

20. Ground Stone Artifacts

DAVID C. GROVE

During the course of the excavations, surface reconnaissance of the site, and other daily research activities, a variety of ground stone artifacts were found. For the purpose of lab analysis and description we have classified these into three major categories: utilitarian (manos, metates, barkbeaters, smoothers), miscellaneous (function unidentifiable), and portable sculpture.

The majority of the utilitarian artifacts are related to food preparation. Our analysis of these has been cursory, and the data presented in this chapter are primarily descriptive. We did not perform microscopic wear analyses of grinding stones, and thus cannot divide mulling stones from manos as did Richard S. MacNeish, Antoinette Nelken-Terner, and Irma and W. Johnson (1967: 101). Few significant patterns, either chronological or spatial, were ascertained during our analyses of these materials. Those which do occur are discussed within the descriptions which follow.

Although we could not ascertain the functions of certain artifacts, some questions have been raised by the patternings. For example, why are over 50 percent of the manos recovered during our research in fragments? Was the breakage accidental (which in most instances seems unlikely), or ritual, or for some other reason? Why do 23 percent of the manos recovered come from the area of the Plaza Central Structure 2 complex, a structure group which appears to have lacked domestic functions? Were broken grinding stones reused for other purposes in this area (either ritual or utilitarian purposes)? A similar question can be asked of the large quantity of spheroidal manos found in the same area.

As has been mentioned in other chapters, the fields at Chalcatzingo are heavily littered with stone. This abundance of surface stone is due both to the proximity of the archaeological zone to the

cliffs and talus slopes of the site's two *cerros*, to prehispanic constructions of stone which once occurred on the site, and to the need during Chalcatzingo's long history for suitable stone for other purposes, such as food preparation. The barranca of the Río Amatzinac, near the foot of the site, provides an almost unlimited supply of igneous boulders and cobbles. Much of the surface stone at Chalcatzingo comes from this latter source.

The selection of stone for the different categories obviously varied. Food preparation tools such as manos and metates were manufactured usually from stones retrieved from the barranca. These are normally finer-grained than the granodiorite of the local *cerros*. Sculptures and carvings, on the other hand, are primarily from the granodiorite. Some denser, finer-grained stone may also have been brought from other areas (particularly during the Classic and Postclassic). However, in general it appears meaningless to attempt a "source analysis" of the ground stone artifacts (both utilitarian and carvings), for the variety of stones recoverable from the barranca source alone is so great that it would be nearly impossible to detect an "import" in the majority of the cases. Thus, our description of the artifacts does not give special attention to the petrographic composition of the individual pieces.

Comparisons in this chapter are drawn primarily from highland Formative period sites. Unfortunately, the comparative materials are not extensive. Although some data have been published from Gulf Coast sites (e.g., Coe and Diehl 1980), those comparisons which can be made do not appear to be meaningful.

UTILITARIAN ARTIFACTS

Manos (Fig. 20.1)

Turtle-Back Manos (41 whole specimens, 95 fragments; Fig. 20.1a)

Dimensions in cm: length, 11.7–27.0, average 18.1; width, 7.5–10.9, average 8.7; thickness, 4.9–8.4, average 5.9.

Turtle-back manos constitute 22 percent of the total manos recovered and were the most common type used at Chalcatzingo. They are characterized by their convex dorsal side. The ventral grinding surface is flat from side to side, but curved from end to end. Also characteristic is a sharp angular contact between the dorsal and ventral surfaces. The overall form strongly resembles a turtle shell. Their shape indicates that they were used in trough-like metates with a concave grinding surface, most likely rectangular tripod or legless metates.

Turtle-back manos occur in both the Barranca and Cantera phases. There are no data at Chalcatzingo suggesting they are earlier, but several have been found in Late Formative and Classic period contexts. Similar manos are found at Tlatilco (Lorenzo 1965: 36–37, Fig. 43), in the Ayotla and Manantial phases at Zohapilco (Niederberger 1976: Fig. 27, nos. 1, 2, 5, 6), and in the Ajalpan and Santa María phases at Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967: 111, Fig. 91, bottom; 112–113, Fig. 93, bottom). Over 80 percent of the turtle-back manos recovered in our excavations were manufactured from vesicular basalt. Illustrated examples from Zohapilco and Tehuacan also appear to be of vesicular basalt.

Loaf-Shaped Manos (5 whole specimens, 9 fragments; Fig. 20.1b)

Dimensions in cm: length, 12.9–19.4, average 16.6; width, 7.4–10.5, average 8.6; thickness, 7.5–12.0, average 9.3.

Four of the five whole loaf-shaped manos are manufactured of vesicular basalt.

All specimens are shaped like bread loaves. Their thickness is usually equal to or greater than their width. The grinding surface is generally flat, or with only a very slight curve. Although one grinding surface is common, a few specimens have two, three, or four ground surfaces. Their shape indicates these manos were utilized with metates having a flat grinding surface.

These manos occur primarily in Cantera phase contexts. Two occur in the subfloor levels of Plaza Central Structure 1, one occurs on a Cantera phase floor of PC Structure 2, and others appear in similar contexts. No good comparison can be found at other central highlands Formative sites.

Quadrangular Manos (14 whole specimens, 30 fragments; Fig. 20.1c)

Dimensions in cm: length, 12.9–26.3, average 17.7; width, 7.1–11.3, average 9.0; thickness, 5.3–9.8, average 7.3.

Quadrangular manos differ from loaf-shaped manos in that their thickness is less than their width. The shape in top and side views is rectangular with rounded edges. The cross section is quadrilateral. The grinding surface is relatively flat, indicating their use on metates with flat grinding surfaces. They are manufactured primarily of vesicular basalt.

Although possibly occurring in the Barranca phase, quadrangular manos appear primarily in the Cantera phase, where they occur in domestic and burial contexts. Manos with the same general form are found at Tlatilco (Lorenzo 1965: 37, Fig. 46) and at Zohapilco in the Manantial phase (Niederberger 1976: Fig. 28, nos. 7, 8).

Large Triangular Manos (14 whole specimens, 20 fragments; Fig. 20.1d)

Dimensions in cm: length, 12.2–19.1, average 16.1; width, 6.3–11.9, average 8.6; thickness, 4.6–10.4, average 6.4.

Large triangular manos generally have two or three flat grinding surfaces, two of which come together to form an angle between 30° and 60°. They are similar in form to the two types described below, but are considerably larger.

This mano type is found most often in domestic contexts (house refuse and trash pits) from the Cantera phase. One example was found beneath an oval metate associated with Burial 54 on T-4. No examples were found in the few Barranca phase house areas excavated.

Triangular manos are found with burials at Tlatilco (Lorenzo 1965: 37, Fig. 44) indicating presumably that, although not found in Early Formative contexts at Chalcatzingo, they were utilized in the central highlands during the Early Formative. Triangular manos also occur at Zacatenco (Vaillant 1930: 37, 48, Pl. 47, nos. 4, 5, 7, 8).

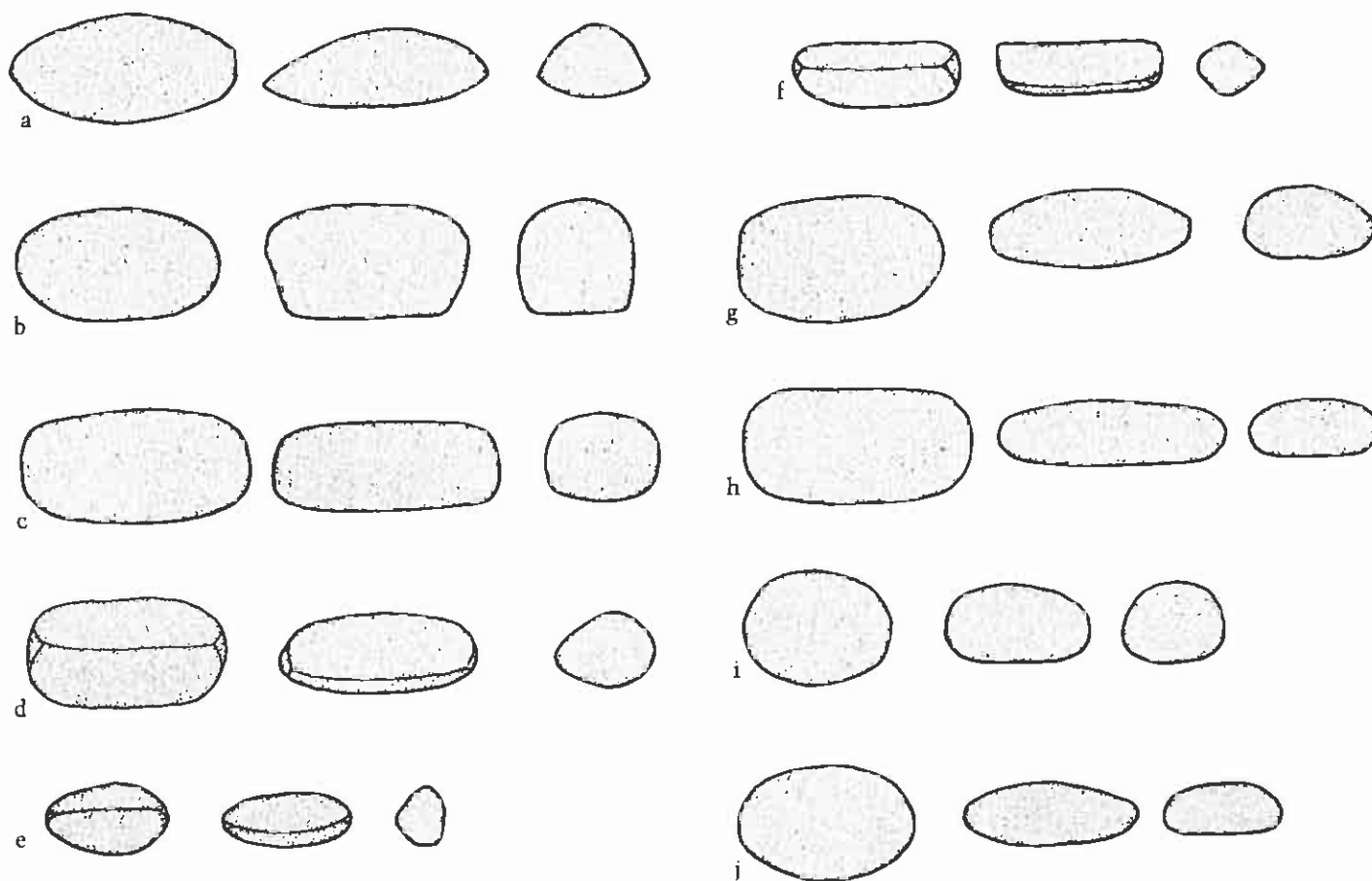


Figure 20.1. Manos, three views of each: a, turtle-back; b, loaf-shaped; c, quadrangular; d, large triangular; e, ovate triangular; f, thin triangular; g, oblong wide; h, oblong narrow; i, spheroidal; j, oval.

