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ARCHEOLOGICAL NOTES ON ALMIRANTE BAY,
BOCAS DEL TORO, PANAMA

By MATTHEW W. AND MARION STIRLING

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ARCHEOLOGICAL NOTES ON ALMIRANTE BAY BOCAS DEL TORO, PANAMA

BY MATTHEW W. AND MARION STIRLING

INTRODUCTION

Since there appears to be no information on the archeology of the Almirante Bay-Chiriquí Lagoon region, we, together with Richard H. Stewart, took occasion to visit briefly Almirante Bay during the month of April 1953 as an extension of our work for the National Geographic Society-Smithsonian Institution on the north coast of Panama the preceding winter.

During 10 days of rather intensive activity, we visited all of the principal islands and a considerable portion of the mainland coast of Almirante Bay. Systematic questioning of natives elicited very little information as to archeological sites. Most informants denied having seen or heard of evidences of aboriginal occupation in the area. Indeed, on completion of our survey we concluded that archeological sites in the vicinity are neither numerous nor conspicuous. However, we did locate three sites worthy of excavation, and we photographed several carved stone objects found in the region.

In the relatively level area north of Almirante, which has been extensively cleared for banana plantations, nothing appears to have come to light. In the remainder of the district the search for sites is hampered by the heavy growth of tropical jungle which covers most of the ground.

The Almirante Bay-Chiriquí Lagoon region apparently followed the pattern of the rest of the north coast of Panama in that permanent settlements were established toward the headwaters of the rivers and not along the coast.

The immediate incentive for our visit to Almirante was an invitation from Dr. Gustav Engler, director of the Chiriquí Land Company Hospital at that place. Dr. Engler has long been interested in the antiquities of Central America and has a small collection of artifacts from Costa Rica and Panama.

As a guide, Dr. Engler secured for us the services of Teodor F. Machazek, a longtime resident of the region and a surveyor well acquainted with the section. Through the courtesy of Mr. G. D. Munch, at that time superintendant of the Chiriquí Land Company, we were the guests of the company, enjoying the facilities of their spacious and comfortable guesthouse during our entire stay. We owe a particular debt also to Rev. Robert W. Turner III, who generously gave us the use of his launch for our rather extensive survey. This courtesy was essential to the success of the work since almost all travel in the region is by water.

We are grateful to Mr. Edward G. Schumacher, artist for the Bureau of American Ethnology, for the line drawings in this report.

Finally, we wish to thank Mr. and Mrs. T. W. Dunn, who accompanied us to Boca del Drago. They gave unstintingly of their time and information collected regarding archeological sites during a long residence in Central America while in the employ of the United Fruit Co.

HISTORICAL BACKGROUND

Information concerning the aboriginal inhabitants of Almirante Bay and the Chiriquí Lagoon is very meager. However, there can be little doubt that the Indians occupying the region at the beginning of the 16th century were the Guaymí, whose descendants still live in the vicinity.

Curiously enough, the most satisfactory descriptions are those of the Columbus expedition of 1502.

The interpreters abducted by Columbus at Puerto Limón, Costa Rica, could speak the language of the natives as far south as the Coclé del Norte River, an area which corresponds pretty well with the hypothetical distribution of the Guaymí along this coast. Ferdinand Columbus, who gives the most complete account, does not describe the habitations of the natives encountered on Almirante Bay and the Chiriquí Lagoon, but he states that somewhat farther to the eastward they lived in single houses separated one from the other by considerable distances. He also states that their permanent habitations were not along the coast, but well up the rivers; an observation confirmed by our archeological reconnaissance in the area.

Oviedo, in describing the 1536 expedition of Felipe Gutierrez on the north coast of Veraguas, relates that their villages normally consisted of four or five large houses. This description would seem to correspond with the archeological evidence at the Darkland site which we examined on Almirante Bay.

The scant archeological remains around Almirante Bay and the Chiriquí Lagoon do not seem to bear out the rather considerable

population indicated by the Columbus accounts. It is probable that the natives living up the rivers heard of the coming of the ships of Columbus, the first to visit this coast, and descended to the bay for the occasion, thus accounting for an abnormal concentration of people.

Ferdinand Columbus tells us that as soon as the ships anchored in Almirante Bay, which the natives called Carambaru, the boats went to one of the islands where there were 20 canoes on the beach. The natives were described as being "as naked as the day they were born." One of these was wearing, hanging around his neck, a gold disk; another, a gold eagle.

On the mainland the Spaniards were met by 10 canoes and saw considerably more gold worn in the form of ornaments. The men were described as wearing narrow loincloths as their only garments, with their faces and bodies painted all over with designs in red, black, and white.

It is interesting to note that the Guaymí today still use these same colors for their face and body paintings, although now they have adopted clothing.

Pedro de Ledesma says that at one place 80 canoes gathered around the ships, and that the natives wore gold ornaments consisting of "crowns," disks, eagles, frogs, tigers, etc. These, of course, were of the same type as the gold ornaments that have been found in such abundance in graves in Chiriquí and Veraguas. Unfortunately, the Spaniards were not much interested in describing other aspects of material culture, although a number of stray items are mentioned.

From Almirante Bay the ships of Columbus entered the Chiriquí Lagoon, called Aburena by the Indians. Here they were met in a more hostile manner by even greater numbers of Indians, who blew horns, beat drums, and created a tremendous din. This reminds us of the present-day noisemaking activities of the Guaymí during their "Balseria" ceremonies.

At Guaiga, a river 12 leagues east of the Chiriquí Lagoon, the Spaniards again landed among a large concentration of Indians. Just beyond here, at a place called Catiba, Ferdinand Columbus says:

This was the first place in the Indies where they saw any sign of a structure, which was a great mass of wall or imagery, that to them seemed to be of lime and stone; the admiral ordered a piece of it to be brought away as a memorial of that antiquity.

Since Columbus speaks of the structure as "an antiquity," it evidently was not constructed by the contemporary natives. When we were on our reconnaissance of the Panama north coast, we made diligent inquiries of many natives who professed to know the region well but all denied seeing or hearing of such a structure. We are inclined to believe that the men with Columbus saw some natural

formation, possibly a limestone dike, which they mistook for a wall. There is a great deal of limestone in this region, such as the cliff and ridge where our cave site Boc-2, at the east end of Almirante Bay, is located.

In 1951 when we were on the Río Indio we heard from several natives of a "casa de laja" on one of the tributaries farther up the river. It was described as a stone masonry ruin, definitely not of Spanish construction. With the stone wall of Columbus in mind, we went to considerable trouble to visit the ruin, eventually succeeding. The "casa de laja" turned out to be a curious natural tunnel about 50 yards long through a horizontally stratified sandstone formation. The only evidence of occupation, past or present, was a huge cluster of bats hanging from the ceiling.

At some time before 1540 an Aztec colony was established in the Sixaola Valley, on the mainland back of Almirante Bay. Before the middle of the 17th century this group, known as the Sigua, had moved to Bastimentos Island in Almirante Bay, where they eventually settled in four towns. Here they maintained themselves with varying degrees of fortune until about the year 1760. The interesting history of this band, the southernmost outpost of the Aztecs, has been outlined by Lothrop.

Rev. Ephraim Alphonse, who has lived among the Valiente Guaymí for more than 25 years and speaks the language fluently, has found some interesting traditions that evidently refer to this group. The Valiente Guaymí still retain the term "Montezuma," meaning ruler.

A tradition which is frequently recounted at the present time relates to the "Dekos," a group of conquerors who came from the north in large canoes having paddles studded with pearls. Their leader was called Siri Klave. The Dekos are always pictured as being more civilized and smarter than the Guaymí. Some of the tales refer to contests in wits between Guaymí and Dekos leaders. In these contests the Guaymí were always defeated, as they were in military combat (Alphonse, 1956).

We spent considerable time on Bastimentos in a futile search for remains that might indicate a settlement of the Aztec Colony, which all the evidence seems to indicate was located here. Not only did our personal search result negatively, excepting for a few nondescript sherds near the mouth of a small stream by the present village of Bastimentos, but the old inhabitants who had spent their lives farming on the island insisted that they had seen no sherds nor other evidence of occupation, except a metate and a mano (pl. 41). We visited the spots where these were found, but saw no evidence of a site.

After the voyage of Columbus, the Almirante region acquired a reputation for being rich in gold. It was frequently visited thereafter

by gold seekers and slavers with the result that native culture was pretty well broken down. There is little in the records of these more or less transient visits that is of help to the archeologist.

Modern accounts of the Guaymí are unsatisfactory, even for areas considerably removed from the Northwest Panama Coast.

During the last quarter of the 19th century A. L. Pinart made some observations on the Guaymí of the Chiriquí Lagoon region, and more recently they have been studied by Ephraim Alphonse.

Practically all of the available early source material has been collected and published by Lothrop (1950) in his excellent Veraguas report.

CERAMIC STUDIES

A considerable amount of time was spent in examining the temper of the various wares from the several sites herein described. The only instruments used in this connection were small hand lenses. Samples of the wares were shown to several professional archeologists. Their conclusions as to the nature of the tempering material differed so widely among themselves and with our own tentative determinations that we decided to follow the advice of Miss Anna O. Shepherd of the Ceramic Technological Laboratory, Carnegie Institution of Washington, D.C., and describe them in general terms rather than to guess at specific descriptions, a practice likely to lead to false assumptions.

All clays are originally derived from decomposition of igneous rocks and contain a certain amount of grit and fragments of unaltered rock. With the naked eye or a hand lens it is impossible to tell in most instances whether the grit is natural or hand ground. In general, the temper of the pottery from Almirante Bay is rounded sand mixed with angular particles.

Similar difficulties were experienced in studying the nature of slips. It was not always possible to distinguish between self slips, applied slips, and effects obtained by polishing. Here again we have tried to be not too categorical in our designations.

Hardness was determined by scratch tests in accordance with the Mohs scale.

Of the pottery excavated in the three Almirante Bay sites, the significant pieces are illustrated and complete data are given with the descriptions of each plate.

Since the excavations were small, we felt that it would be premature to give names to the pottery types encountered.

Colors have been identified in the Munsell color system. As every ceramist knows, the colors of primitive pottery vary considerably because of uneven firing conditions, as well as other factors. The

same pot may contain several colors, blending, for example, from weak yellowish orange, to moderate orange, light brown, and black. In describing the pottery this fact has been taken into consideration and the best personal opinion given of each specimen illustrated in order to convey to the reader a proper understanding of the wares. The laboratory studies were made under fluorescent light. In instances where the buff has definitely fired moderate orange, it is so described. In Boc-1 and Boc-3, the buffs generally fired orange. In Boc-2, the buffs frequently fired brown.

The equivalents of Munsell color symbols are given according to I.S.C.C. (Inter-Society Color Council) Standards. When a specimen is unique, the Munsell equivalent is given in the text (Judd and Kelly, 1939). The following tabulation gives the general color equivalents used in this paper:

	Munsell	I.S.C.C.
Light buff	1Y8.5/4.5.....	Pale yellowish orange.
Buff	10YR7/4.....	Weak yellowish orange.
	10YR8/6.....	Weak yellowish orange.
	10YR6/4.....	Light yellowish brown.
Dark buff	5YR5/6.....	Light brown.
Dark brown.....	5YR2/2.....	Dusky brown.
Orange.....	5YR6/8.....	Moderate orange.
	10R5/8.....	Moderate reddish orange.
Red.....	6R5/8.....	Moderate red.
	10R4/8.....	Moderate reddish brown.
Dusky red.....	5R3/4.....	Dusky red.
Deep red.....	5R3/10.....	Deep red.

SITE DESCRIPTIONS

DARKLAND (BOC-1)

In the southern part of the bay, south of Cristobal Island, a long narrow point known as Darkland projects into the bay. This had been partially cleared for cultivation and the grazing of stock. The peninsula is formed by a rather flat-topped ridge which gradually increases in elevation from the point. Scattered along the top of this ridge were four large mortars made from unshaped stones (pl. 42, *b*). Just above this area and about 300 yards from the point, we discovered four midden mounds, each about 40 feet in diameter and 5 feet in height; apparently each was the refuse mound for a single house. Having no facilities for carrying much material at the time of our visit, we made in one of these mounds a single small excavation about 4 feet square and 2 feet deep. The mound proved to be rich in sherds and other materials. Among the more abundant forms were subglobular bowls, with incurving rims, of buff-colored ware with a

coarse temper. This ware is characterized by a gray to black core, with margins ranging from weak yellowish orange to moderate orange. These were decorated with elongate punctations in rows, between incised parallel lines. The designs are geometric and tend toward triangular forms. Some of these bowls were further decorated with small nodes or bosses connected with incised lines or roughened bands. One specimen was of much thicker ware and had an excurvate rim (pl. 28, *a-i*).

Also abundant were sherds of large vessels with modeled applique designs on the body. One had two leaping porpoises (pl. 29, *a*). Another was an octopus (pl. 28, *l*), while still another fragment displayed what seems to be the tail of a fish (pl. 28, *n*).

One curious sherd consists of what appears to be a thick beveled rim with rectangular openings cut below the rim. It is possible that it is a part of a slotted pedestal base. If so, it is unusually thick and heavy (pl. 29, *f*; fig. 18, *e*).

Other pieces were from large pots with slightly outcurving rims. Some of these have red paint on the lip, others on either the exterior or interior. The majority are polished light buff on the interior (pls. 28; 29, *e, i*).

