

A HUAQUERO'S DISCARD: ELEVEN ASSOCIATED MOLDS FROM  
HUACA FACHO, PERU

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In 1904 Mrs. Charlotte Uhle purchased 138 molds from a huaquero who claimed to have found them at the site of La Mina in the Chancay Valley.<sup>1</sup> These molds, which have never been described in print, are presently in the Robert H. Lowie Museum of Anthropology. In the same year Max Uhle excavated five grave lots from the site of La Mina which were described by Kroeber as belonging to the Chancay Black on White or Late Chancay style.<sup>2</sup> Several of the molds collected by Mrs. Uhle reproduce vessel forms found in her husband's grave lots and therefore can be identified as belonging to the Chancay style of the later part of the Late Intermediate Period. Until this year these Chancay molds represented the only group of molds from the Peruvian area with site associations.<sup>3</sup> In July of 1968, Christopher B. Donnan and I made a ten day trip into the Lambayeque Valley in order to study a facade of twenty murals which James A. Ford had partially recorded at the site of Huaca Facho in 1958. While at this site we found eleven ceramic molds which, although a surface find, were associated and form a unit of contemporaneity.<sup>4</sup> These molds are instructive for two reasons: first, they illustrate a unique example of archaeological association; and second, they provide another footnote to our understanding of ceramic technology. This report includes a description of these molds, a discussion of their technological implications, and a tentative proposal as to where they fit into the chronology of the north coast of Peru.

The site of Huaca Facho is located approximately twenty-five kilometers north-northeast of the city of Chiclayo. It is on the Hacienda Batan Grande, and is about five kilometers northwest of the four large adobe structures which are generally referred to as the Batan Grande Group.<sup>5</sup> Huaca Facho is a large artificial mound, with numerous graves in the immediate vicinity. This site, as well as the whole Batan Grande complex, is situated amidst an algarrobo forest consisting of a thick tree cover in a dry and sandy soil, thinly covered with grass and shrubs. In his surveys of the north coast, Kosok describes this vegetation as a desert jungle.<sup>6</sup>

The immediate area about Huaca Facho reflects the extensive digging of the local huaqueros. Hundreds of vertical-sided square pits cluster around the mound in random orientation. The huaqueros dig a square pit, find traces of tombs in the wall profiles and burrow in to the tombs from the side. Whole vessels and sherds litter the surface throughout the looted area. A random surface collection yielded Moche V stirrup spouts and pieces which could be assigned to the later phases of the Middle Horizon, and to the Late Intermediate Period. It is clear that the huaqueros see fit to take out only pieces with good market potential. Digging for ancient burials can be a dangerous profession; during the past year the Chiclayo P.I.P. (investigation Police of Peru) reported arresting

ten huaqueros and confiscating 400 vessels.<sup>7</sup> It is understandable that a grave robber would wish to be discreet in what he removes from a site.

In this light, the context of the eleven molds was understandable. They were found, within a meter of one another, some in a heap together, on the top of a back-dirt pile beside one of the many looted pits about 100 meters west of Huaca Facho. From their common location beside the looted tomb, it is safe to assume that these molds represent the discarded remains of what was once a potter's burial.

### The molds

Despite the variety of the effigy heads formed, the molds themselves share common morphological features. With the exception of a single ornamental stamp (fig. 10a), the collection consists of three pairs and seven halves of two-piece concave molds of animal and human heads. The juncture is vertical and longitudinal dividing the paired pieces into a left and right half. The neck area or base of every example is rounded and irregular. Because of the irregularity of the neck area, it would have been difficult to use these molds directly with body molds. The heads formed by the molds are open at the neck, however, and could have been joined to larger chambers (either modeled or symmetrical).

The exterior surface of all but two of the molds is smooth and reflects the shape of the effigy head only in the proportions of length and width. The exceptions to this rule have incisions on the outer surface which, on one example, identify the effigy head inside and, on the other, distinguish the mold from others of similar form and size in the collection. The first is a complete two-piece feline head mold (fig. 8b). It shows roughly shaped ear protrusions and incised triangular eyes on each half. Although the outside surface of this specimen is partially chipped, a portion of the incised mouth is still visible on one half of the mold.

The second example is an incomplete, two-piece llama head mold (fig. 3a). The surviving right half of the mold has three incisions on the top. Two parallel incisions intersect the seam at right angles and it is evident that these lines originally extended across the other half of the mold. A third line is perpendicular to the other two and crosses them at about a centimeter from the seam. These markings are clearly not intended to reflect any zoomorphic features of the llama effigy. A possible explanation is that these were intended by the potter as minimal identity marks to differentiate between his molds just as a modern-day electrician relies upon color to distinguish between the many wires in a large communication cable.

