

Boian period ceramics from Teleor 008, a site in South of Romania

Laurens THISSEN*

Abstract: This paper is about a technological and categorisation assessment of a sample of ceramics from a small site in the Lower Danube Plain, briefly occupied during two phases of the Boian period, all probably dated to the first half of the 5th millennium cal BC. Focusing on fabric use, firing methods and aspects of pottery use, an evaluation of fragmentation and post-deposition patterns helps in assessing the site's use life.

Rezumat: Textul de față se referă la evaluarea tehnologică și la clasificarea unui eantion ceramic provenit dintr-un mic sit din câmpia Dunării de Jos, ocupat pentru o scurtă perioadă de timp de-a lungul a două faze ale perioadei Boian, ambele datate, probabil, în prima jumătate a mileniului V BC. Concentrându-se asupra compoziției pastei, metodelor de ardere și aspectelor legate de utilizarea ceramicii, o evaluare a modelelor de fragmentare și postdepoziționale contribuie la înțelegerea utilizării sitului.

Keywords: prehistoric pottery, technology, fragmentation patterns, Southeastern Europe, Neolithic.

Cuvinte cheie: ceramic preistoric, tehnologie, modele de fragmentare, sud-estul Europei, neolitic.

The site Teleor 008 is located approximately 1 km west of the Teleorman River, several hundreds of meters removed from the terraced edges of the flood plain. It is one of a series of at least five flat settlements found by the SRAP Project situated on "sand islands" or gravel bars on the valley floor, all of which date to the 5th millennium cal BC Boian period (Teleor 001, Teleor 008, Teleor 009, Teleor 010 and Teleor 011) (D.W. Bailey et alii 1999, 2001)¹. Occupation of the site shifted from west to east over three consecutive stages, as is concluded on the basis of differences in soil morphology (C. Hait 2001, p. 94), and as a preliminary assessment of the pottery seems to confirm (R.-R. Andreescu, P. Mirea 2001). In order to trace developments in ceramics over time, both morphologically and technologically, a sample of material was selected for study representing the three discrete occupation stages. This sample includes pottery from the earliest Boian stage in Sondage 36, from the subsequent stage in Sondage 39/41/44, and ceramics from the final Boian stage as present in Sondage 24/48 (fig. 1). According to R.-R. Andreescu and P. Mirea (2001, p. 13f.), the occupations in Sondages 36 and 39/41/44 belong to the Boian-Giulești phase, and those in Sondage 24/48 to the Boian-Spanov phase (see also D.W. Bailey et alii 2002, p. 352).

Up till recently, the typo-chronological method (e.g., E. Coma 1974) has dominated Boian pottery studies in Romanian archaeology, while work dealing with its technical/technological aspects is limited to one brief petrological report (E. Stoicovici 1974). A quantification of the different fabric groups, and of categories ("types") has never been attempted. The aims for the present paper are, therefore, among others, a) to get a clear picture of the development of Boian pottery over time; b) to assess the fabrics in use, production methods, firing methods; and c) to investigate pottery use during the Boian period.

◆ Context

Sondage 36 yielded a structure close underneath topsoil and traces of its plan, size and orientation were heavily disturbed by ploughing. A hearth and patches of a floor were recovered, as well as a substantial amount of burned daub fragments giving clues to building methods used. This building was founded on virgin soil. In nearby Sondage 43 (outside of the study area) remains of another heavily damaged structure described as a "pit-dwelling" (C. Hait 2001, p. 82), oriented NE-SW are possibly contemporary to the Sondage 36 house. In Sondage 39/41/44 the second Boian occupation on Teleor 008 is represented by one structure, again close to topsoil and severely

* Thissen Archaeological Ceramics Bureau, Amsterdam, Netherlands, e-mail info@tacb-pottery.nl.

¹ A ¹⁴C sample from Teleor 008, Sondage 24/48 (Boian-Spanov phase), being an animal bone from a secure context, provides a date of 4770–4530 cal BC at 2sigma (Beta-148762, 5790±40 BP) (D.W. Bailey et alii 2002, p. 352).

disturbed by agriculture. Fragments of daub and remnants of a hearth “placed on a burnt level” could be traced (R.-R. Andreescu, P. Mirea 2001, p. 12). Sondage 24/48 representing the last Boian stage yielded the remains of a hearth associated with a layer of “burnt clay material” (S. Trick 2001, p. 44, p. 45, fig. 5.2), all on a horizontal level sitting on virgin soil. Each area represents a discrete, single-layer occupation horizon, subsequently abandoned and finally covered, according to Hait (2001), by layers of silt accumulated during periods of flooding of the valley-bottom. Given the limited extent of the Teleor 008 gravel bar each occupation phase cannot have harboured more than one or two dwelling structures (cf. Sondage 36/43 evidence). The duration of the intervals between these three occupations cannot be gauged, but may have been of short duration in view of the cohesion in the ceramic assemblages.

◆ Fabrics

A total of 2,941 sherds have been analysed, amounting to 28,970 g. Of these, 997 sherds were considered as diagnostic – being feature sherds such as rims, bases, handles, decorated sherds, surface-roughened sherds, carinated and offset-neck body sherds. The ceramics are divided among a total of seven fabric groups by examining fresh fractures under a 20x microscope. Two groups make up 90% or more of the total amount during all three stages of occupation (fig. 2).

Fabric 1 Untempered fine

Vessels manufactured in Fabric 1 have dark brown–black cores, and grey-brown, grey-black, more rarely ochre-brown interiors and exterior sides. Fractures are zoned accordingly, with only very thin (0.5 mm) inner and outer margins. Hardness is about 2–3 on the Mohs scale (can be scratched with fingernail), the surfaces feel smooth, while also fractures are smooth/regular. Non-plastics consist of sparse, fine-sized, occasionally medium-sized, quartz/quartzite inclusions, of whitish, slightly glistening colour, which are well sorted. They are subangular–subrounded. A well-sorted mica-shimmer is present in the paste and visible on the in- and outside surfaces. Vessels are medium to highly burnished all-over, including the exteriors of the bases. This fabric is used preferentially for cups and straight-walled beakers with fine plissé or fluted decoration and small notches on rims and widest diameters. Wall thickness varies between 4–6 mm. Occasionally occurring in Fabric 1 are thick-walled (up to 12 mm) body sherds, which are strongly convex in section, but undiagnostic as to vessel shape or location. They indicate, however, that larger vessels were produced in this fabric besides the drinking cups and beakers.

Fabric 2 Limestone

Vessels manufactured in Fabric 2 have zoned fractures brown–black–brown (margins 1 mm), and light brown in- and outside colours. Hardness is 2.5 on Mohs scale. Fractures are smooth–irregular. Non-plastics consist of a) sparse–moderate quartz, medium-coarse sized (up to 3 mm), ill sorted, subangular–subrounded; b) medium–coarse sized (1–2 mm), yellowish-white limestone granules which are powdery when scratched, present in moderate frequency, ill-sorted, subrounded; c) a sparse amount of finely chopped chaff, well-sorted. Again present is mica, both in the paste and on the interior and exterior surfaces. The interiors are smoothed and lightly–medium burnished all-over; exteriors are usually surface-roughened, this in compliance to Fabric 7 vessels, suggesting that F.2 is a variant of F.7. The only category in F.2 fabric is made up of holemouth pots.