Ovate Triangular Manos (11 whole specimens, 22 fragments; Fig. 20.1e)

Dimensions in cm: length, 8.1–11.8, average 9.4; width, 4.2–6.7, average 5.4; thickness, 2.2–5.5, average 3.9.

Ovate manos are smaller than those described above, but like them have two to three flat grinding surfaces. Two grinding surfaces meet to form an angle of 30° to 60°. The width of this mano type is more than half the length. Their relatively small size suggests that they functioned for grinding purposes other than maize processing.

Seventy percent of the ovate triangular manos come from the area of the Plaza Central, the majority from the excavations of the Structure 2 complex. Of the thirteen specimens recovered from this area, only one unbroken example was recovered, the other specimens being fragments. The greatest quantity of iron ore fragments recovered on the site also come from PC Structure 2 (see Chapter 23). It is possible that some manos were used to grind hematite here. However, these manos do not appear to correlate with Str. 2 areas from which raw or ground hematite chunks were excavated, nor do hematite stains appear on the grinding surfaces of any of these manos (such a "stain" attribute apparently means very little). One ovate mano was recovered from a probable Barranca phase context; the others are primarily in Cantera phase contexts.

Similar manos are illustrated from Ticoman (Vaillant 1931: Pl. 89, bottom row, nos. 4, 5).

Thin Triangular Manos (7 whole specimens, 18 fragments; Fig. 20.1f)

Dimensions in cm: length, 8.1–15.8, average 13.2; width, 3.3–6.4, average 5.0; thickness, 3.9–5.8, average 4.5.

While similar to the above two types in form, thin triangular manos are smaller than large triangular manos, and are differentiated from ovate triangular manos in that they are thin, with their width less than half their length. Like ovate triangular examples, these seem too small to have functioned for maize processing.

These manos occur primarily in Cantera phase contexts. Although over half of the entire sample occurs in Plaza Central contexts, five of the seven whole manos were recovered from adjacent Terraces 25 and 27.

Oblong Wide Manos (14 whole specimens, 43 fragments; Fig. 20.1g)

Dimensions in cm: length, 10.3–16.4,

average 13.1; width, 6.9–10.0, average 8.5; thickness, 4.4–6.6, average 5.6.

Thirteen of the fourteen whole specimens are manufactured from vesicular basalt. In top view these manos are oblong in shape. Their grinding surface laterally is flat. Their width is more than one-half their length, and their thickness more than one-third their length.

Although one whole oblong wide mano was recovered from the fill of a Classic structure, the other specimens are primarily from Cantera phase contexts.

Similar manos are illustrated from the Tehuacan Valley and cover a long time span in that region (MacNeish, Nelken-Terner, and Johnson 1967: 111, Fig. 90).

Oblong Narrow Manos (10 whole specimens, 30 fragments; Fig. 20.1h)

Dimensions in cm: length, 12.1–17.5, average 14.7; width, 6.4–8.9, average 7.8; thickness, 4.1–5.7, average 4.9.

These manos have an oblong shape, with their width usually less than half their length. Their thickness is approximately one-third their length. They generally have more rounded ends than oblong wide manos. Normally only one grinding surface is present. Among the whole specimens the sample is equally divided between manos made of vesicular basalt and those made of fine-grained igneous rocks.

Oblong narrow manos occur primarily in Cantera phase contexts. A mano of similar form but larger size is illustrated from Zohapilco (Niederberger 1976: Fig. 27, no. 3).

Spheroidal Manos (76 specimens, whole and fragmentary; Fig. 20.1i)

Dimensions in cm: length, 8.7–15.3, average 11.5; width, 7.1–11.8, average 8.8; thickness, 4.4–9.0, average 6.8.

Relatively round stones, spheroidal manos have at least one grinding surface, although some examples seem to have been utilized on all sides. This type of mano occurs primarily on the Plaza Central (66 percent), and there they occur in greatest quantities around the Structure 2 complex (57 percent of site total). Only one spheroidal mano exhibiting hematite stains was recovered. Of the nine metates and fragments from the same area, only three (two egg-shaped, one irregular shaped) have grinding areas of the type that would match the grinding surface of spheroidal manos.

With few exceptions, spheroidal manos from our sample occur in Cantera phase contexts. They are similar to the spheroidal manos from the Tehuacan Valley

(MacNeish, Nelken-Terner, and Johnson 1967: 108–110, Fig. 89, top row), but larger than the stone balls recovered by Vaillant at Zacatenco, El Arbolillo, and Ticoman (see Balls, under Miscellaneous Artifacts, below).

Oval Manos (18 whole specimens, 23 fragments; Fig. 20.1j)

Dimensions in cm: length, 6.6–13.1, average 10.6; width, 3.3–9.1, average 6.9; thickness, 1.7–5.3, average 3.7.

Oval in form with relatively flat bottoms, the width of these manos is half or more than half their length. Normally only one grinding surface is present.

Oval manos occur in both Barranca and Cantera phase house contexts. They are similar to both ovoid mullers and ovoid manos described for the Tehuacan Valley (MacNeish, Nelken-Terner, and Johnson 1967: 106–108, Pls. 88, 89, bottom).

Irregular Shaped Manos (9 whole specimens, 105 fragments)

Dimensions in cm: length, 8.1–16.1, average 11.7; width, 5.2–9.5, average 6.8; thickness, 4.1–7.7, average 5.5.

These are unshaped, irregular rocks which exhibit at least one grinding surface. Because they are unshaped, they do not fit within any of the other mano categories. Although over 50 percent of the specimens recovered come from Plaza Central archaeological deposits, no whole specimens were found in this area. Whole irregular shaped manos were recovered in both Barranca and Cantera phase house contexts from other site areas.

Metates (Fig. 20.2)

Rectangular Tripod Metates (1 whole specimen, 27 fragments; Fig. 20.2a)

Dimensions in cm: length (1 example), 38.9; width, 22.1–34.9, average 27.6; height, 5.6–9.8, average 7.4. Grinding surface: length, 34.1 (1 sample); width 20.4–30.0, average 23.7; depth, 0.1–7.2, average 3.4.

This metate type is characterized by its rectangular shape with rounded corners and by its three stubby legs. Two legs occur at one end of the metate, and a single leg is centered at the opposite end. This last leg may be slightly taller. Leg shape is rounded or ovoid. Our specimens occur in good Cantera phase contexts.

Rectangular tripod metates are not uncommon at other sites in the central highlands from the Formative through the Postclassic and exhibit little change except occasionally in leg form and

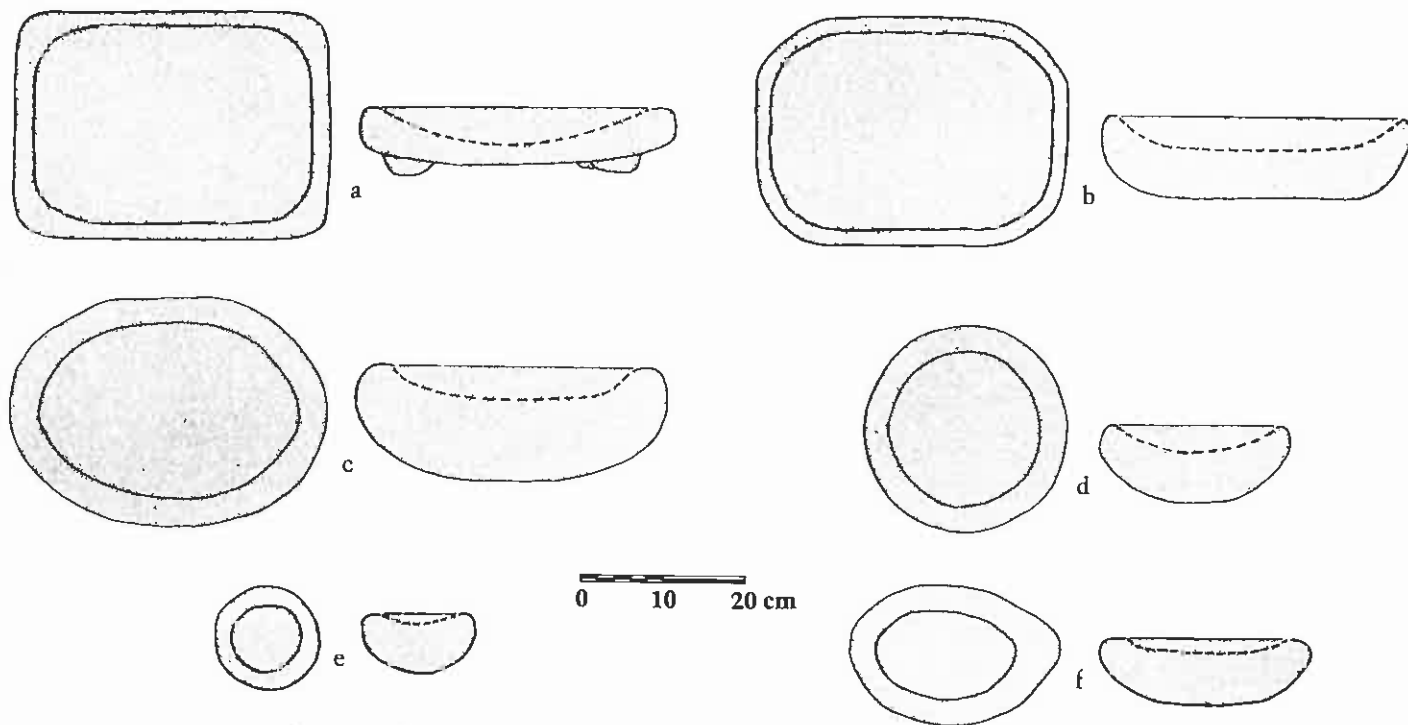


Figure 20.2. Metates, two views of each: *a*, rectangular tripod; *b*, rectangular legless; *c*, oval; *d*, circular; *e*, hemispherical; *f*, egg-shaped.

height. They are mentioned for La Nopallera cave during the Classic period (García Cook 1967:106, Pl. 37, Chart 24), and during the Classic and Postclassic at Tehuacan, where the change through time seems to be from ovoid to rectangular feet (MacNeish, Nelken-Terner, and Johnson 1967:120–121). No tripod metates are reported from the Early Formative at Tlatilco. Well-made tripod metates are illustrated by Vaillant from Zacatenco (1930:Pl. 66, nos. 1, 7), although the legs are better defined than those on our Chalcatzingo sample. Legged metates are also present at Ticoman (Vaillant 1931:Pl. 89) and San Lorenzo Tenochtitlan, Veracruz (Coe and Diehl 1980:1:228, Fig. 214).