Two features of the vertical juncture line serve as clues to understanding the technique for using and making the molds. When laid on a flat surface, the juncture edges are not flush with the plane, but curved and irregular. This could be due to carelessness on the part of the potter, but more likely represents an intentional technique to insure

against slippage when the molds are pressed together. A second feature of the juncture edges is a series of wavy scratches that is clearest on the largest of the llama molds (fig. 1a). These incisions were clearly made before the molds were fired and suggest how they may have been manufactured. In 1963 Donald E. Thompson described a mold matrix from the north coast which served as a template for mold production.<sup>8</sup> This matrix is in the form of a face-neck jar and has a vertical groove dividing the surface into a front and back half. A similar matrix for making molds of a llama torso is included in the Chancay collection at the Lowie Museum.<sup>9</sup> Clay could be pressed on the outside of the matrix and then cut away, with the groove as a guide, forming the two halves of the unfired mold. Very likely the Huaca Facho examples were manufactured on such matrices, and the wavy scratches on the juncture edges came about when the clay was being cut away.

The paste is heavily tempered with large (0.5-1.0 mm.) sand grains. Several examples have breaks and pitted surfaces which are rough and pockmarked due to the large sand inclusions in the clay.

Only one mold in the lot appears to have been oxidized in firing and has a reddish color (fig. 7). The rest of the pieces are a light brown to gray color. That these were fired at low temperatures in a reducing atmosphere is indicated by their high permeability. Water and moisture were quickly absorbed when the molds were first washed and later when clay was pressed into them. Permeability is directly related to porosity, and, as Shepard points out:

A clay undergoes changes in porosity throughout the course of firing. During the early stages, when water is driven off, the porosity increases, often as much as 10 percent. The clay continues to become more porous with the oxidation of carbonaceous matter but begins to shrink when sintering or incipient vitrification starts.<sup>10</sup>

The greater the permeability of the mold, the more readily it will absorb the moisture from the clay pressed into it, and thus facilitate the shrinkage of the clay and its subsequent removal as it begins to harden. Thus it seems probable that the high permeability of these molds is the result of their having been intentionally fired at low temperatures, between 400° C and 800° C, in order to prevent sintering and enhance their absorptive qualities.<sup>11</sup>

Other than the variety in the effigy heads depicted, the only difference among the molds was in size. As specified for individual pieces in the key to illustrations, the molds showed a maximum length of 9.6 cm. and a minimum length of 8.0 cm. Despite these differences, the molds fall within a small size range, which, when viewed in conjunction with the common features mentioned above, seems to indicate a common function, one which very likely reflects probable use with a single vessel category (see section on dating, below).

The thickness of the molds is not proportional to their size; the smaller ones are about as thick as the larger ones. Only one has a thickness less than 1.0 cm., with the majority ranging between 1.2 cm. and 1.6 cm. Thickness not only gives strength to the mold but enhances its permeability.

Out of the eleven, one piece shows a different form and function from the rest. This is a single element stamp (fig. 10a) which, as Donnan points out for Moche examples, serves as, "...a method of ornamentation rather than forming the object itself."<sup>12</sup> Probably used on the neck or side of a vessel, this stamp has irregular flaring sides and forms a conventionalized animal face (fig. 10b) when pressed into clay. On the back of the stamp is a protruding lug; this lug gives the user a firm grasp on the stamp with one hand as the clay is pushed into the stamp from the inside of the vessel with the other.

### Molding

In order to understand the technology of manufacturing effigy heads from molds, I first reviewed the literature and then worked with the molds themselves.

Our best understanding of the workings of two-piece concave molds comes from Foster's study of the Mexican potters of Tzintzuntzan and from Donnan's study of the Uhle collections of Moche ceramics. Foster describes how the Mexican potters of Michoacan use two concave vertically-joined halves to mold closed neck vessels:

The paste is pounded out flat on a stone in a form roughly shield-shaped, and of the proper thickness for the pot. This "tortilla" is placed on the inside of one mold, smoothed with a wet cloth to conform to the mold contour, and the surplus is trimmed off with a horse hair or maguey fiber. A second tortilla is shaped in the other mold. Both halves are then joined; the juncture is smoothed with a wet cloth from within; and after a short period of drying the molds are removed. When nearly dry the outside of the pot is smoothed with a rock scraper and polished with a wet cloth.<sup>13</sup>

Donnan discussed the use of both single and two-piece molds by the Moche potters. Through direct experimentation with molds for forming the symmetrical chambers of stirrup spout bottles, he found the two-piece mold more effective than the one-piece, because it was easier with this mold to fix and smooth the seam on the inside without warping the vessel.<sup>14</sup>

Both accounts describe the halves made from two-piece molds being joined while still in the mold. It is clear that the key to being able to join the clay halves while still in the mold is the ability of

the potter to reach into the mold to work and smooth the sides together. The Tzintzuntzan workers make vessels up to 50 liters in size, and even the Moche molds for the chambers of stirrup spout bottles are three or four times as large as the Huaca Facho examples.

