

HANDICRAFT PRODUCTION, SECONDARY FOOD TRANSFORMATION AND STORAGE IN THE PUBLIC BUILDING P4 AT EB IVA EBLA

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Abstract

Part of a new public building dating to the Early Bronze IVA was excavated at Ebla, including nine rooms with sealed destruction levels. The good state of preservation makes it possible to identify its diversified economic functions. The largest locus was devoted to the transformation of horticultural products as demonstrated by working installations and by the ceramic assemblage, which exhibits a typological differentiation indicative of a multi-functional economic unit. The other rooms have numerous installations for secondary food production. A pair of rooms with a fireplace, where elements of gold foil, stone and shell inlay and parts of two identical animal statuettes have been found, was probably a goldsmith's workshop. Some exceptional finds testify to the economic role of this unit and links with the central administration of Royal Palace G. A possible connection between Building P4 and a hitherto unidentified temple may be surmised, as the topographical position under the Middle Bronze Age monumental sacred area of Ishtar suggests.

1. Introduction

The excavations in area P South at Tell Mardikh, ancient Ebla, began in 1990 and continued in 1991 and 1992, under the direction of P. Matthiae with R. Dolce as area supervisor. The authors were responsible for the excavations during the last two seasons.

The general stratigraphy of area P South presents five levels. Levels 1 and 2 consist of non-structural layers from the Late Byzantine and Iron Ages. Level 3 is represented by the MB II square, located in the Ishtar sacred area (Matthiae 1992; 1993c.). To a certain extent, this square has preserved the earlier levels but has also caused an extensive horizontal razing. In particular, level 4, assigned to the destruction debris of the EB IVA building (known as P4 and constituting level 5; *fig. 1*), was seriously damaged in the rooms with a higher elevation. Levels earlier than EB IVA, where present, have up to now only been exposed in very limited spots.

This paper attempts to reconstruct the function of each room of Building P4, focusing on the economic significance of the building as part of the centralized organization of EB IVA Ebla. First the architectural features will be examined, stressing the patterns of circulation and the functional blocks of the building. Then the pottery assemblage of L. 5220 will be discussed in detail and patterns of distribution of storage jars in the building will also be taken into consideration. Together with the pottery, the analysis of tools, personal objects and luxury items from

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each room helps to put forward a functional interpretation of Building P4, also evaluating its role in the Eblaite administration and within the wider framework of the Syro-Palestinian urban societies at the end of the Early Bronze Age.

2. Architecture and distribution

Architectural Features. Building P4 lies at the north-western foot of the Acropolis with a NE-SW orientation (*fig. 1*). The builders cut through the preceding layers dated to the end of EB III, present in the eastern sector (e.g. L. 5246), and laid the foundations directly on bedrock. The north-western limits of the Acropolis, exposed by this razing operation, were sustained by means of a fieldstone wall (M. 5239), which also continued on the southern side of the building in form of a limestone outer revetment. In the eastern sector, the wide area cleared out for the foundations was levelled with thick layers of crushed limestone.

The perimeter wall (*fig. 2*), which has been identified to the east and to the south, is a massive mud-brick structure (1.5 - 2.5 m thick) which abuts on the fieldstone wall (M. 5239) and, to the south, on the limestone revetment (M. 5325). Another imposing mud-brick wall (M. 5328) probably represents the northern limit of Building P4. It is linked with a further structure (M. 5333) stretching eastwards, up to the boundary of the present excavations. Unfortunately, the north-western sector is completely lost, due to the collapse of an underlying cave. Nevertheless, the foundations of Wall M. 5003, visible at the edge of the ravine (F. 5243), prove that it continues to the west up to Wall M. 5036, dividing L. 5007 from the higher L. 5035 (see reconstruction in *fig. 4*).

A characteristic feature of the building is the different elevations of its sectors (*fig. 3*), partly depending on the presence of earlier building levels to the east, partly because of the varying elevation of the bedrock in various spots, in one case deliberately levelled by a massive filling (in L. 5220). Thus, while the floors of L. 5214 and L. 5021 lie directly on the rock (413.05 m o.s.l.), those of L. 5220 are 1.25 m higher. To the north, L. 5032 and L. 5033 are at the same level as the western rooms, but are flanked to the west by another raised room (0.75 m higher), connected by three steps (L. 5035). The westernmost room, L. 5038, lies at 11.85 m indicating that there was a further step of more than 1 m in this sector of the building.

Circulation. Wall M. 5008, two bricks thick, divides the whole structure into two non-communicating rows of rooms. The entrance to the eastern wing is through L. 5035, from which one reaches L. 5032, L. 5005, L. 5009 and L. 5220. Thus, to reach the main room in the building, it was necessary to cross all the other rooms. It is noteworthy that, notwithstanding its dimensions (5.5 x 8.0 m), L. 5220 does not seem to have any distributive function. In the western wing, L. 5007 and L. 5021 are accessible from the north, while L. 5214 depends on another circulation system running to the west, where there is a further row of rooms (L. 5216 and L. 5038). The northern entrance may be hypothetically placed in a room to the west of L. 5035. From here, a passage running over M. 5036 probably served as an elevated gallery connecting the lower rooms. As the door between L. 5007 and L. 5021 was blocked and obstructed by two storage jars in L. 5007, it is necessary to reconstruct an alternative circulation, which must be assumed to be through the passage over M. 5036. The two staircases in L. 5021 and L. 5007 confirm the hypothesis of an upper circulation. The first staircase in L. 5007 probably was connected to the passage over M. 5036 by an elevated wooden structure. The second staircase leads

from L. 5021 to the top of Wall M. 5036. The latter consists of two sections separated by an inner fill of sherds and pebbles. Only the western section of this structure stood up to the roof, while the eastern section was probably a sort of balcony facing L. 5021, as a jar and a grinding stone found on it testify. The holes for the wooden posts of these structures (supporting a sort of balcony) are visible in the north wall of L. 5021 and in the floors of L. 5021 and L. 5007. The eastern wing of Building P4 is composed of three units. The northern unit has two rooms (L. 5032 - L. 5033) oriented E-W, similar in shape to the twin rooms L. 5005 - L. 5009, which have an orthogonal orientation (N-S), and form the second unit. L. 5220, a large roofed room (5.5 x 8.0 m), constitutes the third unit. It has three long benches facing the middle, and partially supporting a series of balconies along its southern and western side. Evidence for this reconstruction of the superstructure is represented by post holes and by a large number of vases found turned upside down on the floor, and thus probably fallen from the balconies. The presence of a partial roof is proved by the connecting joint of a drainage pipe leading rainwater to the cistern of L. 5021 (*fig. 23*). This installation was connected to the downpipe of the roof. L. 5220 was entered from L. 5009, by means of a door in the north-western corner; another passage, in the south-western corner, was through a – perhaps secondary – spiral staircase constructed with three grinding tables as steps, leading to a filled-in wall (M. 5321), similar in technique to M. 5036.

3. The pottery horizon of Building P4

Pottery is one of the most significant, if debatable, kinds of evidence for the study of working activities. The basic assumption is that different vessels served different functions, although in many cases this is hard to prove convincingly. In the present study, pottery has been divided into three major functional and technological groups, according to fabric and size: Simple Ware (SW), Kitchen Ware (KW) and Preservation Ware (PW). Within these broad categories several types were distinguished, following the study of the pottery equipment of Royal Palace G by Mazzoni (1982; 1985a). Patterns of type distribution may be interpreted as indicating patterns of differentiated activities, which may be only defined in very general terms at this level of analysis, but in conjunction with other elements are essential to put forward a functional interpretation. In this preliminary study, only the largest room, L. 5220, which also had the greatest number of vessels, has been chosen for a detailed analysis of the pottery assemblage, together with a brief sketch of the distribution of storage jars in Building P4.

The Pottery Assemblage of L. 5220¹

SIMPLE WARE. Goblets (25%): corrugated goblets with flat bases may be subdivided into a type with heavier corrugation and slightly everted rim (15%) and one with vertical thickened rim and light corrugation (7,5%; *fig. 5.1*). One goblet has pierced lugs, one has inturned upper walls with carination (a form anticipating a common EB IVB type), two are miniature corrugated goblets (*fig. 5.2*). **Bowls (12,5%):** the most common type is represented by medium-sized bowls with thickened or everted rim and inturned upper walls (6,3%; *fig. 5.3*). Open bowls with

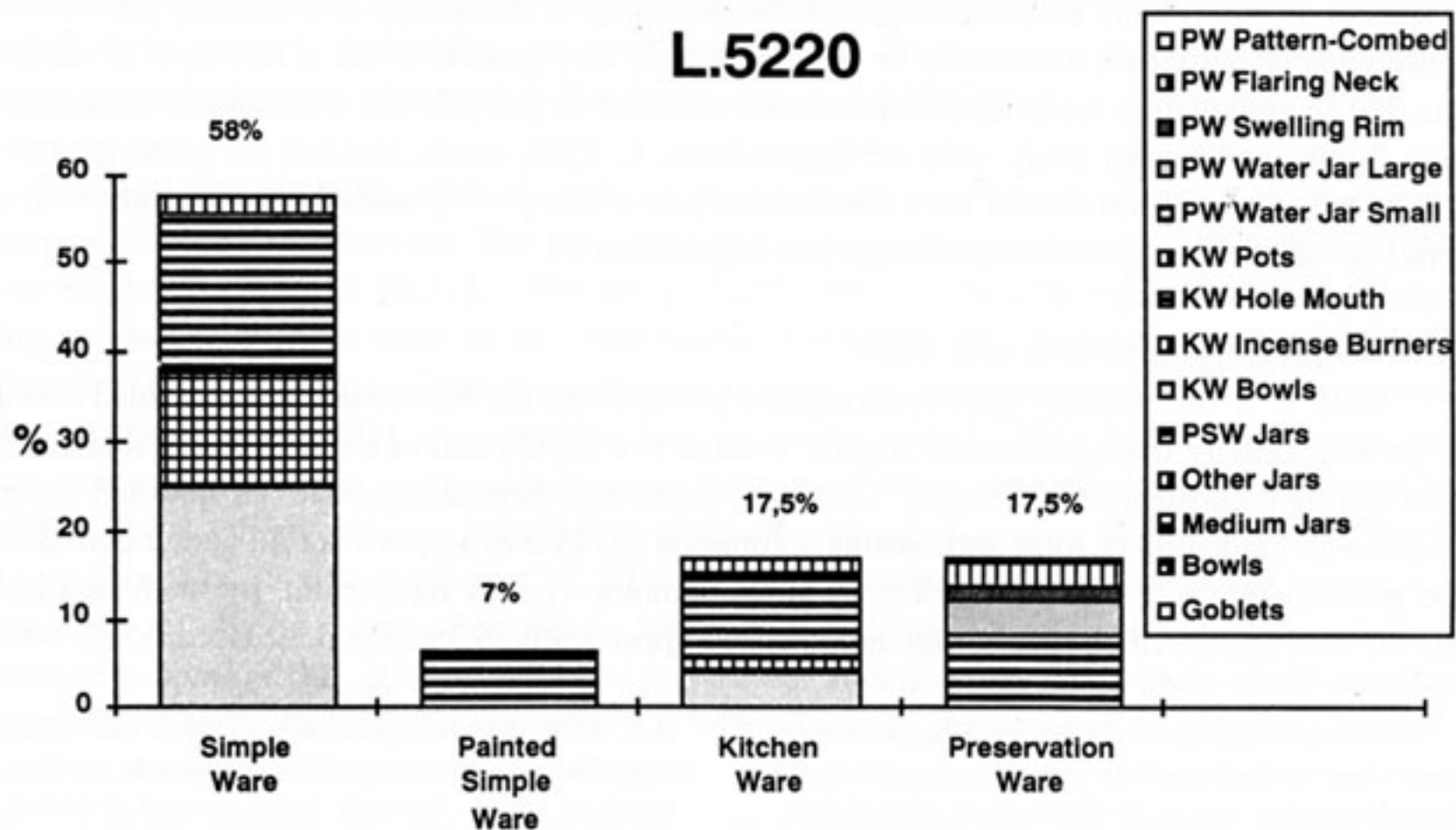
1. We have indicated only the percentages for each type, since in most cases the exact number of vessels is only tentative, due to the fragmentary state of preservation. Approximately 160 vessels were excavated

in L. 5220; the given percentages always refer to the total. The reconstructed profiles indicated in *fig. 5* are based on vessels currently being restored or already known types.

everted rims are in a metallic-like ware, similar to the previous ones (3,1%). Small and medium carinated bowls with flat bases constitute a characteristic type (1,9%; *fig. 5.4*). The last type are open with flattened rim (1,2%). Most of the types have ring bases. *Jars* (20%): medium-sized with flat bases in porous buff or greenish clay often with a whitish slip mostly have a flaring neck with thickened rim (12,5%; *fig. 5.5*), in some cases with a wavy scrabbled pattern on the shoulder (1,2%). A coherent group is represented by jars with short necks and everted rims with internal grooving (4,4%). Isolated finds include a grooved rim jar with handle (*fig. 5.6*) and a teapot, slightly corrugated and with a ring at the base of the neck (*fig. 5.7*); another fragment of spout was also found. Worthy of note is a fragment of a Syrian bottle of the slender type, later than the globular one, the only form attested to in Royal Palace G. Two sherds of Reserved Slip Ware were also found. *Painted Simple Ware* (6,3%): most common are small jars banded in red or black, with either thickened or everted rims (5%; *fig. 5.8*). An isolated type is represented by the only large painted lid.