Fabric 5a Fine chaff

This fabric is exactly similar to Fabric 1, apart from the fine chaff inclusions occurring in moderate frequency and well sorted. Due to these additives, fractures are slightly more irregular than Fabric 1 fractures. The fracture zonation is similar (brown-black-brown), with again very small margins. Vessels are burnished all-over. Fabric F.5a is reserved for beakers and bowls occasionally.

Fabric 6 Shell

This fabric is similar to F.7, apart from the inclusion of small, very sparse, crushed-shell fragments, of white colour, perpendicular to fracture. The shells being very sparse, and the fabric very rare, it is likely that F.6 is not a deliberate fabric and that the shell fragments occur by accident being part of the basic alluvial clay. Despite the fact that shell as a temper is very resistant to thermal shock and thus a potentially highly suitable variable for cooking pots (cf. O. Rye 1976, p. 120f.), this quality

was obviously not known to Boian potters. One diagnostic sherd is from a holemouth pot, confirming the parallel to F.7.

Fabric 7 Chaff

Vessels made in F.7 have velvety black cores and brown to black interior and exterior margins and surfaces. Fractures are zoned. Hardness is 2.5 on Mohs scale, while the feel of the sherds is smooth or rough depending on the presence or absence of exterior surface-roughening. Fractures are irregular. The non-plastics consist of abundant chaff, 3-4 mm in size, well-sorted, leaving black carbonised voids, which are shiny and stand black against the black core. In addition there is sparse-moderate quartz of glistening whitish-grey colour, medium sized (≤ 1 mm) and fairly sorted. The particles are subangular-subrounded. Also occasionally present are sparse yellowish-white limestone particles of medium size, and ill sorted, which are very soft and scratchable, of powdery texture. As in all Teleor 008 fabrics, there is a constant mica shimmer of well-sorted particles, fine sized, both observable in the paste itself as on the in- and outside surfaces. With the exception of the cups and beakers, nearly all other categories attested on Teleor 008 are produced in this fabric.

Fabric 8 Grog

Sherds belonging to this fabric have a grey-black core, and ochre-coloured in- and outsides. Hardness is 2.5 on Mohs scale, feel is rough. Fractures are laminated. The grog is abundant, coarse-sized, ill sorted, and occurs as flat, and concave/convex elements of brown colour, which are easily scratched. The fabric is extremely rare and is attested only in Sondage 36. The two observed sherds are not diagnostic and might belong to the Gumelni a period intrusion here.

Fabric 10 Quartz

Brown paste, very dense grit (>30%), white quartz sand, very little chaff; moderately sorted, subrounded. Hardness is soft, feel is irregular. The fabric may be a variant of F.7.

Intrusive material mostly from the Gumelni a period has been classified under "fabric 11" and is not our concern here.

Through time, there is little variance in fabric use, but there is a decrease of F.1 in the last Boian stage of the site, concomitantly with an increase of F.7 (fig. 2). All fabrics are made of clay possibly retrieved from the close vicinity of the site, from alluvial silty deposits in the valley-bottom. Indicative of this are the occasional inclusions of limestone, shell and the rounded aspect of the quartz grains, all of which were probably natural to the clay. The mica non-plastics occur in all fabric groups as a constant factor and are natural to the clay as well. The fineness of F.1 may either be a result of careful levigation of the clay, or else the clay for F.1 may be taken from a separate clay bed of more silty structure. Fabric 1 is the only group to which no chaff has been added. The chaff used in all the other fabrics may possibly have been added to increase the green strength of the clay. The use of chaff may further have been found favourable for pots used in for cooking, making them better resistant to thermal shock. Rye has observed that the burnt out voids from organic temper "are advantageous in cooking vessels because they interrupt cracks that form as a consequence of thermal stress during use" (O. Rye 1981, p. 34). It is plausible to assume that the Boian potters were aware of the positive aspect of plant-tempered vessels when used for cooking. Indeed, all the holemouth pots are made in F.7.

◆ Manufacturing methods

In several sherds clear signs of coil building were noticed, where sherds were fractured along the joins of the coils, or where coils were clearly visible in the sherds sections. The holemouth vessels which have flat or disk bases were built from the base upward by coiling. No traces of mat impressions occur among the sample studied. Interior and exterior walls were smoothed to obtain even surfaces. Holemouth pots were then given a barbotine or roughened outlook on the exterior, leaving a small burnished zone along the collar or rim. Handles do not occur. The manufacture of the beakers and cups is not by coils, since no traces of them have been observed. Most likely these small vessels were formed by means of pinching a ball or slab of clay to the desired shape, starting from the base and then "pulling up" the body. Next they were burnished while the clay was in a leatherhard state. Dishes and bowls may have been made using various techniques including coiling, pinching or

drawing. Among the carinated bowls, there is some evidence of the top- and lower body having been manufactured separately (cf. fig. 9/2).

Remains of kilns have not been attested at Teleor 008, nor such material cues for monitoring kiln firing such as draw trials (e.g., small vessels, rings or blocks) (O. Rye 1981, p. 105), although kiln-firing is known from slightly later Cucuteni contexts (E. Coma 1976) and the high temperatures routinely reached in, e.g., Vină ceramics amounting to 900°–1000°C (cf. T. Kaiser 1984, p. 256, 259; R. Tringham et alii 1992, p. 376) at least suggest great mastery of pyrotechnology. The Boian pottery has not been fired at such high temperatures, but the repertoire does suggest that there was a high degree of control over firing (as well as cooling) procedures, several of the categories evidencing different, but carefully monitored procedures aiming at acquiring preferred outcomes. Most of the F.1 and F.7 vessels with the exception of the excised group show thin, sharp core margins, these margins being moreover of equal width. The colour zonations on the fractures display black cores with lighter margins, the sharpness of the zonation indicating firing was done in neutral to reducing conditions (O. Rye 1981, p. 116). These margins show the “natural” clay colour indicating that the vessels were cooled in the open air, creating the oxidation of the in- and outsides of the pots. The presence of such sharp, oxidized zones is, according to Rye, “diagnostic of open firing followed by very rapid cooling in air” (1981, p. 118).

By contrast, the thick-walled, excised group in F.7 fabric has well-burnished exteriors and unburnished, slightly porous interiors. Colours are contrasting: black for outsides, orange, brown or reddish tones for the insides. The fractures are not zoned, but diffuse according to the surface colours. Possibly we have here an entirely different way of firing, much as was suggested by Loe Jacobs (Pottery Technology Institute, Leiden University) for a different context:²

“The vessels are placed upside down in the fire, and fired in an oxidizing atmosphere. At the end of the firing they are subjected to a short reduction process by extinguishing the fire, and closing off the oxygen flow by covering the vessels (with sand for instance). In that state the pots cool down. This process creates black exterior colours. The interior colours to shades of red or brown, dependent on the amount of oxygen remaining inside the vessel. Moreover, a red/black colour separation is always present on the fracture (...).”

