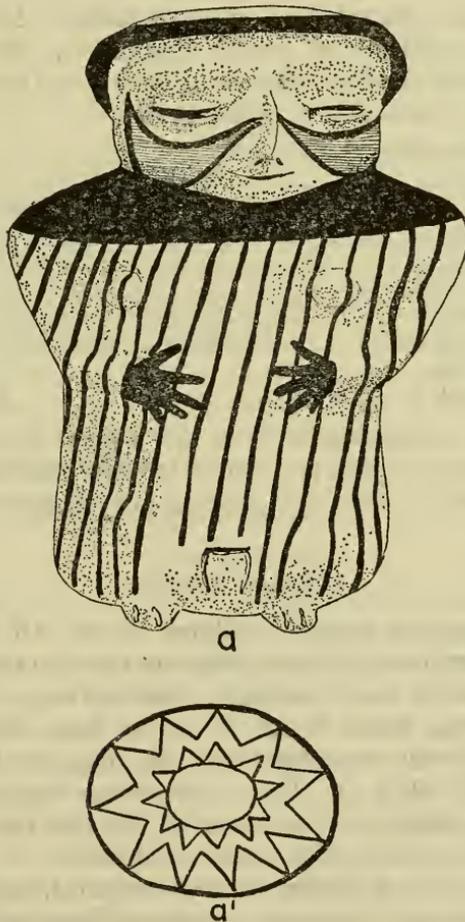


FIGURE 14.—Polychrome effigy jar.

decorated in black, except for the red shadows under the eyes. The manner of hair indication is similar to that above and the feet are like those on many Veraguas buff ware effigies. The style, however, seems completely unrelated to any Panama pottery published heretofore and seems more lifelike than the usual humanoid effigies.

INCISING

The main design technique consists of incising with the thumbnail or a pointed tool in a linear fashion to form various animal drawings. These are then elaborated with incising or punching by various mechanical tools so as to fill in the design or further elaborate the body outlines. Punched holes, shell marks, thumbnail marks, and various combinations of markings made by a hollow reed have been identified. The reed marks are in patterns of full circles, concentric circles, circles with central dots, and half circles. Many designs are executed with a mixture of several techniques. The frequency of appearance of single and mixed designs is as given below and as illustrated by selected examples in plates 16-18:

Number of pooled decorated sherds.....	339
Number incised.....	328
Linear.....	185
Punched.....	67
Shell.....	38
Reed.....	13
Circle-dot.....	12
Concentric circles.....	10
Half circles.....	19
Fingernail.....	5

Raised ridges along incised lines are present in some examples, but most designs are clean and would indicate incising the "leather-hard" rather than in wet clay, causing uneven grooves due to subsequent polishing.

SURFACE DESIGNS

Surface designs are shown in plates 19-20. Of the out-sloping plates and shallow bowls, the most frequent rims are those with molded ridges and/or one or more concentric incised rings. The ridge may be above the ring, below it (pl. 19, *a*), or both above and below (pl. 19, *e*). In some examples either the edge or the ridged edge was scalloped (pl. 19, *b*, *d*). Other designs are simple shell stamping (pl. 20, *i*) and punching or notching of the rim (pl. 20, *d*). They are apparently notched in the leather-hard state.

Of the vertical, and chiefly brown-ware rims, designs consist of geometrical patterns of alternating incised lines and punched dots (pl. 20, *a-c*). In contrast to the former group, incising appears to

have been done in the damp state, leaving a well-defined ridge which can be seen in the photographs. The patterns occur all over the external surface exclusive of the bottom and do not appear to be organized in zones. Some designs are more elaborate incised circles and swirls (pl. 19, *g*), like those on the votive ware. On others, an applique ridge is diagonally incised in imitation of rope, or has crude ridging and edge notching.

RELIEF MODELING AND APPLIQUE

Other plastic decorative techniques frequently employed are relief modeling and applique. It is the former which really gives this pottery its completely distinctive appearance and one cannot but be impressed at the high degree of refinement in this technique. Occasionally the entire animal body is raised above the vessel surface, outlined with deep linear incising, and paneled with reed or shell markings. In the thick, heavy sherds the modeling often is pressed outward from the inner surface; in smaller sherds the inner surface is smooth and flush. Relief is used also for heads alone, or portions of heads such as jaws and the beaks of birds. Applique is used in much the same manner where a sharper raised edge is required; most frequently in the application of eyes. The term "Modeled Relief Brown Ware" has been applied locally to this type of pottery found on the Venado Beach site, a term believed to have originated with Dr. Lothrop during his excavations there. The frequencies of these decorative techniques are as follows:

Applied.....	8
Modeled.....	3
Applied and incised.....	124
Modeled and incised.....	35
	<hr/>
Total plastic decorations.....	170

TRADE WARE

Seventy-six sherds were found having decorations in two or more colors. Of these, 20 were true polychromes in red, white, black, purple or, more rarely, orange. Several represent portions of typical Veraguas-Coclé types both in designs and materials. Most appear to be segments of fruterías and plates with serpent and similar motifs, including the "coral snake rim" (fig. 10, *d, f, g*). Similarly, a portion of a frutera pedestal was found. One sherd has a raised "nubbin" with four supports (fig. 10, *j*) decorated in red and black on a highly polished buff ware of foreign import. This represents a type ware of Parita and related sites on the Azuero Peninsula. A sequence of progressive stylizations are known whereby this is shown to be a frog effigy (Biese, 1961). This definitely is not a locally manufactured

piece and is known to occur as trade ware in both Coclé and Veraguas.

A complete widemouthed vessel (pl. 15, *a*) and nine sherds are of red designs on a white ground, identical to the Coclé redline ware.

In the absence of further material from the site, these pieces are all considered to be trade ware brought in from the more westerly provinces. Unfortunately, the lack of correlated finds in graves or in context with incised wares makes it impossible to establish them as contemporaneous with the other artifacts. It is of significance, however, that the redline ware is considered to be definitely a late characteristic of Sitio Conte in Coclé.

Several of the red ware vessels merit individual discussion. In plate 21, *b*, are shown two red ware vessels, a small dish and a spouted vessel, both with white panels bearing black scrolls. While similar to Coclé vessels, at least to me they appear to be imitations or copies of the same; an impression perhaps only gained by handling the two side by side. They are cruder, heavier, and slightly different in surface texture than the usual Sitio Conte ware and may be of local manufacture.

Plate 21, *a*, also shows a widemouthed pot and a rather massive, dense polychrome pedestal enclosing rattles. Both of these have a coarse, medium buff ground color with designs in red and purple edged in black. In style and finish they do not resemble previously reported Panama polychromes.

SECONDARY USE OF ARTIFACTS

Sufficient direct evidence for the repair and re-use of damaged vessels often is lacking. However, the ordinary rim chipping of vessels in use, which was later smoothed by grinding, is seen frequently. When evidence of major repairs is found, it is an occurrence worth detailed notice. When a vessel is used for burial it may be taken as some evidence of a frugal or materially poor culture or, conversely, one lacking a highly formalized burial tradition. This is in marked contrast to many cultures in which the grave furniture is new and constructed specifically for the purpose.