Rectangular Legless Metates (4 whole specimens, 44 fragments; Fig. 20.2b)

Dimensions in cm: length, 28.8–48.4, average 41.2; width, 18.2–34.8, average 28.4; height, 6.9–13.6, average 9.6. Grinding surface: length, 26.0–45.7, average 39.1; width, 15.4–31.6, average 24.1; depth, 0.7–7.3, average 4.3.

These legless metates are characterized by a generally rectangular shape although they have heavily rounded corners. While the basin- or trough-shaped grinding area usually has well-defined

edges, in several samples the grinding surface is relatively shallow. Specimens come from both Barranca and Cantera phase contexts. Similar metates are found at Tlatilco (Lorenzo 1965:35, Fig. 41) and at Zohapilco (Niederberger 1976: Figs. 26, 27, no. 8). Although most of the Tlatilco and Zohapilco samples are from Early Formative contexts, one Zohapilco specimen is contemporaneous to our Chalcatzingo examples. No similar metates are illustrated from Zacatenco or El Arbolillo.

Circular Metates (3 whole specimens, 14 fragments; Fig. 20.2d)

Dimensions in cm: diameter, 16.3–24.7, average 20.5; thickness, 6.3–9.7, average 7.6. Grinding surface: diameter, 7.7–20.2, average 15.2; depth, 0.1–2.7, average 0.7.

This category consists of circular or near-circular legless metates with shallow, slightly concave grinding surfaces. They occur in both Barranca and Cantera phase contexts. Circular “mortars” are present at Tlatilco (Lorenzo 1965:38, Fig. 48), but I hesitate to give that term to our specimens. Our examples are more similar to “saucer-shaped lipped metates” from Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967:120),

which are restricted to the Formative period in that area.

Hemispherical Metates (4 whole specimens, 3 fragments; Fig. 20.2e)

Dimensions in cm: diameter, 10.9–12.6, average 10.8; thickness, 5.0–5.7, average 5.3. Grinding surface: diameter, 3.9–9.1, average 6.7; depth, 0.3–1.2, average 0.8.

These legless grinding stones are circular and in that respect similar to circular metates. However, they are significantly smaller, and in addition have an almost hemispherical cross-section. Interestingly, several also have a shallow concavity pecked into their base. As with small oval grinding stones, these do not appear to have functioned in maize processing. Because of the small quantity of hemispherical metates recovered during our research, their chronology and distribution pattern on the site is unclear.

Oval Metates (5 whole specimens, 17 fragments; Fig. 20.2c)

Oval metates can be subdivided into two subcategories by size:

Large [1 whole specimen, 5 fragments]. Dimension in cm: length, 37.3 (1 example); width, 19.8–28.7, average 24.0; height, 7.2–9.5, average 8.5. Grinding surface: length, 32.9 (1 example); width,

15.4–26.2, average 20.1; depth, 0.9–8.0, average 3.3.

Small (4 whole specimens). Dimensions in cm: length, 12.5–16.2, average 14.4; width, 9.7–11.1, average 10.2; height, 4.3–7.0, average 5.4. Grinding surface: length, 7.7–11.6, average 10.0; width, 5.4–7.3, average 6.6; depth, 0.2–1.0, average 0.7.

(Twelve fragments were not classified into the two subcategories.)

These metates, oval in shape and legless, fall into two definite size categories. Although the large metates were apparently used for maize grinding, it is uncertain what food or materials were ground on the smaller ones.

The differential distribution of these artifacts appears to be significant. The large oval metates are generally associated with Cantera phase house structures. One of the four complete metates comes from within the inner structure of the large Formative period earthen platform mound on the Plaza Central (Str. 4) and thus dates to the Amate phase. The remaining three come from T-25—two from a pre-altar, Barranca phase trash pit adjacent to the altar (see Chapter 7), the third in association with late Cantera wall lines on the north side of the terrace. Although no direct comparisons have been found between small oval metates and those described at other central highland sites, the large oval metates are similar to Tehuacan's boulder trough metates and basin-shaped metates (MacNeish, Nelken-Terner, and Johnson 1967: 118–120, Fig. 99).

Egg-Shaped Metates (1 whole specimen, 10 fragments; Fig. 20.2f)

Dimensions in cm: length, 25.4 (1 example); maximum width, 12.8–17.9, average 15.8; thickness, 3.6–10.2, average 7.1. Grinding surface: length, 17.2 (1 example); maximum width, 8.9–12.2, average 10.5; depth, 0.1–2.1, average 0.9.

These metates are egg-shaped boulders with oval grinding areas. While occurring in Cantera phase deposits, they may also continue into the Classic period. The closest similarities lie with the "boulder metate-milling stones" at Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967: 118, Fig. 98).

Irregular Metates (1 whole specimen, 8 fragments)

Dimensions in cm for single whole specimen: length, 35.7; width, 20.0; thickness, 10.9. Grinding surface: length, 32.2; width, 15.5; depth, 0.4.

These are irregularly shaped boulders

which do not fit within the categories above. They seem similar to "boulder metate-milling stones" described for Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967: 118, Fig. 98). It is possible that our egg-shaped and irregular metates should be combined into a single category.

Flat Palettes (11 whole specimens, 22 fragments)

Dimensions variable.

These are irregular, unshaped flattish stones which exhibit grinding wear on one flat surface. They are similar to "whetstones" described by MacNeish, Nelken-Terner, and Johnson (1967: 126) from Tehuacan. Twenty-six of the thirty-three specimens from our excavations come from Plaza Central contexts, with 55 percent of the total quantity coming from the Structure 2 complex area. This area, as has been noted, produced the greatest quantity of iron ore fragments found on the site. Some of these iron ore specimens had been ground flat on one surface. However, none of the flat palette-like stones recovered contained any visible traces of hematite pigment.

Bark Beaters

Oval Beaters (3 specimens; Fig. 20.3)

Dimensions in cm: (a) length, 15; maximum width, 13.5; maximum thickness, 7.25; (b) broken length, 11.5; broken width, 10; thickness, 4.5; (c) broken length, 6.7; broken width, 9; thickness, 3.75.

Oval beaters are heart-shaped stones (maximum width near one end of the long axis, with a long taper to the artifact), with striations running parallel to the long axis. On artifact *a* (Fig. 20.3a), the striations are crudely engraved and not quite parallel. On artifacts *b* (Fig. 20.3b) and *c* (Fig. 20.3c) they are better executed. On *a* and *b*, the striations cover a surface area of only about 6 × 4 cm, while on *c*, they run across the entire width of the stone (which is broken, so their length is unknown). Artifacts *a* and *c* have curved surfaces which are striated, while *b* has a flat surface.

Artifacts *b* and *c* are surface finds. Beater *a* occurred in a Cantera phase archaeological context. Although some disturbance was present in the context, it

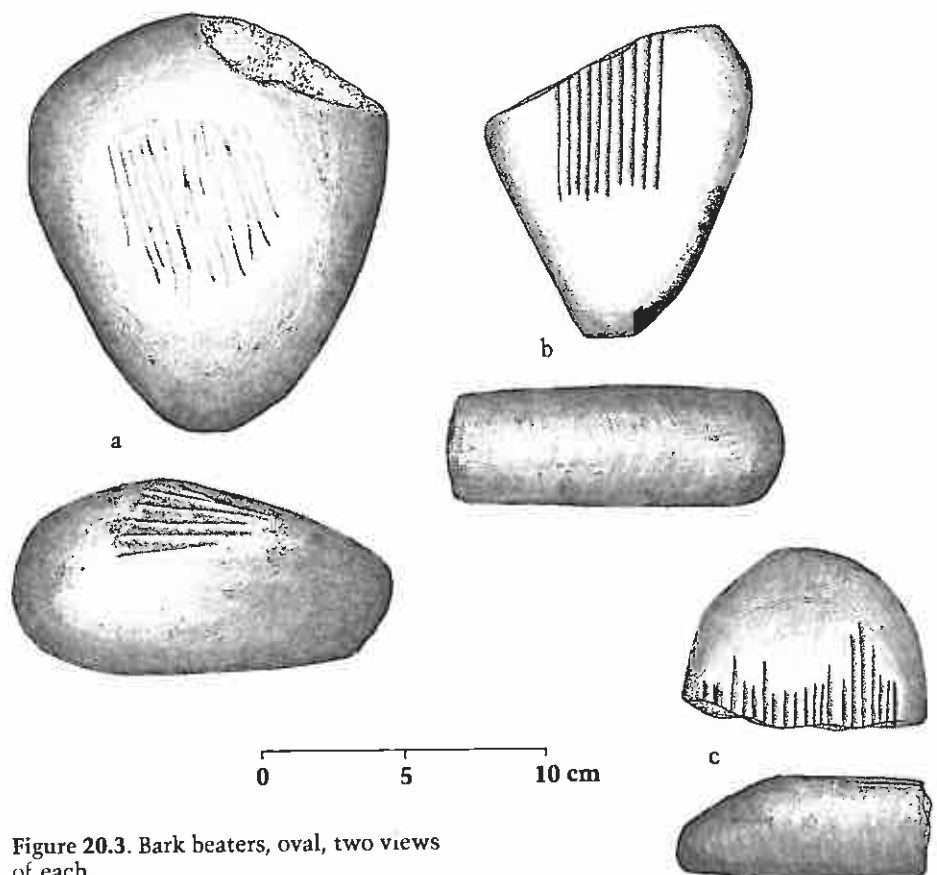


Figure 20.3. Bark beaters, oval, two views of each.