In contrast, it appears likely that, because of the size, the heads molded from the Huaca Facho specimens were joined together after they were taken out of each half of the two-piece molds. When I experimented with these small molds I found it difficult, and with one set impossible, to make a firm bond while the clay was still in the mold. With the smallest mold, a llama head (fig. 7), the neck opening was too small to permit even my little finger to reach inside to smear clay back and forth across the seam. Instead, it was easier to join the two halves of damp clay together after they had been removed from each side of the mold.

As Donnan observed when working with larger Moche molds, less than half an hour after the clay was pressed in, the molds had absorbed enough of the moisture from the clay and the clay had shrunk enough to allow it to be easily removed from each side.<sup>15</sup> In working with these molds, I was able to use them successfully in the following way. Before removing the head from the mold, any clay which overhung the juncture edges of each half of the mold was cut away so that the freshly formed segments would join as evenly as the two sides of the mold. Then, after removing the clay, the edges of the halves were roughened with cross hatched incision to allow the clay to interdigitate at the seam. Finally, a strong juncture was insured by smearing slip along the roughened edges before the two halves were pushed together. Excess slip was then wiped away, and the seam could be smoothed.

This variation in the technique of joining does not necessarily reflect the actual technique used by the potter who originally made effigy heads with these molds; it is simply the method I found easiest when experimenting with various techniques. Furthermore, this variation in no way contradicts the techniques described by Foster and Donnan, but rather reflects the limited possibilities available when working with small two-piece molds. In fact, only because of the small mass of the effigy heads, where warping is less of a problem than with large vessels, is this technique workable.

### The effigy heads

It was necessary to press clay into the molds to see what forms were represented in the collection. The two-piece molds formed the following representations: four llamas (figs. 1, 2, 3, 7), two pumas (figs. 4, 8), one bird, most likely an owl (fig. 9), a naturalistic human head (fig. 5), and what appears to be a "hairless" dog with wrinkles around the eyes (fig. 6). One mold was so crude that its subject could not be defined (not illustrated). Finally, as previously mentioned, the lot included a single stamp of an unidentifiable animal face (fig. 10).

Despite the variety of subjects represented, the effigy heads shared a number of stylistic features. Common to all was a circular or almond shaped eye in relief, usually having a raised ridge forming a concentric circle on the outside.

As they came from the molds the heads had rough, ill-defined features and grainy matte surfaces. Clearly the molds were intended only to give basic form, and much finishing and smoothing would be necessary to give detail and sheen to the heads.

Three of the four llama heads have rope halters crossing vertically down the muzzle (figs. 1, 2, 3). The one aberrant head was the only "llama" coming from a complete two-piece mold, and was the smallest of the four (fig. 7). Its lips are drawn back exposing teeth and tongue.

The two puma heads have similar mouths. The upper lips are drawn back indicating a growl and exposing the teeth (figs. 4, 8). It is interesting that the teeth are represented on the positive impressions as depressions and the spaces between them as high ridges.

The one human head (fig. 5) has a massive appearance because the upper part of the neck extends straight out from the back of the head. The cheek bone is depicted in high relief as a vertical ridge, and the mouth is a slit which becomes wider and deeper away from the center of the face, giving the impression of a snarl.

#### Dating the molds

Dating these molds is difficult. As surface finds, they lack both stratigraphic context and associations with any whole vessels which might have permitted a clue based on stylistic grounds. The problem is further complicated by the poorly defined archaeological sequence of the Lambayeque region. Nevertheless, on the basis of stylistic features of the molds themselves, I am tentatively identifying the molds as belonging to the Chimu style of the Late Intermediate Period.

Two lines of evidence support the proposal that the Huaca Facho molds belong to the Chimu style of the Late Intermediate Period. The first is based on the depiction of the hairless dog, if that is what it is. Kroeber illustrates a whistling vessel in the form of a seated hairless dog.<sup>16</sup> This piece is described as "Late Chimu" in a terminology which refers to Moche Style as "Early Chimu." However, simply the presence of the hairless dog motif is not enough to warrant any conclusions; Tello illustrates a finely modeled stirrup spout bottle in the form of a hairless dog which can be assigned stylistically to Moche I.<sup>17</sup> What is important is that the Huaca Facho hairless dog head shows greater stylistic similarity in features of form and finish to the Chimu piece illustrated by Kroeber.

The second line of evidence comes from a feature common to all the molds. Each mold is a head terminating at the neck; very likely

these heads were applied to the shoulders of closed-neck jars. This usage is common in the Chimu style. Kroeber illustrates such an example in his publication on the Uhle collections from the site of Chiquitoy in the Chicama Valley.<sup>18</sup> Bennett illustrates similar vessels from his sites "Lambayeque One" and "Lambayeque Two."<sup>20</sup> Associations for these two vessels are not given, but they are clearly of the Chimu style.