The lizard motif incised relief vessel shown in plate 12, *a*, was originally recovered as burial No. 7, where it was found within a conventional undecorated urn. This round-bottomed vessel is 40 cm. in maximum diameter by 30 cm. in maximum height, with its inflection point located at five-eighths of the latter. It is of a medium red-brown paste with a smooth unpolished surface. There was a portion of an incompletely oxidized brown to dark-green identical vessel used as a cover. The ridges, which divide the vessel into four panels, and the crest of the lizard exactly match up with the cover

design with a 5-10 cm. overlap all the way around. This vessel top has a shallow flat shoulder ending in a throat only 15 cm. in diameter around which there is evidence of a vertical rim having been present at one time. The bottom has a 19 cm. curving fracture with 7 smooth holes drilled along the edges. This was obviously for the placement of ties for mending by the "crack-lace" method previously unreported from Panama. As mentioned above, the jar contained a 20-cm. plate and an infant burial. It appears that a utility grain- or water-storage jar, with a not uncommon design, developed a crack and was repaired. The vessel mouth was then widened so that the plate and burial (or secondary burial) could be placed in it and covered with the broken top of a similar vessel. Linné (1929) summarizes the distribution of the technique and concludes it is primarily of western South American origin with singular exceptions in Nicaragua and Costa Rica. It is completely unknown from Mexico and Guatemala.

SPINDLE WHORLS

The 15 spindle whorls from the site (pl. 22) were treated separately in a recent publication, to which one should refer for more detailed information (Biese, 1961). All of the whorls were found exposed on the surface after heavy rains, and were distributed sporadically and without context in both residence and burial areas. They are all made of the same red-brown to brown clays and tempering techniques used for the general ceramic remains. The surface treatments fall into two distinct groups: the coarse orange-to-red-to-brown slip of Panamá Viejo red ware, and the unslipped, smooth brown wares. One whorl (No. 3) was a partially smudged tan of coarse clay.

By physical characteristics, the whorls fell into three groups:

Simple.—Nos. 10-11 are simple flattened balls of slipped clay bearing a center core and representing the simplest type of spindle weight. No. 12 adds the further refinement of a secondary smaller mass atop the first. In Nos. 1-2 this mass is more distinctive.

Mammiform.—Nos. 5, 7, and 9 have a more pronounced upper mass of clay. They also differ from the preceding by being composed of a smoothly polished dark-brown clay.

Incised.—The remainder of the whorls are all similar in that they are decorated with radial incising or punctate designs.

In the publication cited above (Biese, 1961) it was pointed out that the weights and diameters of these whorls placed them in two groups such that the rough approximation of their inertia gave a sevenfold difference. It was suggested that this was evidence for a more advanced weaving technology in which either two different fibers were spun or two different weights of fibers were made for different purposes.

MISCELLANEOUS CERAMIC OBJECTS

A number of miscellaneous clay objects were recovered from the site. Figure 15 shows two single note incised brown ware whistles, both probably representing alligators. The broken tail of another whistle, probably representing a bird, is illustrated in plate 23 with other miscellaneous objects found at the site.

CLASSIFICATION

There is an insufficient collection of material upon which to base a definitive classification scheme. This is especially true when it is known that related pottery is present throughout the Venado Beach-

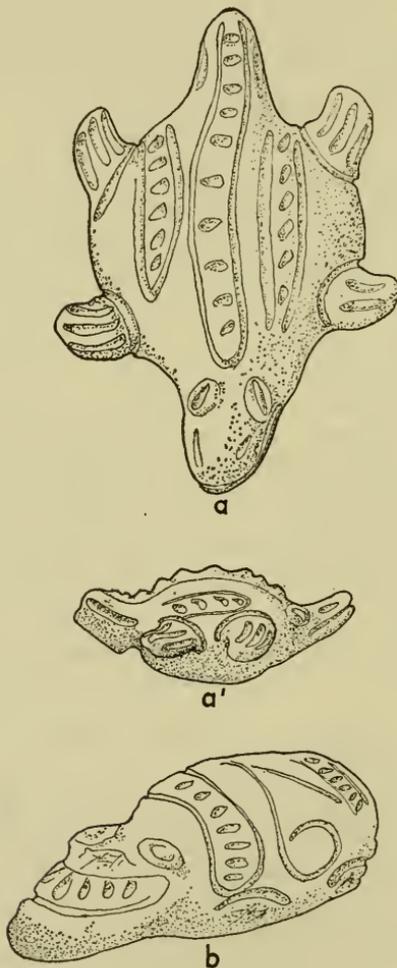


FIGURE 15.—Brown ware whistles.

Madden Lake areas and its accumulation will necessitate revision of any system. Furthermore, we may well find that stratified deposits will presage a system of classification having temporal as well as geographical value in the determination of cultural parameters. Nevertheless, a summary of the ceramic collection presented herein may be given in the form of a preliminary classification. This is intended only to be descriptive of the various broad groups of pottery recovered and to be used as an aid for further comparisons; to divide it immediately from the equally broad cultures previously described from Panama.

I. PANAMÁ VIEJO RED WARE

II. PANAMÁ VIEJO DECORATED BROWN WARE

1. *Incised brown ware.* (Pl. 8, e.) Identical to those sherds of the same name from Sitio Conte. The paucity of examples would suggest it is neither native to, nor representative of, either of these areas.
2. *Geometric brown ware.* Including its red-brown variants. The design is geometrical and incised with secondary elaboration by punching and mechanical stamping with shell and reed.
3. *Biometric-relief brown ware.* (With red-brown variants.) The designs are animal representations in bas-relief outlined by incising and elaborated by secondary stamping. This also would include the smaller designs in which the representation is not actually elevated from the vessel surface.

III. PANAMÁ VIEJO BLACK ON WHITE PANELED RED WARE

IV. PANAMÁ VIEJO CEREMONIAL WARE

Including those elaborate vessels with geometrical designs and/or three-dimensional modeled or applied sculptures (modeled-relief brown ware).

V. PANAMÁ VIEJO URN WARES

1. *Red urn ware*, and the common red-brown covers
2. *Relief urn ware*
3. *Black on white paneled red urn ware* (covers only)
4. *Red and black on white urn ware*

The remaining painted sherds are represented by only one example each and cannot be classified. They are presented only for descriptive purposes.

DISCUSSION

GEOGRAPHICAL DISTRIBUTION

The most important material from this site, for the tracing of horizontal distribution, is the decorated brown ware. From the Pearl Islands, Linné (1929) illustrates a nubbin sherd (p. 99), incised animal feet (p. 81), and alligator and serpent designs in raised brown ware with similar techniques in reed marking, shell marking, punching, and incising (p. 90).

Raised brown ware sherds with animal designs are illustrated from Punta Patiño, near the Gulf of San Miguel, deep in the Darien (Linné, 1929, p. 154). It is possible that cultural influence extended as far south. With the single exception of Linné's work we have no data from the Darien region of Panama. More tenuous identification exists in the case of his scalloped profile rim from Triganá, Colombia (p. 33), which resembles our figure 8, *d*.

