

Appendix: The Southern Margins of Sumer

Euphrates channels. If water moved down the southernmost Euphrates channel into the Eridu depression, a freshwater lake would form southeast of Eridu and drain through the break in the Hazim. Salt would be removed from the basin, and ground moisture would increase along the river channel. Poplar, willow, and tamarisk would thrive on the riverbanks, and on the levees a brushy cover of *Prosopis* would survive in uncultivated areas. The lake itself would probably support a marshy vegetation, predominantly reeds such as *Phragmites*, which now surround the Hor al-Hammar. When the southernmost Euphrates channel ceased to flow, the lake would become a salty mud flat, with only a few salt-loving, drought-tolerant plants surviving on the former levees and channel bottoms. On the dunes only the *Haloxylon*, a small tree, would flourish, protected from woodcutters by kilometers of barren alluvial desert. Eventually more

northerly Euphrates channels would become obstructed, and water would again shift into the southern channel, initiating another cycle.

This natural cycle in the Eridu basin has been deduced from a minimum of assumptions and must be verified by geological surface mapping and leveling, the study of sediment cores, and other techniques. It is possible that such study would reveal that this proposed cycle never ran its course, since after 4500 B.C. human communities were sufficiently numerous that their efforts to control the flow of water would affect the distribution of vegetation and deposition of silt layers. Before this interaction of natural and cultural factors can be sketched, something must be said regarding the archaeological chronology upon which our understandings of community and channel shifts are based.

The Sequence of Ceramic Assemblages

This section presents the bases for dating surveyed sites. It covers ceramic developments in this area from about 5000 B.C. to at least 400 B.C. It is based on a preliminary study of apparently briefly occupied sites in southern Sumer, sorted from the universe of 192 sites located during 1966.

A presentation like this is necessary because the available published material is biased in favor of unbroken and unweathered vessels from graves, while surface collections generally yield weathered sherds from domestic areas. A study based on the manipulation of surface collection statistics is bound to have errors, but until more stratified sherd samples are carefully reported in print, this approach will have to suffice.

In the pottery descriptions I attempt to use a simple terminology. A "period" is defined on the basis of a series of surface collections in which a number of types occur together. Within periods, "complexes" are defined by series of surface collections in which either a few types cluster together or a type is unusually common. A complex may represent a portion of a period, or it may represent a ceramic group with special functions. When more and better samples are available, this rather artificial division will be unnecessary.

The terms for parts and attributes of vessels, and their combinations into named types, are tentative. Each ceramic type is designated by a code beginning with the letters RJ for rim of jar, RB for rim of bowl, B for base, and O for other. Following the letters is a number indicating the period of most common occurrence. The number 1 represents the earliest Eridu and Hajji Muhammad periods, and 10 represents the latest Neo-Babylonian and

later periods. Next follows a hyphen and a number serially assigned for each variant. Thus, RB8-2 is the second described bowl rim type of the Late Larsa–Old Babylonian period, a type that also happens to occur during the preceding Early Larsa period. Each type is also given an informal descriptive name. In the sections for each period there is first a general statement about the ceramics of the period, then a list of type descriptions. Each description includes the type number, the name, a figure reference, and any other observations. The site catalog gives the counts of types from a series of collections. This allows the reader to examine patterns of the co-occurrence of types in "periods" and "complexes." Were this study to be redone, I might well present site-by-site corpora as Adams and Nissen did in *The Uruk Countryside* (1972); thus presenting maximal information on ceramic variations and allowing complete reevaluation when adequately described stratified ceramics are available for the area. However, since the sherds were recorded typologically, they must be presented in this way.

THE ERIDU AND HAJJI MUHAMMAD PERIODS

Ceramics of these early periods are not well represented in our surface collections, and, since Lloyd and Safar (1948) and Oates (1960) have presented an extensive description of these materials, great detail is not necessary here.

Eridu period ceramics have a temper of medium-sized sand particles, a yellow to buff body, and a similarly colored slip. The most common form among the exca-

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vated rims from the Eridu Temple Sounding is a small to medium-sized hemispherical bowl. Their exteriors characteristically have a motif of parallel oblique painted lines. In the earlier layers of this period, the bowl interiors are usually decorated with pendant triangles; in later layers of this period (XVI to XIV) grids and checkerboards become common. The only Eridu sherd recovered in the survey is an overfired example with the later checkerboard interior (fig. 2*a*), although other sherds are known from Ur and Tell Ubaid (Oates 1960, n. 18).

Hajji Muhammad period ceramics have a similar temper and slip, but usually they are harder and have a buff to green color. The paint is matte or glossy. There is much variation in vessel shape in the excavated samples, but only fragments of the distinctive carinated bowls have been recovered in the survey samples. These medium to large shallow bowls have a broad outflared rim. The exterior painting is usually bold zigzag bands; the rim interiors usually have an oblique crosshatch (fig. 2*b*), and base interiors have grids (fig. 2*c*) or arrangements of triangles (fig. 2*d*). As will be discussed shortly, a simpler variant of this bowl continues into Early Ubaid times and is more common in the survey collections than are these classic forms.

THE EARLY UBAID PERIOD

Surface sherds of this period are found mixed with Late Ubaid pieces, but they can be recognized by comparison with sherds from the Eridu Temple Sounding layers X and IX. These ceramics have a fine sand temper or no visible temper and vary in color from buff to green. The most frequent surface indicator of Early Ubaid occupations is the carinated bowl with simple black bands (RB2-1).

RJ2-1: Interior-ledge-rim jar (fig. 2*b*). In this period these have a solidly painted rim and a complex shoulder motif of curved or crosshatched lines.

RB2-1: Carinated bowl with simple black Bands (fig. 2*e*). These are thinner and less sharply carinated than earlier Hajji Muhammad bowls, and the paint is matte, never glossy. The base interiors often have a rosette motif with lines radiating from a central dot (fig. 2*f*). Unpainted variants occur.

RB2-2: Medium-sized deep bowl with interior triangle motif (fig. 2*g*).

RG2-3: Flat-lip basin with interior or rim-top triangle motif. This is similar to RB2-2 but heavier, larger, and with a flattened rim. Plain and simple banded variants are common. All these variants may also occur during the preceding Hajji Muhammad phase.

RB2-4: Bell-shaped cup. Many variants of these fine vessels, both plain and painted, are known from Eridu (Lloyd and Safar 1948, pl. III).

THE LATE AND TERMINAL UBAID PERIOD

The ceramics of this period have a paste and color similar to those of the Early Ubaid, but there is more green color, warping, and surface sludging from the overfiring of salt-impregnated clays. Many vessels exhibit the surface scoring characteristic of wheel finishing.

Sites with dominant surface assemblages of this period are recognizable from the fragments of painted sherds, particularly of incurved bowl rims (RB3-7 to 10) and ledge rim bowl rims (RB3-11 and 12) and quantities of clay sickle fragments (03-1), though the latter also continue into later periods. A study of statistics on the ceramics from Eridu by G. L. Barnes (pers. comm.) shows that at least two complexes are separable. The Late Ubaid complex is known from Eridu Temple Sounding, levels VII and VI, and Hut Sounding, level V. It has high-necked jars with completely painted (RJ3-3) or banded (RJ3-2) necks; plain forms are rare. Among the medium-sized bowls, the ledge rim (RB3-11, 12) is more common than the incurved form, and both frequently have lip and interior motifs such as oblique lines, curved lines, or triangles. The Terminal Ubaid complex (cf. Wright et al. 1975, p. 140) is known from the Eridu Hut Sounding, level IV. The high-necked jars have unpainted collars (RJ3-1). Among the medium-sized bowls, the incurved form seems to be more common than the ledge-rim form, and both have solid painting or bands rather than geometric motifs. More than 35 percent of the incurved forms have impressed combing on the interior (RB3-10). Simple bowl forms are frequently unpainted. A deep basin with exterior ridges also seems to be typical (RB3-15, 16).

RJ3-1: High-neck jar, unpainted collar. These range from medium to large. The bodies of these vessels are probably hand-built and finished, but the rims may have been wheel-finished.

RJ3-2: High-necked jar, painted bands (fig. 2*i*). The illustrated example is relatively large.

RJ3-3: High-neck jar, completely painted collar. This form is rare, occurring in both Early Ubaid and the beginning of Late Ubaid at Eridu.

RB3-1: Hemispherical bowl, unpainted. This form has a simple rounded lip and is usually relatively shallow. None of the variants are useful chronological indicators. These and other bowls are apparently wheel-finished.

RB3-2: Hemispherical bowl, painted band.

RB3-3: Hemispherical bowl, painted interior decorations. Doubtless future work will reveal chronologically distinctive variants.

RB3-4: Small deep bowl, unpainted. Complete examples from the cemeteries at Ur (Woolley 1956, pls. 17-19) and Eridu (Lloyd and Safar 1948, pl. III) indicate that this form typically had a ring base.

RB3-5: Small deep bowl, painted bands.

RB3-6: Small deep bowl, painted motifs (fig. 2*j*). On

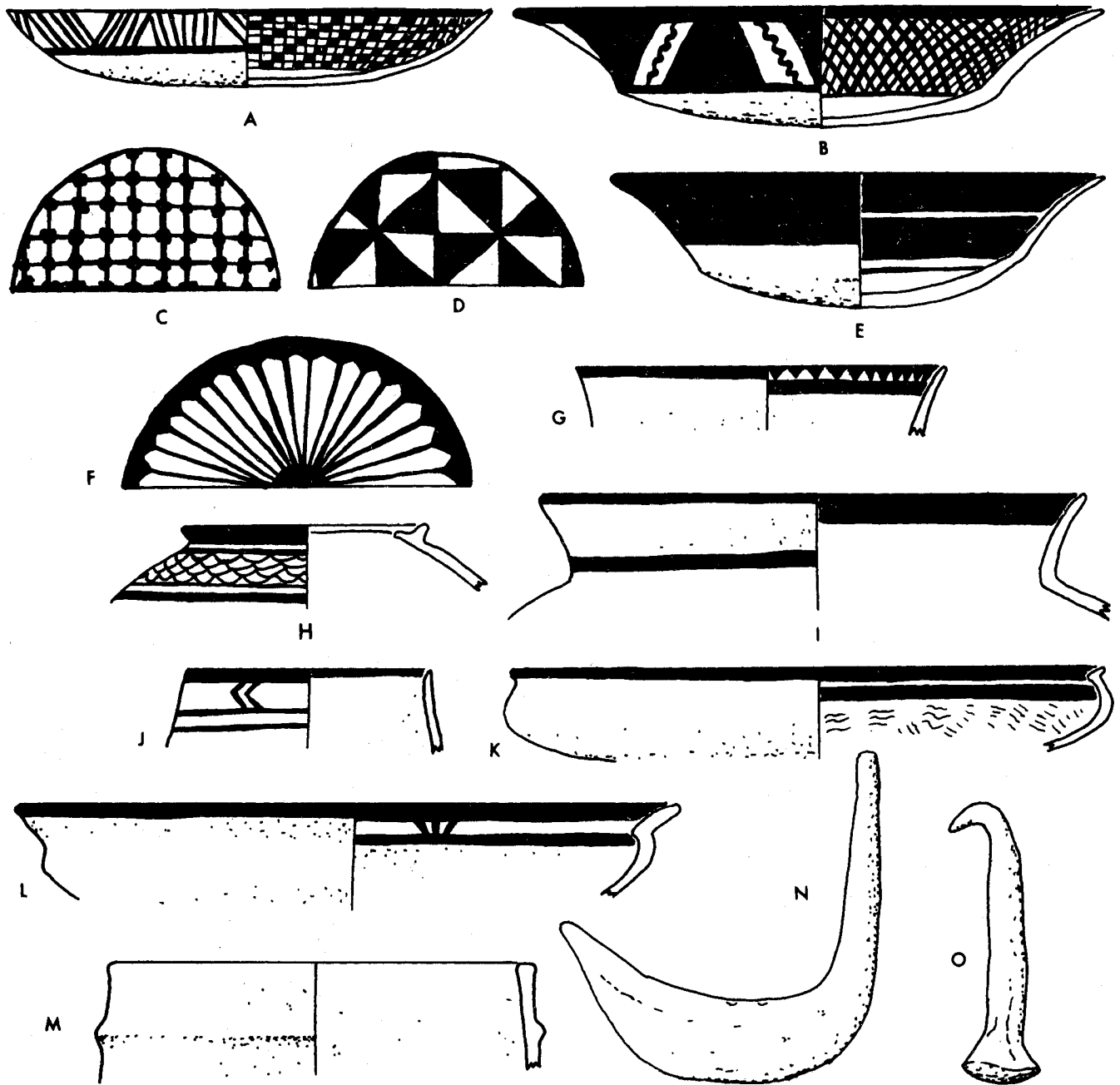


Fig. 2. Ceramics of the Eridu, Hajji Muhammad, and Ubaid periods (2/5). (N.b.: B and P indicate Munsell color readings for clay body and paint respectively, when available. D indicates diameter when relevant.)