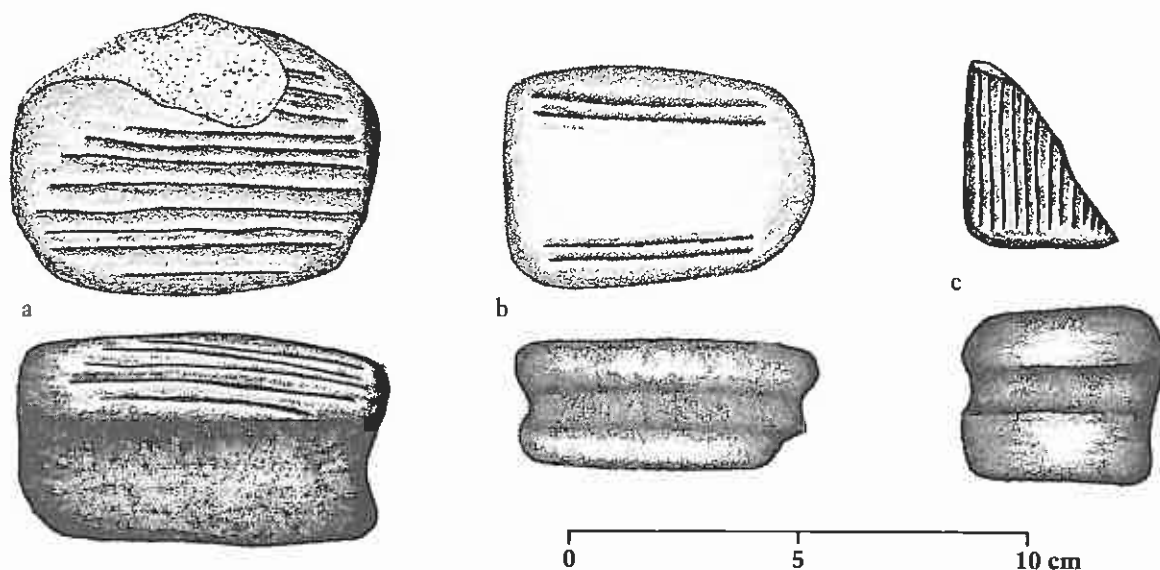


Figure 20.4. Bark beaters, rectangular, two views of each.

is due to intrusive Cantera phase burials. These artifacts could have been hand-held or anvil stones, for no hafting grooves occur such as are found with rectangular beaters (see below). Christine Niederberger (1976: Pl. 30, no. 10) illustrates a striated stone of slightly similar shape from Manantial phase deposits at Zohapilco. If these artifacts are bark beaters, they are the earliest reported for Mesoamerica.

Rectangular Beaters (3 specimens; Fig. 20.4)

Dimensions in cm: (a) length, 8.25, width, 6.25, thickness, 4.8; (b) length, 6.8, width, 4.7, thickness, 2.1; (c) too fragmentary to measure except thickness, 3.8. Hafting groove is 1 cm wide and ca. 4 mm deep.

The form of these three artifacts is typical of Mesoamerican bark beaters. They are rectangular stones which have an encircling groove around their side for hafting [see MacNeish, Nelken-Terner, and Johnson 1967: Fig. 135 for hafted example]. Two artifacts in our sample, *a* (Fig. 20.4a) and *b* (Fig. 20.4b), have parallel striations on both sides, while *c* (Fig. 20.4c) has them on only one side. One striated surface of *a* is flat, and the other is slightly curved. The hafting groove on *a* is wide and shallow, while on *b* and *c* it is a deep channel. Both ends of artifact *a* are worn, as if part of the tip of the beater was used for grinding. Beater *b* has striations on both sides but only along the edges, suggesting that the central striations may have been ground down

through other use of this artifact. Thus, two of the three beaters may also have been used for grinding.

Beater *a* is a surface artifact from the Plaza Central, while *b* and *c* are from Classic period deposits. Bark beaters and their distribution in Mesoamerica are well described most recently by Thomas A. Lee (1969: 129–131), and earlier by A. V. Kidder, Jesse Jennings, and Edwin M. Shook (1946: 143) and Paul Tolstoy (1963).

Smoothing Stones (Fig. 20.5)

Flat Stone with Stub Handle (1 specimen; Fig. 20.5a)

Dimensions in cm: length, 13; width, 9; thickness, 5–6. The “handle” is ca. 4.5 cm in diameter and 6 cm long. It is located two-thirds of the way along the body of the stone.

This is a stone worked into a rectangular shape, with a projecting rounded “handle.” The sides and base are shaped to flat surfaces, although the exterior is only slightly smoothed (rather than ground to a completely smooth finish).

Stones such as this could have been for flat grinding, and there is evidence that these may have been used as plastering trowels as well (Acosta 1964: 56). Although this type of handle is rare on these artifacts, odd-shaped handles do occur (Lee 1969: Fig. 83a; Tolstoy 1971b: Fig. 6h). As Tolstoy points out (1971b: 289), artifacts of this type begin as early as El Arbolillo I and may also occur at Tlatilco. They are not uncommon at

Classic and Postclassic sites. The dating of the Chalcatzingo specimen is Cantera phase.

Flat Stone with Rectangular Handle (1 specimen; Fig. 20.5b)

Dimensions in cm: broken length, 6; width, 6.75; height including handle, 7.25.

Found on the surface of CT-1, this is a fragment of a flat-based rectangular stone, with the upper section sloping up into a vertical handle which runs almost the entire length of the artifact. The handle is slightly convex on both sides, allowing for gripping. This stone is more typical of smoothing stones than the artifact described above, and is like Tolstoy’s “blotter variety” (Tolstoy 1971b: 289, Fig. 6f) which he states is most abundant at Classic sites, and like smoothing stones illustrated by Angel García Cook (1967: Pl. 33, nos. 1, 2).

Flat Stone with Perforated Handle (1 specimen; Fig. 20.5c)

Dimensions in cm: length, 7.75; handle length, 6.75; worn width, 5.75; estimated original width, ca. 7; height, 6.

This is a short rectangular smoother with a rectangular handle which is perforated through to form a rectangular loop. The handle is only 1 cm shorter than the body length. The sides of this artifact taper upward from the base at about 33°, but one side has been worn, apparently through use, into an opposite taper (inward toward the base) of ca. 40°.

This type of smoother is similar to Tolstoy’s “flatiron type” (Tolstoy 1971b:

289, Fig. 6h) but not as well made. The wear pattern, if from use, suggests that the artifact was used for a grinding function rather than for smoothing plaster (a function normally attributed to these artifacts). This specimen is probably Classic period in date.

Flatiron Smoother (1 specimen; Fig. 20.5d)

Dimensions in cm: flat arm length, 5; width, 3.5; thickness, 1.5; rounded arm length, 4; diameter, 2.

This is an L-shaped fragment of stone with one arm wide and flat and the other arm rounded. The surface is generally smooth. It is similar in shape to "flatiron pestles" described from Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967: 85, Fig. 105). This specimen is a surface find and cannot be dated.

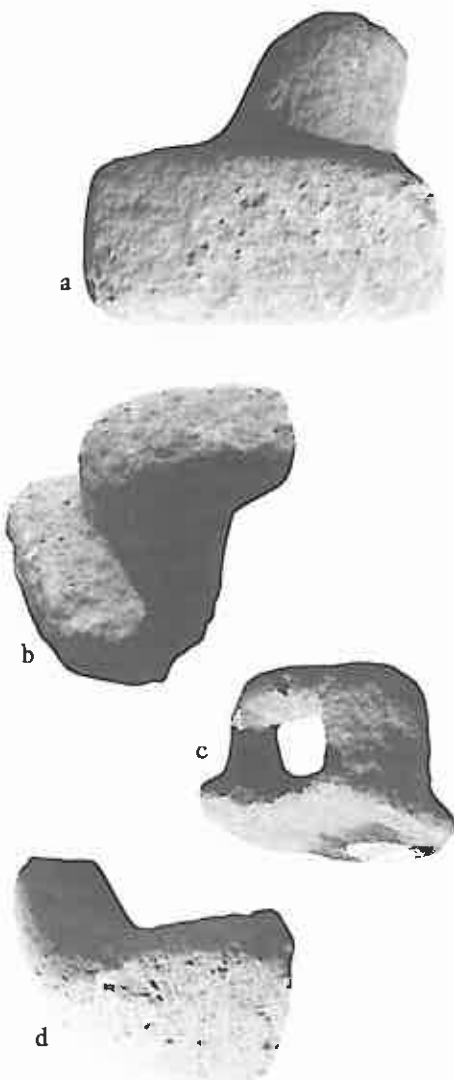


Figure 20.5. Smoothing stones. [Scale varies; see text for dimensions.]

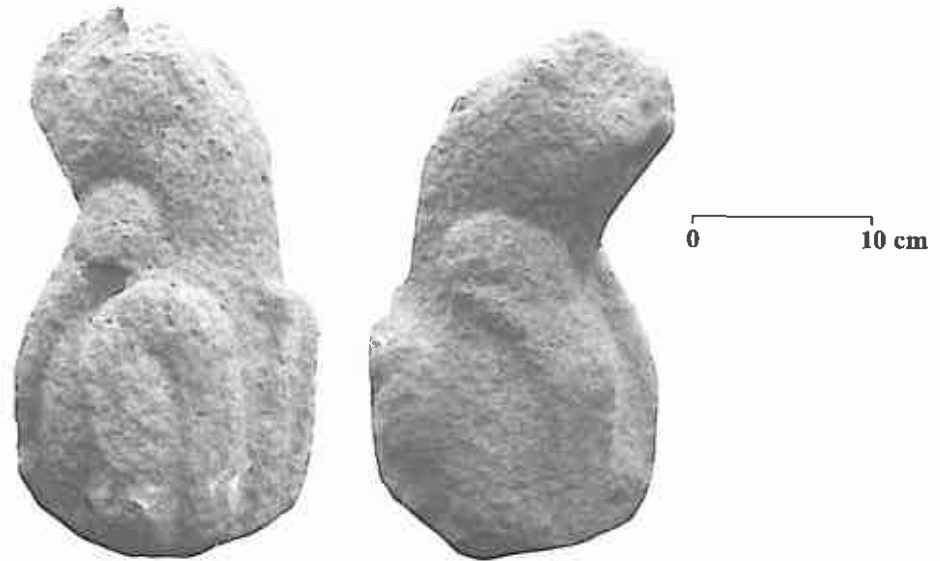


Figure 20.6. Animal sculpture, two views.

PORTABLE SCULPTURE

A variety of artifacts have been placed within the category of portable sculpture. Most of them are stone heads or figurines. Several of the objects, such as the "plug," are more difficult to classify, and their inclusion within this category is highly subjective. To avoid confusion, Formative period sculptures are separated from Classic and Postclassic sculptures.

Formative Period Sculptures

Animal (1 specimen; Fig. 20.6)

Dimensions in cm: height, 30; width and thickness, 15–16.

This small carving depicts a seated animal, presumably a feline or canine. The facial area of the head is broken, but two rounded ears (or bulging eyes) occur near the rear of the head area. A medium-sized tail is depicted running up the animal's back. There are no other known Chalcatzingo carvings that resemble this animal, and no other similar carvings have been reported in the central highlands from this time period, but the known carving sample is small. La Venta Monument 41 (Clewlow and Corson 1968: 175, Pl. 11b) depicts a small carved "jaguar." This indicates that occasional small animal carvings were made on the Gulf Coast during this period. The La Venta piece is similar to the Chalcatzingo carving only superficially: both are stone, both represent animals, and both are in a seated position. The context of the Chalcatzingo specimen on T-25 suggests it is Cantera phase in date.