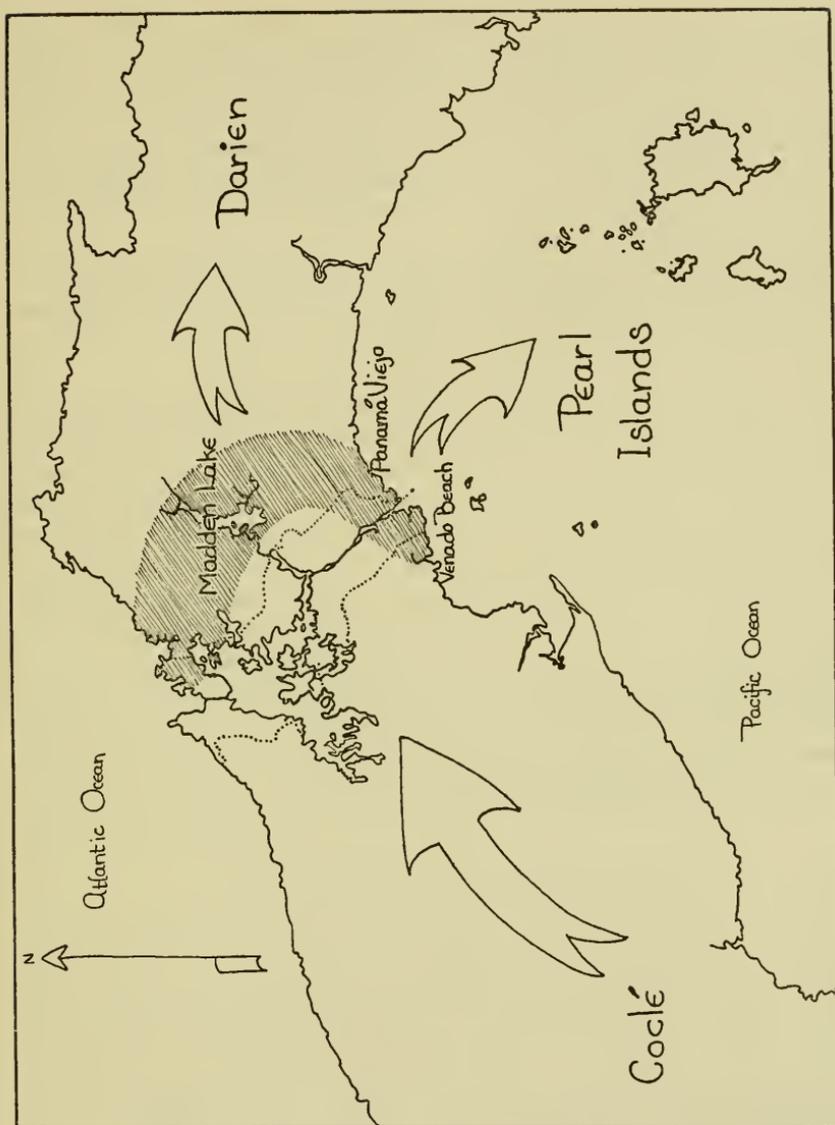
Recent work in Cupica, Colombia (Reichel-Dolmatoff, 1961), has demonstrated identical fragments of our modeled-relief brown ware as well as Coclé humpback polychrome effigies and other trade ware from the Late period at Sitio Conte. This gives us a known, active distribution area of over 250 miles to the southeast, into the Darien jungle via land. This country is considered to be almost inaccessible today even with our most modern equipment. The obvious route is the sea passage via the Pearl Islands (which have similar pottery types mentioned above), a considerably shorter distance. The intermediate vessel shown by Reichel-Dolmatoff (1961, fig. xiii, 3-4) also more closely links the modeled-relief brown ware of the present site with that of the Santarem in Brazil as described by Palmatary (1939).

Across the Isthmus of Panama, the brown ware type pottery is well known among local archeologists from Venado Beach; several typical sherds and stone points are shown in plate 24. Similarly, the same pottery is found across most of the Madden Lake region in a broad zone up to 15 miles east of the Canal. Plate 25 shows typical surface finds selected from several dozen sites exposed during the dry season when the Lake drops. Plate 25, *a*, is an otherwise typical point recovered unassociated from the Fort San Lorenzo area near Colón. These illustrated artifacts were selected from hundreds because of their similarity to others presented herein.

From the distribution of similar pottery, points, and burials, related cultures are seen to have occupied a wide band across the entire Isthmus from the Atlantic to the Pacific, covering, and slightly to the east of, the area occupied by the present day Canal Zone. It extends out to the Pearl Islands in the south and into an as yet undetermined area of the Darien. This distribution is reflected in map 3.

CONTACTS AND MIGRATIONS

Cultural contact definitely is shown with the westerly provinces, primarily Coclé, through the admixture of polychrome vessels and sherds. Unfortunately, these sherds are not stratified, and range from periods which are considered to be characteristic of both early and late Sitio Conte. Identifying goldwork and whole vessels were recovered from Venado Beach but have been published only in preliminary form (Lothrop, 1956). Recent work has suggested Coclé



MAP 3.—Distribution of Panamá Viejo cultural traits.

polychrome might be much more widely distributed than was originally thought. It is present in other foci, rather than being restricted to trade ware, throughout a portion of the Azuero Peninsula and adjacent southeastern Veraguas. Until further details are available, we can only state with certainty that the Panamá Viejo culture had limited trade contacts with her classical polychrome neighbors to the west. There is no evidence to suggest contact with the more westerly Chiriqui or Costa Rica.

Contacts to the east are suggested by the distribution of pottery to Darien, if not actual settlements of related cultures. Further exploration of the Darien will be necessary before we are enlightened on this point.

In contrast to actual contacts, the presence of shell marking and incised spindle whorls tends to suggest a combination of vertical and horizontal transmission of traits somewhere in the as yet remote past of Central American migrations. Parallel shell edge stamping around the vessel rims is known in Panama from the Girón site in Azuero (Willey and Stoddard, 1954), where it was found in the possibly contemporaneous levels of the Santa Maria Phase, and from both the Santa Maria and early Coclé levels at Sitio Conte (Ladd, 1957). Shell stamping is also known from the Sarigua Phase at the Gulf of Parita (Willey and McGimsey, 1954), though in this case the pottery paste is quite different and there is a considerable time lag between the estimated dates of Sarigua and Coclé. Shell stamping is a widely distributed trait throughout Central America.

There are present two other traits of possible vertical significance, i.e., urn burial and crack-lace pottery mending, which may represent evidence of either direct migrations or counter migrations with South America at some time in the history of this culture's predecessors. These have been discussed more fully above, and we are now beginning to believe urn burial may represent a direct migration of much more ancient origin and distribution throughout Mesoamerica than has been thought previously. The evidence offered by polychrome pottery traits is still more meager, but despite the difference in stylistic development one is often tempted to draw relationships between Mexico, Panama, and Peru.