- a. Eridu period bowl, EP-104.
- b. Hajji Muhammad period carinated bowl, B: 2.5Y 4/2, P: 10YR 2/0, EP-104.
- c. Hajji Muhammad period bowl interior motif, EP-3.
- d. Hajji Muhammad period bowl interior motif, EP-104.
- e. RB2-1, carinated bowl, B: 5Y 6/3, P: 10YR 3/1, EP-29.
- f. RB2-1, bowl interior motif, B: 5Y 7/2, P: 5Y 3/1, EP-38.
- g. RB2-2, deep bowl, B: 5Y 4/1, P: 10YR 3/1, EP-141.
- h. RJ2-1, interior-ledge-rim jar, B: 5Y 7/4, P: 10YR 2/1, EP-141.
- i. RJ3-2, high-necked jar, B: 5Y 5/4, P: 2.5Y 2/0, EP-141.
- j. RB3-6, small deep bowl, B: 2.5Y 5/4, P: 10YR 2/1, EP-104.
- k. RB3-10, incurved bowl with flat lip, combed interior, B: 5Y 7/4, P: 10YR 3/1, EP-104.
- l. RB3-12, ledge-rim bowl, B: 5Y 5/4, P: 7.5YR 2/0, EP-29.
- m. RB3-13, deep flat-lip basin, B: 5Y 5/4, EP-98.
- n. O3-1, clay sickle, B: 5Y 5/4, EP-98.
- o. O3-2, clay muller, B: 5Y 6/4, EP-98.

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the exterior are horizontal bands, between which are placed variously oriented triangles, zigzags, grids, and other rare motifs. No sample is large enough to allow study of the chronological and spatial variations in these motifs.

RB3-7: Incurved bowls with flat lip, unpainted.

RB3-8: Incurved bowls with flat lip, interior and exterior painted bands.

RB3-9: Incurved bowls with flat lip, painted motifs. These are usually curved or zigzag lines below the interior band.

RB3-10: Incurved bowl with flat lip, combed interior (fig. 2*k*).

RB3-11: Ledge-rim bowl, completely painted rim.

RB3-12: Ledge-rim bowl, painted motifs (fig. 2*l*), triangles, zigzags, and oblique lines are all found on the ledge rims.

RB3-13: Flat-lip basins, unpainted.

RB3-14: Flat-lip basin, painted bands. These are rare and may be a final development of the similar forms known from the Early Ubaid period (RB2-3).

RB3-15: Deep flat-lip basin with exterior ridge, unpainted (fig. 2*m*).

RB3-16: Deep flat-lip basin with exterior ridge, painted. The few painted examples have two horizontal bands enclosing curved lines.

03-1: Clay sickles (fig. 2*n*). The maximum use of these items in this area seems to be during these periods. However, the typical smaller form continues later, and so the presence of small sickle fragments in a collection is considered only as suggestive of Ubaid cultivation. Note that many stray clay sickle finds are close to Ubaid sites but far from Uruk sites and therefore are more likely to be Ubaid. A number of our examples exhibit retouch on the blades.

03-2: Clay muller (fig. 20). These are often termed "bent clay nails" in the literature. Our examples, like the excavated examples from Ras al-'Amiyah (Stronach 1961, p. 107), often show signs of use as a pestle. These occur both before and after the Late and Terminal Ubaid periods.

03-3: Chert hoes. Bifacially flaked implements similar to certain varieties of late Acheulian bifaces.

URUK PERIOD

Except where noted, ceramics of this period surviving on the surface have a distinctive temper of fine rounded sand and coarse crushed rock, either calcite or quartz. This grit constitutes 30 percent of the paste. The body is generally dark green or gray.

Sites with dominant surface assemblages of this period are marked by simple straight-rim jars (RJ4-1), beveled-rim bowl rims (RB4-1), large strap handles (04-1, 04-2), and large clay sickles. Even when weathering has removed

most distinctive ceramic items, a scatter of rough, fire-cracked chert flakes and limestone rubble suggests Uruk occupation, for Uruk ceramics were often associated with such debris.

RJ4-1: Simple straight-rim jars (fig. 3*a-c*): These are distinguished by simple horizontal combing on the body exterior and by frequent attachment of 04-1 and 04-2 handles.

RJ4-2: Thick-rim jars (fig. 3*d-e*): Distinguished by the triangular section of the low outcurved rim.

RJ5-4: Flared expanded-rim jars (fig. 4*j, k*): These are rare.

RB4-1: Beveled-rim bowl (fig. 3*f, g*): Distinguished by predominant gray brown color, straw temper, and finger marks resulting from manufacture in a press mold.

RB5-2: Conical-bowl rim (fig. 6*a-c*).

04-1: Twisted strap handle (Fig. 3*h*): Distinguished by flattened section and relatively large size. These are later Uruk.

04-2: Plain strap handle (fig. 3*i*): Distinguished by flattened section, double grooving, and relatively large size.

04-3: Twisted lug handle (fig. 3*j*): Distinguished by finer twistings and horizontal placement on the vessel.

04-4: Clay cones (fig. 6*j-l*): Rare. One example has a hollow head.

05-2: Spouts (fig. 5*g-j*). Similar to later forms.

04-5: Droop spout: These are rare and perhaps late in this period. Distinguished by long conical spout turned downward at a marked angle. Often there is a slightly thickened rim on the spout.

04-6: Stamp-decorated sherds: These are rare and perhaps early. Distinguished by either individual crescentic impressions or rocker impressions on the upper body of a small jar.

04-7: Combed sherds: These are common. Distinguished by complex overlapping spirals and curves, often partially smoothed over. Simple combing continue into later periods.

04-8: Large clay sickles: Very large forms with handles thicker than 1.9 cm and blades wider than 5.5 cm may be more typically Uruk in the Eridu area.

JEMDET NASR AND EARLY DYNASTIC PERIOD

Except where noted, ceramics of this period have inclusions of fine sand and very finely crushed rock, generally calcite. The latter is generally observable only under a microscope. The paste is often buff to reddish, but greenish overfired examples occur. Jars, large bowls, and the upper portions of conical bowls are often covered with a cream slip or wash.

Within this period, three complexes can be isolated. One is distinguished by rarity of decorated types, the

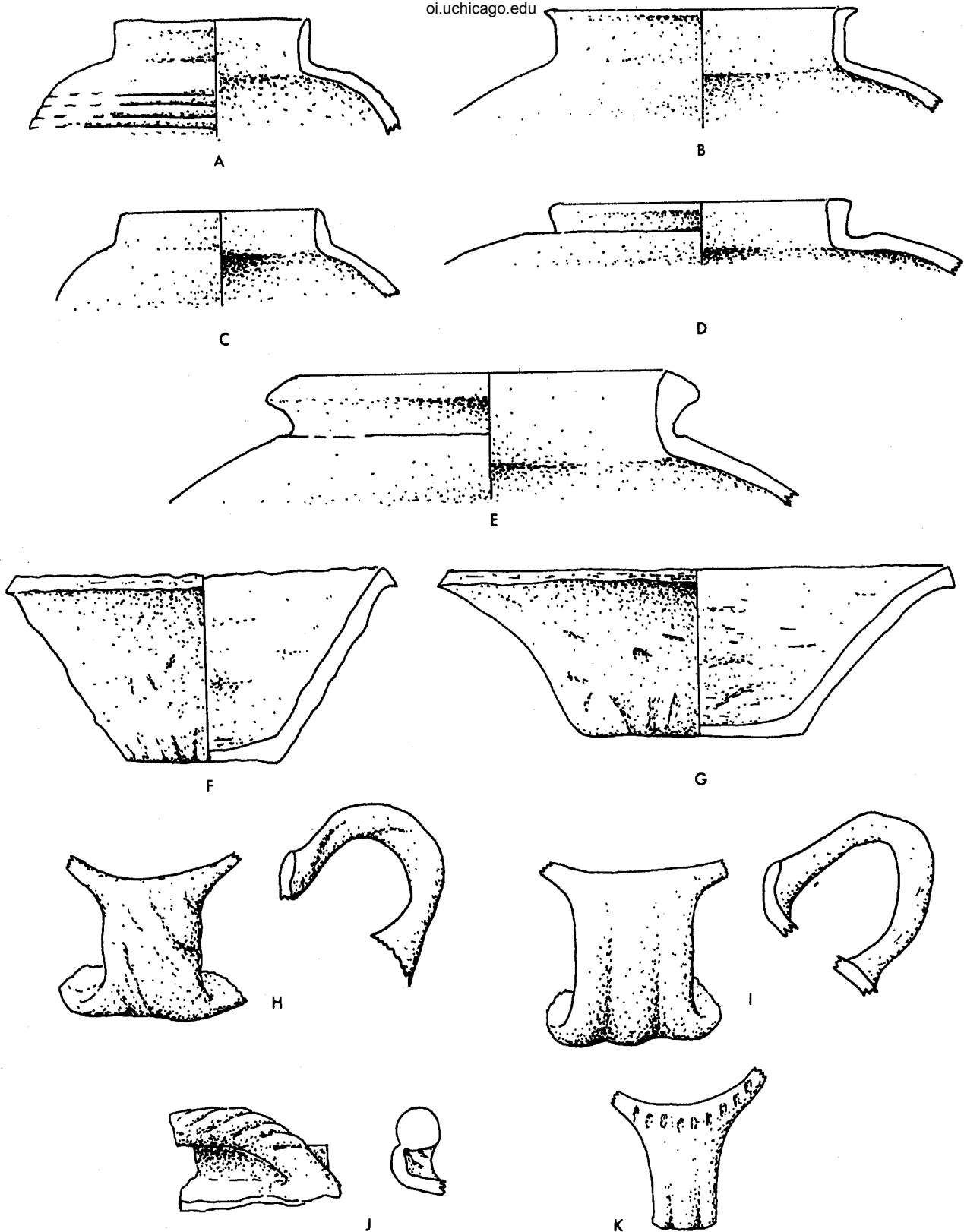


Fig. 3. Ceramics of the Uruk period (2/5).

- a. RJ4-1, straight-rim jar, B: 2.SY 6/4, EP-171.
- b. RJ4-1, straight-rim jar, B: 5Y 5/4, EP-171.
- c. RJ4-1, straight-rim jar, B: 5Y 6/4, EP-171.
- d. RJ4-2, thick-rim jar, B: 5Y 6/3, EP-3.
- e. RJ4-2, thick-rim jar, B: 5Y 7/3, EP-3.
- f. RB4-1, beveled-rim bowl, B: 5Y 6/3, EP-3.

- g. RB 4-1, beveled-rim bowl, B: 2.SY 7/4, EP-3.
- h. O4-1, twisted strap handle, B: 5Y 5/2, EP-29.
- i. O4-2, plain strap handle, B: 5Y 6/4, EP-29.
- j. O4-3, twisted lug handle, B: 5Y 5/4, EP-171.
- k. O4-2, plain strap handle. B: 5Y 7/4, EP-171.

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occurrence of small flat and twisted strap handles, and the high frequency of rim alterations on conical bowls, most distinctively a slightly beveled-rim form (RB5-4). This is probably a Jemdet Nasr complex. The second complex is distinguished by the frequent occurrence of hatched strips, reserved slip, and incised and excised jar shoulders (05-5, 05-6, 05-7), solid-footed goblets (B5-5), double-rim dishes (05-1), and flat-rim jars (RJ5-5). This is an Early Dynastic I complex. The third complex is distinguished by low frequencies of ledge-rim jars (RJ5-1), so common in the previous two complexes; high frequencies of the simple flared-rim jars (RJ5-3), a scarcity of decorated sherds except for hatched strip (05-5). This is probably an Early Dynastic III complex. It is unfortunate that the Jemdet Nasr and Early Dynastic III complexes are indicated primarily by the absence of things, for it is difficult to establish their presence unless they form the dominant complex on a site.

Sites with dominant assemblages of this period are marked by quantities of conical bowl fragments, cream-slip sherds, and denticulate sickle blades.

RJ4-1: Simple straight-rim jars (fig. 3a, c): This type is rare in surface collections from sites of this period, apparently because the potters were using a low-fired body that disintegrates quickly when exposed. Those that occur are little different from their Uruk predecessors, though loop handles are replaced by simple oval lugs attached to the rim. None of these lugs have been found in surface collections, but they are frequent in excavated samples (Wright 1969, p. 68, fig. 18e).

RJ5-1: Ledge-rim jars (fig. 4a-c): There is a possibility that sharp neck-shoulder and shoulder-body junctures are more typical of the Jemdet Nasr complex. Vessels of this type frequently have shoulder decorations (see below).

RJ5-2: Band-rim jars (fig. 4d-g): These may be more frequent in Jemdet Nasr times.

RJ5-3: Simple round-rim jars (fig. 4h, i): Distinguished by a coarse, often dark green body. Probably more common in Early Dynastic III.

RJ5-4: Flared expanded-rim jars (fig. 4j, k): Distinguished by light body color; high, gently outcurved neck; and slight, often concave bevel.