Cylinder, Carved (1 specimen; Fig. 20.7)

Dimensions in cm: length, 19; diameter, 12.5.

This stone cylinder has one broken end, indicating that it was part of a larger sculpture. A 7 cm wide shallow groove is carved across the unbroken end of this artifact. Such grooves also occur on several other sculptures described below. The circumference of the cylinder is carved with a pair of undulating lines which show similarities to "rattlesnake rattles" of stone carvings from later periods. Below the undulating lines is a line setting this area off from the remainder of the cylindrical shaft.



Figure 20.7. Carved cylindrical object.

Found near Monument 22 (the altar) on T-25, the artifact comes from a Cantera phase context which predates the altar.

Figurine (1 specimen; Fig. 20.8a)

Dimensions in cm: height, 8; maximum width, 7.25; maximum thickness, 6.

This small anthropomorphic figure is missing its head and arms. The body is fairly naturalistic and is executed in a squatting position. The surface is granular and semi-smoothed. Dating of this figure is uncertain since it occurred in a mixed Cantera phase–Classic period level on T-11.

Figurine (1 specimen; Fig. 20.8b)

Dimensions in cm: broken height, 9; width at hips, 6.5; thickness, 3.

Unlike the other stone figurines described here, this figurine is very similar in its execution to the bodies of the Middle Formative ceramic figurines recovered during our excavations [see Chapter 14]. This figurine is fragmentary, lacking the head and one arm. Its surface is granular and only partially smoothed.

Three-Section Figurines (3 specimens)

(a) (Fig. 20.8c). Dimensions in cm: height, 10; width, 4; thickness, 6.

This is a crude, oval anthropomorphic figure. The surface is granular and unsmoothed. Two pecked grooves circle the body, delimiting the head, torso, and lower body area. No arms or legs are shown, but a very simple face is depicted primarily by a nose and shallow eyes.

Although this particular figurine comes from a surface collection on T-4, it is very similar to figurine *b* (below) which was found in a good Cantera phase context. Thus figurine *a* is probably also a Cantera phase artifact.

(b) (Fig. 20.9d). Dimensions in cm: height, 10.5; maximum width, 7; maximum thickness, 7.5.

This is apparently a zoomorphic figurine, since the head appears as a long snout, with the eyes far back on the head. Nostrils and a small mouth are also shown. The surface is granular and unsmoothed. Two deeply pecked grooves circle the body, setting off the head, torso, and leg areas (as in figurine *a*). Small grooves on the figurine's front delimit fore and hind limbs.

This artifact was found within a layered Cantera phase trash deposit on T-21. A radiocarbon date from this deposit [N-1950] provided a date of 830 ± 85 BC, which is consistent with our other Cantera phase dates (see Chapter 5). Although only figurine *b* out of the

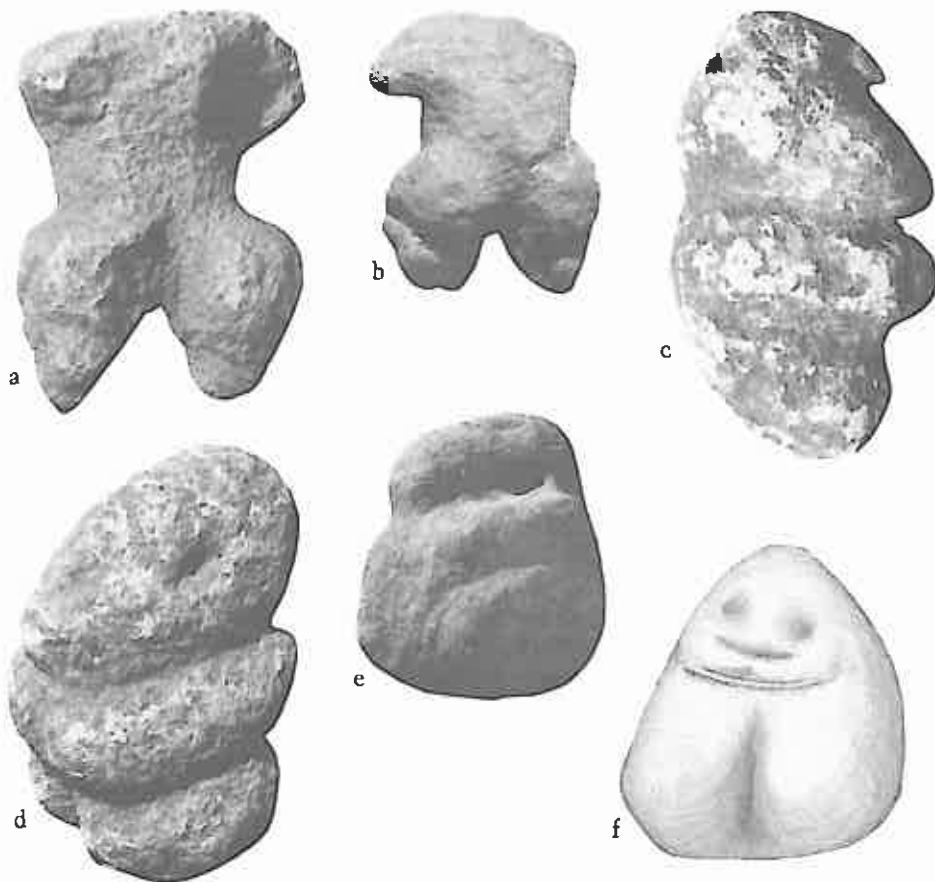


Figure 20.8. Carved figurines. (Scale varies; see text for dimensions.)

three comes from a good archaeological deposit, figurines *a*, *b*, and *c* suggest that three-section oval or roundish crude stone figures may have been relatively common during the Cantera phase. No figurines of comparable antiquity are illustrated from other central Mexican sites.

(c) (Fig. 20.8c). Dimensions in cm: height, 7; maximum width, 6.75; maximum thickness, 5.5.

This oval figurine found on the surface of N-7 is shorter and wider than figurines *a* and *b*, but like them is divided by pecked grooves into three sections. The face has the eyes set well back, leaving a long, snout-like face. Legs are depicted by shallow grooves along the figurine's sides.

Pebble Figurine (1 specimen; Fig. 20.8f)

Dimensions in cm: height, 5.5; maximum width, 6; maximum thickness, 5.

This figurine is simply a large pebble, only slightly reworked to create a crude zoomorph by adding a face and taking advantage of the natural contours of the

pebble. The back of the stone appears broken, but it is difficult to tell if this break took place before or after the simple face was added. If this artifact had not occurred in a subfloor trash pit feature within the site's elite Cantera phase residence, PC Structure 1, it would be tempting to view it as a recently made "joke" due to its simplicity and crudeness.

This figurine, together with the three-section figurines, indicates that crude stone figures were present on the site during the Cantera phase in both elite and non-elite areas.

Handstone (1 specimen; Fig. 20.9)

Dimensions in cm: length, 24.5; height, 19.5; width, 9.5.

The artifact is a three-quarter round stone circle with a carved-out handle offset to one side. The base of the carving is not flat but lightly undulating (shallow undulating grooves perpendicular to the object's long axis). The stone was found associated with Cantera phase PC Structure 2.

Objects of this type occur primarily along Mexico's Gulf Coast and in southern Mesoamerica. They are frequently described as ball game handstones, and are well discussed by Stephan F. de Borhegyi (1961; 1967). Although they generally occur in Late Classic period contexts, a Late Formative example is mentioned by Lee (1969:149); C. W. Weiant (1943:119) identifies "sling stones" with loop handles from the Ranchito zone of Tres Zapotes (undated context); and Borhegyi (1967:Fig. 2a, 2b) illustrates a circular stone ball with a loop handle from La Venta. This last is possibly a Middle Formative carving and thus contemporaneous with the Chalcatzingo example, although in form the two are not similar. In form the Chalcatzingo specimen is more similar to the Veracruz "padlock stones" illustrated by Miguel Covarrubias (1957:Fig. 72, second row) and to a more crudely made handstone from Kaminaljuyu, Guatemala (Borhegyi 1967:Fig. 7, no. 4).

The function of "padlock stones" is still unclear. That some objects of similar form may have been used in ball games in the Classic and Postclassic periods is clear from carvings and figurines (Borhegyi 1967), but, as others have pointed out, there are no data to suggest that heavier stone objects of the general form depicted as carried by ball players necessarily functioned in the same manner. This would be particularly true of Formative period examples. While some form of the rubber ball game was probably played on the Gulf Coast, possibly even in formal ball courts by the late Middle Formative (Coe 1970:29; Wyshak et al. 1971), there are no data to suggest that the Chalcatzingo handstone was necessarily connected to this.

Borhegyi (1967:215–216) has suggested that the "knuckle dusters" carried by individuals and some supernaturals in Olmec carvings may be similar in form and function to ball game handstones. Since they are carried at times by supernaturals, and since in form they are really dissimilar to known handstones, I see no validity to that argument based upon our present data. It should be mentioned that La Venta Monument 19 (P. Drucker, Heizer, and Squier 1959:198) depicts a seated individual holding an object which is similar in general form to the La Venta handstone illustrated by Borhegyi (1967:Fig. 2a, 2b), although no function can be ascribed to the object except that by context it does

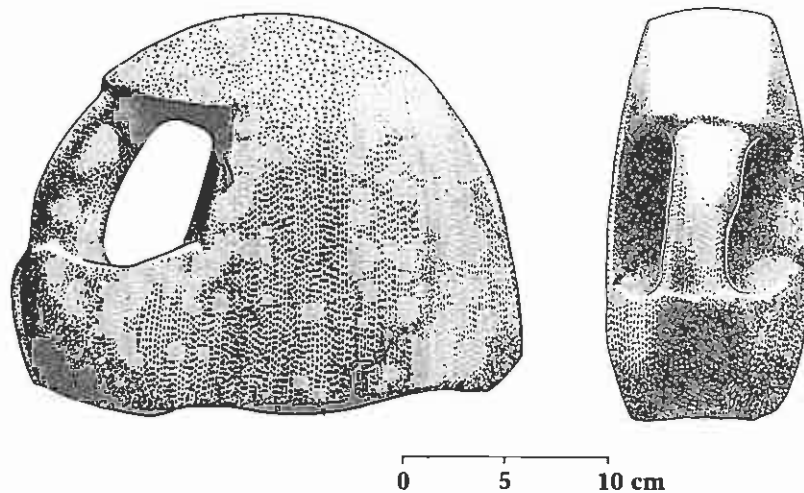


Figure 20.9. "Candado" handstone, two views.

not appear ball game related. Finally Weiant (1943:119) suggested that the Tres Zapotes "sling stones" functioned for "ironing" or smoothing. If such were the case for the Tres Zapotes artifacts, it does not appear to have been the function of the Chalcatzingo handstone because of its undulating base.