CHRONOLOGY

In attempting to assign a date to the culture represented by this site we have two essential cultural links: polychrome trade ware and the Venado Beach site. Both of these have been subjected to recent reexamination, and some doubt exists. When originally described (Lothrop, 1942), the classic polychromes of Coclé were thought, on the basis of style, to be representative of a unique local focus with

wide trade contacts and of a relatively late date, i.e., ca. A.D. 1300–1500. Later unpublished local work indicates the possibility of wider distribution and independent production in several areas of Central Panama. Stratigraphy at the Girón site and Sitio Conte would seem to indicate a greater time span for the entire complex of decorated brown ware and polychrome phases.

Still more recently (Lothrop, 1958 and 1959) a Venado Beach urn burial has yielded a radiocarbon date of A.D. 227 ± 60 (Yale—125) which was cross-dated with early Coelé polychromes. Dr. Lothrop has suggested that this is too early and may represent a sampling or technical error; the reader is referred to the above-cited two papers for a thorough discussion of these and other dates from Panama. In 1961 he announced a new Venado Beach radiocarbon determination of 1000 years B.P. (Groningen No. 2200) from material found in similar circumstances (i.e., charcoal from within plain red ware burial urns). Once a date is accepted, we still have to decide the relationship of this site to Venado Beach and the Lake area. On the basis of trade wares present, Panamá Viejo has very little, the Madden area almost none, and Venado Beach a rather high proportion. Similarly, the absence of both jewelry and trade ware points to an economically poor or dependent tribe associated contemporaneously with Venado Beach when the latter was the ceremonial or ruling center. For at least a tentative assignment of relative dates in Panama I am inclined to accept the Venado Beach radiocarbon date with a slightly earlier date for Panamá Viejo and a still earlier one (ca. 50–100 years) for Madden Lake.

INTERPRETIVE SUMMARY

A new Early Christian Era culture is described herein from Central Panama. It is composed of a rather widespread group of related tribes which shared common burial and ceramic traits, and were distributed over the Canal Zone, the Pearl Islands, and the adjacent territory to the east. The composite tribes perhaps are affiliated loosely through common ethnic origins and maintain Venado Beach as a "capital." Their characteristic economy was based largely on shellfish and offshore gathering and limited agriculture supplemented by small-animal hunting. Life appears to have been rather sedentary and peaceful with limited trade contacts and possibly irregular hazardous trips to the immediately adjacent east and west. Weaving was practiced. Pottery skills were developed to a high degree, but full classic polychromes are not indigenously present. Burial is moderately ritualistic with special classes of pottery, but not formalized to a high degree, and may occur in urns, open extended, or secondary fashion. Deep level graves are not present, but a suggestion

of mutilation occurs. The complicated skills of jewelry and gold working, ceremonial stonework, and permanent structures are absent; this more from economic position than artistic development, since realistic clay sculpture is present. The identifying traits are: (1) urn burial; (2) incised relief brown ware with zoomorphic patterns; (3) certain red and brown ware combinations with shell, reed and punch markings; (4) elaborate ceremonial or votive ware; (5) incised spindle whorls; and (6) simple flake points without secondary elaboration except crude tang formation and ground and polished stone celts in a variety of patterns.

BIBLIOGRAPHY

ANDERSON, C. L. G.

1911. *Old Panama and Castilla Del Oro*. Washington, D.C.

BANCROFT, HUBERT H.

1882-87. *History of Central America*. (1501-1530.) 3 vols. San Francisco.

BIESE, LEO P.

1960. Spindle whorls from Panamá Viejo. *Panama Archaeol.*, vol. 3, No. 1, pp. 35-46. Canal Zone.

1961. The frog effigy and large polychrome vessels from Parita. *Panama Archaeol.*, vol. 4, No. 1, pp. 32-41. Canal Zone.

CARLES, RUBEN D.

1960. *Old Panama*. *La Estrella de Panama*. Patrick J. Smythe, trans.

LADD, JOHN.

1957. A stratigraphic trench at Sitio Conte, Panama. *Amer. Antiq.*, vol. 22, No. 3, pp. 265-271.

LINNÉ, SIGVALD.

1929. *Darien in the past: The archaeology of Eastern Panama and Northwestern Columbia*. Göteborgs Kungl., Vetenskaps-och vitterhets-samhälles handlingar, Femte Följden, ser. A, band 1, No. 3. Gothenburg.

LOTHROP, SAMUEL K.

1937. *Coclé, an archaeological study of Central Panama*. 1. *Mem. Peabody Mus. Harvard Univ.*, vol. 7.

1942. *Coclé, an archaeological study of Central Panama*. 2. *Mem. Peabody Mus. Harvard Univ.*, vol. 8.

1950. *Archaeology of southern Veraguas, Panama*. *Mem. Peabody Mus. Harvard Univ.*, vol. 9, No. 3.

1954. *Suicide, sacrifice and mutilations in burials at Venado Beach, Panama*. *Amer. Antiq.*, vol. 19, No. 3, pp. 226-234.

1956. *Jewelry from the Panama Canal Zone*. *Archaeol.*, vol. 9, No. 1, pp. 34-40.

1958. *The archaeological picture in southern Central America*. *Proc. 33d Int. Cong. Amer.*, tomo 1, pp. 165-172. San Jose.

1959. *A reappraisal of isthmian archaeology*. *Mitteilungen Hamburg Mus. Volkerkunde*, band 25.

1960. *C 14 dates for Venado Beach, Canal Zone*. *Panama Archaeol.*, vol. 3, No. 1. Canal Zone.

MUNSELL COLOR CO., INC.

1954. *Munsell soil color charts*. Baltimore.

PALMATARY, HELEN C.

1939. Tapajó pottery. *Etnol. Stud.*, vol. 8, pp. 1-136. Gothenburg.

REICHEL-DOLMATOFF, GERARDO, and REICHEL-DOLMATOFF, ALICIA.

1961. *Revista Colombiana de Antropología*, vol. 10, pp. 239-332. Bogotá.

SHAFROTH, JOHN F.

1953. *Panama La Vieja; cincuentenario de La Republica*. Imprenta Nacional. Panama.

SMITH, H. MORGAN.

1960. Diggers may find Pre-Spanish city. *In Panama American*, Sunday American Supplement, Jan. 24. Panama.

SOSA, JUAN B.

1955. *Panama La Vieja; con motive del cuarto centenario de su fundacion*. 2d ed., Imprenta Nacional. Panama.

VINTON, KENNETH W.