KITCHEN WARE. *Bowls* (5,6%): large open bowls with thickened rims on the outside are the most common type (3,1%), although in one case the rim is inverted. The so-called incense burners with fenestrated pedestals are represented by the type with straight flaring sides (1,3%; *fig. 5.10*) and by one specimen with inturned walls and an everted rim. *Pots* (11,8%): two pots have vertical curving walls and thickened rims (1,2%), but the majority are of the hole-mouth type (9,45%; *fig. 5.11*). Three rim sherds of one or possible two globular corrugated jars with vertical rim have also been found (*fig. 5.12*). Finally, two jar rim sherds of Red-Black Burnished Ware (so-called Khirbet Kerak Ware) must be mentioned.

PRESERVATION WARE. The prevalent type is the storage jar with vertical triple-grooved rim, cylindrical straight-sided body, flat base in a coarse greenish standardised fabric ("water



jars"). Two types may be distinguished according to size (their ratio is exactly 3:4). The first one, smaller, may be scrubbed on the shoulder (8,2%; *fig. 5.13*) while the second one is larger (3,8%; *fig. 5.14*). Five specimens bear potter's marks. Another kind of storage jar in a medium to highly fired ware has a squat globular body and swelling rim (1,8%; *fig. 5.15*); one specimen is of the three-footed type. Other jars with everted necks and slightly thickened rims are less typical (2,5%; *cf. fig. 5.5* upper profile). A pattern-combed jar with long flaring neck and folded rim, without handles, is the typical olive oil container, attested to from the coast to the western Eblaite countryside (*fig. 5.16*).

Although there are more than 10 large storage jars, it is evident that the prevalent forms are medium-sized jars in SW, PSW and PW. Hole mouth globular pots in KW constitute another consistent group. Thus, transference activities are more evident than storage. The numerous goblets probably relate to the contents of the jars. As far as chronology is concerned, the similarity with the assemblage of Royal Palace G is total. The slender Syrian bottle and the carinated goblet point to a dating towards the very end of EB IVA. Also worth noting is the presence of two Khirbet Kerak sherds, also very rare in Royal Palace G.²

Distribution of Preservation Ware in Building P4. The main storage room of the building was probably L.5007. In fact, on the limited part of the floor preserved there were five storage jars, two with swelling rims (*fig. 5.15*) and three large "water jars" (*fig. 5.14*). The nearby L.5021 contained two large jars with flaring necks, rims with internal groove, high shoulders and flat bases (*fig. 6*). One fragmentary "water jar", much worn, was placed in the gallery upon M.5036. In the grinding room L.5035 two small "water jars" were found in the preserved part, but it is possible there were more, as in L.5032, which was characterised by a noteworthy concentration of storage jars, consisting of one tripod jar with a swelling rim, two large "water jars" and two small ones. In L.5033, only one small "water jar" was found. To the south, L.5005 and L.5009 had the same number of storage jars: one tripod jar with a swelling rim (with a seal impression on the shoulder in the L.5005 specimen) and two large "water jars". The preservation jars retrieved from L.5220, also examined in the preceding section, were six large "water jars", thirteen small ones, three with swelling rims (one tripod), four everted neck jars, and a pattern-combed jar (*fig. 5.16*). Finally, one fragmentary storage jar, much worn, was present in L.5038, while L.5214 did not contain any. (See *fig. 7*).

The distribution of storage jars does not form a consistent pattern. The greatest concentration occurs in L.5220, stressing the importance of this room within the production system of Building P4. "Water jars" are more or less homogeneously distributed, while the only two jars with flaring necks are present in L.5021, which, as will be seen in the following paragraph, also differed in this respect from the other rooms where grinding took place.

4. Tools, personal objects and luxury items in Building P4

Tools may be divided according to their material and function.

Grinding Facilities. Three kinds of basalt tool were used for grinding. The main type is a table, generally an oval-shaped basalt slab (0.60 x 0.30 x 0.15 m) with a concave profile. The other two types are grinding stones (0.35 x 0.15 x 0.10 m), usually used in association with ta-

2. See Mazzoni 1985b for the relative dating of the EB IVA pottery assemblage of Ebla and for its cul-

tural connections with the Euphrates area to the north-east and with Hama to the south.

bles (fig. 8), and basalt bowls with a mean diameter of 0.30 m and a sub-hemispherical profile and flat base.

Tools. Small weights, flint blades, polishing pebbles and bronze chisels are indeed tools related to more general working activities, not strictly concerning food preparation, such as handicraft production, which is also testified by a number of precious objects (see below). Flint blades are widely used both in handicraft and in food preparation, whereas small weights, polishing pebbles and bronze chisels are specialized tools for working precious metals. Two different types of hematite weight have been found, one is barrel-shaped (cp. Archi 1987: n. 36), the other is spherical (*ibid.*: n. 4), both are shekels of 7.80g., which, according to Archi (1987: 51), was the weight unit of the Ebla countryside. Among the flint blades, two are of the so-called Canaanite type. Building P4 contains a few spindle whorls and rounded counterweights for textile production. There is also a miniature rectangular table with long legs, made of basalt (fig. 20).

Personal objects. Personal objects are mainly beads (of various materials, such as red marble, andesite, steatite, hematite, carnelian, limestone and faience) and bone pins: both common ornaments for clothes. Two different types of bone pins may be distinguished (fig. 21). Both have the head etched with parallel lines, but only one type is pierced just below the head. A third kind of bone pin is represented by *kohl* sticks (fig. 22), characterised by a flattened end. Some rare pierced shells were probably pendants for necklaces. Other personal objects, conveying a symbolic meaning, are clay figurines. Those found in Building P4 are simple animal-shaped (representing goats or sheep) or female statuettes, with high *polos*, elaborate styles, and naked bodies (fig. 11).

Luxury Items. Some luxury items found in Building P4 have a different function and value. Among those are several pieces of gold foil, stone, bone and faience inlay, probably decorating a wooden piece of furniture, parts of two composite animal statuettes, two carved pieces of marble furniture and a fragment of an Egyptian bowl of (so-called) "Chefred's diorite". The latter object is particularly interesting, because its rare material is the same as the carinated bowls (class Aa) found in Royal Palace G (Scandone Matthiae 1981: 100-104, fig. C). However, the bowl from Building P4 is a different shape, with slightly rounded walls and a square rim. This new type finds its closest counterparts in the funerary contexts of V-VI Dynasties and again proves the relationship between EB IVA Ebla and the late Old Kingdom Pharaohs (*ibid.*: 125-128). This vessel, which was of intrinsic value, since it was not merely the container of a traded product, might have reached Ebla as a precious gift or as an expensive luxury item. Nevertheless, as G. Scandone Matthiae rightly pointed out, a direct provenance from Egypt need not necessarily be surmised.

A typical Early Syrian production is another fragment of a greyish limestone bowl with a grooved rim, of a type similar to a specimen from Royal Palace G (Pinnock 1981: n. 5, 64, 70-71, fig. 19), but with an additional inner groove on the rim.

The analysis of the objects' distribution, together with the consideration of the working installations and facilities, adds to the understanding of the function of each unit of the building.

L.5220. The main room of Building P4 exhibits a great variety of finds in accordance with its multifunctional character. As far as tools are concerned, the great number of grinding stones (12 specimens) is noteworthy, because it far exceeds the grinding tables (2 specimens). Since

the vast majority of the grinding stones found near Bench B.5222 were probably connected with that structure and with the adjacent tripartite installation, abutting on Wall M.5011, perhaps they were used in processing horticultural products before or after their collection in the triple basin or trough, although it cannot be excluded that they served as building material in the bench or in the trough (some fragments of these basalt stones were in fact found inserted in the *tauf* walls of the tripartite basin). Nevertheless, it has to be presumed that the little oval-shaped basalt stones also had an independent use.

LocI:	L.5220	L.5005	L.5009	L.5035+ 5032+5033	L.5007	L.5021	L.5214
Grinding Facilities							
Grinding Stones	10	-	1	3	-	4	2
Grinding Tables	2	1	-	2	1	2	-
Basalt Bowls	-	-	-	-	1	1	1
Tools							
Miniature Basalt Tables	1	-	-	1	-	1	-
Polishing Pebbles	-	5	-	-	-	-	-
Weights	-	-	1	-	2	-	1
Flint Blades	1	7	-	-	-	2	-
Bronze Chisels	1	1	2	-	-	-	1
Spindle Whorls	-	-	-	1	-	-	1
Mace-head	1	-	-	-	-	-	-
Personal Objects							
Beads	12	1	1	2	3	1	2
Pierced Shells	1	-	2	-	2	1	-
Bone Pins	-	1	1	-	-	3	5
Kohl sticks	-	-	-	-	-	1	-
Clay Figurines	3	-	1	1	4	5	2
Bronze Pin	-	-	-	1	-	-	-
Bronze Ring	1	-	-	-	-	-	-
Luxury Items							
Stone Furniture	-	-	-	-	-	-	2
Marble Statuettes	-	2	-	-	-	-	-
Inlays	-	88	1	-	1	1	1
Gold Foils	-	5	-	-	-	-	-
Gold Cap	-	-	1	-	-	-	-

Another kind of working facility has been brought to light in the southern half of the room. Three basalt tables are fixed over Bench B.5226, with the long axis parallel to the bench, contrary to their usual placement, probably because they served here as cutting tables. This function is suggested by a goat bone preserved in between two tables and by the discovery of a flint blade over one of them. A basalt mace-head might also have been used in meat processing in association with a smoothed basalt bowl. The second bench (B.5218) might have served as a working table or seat. To the west of B.5226, along Wall M.5008, three round holes, 0.5 m

deep, were possibly occupied by storage jars of the swelling rim type, although they were found devoid of pottery sherds. Furthermore, it is noteworthy that, like the benches and the triple trough of the long basin on the northern side of the room, these holes are also three in number, pointing to a tripartite working activity, presumably carried out by three workmen.

Although L.5220 housed working activities and had a storage function, one piece of luxury furniture, namely a little table of a green translucent calcite (*fig. 9*), was also present. Only a corner of this piece of furniture is preserved, but it was probably part of a composite artefact, as a round hole for a locking bolt on its upper face testifies. Presumably the hole served to fix the foot of the table, made of a different material (wood?). The fragment of an Early-Syrian limestone bowl (*fig. 10*), whose type is attested to in Royal Palace G (see p. 14 above) also comes from this room.

The personal objects from this room consist of 9 stone and 3 frit beads, which, at least in one case, were found together in a group of four. Their spherical shape and dimensions (d. 3 cm) indicates that they were used as counterweights in belts or with pins, as shown in the Mari Standard (Pinnock 1993: 14, Type C). Among clay figurines, a female head with high polos and complex hairdress is a fine example of the style of the coroplastic production at EB IVA Ebla (*fig. 11*).

L.5005. The findings of L.5005 differ from those of the other rooms owing to the presence of numerous pieces of inlay (of various materials: andesite, limestone, shell, frit, bone, ivory; *figs. 12-13*) and of two limestone sculptures which were presumably parts of two animal statuettes composed of sections of different materials (*fig. 14*). The inlays might have decorated a wooden box or a piece of furniture of particular significance, as is demonstrated by peculiar eye *tesserae* (*fig. 13*). The shapes of the inlay pieces suggest a decoration divided into bands delimited by a series of frameworks made of thin bars of various colours (red, dark green and ivory). The oblique ends of the bars suggest that they formed square or rectangular frameworks. The inlay pieces are of three different types. Apart from the eye *tesserae*, there are square (0.030 m) andesite plaques with oval holes in the middle, small square (0.015 m) ivory *tesserae* with a round hole in the centre filled with frit, and bone triangles, presumably used in borders as in the wooden panels from Palace G (Matthiae 1984: pl. 43a). The modular nature of all these inlay pieces is also noteworthy, hinting at their belonging to a single piece of furniture.