The blackness of the outsides was obviously intentional and must be linked to the white fill of the excised patterns common in this group of vessels.

◆ Categorisation

On the basis of the diagnostic sherds a preliminary grouping into categories has been attempted along basic-level categories, where I divide into open and closed shapes and in special shapes (Tab. 1). Dominant in each of the three Boian assemblages from Teleor 008 are beakers in F.1 fabric, and holemouth pots with surface-roughened exteriors in F.7 fabric (fig. 3). A third group consists of F.7, thick-walled vessels that have excised decoration, which is often filled with a white paste. For an overview of basic-level categories and subordinate categories the reader may refer to figs. 7–11, discussion limited here to the most salient categories.

Teleor 008 beakers are vertical-walled with flat or concave bases. A random survey of complete beakers recently published as “goblets” (M. Neagu 1999, p. 47, nos. 171-173) gives an average diameter of 9.76 cm, with an average height of 12.91 cm (n=7), making quite substantial vessels that are not easily gripped by one hand. Handles are absent. Carefully made and finished, the vessels are usually decorated with plissé or flutings and/or small indentations on the rims or on the widest diameters. Assuming these beakers as drinking vessels, the flutings on the rim must have produced specific effects to the lips, mouth and fingers. The fluting itself may be associated with liquids. F.1 beakers are fired at a higher temperature as the other fabric groups, and F.1 might have a different clay-source. The beakers are presumably fired separately from the F.7 vessels, and we might conjecture a different production centre altogether for these F.1 beakers. Such beakers remain a constant factor over time on Teleor 008, and there is hardly any change in shapes, proportions and decoration patterns from the Boian-Giule ti to the Boian-Spanov occupation on site (fig. 4).

² Technical analysis of pottery from the Chalcolithic site of Düdartepe, Turkey (L. Thissen 1993, p. 215f.).

POTTERY

A. OPEN FORMS (4)	
I. Cups (D 12 cm; H<D)	(fig. 7/1-5)
II. Beakers (D 12 cm; H = D)	(fig. 7/6-10)
III. Dishes (D 15–30 cm; H = ½ D)	(fig. 8)
IV. Bowls (3)	
a. hemispherical bowls	not illustrated
b. carinated bowls	(fig. 9/1-3, 6)
c. shouldered bowls	(fig. 9/4, 5)
B. CLOSED FORMS (2)	
V. Pots (2)	
a. holemouth pots	(fig. 10/1-4)
b. offset neck pots	not illustrated
VI. Large vessels (unknown form)	not illustrated
C. SPECIAL SHAPES (4)	
VII. Lids	(fig. 10/5, 6)
VIII. Sieves	(fig. 10/7, 8)
IX. Excised vessels (unknown shapes)	(fig. 11/1-6)
X. Grooved vessels (unknown shapes)	(fig. 11/8-12)

Tab. 1. Category structure of Teleor 008 ceramic assemblages. Within the superordinate category of POTTERY the syntax is A. COVERT CATEGORY; I. Basic-level category; a. subordinate category. Structura categoriilor repertoriilor ceramice de la Teleor 008. În cadrul categoriei superioare de CERAMIC sintaxa este A. CATEGORIA GENERAL ; I. Categoria de baz ; a. Categoria subordonat .

Even more dominating the ceramic repertoire are holemouth pots, all of them having exterior surface-roughening (or streaked barbotine). Due to the high degree of fragmentation on Teleor 008 (see below) no complete profiles are available, but body contours must have been simple, without very sharp inflexion points. On the basis of the published evidence, Boian cooking pots possibly had simple convex-walled contours, with base diameters only slightly less than rim diameters. Taking into account aspects of stability, these vessels were likely to be not much higher than as indicated by the rim diameter. Handles, knobs or lugs are never attested. Bases are flat. Rim diameters range from 11–23 cm, but seem to group in two clusters, one around 12–15 cm, the other around 17–18 cm. Base diameters range from small to large, from 8–25 cm, with no particular clustering apparent from the sample studied. On the basis of shape, quantity and surface treatment these vessels are considered to have been used as cooking pots. Interiors are always smoothed and lightly but carefully burnished, probably as a kind of sealing method to reduce permeability of the vessels during the cooking process (cf. M. Schiffer 1990). A few of them have faint blackish attrition marks on the interiors, usually on fragments from near the base area. There is no change over time in the appearance of these vessels.

Of very fragmentary nature are the vessels with excised decoration. Shapes are not at all clear, but seem to consist of shouldered pots, pedestaled vessels (fig. 11/4, 5) and carinated bowls, when reviewing the published record on Boian ceramics (e.g., M. Neagu 1999). They are usually thick-walled, with black exteriors and brown–orange interiors. Decoration consists of V- and/or U-shaped carving or excision, executed when the clay was in a leatherhard state (cf. O. Rye 1981, p. 90). Rather characteristic for this group of vessels are zones of cut-away clay alternating with the medium-burnished vessel surface. Patterns consist of intricate meanders, chevrons and triangles. Quite typical are cut-away triangles repeated in circumfering zones in a horizontal plane, either along rims, pedestal rims or on critical inflexion points of the vessel. These excised triangles are usually filled with white paste, and are commonly known as “wolf-tooth”. The excised motifs may be joined by deep grooves that may be white-filled as well. The wideness of the carved zones is commonly seen as a time marker: the Boian-Giule ti stage preferring narrow cut-away fields, the Span ov stage pottery showing wide carved zones in between the normal vessel surfaces. Also “wolf-tooth” decoration

seems an older decorative feature, at Teleor 008 not attested in Sondage 24/48 which dates to the Span ov stage.

On the basis of the published Boian record, these excised vessels must have been of substantial size, of intricate design and of impressive appearance, their usual blackness of surface contrasting deliberately with the white incrustations. While having burnished exteriors, their insides were not burnished, and only lightly smoothed. It is surmised that such vessels were used for the storage of (dry) goods, and were on permanent display, probably evidencing a certain status of the household. Dry goods storage is more likely than liquid because of the slightly porous and unburnished interior surfaces. The storage function is confirmed by the occurrence of large lids with similar decorations fitting such vessels and attested on other sites (e.g., M. Neagu 1999, nos. 73, 127, 133, etc.).

Cups resemble beakers in being carefully made in F.1 fabric, and are structurally linked to them in having similar plissé decoration and notches as well. The proportions differ. It may be that these cups played a similar role in the social practice of drinking.

◆ How many pots?

The percentage factor of measurements of the rim radius (see also further below) gives insight in the minimum number of vessels represented in the sample studied. Using intervals of 10% of basic-level category rim diameters, the following result is obtained (Tab. 2).

	Sondage 36 (n=102)	Sondage 39/41/44 (n=62)	Sondage 24/48 (n=31)
cups	1.6 (6)	1.0 (1)	0.2 (2)
beakers	3.9 (35)	2.4 (24)	0.7 (7)
dishes	0.7 (7)	1.0 (10)	0.8 (8)
bowls	1.4 (13)	1.0 (10)	0.3 (3)
pots (holemouth)	3.9 (35)	1.7 (17)	1.0 (10)
large vessels	0.1 (1)	0	0
lids	0.2 (2)	0	0
sieves	0.1 (1)	0	1.0 (1)
excised vessels	0 (no rims)	0 (no rims)	0 (no rims)

Tab. 2. Teleor 008. Minimum number of vessels on basic-level category level, using percentage factor of rim radius (in brackets total number of rim sherds).