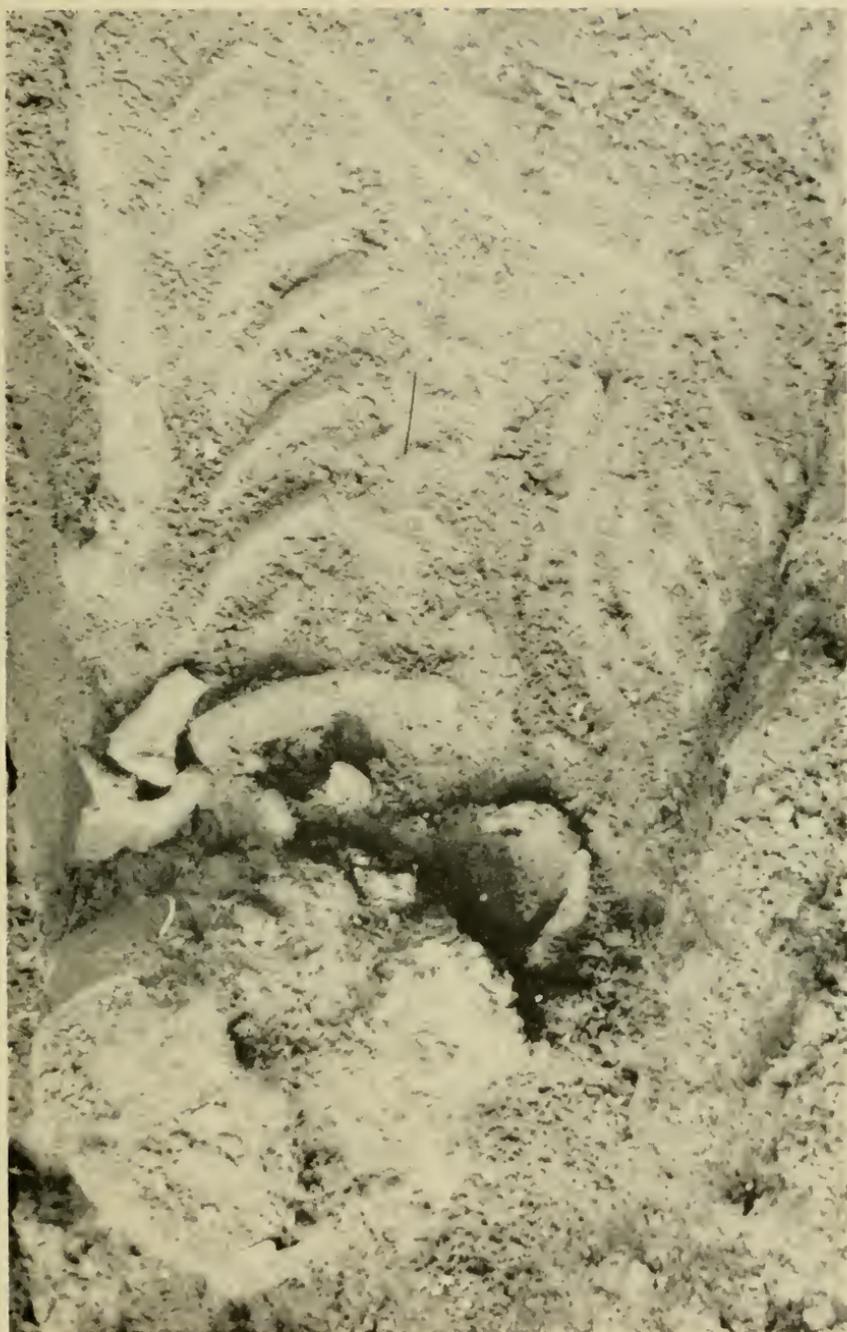
1951. A new archaeological site in Panama. *Scien. Monthly*, vol. 73, No. 2.

WILLEY, GORDON R., and MCGIMSEY, CHARLES R.

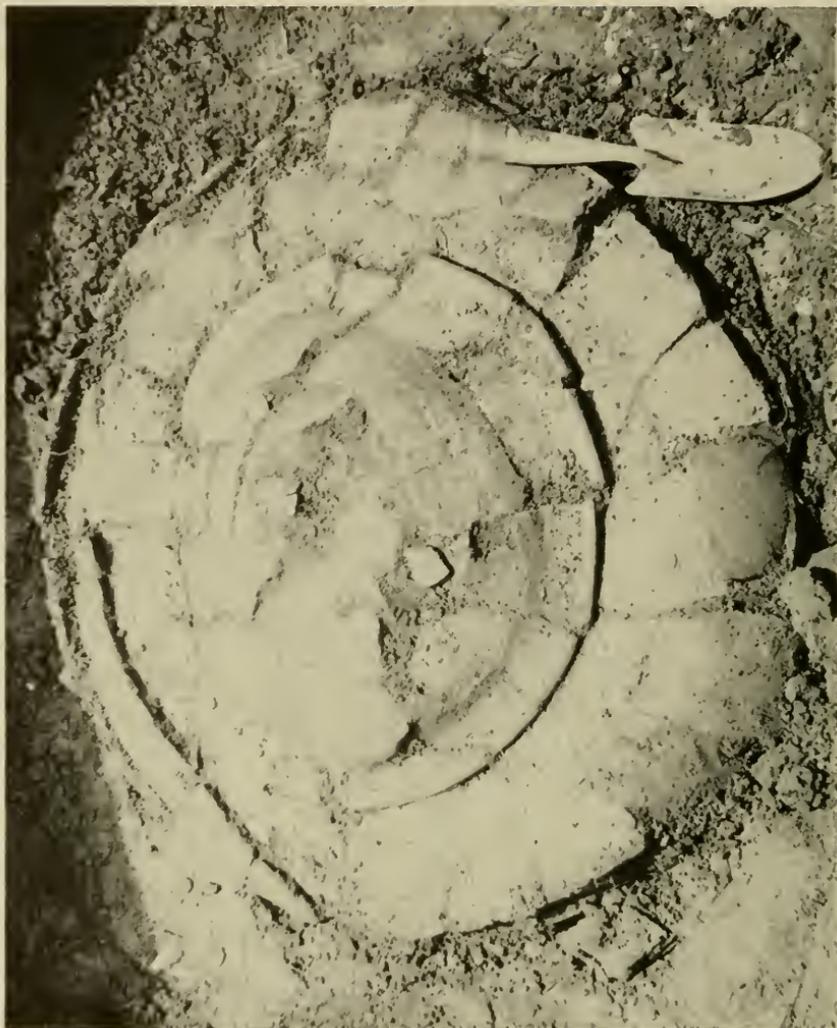
1954. The Monagrillo culture of Panama. *Pap. Peabody Mus. Harvard Univ.*, vol. 49, No. 2.

WILLEY, GORDON R., and STODDARD, THEODORE.

1954. Cultural stratigraphy in Panama: A preliminary report on the Girón site. *Amer. Antiq.*, vol. 19, No. 4, pp. 332-343.