Of outstanding interest are the two portions of two composite statuettes of finely polished light greyish limestone. The pieces seem to be part of the limbs of a standing bull, which were inserted on a wooden bar, through the oblique hole visible in the middle. Cylindrical slots, visible on the flat side (*fig. 14*), housed the bolts which fixed the other parts of different materials (wood, andesite). Perhaps some gold foil, found in the debris on the floor, also covered parts of this artefact. As far as the iconographic theme is concerned, the standing bull is attested to in the wooden inlays from Royal Palace G, while the technique of using different materials is – as well known – one of the noted skills of the Eblaite artistic production. Concerning the material, two limestone animal statuettes from Royal Palace G might be recalled here. The smaller, but better preserved, crouching bull and crouching ram found in Court L.2913 of Royal Palace G (Matthiae 1980) are also carved in a dense-textured limestone. Together with the latter, the two pieces from Building P4 testify to the level reached by Eblaite artistic handicraft and the high workmanship attained in the domain of sculpture composed of, and inlaid with, different materials. No other pieces of these statuettes were found in L.5005,

probably because they were not finished when Building P4 was destroyed. The hypothesis of considering L.5005 the workshop where the statuettes were assembled, is corroborated by a skirt carved in limestone belonging to another sculpture, albeit of a human figure.

Several small pieces of burnt wood, an andiron, an incense burner, and a peculiar fire container, in the form of a flat dish of burnt clay (*fig. 15*, on the left), suggest that L.5005 was a workshop, perhaps that of a goldsmith. A silver foiled palette and 5 gold fragments of a revetment strengthen this interpretation. A curved bronze tool might be a chisel, and 5 oval pebbles, found near the fireplace, might have been used in smoothing and polishing. Flint blades, retrieved in great number (7 specimens) presumably had an important role in coating and fixing operations. Finally, a basalt slab might have been used as a work table.

L.5009. This space was strictly dependent on L.5005, possibly being an ancillary room of the workshop. On two sides along the walls, two benches served as seats, while in the middle there were three jars, perhaps containing the raw materials and water necessary for handicraft production. As in its twin room, in L.5009 a grinding slab was also used as a work table. The finds suggest a close relation with the nearby L.5005. Another fragment of one of the animal statuettes retrieved in L.5005 came from L.5009. A gold cap, probably of a ceremonial sceptre and a steatite convex inlay are precious finds similar to those of the adjacent room. Two bronze curved chisels (*fig. 16*) are tools for working jewellery, luxury or miniature pieces of furniture and composite items. A serpentine weight might have served to weigh valuable materials. Only two finds are personal objects: a bone pin and a clay figurine. Two shells, found on the floor, may be interpreted as raw materials waiting to be refined in the workshop.

The assemblage of artifacts in L.5005 and L.5009 may be explained by identifying the twin rooms with a goldsmith's workshop. In L.5005 was the fire and presumably the items were finally assembled and surfaced here, while L.5009 served as a store for raw materials and the room where the various parts of the items were manufactured.

L.5035, L.5032 and L.5033. Although directly communicating with L.5005 and L.5009, the rooms on the northern side of the building (L.5035, L.5032 and L.5033) constituted a separate block, entirely devoted to the processing of cereals. Identical facilities are found in L.5035 and L.5032 (two round pulping and milling platforms, with a hollow in the middle, and a plastered area with a shallow circular depression). It is likely that these installations were used for fine grinding operations. In fact, the only finds from the loci we are dealing with, are two basalt grinding tables and stones, which presumably were employed together with the circular installations, in the transformation process. While cereal was ground by means of basalt slabs and stones, on the round platforms they might have been mixed with liquids, and then stored in the numerous jars present in these rooms.

Among the other kinds of finds, L.5032 has provided an andesite spindle whorl, used to twist wool thread, and a long bronze chisel. The latter was found together with a miniature basalt table. A shell inlay, a clay figurine and a bead can hardly furnish any suggestions about the function of the room. A bronze pin for clothes, which is exactly the same shape as its more widespread bone counterparts is also worthy of note.

The finds of L.5033, badly damaged by a later pit, are not of great relevance (a bead and a shell ring). Conversely, three great bricks, covered by a thick plaster, placed in the floor in a straight line, are of particular interest. They might have been platforms in a room where liquids frequently flowed across the floor. The floor in fact slopes slightly from east to west towards a

limestone table at the foot of the western wall. A continuous plastered bench - 0.25 m thick - stretches along the western side of Wall M.5006, both in L.5032 and in L.5033, also continuing in the narrow passage between the two rooms.

L.5007. As stated in the last paragraph, L.5007 was probably the main storage room of the building, having an important role due to its central position in respect of the two units where agricultural products were prepared (namely L.5035-L.5032 and L.5021-M.5036). Working tools are represented by a grinding table and a basalt bowl, while two weights were possibly related to handicraft activities. The other objects from L.5007 can be divided into ornaments (five beads, two made from pierced shells), and clay figurines, which represent the most significant find of this type within Building P4.

A small, but interesting object has been found in a jar in L.5007. It is a duck-shaped steatite artefact, which might be considered a miniature sculpture because of the great accuracy of the carving and of a cylindrical hole in its bottom, certainly serving to fix the figure to a wooden base. This technical feature ascribes the piece to the well-known class of miniature animal statuettes from Royal Palace G recalled above (Matthiae 1980).

L.5021. In spite of the presence of food producing devices, L.5021 also contains a great variety of objects and tools. Two grinding tables and three stones came from the grinding unit constituted by Bench B.5233, with two tables on it (*figs. 17 & 23*) and a plastered area surrounded by a raised ridge nearby (similar to L.3926 in the Central Complex of Royal Palace G; Matthiae 1987: 144, *fig. 5*). Immediately to the south there is a cistern, with a round mouth encircled by small slabs. It is connected to a drainage pipe coming from the roof (*fig. 23*, in the middle). A second working place, also with a bench and a raised ridge, lies in the south-western corner of the room, beneath the staircase. Apart from grinding operations, other activities might also have been housed in L.5021, as two blades (obsidian and flint) indicate. A basalt bowl might also have been used for cutting or pulping food, as might a miniature basalt table of the long-legged type. Four bone pins for clothes and five clay figurines (three of animals) are among the personal artifacts which should be mentioned.

Those finds suggest a differentiated food production, which perhaps needed a constant supply of water to be brought from the cistern just in front of the principal gathering installation. Lentils and olives, found together with seeds of cereals (Mrs. Cl. Wachter p.c.), also confirm the wide range of agricultural product processing which took place in L.5021.

L.5214. This room is characterised by the presence of two finds of exceptional interest. The first one is a fragment of an Egyptian diorite bowl (*fig. 18*) (of a precious stone called "Chefren's diorite"), which has parallels only in the findings of Royal Palace G (see p. 14 above) and which might indicate that Building P4 was controlled by an authority capable of gathering luxury goods of foreign provenance. The other outstanding object is a miniature marble table with feet of different material, carved with a band of inverted triangles (*fig. 19*).

Among the other finds, the association of a miniature basalt table (*fig. 20*) with a bronze chisel, which also occurs in L.5032 should be pointed out. It is difficult to identify the specific function of this piece of basalt furniture; the raised framework on the upper face seems to suggest that a powdered material was put upon the table; however, it is impossible to assert that it had only that use.

Five bone pins were found in L.5214, the largest number of these personal artifacts from one room. They are of two types: *kohl* sticks with flattened ends (*fig. 22*), and clothes pins (*fig. 21*), sometimes pierced below the head.

5. Function and significance of Building P4

Functional Interpretation. On the basis of the preceding analyses (architectural features, circulation system, pottery equipment and objects), it is possible to put forward a functional interpretation for each room and for the whole building. As far as the western wing is concerned, L.5007 and L.5021 must be considered as a unit, as the architectural analysis has shown. L.5007 was the main storage room of the building (a hypothesis confirmed by the absence of working tools and installations), while in L.5021 grinding activities took place, and perhaps also in the flanking gallery of M.5036. Ground materials were subsequently collected in the curved ridges of the floor and possibly in two large jars. The cistern of L.5021 probably supplied the water necessary for some of these operations. Of the westernmost sector, represented by L.5038, L.5216 and L.5214, only minor parts of the first two rooms were excavated, and it is thus impossible to define their function. L.5214 was probably devoted to the storage on shelves of small precious objects.

In the eastern wing, to the north of L.5007, where agricultural products were stored, processing activities took place. L.5035 was a large pulping and milling area paved with a hard plaster. It was equipped with two round installations and with two small storage jars and stone tools. L.5032 had identical functions, as the installations and the similar proportions of storage jars show. Conversely, L.5033 was almost devoid of storage jars: the plastered bricks and a limestone table on the sloping floor suggest that other materials were processed here, possibly in a semi-liquid state. The twin rooms L.5005 and L.5009 were the workshop of a craftsman, probably a goldsmith, as demonstrated by the luxury objects in different stages of production and the various tools retrieved. The largest room of the whole excavated building, L.5220, was also the place where the most complex processing activities were carried out, as demonstrated by the huge quantity of pottery, including many jars (more than anywhere else in Building P4) for short-term storage, but especially medium-sized jars, used for transferring products. L.5220 cannot however be termed a storage room, as the numerous installations (trough, benches, round hollows) and the objects and the quantities of open forms in the pottery assemblage demonstrate. Among the activities undertaken in L.5220, apart from meat preparation suggested in § 4, a general function of processing orchard and horticultural products may be recognized. In fact, among the burnt materials, figs, lentils and olives were identified in the jars, and olives also in the trough; the pattern-combed jar (*fig. 5.16*), usually associated with oil products, may be recalled in this context. The typical products of the Ebla countryside (Archi 1990) were thus processed in the main room. There are only a few hints concerning the different stages of such processing. It is possible that the triple trough, the three benches and the three round hollows in the floor were somehow connected, pointing to a tripartite working activity, perhaps carried on by three working units.

In summary, the various sectors of Building P4 were devoted to the following functions: 1) Grinding of cereals in L.5035 and L.5032. 2) Storage and pulping of cereals and horticultural products in L.5007 and L.5021. 3) Processing of semi-liquid materials in L.5033. 4) Transformation of fruit and horticultural products in L.5220. 5) Goldsmith's workshop in L.5005 and L.5009.

The Significance of Building P4. The architectural extension of Building P4 (300 m², hypothetically 600 m² for the whole building) and the scale and variety of the economic activities carried on inside it suggest that we are dealing with a public building. The fact that it

lies under the MB II sacred area is a possible hint to a connection with an EB IVA temple, hitherto unidentified. This hypothesis, proposed by P. Matthiae (1993a: 5), is supported by the luxury items found in the building, such as the Egyptian bowl, the stone furniture, the revetments of precious metals and the numerous inlays. These precious objects could only have been collected by an economically powerful authority. On the other hand, the productive activities may find a parallel in the northern wing and in the southernmost sector of the Central Complex in Royal Palace G (Mazzoni 1988; Matthiae 1984: pls. 23-24). The similarity, in the irregular thin structures, numerous installations and storage rooms, between Building P4 and the Central Complex on the southern slopes of the Acropolis is particularly evident. A connection with the "Houses of the Great Men" mentioned in the Archive texts may still be considered possible, as was also suggested for the Southern Wing of Royal Palace G (Matthiae 1984: pl. 21).

Among contemporary structures in Syria-Palestine, comparable with Building P4, one may recall, in the Jezirah, the living quarter to the west of "Kleiner Antentempel", levels 5-4 of Tell Khuera, period I C, and the "Wohnhäuser", period I D, where in Houses A and B installations similar to those of Building P4 were excavated (Moortgat 1960: fig. 1; Orthmann 1990: 13-14). At Tell es-Sa^cidiyyeh in Transjordan a building in Area BB, characterized by small rooms lying at different levels (with several communicating staircases), might have housed similar agricultural product processing activities, as various grinding installations and ovens testify (Tubb, Dorrell 1994: 59-67, fig. 9). A difference with Building P4 lies in the presence of ovens, hitherto not found in Building P4, a possible indication that the latter did not produce food for direct consumption. These complexes exemplify the unity of the basic economic processes of the urban cultures of the Syro-Palestinian area in the latter part of the Early Bronze Age.