Rectangular "Plug" (1 specimen; Fig. 20.10)

Dimensions in cm: height, 32; maximum width of shaft, 16, tapering to 12. Base: length, 20; width, 20; thickness, 10.

This artifact is broken in two pieces. One end is a large square with rounded corners. A tapering rectangular shaft extends from this larger square section. The other, smaller end of the carving is flattish, but with a 7 cm wide shallow groove running across it.

This artifact was found during exploratory trenching of the T-15 earthen water control dam in a context which suggests that it postdates the dam construction. Dating is therefore uncertain, but it is probably Formative period. A similar stone "plug" found on the site is in the possession of a Chalcatzingo villager. La Venta Monument 43 (Clewlow and Corson 1968:175, Pl. 11c), while cylindrical, has a similar form.

"Yuguito" Fragment (1 specimen; Fig. 20.11a)

Dimensions in cm: external diameter, ca. 15; internal diameter, ca. 8.4; width, 12.5; external circumference of broken section, 16.5.

This fragment appears similar in shape to Formative period stone "yuguitos"

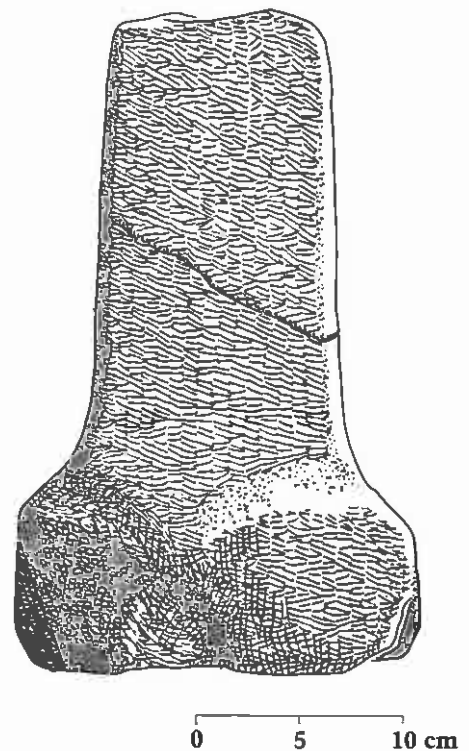


Figure 20.10. Rectangular "plug."

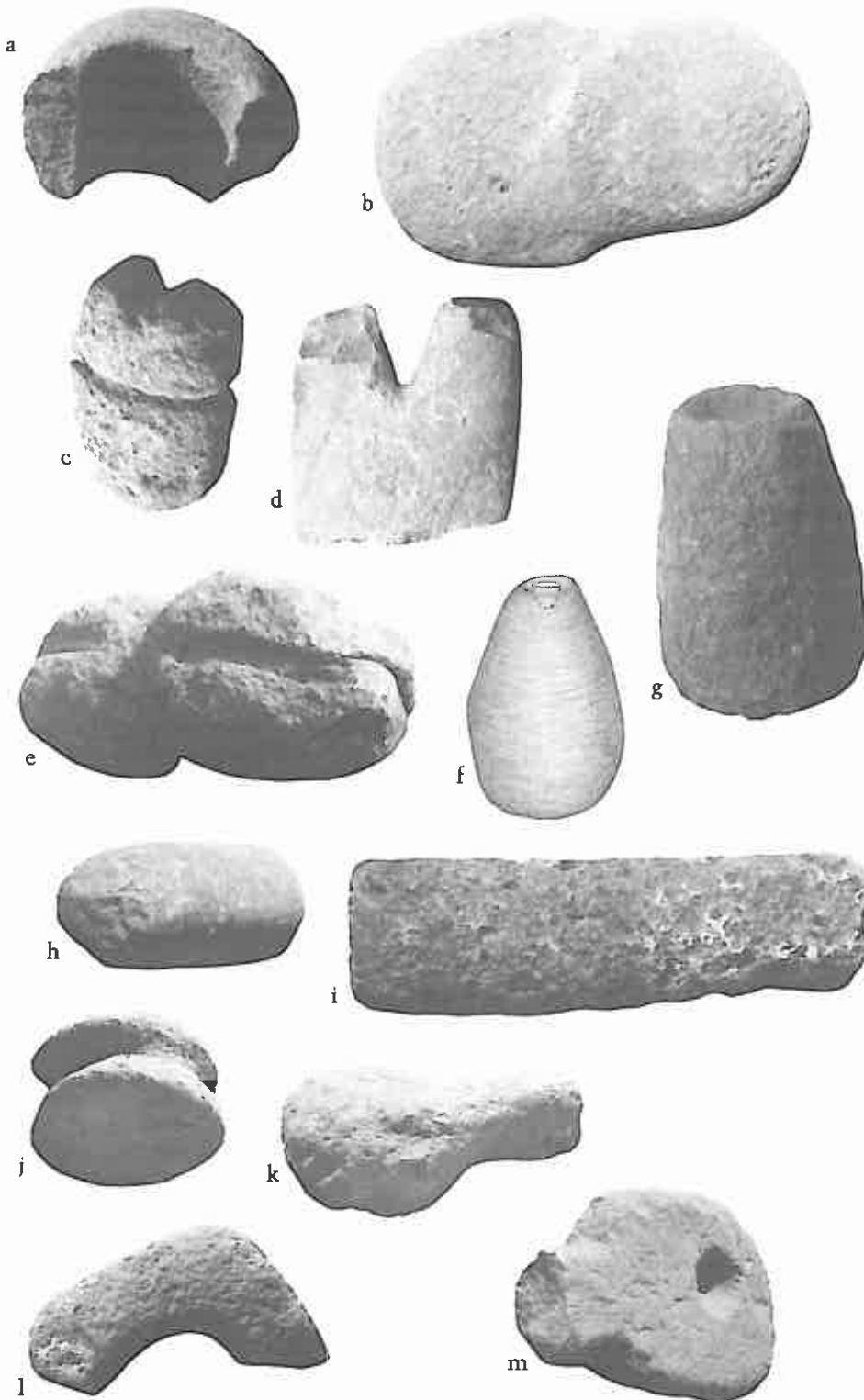


Figure 20.11. Miscellaneous stone objects: *a*, "yuguuto"; *b*, T-shaped "axe"; *c*, V-notched stone; *d*, fragmentary V-notched stone; *e*, bi-lobed grooved stone; *f*–*g*, conical stones with perforated tops; *h*–*i*, cylindrical rods; *j*, disc; *k*, hammer stone; *l*, rectangular perforated stone fragment; *m*, unidentified stone object with ground depression. (Scale varies; see text for dimensions.)

(small yokes). It is undecorated but very well executed. The surface has been ground smooth. For purely descriptive reasons, it can be said that if the fragment were continuous, it would have formed a stone cylinder or "bead" with an outer diameter of ca. 15 cm and an inner diameter of ca. 8.4 cm. In transverse section the outer surface of the stone is slightly rounded from end to end, while the surface is relatively flat. There are no data to suggest the original complete form of this artifact. Both ends are broken. It is Cantera phase in data and was associated with PC Structure 2. **"Winged Phallus" (1 specimen; Fig. 20.12)**

Dimensions in cm: height, 32; maximum diameter, 22. The cap tapers in thickness from 6 to 4 cm.

This unusual artifact, somewhat reminiscent of Guatemalan mushroom stones, has a slightly tapering vertical body which ends in a truncated conical cap (tapering horizontally from front to back). The cap is lightly grooved on one side, lending a phallic appearance to the cap and the carving as a whole. The top of the cap is flattish and has a smoothed surface, indicating that the cap was purposely carved and not broken into the truncated form. The unusual feature of the carving is a pair of raised wing-like elements on the body. The base of the carving has a wide, rounded, shallow groove running from front to back. Such shallow basal grooves are a feature on several other specimens discussed in this chapter.

Aside from some vague similarities to mushroom stones, no similar carvings in this form are known from Formative period Gulf Coast, Chiapas, or central Mexican highlands. The wing-like elements and the flattish cap suggest that the carving is not a mushroom stone, nor is it a reworked mushroom stone. There is no evidence to suggest that this carving is in anything other than its original form. The carving was found at the base of a trash pit which occurred in a sub-floor level of PC Structure 1, which dates to the Cantera phase.

Classic Period Sculptures

"Flower" (1 specimen; Fig. 20.13a)

Dimensions in cm: maximum diameter, 21; thickness, 6.5; diameter of central hole, ca. 5.

This sculpture is in the form of two concentric circles from which emanate four petal-like lobes. The overall form is

circular. The "flower's" center is a hole which passes through the carving. Each "petal" has a raised edge. This limestone artifact was found broken within a Late Classic trash pit intruded into the T-6 platform structure.

Tlaloc Head (1 specimen; Fig. 20.13b)

Dimensions in cm: height, 15; width, 13; thickness, 10.

This is a crude, oval, coarse-surfaced stone Tlaloc head. The eyes are crudely executed depressions ringed by engraved circles. The nose is bulbous and protruding. The upper vertical line of the mouth extends almost completely across the lower section of the face, while below it seven vertical lines extend to the base of the stone. All lines are crudely engraved. A circular depression is pecked into the central area of the vertical lines, and perhaps once could have held a small greenstone inset. The bottom of the head is slightly flattened.

This head was found in association with the site's Late Classic circular pyramid. Such pyramids are normally considered to be affiliated with the wind god, and thus the Tlaloc association can be considered unusual. It is likewise unusual to find a Tlaloc head with a concavity apparently for the inset of a greenstone.

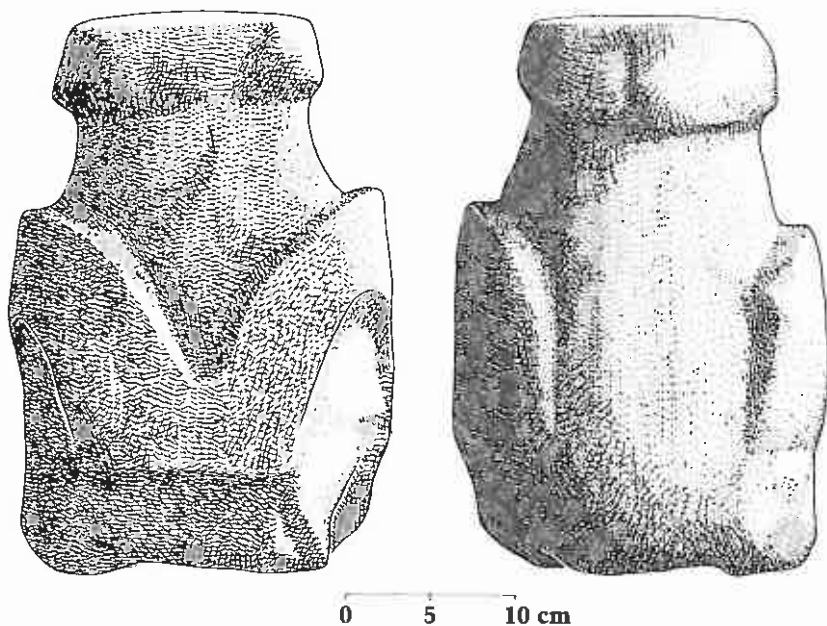


Figure 20.12. "Winged phallus," two views.