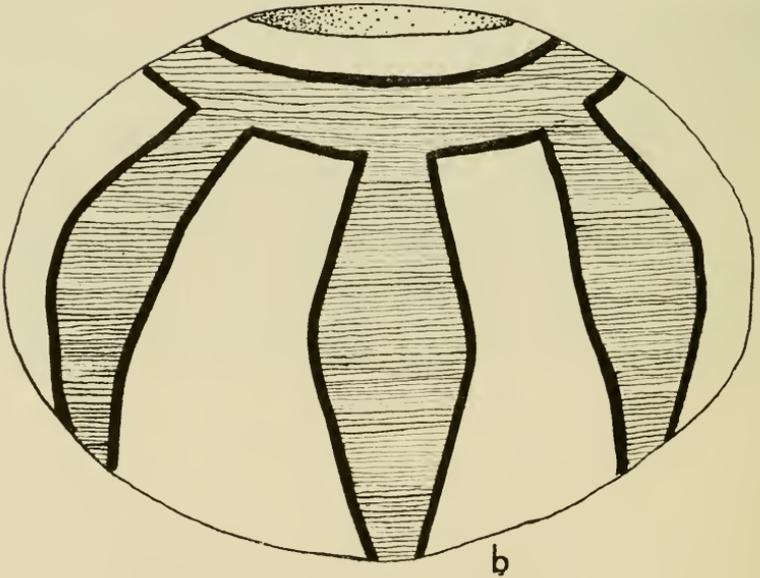
Sacrifice burial.



Serpent burial urn.



Serpent burial urn.



Painted urn and panel from incised monkey urn.



Votive ware double turtle-monkey effigy.



a

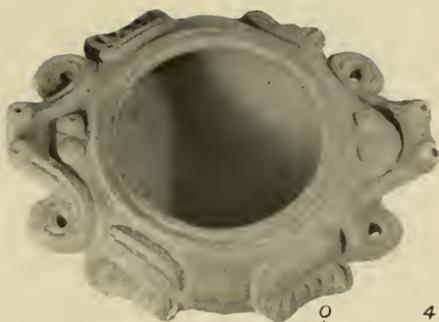


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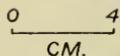
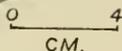
Votive ware double bird effigy.



a



b



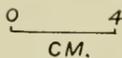
c



d



e



f



Miscellaneous votive ware.



a



b



c



d



e

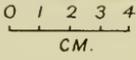
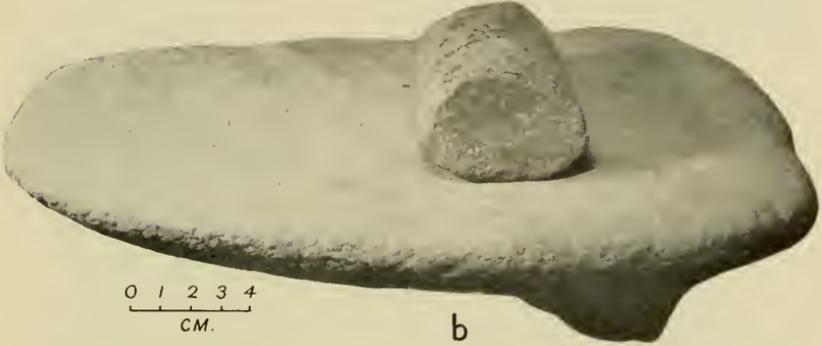
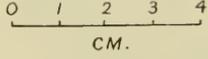
Miscellaneous votive ware.



a



a'



b

Stone artifacts.



a



b

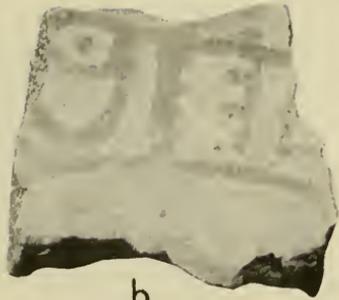


c

Red ware vessels.



a



b



c

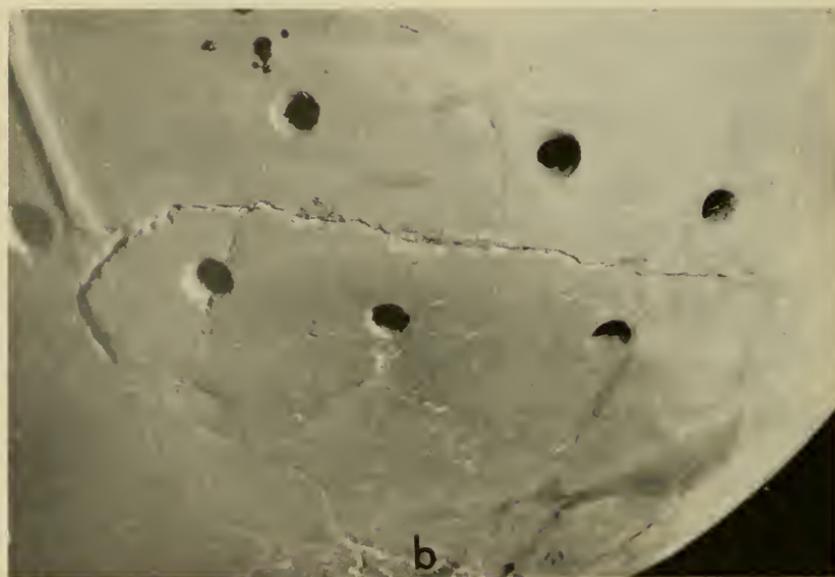


d



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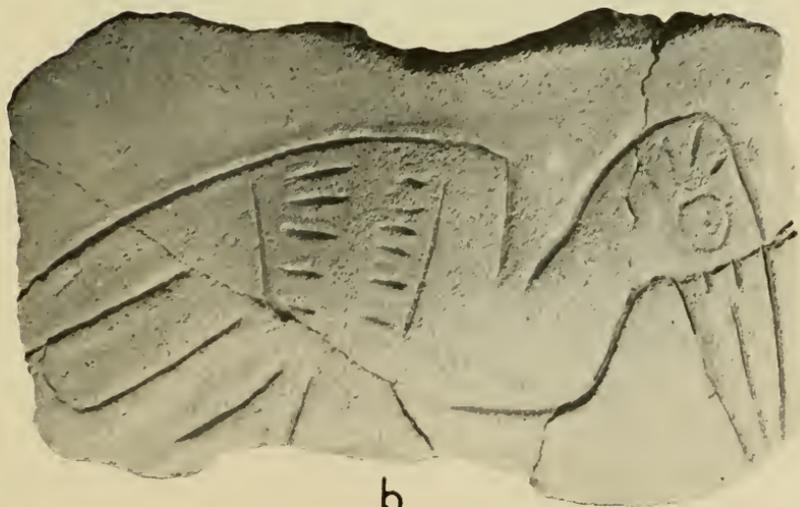
Painted wares.



Lizard effigy vessel.