Building P4 represents a typical complex of the mature phase of the so-called second urbanization (Matthiae 1993b; Mazzoni 1991), with diversified economic functions and a still limited specialized character, while the wealth of the goods retrieved hints to its dependence on a public authority.

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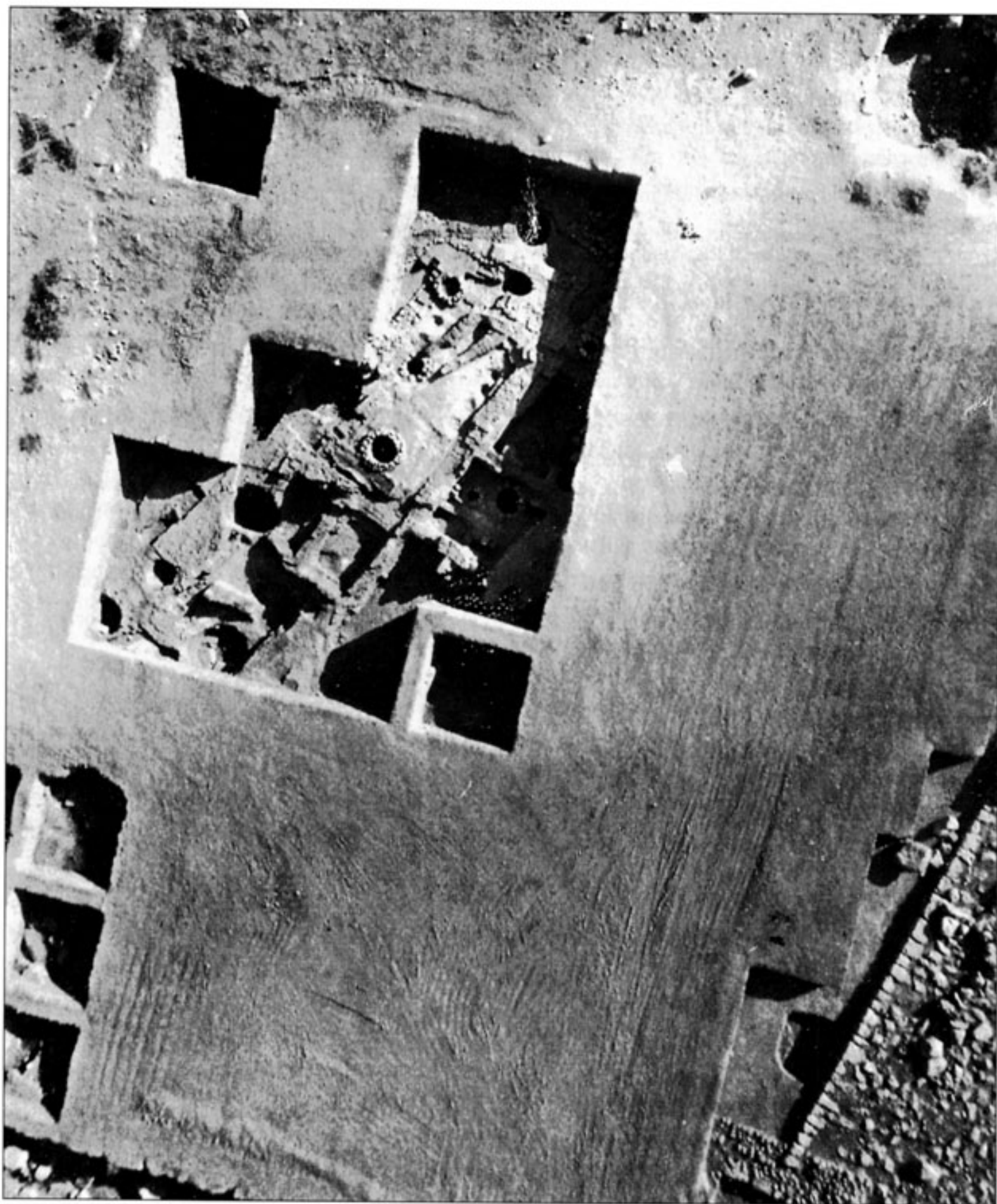


Fig. 1: Aerial view of Building P4.

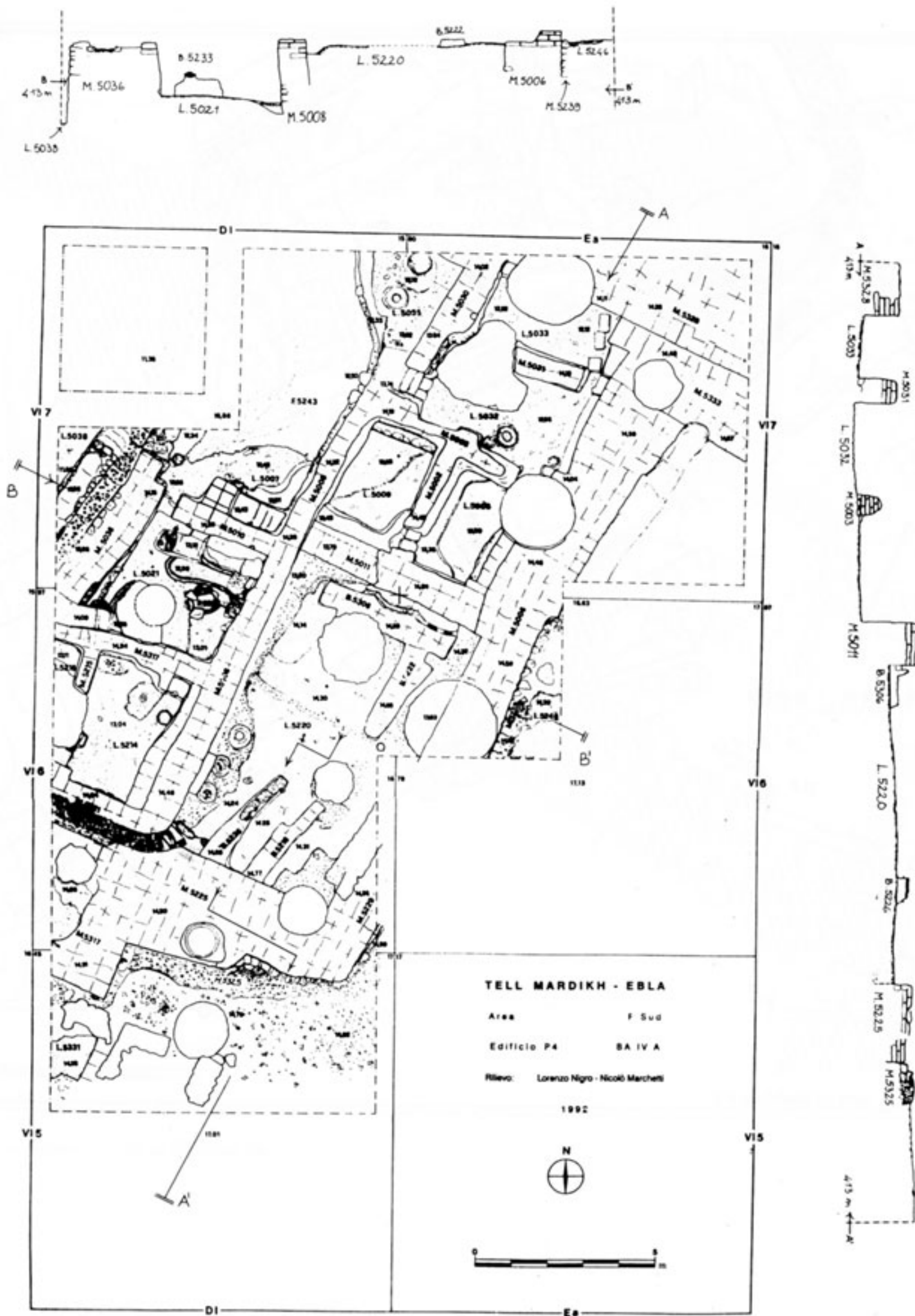


Fig. 2: Plan of Building P4.

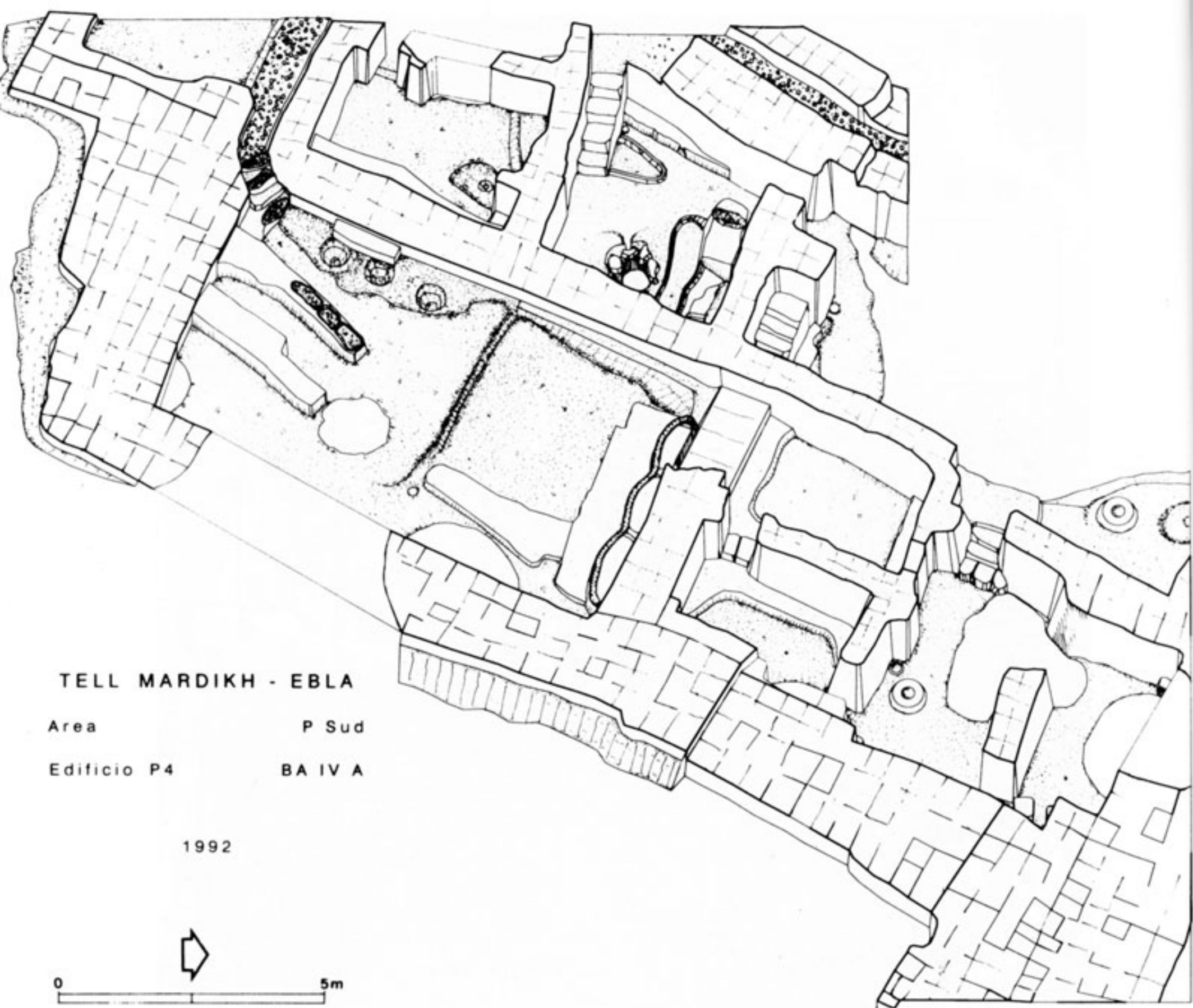
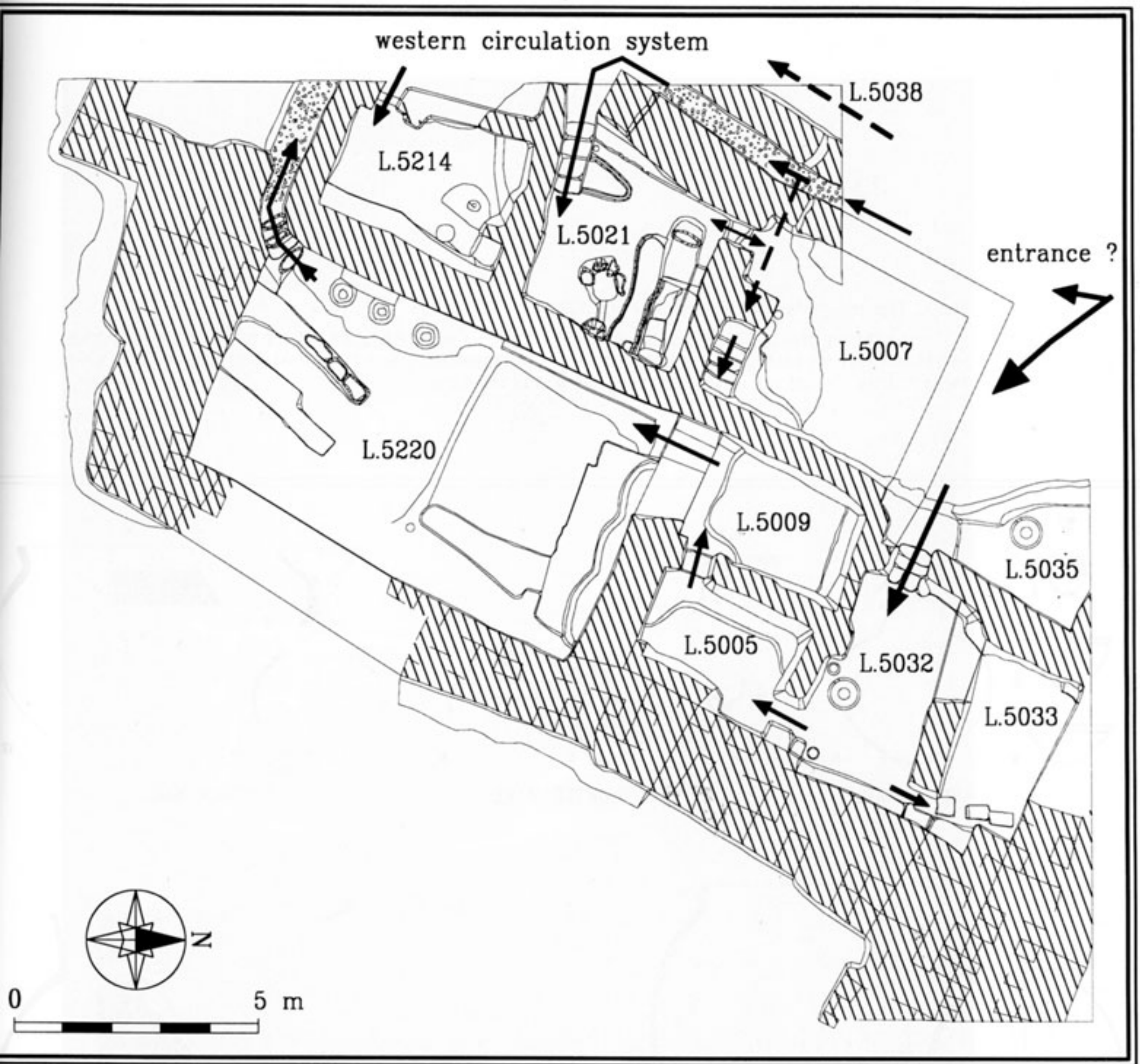