In 1966, Sheele and Patterson published a preliminary seriation of the Chimu pottery style.<sup>21</sup> It is important to note that although they referred to nearly every other Chimu vessel illustrated in Bennett and Kroeber, they did not assign any of the above mentioned Chimu vessels to any of their six epochs. In other words, they did not include the vessel category of closed-neck jars with high shoulders and effigy heads in any temporal position in their sequence.

Although clearly not of the Early Intermediate Period, this vessel category shows affinities, notably in the proportionately thin neck, to jars of phase IV of the Moche style. I would therefore date the Chimu examples on seriation grounds as early in the Late Intermediate Period. By extension, I would suggest a similar date for the Huaca Facho molds. This assignment is supported by the work of Margaret A. Hoyt who has been doing research on the chronology of Chimu pottery at the University of California at Berkeley. She identified this vessel category as belonging in the first half of the Late Intermediate Period or late in the Middle Horizon.<sup>22</sup>

### Conclusion

In summary, this collection not only provides us with a rare association of molds but also enables us to understand better the technology of molds by augmenting the previous samples. Furthermore, this collection is significant because this is the first group of probable Chimu molds, relating to a style in which the dependence on molds is a prominent feature.

## NOTES

<sup>1</sup>Rowe, 1954, p. 116. In a letter to Kroeber dated 1906, Charlotte Uhle wrote: "The moulds of all three boxes (138 or so) all came from one place, the cemetery of 'La Mina,' that is a site on a sandy slope directly over Chancay where at present not a single unopened grave could be found." The total number of separate molds is less, since several pieces are in reality the left and right halves of the same mold.

<sup>2</sup>Kroeber, 1926, pp. 266-267.

<sup>3</sup>Individual specimens of molds exist in different collections and in a few published accounts. Of the known examples, single element press molds for modeling are the most common and two-piece molds for forming vessel chambers are the least well known. In a personal communication (1968) John H. Rowe reported that he was shown a collection of Moche molds by Rafael Larco Hoyle at the Museo Rafael Larco Herrera in Lima. Of these molds at least two were for making stirrup spout bodies and one was for a warrior figurine, probably Moche II. Several single element molds for making figurines are present in the Uhle collections from Moche at the Robert H. Lowie Museum of Anthropology. In July, 1968, I saw a collection of molds at the Bruning Museum in Lambayeque, Peru. One was a two-piece mold for making an entire stirrup spout vessel which probably dated to the Late Intermediate Period or Late Horizon. Published examples of molds are rare. Accounts of Moche molds appear in Tello (1938, pp. XXXV, XXXVII) and Hébert (1902, p. 4). Linné illustrates half of a two-piece mold for a figurine from Lambayeque and gives an out of date discussion of mold technology and the then-known examples (Linné, 1925, fig. 18). In a later publication he lists some additional examples (Linné, 1934, pp. 193-197). Finally, Schmidt illustrates the right half of a two-piece llama mold (no. 1), the front and back of molds for a seated Moche male (nos. 2, 3), and what appears to be the mold for the face of a portrait head bottle, probably Moche IV (no. 4) (Schmidt, 1929, p. 535). He also pictures five single-element stamp molds similar to examples in the Chancay collection at Berkeley (nos. 5-9), and the front and back sections of a figurine mold from Pisco (nos. 10-12) (Schmidt, 1929, p. 535). In addition he shows a two-piece mold for a double spout vessel (Schmidt, 1929, p. 534, no. 1).

<sup>4</sup>This research was conducted with the aid of a Ford Foundation Training Grantee (no. 68-346). The specimens are presently in the Museum of Anthropology of the University of California at Los Angeles. I wish to thank Christopher B. Donnan who not only made my presence in Peru possible but also authorized me to describe the subject matter of this report.

<sup>5</sup>Kosok, 1965, pp. 162-3.

<sup>6</sup>Kosok, 1965, p. 162.

<sup>7</sup>Rivera, 1968, p. 14.



<sup>8</sup>Thompson, 1963.

<sup>9</sup>RHLMA 16-1542. Also, Rowe (personal communication, 1968) was shown a collection of Moche mold masters by Rafael Larco Hoyle. He described them as being heavily made with a vertical groove around them.

<sup>10</sup>Shepard, 1965, p. 126.

<sup>11</sup>Linné, 1925, p. 114.

<sup>12</sup>Donnan, 1965, p. 120.

<sup>13</sup>Foster, 1948, p. 357.

<sup>14</sup>Donnan, 1965, p. 119.

<sup>15</sup>Donnan, 1965, p. 118.

<sup>16</sup>Kroeber, 1925, pl. 60a; RHLMA nos. 4-9.