RJ5-5: Flat-rim jar (fig. 5a): May be more frequent in Late Early Dynastic I. Distinguished by hard, very sandy paste, and gray to light green color.

RB5-1: Large bowl (fig. 5b): These are common in excavated Early Dynastic I material but occur in Jemdet Nasr times as well. Often with flattened rim and hatched strip below rim. Sometimes lightly chaff-tempered.

RB5-2: Simple conical bowl (fig. 6a-c, g): The significance of the considerable variation in rim thickness and angle is not apparent.

RB5-3: Braced conical-bowl rim (fig. 6d): Probably limited to Jemdet Nasr and Early Dynastic I. Distinguished

by the thickened band on the exterior below the rim.

RB5-4: Beveled conical-bowl rim (fig. 6e): Probably limited to Jemdet Nasr.

RB5-5: Thickened conical-bowl rim (fig. 6f).

RB5-6: Simple stone-bowl rim (fig. 5c): Very common in Early Dynastic I sites. Made of gypsum or local limestone, both coarse, porous materials.

B5-1: Pinched ring base (fig. 5d): Distinguished by finger marks around ring. Often scraped on interior.

B5-2: Flat base (fig. 5e): Distinguished by slight unevenness on base. Often scraped on interior.

B5-3: Wide-mouth conical-bowl base (fig. 6i): Base string cut.

B5-4: Narrow-mouth conical-bowl base (fig. 6h): Base string cut.

B5-5: Solid-footed goblet base (fig. 6j): Base string cut. Frequently asymmetrical. These are typically Early Dynastic I.

04-1: Twisted strap handle: Jemdet Nasr and Early Dynastic I examples of this type are small and round in section. Some were attached to ledge-rim jars (RJ5-1) rather than simple straight-rim jars (RJ4-1).

04-2: Plain strap handle (fig. 3k): Jemdet Nasr and Early Dynastic I examples of this type are small, often with only one groove.

04-3: Twisted lug handle: Perhaps present in Jemdet Nasr.

04-4: Clay cones (fig. 6j-l): These occur no later than Jemdet Nasr. They vary greatly in size. Some show marks of the potter's knife across the head. Some are chipped across the head and some are chipped on the side. This may reflect functional differences.

05-1: Double-rim dish (fig. 5f): Distinguished by high outside rim, low inside rim, sometimes slightly outcurved with a small gap through it, and by pitting inside the inner rim, perhaps resulting from gentle pounding.

05-2: Spouts (fig. 5g-j): These vary from short to long, straight to slightly curved, and are generally slightly conical. Long forms are rare in Early Dynastic III.

05-3: Punctate decorated sherds: Distinguished by an irregular line of slits, either vertical, oblique, or horizontal, on jar shoulders.

05-4: Hatch-strip decorated sherd (fig. 6m): Strip varies from wide to narrow, hatching varies from wide to narrow and vertical to oblique. Varieties of this have been called "cable ornament."

05-5: Reserved-slip decorated sherd (fig. 6n): In our collections this occurs on Early Dynastic I sites.

05-6: Incised sherd with excised triangles (fig. 6o): This combination of shoulder decorations is apparently Early Dynastic I throughout the alluvium. The incising is generally oblique crosshatched within triangles or bands radiating out from the neck, or within concentric circles incised on the jar neck.

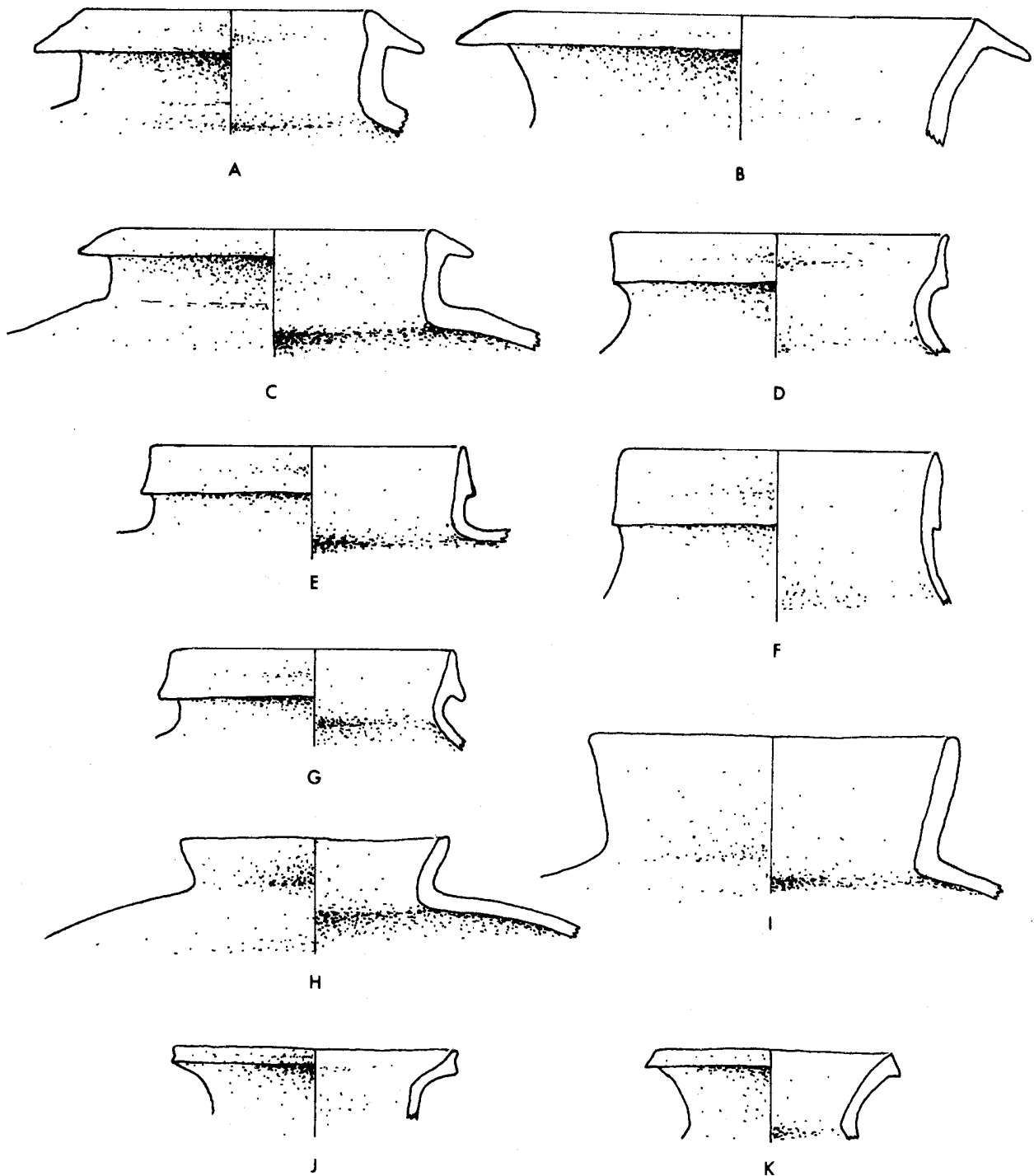


Fig. 4. Ceramics of the Jemdet Nasr and Early Dynastic period (2/5).

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|--|--|
| a. RJ5-1, ledge-rim jar, B: 5Y 7/3, EP-29. | g. RJ5-2, band-rim jar, B: 5Y 7/4, EP-127. |
| b. RJ5-1, ledge-rim jar, B: 2.5Y 7/2, EP-47. | h. RJ5-3, round-rim jar, B: 5Y 7/2, EP-30. |
| c. RJ5-1, ledge-rim jar, B: 10YR 7/2, EP-47. | i. RJ5-3, round-rim jar, B: 2.5Y 6/2, EP-30. |
| d. RJ5-2, band-rim jar, B: 2.5Y 7/4, EP-127. | j. RJ5-4, flared expanded-rim jar, B: 5Y 6/2, EP-29. |
| e. RJ5-2, band-rim jar, B: 10YR 6/3, EP-4. | k. RJ5-4, flared expanded-rim jar, B: 5Y 7/3, EP-29. |
| f. RJ5-2, band-rim jar, B: 2.5Y 3/0, EP-5. | |

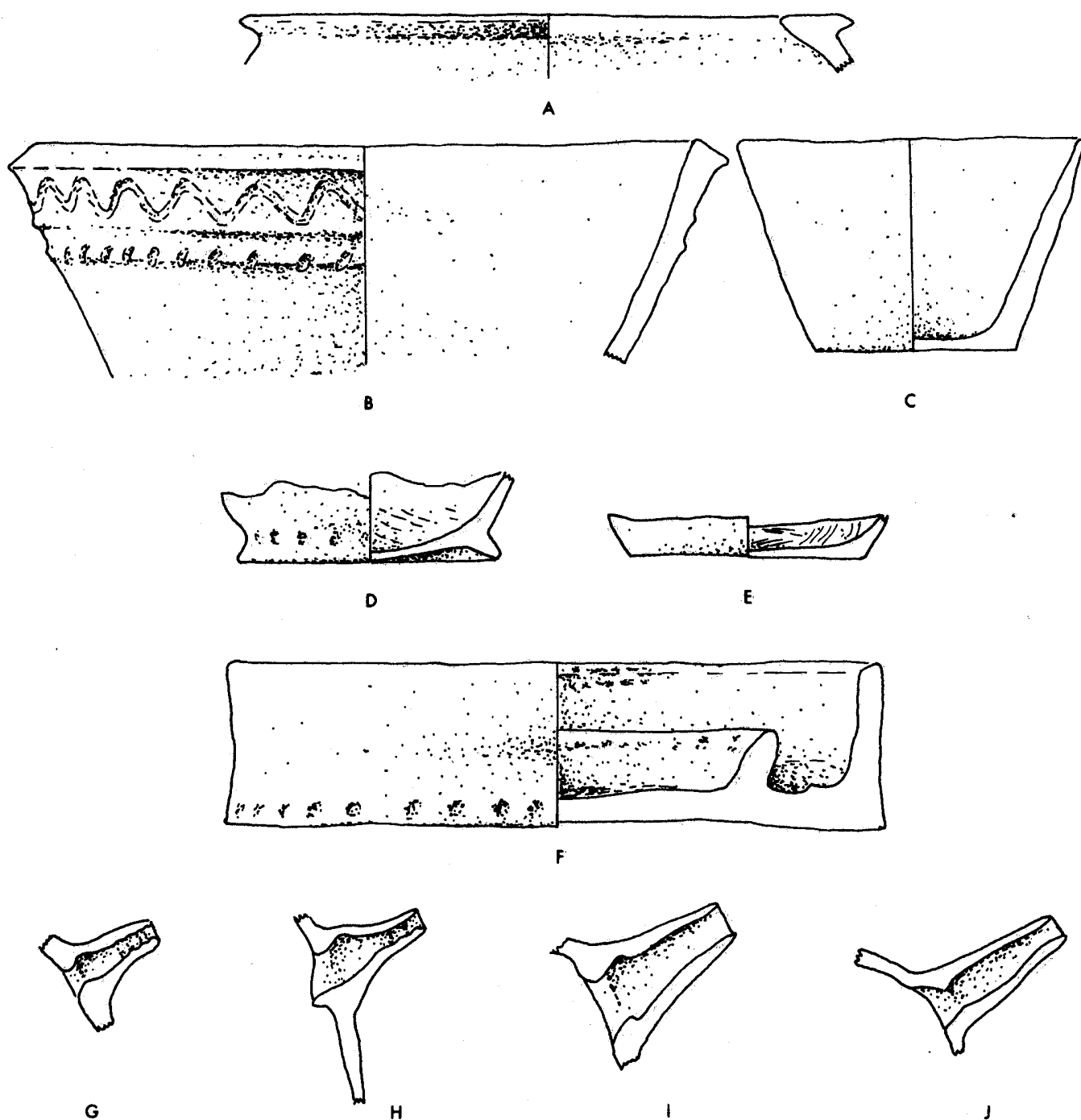


Fig. 5. Ceramics of the Jemdet Nasr and Early Dynastic period (2/5).