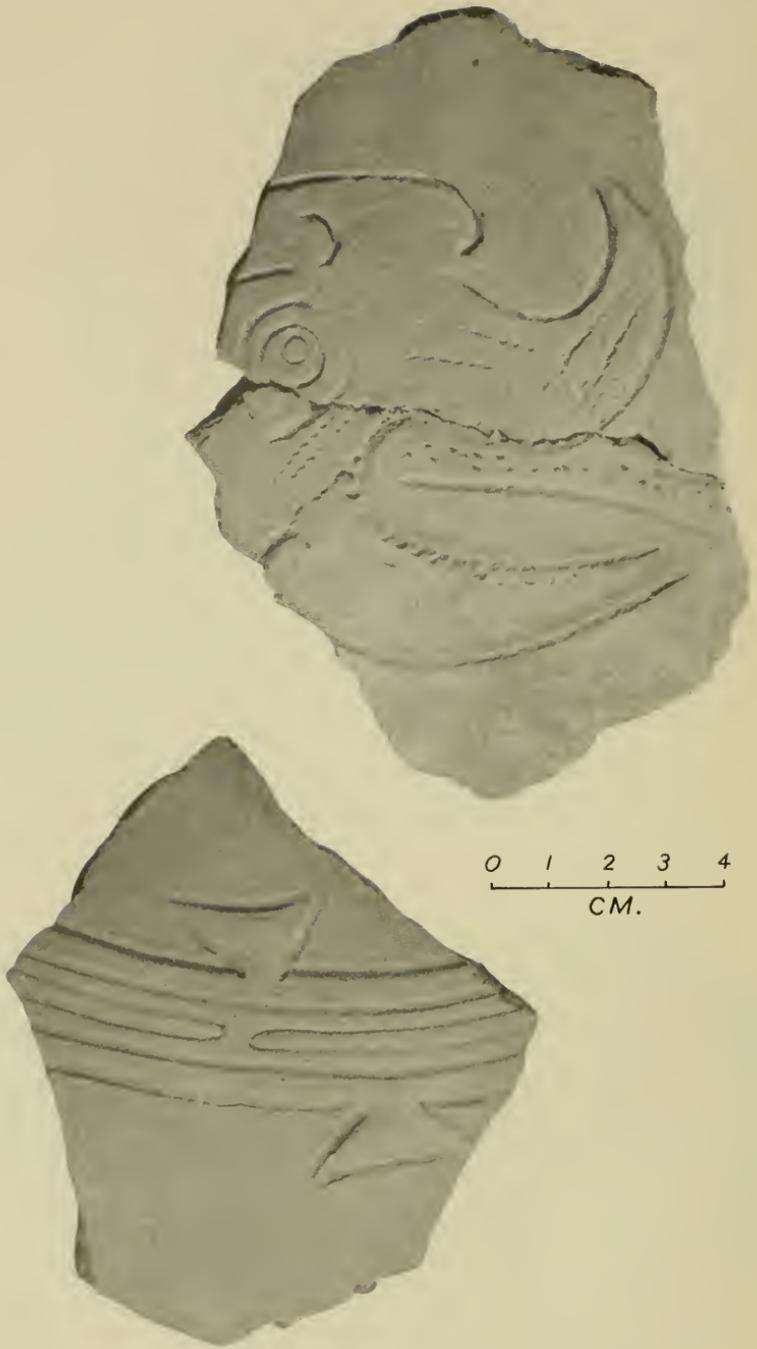


a



b

Incised relief brown ware.



Incised relief brown ware.

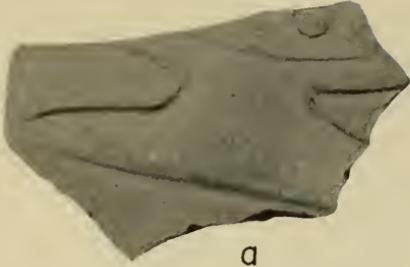


a



b

Coclé-type red line ware and humpback effigy jar.



a



b



c



d



e

Incised relief brown ware.



a



b



c



d



e

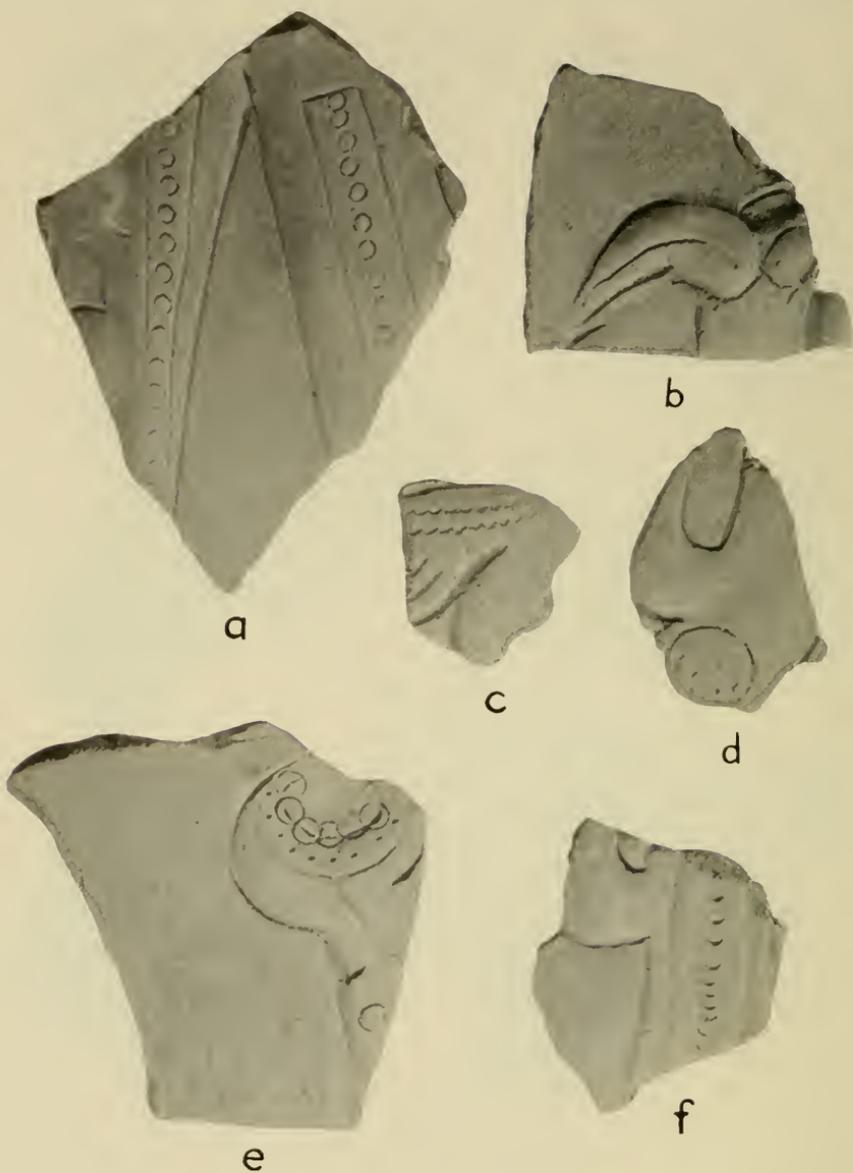


f



g

Incised relief brown ware.