<sup>17</sup>Tello, 1938, p. 170, bottom.

<sup>18</sup>Kroeber, 1925, pl. 60g; RHLMA 4-3421.

<sup>19</sup>Bennett, 1939, fig. 20h.

<sup>20</sup>Bennett, 1939, fig. 21c.

<sup>21</sup>Sheele and Patterson, 1966, pp. 15-30.

<sup>22</sup>Margaret A. Hoyt, personal communication, 1969.

## BIBLIOGRAPHY

- Bennett, Wendell Clark  
 1939 Archaeology of the north coast of Peru; an account of exploration and excavation in Viru and Lambayeque Valleys. Anthropological Papers of the American Museum of Natural History, vol. XXXVII, pt. 1, pp. 1-153. New York.
- Donnan, Christopher Bruce  
 1965 Moche ceramic technology. *Nawpa Pacha* 3, pp. 115-138. Berkeley.
- Foster, George McClelland, Jr.  
 1948 Some implications of modern Mexican mold-made pottery. *Southwestern Journal of Anthropology*, vol. 4, no. 4, winter, pp. 356-370. Albuquerque.
- Hébert, Jules  
 1902 Quelques mots sur la technique des céramistes peruvians. *Journal de la Société des Américanistes de Paris*, tome IV, no. 1, pp. 1-7. Paris.
- Kosok, Paul  
 1965 Life, land and water in ancient Peru. Long Island University Press. New York.
- Kroeber, Alfred Louis  
 1925 The Uhle pottery collections from Moche. *University of California Publications in American Archaeology and Ethnology*, vol. 21, no. 5. Berkeley.
- 1926 The Uhle pottery collections from Chancay. *University of California Publications in American Archaeology and Ethnology*, vol. 21, no. 7, pp. 263-304. Berkeley.
- Linné, Sigvald  
 1925 The technique of South American ceramics. *Göteborgs Kungl. Vetenskaps- och Vitterhets-Samhälles Handlingar*, fjärde falden, band 29, no. 5. Göteborg.
- 1934 Archaeological researches at Teotihuacan, Mexico. *The Ethnographical Museum of Sweden (Riksmuseets Etnografiska Avdelning)*, new series, publication no. 1. Stockholm.
- Rivera, Juan Hugo  
 1968 El saqueo arqueológico de Batán Grande. *El Comercio*. Dominical, 9 de agosto, 1968. Lima.
- Rowe, John Howland  
 1954 Max Uhle, 1856-1904, a memoir of the father of Peruvian Archaeology. *University of California Publications in American Archaeology and Ethnology*, vol. 46, no. 1, pp. 1-134, pl. 1-14. Berkeley.

Schmidt, Max

1929 Kunst und Kultur von Peru. Propyläen-Verlag, Berlin.

Shepard, Anna Osler

1965 Ceramics for the archaeologist. Carnegie Institution of Washington, publication 609. Washington, D.C.

Sheele, Harry and Patterson, Thomas Carl

1966 A preliminary seriation of the Chimu pottery style. Nawpa Pacha 4, pp. 15-30. Berkeley.

Tello, Julio César

1938 Arte antiguo peruano; album fotográfico de las principales especies arqueológicas de cerámica muchik existentes en los museos de Lima. Primera parte, tecnología y morfología. Inca, vol. II. Lima.