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|---|-------------------------------------|
| a. RJ5-5, flat-rim jar, B: 5Y 7/3, EP-47. | f. O5-1, double-rim dish, EP-79. |
| b. RB5-1, large bowl, B: 5Y 6/4, EP-142. | g. O5-2, spout, B: 10YR 6/3, EP-47. |
| c. RB5-6, stone bowl, calcite, EP-156. | h. O5-2, spout, B: 5Y 7/3, EP-47. |
| d. B5-1, pinched ring base, B: 10YR 8/3, EP-30. | i. O5-2, spout, B: 5YR 6/4, EP-29. |
| e. B5-2, flat base, B: 5Y 6/4, EP-22. | j. O5-2, spout, B: 2.5Y 7/4 EP-3. |

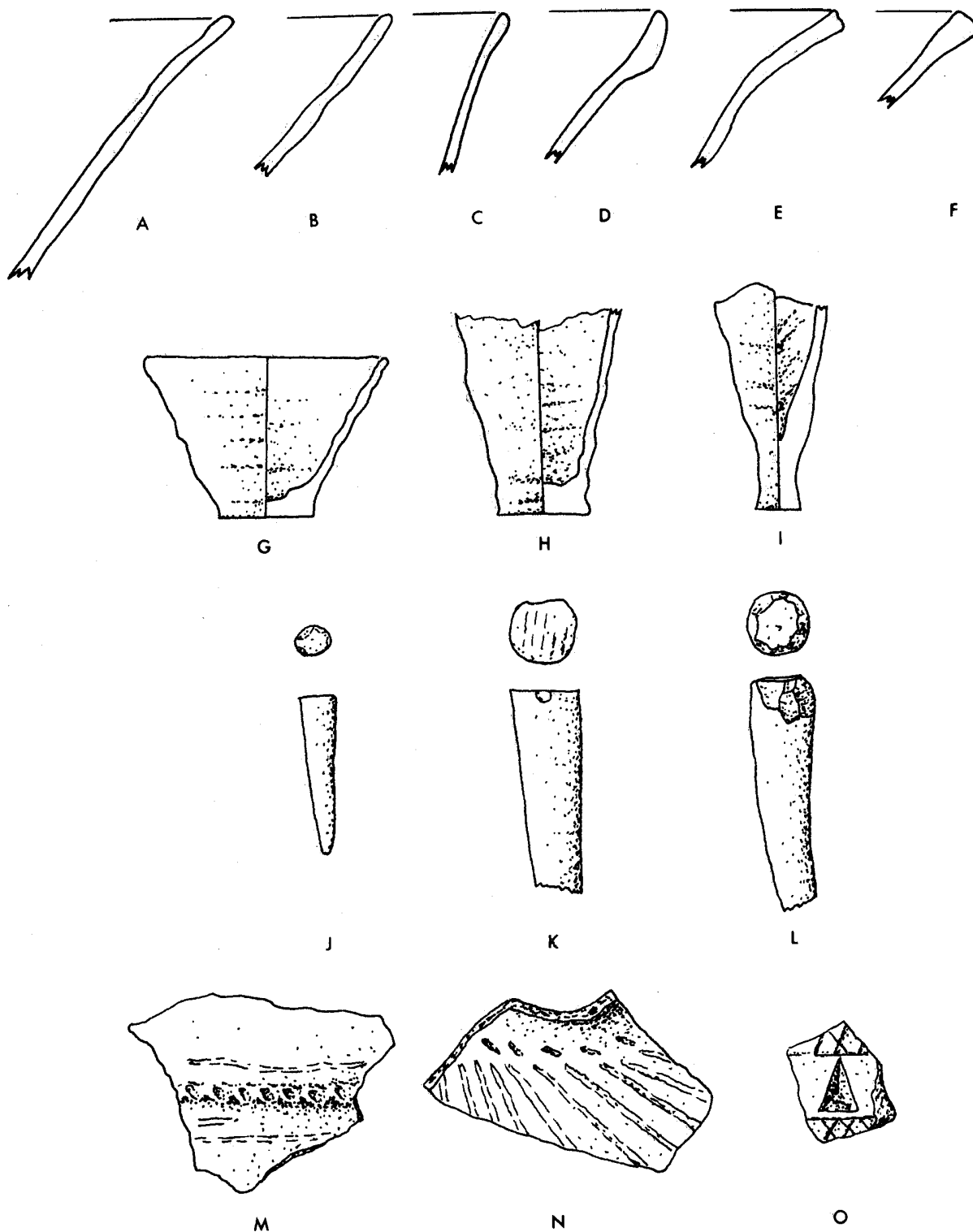


Fig. 6. Ceramics of the Jemdet Nasr and Early Dynastic period (2/5).

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| a. RB5-2, conical-bowl rim, B: 2.5Y 2/0, D: 32, EP-60. | g. RB5-2 on B5-3, conical bowl, B: 7.5YR 6/6, EP-30. |
| b. RB5-2, conical-bowl rim, B: 5Y 5/4, D: 16, EP-60. | h. B5-4, narrow-mouth goblet base, B: 7.5YR 6/5, EP-30. |
| c. RB5-2, conical-bowl rim, B: 5Y 5/4, D: 14, EP-60. | i. B5-5, solid-footed goblet base, B: 7.5YR 5/6, EP-82. |
| d. RB5-3, braced conical-bowl rim, B: 10YR 5/4, D: 48, EP-60. | j. O4-4, clay cones, B: 5Y 6/3, EP-5. |
| e. RB5-4, beveled conical-bowl rim, B: 2.5Y 3/0, D: warped, EP-60. | k. O4-4, clay cones, B: 5Y 7/4, EP-3. |
| f. RB5-5, thickened conical-bowl rim, B: 10YR 5/3, D: 38, EP-60. | l. O4-4, clay cones, B: 2.5Y 7/4, EP-127. |
| | m. O5-4, hatched strip decoration, B: 5Y 7/4, EP-79. |
| | n. O5-5, reserved-slip decoration, B: 2.5Y 6/2, EP-29. |
| | o. O5-6, incised-excised decoration, B: 2.5Y 7/4, EP-79. |

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05-7: Denticulate sickle blade: Fine denticulations may be more common in the Jemdet Nasr, and coarse denticulations may be more common in Early Dynastic I.

AKKADIAN PERIOD

Single-component Akkadian sites are very rare in the survey area, so a complete complex cannot be defined. Certain distinctive types isolated from mixed collections are presented.

Ceramics of this complex are tempered with either small quantities of fine sand or small quantities of vegetal matter. They vary from buff to light tan.

Sites with dominant surface assemblages of this period are marked by quantities of ridged sherds (cf. RJ6-2 and RJ6-3).

RJ6-1: Narrow ledge-rim jars (fig. 7*a, b*): Distinguished by a gently outcurved neck and slight ledge, often concave on top. This is probably a development from RJ5-4 and may well occur earlier.

RJ6-2: Ridged thickened-rim jar (fig. 7*c*): Distinguished by wide mouth and slightly outcurved rim, triangular in section.

RJ6-3: Ridged rounded band-rim jar (fig. 7*d*): Distinguished by rounded rim folded over to leave a small crease under the rim (see illustration).

RB5-2: Conical-bowl rim (fig. 6*a-c*).

RB6-1: Fine carinated vertical-rim bowl (fig. 11*b*): Distinguished by relative thinness and by concavity of the vertical rim.

B5-4: Narrow mouth conical-bowl base (fig. 6*h*).

06-1: Fine comb-decorated sherds (fig. 7*e, f*): Distinguished by straight combed rows alternating with wavy combed rows, often between ridges. These are common during this period but certainly occur both earlier and later.

UR III AND EARLY LARSA PERIOD

Ceramics of this period are generally lightly chaff tempered and buff to yellowish in color.

Two complexes are recognized within the period. In one, the High band-rim jar (RJ7-1) is frequent. This may be an Ur III complex. In the other the single grooved band-rim jar (RJ7-3) and the rolled-rim jar (RJ8-1) are frequent. This may be an Early Larsa complex. Sites with dominant assemblages of this period are generally marked by the occurrence of double grooved band-rim jars (RJ7-2).

RJ7-1: High band-rim jars (fig. 8*a, b*): Distinguished by high, gently outcurved band rim.

RJ7-2: Double groove band-rim jar (fig. 8*c, d*).

RJ7-3: Single groove band-rim jar (fig. 8*e, f*).

RJ7-4: Grooved square-rim jar (fig. 8*g*): A large, wide-mouth vessel with deep wide grooved and flattened

rim, square in section. Perhaps a development from RJ6-2.

RJ7-5: Flattened rolled-over rim: In these complexes this type includes vessels transitional between RJ7-4 and RJ8-1.

RJ8-1: Rolled-rim jar (fig. 10*a, b*).

RB6-1: Fine carinated vertical-rim bowl (fig. 11*b*).

RB8-1: Band-rim bowl (fig. 10*g*): Rare.

RB8-2: Multiple-groove simple-rim bowl (fig. 10*h*).

RB9-2: Shallow conical bowl (fig. 12*h*).

B7-1: Disk base (fig. 9*a*): Frequently has a concavity in interior.

B7-2: Large button base (fig. 9*b*): Distinguished by relatively large, round base separated from rounded vessel bottom by a sharp crease, and by rounded concavity in bottom of base.

B7-3: Small conoidal base (fig. 9*d*): Distinguished by an incurved base coming to point, slight rounded nipple, or slight flat area.

B7-4: Small button base (fig. 9*e*).

B7-5: Ring base (fig. 9*c*): Distinguished by relatively narrow jar body above the base. "Makers' marks" are sometimes visible on the base.

B7-6: Medium-high base (fig. 9*f*): Distinguished by relatively large base, narrow stem, and rounded bottom of jar body above.

B8-2: Small cylindrical base (fig. 11*g, h*).

06-1: Fine comb-decorated sherds (fig. 7*e, f*).

07-1: Pot stand (fig. 9*g*): This type is distinguished by band rims and top and bottom rims of equal diameter.

08-1: Hatched-groove-decorated sherds (fig. 11*k*): Rare.

09-1: Pot stand (fig. 13*g*): Rare.

LATE LARSA AND OLD BABYLONIAN PERIOD

Ceramics of this period are generally straw tempered and buff to light green in color. The shape category of small bowls shows a tremendous amount of variation that is not well understood, even though we have more collections of this period than any others.

There are two complexes within the period. One has the hatch-rim jar (RJ8-2), the shallow groove-rim bowl (RB8-5), and the small cylindrical base (B8-2). The other lacks these items. Whether these two complexes represent style change through time within the period or some other factor is not known.

Sites with dominant surface assemblages of this period are indicated by the occurrence of hatched-groove decorated sherds (08-1).

RJ8-1: Rolled-rim jar (fig. 10*a, b*): Distinguished by a gradual thickening of the slightly curved neck and a rolling over of the lip resulting in a slight crease below the rim. Often hatched-groove decoration (fig. 11*k*) occurs on the vessels with this type of rim.

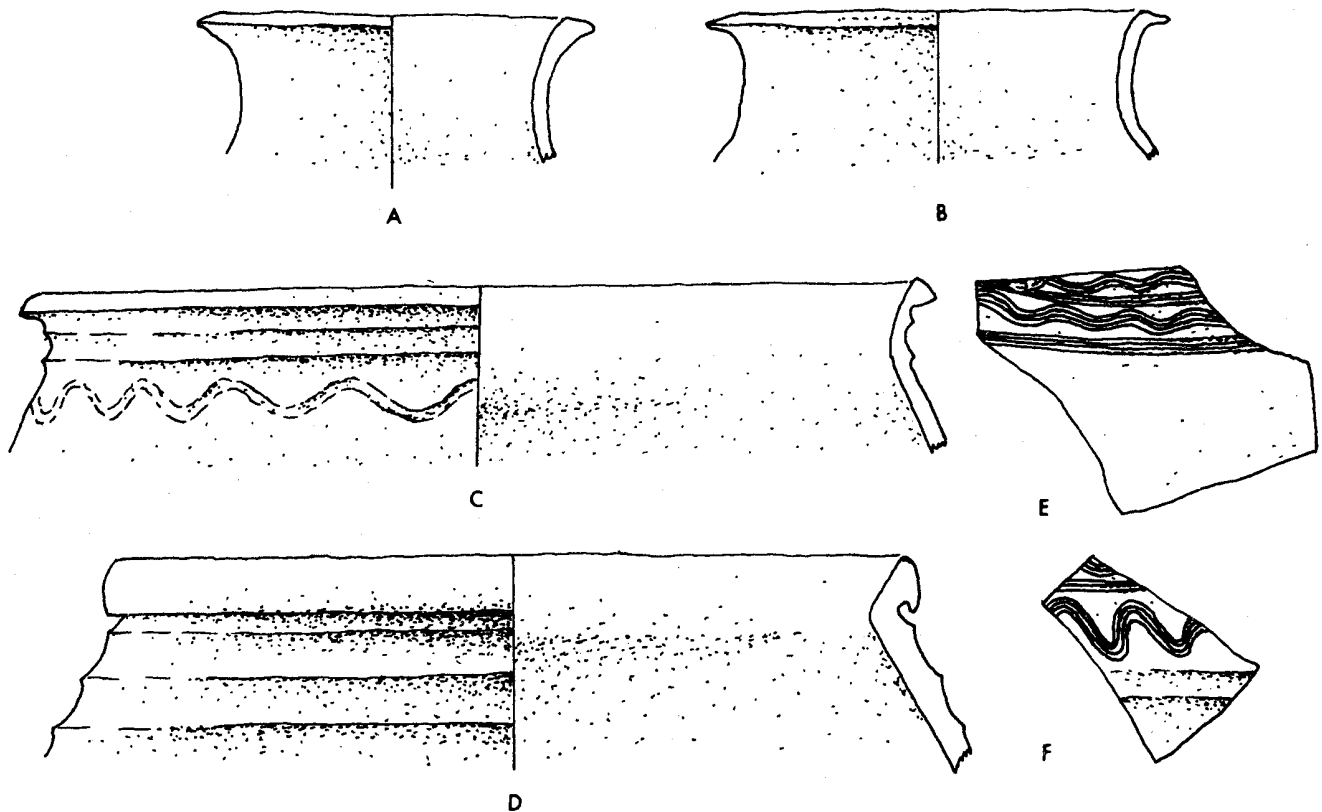


Fig. 7. Ceramics of the Akkadian period (2/5).