Excurvate, buff-colored rims with combed decoration on the interior and smooth on the exterior were almost identical with similar pieces from the site at Boca del Drago (Boc-3). This is a buff-colored ware with coarse tempering material (pl. 28, *k*).

One of the most individual wares is rather thin with finely ground temper and fine line red painting on a light buff slip (pl. 28, *m*).

Two sherds appear to be longitudinal sections of hollow vessel supports. The fact that one of these has horizontal red line painting strengthens this hypothesis since this is a normal type of decoration for the typical conical base tripod vessel characteristic of Chiriquí, examples of which were found in the nearby cave site (Boc-2).

Several small sherds were of very thin fine paste ware with polished surface painted red on buff. Because of the small size of the sherds it was impossible to deduce the vessel forms, but they were probably of small size.

Thick body sherds from large pots were quite abundant. These had a coarse sand temper and were usually fired buff on the exterior and black on the interior. Some of these had combed decoration on the exterior, some were smooth. This is apparently the same ware as that with modeled animals on the body, and is analogous to the large urns from Boc-3.

One flat awl with sharp point and sharp edges, made apparently from the leg bone of a deer, was the only bone implement found.

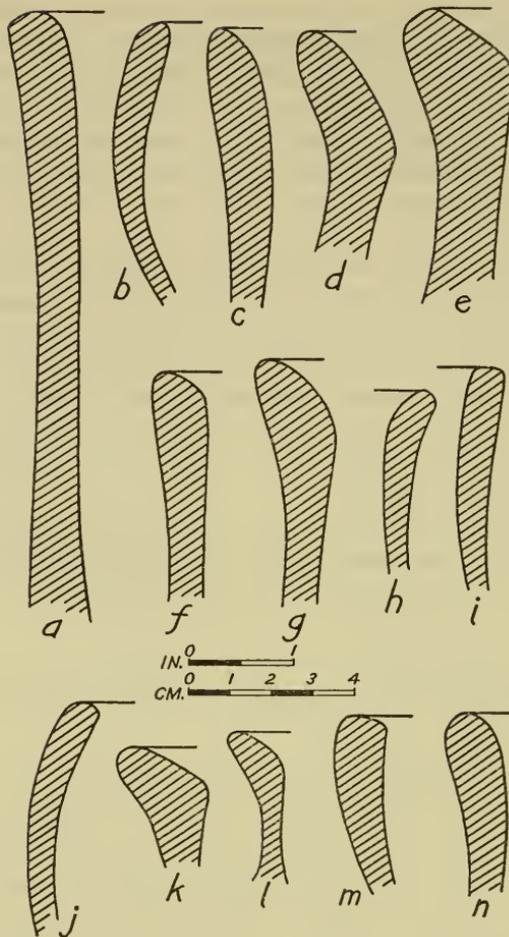


FIGURE 18.—Sherds from Bocas del Toro, site 1. *a*, Large rim sherd with applique porpoises, smooth orange interior, pl. 29; *a*; *b*, buff punctate bowl, smooth rim, triangular design, pl. 28; *a*; *c*, buff interior, exterior blackened with charcoal, pl. 29; *b*; *d*, smooth buff exterior and interior, pl. 29; *i*; *e*, heavy slotted rim (or base?), pl. 29; *f*; *f*, light buff exterior and interior, red painted rim, pl. 29; *d*; *g*, smooth buff exterior and interior, punctate ware with incising, pl. 28; *b*; *h*, buff surfaces, interior of rim is combed, pl. 28; *k*; *i*, light buff exterior and interior with red painted lip, pl. 29; *c*; *j*, rough buff punctate ware with incising, pl. 28; *c*; *k*, smooth buff interior with red painted lip, pl. 28; *o*; *l*, smooth buff with inside lip painted red, pl. 29; *k*; *m*, smooth light buff interior with lip painted red, pl. 29; *j*; *n*, smooth light buff interior, charcoal on exterior, lip painted red, pl. 29; *e*.

Scattered throughout the excavation were a number of flint flakes and many coral branches.

The above-described material, it should be remembered, came from a small test pit and represents at best a most incomplete sample.

Boc-1 is by far the most promising site that we located on our survey of Almirante Bay. The small mounds are rich in content and a full scale excavation would without doubt give key results for this virtually unknown area.

DARKLAND CAVE (BOC-2)

On a high jungle-covered ridge about 2 miles southwest of the Darkland peninsula there is a limestone cliff about 100 feet high. Along the base of this cliff are a number of caves containing the remains of human burials and accompanying offerings. The native who guided us to this spot had discovered the caves a few years before and said that he and his father had removed several complete pots, of which he was unable to give an adequate description, and a stone metate carved in the form of a jaguar.

We selected the most promising looking of the caves and excavated it completely. The cave, whose opening was about 20 feet across, extended about 30 feet into the cliff, with a ceiling of irregular height. The last 20 feet of the cave was filled to within about a foot of the ceiling and could not be entered until the fill was removed. The bulk of the artifacts recovered and a few fragments of human bone were in the upper 12 inches of the deposit. No evidence of human occupation was found below this surface level, although the fill averaged from 3 to 4 feet in depth.

Objects of stone consisted of a well-carved jaguar head broken from a metate of Costa Rica-Chiriquí type, and eight celts of mediocre finish (pl. 43, *g-n*). There were none of the type with flaring edge so common in Veraguas. One small triangular polished celt of a blue slatelike stone is 10 cm. long and 5 cm. wide at the blade. It is flat on one side and convex on the other. A chisel of limestone was 19.5 cm. long. There was also a small polishing stone of bright red jasper about 5 cm. in diameter (pl. 38, *e, f, g*). Scattered throughout the surface layer were many large marine conchs, principally *Strombus gigas* Linné and *Charonia tritonis nobilis* Conrad, and about 20 artifacts of unknown use made from the spire of the conch with a circular hole 5 cm. in diameter in the center (pl. 38, *a-d*).

Although five or six nearly complete vessels were recovered, the bulk of the pottery was in the form of scattered sherds, representing a considerable variety of forms and wares.

Apparently, the great majority of the vessels originally had a buff-colored surface, although some examples were dark buff and brown. In addition, various sherds are blackened by carbon, discoloring the surface as well as the paint.

All the sherds are coated to a certain extent with a white deposit caused by the dust in the limestone cave, a condition making it

difficult to decide the original color of the pottery. In some instances, the red paint has turned orange and in others, dusky brown; it is difficult to decide the original hue. One example of this wide range in hue can be seen on the horizontal red line striping on the legs of the tripod vessel (pl. 30, *b*).

There were five examples of tripod vessels, two of which are fairly complete. One of these consists of smooth buff ware well coated with lime on both interior and exterior (pl. 30, *a*). The outflaring rim is 4.7 cm. wide. The interior is decorated with four groups of seven red perpendicular lines 0.3 cm. wide, spaced quadrilaterally. Each grouping is approximately 3.8 cm. wide. The edge of the rim is also painted red.

The other fairly complete specimen has the rim missing, but this was probably a bowl-shaped form (pl. 30, *b*). The body is roughened by horizontal striating. The legs are smooth, decorated with horizontal red line painting and three perpendicular slots 5.0 cm. long, 0.5 cm. wide. Two slots are on either side of the leg, near the top; the other in the center front near the foot, which is broken off. The most nearly complete leg has a modeled animal figure seated on the upper edge. The interior of the vessel is smooth and buff in color. Most of the exterior is blackened by carbon. This specimen is almost identical with two figured by Wassén, 1949 (figs., 9, *a*; 10) found near Boquete, Chiriquí.

Of the remaining three examples, two were of the buff striated type and the other, consisting of a conical base, is of thick buff ware. The

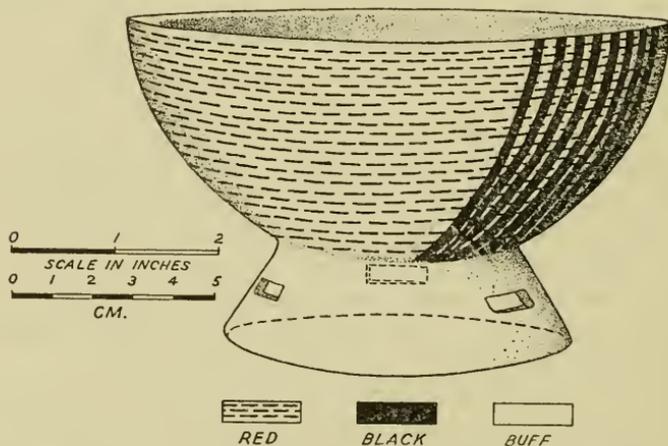


FIGURE 19.—Bowl with slotted pedestal base. Black core, dark buff margins; fine temper; base and interior of bowl polished dark buff; deep red slip on exterior of bowl on which were painted black perpendicular stripes extending from the rim to the juncture with the base; see pl. 31, *f*.

exterior is polished and partially dark brown from carbon. All of these are of hard fine-tempered ware, with black core and buff margins. There was one small pedestal base bowl (pl. 31, *f*; fig. 19) with three rectangular horizontal slots in the base. The base and the interior of the bowl are polished dark buff ware. The exterior of the bowl has a deep red slip on which were painted black perpendicular stripes extending from the rim to the juncture with the base, 6.8 cm. long. Vestiges of eight stripes can be seen on the portion of the bowl which was found. Whether the stripes encircled the entire bowl or were painted in groups cannot be ascertained. The ware has a fine temper, is rather thin, and is fired to a dark buff on the surfaces with a black core. This was the only pedestal base found.

Frying-pan incensarios were represented by one specimen, a transverse piece broken off from the base of the handle. It is made from a hard fine-tempered ware with a buff polished surface. It is painted red along the edges and has one transverse red line, 0.6 cm. wide (pl. 33, *c*). Similar but complete examples of this type were found by us at the Coclé site of Mojara in Herrera Province.

Small plain subglobular bowls were represented by seven specimens, two of which were more or less complete (pl. 30, *c*, *d*). These are rather crudely made from a buff-colored ware. The surface typically is carelessly smoothed. Plate 30, *c*, has a body diameter of 8.4 cm. and a body height of 8.0 cm. Plate 30, *d*, has a body diameter of 11.0 cm. and a body height of 7 cm.

Two of the subglobular bowls were polished brown, one polished dark buff, and another buff with a red lip. Most had small outflaring rims, some with rolled lips. Some were carbonized on the exterior from having been on an open fire. The rim variations can best be seen from the illustrations (pl. 33, *a*, *b*, *e*, *f*). One variation consisted of a combed exterior with a crude rectangular pattern and small nodes on the shoulder (pl. 31, *b*).

There were eight examples of bowls with vertical strap handles. Judging from the fragments found, these had been low hemispherical bowls with outflaring rims to which were attached a pair of opposing strap handles (pl. 31, *a*, *c*, *d*, *g*; fig. 21, *e*, *f*, *g*, *b*).

Plate 31, *a*, is made of polished dark buff ware weathered brown in places. The lip of the rim is painted red and extends 1 cm. onto the top of the strap handle. Directly in front of the strap handle on the interior of the outflaring rim are six vertical red lines, 0.2 cm. wide, 3 cm. long. The strap handle was modeled and stuck on the pot carelessly. It is 3.5 cm. wide.

Plate 31, *c*, is buff ware with a rim painted red extending 0.4 cm. down the exterior of the bowl and 0.4 cm. onto the strap handle, where it joins the rim. There is an irregular spot of red paint on the

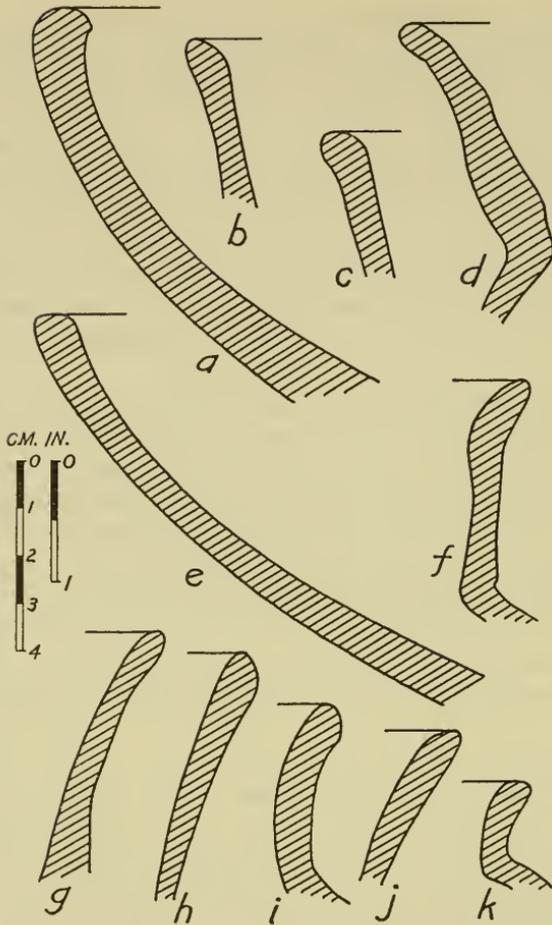


FIGURE 20.—Sherds from Bocas del Toro, site 2. *a*, Shallow bowl, pedestal base (?), red painted lip, dark buff interior and exterior, pl. 34, *g*; *b*, buff ware with smooth interior and exterior and red lip; *c*, buff ware, lip painted red with traces of red on interior; *d*, buff ware, red painted lip and convex curving collar, exterior carbon coated, pl. 36, *b*; *e*, shallow bowl or pedestal base (?), lip painted red, dark buff interior, red design on interior; *f*, polished buff interior, exterior rough and carbonized, red lip, pl. 32, *i*; *g*, buff ware with a rough exterior, smooth, interior, and fine temper, pl. 36, *d*; *h*, buff ware, carbonized black, polished interior, rough exterior, pl. 36, *f*; *i*, red painted lip, rough exterior and smooth buff interior; *j*, rough carbonized exterior and smooth buff interior; *k*, rough exterior and smooth buff interior.

body of the vessel. The temper is coarse. The exterior of the vessel and the rim are smooth, while the interior is slightly rough. The strap handle is 2.7 cm. wide.