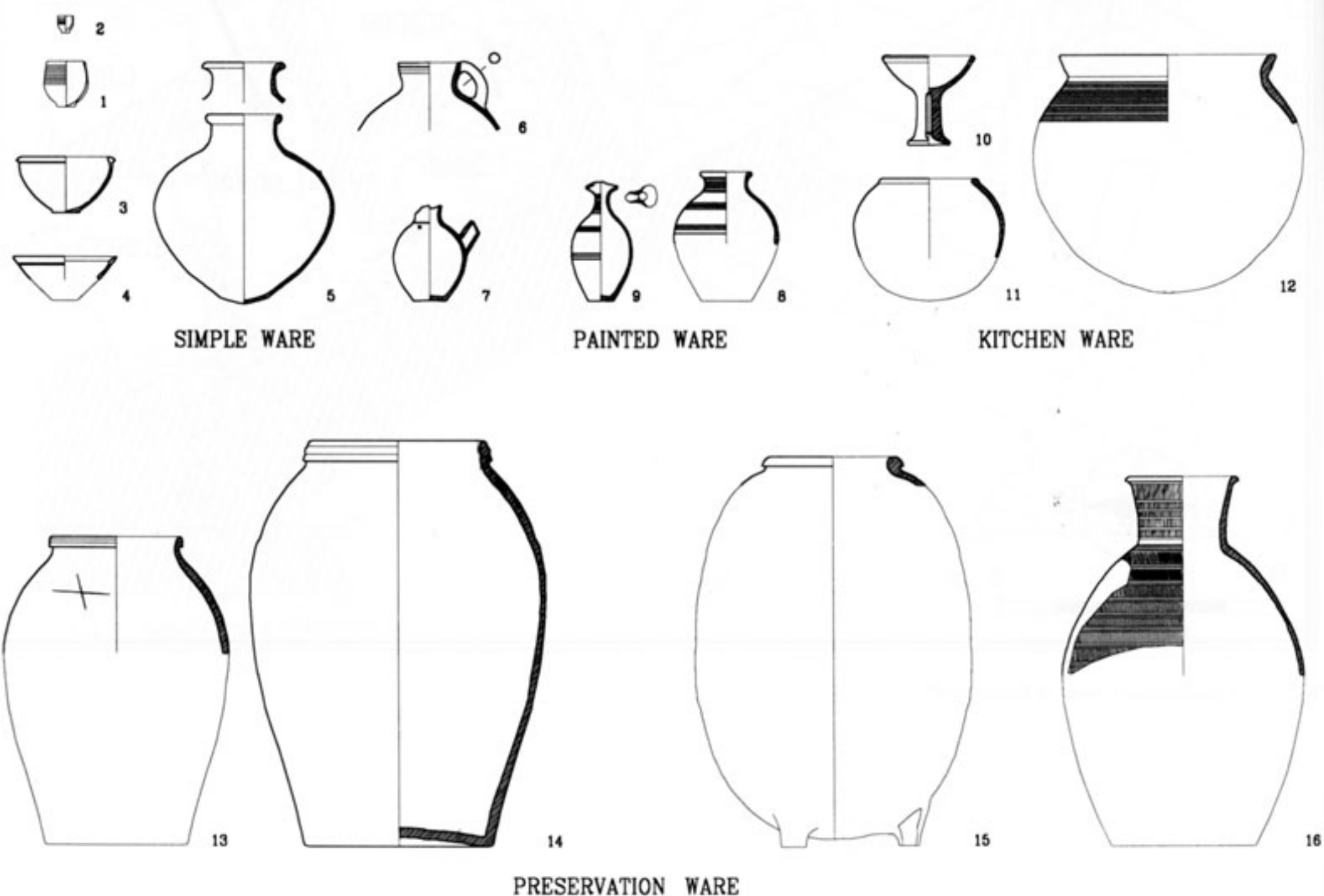
Fig. 3: Isometric view of Building P4.



4: The circulation system of Building P4.

Fig. 5: Typology of the pottery assemblage of L.5220.

5:1 TM.91.P.791/1; 5:2 TM.91.P.802/2; 5:3 TM.91.P.770/3; 5:4 TM.92.P.45/3; 5:5 TM.91.P.792/15; 5:6 TM.91.P.770/5; 5:7 TM.91.P.768/4; 5:8 TM.92.P.116/3; 5:9 TM.90.P.636/1; 5:10 TM.90.P.637/1; 5:11 TM.91.P.681/1; 5:12 TM.91.P.777/13; 5:13 TM.91.P.777/14; 5:14 TM.90.P.1074/1; 5:15 TM.91.P.785/1; 5:16 TM.91.P.777/1.



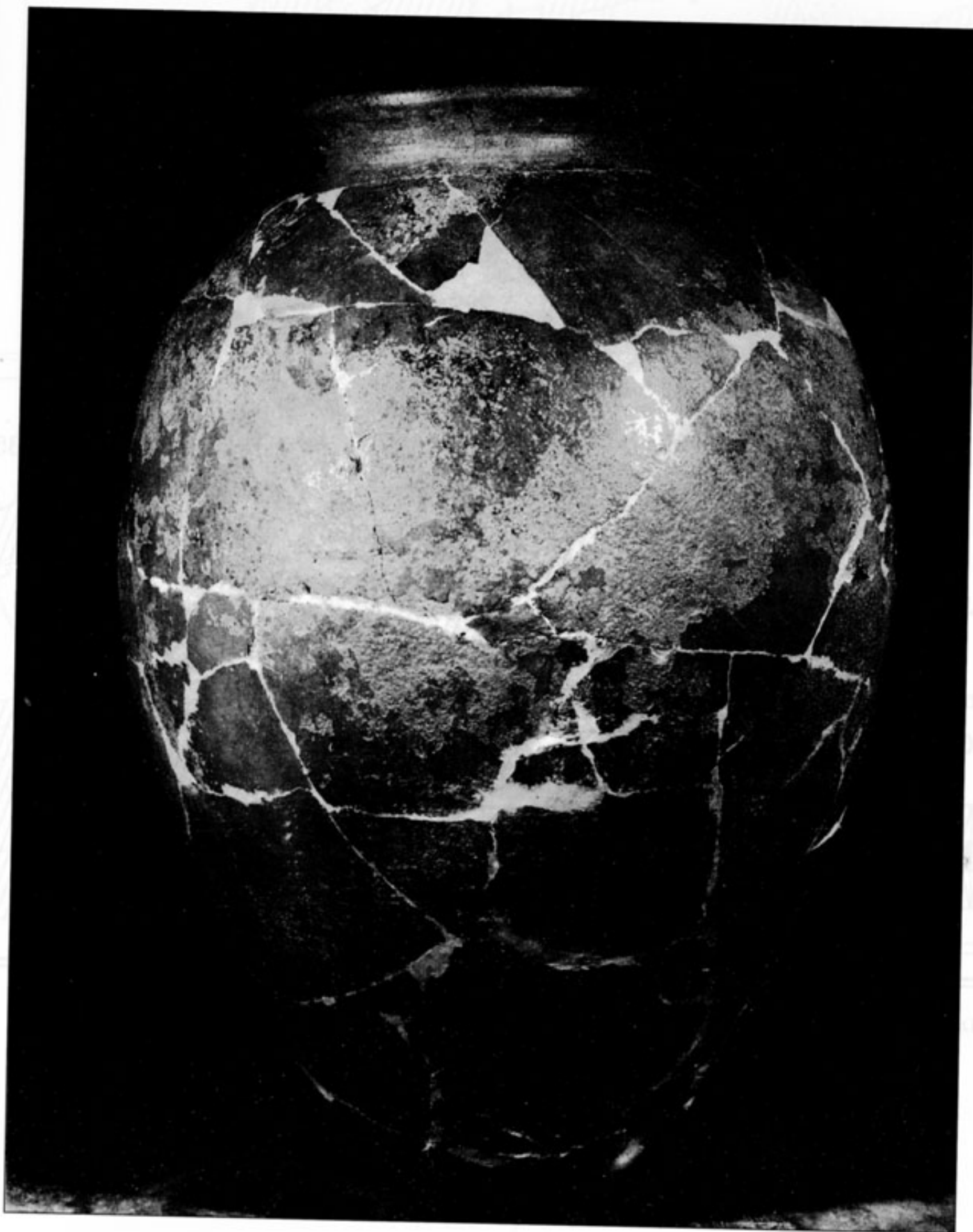


Fig. 6: Preservation jar with inner grooved rim and flaring neck from L.5021, h. 125 cm (TM.91.P.805/1).