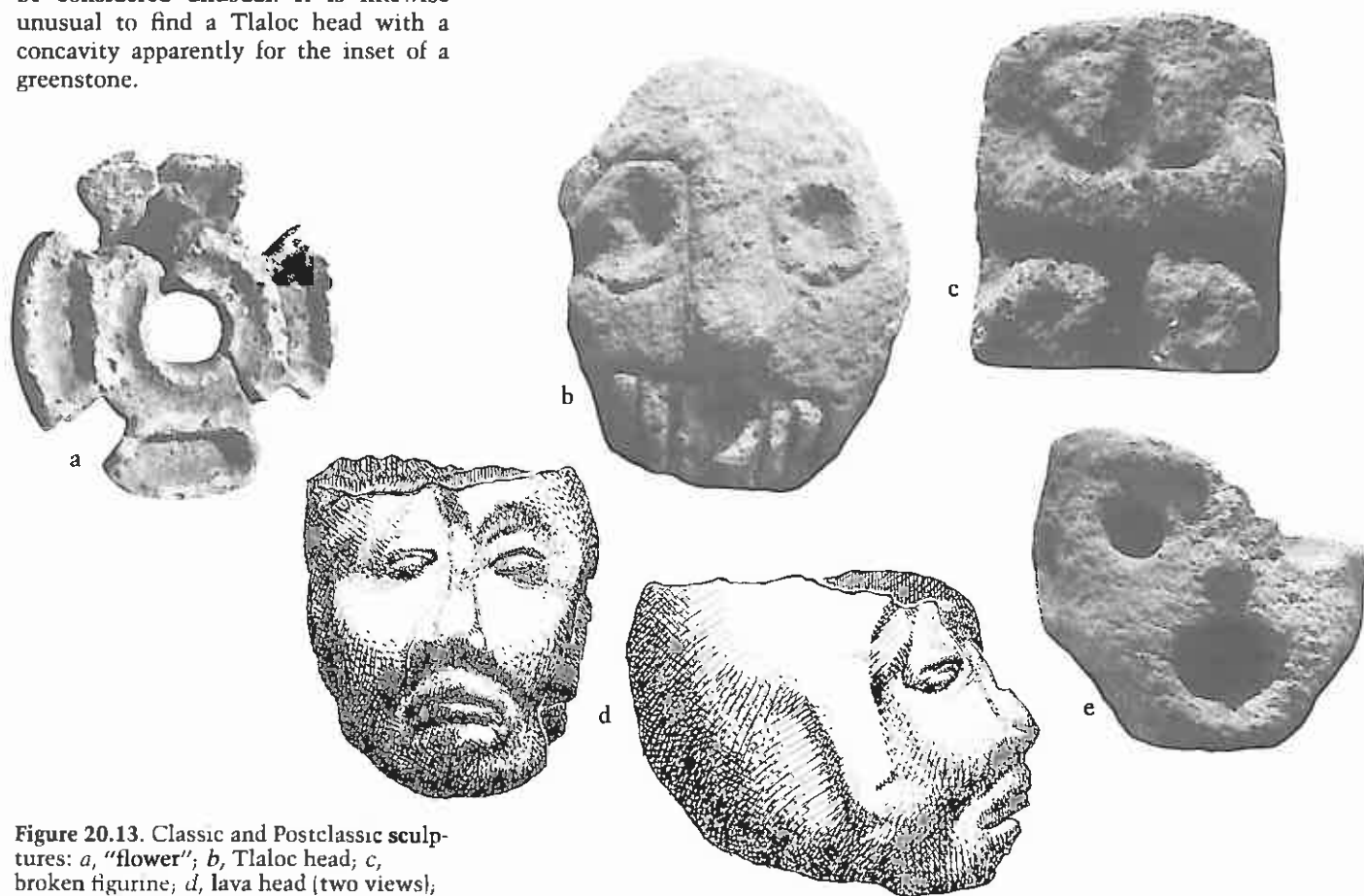


Figure 20.13. Classic and Postclassic sculptures: *a*, "flower"; *b*, Tlaloc head; *c*, broken figurine; *d*, lava head (two views); *e*, stone head. (Scale varies; see text for dimensions.)

Postclassic Period Sculptures**Figure (1 specimen; Fig. 20.13c)**

Dimensions in cm: height (broken), 23; width, 19; thickness, ca. 9.

This blocky, rectangular, headless female statue has a rough surface, unsmoothed. Two breasts, simple arms held across the midsection, and two blocky legs are depicted. This sculpture is similar stylistically to Postclassic carvings from central Mexico.

Heads (2 specimens)

(a) (Fig. 20.13d). Dimensions in cm: height (broken), 10; width, 10; depth, 12.

This head of dark igneous stone is a single carving and not originally part of a statue. No neck area is represented. The forehead and top are broken and missing, but this break has the same color and weathering as the majority of the carving and thus is probably quite old. However, a relatively fresh break has destroyed a section of the right rear side of the head. The head is long and relatively narrow; the features are sharply defined. The ear area is covered by hair or a helmet. Stylistically this carving is Postclassic. H. B. Nicholson (personal communication) has noted similarities of this sculpture to representations of the Aztec deity Xochipilli.

No other carvings of this sophistication and style have been reported (or seen by us in villagers' collections) from the site. The carving was found on the surface while we were preparing to photograph the newly uncovered Monument 12. Much of the surrounding fill had Postclassic sherds, again suggesting that this head, if originally part of the slope wash in that area, is Postclassic.

(b) (Fig. 20.13e). Dimensions in cm: height (broken), 21; maximum width, 23; thickness, 16. Facial features: mouth diameter, 7; eye diameters, 5–6.

This broken simple sculpture of a human head is relatively flat. The eyes and mouth are deep ground depressions, giving the face the vacant stare of Xipe representations. The nose protrudes slightly. A raised eyebrow area occurs over the right eye. The entire forehead and part of the left eye have been broken off. Low relief carved ears occur on both sides of the head. A large carving with similar eye and mouth treatment was in the possession of a Chalcatzingo villager.

This carving was found on the surface of a small mound at the summit of the Cerro Delgado. Although this mound was not test-excavated, surface collections and test excavations of other areas of

the upper Cerro Delgado indicate Middle Postclassic activities in that site area. It is therefore probable that this head is Middle Postclassic in date.

MISCELLANEOUS ARTIFACTS

Artifacts placed within this miscellaneous category are of unknown or dubious function. Unless otherwise noted, all artifacts are manufactured from igneous rock. Most of these objects date to the Formative period.

"Awl" (1 specimen)

Dimensions in cm: length, 7.5; width, 2; thickness, ca. 0.5.

This artifact, from a Cantera phase level on T-24, is flat and thin with a tapering rounded point. Its rounded tip may be wear-related. It is similar in general shape to chipped stone "perforators" (e.g., García Cook 1967: Pl. 30), although this is ground stone. The thinness of the artifact indicates that it could not have been used with great pressure.

"Axe, T-Shaped" (1 specimen; Fig. 20.11b)

Dimensions in cm: length, 24.5; body width, 12.5; maximum width of rounded flaring head, 14.5; maximum thickness, 7.5.

This is a large, well-made stone artifact whose surface has been ground relatively smooth. The artifact has an oval shape which slightly flares to a rounded T shape at one end. In cross-section both length- and widthwise, the artifact is an elongated oval.

The function of this piece is unknown. No clear wear marks occur. Its context on T-23, near a fragmentary wall line and adjacent to Cantera phase house walls, does not help indicate function but does date this object to the Cantera phase. The artifact has a smoother surface than most stone artifacts discussed.

Axe-like, V-Notched Stone (2 specimens)

(a) Complete axe-like stone (Fig. 20.11c). Dimensions in cm: length, 5.25; maximum width, 3.2; maximum thickness, 2.4; maximum notch depth, 0.5.

This small stone artifact is similar in general shape to "Olmec" axes in that one end is notched by a V-shaped groove. The object, in frontal view, tapers slightly from the wide, notched end. However, in side view there is little taper, and in this regard it is dissimilar to Olmec celts and axes. The surface is granular and only slightly smoothed. A groove runs across both sides and the front of the object

1.75 cm from the notched end, exactly one-third of the way from that end to the other. The notched end is flat, and the stone can stand upright when placed on it, while the opposite end is rounded.

No similar artifacts other than notched "celts" and "axes" are published for the Middle Formative. It may be that this artifact had a symbolic function. The notched celts may be symbolically similar to the notched fangs which emerge from the mouths of various Olmec supernatural. A similar motif, a group of three notched elements, appears at the tip of the tail of the lower jaguar on Chalcatzingo Monument 4 (see Chapter 9). This specimen was recovered from the T-24 Cantera phase structure.

(b) Fragmentary notched stone (Fig. 20.11d). Dimensions in cm: broken length, 6.5; width, 6; thickness, 2.

This artifact is a fragment of an axe-like stone, found on the surface of T-9. It has a deep (2 cm deep, 2 cm wide) V-shaped notch at the unbroken end. The sides of the artifact are tapered (unlike artifact *a* described above), and the surface has been ground smooth. It is much better made than artifact *a*. While it is similar to Olmec celts, no engraving occurs on this piece. It is possible that the notch had some type of functional use, for the base of the notch is U-shaped and appears to have been ground or worn into this shape. But this wear may be related to the manner in which the notch was cut and the entire artifact smoothed rather than to artifact function. Possible symbolism of the notched axe is briefly discussed with artifact *a* (above).

Balls (56 specimens)

Dimensions in cm: diameters, 2.5–5.

These small stone balls do not have any differential grinding or smoothing on one surface to indicate that they may have functioned in grinding. The majority are made from vesicular basalt.

The distribution of stone balls at Chalcatzingo is interesting. Most occur in Cantera phase contexts but range from the Barranca to the Postclassic. Over half were found in association with Cantera phase structures on the Plaza Central, the ceremonial area of the site. Eleven balls come from excavations in the high caves on the Cerro Delgado and are primarily Early Postclassic in date.