Teleor 008. Num rul minim de vase în raport cu nivelul categoriilor de baz , utilizând procentajul razei buzelor de vas (în paranteze: num rul total al buzelor de vas).

Assuming that the pottery as deposited on Teleor 008 has remained more or less in situ, it is clear from Table 2 that even while these are minimum numbers for each category they show that the total number of vessels used during the life span of each occupation is restricted. As such, the extent of occupation must have been short, certainly not surpassing one generation, and probably much shorter than that. The amounts of vessels represented, admittedly yielding only coarse-grained evidence, do not contradict the architectural record that the pottery as retrieved basically reflects the use and discard patterns of one single household, whether on seasonal or permanent basis. Especially the minimum number of cooking pots, even when doubling the amount, may very well fit use patterns of one family, if we take into account breakage rates of daily used kitchen gear, where the maximum life span for cooking pots is at about 3 years (cf. D. Arnold 1985, p. 152ff.). While these are minimum vessel numbers set off against the rim sherds counted for each category, they display the high degree of fragmentation in all three individual pottery assemblages of Teleor 008. There are only three complete profiles – not coincidentally of small vessels.

◆ (Post-)deposition patterns

Fragmentation, breakage patterns or (post-)depositional aspects are assessed through the variables of radius, sherd size, weight and abrasion. Sondage 36 contexts 233, 212 and 217, all from the ploughzone, yield a definitely secondary debris. Sherds are mostly heavily fragmented, joins very

few and there is much “light–moderate” abrasion. Typical is a thick calcium carbonate (CaCO_3) crust covering many sherds. Often this crust is obliterating the surface-roughening applied to many of the F.7 sherds, and possibly the amount of SFRW sherds is higher than could be established. In 212 occur a few sherds which might be of Gumelni a date. Contexts 252, 213 and 226 from the underlying deposit containing building material have a similar aspect as the ploughzone sherd material, including the CaCO_3 crust. From context 213, underlying 212 directly, again Gumelni a intrusions were retrieved, so perhaps there was a Gumelni a pit in this area. Contexts 270 and 278 below 252, 213 and 226 are again similar: CaCO_3 crust, heavy fragmentation, no joins, fairly abraded. Although 278 has an Iron Age burial cut, no apparent mix of sherds from different periods was observed.

In Sondage 39/41/44, area 44 there are several joins within the three excavated contexts (255–263–267) and also between one context and the other. The abrasion is dominantly light. Notable is a complete profile of a cup (fig. 7/1 from context 267). Also from area 39 several sherds can be joined. By contrast, sherds from adjoining area 44 yield heavily eroded non-joining pieces.

From Sondage 24/48, context 269 several sherds are affected by fire, either by being refired to red, or else being covered by a burnt granular crust, resembling though different from the calcium carbonate crust attested in Sondage 36. Such sherds may be linked to the find of six chaff-tempered clay weights also secondarily fired to orange-red from the same 269 context, as well as a large sieve fragment (fig. 10/8). Together with a flat grinding stone and a round stone ball possibly for grinding also, from underlying context 276, all finds from this area (24/48 SW Ext.) can be connected to the find of a hearth here. The burnt/refired sherds might have been part of the construction of the hearth. In general, however, the degree of abrasion in 24/48 is higher than in the two other sondages.

The overall degree of abrasion was assessed on the diagnostic sherds (fig. 5). Abrasion is lowest in the most western area, Sondage 36, and highest in the most eastern one, in Sondage 24/48. Here, more than 50% of the sherds shows heavy traces of abrasion, against 15% in Sondage 36, and 30% in the middle Sondage 39/41/44. The degree of fragmentation is similar overall, with no great fluctuations in the sherd size in the different soundings. Fragmentation itself is high, with 80–90% of all sherds being smaller than 5 cm (fig. 6). This high level of fragmentation is also apparent from the measurement of the radius of the sherds (mostly rim- and base sherds, occasionally also body sherds where the widest diameter was measurable) (cf. B. Eglhoff 1973). Hardly any difference occurs here (tab. 3).

Radius	Son 36 (n=284)	Son 39/41/44 (n=144)	Son 24/48 (n=97)
10%	90.85	88.19	87.63
20%	6.69	6.94	10.31
30%	1.41	2.08	2.06
40%	0	0.69	0
50%	0.7	0.69	0
60%	0	0.69	0
80%	0.35	0.69	0

Tab. 3. Teleor 008. Percentage factor distribution of radius measurements per stage.
Teleor 008. Distribuția procentajului m sur torilor razei în funcție de etape.

◆ Evaluation

Large, decorated vessels often have black exteriors, brown-red interiors, indicating an initially oxidizing firing atmosphere, which was then abruptly changed to a reduced atmosphere. The black colour must have been a deliberate objective, because it is all-over, and makes the white fill of the excised design stand out in a visually impressive way. Possibly such large vessels are for functional display, e.g., long-term storage (but not water, as the vessels, though not burnished on the insides and slightly porous, are well burnished on the outsides). Added to this visual display aspect may be the fact that such vessels are occasionally fitted out with pedestal bases, making them stand out even more. The fine table-ware consisting of beakers and cups with rim notches and fine fluting/plissé are, by contrast, more tactually than visually impressive, both to the hands and to the lips – the fine fluting

often only visible when turned in the light. As such, these beakers are more for “feeling” than for “viewing”. The beakers always have heavily use-wear bases, indicative of their heavy use.

As to gestures, there are no handles in Boian pottery, apart from occasional small knobs on bowls (fig. 9/1). Vessels are taken and carried by the rim (large cooking vessels), within the hand (beakers, cups), or taken and carried with both hands. Gestures of hands are clasped, fingers together, and cupped. Gestures do not involve separate fingers, which point and penetrate (as in the case of lugs, or strap handles). Vessels can stand by themselves (all having flat bases). In this way, Boian pottery, in continuation of V dastra practices, significantly restructures and revives Early Neolithic practices concerning gestures and tactility, and contrasts with Dude ti patterns.

While the Boian period sites in the explored section of the Teleorman valley bottom are temporary in the sense that each stage's use-life did not last over one single generation at the most, the ceramics do yield a comprehensive repertoire meeting the requirements of daily life on the site. The absence of simple storage containers, apart from the large excised vessels, could indeed point to a seasonal use of the site, but the presence of wooden, reed and unbaked clay containers, as well as storage pits cannot be ruled out.

Obviously, the Boian pottery of Teleor 008 played a role in possibly ritualised or institutionalised practices such as communal drinking and feasting, given the sophisticated large drinking beakers of invariably good technical quality and subtly decorated. While the F.7 cooking pots fit in with a long tradition starting in the first days of pottery making in the Danubian Plain and continuing basically unaltered in the ensuing Gumelni a period, it might be premature to infer that also cooking habits and by extension food habit patterns remained unchanged as well over the centuries, and much circumstantial evidence is needed here.