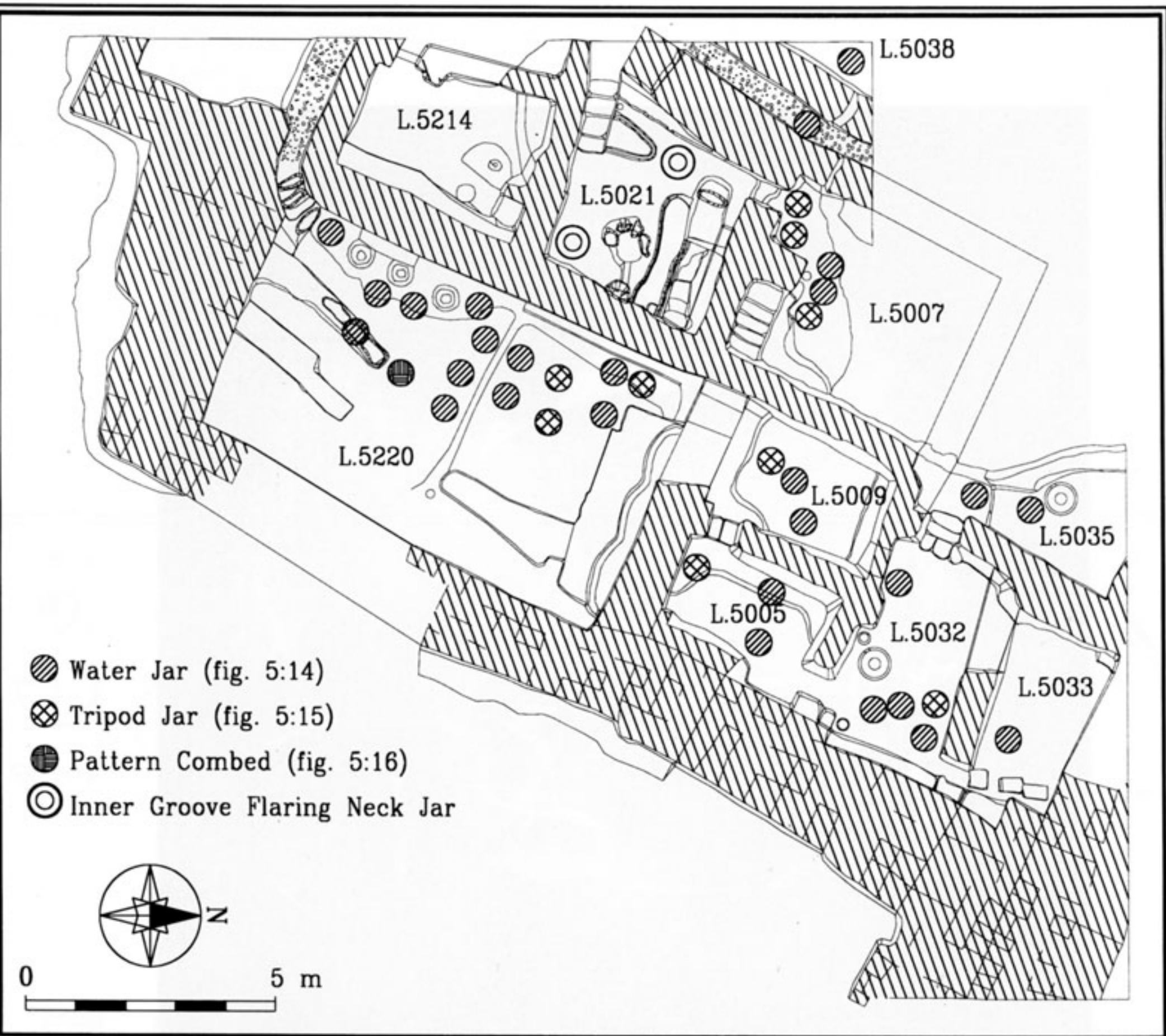


Fig. 7: Distribution of preservation jars in the Building.

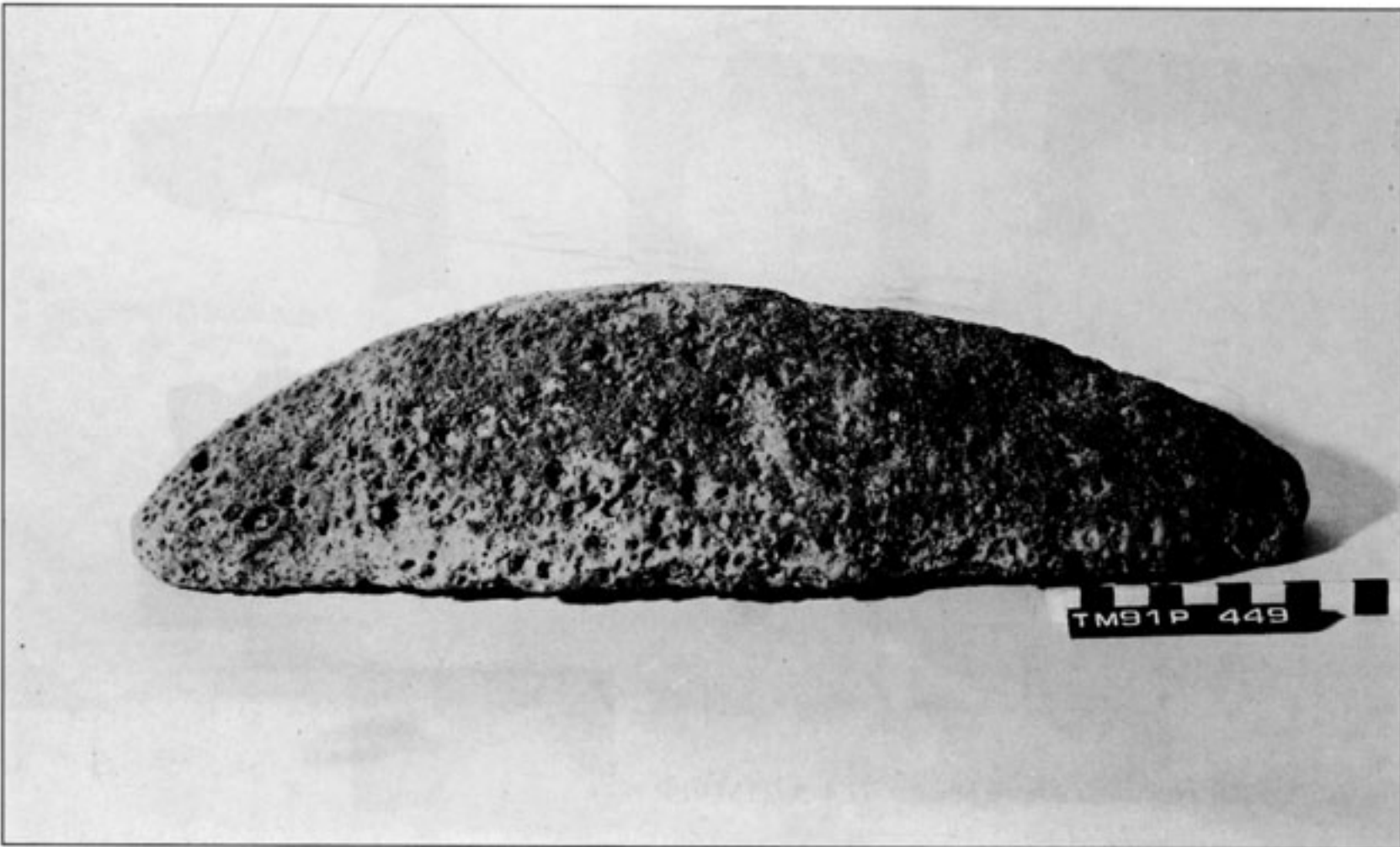


Fig. 8: L.5220: basalt grinding stone (TM.91.P.449).

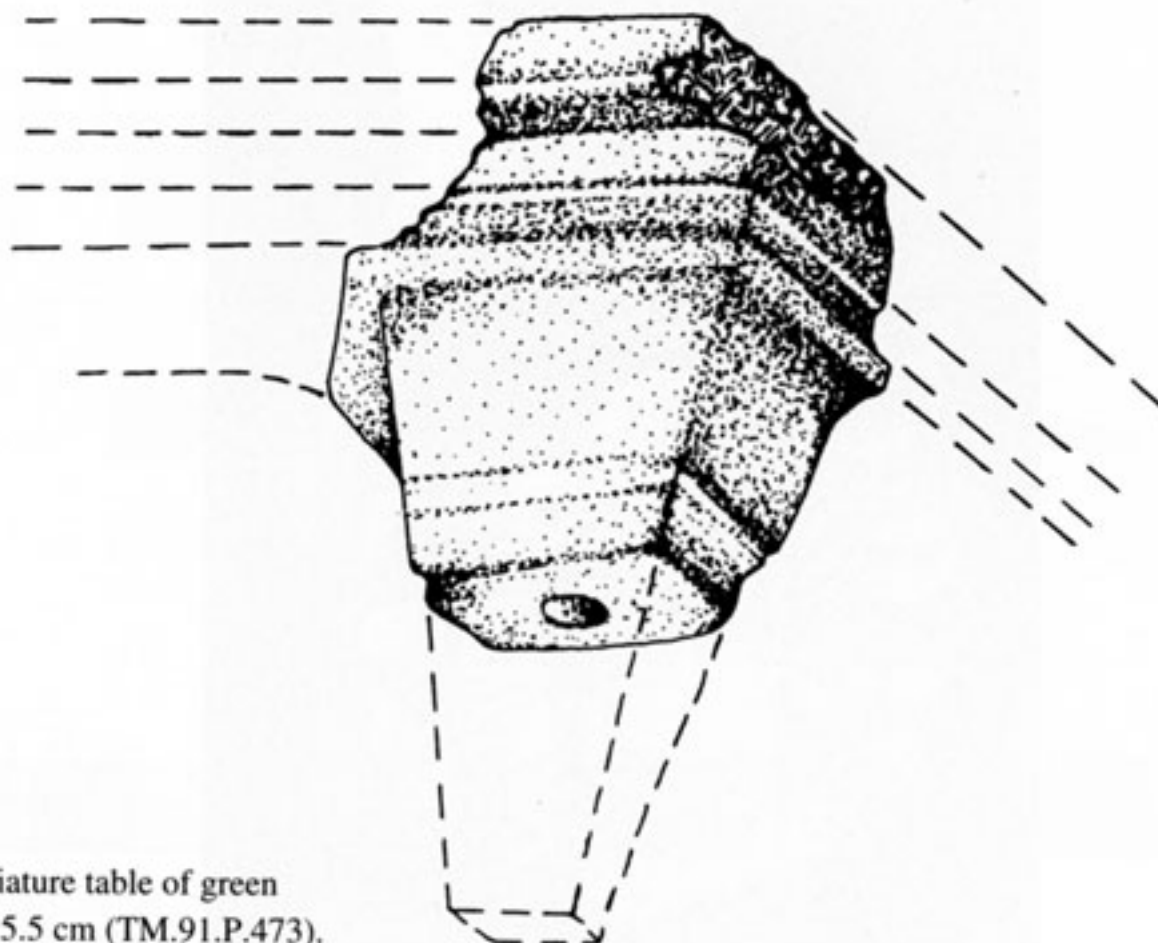


Fig. 9: L.5220: miniature table of green translucent calcite, h. 5.5 cm (TM.91.P.473).