Plate 31, *d*, is buff ware weathered brown. The rim probably had been painted red. There appears to have been a strip of pottery

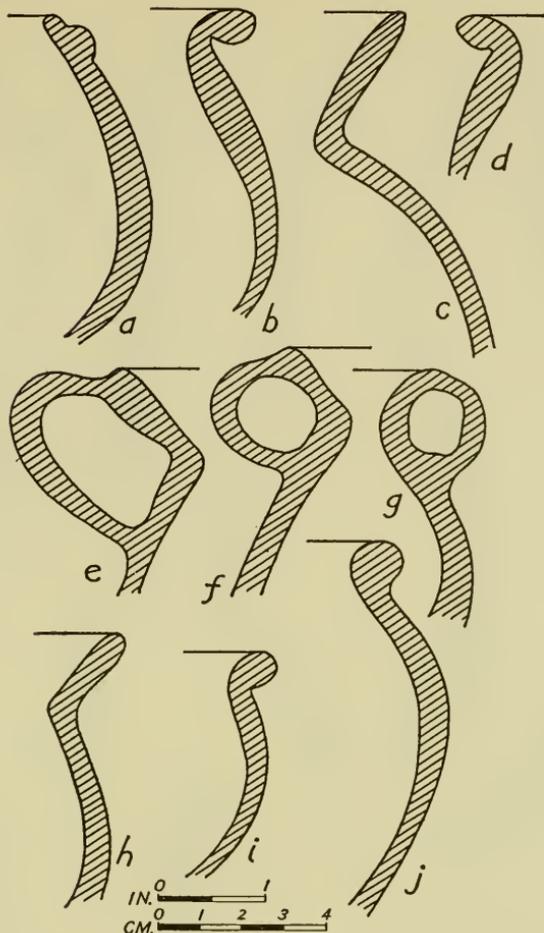


FIGURE 21.—Sherds from Bocas del Toro, site 2. *a*, Buff ware, exterior blackened by carbon, had strap handle, incised design, roughened zones, bosses, smooth interior, pl. 31, *e*; *b*, buff with loop handle, covered with limestone dust inside and out, pl. 31, *g*; thin buff tripod jar, carbonized exterior and smooth interior; *d*, polished dark buff interior and exterior, pl. 33, *b*; *e*, polished dark buff, lip painted red and vertical lines on interior of rim, strap handle, pl. 31, *a*; *f*, buff interior and exterior with red rim, pl. 31, *c*; *g*, buff weathered brown with smooth interior and exterior and strap handle, pl. 31, *d*; *h*, buff, polished interior, exterior of rim roughened, pl. 33, *f*; *i*, buff weathered brown with polished interior, pl. 33, *a*.

applied on top of the strap handle as decoration. The handle is 1.7 cm. wide.

One specimen has a plain incurving rim. This had a roughened zone below the rim, decorated with incised lines connecting small hemispherical nodes. Another roughened zone runs around the middle of the bowl. The edge of the rim is painted dark red (pl. 31, *e*; fig. 21, *a*).

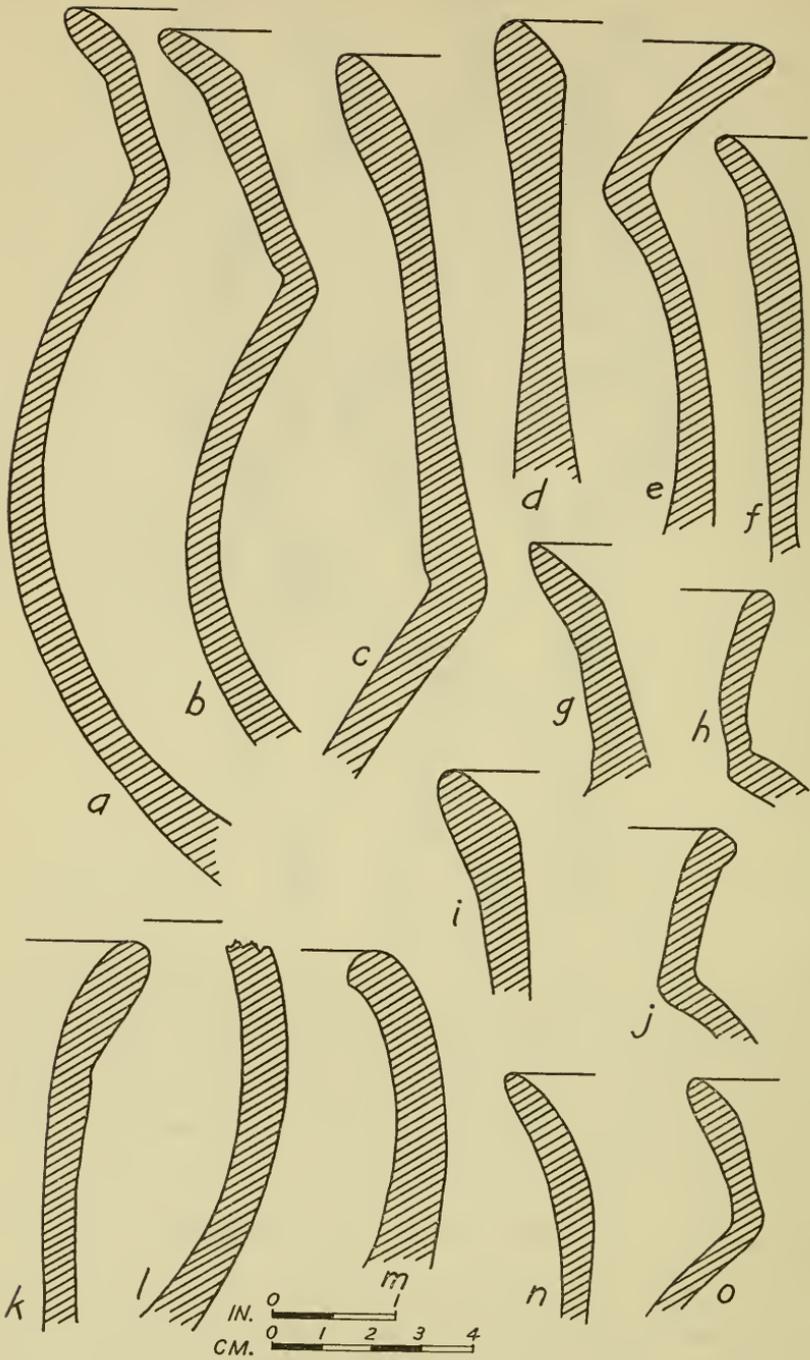


FIGURE 22.

For legend, see opposite page.)

Plate 31, *g*, shows buff ware with a rolled everted rim and a loop handle.

The most abundant form consisted of fragments of 17 large sub-spherical pots with medium outflaring rims. Of these, three were sufficiently complete to give an idea of the body shape. There is considerable individual variation in the rim forms (pl. 34, *a*, *b*, *c*; fig. 22, *a*, *b*, *e*).

One broken, but almost complete, example had the entire exterior surface roughened as though by rolling it with a corncob or a rough fabric. The interior is well smoothed. The lip is painted red. A series of rather undefined vertical ridges runs around the middle of the body as an additional decorative feature, and a series of indentations runs around the base of the collar (pl. 34, *a*; fig. 22, *a*).

The remaining examples are carelessly smoothed on the exterior and carefully smoothed on the interior. Some had red-painted lips and some were coated with carbon from being over an open fire. The ware is coarse, fired to a black core, with moderately reddish orange margins and dark-buff surfaces. Most have plain round lips, but on two examples the lips are beveled.

There were seven fragments (six illustrated) from large vessels with high collars (pl. 35; fig. 22, *c*, *f*). The collars are roughened on the exterior by combing. One has a smooth zone below the point where the collar joins the body; below this the combing begins again (pl. 35, *d*). In all examples the interior is carefully smoothed. Two had a red-painted lip. On the rim, one sherd has part of an applied octopus, suggestive of similar designs from Boc-3. This sherd has a dark-buff polished interior and a red-painted lip. The exterior is rather rough (pl. 35, *a*, fig. 22, *d*).

Large shallow bowls were represented by two specimens. These are similar in form to the pedestal base "frutas" from Coclé and Veraguas, but probably did not have such bases since none were found in Boc-2. One of the specimens has a beveled lip, painted red, and

FIGURE 22.—Sherds from Bocas del Toro, site 2. *a*, Buff ware, red painted lip, smooth interior, roughened exterior, pl. 34, *a*; *b*, buff ware, red lip, exterior rough and somewhat blackened, pl. 34, *c*; *c*, buff ware, smooth interior, exterior of collar combed, smooth on exterior below collar, pl. 35, *c*; *d*, dark buff polished interior, exterior blackened, rough, applique design, lip painted red, pl. 35, *a*; *e*, dark buff ware, roughly combed collar, smooth interior, pl. 34, *b*; *f*, polished dark buff interior, combed exterior, pl. 35, *b*; *g*, polished buff ware, fine combing on collar, smooth below collar, deep incised groove separating collar from body, pl. 9, *h*; *h*, smooth buff slip on interior, exterior rough, pl. 36, *i*; *i*, smooth buff interior, exterior rough, deep groove separates collar from body, red lip, pl. 36, *k*; *j*, polished buff on interior, roughened exterior, red lip, pl. 36, *e*; *k*, dark-buff ware, smooth interior, rough exterior, lip painted red, pl. 34, *e*; *l*, body sherd, buff ware coated with limestone dust, smooth exterior and interior; *m*, dark buff ware, smooth interior and exterior, pl. 34, *f*; *n*, polished buff interior, rough buff exterior; *o*, carbonized buff ware, smooth interior and exterior, pl. 36, *c*.

has a smooth exterior and interior (pl. 34, *g*; fig. 20, *a*). The other has a plain lip also painted red, and a design consisting of six red stripes 0.6 cm. wide and 7.5 cm. long projecting into the dark buff interior. Each stripe is rounded at the end, not blunt or squared off (pl. 34, *d*; figs. 23, 20, *e*). The exterior is roughened by combing below

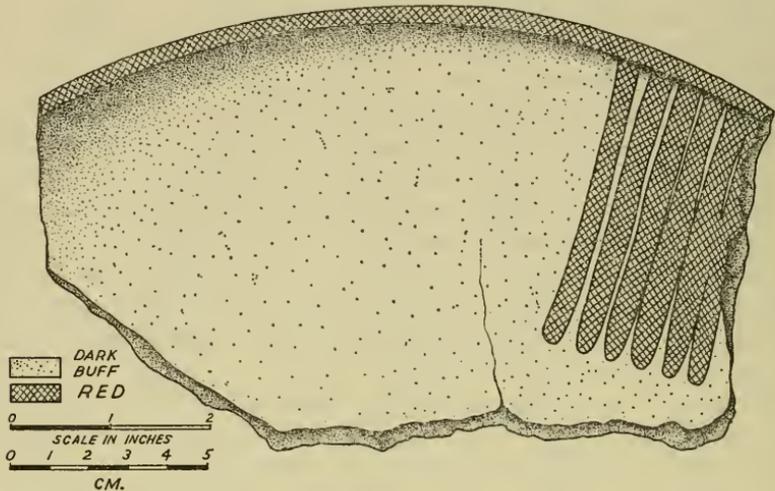


FIGURE 23.—Shallow bowl from Bocas del Toro, site 2. Polished dark buff interior decorated with 6 red stripes and red painted lip. Exterior badly eroded but apparently had vertical ridges around middle similar to pl. 34, *a*. Medium temper. 1 cm. thick.

the rim, and below this is a row of roughened vertical ridges. In both examples the ware is fairly thick and is grit tempered. The color on the surface is dark buff, weathered a dark brown.

There were four body sherds of thin, hard, fine paste ware, evenly fired, with no black core, 0.4 cm. thick. Three of these have a dark-orange (2.5YR 5/8) (Munsell system) smooth surface, while the other has a burnished-brown (10YR 3.8/2) exterior surface. These are definitely different from the other sherds.

There were three sherds of red on buff ware. Two are rims with red-painted lip and fine vertical red lines on the interior of the rim. The sherds are 0.8 and 0.6 cm. thick, respectively. The interior is polished, the exterior rough (pl. 32, *f*, *h*). The other example is a body sherd with smooth surface, having painted on it a simple red-line geometric design. The interior is smooth and unpainted buff (pl. 32, *e*).

Among the miscellaneous specimens was a low concave vessel support painted red where it joined the body of the vessel. The remainder of the exterior and the interior are buff. The beveled supporting edge is roughened with diagonal scoring (pl. 33, *d*).

The neck of a small jar was of rather thin dark-buff ware. It was encircled by two parallel rounded ridges decorated with crude incising (pl. 32, *b*).