Thompson, Donald Enrique

1963 A mold matrix from Peru. American Antiquity, vol. 28, no. 4, April, pp. 545-547. Salt Lake City.

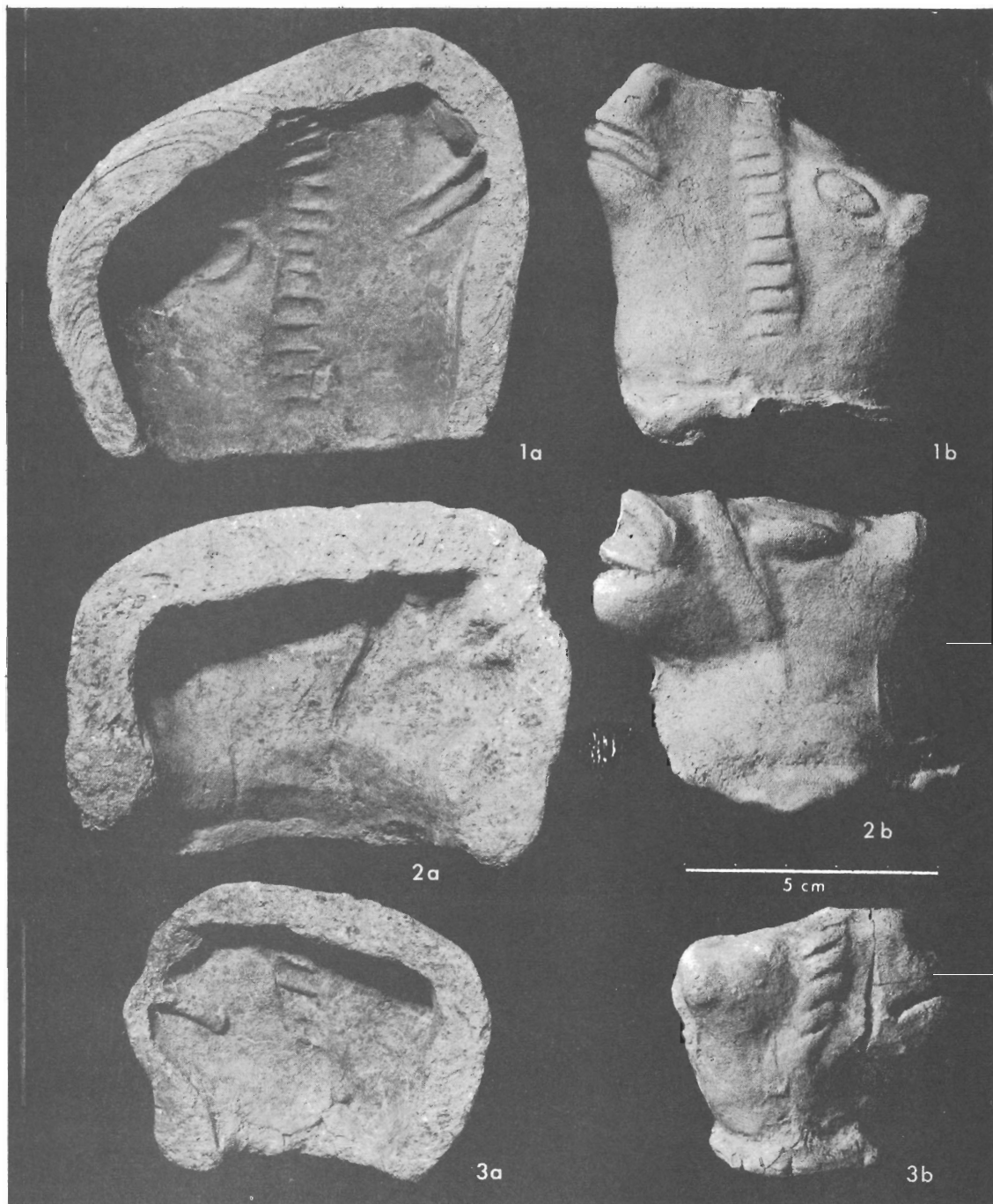


Plate XXII. Molds and impressions.