- a. RJ6-1, narrow ledge-rim jar, B: 10YR 7/4, EP-17.
- b. RJ6-1, narrow ledge-rim jar, B: 10YR 6/4, EP-17.
- c. RJ6-2, ridged thickened-rim jar, B: 10YR 6/4, EP-12.

- d. RJ6-3, ridged rounded-band rim jar, B: 10YR 8/5, EP-30.
- e. O6-1, comb decoration, B: 10YR 6/3, EP-12.
- f. O6-1, comb decoration, B: 5Y 6/4, EP-12.

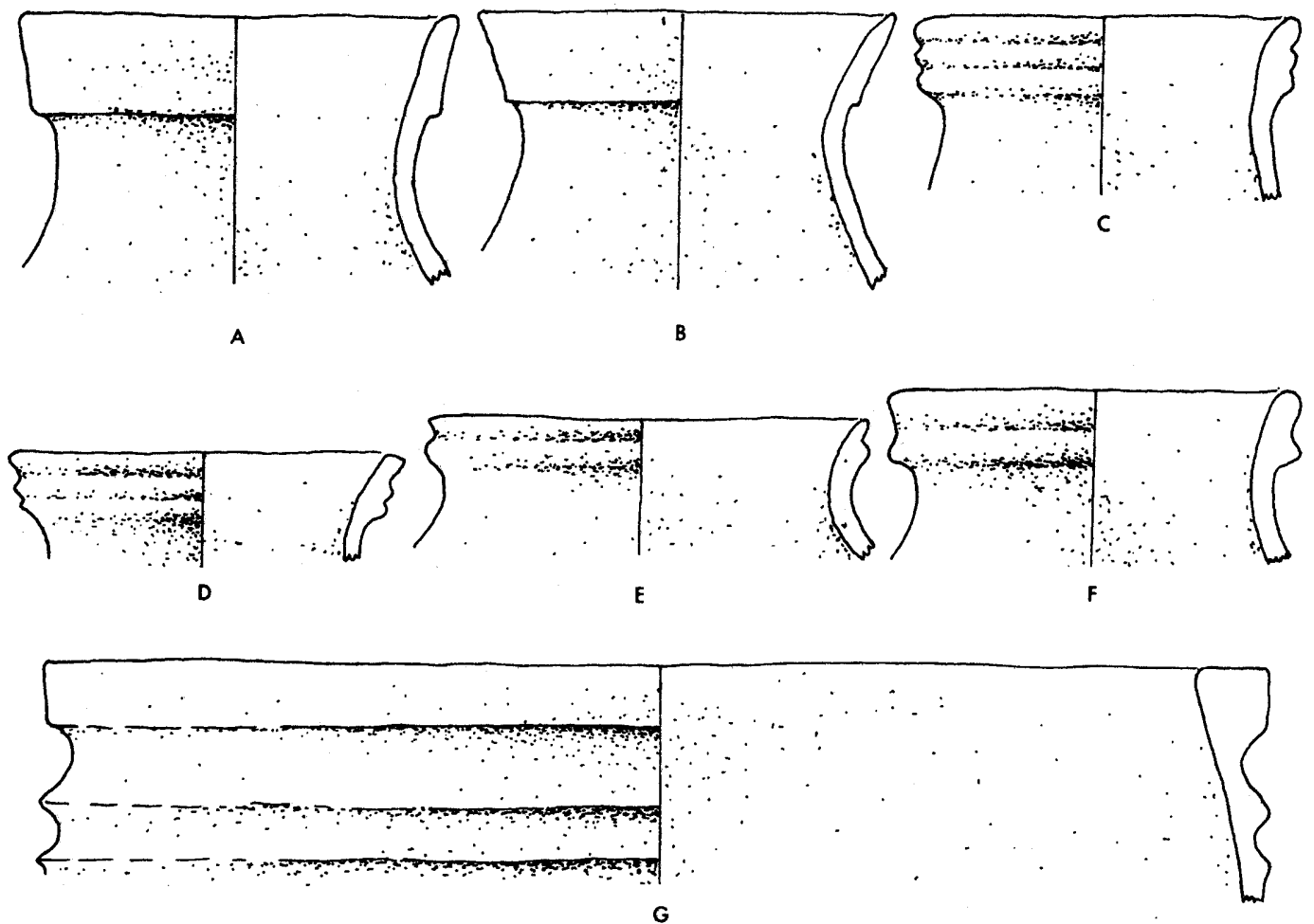


Fig. 8. Ceramics of the Ur III Early Larsa period (2/5).

- a. RJ7-1, high band-rim jar, B: 5Y 6/3, EP-60.
- b. RJ7-1, high band-rim jar, B: 5Y 7/4, EP-30.
- c. RJ7-2, double groove band-rim jar, B: 10YR 6/4, EP-60.
- d. RJ7-2, double groove band-rim jar, B: 5Y 5/4, EP-84.
- e. RJ7-3, single groove band-rim jar, B: 5Y 6/4, EP-60.
- f. RJ7-3, single groove band-rim jar, B: 5Y 6/4, EP-60.
- g. RJ7-4, grooved square-rim jar, B: 5Y 7/3, EP-84.

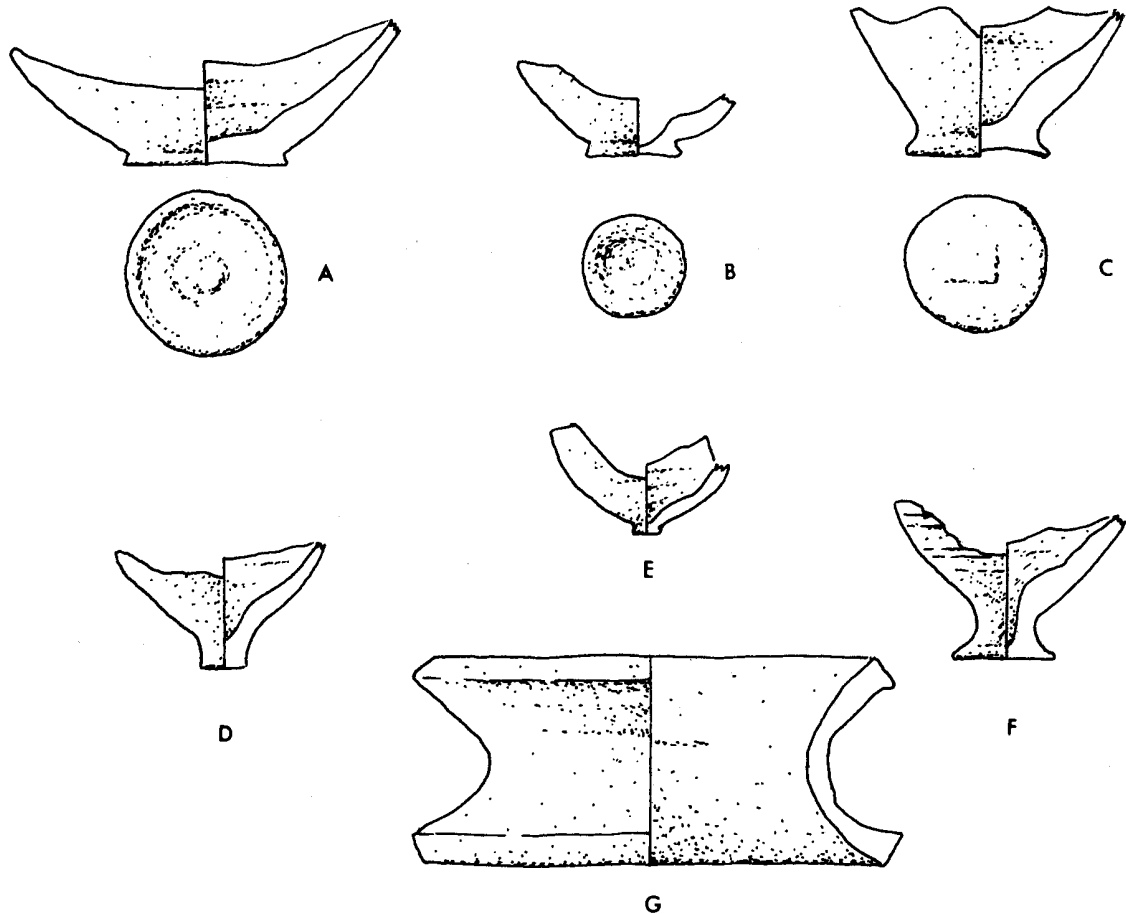


Fig. 9. Ceramics of the Ur III and Early Larsa period (2/5).

- a.* B7-1, disk base, B: 5Y 6/4, EP-84.
- b.* B7-2, large button base, B: 10YR 6/4, EP-29.
- c.* B7-5, ring base, B: 7.5YR 6/6, EP-111.
- d.* B7-3, small conoidal base, B: 5Y 6/3, EP-84.
- e.* B7-4, small button base, B: 10YR 6/5, EP-60.
- f.* B7-6, medium-high base, B: 5Y 6/2, EP-111.
- g.* O7-1, pot stand, B: 5Y 7/3, EP-16.

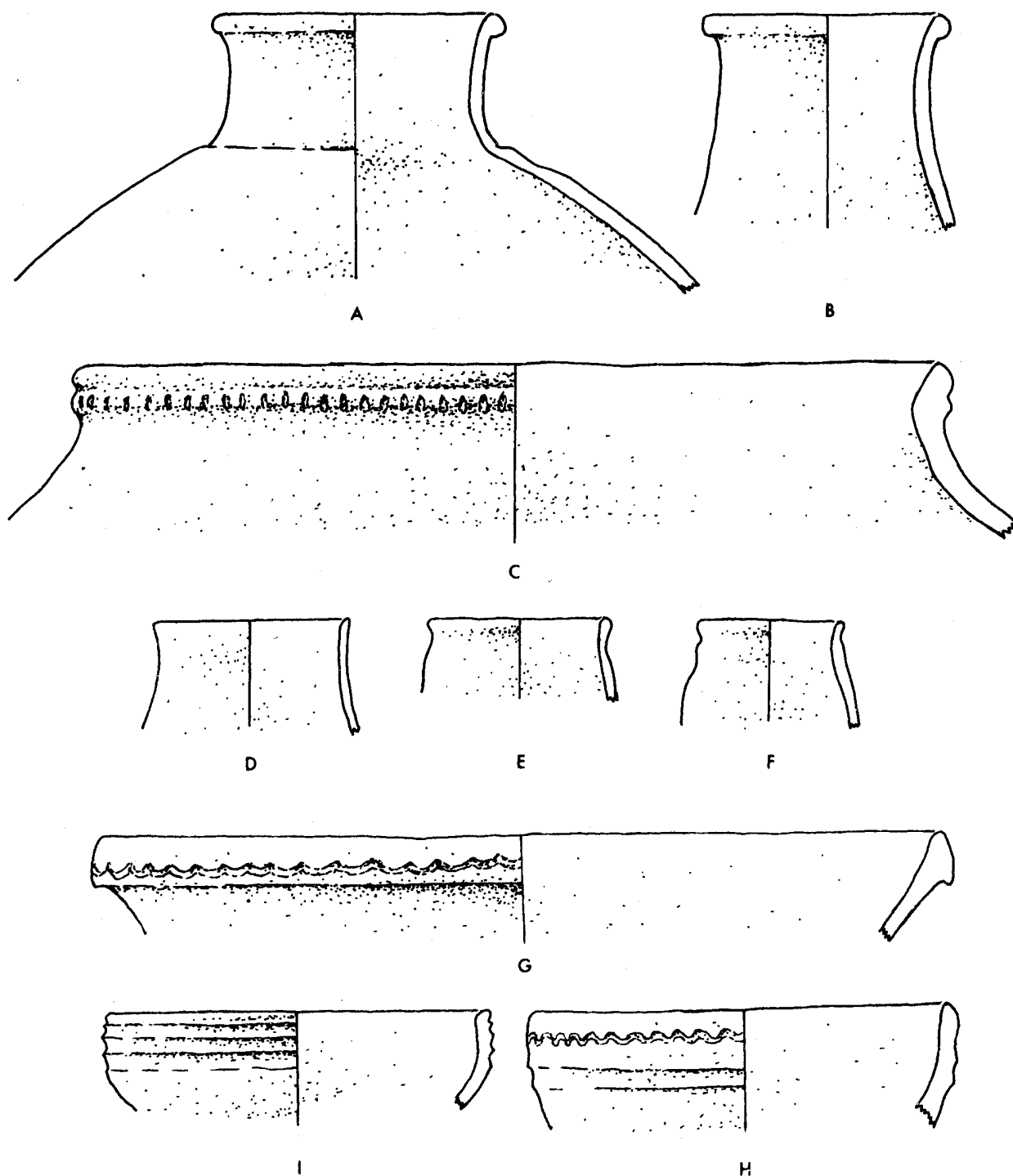


Fig. 10. Ceramics of the Late Larsa and Old Babylonian period (2/5).