Part of the neck of a small vessel of hard medium-tempered ware was decorated with lunate punctations in parallel rows between double incised lines. This decorated area is separated by a rounded ridge between incised lines from a smooth-zoned red band. The interior is definitely painted red on one half, probably the neck. The other half is buff. The exterior design was zoned red on buff (pl. 32, *c*).

One sherd of rather thick, hard ware has a polished dark buff (carbonized almost black) exterior with part of a raised design (pl. 32, *d*).

Among other miscellaneous pieces was a flat base of dark-buff ware (pl. 32, *a*).

The cave site (Boc-2) was probably a burial place, in which had been placed offerings of shell, stone, and pottery. There was no evidence of fires having been made in the cave. Furthermore, the lowness of the ceiling would not have made it a suitable dwelling site, nor would its location near the summit of a high steep mountain. The presence of fragments of human bones would seem to make its burial function certain. The pottery shows a connection on the one hand with that from Boc-3 and on the other hand with Chiriquí ware from the vicinity of Boquete. The lowest point, for some distance, in the Continental Divide lies directly south of Almirante Bay in direct line with Boquete. An old trail which is still in use crosses this pass from the northern part of the Chiriquí Lagoon. It is probable that this natural route was in use in aboriginal times.

BOCA DEL DRAGO (BOC-3)

At the extreme northwestern corner of Almirante Bay the Boca del Drago is a narrow pass separating the mainland from Colon Island. On Colon Island, on the east side of the pass, just below Cauro Point, there is a cove with a crescent-shaped sand beach. At a point toward the south end of the beach there was formerly an aboriginal site, which has been largely destroyed in recent years by wave action from storms. Several native fishermen living on the cove told of large urns being exposed on the beach after these storms. As described, these urns were as much as 3 feet in height, with wide mouths and high outflaring collars or rims.

We conducted excavations on the beach in the area indicated and found numerous sherds of such urns as well as fragments of smaller vessels. There were also a few nondescript fragments of human bones, suggesting that the large vessels were burial urns.

We made some tests in the forested, undisturbed soil back of the beach, but found no traces of a village site or burials.

The sherds recovered from the beach exhibited a fair variety. Characteristically at this site, the paste was fired brownish black in the core, to buff and moderate orange on the surface. In some ex-

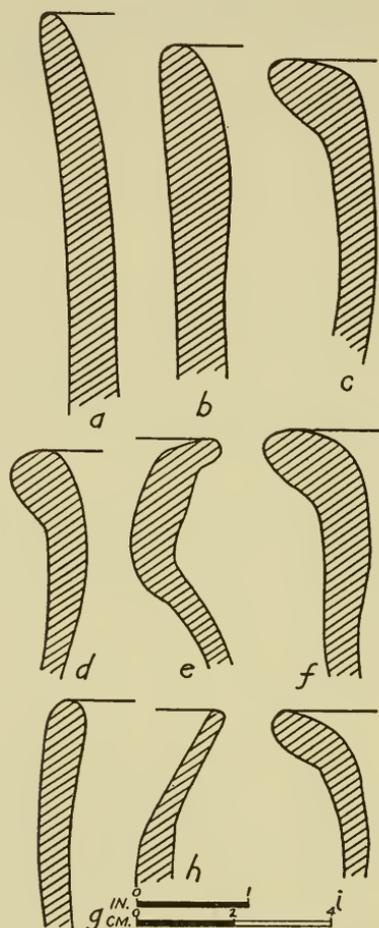


FIGURE 24.—Sherds from Bocas del Toro, site 3. *a*, Polished orange interior and lip, fine regular combing on exterior, band of extremely fine combing extending 2.5 cm. below lip, pl. 39; *b*, similar to “*a*” but with smooth area below lip and above fine combed area, pl. 39; *c*, buff interior and exterior, red paint on exterior of rim, interior deeply combed or impressed, grooved indentations outlining rim, 1.3 cm. from lip, pl. 30; *d*, polished orange interior and rim, exterior buff blackened by carbon and rather rough, pl. 39; *e*, dark buff blackened by carbon, smooth interior and exterior, pl. 39; *f*, same as “*c*,” pl. 40; *g*, smooth buff interior, buff exterior has regular combing similar to “*a*” and “*b*,” pl. 40; *h*, *i*, smooth buff interior and exterior, pls. 40, *j*, and 40, *d*, respectively.

amples, it was fired 100 percent moderate orange. In other examples the moderate orange surface is definitely due to polishing. In others (pl. 40, *d*), the orange interior over buff paste may be due to a self wash. Probably all the clay with coarse and moderate temper is the same, and the buff or orange color variations are due to firing conditions. The fine-tempered pastes (pls. 39, *a*; 40, *j*, *k*) are definitely different.

Evidently smaller vessels were normally of a globular form with rims that differed from straight to excurvate in varying degrees. Some of these were painted red.

Some excurvate rims were decorated by combing on the interior (pl. 40, *a*, *b*), but had a smooth exterior. These were buff with a medium temper.

One rim fragment had a looped handle attached to the rim (pl. 39, *g*). This piece was very coarse tempered and had a smooth orange-buff exterior and interior. It is very similar to a specimen found near Boquete, Chiriquí, and figured by Wassén (Wassén, 1949, fig. 37). Another example was found by us at Utivé, Province of Panama.

One solid tapering piece could have been a vessel support or a heavy handle (pl. 40, *i*).

A sherd of fine-paste, dusky yellowish-orange (8YR 6/6) ware, had on it the applique figure of an animal. This piece is typical Chiriquí alligator ware (pl. 39, *a*).

There was a single sherd of fine-tempered ware with a painted design. The decoration consisted of bold red and black parallel lines on a light-buff surface (pl. 40, *e*).

The only indication of the use of stone was a number of flint chips or rejects.

On the whole, the ware of Boc-3 shows a close affinity to that in Boc-1.

JUNGLE POINT

On a heavily forested ridge back of Almirante and near Western River, we visited another site, where we conducted some excavations with unsatisfactory results. A native who had made a clearing on top of the ridge and had built a thatched hut told us he had found potsherds, a clay figurine of a woman, and some stone specimens while excavating a level place for his house. The figurine had been lost, but we obtained from him three celts, two of a fine-grained bluish-black stone and the other light gray. There was also a pestle of limestone (pl. 43, *c-f*).

We excavated in an area adjoining the house, but found only a few nondescript potsherds.

The most interesting point in connection with this site is that it demonstrates that habitation sites apparently existed occasionally on the tops of steep ridges.

COCOS ISLAND

We visited Cocos Island, one of the larger islands in the bay, where we heard the familiar story that the natives knew of no ancient habitation sites. One man, however, had found an interesting basalt figure of Costa Rican type, which we photographed (pl. 41, *a-b*).

The figure represents a standing woman, holding her breasts in her hands, with a human head hanging on her back. The finder of the figure led us to the spot where the find had been made, but we saw no evidence of a habitation there.

BIBLIOGRAPHY

ALPHONSE, EPHRAIM S.

n.d. Among the Valiente Indians. London.

1956. Guaymí grammar and dictionary, with some ethnological notes. Bur. Amer. Ethnol. Bull. 162.

COLUMBUS, FERDINAND.

1744. The history of the life and actions of Admiral Christopher Columbus. In "A collection of Voyages and Travels," by Awunsham and John Churchill, vol. 1. London.

JUDD, DEANE B., and KELLY, KENNETH L.

1939. Method of designating colors. Journ. Research Nat. Bur. Stand., vol. 23.

LOTHROP, SAMUEL K.

1942. The Sigua: southernmost Aztec outpost. Proc. 8th Amer. Scien. Cong., vol. 2. Washington.

1950. Archaeology of southern Veraguas, Panama. Peabody Mus. Amer. Archaeol. and Ethnol., Harvard Univ., Mem. vol. 9, No. 3.

PINART, ALPHONSE L.

1885. Chiriquí. Bocas del Toro. Bull. Soc. Geogr. France, septieme serie, tome 6. Paris.

SANTO THOMAS, ADRIAN DE.

1950. Conversion of Guaymí and Darién and its Indians. Ed. and trans. by E. B. Adams and Doris Stone. In "Archaeology of southern Veraguas, Panama," by S. K. Lothrop, appendix 2, pp. 96-103.

SHEPARD, ANNA O.

1956. Ceramics for the archaeologist. Carnegie Inst. Washington, Publ. 609.

WASSÉN, HENRY.

1949. Contributions to Cuna ethnography: Some archaeological observations from Boquete, Chiriquí, Panamá. Etnologiska Studier No. 16, Etnografiska Mus., Goteborg, Sweden.

EXPLANATION OF PLATES

PLATE 28

- a-i*, Characterized by gray to black core with margins varying from weak yellowish orange to moderate orange. Moderate coarse temper.
- a*, Punctate bowl, smooth rim. Eroded granular orange exterior. Smooth buff interior. See figure 18, *b*.
- b*, Punctate with incising. Smooth buff interior. 1.5 cm. thick. Figure 18, *g*.
- c*, Punctate with incising. Smooth interior. Exterior eroded and granular. 1.0 cm. thick. See figure 18, *j*.
- d-f*, *h*, *i*, Punctate and incised. Exterior and interior smooth orange. 0.6-1 cm. thick.
- g*, Punctate and incised, with boss. 1 cm. thick.
- j*, Buff core and surfaces. Interior and exterior smooth with indented fillet applied just below rim. 0.7 cm. thick.
- k*, Gray core, buff surfaces. Smooth exterior. Interior of rim combed. 1.0 cm. thick. See figure 18, *h*.
- l*, Buff core and surfaces. Smooth interior. Medium temper. Modeled octopus applique design. 0.8 cm. thick.
- m*, Light buff slip with fine line red painting. Finely ground temper. 0.5 cm. thick.
- n*, Very coarse buff ware. Interior granular. Fishtail applique design on exterior. 2.0 cm. thick.
- o*, Smooth light buff interior, red painted lip. See figure 18, *k*.

PLATE 29

- a*, Large rim sherd with applique porpoises. Brownish-black core, orange margins. Interior and rim, well-polished orange. Exterior shows very fine marks of smoothing implement, perhaps cornhusk or other similar leaf. Coarse to very coarse temper. 1.2 cm. thick. See figure 18, *a*.
- b*, Brownish-black core, buff margins. Polished buff interior and rim. Exterior, slightly rough, blackened by carbon. Coarse temper.
- c*, Black core, buff margins. Smooth buff interior and lip. Exterior, slightly rough. Medium temper. Lip painted red and remnants of red painted designs on exterior and interior. 1 cm. thick. See figure 18, *i*.
- d*, Black core, moderate orange to buff margins. Medium temper. Smooth light buff exterior and interior. Rim painted red, extending 2.5 cm. down exterior. 1.1 cm. thick. See figure 18, *f*.
- e*, Brownish black core, buff margins. Medium temper. Smooth light buff interior and exterior. Rim painted red. Exterior blackened by carbon. 1.1 cm. thick. See figure 18, *n*.
- f*, 80 percent brownish black core, orange to buff margins. Coarse temper. Smooth orange interior and exterior. Rectangular openings had been cut below rim. 2.0-2.5 cm. thick.
- g*, 90 percent brownish-black core and outer surface, 10 percent inner surface buff. Very coarse, heavily tempered. Granular interior. Exterior combed. 1.5 cm. thick.
- h*, Brownish-black core, buff exterior. Medium temper. Interior smooth and exterior slightly roughened.
- i*, Light buff, medium temper. Smooth exterior and interior. Interior shows narrow parallel ridges made by rubbing stone. 1.5 cm. thick.
- j*, Brownish-black core, buff margins, coarse temper. Smooth light buff interior and exterior. Red-painted rim. 1.2 cm. thick. See figure 18, *m*.
- k*, Black core, buff margins. Fine temper. Smooth buff interior and exterior. Inside of lip painted red. 0.5-0.8 cm. thick. See figure 18, *l*.

PLATE 30

- a*, Tripod vessel. Black core, buff margins. Fine temper. Smooth buff exterior and interior. Completely coated with white dust from the limestone cave. Four groups of red perpendicular lines on the interior of rim. 0.5 cm. thick.
- b*, Tripod vessel. Some parts of bowl burned 100 percent buff, others black core and buff margins. Fine temper. Smooth buff interior. Most of exterior blackened by carbon. Body roughened by horizontal striating. Legs are smooth and decorated with horizontal red line painting. Modeled animal figure seated on top one leg. Three perpendicular slots in leg. 0.7 cm. thick.
- c*, Subglobular bowl. Black core, buff margins and surfaces. Fine temper. Exterior and interior rough.
- d*, Subglobular bowl. Black core and margins. Fine temper. Smooth buff interior and exterior.

PLATE 31

- a*, Polished dark buff. Fine temper. Exterior and interior smooth. Edge of rim painted red. Red perpendicular line decoration on interior of rim. Strap handle shows finger marks where attached. 0.6 cm. thick. See figure 21, *e*.
- b*, Combed buff exterior. Smooth carbonized interior. Medium temper. Small nodes on the shoulder. 0.8 cm. thick.
- c*, Buff. Coarse temper. Smooth exterior. Interior pitted. Rim painted red. Strap handle. 0.7 cm. thick. See figure 21, *f*.
- d*, Buff weathered brown. Medium temper. Interior and exterior smooth. 0.6 cm. thick. See figure 21, *g*.
- e*, Buff. Fine temper. Polished interior. Carbonized exterior has roughened zone below the rim, decorated with incised lines connecting hemispherical nodes. Another roughened area runs around center of bowl. Edge of rim painted dark red. See figure 21, *a*.
- f*, Bowl with slotted pedestal base. Black core, dark buff margins. Fine temper. Base and interior of bowl, polished dark buff. Deep red slip on exterior of bowl. 0.6 cm. thick. See figure 19.
- g*, Buff paste. Medium temper. Exterior smooth but pitted by erosion. Interior eroded. Rolled everted rim, loop handle. See figure 21, *b*.