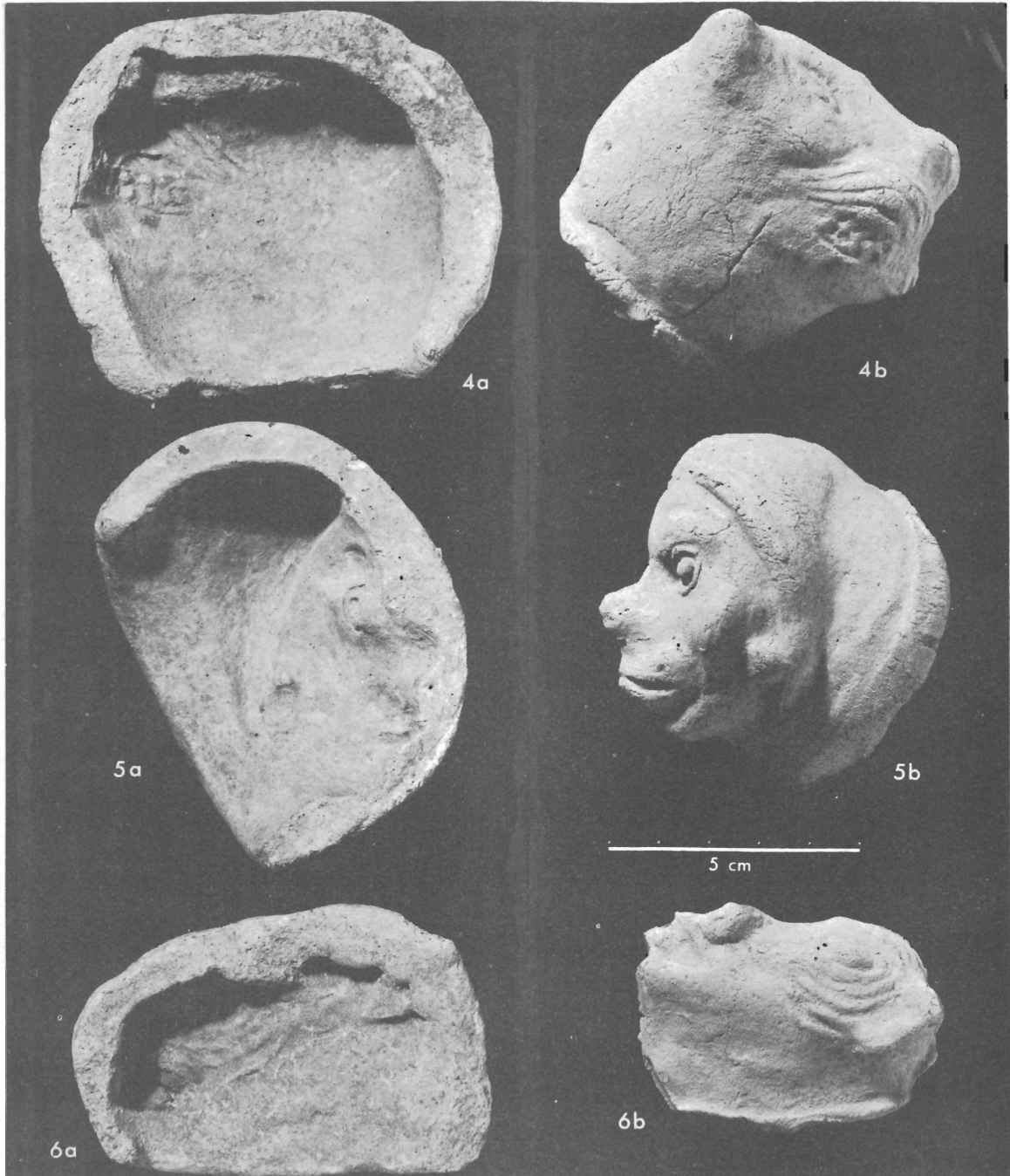


Plate XXIII. Molds and impressions.