The preference by Boian people to expend care and attention, as well as value on display storage is evidenced by the black containers with their intricate excised decorations. Unfortunately, the interrelations of such vessels, their various forms, the decorative patterns and the possibly discrete functions concerning storage cannot be gauged from the Teleor 008 corpus, although these interconnections must surely be reckoned with. It is indeed probable that such storage vessels represent status objects, possibly as part of marriage rituals or as part of a trousseau.

It is far from certain whether such vessels and also the F.1 beakers were locally produced. Presently, detailed data on Boian pottery are yet too scarce to test the hypothesis that expertise at making F.1 beakers as well as F.7 excised vessels were all part of common household know-how, and the variance in manufacturing and firing techniques might point away towards the existence of specialised centres. Whether or not all the pottery was manufactured on site, the cohesion shown in the fabrics points to manufacture somewhere in the wider region, making use of the rich alluvial soils existing in the flood plain. If we accept the existence of specialised production centres within the wider region of Boian occupation in Southern Romania, the presence of such vessels at the small sites at Teleor 008 suggests the existence of local area networks, where it was easy to acquire and/or exchange such obviously highly valued objects. Accepting such hypotheses would, in addition, mean that not in all the cases of the Boian pottery categories the producers and the users were the same, or concentrated in one settlement. In order to address such questions, it is necessary to pursue technical and morphological analysis of Boian pottery assemblages on a detailed level over more sites in the larger region of Southern Romania.

◆ Acknowledgements

Thanks go out to Douglass Bailey and Radian Andreescu for enabling the study of the Teleor 008 Boian material as part of the Southern Romanian Archaeological Project. Special thanks to Cristi Mirea, Radu-Alexandru Dragoman and Sorin Oanț -Marghitu for discussions and friendship. This material was studied in 2001 and the report originally submitted as part of the 3rd SRAP preliminary reports, which was never printed. The present text is largely unaltered, apart from some minor tweaking and editing.

◆ Bibliography

- R.-R. Andreescu, P. Mirea 2001 Ceramic analysis and chronological framework, in D.W. Bailey, R.-R. Andreescu, S. Mills, S. Trick (eds.), Southern Romania Archaeological Project, second preliminary report, School of History and Archaeology, Cardiff University, Cardiff, p. 7-18.
- D. Arnold 1985 Ceramic theory and cultural process, Cambridge University Press, Cambridge.
- D.W. Bailey et alii 2002 D.W. Bailey, R.-R. Andreescu, A. Howard, M. Macklin, S. Mills 2002, Alluvial landscapes in the temperate Balkan Neolithic: transition to tells, *Antiquity*, 76, p. 349-355.
- D.W. Bailey et alii (eds.) 1999 D.W. Bailey, R.-R. Andreescu, S. Mills, Southern Romania Archaeological Project, preliminary report 1998, School of History and Archaeology, Cardiff University, Cardiff.
- D.W. Bailey et alii (eds.) 2001 D.W. Bailey, R.-R. Andreescu, S. Mills, S. Trick, Southern Romania Archaeological Project, second preliminary report, School of History and Archaeology, Cardiff University, Cardiff.
- E. Com a 1974 *Istoria comunit Ților culturii Boian*, Editura Academiei Republicii Socialiste România, Bucure ți.
- E. Com a 1976 Caracteristicile i insem tatea cuptoarelor de ars oale din aria culturii Cucuteni-Ariu d, *SCIVA*, 27, p. 23-33.
- B. Egloff 1973 A method for counting ceramic rim sherds, *American Antiquity*, 38, p. 351-353.
- C. Hait 2001 Soils and sediments: report for the 2000 field season, in D.W. Bailey, R. Andreescu, S. Mills, S. Trick (eds.), Southern Romania Archaeological Project, second preliminary report, School of History and Archaeology, Cardiff University, Cardiff, p. 79-96.
- T. Kaiser 1984 *Vin a ceramics: economic and technological aspects of Late Neolithic pottery production in Southeast Europe*, PhD dissertation, University of California, Ann Arbor.
- M. Neagu (ed.) 1999 *The Boian civilisation on Romania's territory*, Editura DAIM, C I ra i.
- O. Rye 1976 Keeping your temper under control: materials and the manufacture of Papuan pottery, *Archaeology and Physical Anthropology in Oceania*, 11, p. 106-137.
- O. Rye 1981 *Pottery technology. Principles and reconstruction*, Taraxacum, Washington.
- M. Schiffer 1990 The influence of surface treatment on heating effectiveness of ceramic vessels, *JAS*, 17, p. 373-381.
- E. Stoicovici 1974 Analiza mineralogic a unor fragmente ceramice de tip Boian, in E. Com a (ed.), *Istoria comunit Ților culturii Boian*, Editura Academiei Republicii Socialiste România, Bucure ți, p. 259-260.
- L. Thissen 1993 New insights in Balkan-Anatolian connections in the Late Chalcolithic: old evidence from the Turkish Black Sea littoral, *Anatolian Studies*, 43, p. 207-237.
- S. Trick 2001 Magnetic susceptibility survey of exposed sections, in D.W. Bailey, R.-R. Andreescu, S. Mills, S. Trick (eds.), Southern Romania Archaeological Project, second preliminary report, School of History and Archaeology, Cardiff University, Cardiff, p. 39-57.
- R. Tringham et alii 1992 R. Tringham, B. Brukner, T. Kaiser, K. Borojevi , L. Bukvi , P. Šteli, N. Russell, M. Stevanovi , B. Voytek, Excavations at Opovo, 1985-1987: socioeconomic change in the Balkan Neolithic, *Journal of Field Archaeology*, 19, p. 351-386.