PLATE 32

- a*, Flat base. Dark buff weathered brown. Fine temper. Exterior and interior smooth. 0.7 cm. thick.
- b*, Neck of small jar. Thin dark buff partially carbonized. Fine temper. Interior smooth. Exterior, two parallel fillets decorated with crude incising. 0.6 cm. thick.
- c*, Buff paste. Medium temper. Buff interior, partially painted red. Exterior, red on buff, with lunate punctations between double incised lines. 0.5 cm. thick.
- d*, Interior and exterior, polished dark buff weathered brown. Fine temper. Raised design.
- e*, Exterior, polished buff painted with red line designs. Smooth, unpainted buff interior. Medium temper.
- f*, Black core with buff margins. Medium temper. Polished buff interior decorated with painted red vertical lines. Lip smooth and painted red. Exterior slightly rough.
- g*, Smooth brown interior. Combed exterior, brown blackened with carbon.

- h*, Slightly roughened buff exterior. Red painted lip and red vertical lines on polished buff interior. Fine temper. 0.7 cm. thick.
i, Wide black core and buff margins. Fine temper. Polished buff interior. Exterior rough and carbonized. Red lip.

PLATE 33

- a*, Brown carbonized. Medium temper. Polished interior. Smooth exterior pitted by erosion. See figure 21, *i*.
b, Polished dark buff interior and exterior. Medium temper. See figure 21, *d*.
c, Fragment of handle, frying pan incensario. Black core, buff margins. Fine temper. Well-polished buff exterior with one red transverse line. Red paint along edges. Under side, smooth buff. 1.5 cm. thick.
d, Concave vessel support, beveled supporting edge roughened. Smooth buff with red paint on exterior.
e, Polished brown interior and exterior. Medium temper. Surface eroded and carbonized. See figure 21, *j*.
f, Polished buff interior and body exterior. Lip of rim painted red. Exterior of rim roughened. Medium temper. See figure 21, *h*.

PLATE 34

- a*, Wide black core, narrow buff margins. Medium temper. Exterior, roughened buff. Interior, smooth buff. Considerable limestone dust deposited on surface. Lip painted red. Vertical ridges around middle. Indentations around collar. 0.8 cm. thick. See figure 22, *a*.
b, Dark buff. Medium temper. Carbonized exterior shows marks of smoothing implement. Interior smooth. 0.7 cm. See figure 22, *e*.
c, Smooth dark buff interior, red painted lip. Exterior carbonized and slightly roughened. Medium temper. 0.7 cm. thick. See figure 22, *b*.
d, Polished dark buff interior decorated with six red stripes. Red lip. Exterior badly eroded but apparently had vertical ridges around middle similar to (*a*). Medium temper. 1 cm. thick. See figures 20, *e*; 23.
e, Dark buff. Smooth interior and exterior. Red painted outflaring lip. 0.8 cm. thick. See figure 22, *k*.
f, Dark buff. Smooth interior and exterior. Red painted beveled lip. Medium temper. 1.3 cm. thick. See figure 22, *m*.
g, Dark buff. Smooth interior and exterior. Red painted beveled lip. 1.3 cm. thick. See figure 20, *a*.

PLATE 35

Large vessels with high collars.

- a*, Dark buff polished interior, exterior roughened. Medium temper. Lip painted red. Applique octopus design. 1.3 cm. thick. See figure 22, *d*.
b, Dark buff polished interior. Exterior combed. Medium temper. 0.9 cm. thick. See figure 22, *f*.
c, Buff, exterior of collar combed. Deep groove where collar joins body. Exterior of body smooth. Interior and lip of vessel smooth. Collar 12.4 cm. high. See figure 22, *c*.
d, Collar and body of vessel combed buff. Smooth zone at point where collar joins body is polished brown. Interior is buff with black firing cloud. Medium temper. 0.7 cm.
e, Black core, buff margins. Medium temper. Polished brown interior. Exterior combed. 1 cm. thick.
f, Very thick black core, narrow buff margins. Combed buff exterior. Lip and interior smooth. Lip painted red. Coarse temper. 0.8 cm. thick.

PLATE 36

Exterior of sherds shown in plate 37.

- a*, Buff, carbonized on exterior. Deep incised groove sets off base of collar from body. Exterior shows marks of smoothing implement, such as cornhusk.
- b*, Buff, carbonized on exterior. Curving convex collar. See plate 30, *d*.
- c*, Carbonized buff ware, red lip. See figure 22, *o*.
- d*, Buff interior and exterior, fine temper. See figure 20, *g*.
- e*, Rough buff exterior, coarse paste. Red lip. See figure 22, *j*.
- f*, Exterior rough, carbonized. See figure 20, *h*.
- g*, Rough buff exterior. Red lip.
- h*, Rough buff exterior. Deep incised groove separating collar from body. See figure 22, *g*.
- i*, Rough buff exterior. Deep incised groove separating collar from body. Coarse temper. See figure 22, *h*.
- j*, Rough buff exterior. Red lip. Deep incised groove separating collar from body. Coarse temper.
- k*, Rough exterior, carbonized. Red lip. Coarse temper. See figure 22, *i*.

PLATE 37

Interior of sherds shown in plate 36.

- a*, Smooth buff with beveled rim on interior. Lip painted red.
- b*, Same as (*a*).
- c*, Polished buff.
- d*, Smooth buff, fine temper.
- e*, Smooth buff pitted by erosion.
- f*, Carbonized, smooth buff.
- g*, Smooth buff with red lip and broad red vertical lines painted on interior.
- h*, Polished buff, beveled rim.
- i*, Polished buff.
- j*, Smooth buff. Red lip.
- k*, Carbonized surface. Smooth buff, beveled rim.

PLATE 38

- a-d*, Conch spires with circular hole in center.
- e*, Limestone chisel.
- f*, Red jasper polishing stone.
- g*, Polished celt of blue slate.

PLATE 39

- a*, Gray core and buff margins. Fine, sparsely tempered. Dusky yellowish orange (SYR6/6) interior and exterior. Smooth exterior, rough interior. Applique animal figure. 0.7 cm. thick.
- b*, Black core, buff margins. Coarse, medium tempered. Exterior, buff with splotches of orange. Fine regular combing, with band of extremely fine combing extending 2.5 cm. below lip. Polished orange interior with fine parallel ridges indicating use of rubbing stone. See figure 24, *a*.
- c*, Dark buff paste. Fine, sparsely tempered. Dark buff, smooth exterior and interior of neck. Everted rim. Interior of body rough. See figure 24, *e*.
- d*, Buff paste, fine tempered. Exterior of body, buff blackened by carbon, rough. Rim smooth and splotched with orange. Polished orange interior. Small buff areas are interspersed with the orange. This may be thin clay wash which has fired orange. See figure 24, *d*.

- e*, Orange paste, medium temper. Smooth orange interior. Exterior decorated with punctate bosses.
- f*, 90 percent brownish black core, 10 percent buff on interior and exterior. Coarse, moderate temper. Exterior combed, buff, with applique design. Interior, granular, pitted, buff. 2.2 cm. thick.
- g*, Orange paste. Very coarse, heavily tempered. Smooth orange interior and exterior. Loop handle.
- h*, Buff, coarse moderate temper. Combed buff exterior. Granular buff interior.
- i*, Buff fired orange and brownish black near rim. Coarse, moderate temper. Smooth interior. Exterior, smooth area 3.5 cm. below lip. Fine combing below this area. 1.5 cm. thick. See figure 24, *b*.
- j*, Buff paste, coarse, moderate temper. Smooth buff exterior and interior. Applique octopus design.
- k*, Same as (*j*) except that buff exterior is roughly combed.
- l*, Paste black, with buff on surfaces. Coarse, heavily tempered. Surface, badly eroded. Applique octopus design.

PLATE 40

- a*, Buff paste and surfaces. Medium temper. Smooth exterior with grooved indentations outlining rim, 1.3 cm. from lip. Red paint on exterior of rim. Interior of body deeply combed or impressed. See figure 24, *c*.
- b*, Same as (*a*). See figure 24, *f*.
- c*, Brownish black core, buff surfaces. Medium temper. Smooth interior. Exterior has regular combing similar to plate 39, *b*, *i*. See figure 24, *g*.
- d*, Gray core, buff exterior and interior. Fine, sparsely tempered. Smooth buff exterior and interior. Fire cloud on interior. See figure 24, *i*.
- e*, Light buff paste. Fine, sparsely tempered. Rough, buff interior. Polished buff exterior with bold dusky red and narrow black, parallel lines. 0.7 cm. thick.
- f*, Buff paste. Fine, sparsely tempered. Flakes of mica on polished buff interior. Rim and interior painted red. Exterior, smooth buff.
- g*, Buff paste. Coarse, heavily tempered. Smooth orange exterior painted red. Interior eroded, granular.
- h*, Buff paste. Medium temper. Exterior combed. Interior of rim smooth.
- i*, Buff paste. Medium temper. Smooth surfaces. Solid vessel support or heavy handle.
- j*, *k*, Gray core, buff margins. Very fine temper, micaceous particles visible on surface. Smooth buff interior and exterior.
- l*, Buff. Fine temper. Interior smooth. Exterior rough.

PLATE 41

- a-b*, Female figure of Costa Rican type from Cocos Island, Almirante Bay.
- c*, Metate found on Cricamola River, photographed in town of Bocas del Toro.
- d*, Metate from Bastimentos Key.

PLATE 42

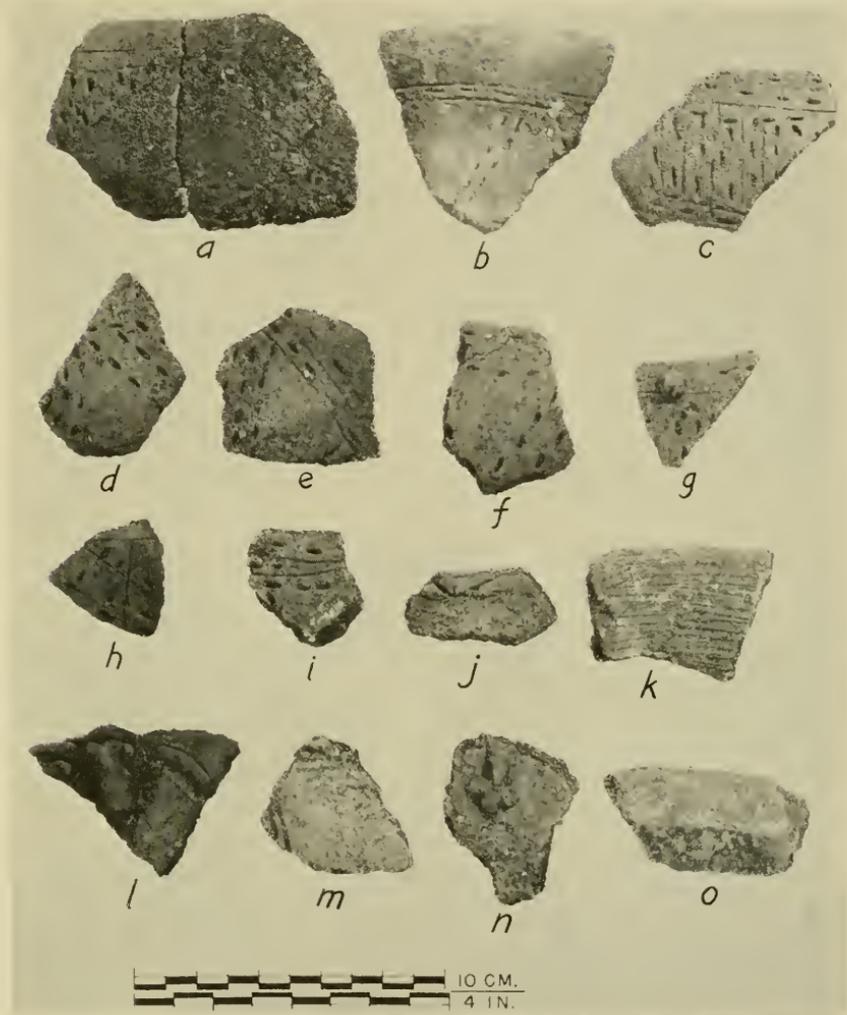
- a*, One of the midden mounds on Darkland Point. This is the mound from which comes the Boc-1 material.
- b*, Two of four large mortars hollowed from unshaped stones on Darkland Point.

PLATE 43

- a-b*, Rings of limestone from the offshore island, Escudo de Veraguas, which was formerly a sacred place where the Guaymí made pilgrimages and held ceremonies. Engler collection. *a*, 8 cm. in diameter; *b*, 16.5 cm. in diameter.
- c-e*, Stone celts from Jungle Point.
- f*, Limestone pestle from Jungle Point.
- g-n*, Stone celts and celt fragments from cave site Boc-2. *k* is 10 cm. long.