- | | |
|---|--|
| <i>a.</i> RJ8-1, rolled-rim jar, B: 2.5Y 6/6, EP-34. | <i>g.</i> RB8-1, band-rim bowl, B: 5Y 6/4, EP-4. |
| <i>b.</i> RJ8-1, rolled-rim jar, B: 2.5Y 6/5, EP-34. | <i>h.</i> RB8-2, multiple-groove simple-rim bowl, B: 2.5Y 7/4, EP-2. |
| <i>c.</i> RJ8-2, hatched-groove rim jar, B: 5Y 6/4, EP-2. | <i>i.</i> RB8-3, irregular-groove simple-rim bowl, B: 5Y 6/4, EP-133E. |
| <i>d.</i> RJ8-3, thin simple jar rim, B: 10YR 8/4, EP-16. | |
| <i>e.</i> RJ8-3, thin simple jar rim, B: 2.5Y 8/4, EP-72. | |
| <i>f.</i> RJ8-3, thin simple jar rim, B: 10YR 7/4, EP-72. | |

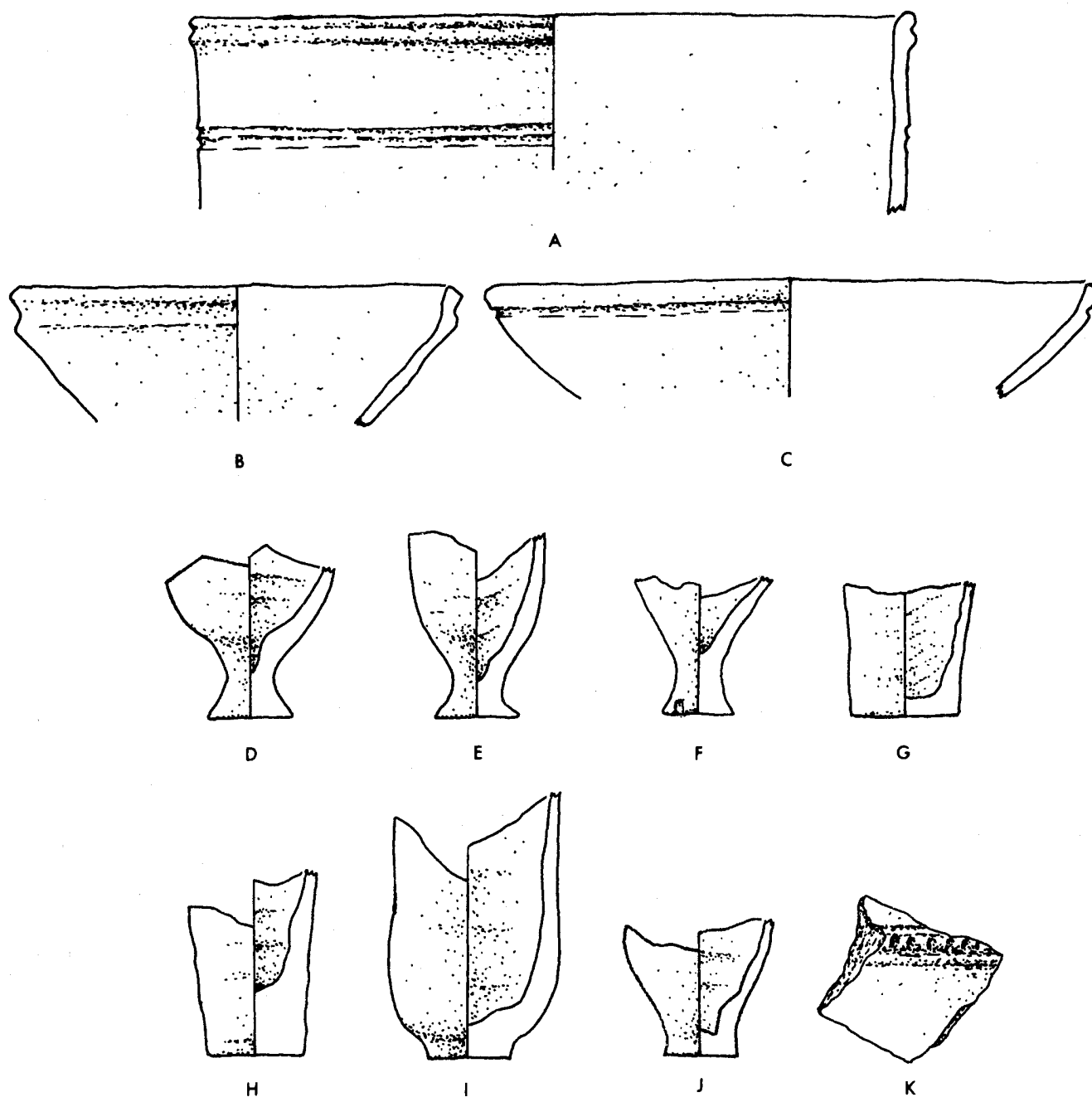


Fig. 11. Ceramics of the Late Larsa and Old Babylonian period (2/5).

- a.* RB8-4, deep multiple-groove-rim bowl, B: 2.5Y 5/4, EP-1.
- b.* RB6-1, fine carinated vertical-rim bowl, B: 5Y 5/3, EP-34.
- c.* RB8-5, shallow single-groove-rim bowl, B: 10YR 7/5, EP-150.
- d.* B8-1, small high base, B: 10YR 5/4, EP-4.
- e.* B8-1, small high base, B: 2.5Y 3/0, EP-4.
- f.* B8-1, small high base, B: 10YR 6/5, EP-72.
- g.* B8-2, small cylindrical base, B: 5Y 6/4, EP-34.
- h.* B8-2, small cylindrical base, B: 10YR 6/4, EP-30.
- i.* B8-3, incurved flat base, B: 5Y 6/6, EP-34.
- j.* B8-3, incurved flat base, B: 2.5Y 6/4, EP-84.
- k.* O8-1, hatched-groove decoration, B: 10YR 7/4, EP-34.

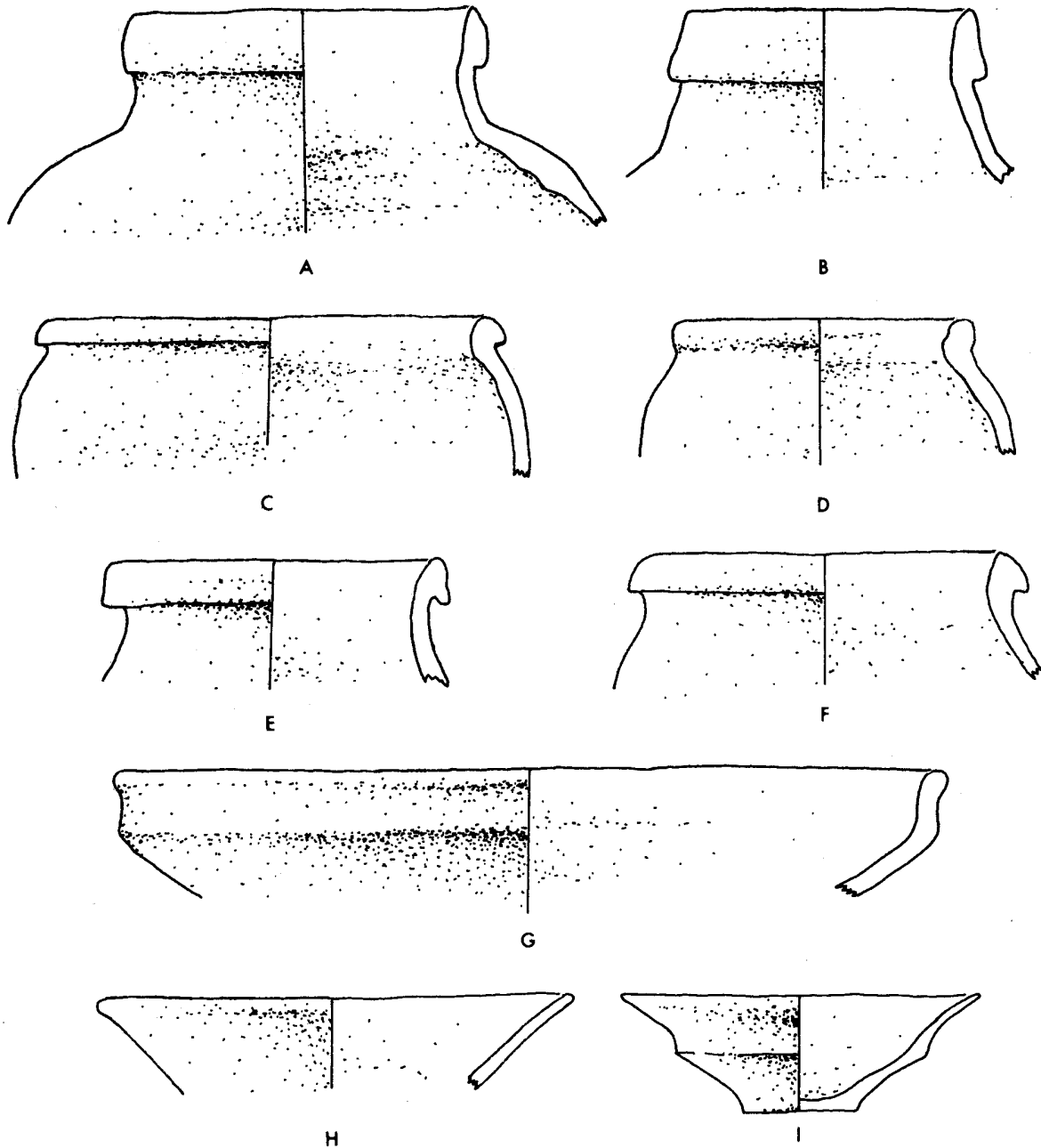


Fig. 12. Ceramics of the Cassite and Post-Cassite periods (2/5).

- | | |
|--|---|
| <i>a.</i> RJ9-1, heavy band-rim jar, B: 5Y 6/4, EP-36. | <i>f.</i> RJ9-3, outcurved rolled-over-rim jar, B: 5Y 7/4, EP-189. |
| <i>b.</i> RJ9-1, heavy band-rim jar, B: 5Y 5/3, EP-89. | <i>g.</i> RB9-1, heavy vertical-rim carinated bowl, B: 5Y 5/3, EP-16. |
| <i>c.</i> RJ9-2, incurved rolled-rim jar, B: 5Y 5/3, EP-189. | <i>h.</i> RB9-2, shallow conical bowl, B: 5Y 6/4, EP-36. |
| <i>d.</i> RJ9-2, incurved rolled-rim jar, B: 5Y 5/4, EP-189. | <i>i.</i> RB9-3, shallow carinated bowl, B: 2.5Y 8/4, EP-36. |
| <i>e.</i> RJ9-3, outcurved rolled-over-rim jar, B: 5Y 6/4, EP-189. | |