TEL008 sondages and depths

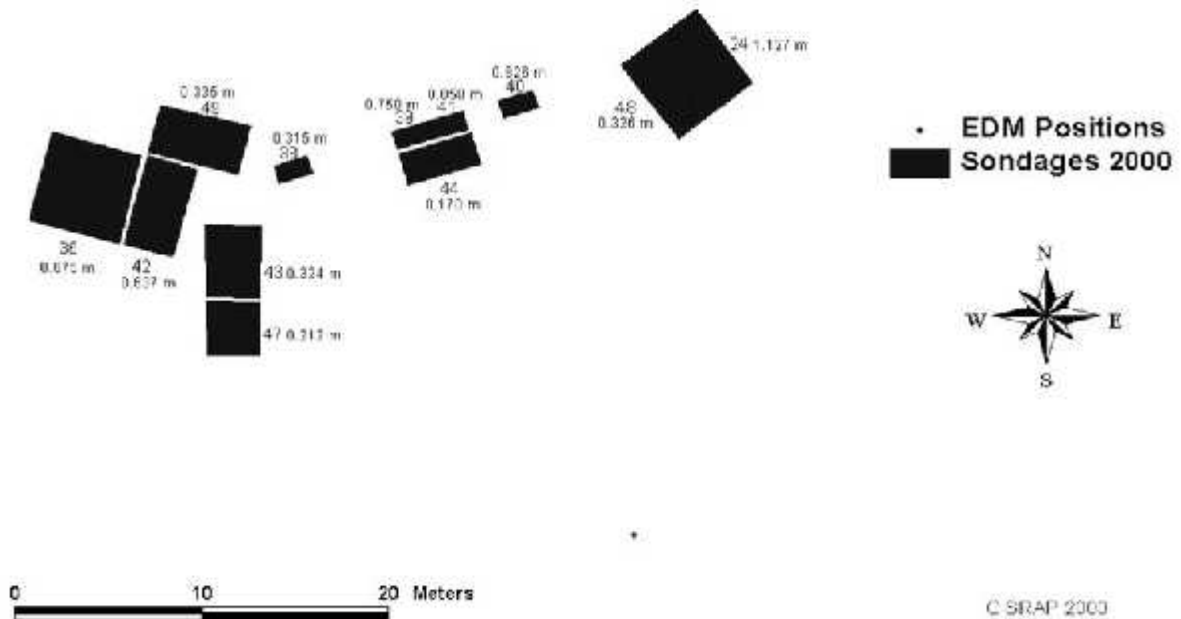


Fig. 1. Location of the areas of study (plan courtesy SRAP Archive © 2000).
 Localizarea arealelor studiate (plan reprodus cu permisiunea SRAP Archive © 2000).

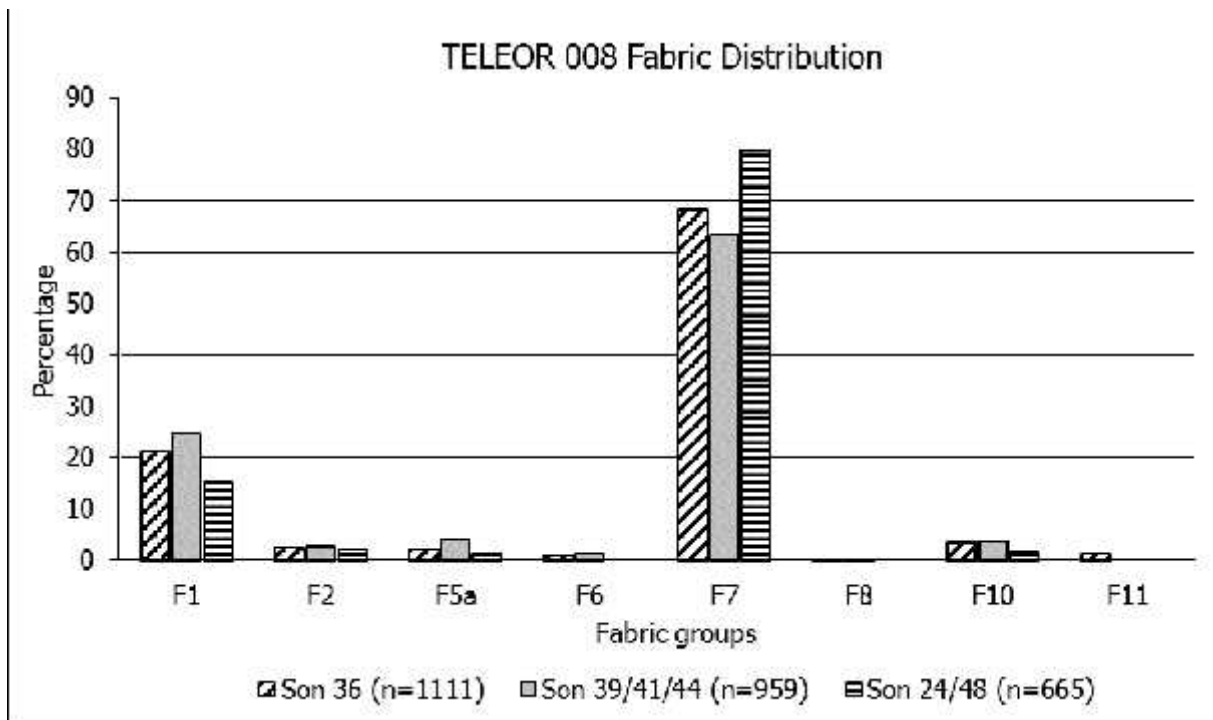


Fig. 2. Teleor 008. Frequency distribution of fabrics.
 Teleor 008. Distribuția frecvenței compozițiilor de past .

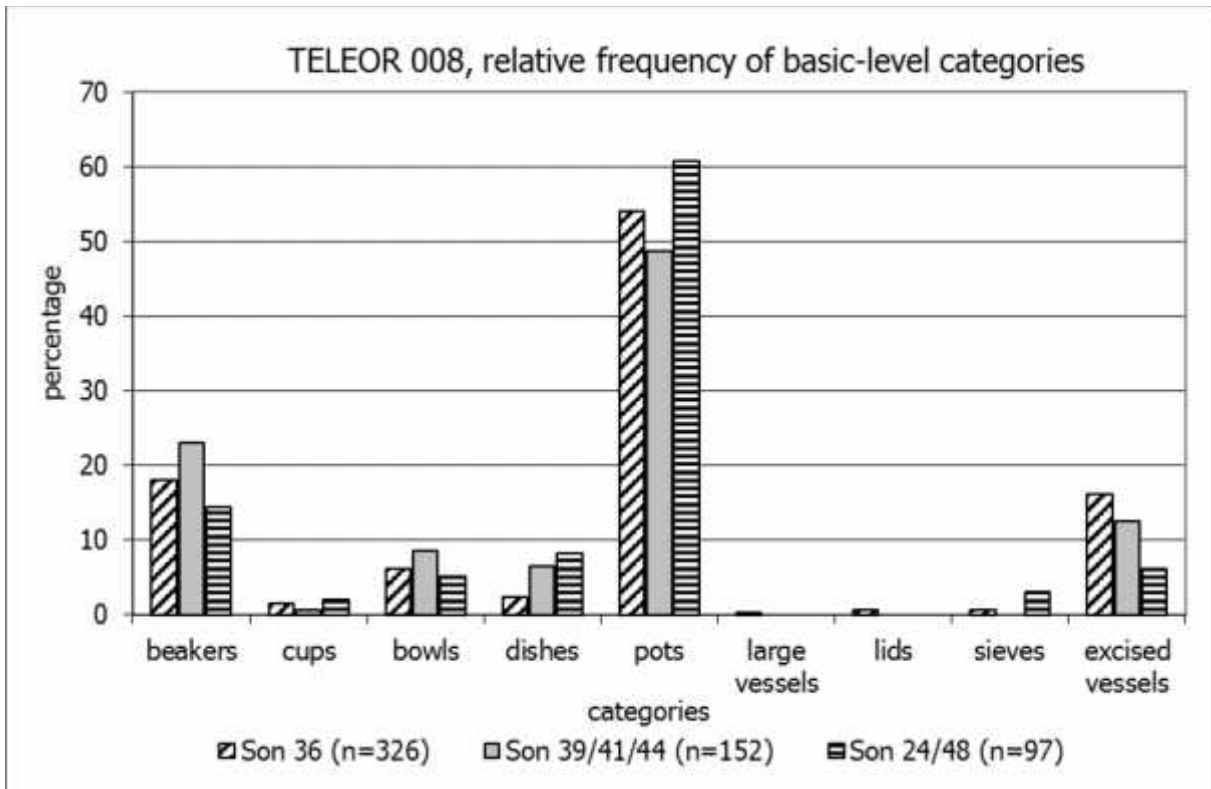


Fig. 3. Teleor 008. Distribution of categories over time, based on diagnostic sherds.
Teleor 008. Distribuția categoriilor de-a lungul timpului, pe baza fragmentelor ceramice tipice.