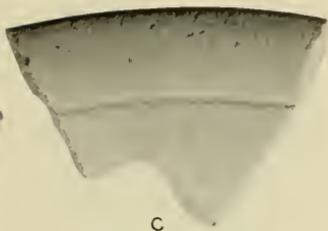
Incised relief brown ware.



a



b



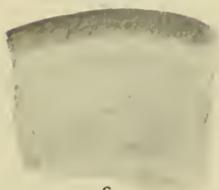
c



d



e



f



g

Rim sherds.



a



b



c



d



e



f



g

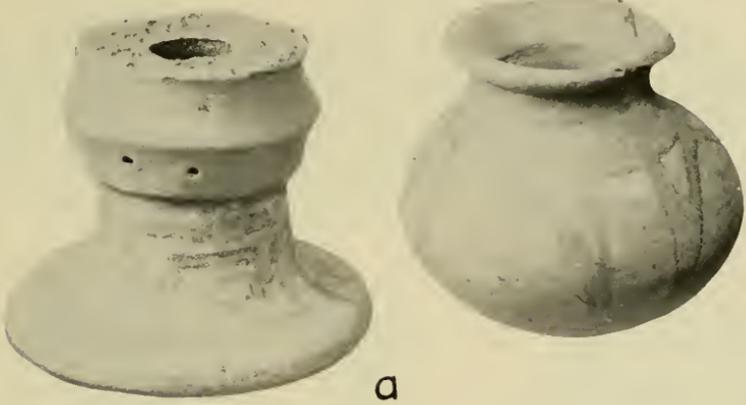


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i

Rim sherds.

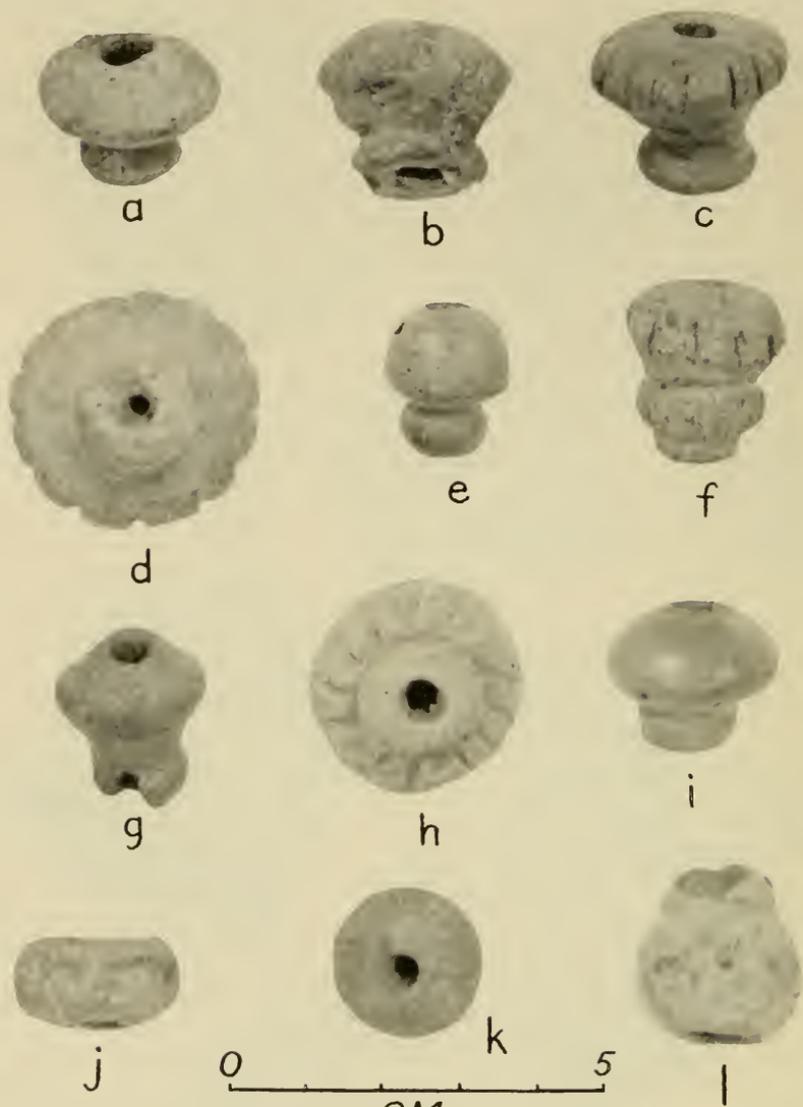


a



b

Miscellaneous polychrome and paneled red ware.



Spindle whorls.



a



b



c



d



e



f

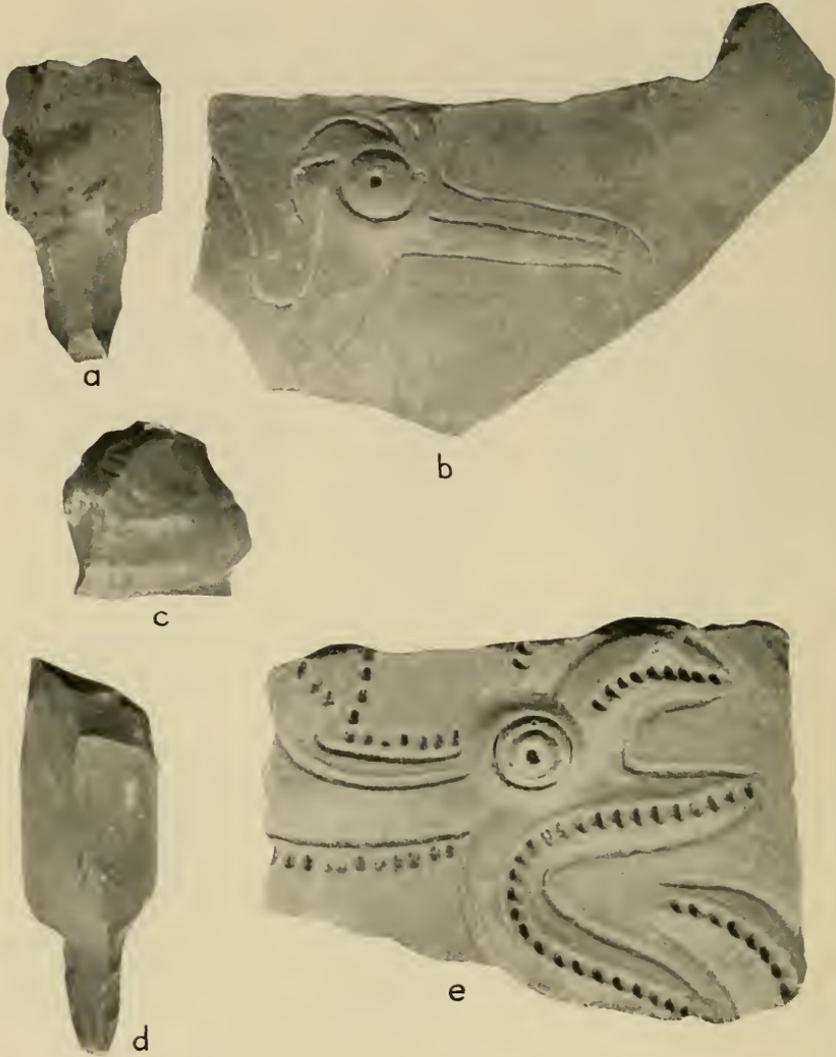


g



h

Miscellaneous ceramic objects.



Artifacts from Venado Beach site.



Artifacts from Madden Lake site.