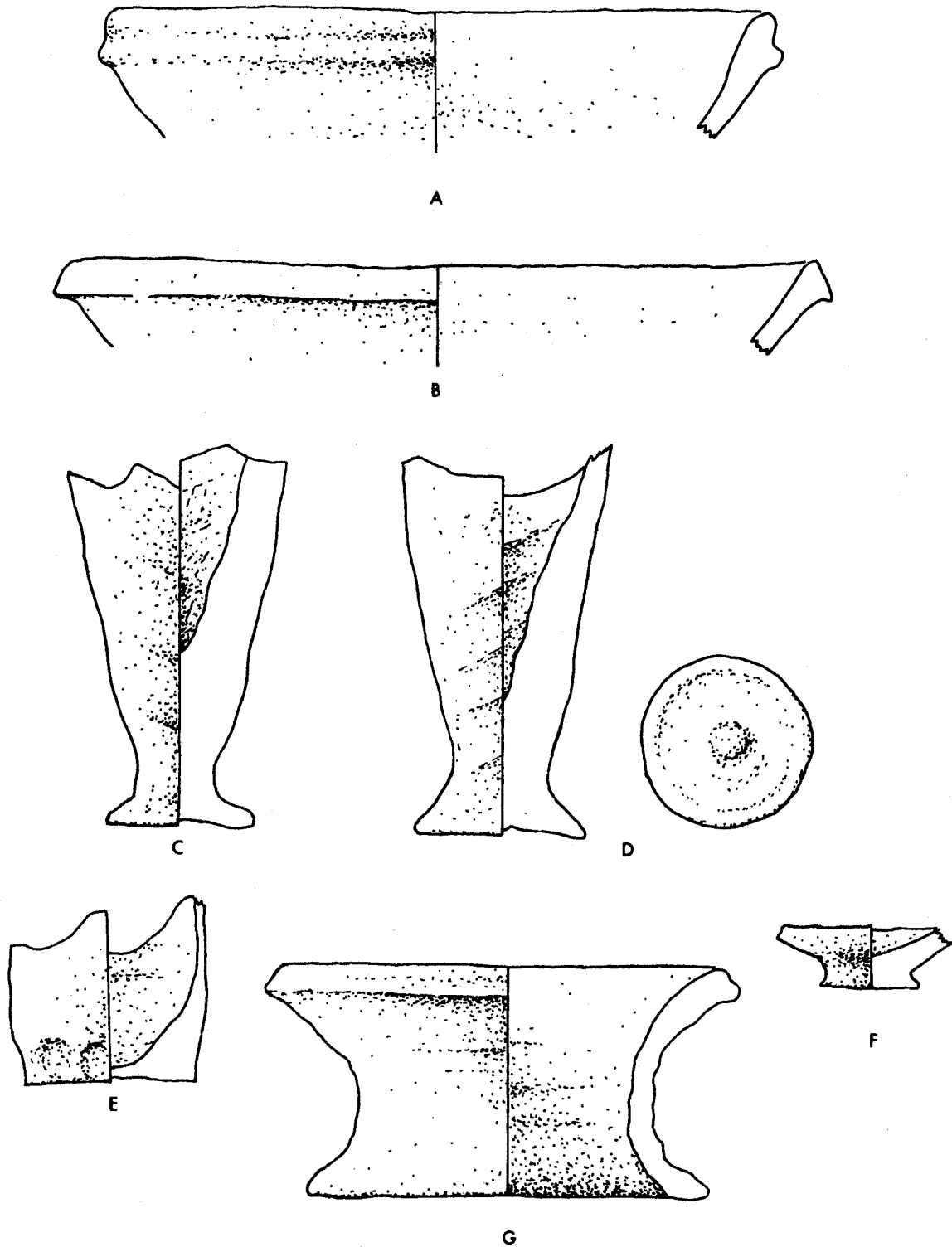


Fig. 13. Ceramics of the Cassite and Post-Cassite periods (2/5).

- | | |
|---|---|
| <i>a.</i> RB9-4, heavy ridged-rim bowl, B: 5Y 8/3, EP-189. | <i>e.</i> B9-2, rough cylindrical base, B: 5Y 5/4, EP-89. |
| <i>b.</i> RB9-5, heavy round beveled-rim bowl, B: 5Y 5/4, EP-186. | <i>f.</i> B9-3, small disk base, B: 5Y 7/3, EP-189. |
| <i>c.</i> B9-1, solid-footed chalice base, B: 5Y 5/4, EP-89. | <i>g.</i> O9-1, pot stand, B: 5Y 5/3, EP-89. |
| <i>d.</i> B9-1, solid-footed chalice base, B: 5Y 7/2, EP-6. | |

Appendix: The Southern Margins of Sumer

RJ8-2: Hatched-groove-rim jar (fig. 10c): Distinguished by a band rim with either one or two grooves creating two or three ridges respectively. The lower or middle ridge is hatched.

RJ 8-3: thin simple jar rims (fig. 10d–f).

RB6-1: Fine carinated vertical-rim bowl (fig. 11b).

RB8-1: Band-rim bowl (fig. 10g): Distinguished by a rounded band rim on a large, shallow bowl. Often there is an incised wavy line as shown in the illustration.

RB8-2: Multiple-groove simple-rim bowl (fig. 10h): Distinguished by a yellowish body, small hemispherical shape, and up to eight closely spaced grooves on the exterior of the rim.

RB8-3: Irregular-groove simple-rim bowl (fig. 10i): Distinguished by buff to green body, thick walls, and series of thickenings resembling the RB8-2 groovings. Often there is an incised wavy line as shown in the illustration.

RB8-4: Deep multiple-groove-rim bowl (fig. 11a): Distinguished by near-straight sides. Some grooving was done with a stylus held at various angles while the pot was still turning on the wheel, but some seems to have been done with a notched template held against the rotating vessel. The significance of this difference is unknown.

RB8-5: Shallow single-groove-rim bowl (fig. 11c): Distinguished by simple rim with single exterior groove.

B7-1: Disk base (fig. 9a).

B7-3: Small conoid base (fig. 9d).

B8-1: Small high base (fig. 11d–f): Distinguished by small cylindrical base with a high stem and rounded body above. In section, this body is often shaped like the letter U. The body is often yellowish.

B8-2: Small cylindrical base (fig. 11g, h): Distinguished by thick base and marked but regular interior thickenings.

B8-3: Incurved flat base (fig. 11i, j): Distinguished by a cylindrical or slightly constricted body with a rounded bottom that is formed into a small, flat solid base. A similar Neo-Babylonian and Achaemenian type is generally smaller and yellower.

08-1: Hatched-groove decorated sherds (fig. 11k): Distinguished as two to four parallel grooves around a jar neck with hatches across several of the resulting grooves. Only more complex varieties are definitely of this period.

08-2: Sherds with heavy black lines painted in bituminous paint. This also recurs in the Neo-Babylonian and later periods.

CASSITE AND POST-CASSITE PERIOD

Ceramics of this period are thick and have heavy vegetal temper. They vary from light brown to dark green.

There are two complexes within this period. One has heavy band-rim jars (RJ9-1) and shallow carinated bowls (RB9-3). This is probably a Cassite complex. The other

has incurved rolled-rim jars (RJ9-2), outcurved rolled-rim jars (RJ9-3), heavy ridged-rim bowls (RB9-4), heavy rounded bevel-rim bowls (RB9-5), and a small disk base (B9-3). This is probably a Post-Cassite complex. Often these two complexes occur on the same site.

Sites with dominant surface assemblages of this period are marked by the occurrence of solid-footed chalice bases (B9-1).

RJ7-5: Flattened rolled-over-rim jars: In this period, this category includes small fragments of RJ9-1 on which the distinctive neck characteristics are no longer preserved.

RJ8-1: Rolled-rim jar (fig. 10a, b): In this period, this category includes small fragments of RJ9-2 on which the neck characteristics are no longer visible.

RJ8-3: Thin simple jar rims (fig. 10d–f).

RJ9-1: Heavy band-rim jars (fig. 12a, b): Distinguished by a neck that slopes below the rim to a marked crease, then curves out and down to form the body of the vessel.

RJ9-2: Incurved rolled-rim jars (fig. 12c, d): Distinguished by the lack of a neck, the thickened, slightly rolled rim is formed directly from the incurved upper body of the vessel.

RJ9-3: Outcurved rolled-over jar rim (fig. 12e, f): Distinguished by outcurved neck and lip thickened and rolled over to the point where there is a marked concavity below it.

RB8-1: Band-rim bowl (fig. 10g).

RB8-3: Irregular-groove simple-rim bowl (fig. 10i).

RB8-5: Shallow single-groove rim bowl (fig. 11c).

RB9-1: Heavy vertical-rim carinated bowl (fig. 12g). Distinguished by thickness of body and by slightly rolled-over rim.

RB9-2: Shallow Conical Bowl (fig. 12h). Both large and small forms occur.

RB9-3: Shallow carinated bowl (fig. 12i): Distinguished by marked carination halfway between the rim and the base, generally small.

RB9-4: Heavy ridged-rim bowl (fig. 13a): Distinguished by a thick rim and very thick ridge below the rim. Probably a development of RB9-1.

RB9-5: Heavy round bevel-rim bowl (fig. 13b): Distinguished by a slight lip at the lower edge of the rim.

B7-1: Disk base (fig. 9a).

B7-2: Large button base (fig. 9b).

B7-3: Small conoid base (fig. 9d).

B7-4: Small button base (fig. 9e).

B9-1: Solid-footed chalice base (fig. 13c, d): Note the heavy ridges on the interior.

B9-2: Rough cylindrical base (fig. 13e): Distinguished by large size and irregular finger markings on lower body.

B9-3: Small disk base (fig. 13f): Distinguished by its small size. Some examples are string cut.

09-1: Pot stand (fig. 13g): Distinguished by unequal

Appendix: The Southern Margins of Sumer

diameter of the rims and by the rounded contour of the rims in section.

NEO-BABYLONIAN, ACHAEMENIAN, AND LATER PERIOD

Ceramics of this period have light to medium vegetal tempering in the larger-sized vessels and a sandy body in the smaller vessels. Colors range from yellowish to greenish. Glaze is frequent on certain types, though it is often weathered to a white encrustation.

Sites with dominant assemblages of this period are marked by Round-rim jar rims (RJ10-1).

Sites on which a majority of round-rim jars (RJ10-1) lack ridges seem to have few model horses (O10-3), stamped sherds (O10-5), and eggshell-ware sherds. This may represent a Neo-Babylonian complex, since sites with this assemblage seem to be on older positions on the canal systems. Unfortunately there are few sites with a clear dominance of this complex.

RJ10-1: round-rim jar rim (fig. 14a, b): Distinguished by vertical or slightly concave thin-walled neck and thickened rim. Often the rounded section of the rim thickening, as shown in the illustration, is slightly flattened on the top and exterior, creating a squared section. Varieties of this type have plain necks, necks with a single sharp ridge, necks with multiple sharp ridges, and necks with hatched ridges. Glaze occurs on some examples.

RJ10-2: Thick-rim jar (fig. 14c): Distinguished by a slight rim thickening and low concave neck, changing smoothly into a convex body, frequently grooved. Perhaps this developed from RJ9-3.

RJ10-3: Club-rim jar (fig. 14d): Distinguished by a vertical or slightly concave thin-walled neck with a small rounded rim separated from the neck by a relatively deep downward groove.

RJ10-4: Large thick-rim jar (fig. 14e): Distinguished by a large, relatively wide mouth and the immediate sloping out from the rim to a rounded body. Grooving or ridging is frequent.

RJ10-5: Concave band-rim jar (fig. 14f): Distinguished by a large, relatively wide mouth, thickened, flattened rim, and deep upward groove on the body isolating a wide concave band.

RB10-1: Simple ledge-rim bowl (fig. 14g): Distinguished by thin walls. On some sites, glaze is preserved on many of these rims.

RB10-2: Narrow ledge-rim carinated bowl (fig. 14h): Same.

RB10-3: Wide ledge-rim carinated bowl (fig. 15a): Same.

RB10-4: Inverted-rim carinated bowl (fig. 15b): Same.

RB10-5: Grooved trapezoidal-rim bowl (fig. 15c): The illustrated example is relatively small and relatively thick walled for this type.

B10-1: Grooved flat base (fig. 15d): Distinguished by scoring on the bottom and grooving on lower body. Frequently glazed.

B10-2: Thin flat base (fig. 15f): Distinguished by thinness, sandy texture of the paste, and slightly convex irregular remnant of clay in the center of the interior.

B10-3: Hole base (fig. 15e): Distinguished by large size of vessel, the hole, and the wide thickened rim around the hole.

B10-4: Small incurved flat base (fig. 16a, b): Distinguished by small size and yellow, sometimes sandy paste clay body.

O10-1: Simple loop handle (fig. 16c).

O10-2: Pinched lug handle (fig. 16d).

O10-3: Model horse (fig. 16e, f): Pinched mane and long modeled tail frequent. Rider is rare.

O10-4: Stamped-node decorated sherds (fig. 16g): Distinguished by fingerprint in the node on the inside and stamp outside, either plain as illustrated, or with a variety of designs.

O10-5: Medallion-stamp decorated sherds (fig. 16i): The wheel-like design is most common.

O10-6: Tripod support legs (fig. 16h).

O10-7: Dentate-stamp decorated sherds (fig. 16j, k): Frequently in vertical or oblique sets between the grooves on jar shoulders.

O10-8: Roughened bottom dishes (fig. 16l): Most common are bottom sherds from this form, which is a shallow oval vessel with thick, heavily chaff tempered walls and bottom. The bottom was roughened with a toothed instrument whose teeth are large and may be round, square, or triangular. This form is distinguished from the Hassuna "husking tray" by the small size of the roughening impressions.

O10-9: Eggshell-ware sherds: Small, very thin sherds with a fine paste, generally very light brown or white and sometimes glazed.