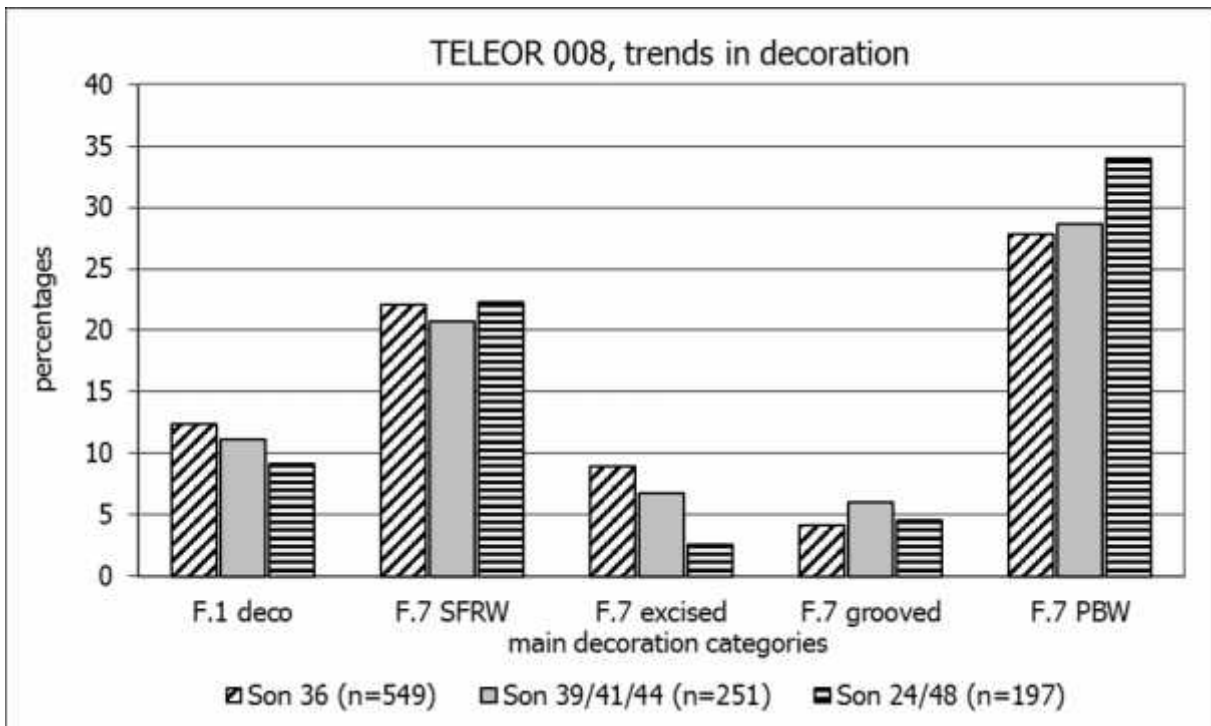


Fig. 4. Teleor 008. Decoration trends over time, where F.1 represents fluted beakers, F.7 SFRW are surface-roughened holemouth pots and F.7 PBW are plain-burnished sherds.
Teleor 008. Tendințe decorative de-a lungul timpului, unde F.1 reprezintă pahare canelate, F.7 SFRW sunt oale cu suprafața nelustruit și F.7 PBW sunt fragmente ceramice lustruite nedecorate.

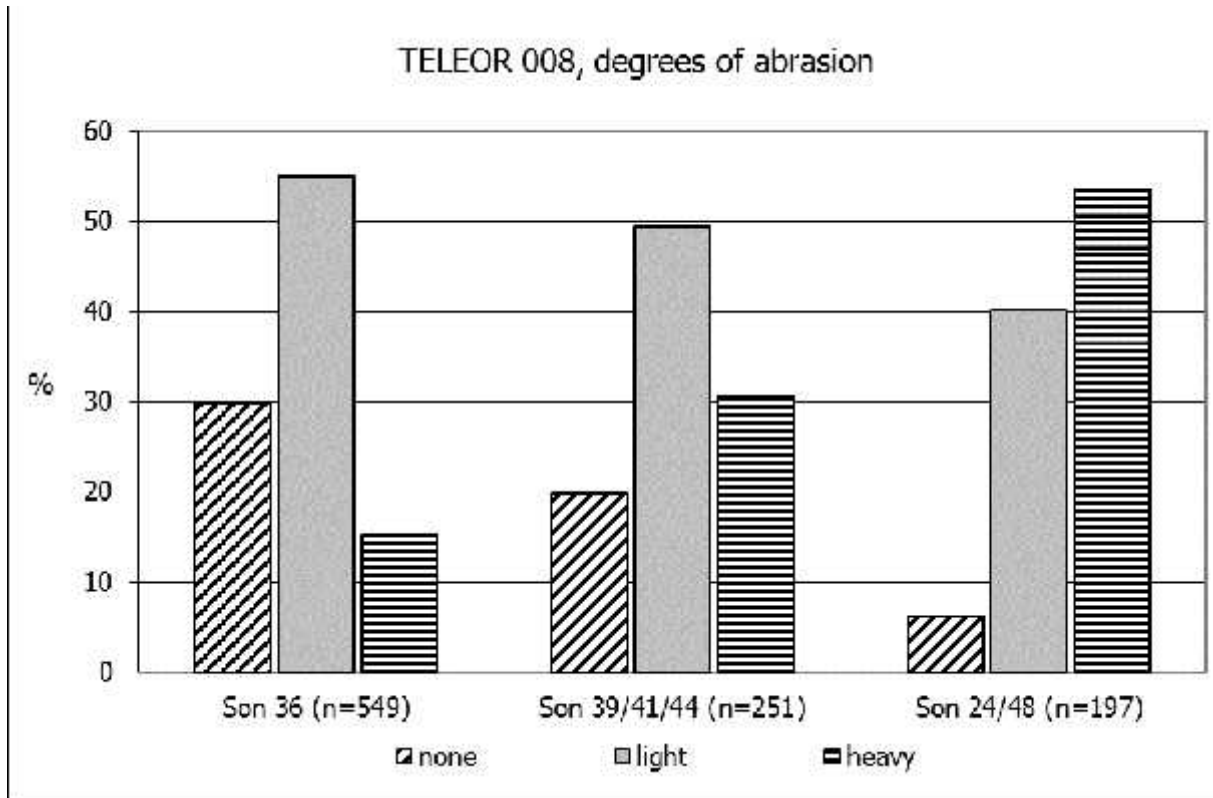


Fig. 5. Teleor 008. Abrasion per stage.
Teleor 008. Abraziunea în raport cu etapele.