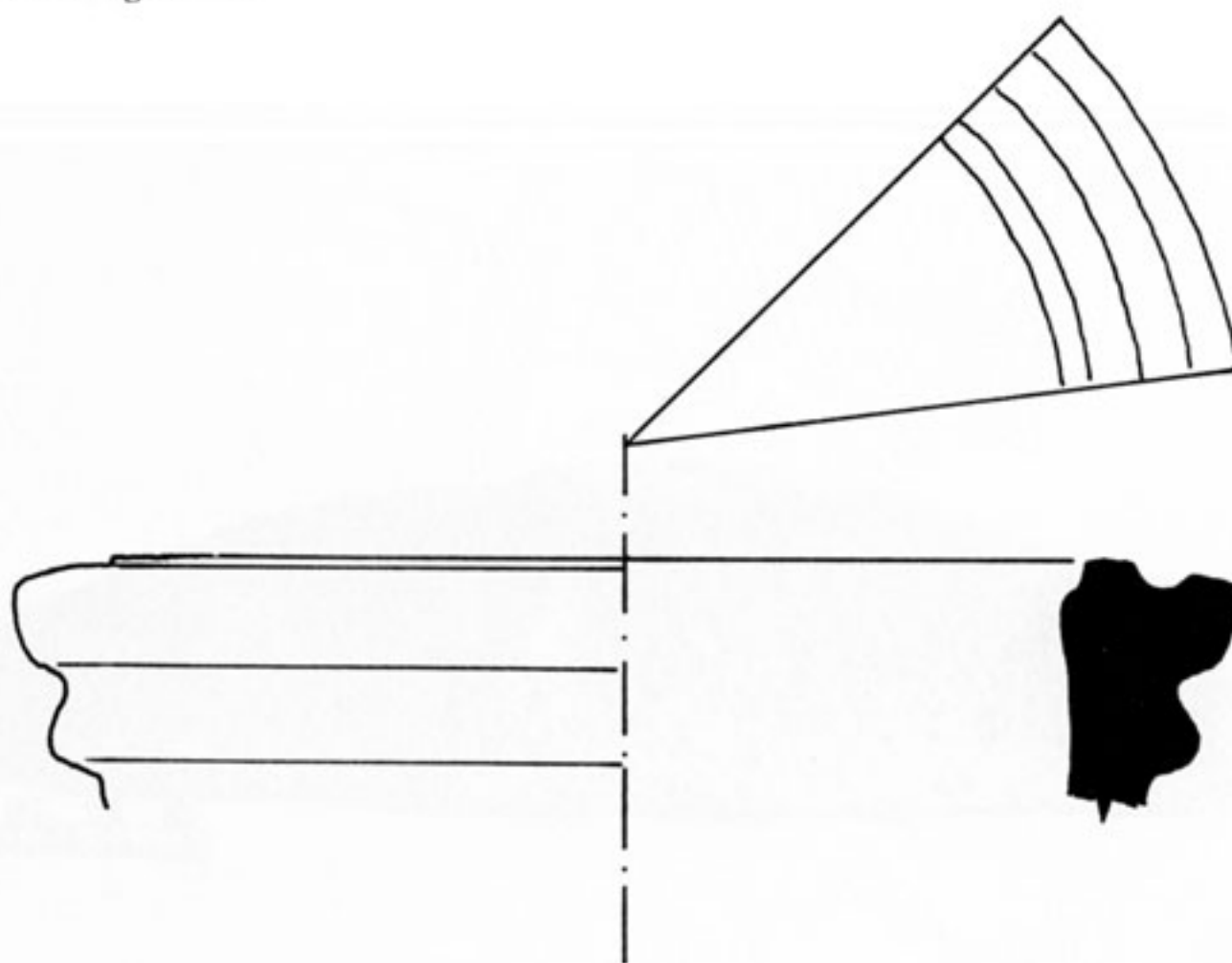


Fig. 10: L.5220: greyish limestone bowl, d. 11.4 cm (TM.91.P.784).



Fig. 11: L.5214: head of a female clay figurine, h. 3.7 cm (see also title page) (TM.92.P.795).

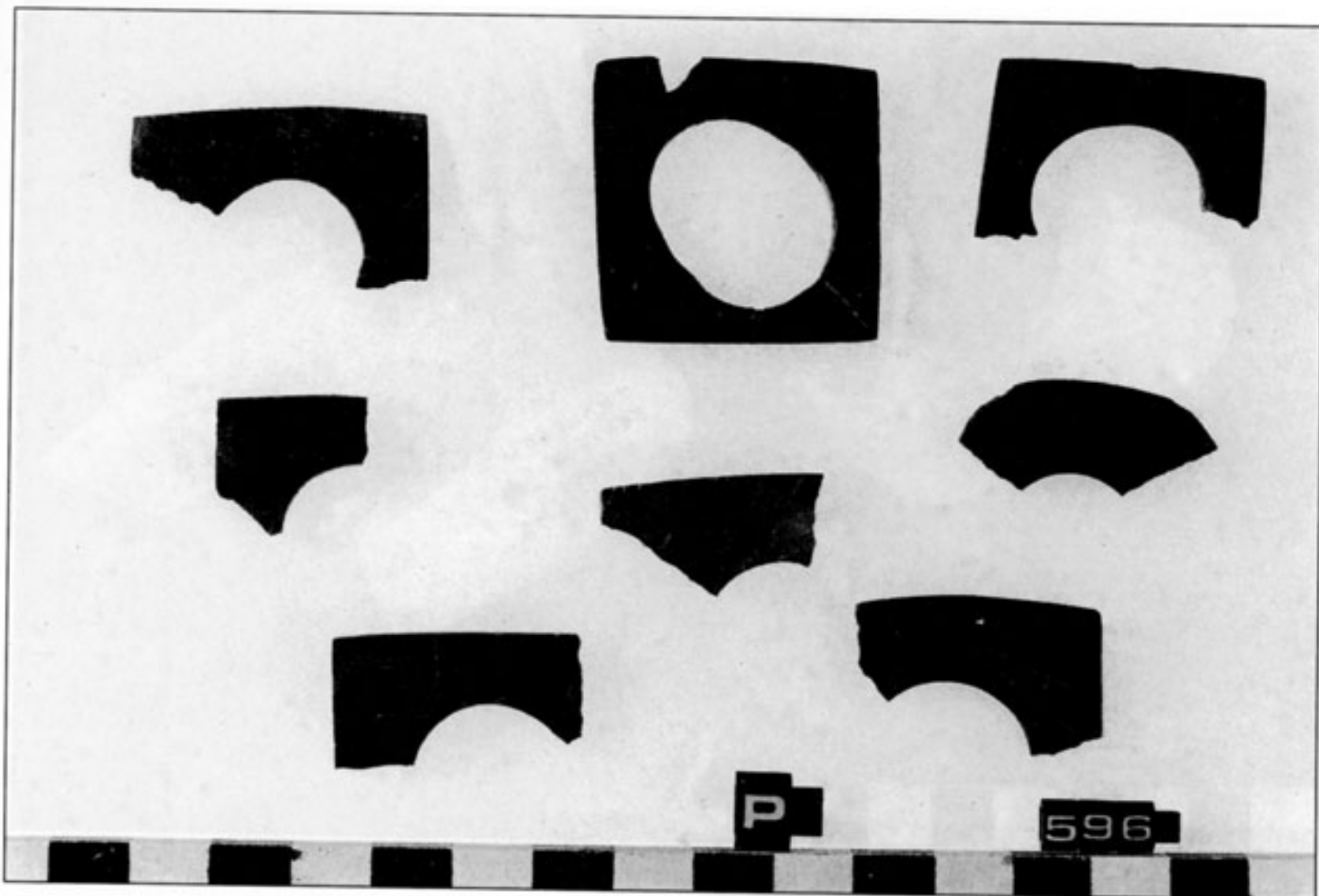


Fig. 12: L.5005: andesite plaques with round hole in the middle (TM.91.P.604).

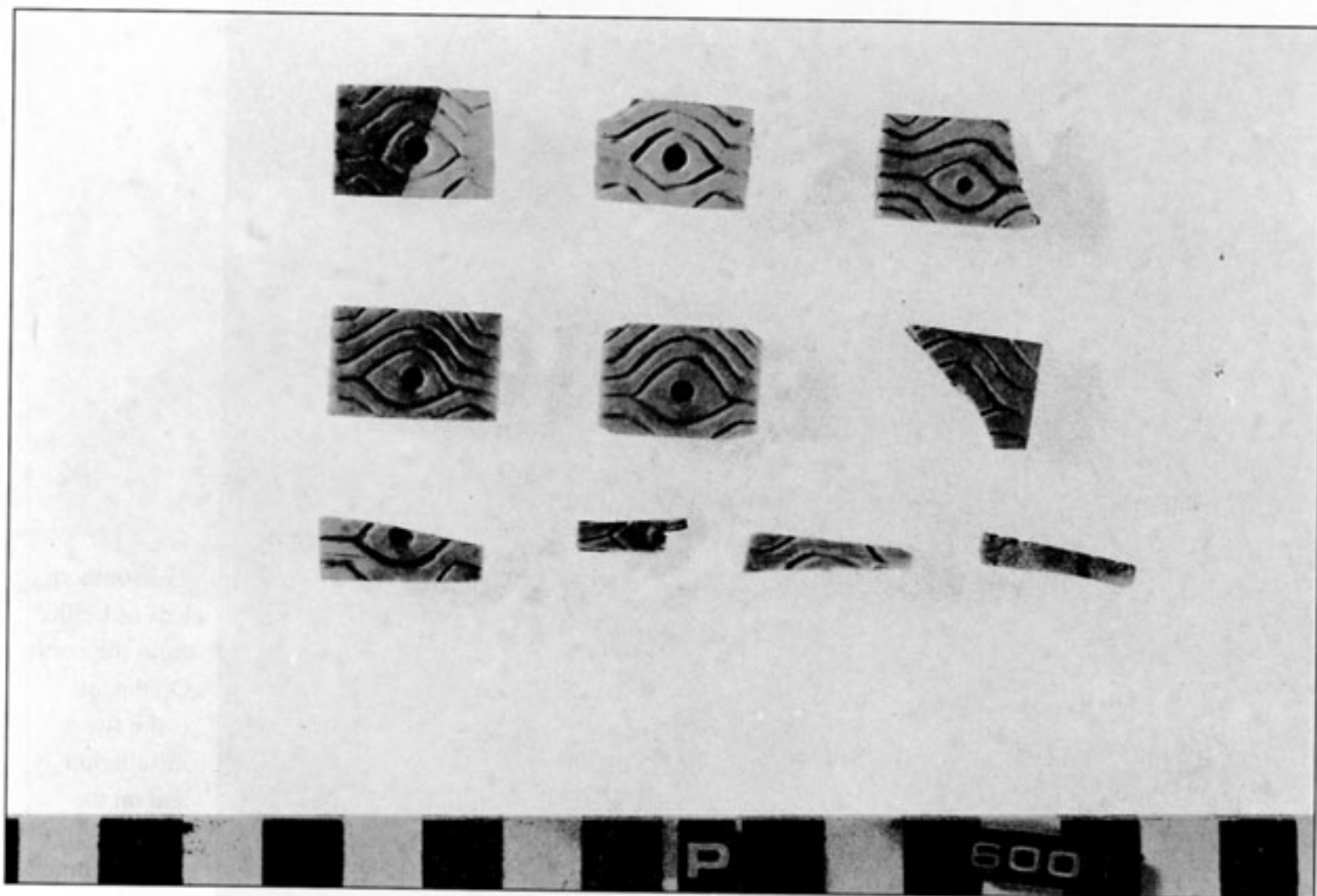


Fig. 13: L.5005: eye tesserae of a composite piece of furniture (TM.91.P.600).



Fig. 14: L.5005: fragments of a light greyish limestone animal statuette (TM.91.P.607).



Fig. 15:
The southern
half of L.5005
from the north.
On the left
is the fire
installation
and on the
right the
door leading
to L.5009.

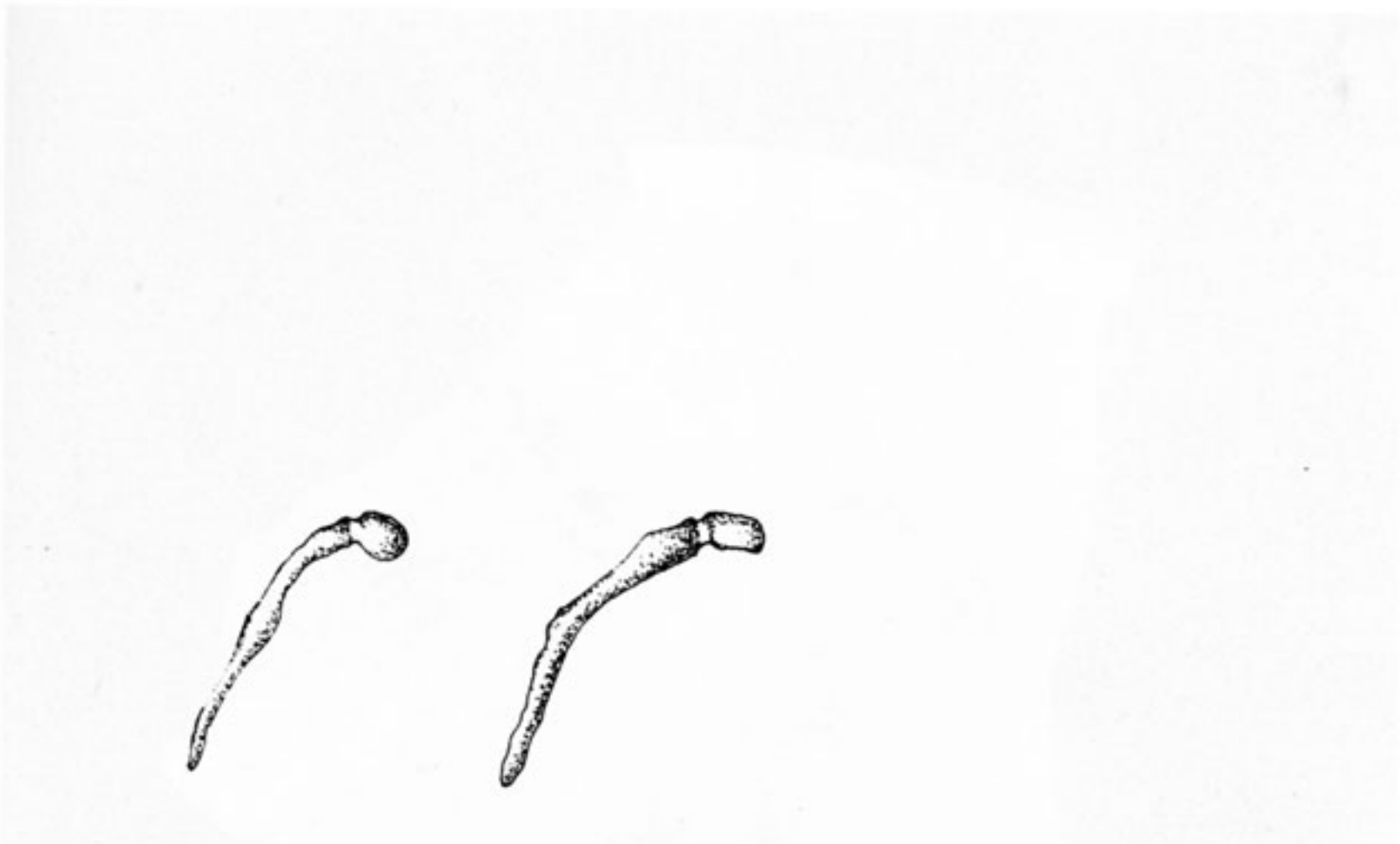


Fig. 16: L.5009: curved bronze chisels, l. 4 cm (TM.91.P.353 and TM.91.P.323).