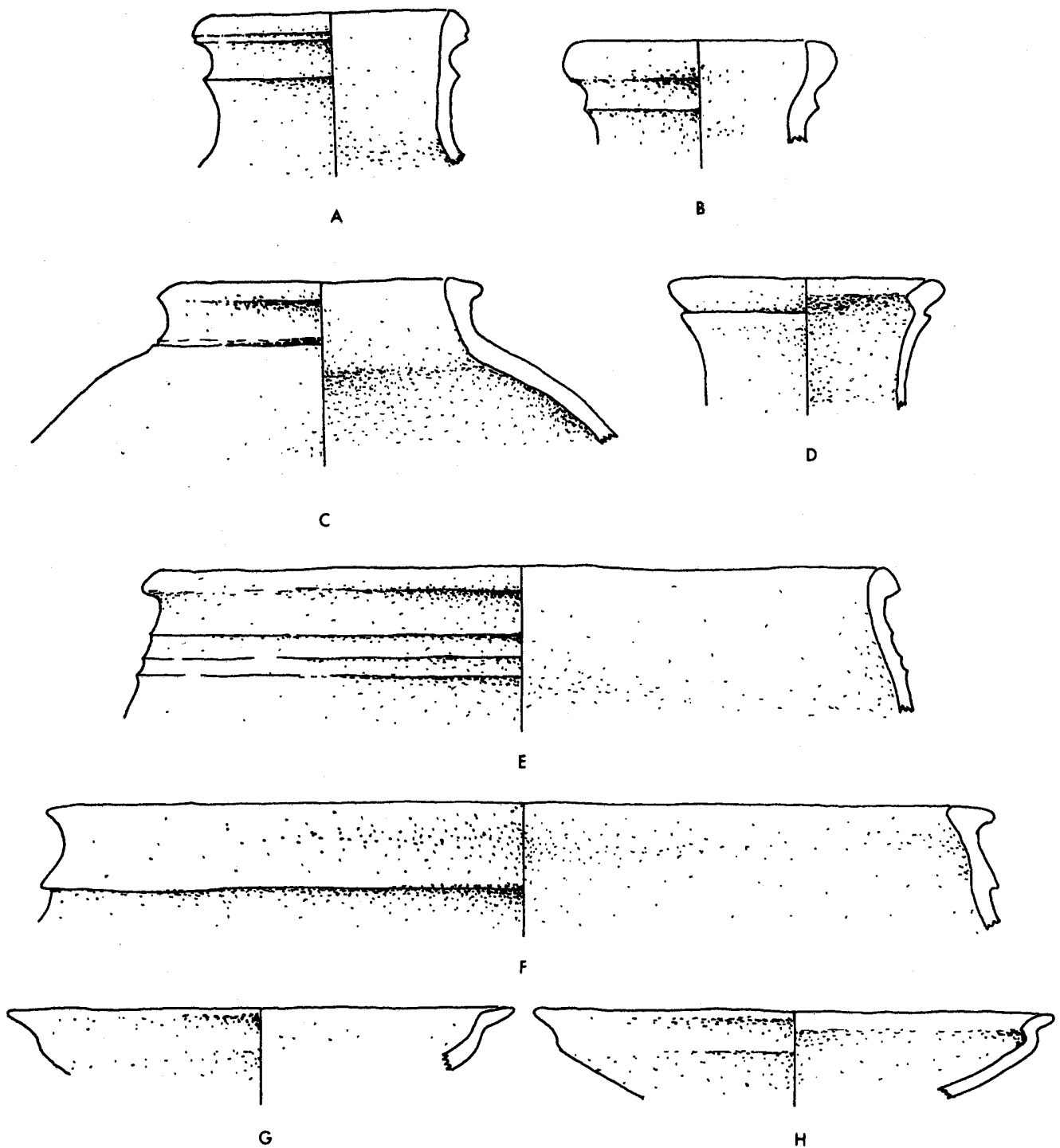


Fig. 14. Ceramics of the Neo-Babylonian and Later period (2/5).

- a. RJ10-1, round-rim jar, B: 5Y 7/3, EP-50.
- b. RJ10-1, round-rim jar, B: 5Y 6/4, EP-47.
- c. RJ10-2, thick-rim jar, B: 5Y 6/4, EP-50.
- d. RJ10-3, club-rim jar, B: 10YR 7/3, EP-50.
- e. RJ10-4, large thick-rim jar, B: 10YR 8/4, EP-148.
- f. RJ10-5, concave band-rim jar, B: 10YR 7/3, EP-88.
- g. RB10-1, simple ledge-rim bowl, B: 10YR 7/3, EP-29.
- h. RB10-2, narrow ledge-rim carinated bowl, B: 5Y 6/4, EP-50.

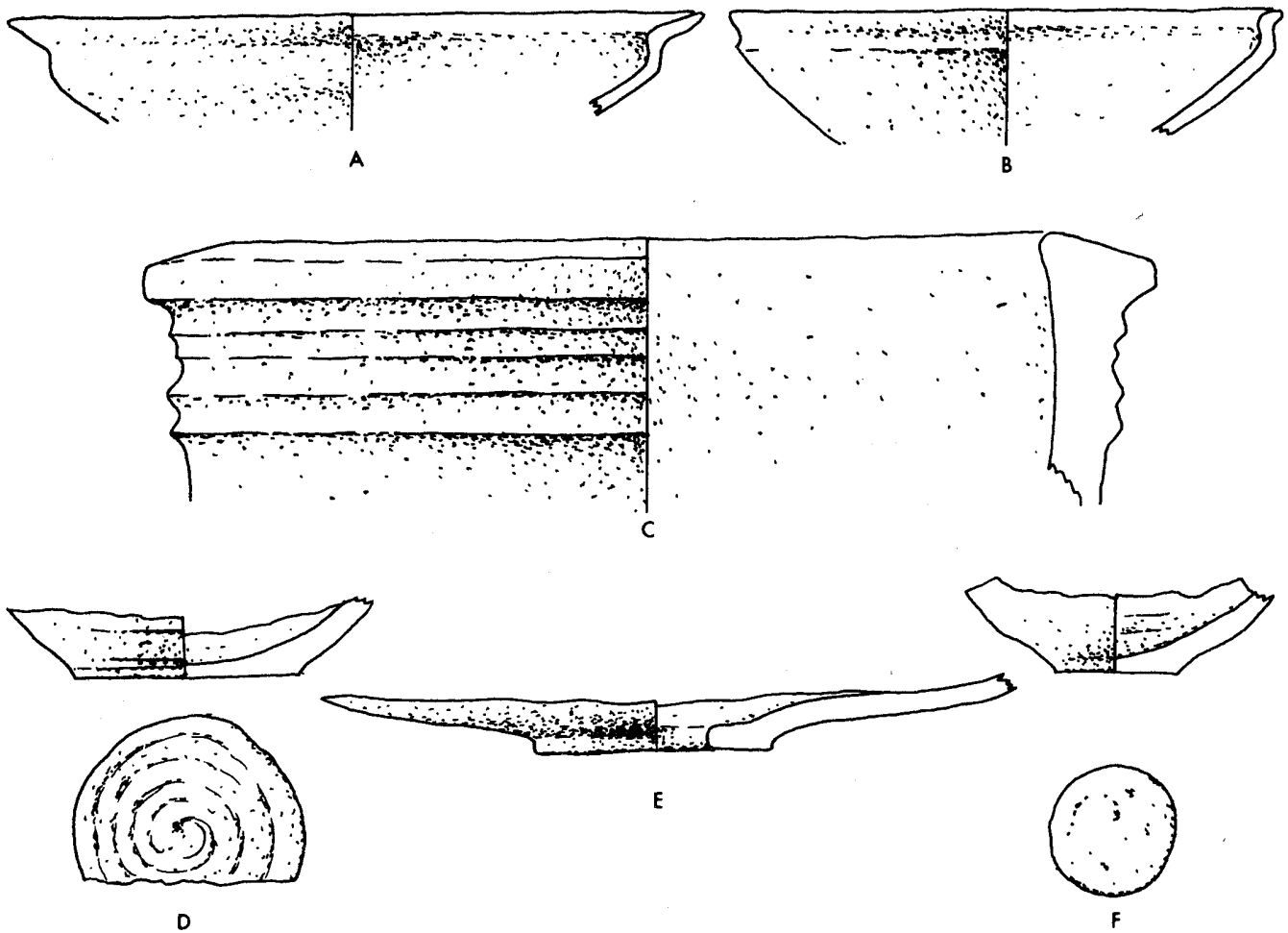


Fig. 15. Ceramics of the Neo-Babylonian and Later period (2/5).

- a.* RB10-3, wide ledge-rim carinated bowl, B: 10YR 7/5, EP-50.
- b.* RB10-4, inverted-rim carinated bowl, B: 5Y 7/3, EP-50.
- c.* RB10-5, grooved trapezoidal-rim bowl, B: 5Y 6/4, EP-102.
- d.* B10-1, grooved flat base, B: 5Y 8/3, EP-50.
- e.* B10-3, hole base, B: 5Y 6/4, EP-81.
- f.* B10-2, thin flat base, B: 2.5Y 8/4, EP-72.

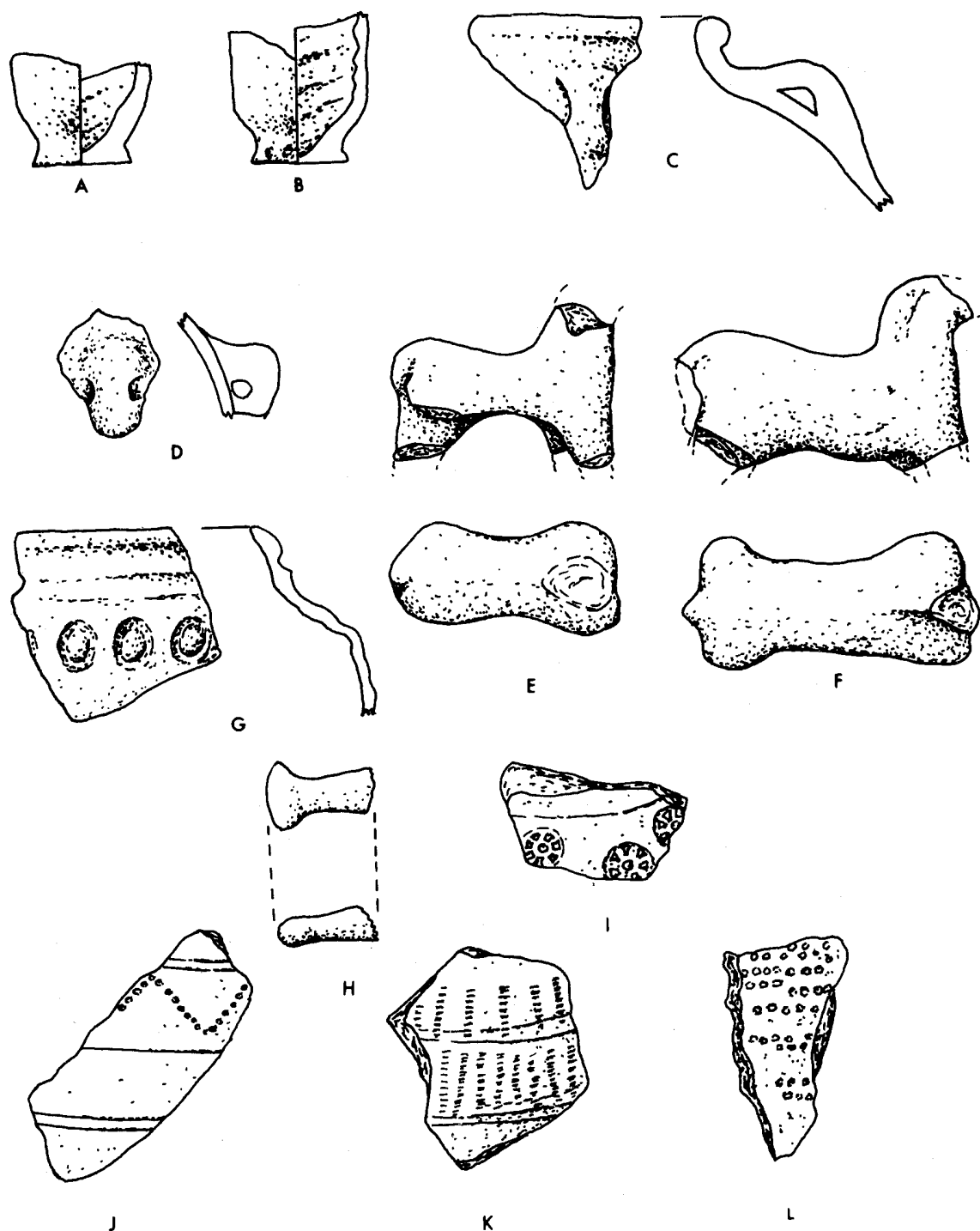


Fig. 16. Ceramics of the Neo-Babylonian and Later period (2/5).

- a. B10-4, small incurved flat base, B: 10Y 7/4, EP-88.
- b. B10-4, small incurved flat base, B: 2.5Y 7/4, EP-102.
- c. O10-1, simple loop handle, B: 5Y 5/3, EP-50.
- d. O10-2, pinched lug handle, B: 5Y 6/4, EP-162.
- e. O10-3, model horse, B: 5Y 6/4, EP-50.
- f. O10-3, model horse, B: 5Y 8/4, EP-162.
- g. O10-4, stamped-node decoration, B: 10YR 7/5, EP-162.
- h. O10-6, tripod support leg, B: 5Y 7/3, EP-50.
- i. O10-5, medallion-stamp decoration, B: 5Y 7/4, EP-110.
- j. O10-7, dentate decoration, B: 5Y 6/3, EP-48.
- k. O10-7, dentate decoration, B: 2.5Y 4/2, EP-113.
- l. O10-8, roughed dish bottom, B: 5Y 7/3, EP-54.