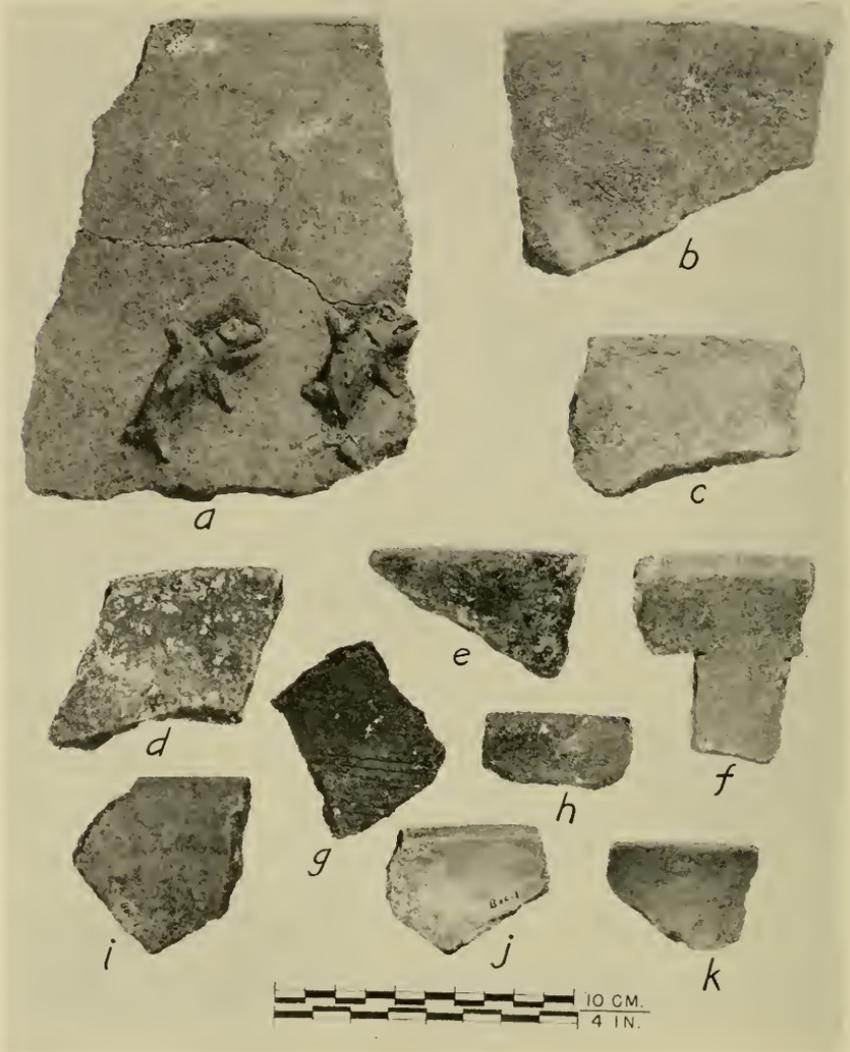
PLATE 44

- a*, Head from jaguar effigy metate found in burial cave, Boc-2.
- b*, Head from jaguar effigy metate found on Valiente peninsula. Engler coll.
- c*, Double-bitted ax (Engler coll.) found near Almirante. This specimen is of the same material and the same size as one of two found by us in a tomb at Barriles, Chiriquí.
- d-e*, Double-bitted axes from Barriles, Chiriquí.



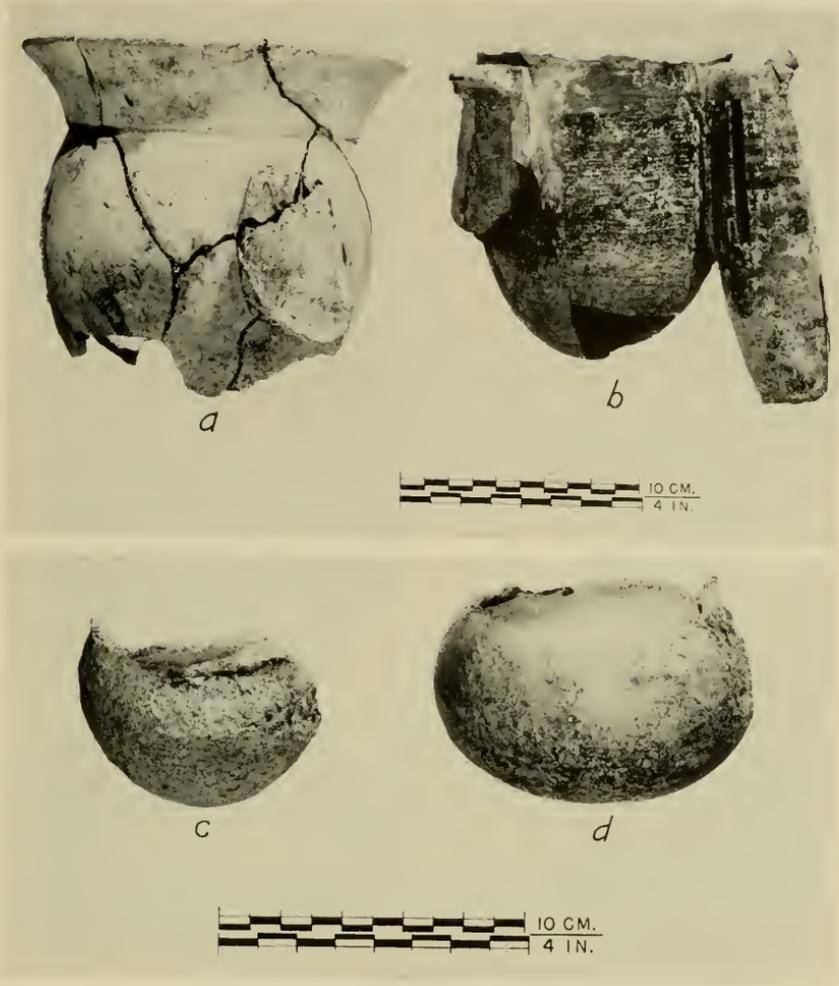
Ceramic ware from Bocas del Toro, site 1.

(For explanation, see p. 279.)

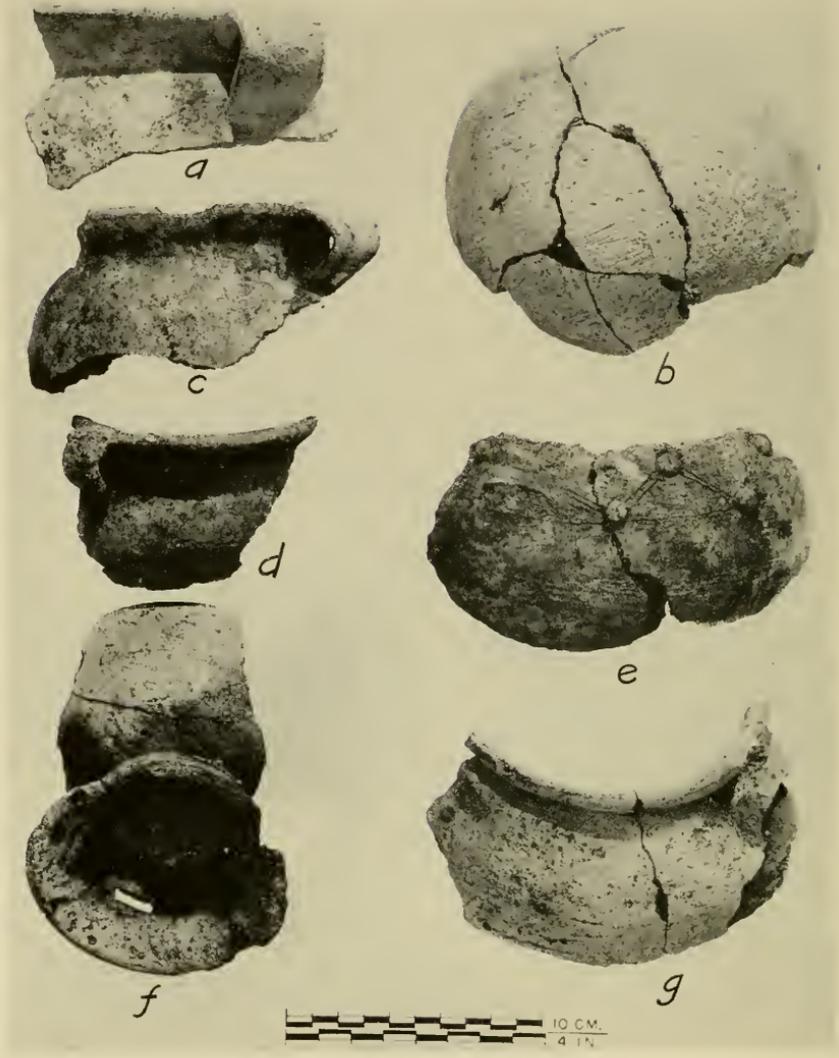


Ceramic ware from Bocas del Toro, site 1.

(For explanation, see p. 279.)

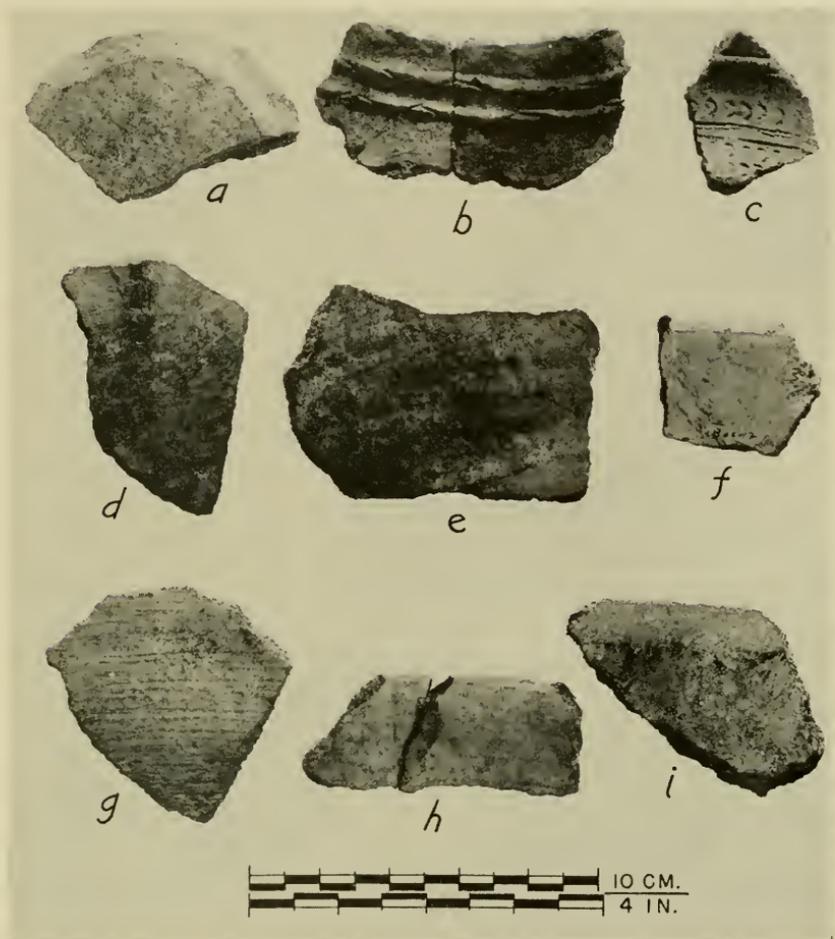


Tripod vessels and subglobular bowls from Bocas del Toro, site 2.
(For explanation, see p. 280.)



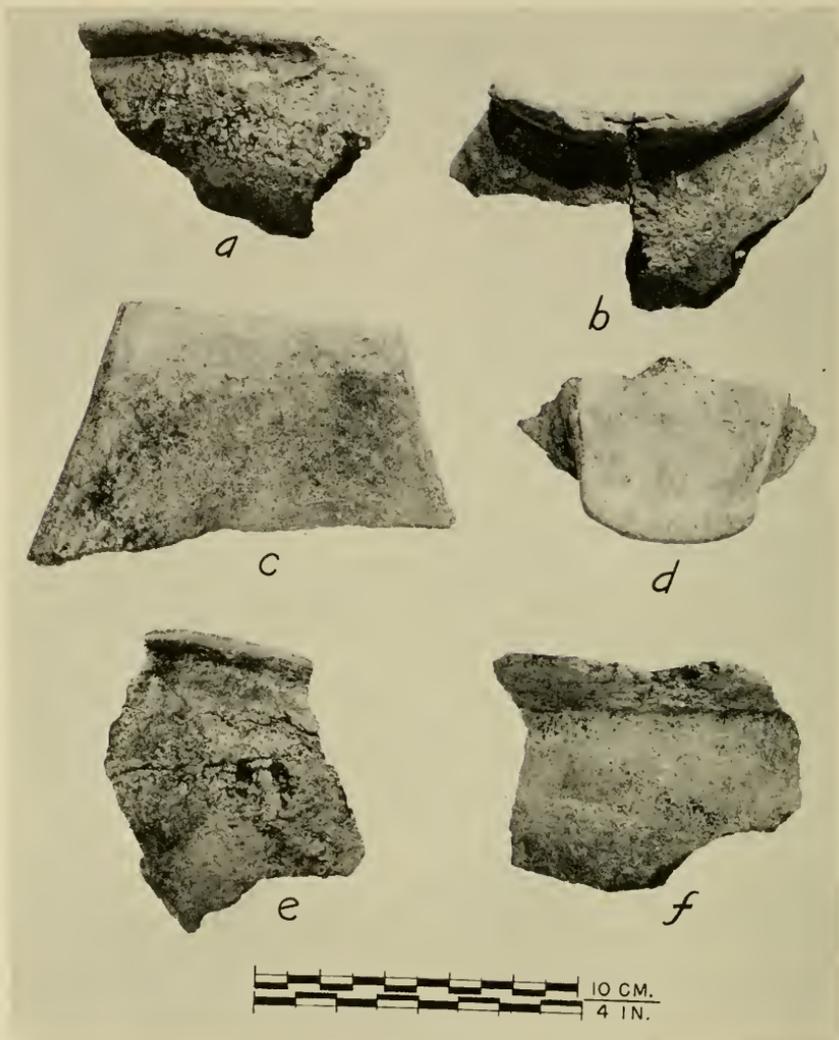
Ceramic ware from Bocas del Toro, site 2.