Similar stone balls are found at many Formative period sites, including Middle and Late period Zacatenco, Period II and Late period El Arbolillo, and all periods at Ticoman (Vaillant 1930: Pl. 45, Table I;

1931:305, Pl. 89; 1935:243, Table 21), and equivalent phases at Zohapilco (Niederberger 1976:78, Pls. 29, no. 8, 31, no. 13).

Bi-lobed Grooved Stone (1 specimen; Fig. 20.11e)

Dimensions in cm: length, 21; width, 11; thickness, 9.

This unusual artifact is from a Cantera phase context on PC Structure 4. It is a very crudely shaped oval bi-lobed stone. Its surface is irregular, but some smoothing has been carried out. When viewed from the front, the artifact's general shape is that of a bi-lobed axe. However, the side view shows the stone to be thick, with little tapering toward the edges.

The unusual feature of this stone is a flat, shallow, ca. 1 cm wide groove which completely circles the stone's lateral edge, essentially bisecting the artifact. This groove follows slight undulating concavities in the stone's surface, indicating that the groove was cut purposely and is not the result of functional wear. The bi-lobed effect is caused by a wide, deep pecked and ground groove running at right angles to the artifact's long axis. This groove passes through the shallow flat groove, and therefore was cut following the engraving of the shallow groove.

Conical Stones with Perforated Tops (2 specimens)

(a) (Fig. 20.11f). Dimensions in cm: length, 6.25; diameter, 4; hole diameter, 1; hole depth, 1.

This small, egg-shaped stone with a shallow hole drilled into its narrow end was found in the T-9B Barranca phase house structure. Its surface is relatively rough.

(b) (Fig. 20.11g). Dimensions in cm: height, 20; maximum diameter, 14; minimum diameter, 10; concavity diameter, 9; depth, 1.5.

This granodiorite artifact is a tapering cylinder with a concave depression ground into the narrow end; the wide end is flat. The surface is smoothed. Dating is uncertain because the artifact comes from a mixed Middle Formative–Classic period deposit on T-24.

Artifacts *a* and *b* are similar in form but not in size nor apparently in function. The upper hole in *a* is small and appears to have been drilled. The upper concavity of *b* appears to have been made by grinding. The form of artifact *b* is similar to that of certain pestles, but there are no data to suggest it served such a function.

Cylindrical Rods (2 specimens)

(a) (Fig. 20.17h). Dimensions in cm: length, 16; diameter, 5.5–6.5.

This artifact is a cylindrical rod with one rounded and one flat end. The side surfaces are ground very smooth. Its context on T-4 is mixed Middle Formative–Classic period. Somewhat similar cylinders are shown from the Francesa phase at Chiapa de Corzo (Lee 1969: Figs. 103d, e, 104c), and described as “manos” at Tehuacan (MacNeish, Nelken-Terner, and Johnson 1967: Fig. 93, top and center) and La Nopalera (García Cook 1967: Pl. 38, no. 3). The rounded tip of the Chalcatzingo artifact is battered, suggesting that it was used at one time for pecking or hammering.

(b) (Fig. 20.11i). Dimensions in cm: length, 35; diameter, 9.5.

A relatively cylindrical rod with a slight taper and generally flat ends, this artifact has a rough surface. The roughened surface indicates that the object did not function as a grinding implement. It was found in the excavations of PC Structure 1 and is Cantera phase in date.

Discs (4 specimens)

(a) (Fig. 20.11j). Dimensions in cm: diameter, 6.75; thickness, 4.5; encircling groove width, 2.

This circular stone disc with slightly convex top and bottom is fully grooved around its diameter. It resembles a stone yo-yo. Its surface is fairly smooth. In general shape this artifact is similar to stone mauls or hammers (García Cook 1967: Pl. 41, nos. 2, 3; MacNeish, Nelken-Terner, and Johnson 1967: Fig. 109). MacNeish, Nelken-Terner, and Johnson (1967: 130) mention that Tolstoy recovered a maul of this shape from El Arbolillo 2. The Chalcatzingo example shows no wear marks from pounding or grinding and is considerably thinner and flatter than the described examples. It was found on T-23 in a Cantera phase context.

(b) Dimensions in cm: diameter, 10.5; thickness, 3.5.

A circular stone disc, this artifact has flat ground surfaces and lightly rounded edges. A shallow, small hole has been pecked into the center of the disc on each side. A similar disc with pecked central holes is reported from Zohapilco's Ayotla and Manantial phases (Niederberger 1976: Pl. 30, no. 4). Niederberger (1976: 75) suggests that these discoidal stones may have served as both grinding stones and anvil stones, but I am not convinced that the Chalcatzingo

artifact functioned in that manner. Because it was found during the T-27 excavations in a Cantera phase area with Late Formative intrusions, this artifact is probably Cantera phase, although the possibility exists that it might be Late Formative.

(c) Dimensions in cm: diameter, 12.5; thickness, 4.5; maximum diameter of tapered perforation, 6; diameter of hole, 2.

This fragment is half of a circular stone disc with tapered perforations on each side. The tapered perforations meet to form a hole ca. 2 cm in diameter. The edges of the disc are rounded.

The function of this artifact is difficult to determine. It is similar in form to stone “rings” illustrated from Tres Zapotes (Weiant 1943: Figs. 2–3, 5–7) and to the Classic period “club head” from Teotihuacan illustrated by Tolstoy (1971b: Fig. 105). Stones of this form could also have functioned as digging stick weights. This artifact was found on the surface of T-9B, and thus the dating is uncertain. Surface artifacts from T-9 are primarily Barranca and Cantera phase. Barranca phase artifacts are generally from the northern (B) area of the terrace.

(d) Fragment. The curvature of the finished (serrated) edge suggests that if this were part of a disc, the diameter would have been ca. 17 cm.

This Barranca phase artifact was found in the PC trench excavation and is a small fragment of what appears to have been a stone disc with a thinner, serrated (notched) edge.

Hammer Stone (1 specimen; Fig. 20.11k)

Dimensions in cm: length, 13; width (diameter of circular area), 7.5; thickness, 4.

In front view, the artifact appears circular with a long tapering “handle,” but it is nearly flat in side view. The surface is unsmoothed. Its shape and battered edges indicate that it may have functioned as a hammer stone. Uncovered in the PC Structure 5 excavations, it is Cantera phase in date.

Oblong, Polished Stones (5 specimens; Fig. 20.14)

Dimensions in cm: length, 1.9–5.1; width, 1.9–2.4; thickness, 0.7–1.6.

These are small, oblong stones with highly polished surfaces. Most of them are oval in cross-section. They may be similar to the *bruñidores* (polishing stones) from Formative period contexts at Zohapilco (Niederberger 1976: 77–78, Pl. 31, no. 12) and to those described by Lee (1969: 152, Fig. 108a) from Guana-

caste-Horcones phase levels at Chiapa de Corzo. However, there are a variety of ways in which the surface of these small stones could have become polished.

One stone is from a Barranca phase context, three are from Cantera phase contexts, and the fifth is from a possible Classic context.

Rectangular Perforated Stone (1 specimen; Fig. 20.11)

Dimensions in cm: length of complete side of rectangle, corner to corner, 11.75; interior to exterior dimension, 4.5; thickness, 4.5.

A fragment of a rectangular stone with slightly rounded sides, this artifact's center area has been ground out to a diameter of ca. 5–6 cm, leaving a hollow rectangle. It could have functioned as a rectangular handle for some implement, including a "ball game handstone" object. In form it is similar to "flat-iron pestles" described from the Tehuacan Formative (MacNeish, Nelken-Terner, and Johnson 1967: 105), although it does not have a wide smoothing area.

The dating of this artifact is uncertain. It was found on the surface of PC Structure 4, the large Middle Formative platform mound. Thus, it could be Cantera phase in date. However, it is also near the Classic period pyramid and a Classic period pavement.

Unidentified Stone (1 specimen; Fig. 20.11m)

Dimensions in cm: length, 10.5; width, 9; thickness, 4.5; length of broken "handle," 2.5; diameter of handle, 3.

This is a flat, relatively rectangular stone slab, with a short (broken) handle at one end. Ground into the surface of the slab is a circular depression, ca. 2.5 cm in diameter and ca. 2 cm deep. The surface of the slab has been ground relatively flat. The sides are crudely pecked and ground to a rough convex shape. There are other stone artifacts (and sherds) with shallow depressions. A possible functional use for some of these is as a bearing for some type of rotating implement. In this instance the stone slab could be held by the handle over (or under) the rotating shaft. If this interpretation is correct, this "bearing stone" may be part of an artisan's tool kit. This artifact is from a mixed Formative-Classic context.

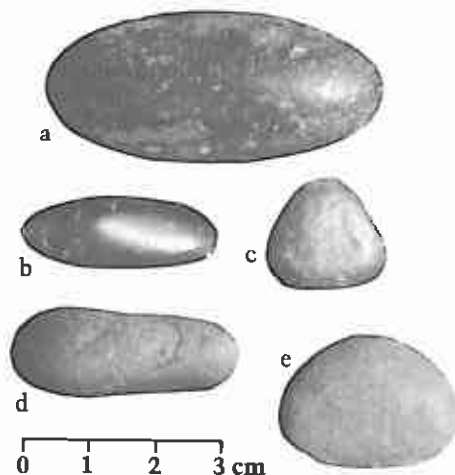


Figure 20.14. Small polished oblong stones.

RESUMEN DEL CAPÍTULO 20

Los artefactos de piedra corriente recuperados en Chalcatzingo se clasificaron en tres categorías con propósito descriptivo: utilitarios, misceláneos (i.e., función no identificable), y escultura. La categoría utilitaria incluye manos, metates, raspadores, y pulidores. Aun cuando algunos patrones temporales o espaciales lograron ser revelados mediante el análisis de estos artefactos y sus distribuciones, resulta interesante notar que más del 50 por ciento de las manos estaban rotas, quizá a propósito, y el 23 por ciento de todas las manos provienen de PC Str. 2, una estructura en la cual parecen estar ausentes otras indicaciones de haber existido actividades domésticas. La mayoría de las herramientas para la preparación de alimentos se hicieron de piedra graneada fina proveniente de la barranca, en tanto que las esculturas son fundamentalmente de granodiorita proveniente de los cerros.

La categoría escultura portátil es muy diversa e incluye ejemplos tanto de orden representativo como del no representativo. Los objetos se fechan desde el Formativo hasta el Postclásico. Entre los grabados sobresalientes del Formativo se encuentra un animal (felino o canino), una piedra de mano semejante a las asociadas con el juego de pelota mesoamericano, un "yuguito," y un "falo-alado" semejante a los hongos de piedra. La escultura Clásica y Postclásica incluye varias cabezas, entre las que se encuentra una con los atributos de Tlaloc.