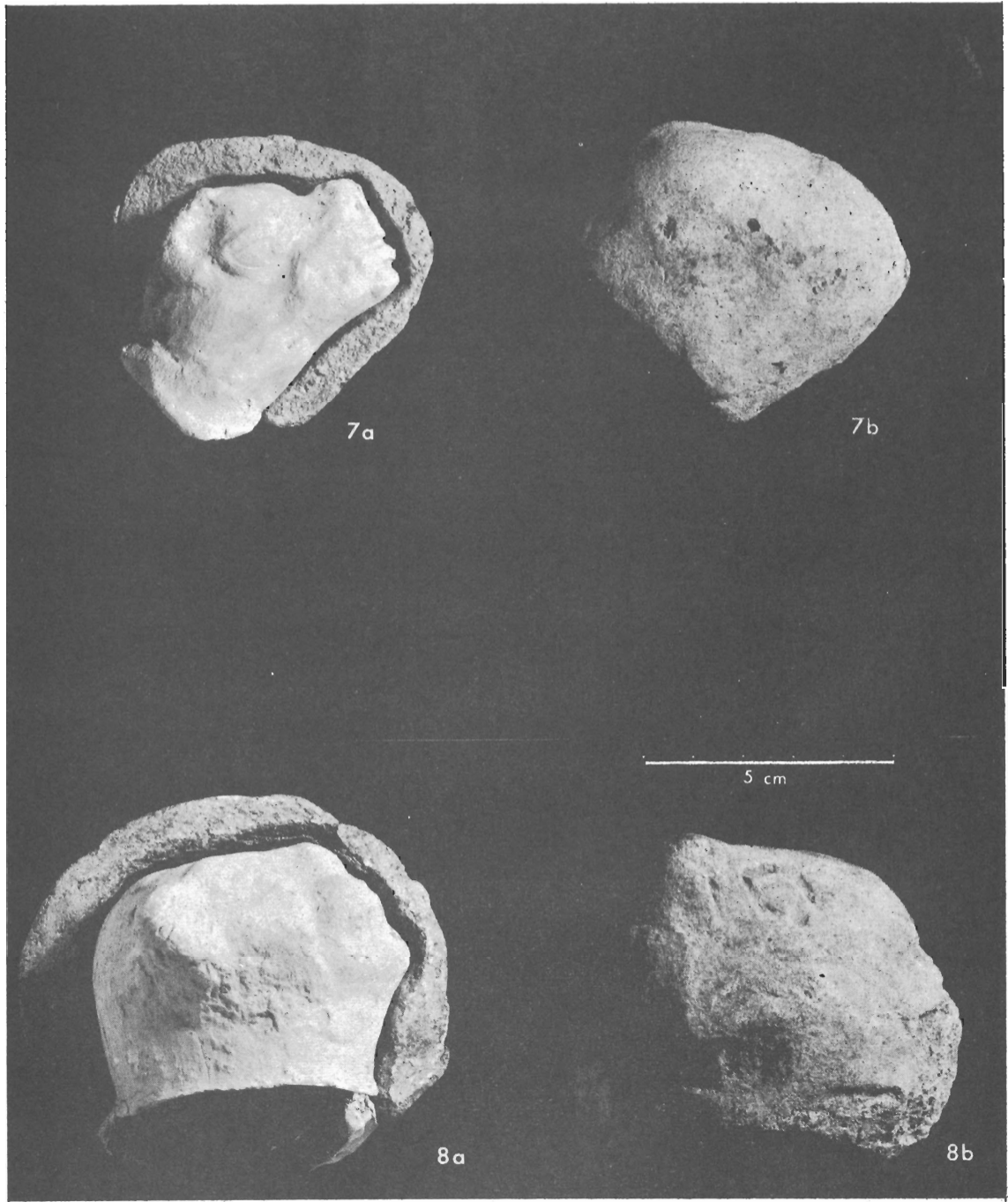


Plate XXIV. Molds and impressions.

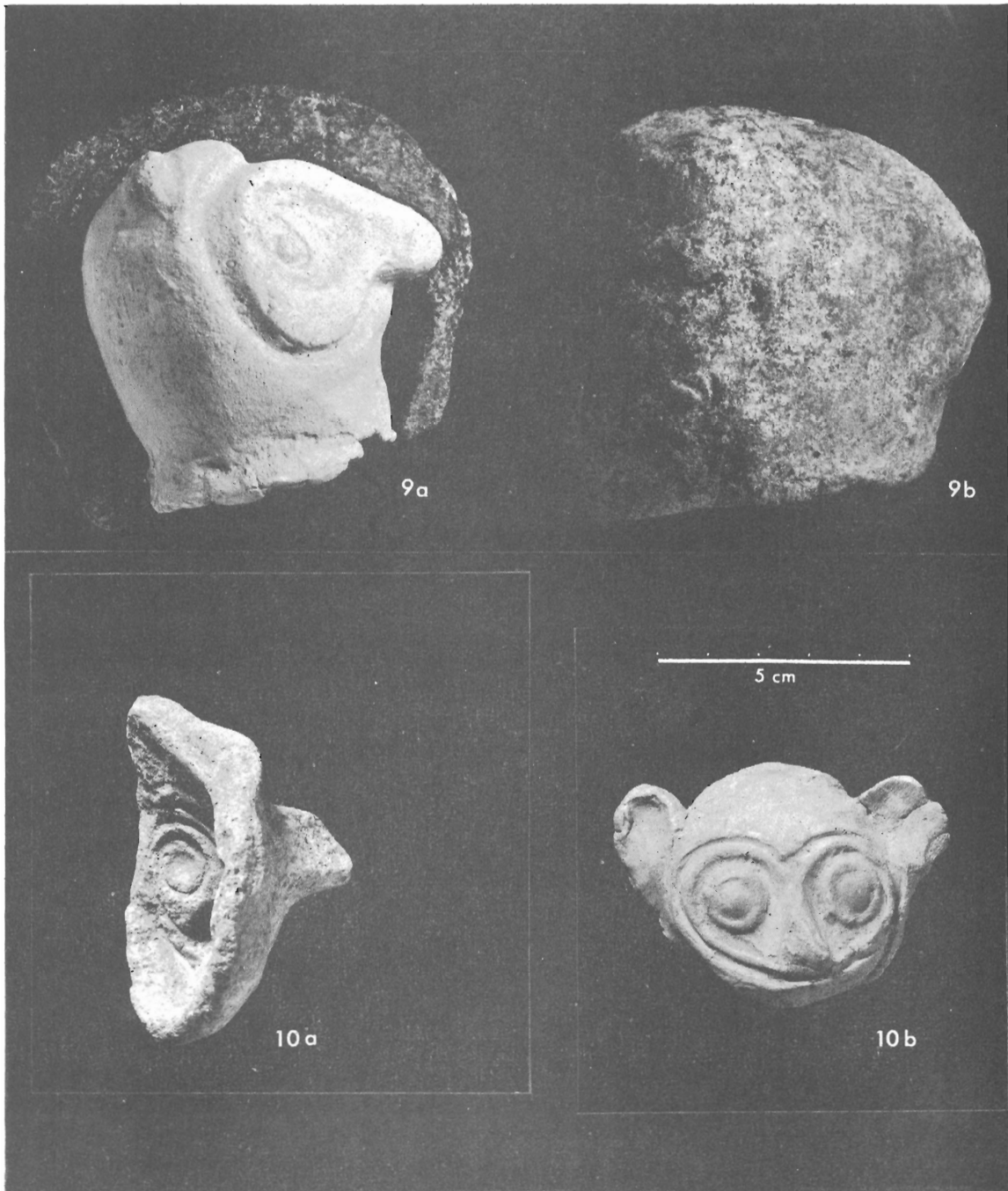


Plate XXV. Molds and impressions.