(For explanation, see p. 280.)



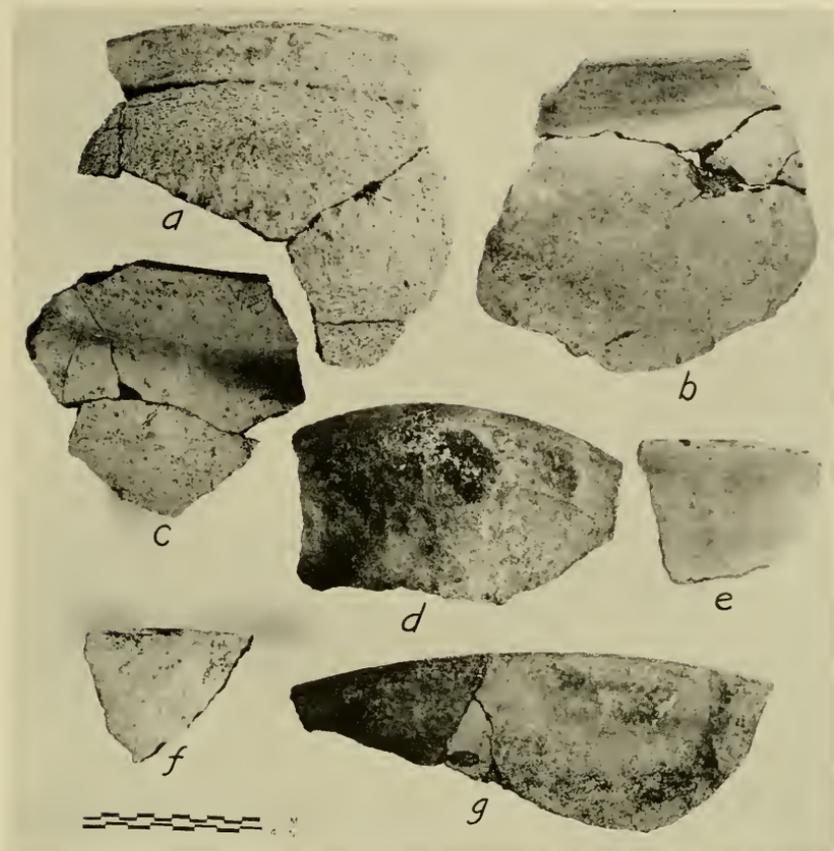
Ceramic ware from Bocas del Toro, site 2.

(For explanation, see pp. 280-281.)



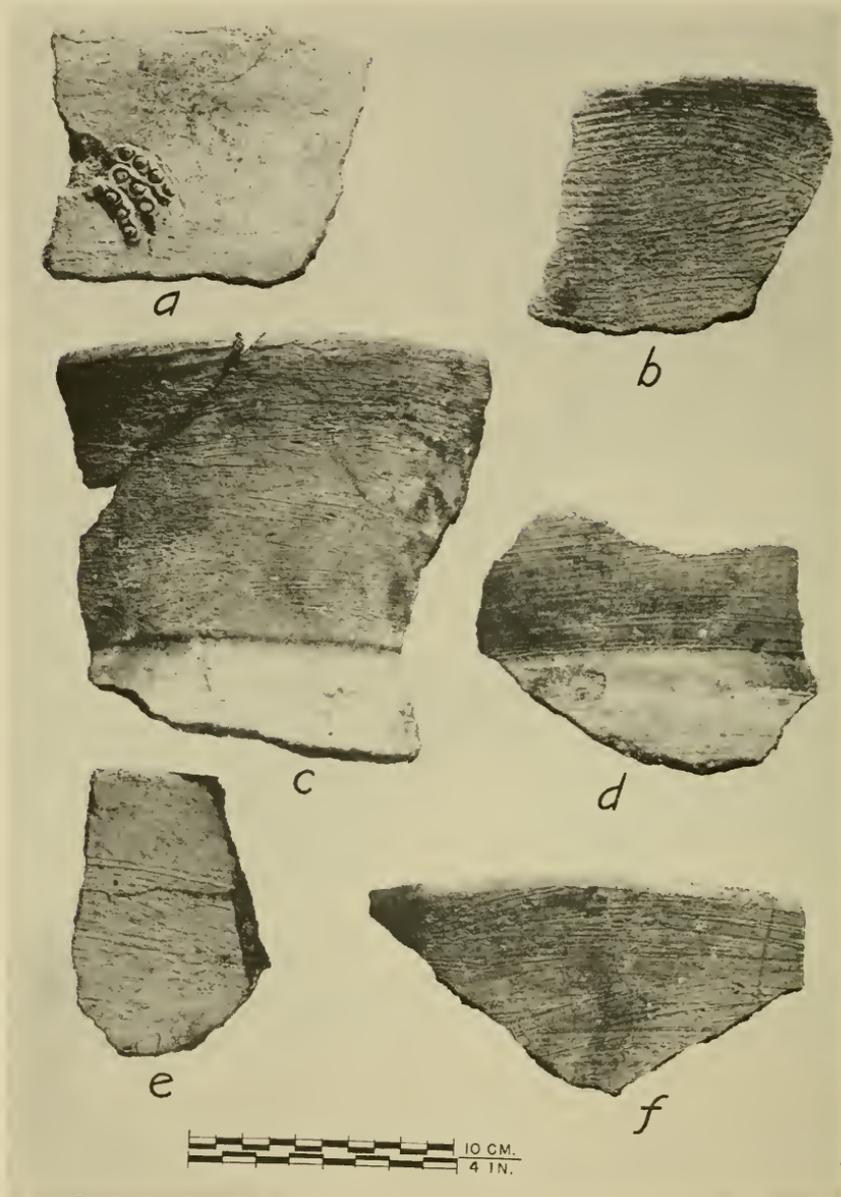
Ceramic ware from Bocas del Toro, site 2.

(For explanation, see p. 281.)



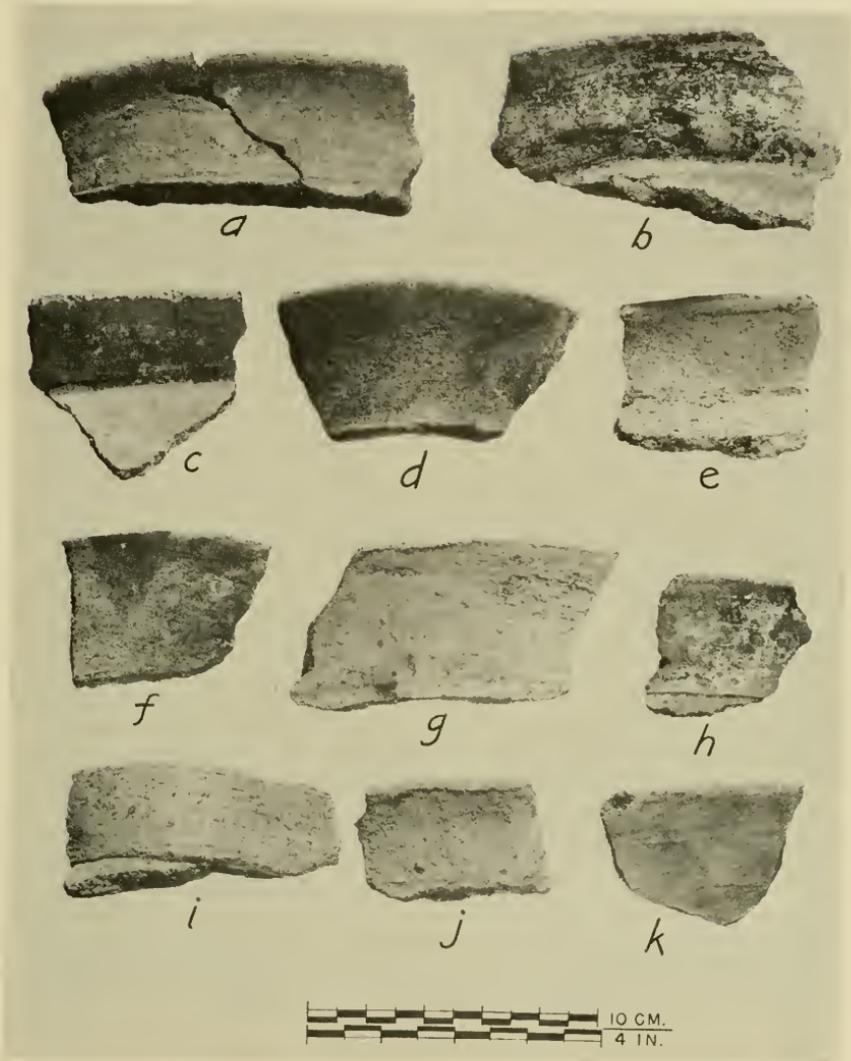
Ceramic ware from Bocas del Toro, site 2.

(For explanation, see p. 281.)



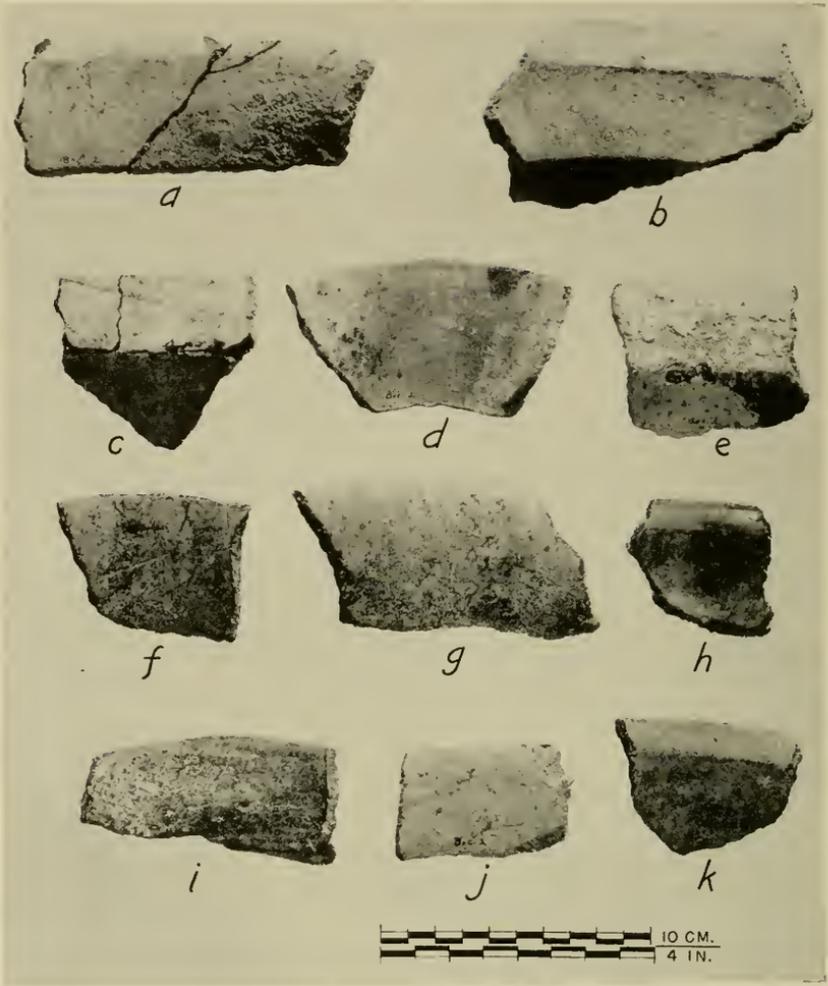
Large vessels with high collars from Bocas del Toro, site 2.

(For explanation, see p. 281.)