Fig. 17: L.5021: grinding table and stone from the bench in the north side of the room (TM.91.P.543).

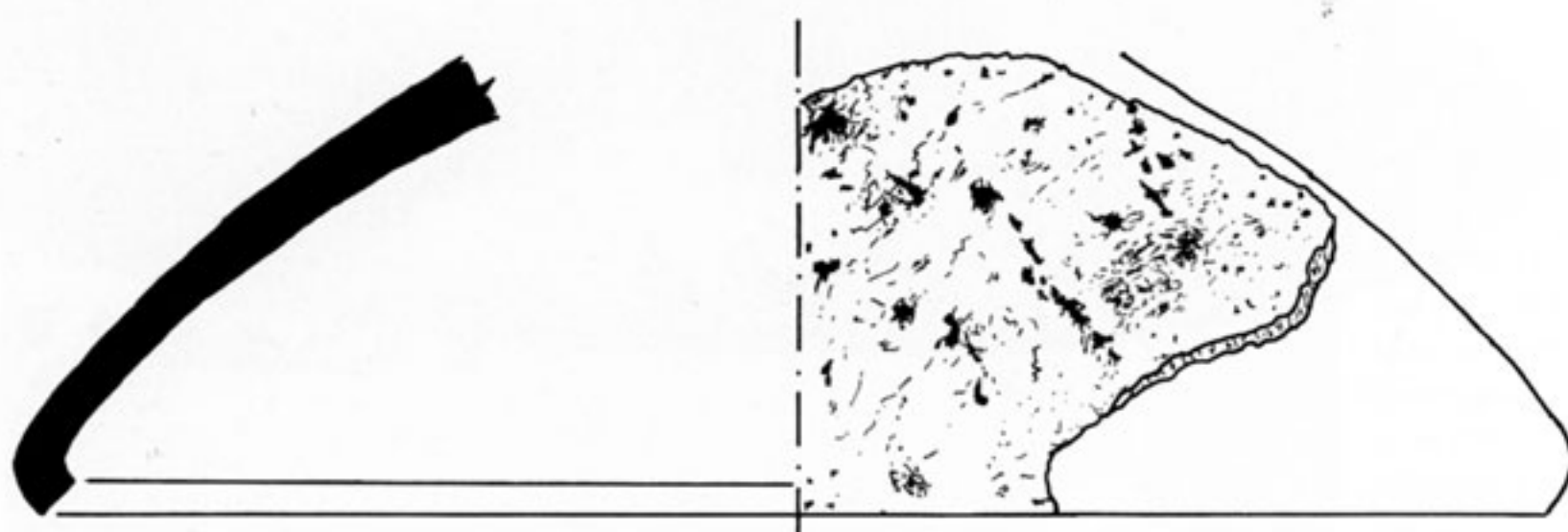
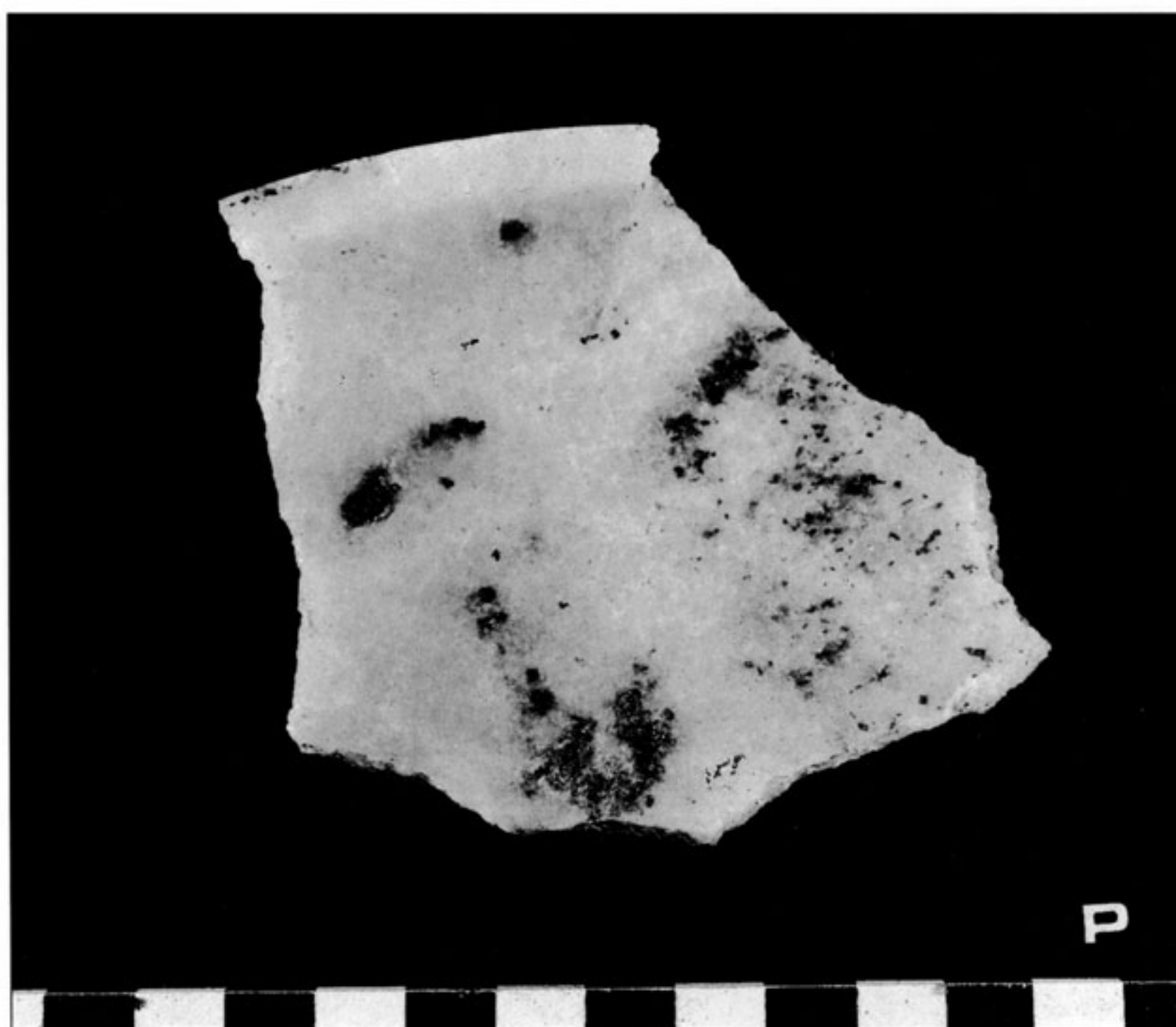


Fig. 18a-b: L.5214: fragment of an Egyptian bowl, d. 20 cm (TM.91.P.430).



Fig. 19: L.5214: fragment of a sculptured miniature marble table, h. 4.5 cm (TM.91.P.473).

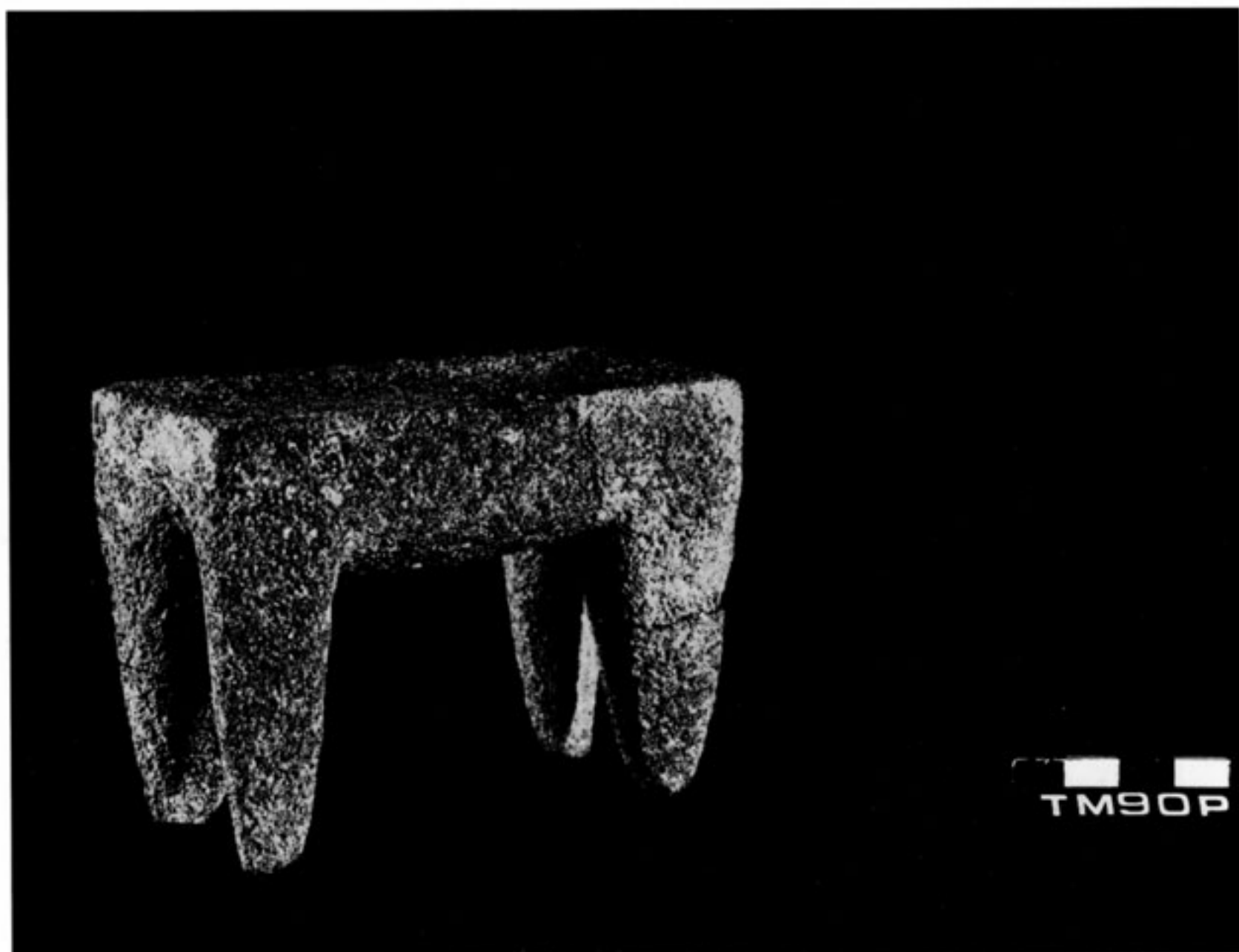


Fig. 20: L.5214: miniature basalt table (TM.90.P.555).



Fig. 21: L.5214: bone pins for clothes (TM.91.P.715 and TM.91.P.716).



Fig. 22: L.5214: kohl stick (TM.91.P.476).

Fig. 23: L.5021: grinding installations and structures from the west. Note that the well on the right is intrusive, while the EB IVA cistern is to the east of it.