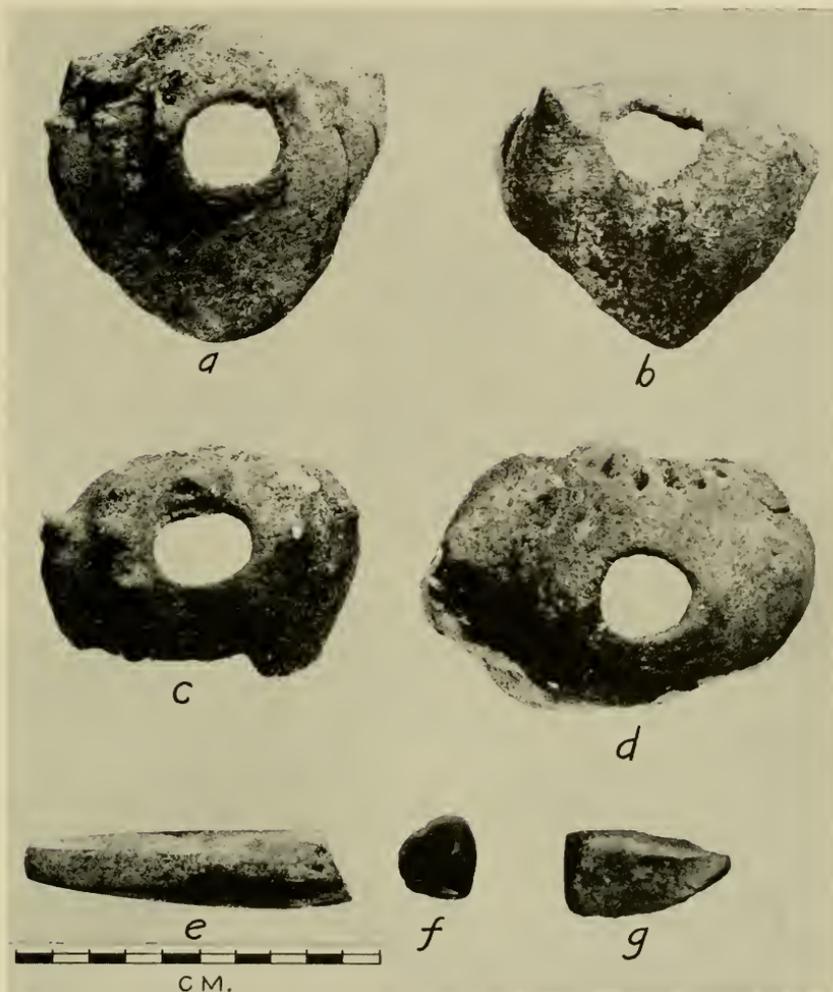


Ceramic ware exteriors from Bocas del Toro, site 2.

(For explanation, see p. 282.)

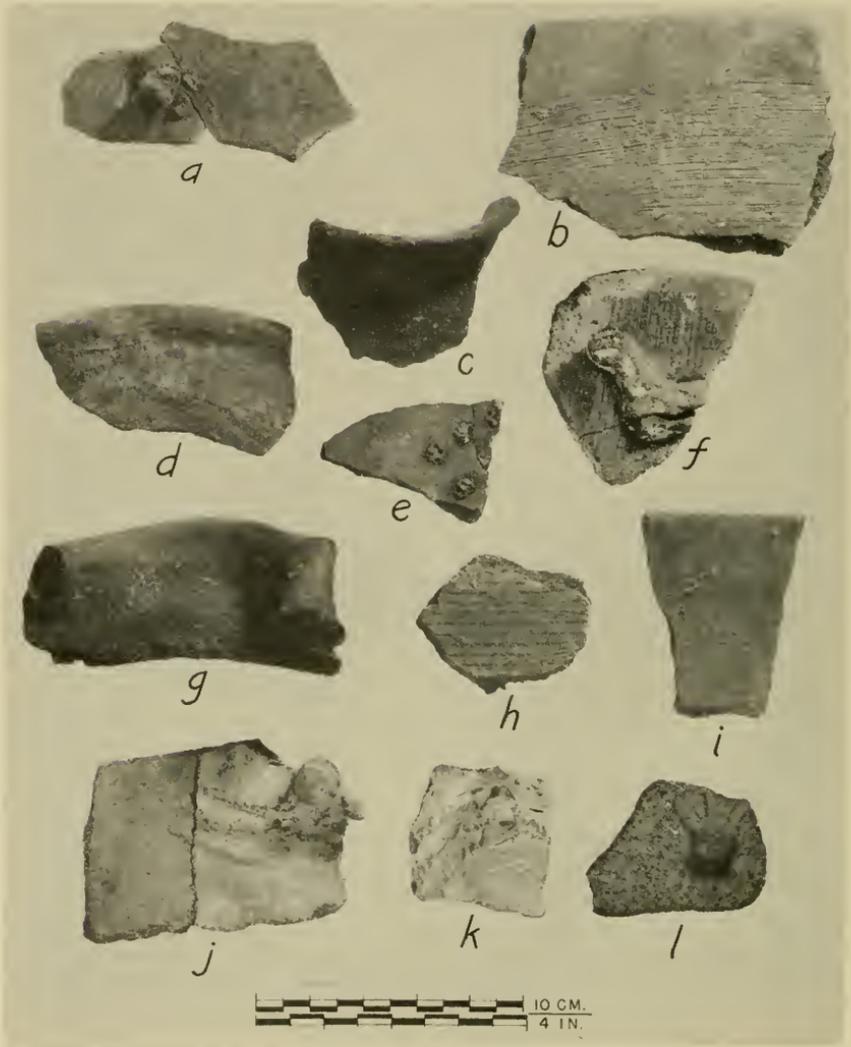


Interiors of sherds shown in plate 36.
(For explanation, see p. 282.)



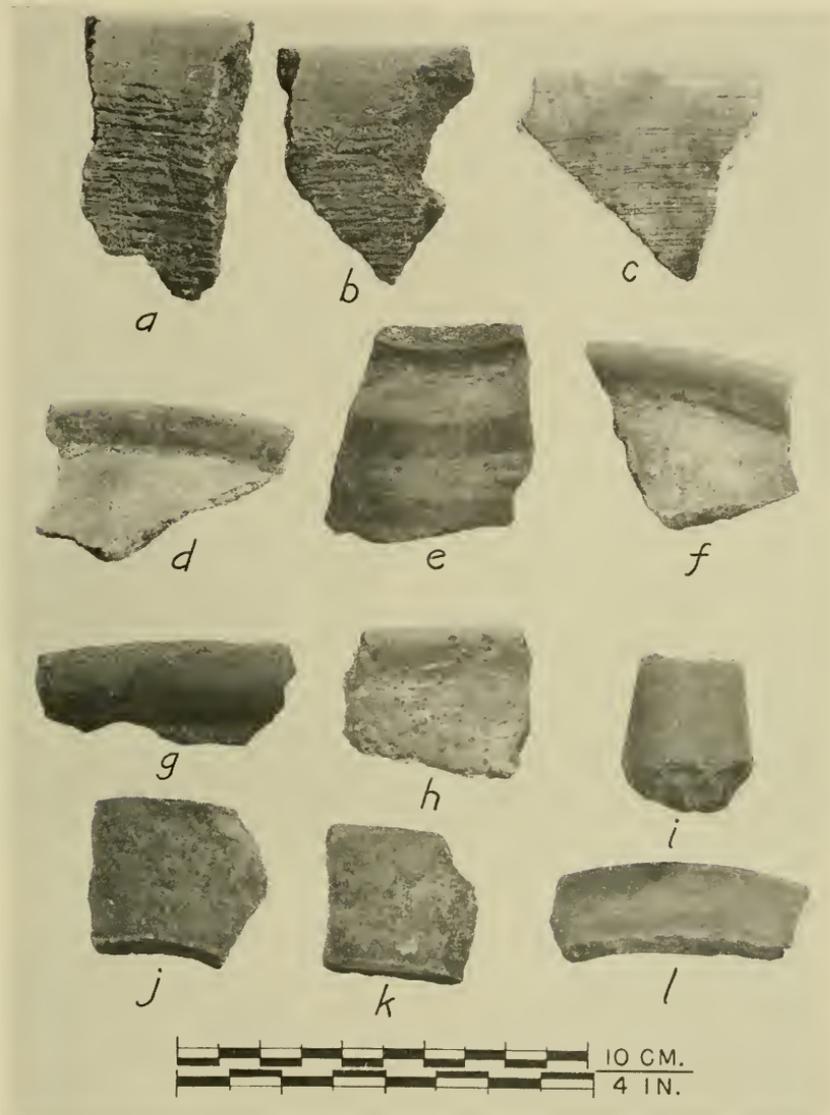
Nonceramic artifacts from Bocas del Toro, site 2.

(For explanation, see p. 282.)



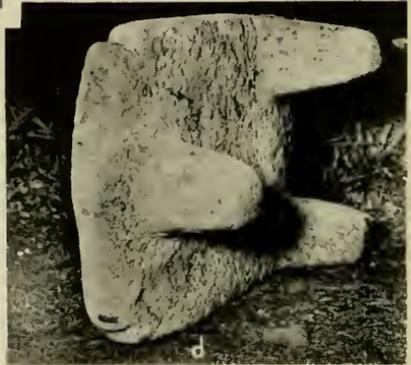
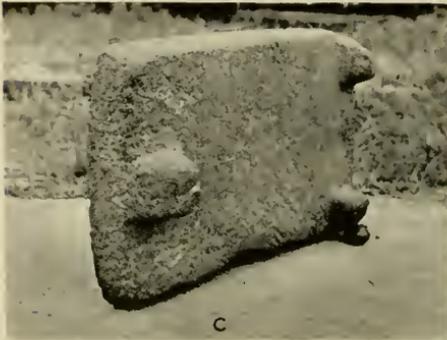
Ceramic ware from Bocas del Toro, site 3.

(For explanation, see pp. 282-283.)



Ceramic ware from Bocas del Toro, site 3.

(For explanation, see p. 283.)



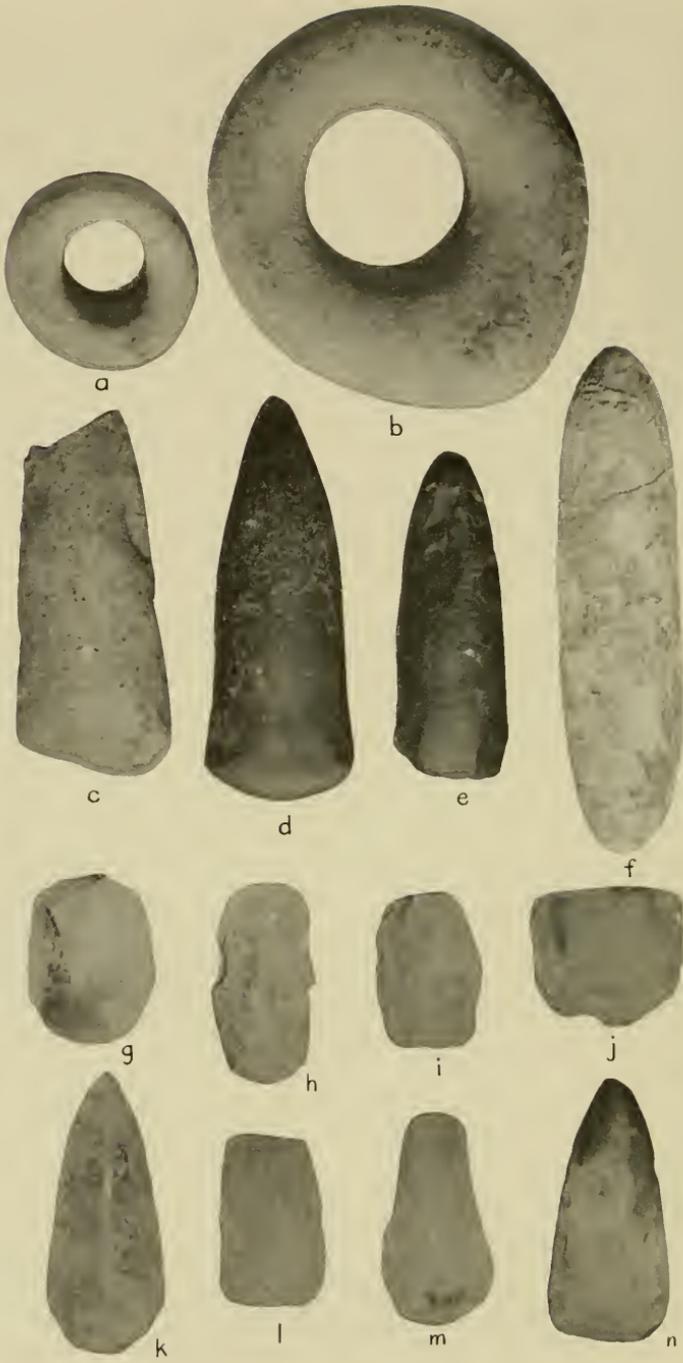
Stone female figure from Cocos Island, Almirante Bay; stone metates from Cricamola River and Bastimentos Key.

(For explanation, see p. 283.)



Midden mound and mortars, Darkland Point.

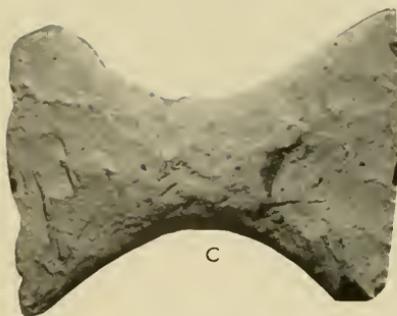
(For explanation, see p. 283.)



Stone artifacts from Escudo Island, Jungle Point, and Darkland Cave.
(For explanation, see p. 284.)



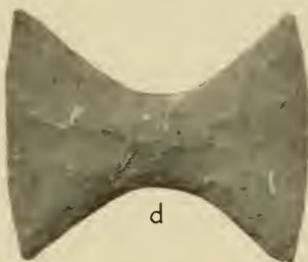
a



c



b



d



e

Jaguar heads and double-bitted axes.

(For explanation, see p. 284.)