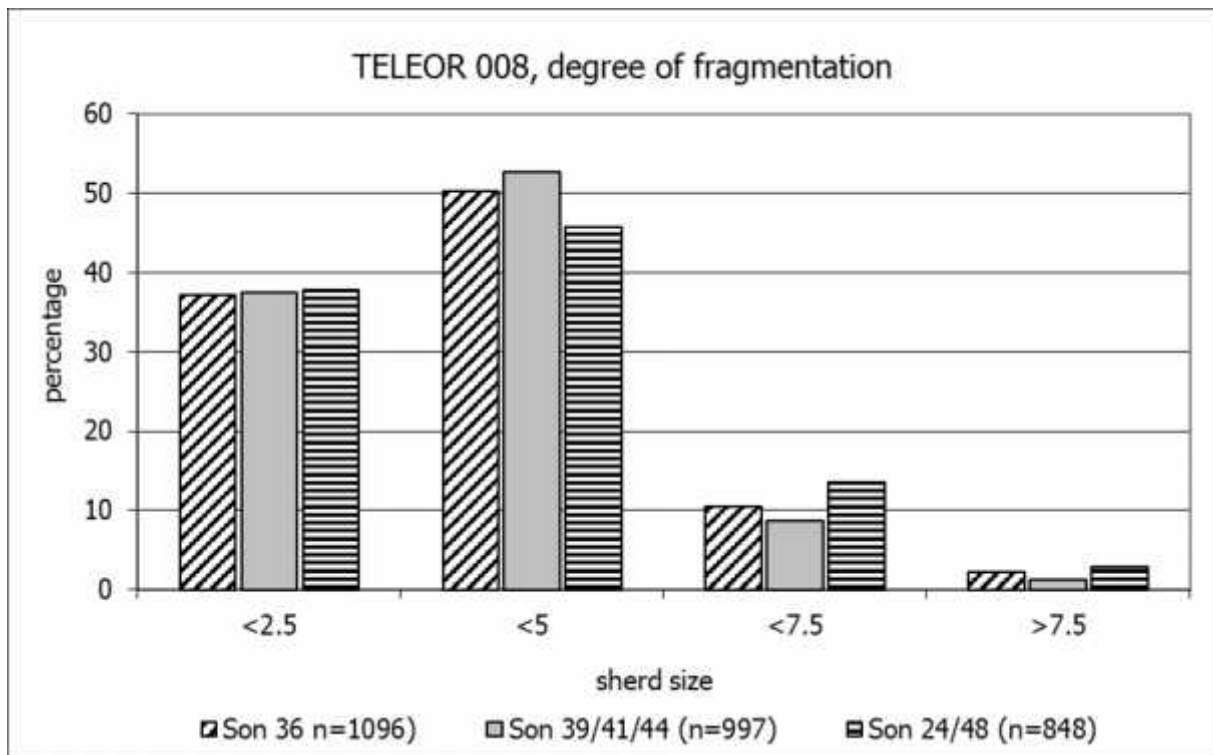


Fig. 6. Teleor 008. Fragmentation by sherd size.
Teleor 008. Fragmentarea în funcție de dimensiunea cioburilor.

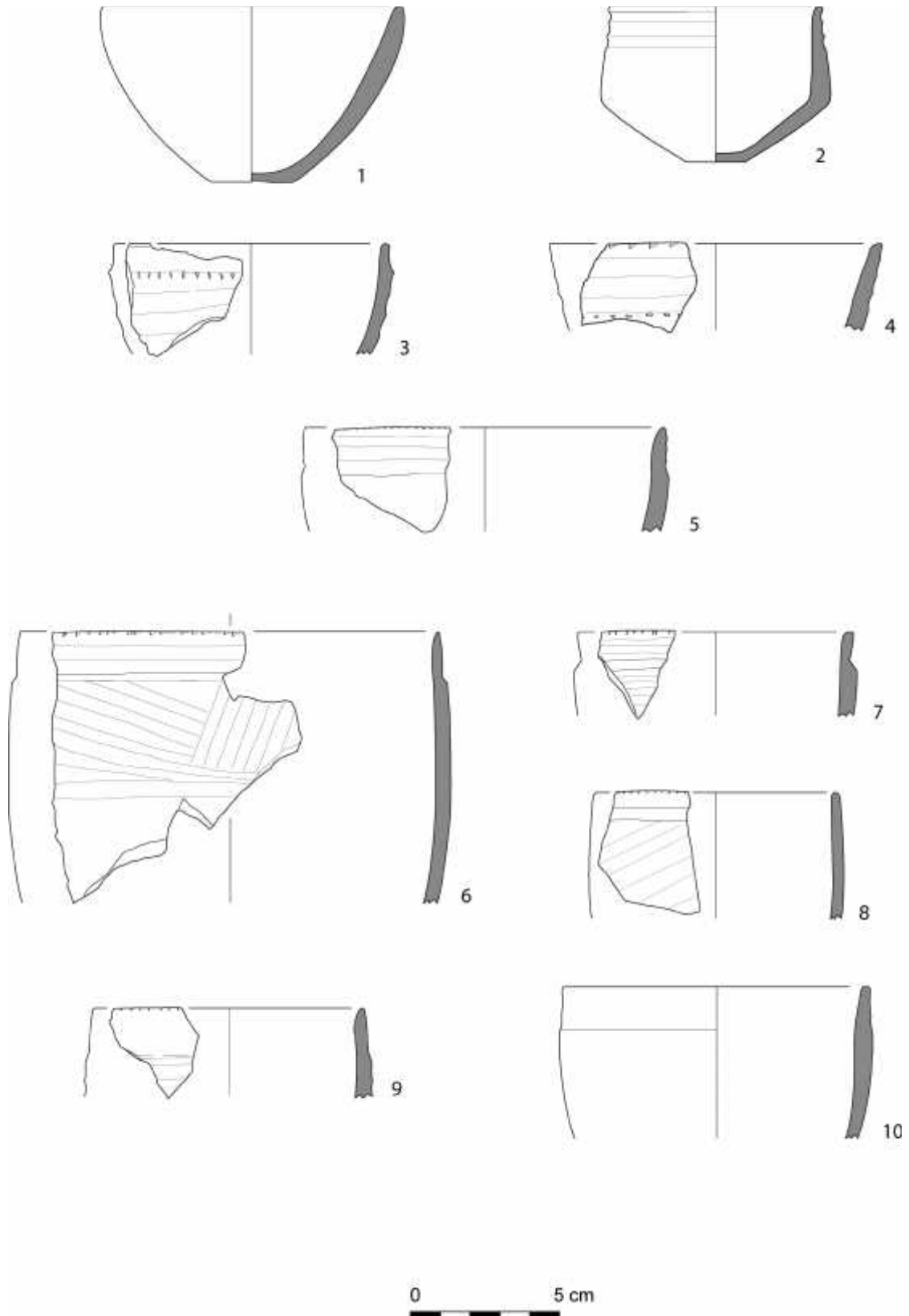


Fig. 7. Teleor 008. Sondages 36 and 39/41/44. Boian-Giule ti phase. Cups (1–5), Beakers (6–10).

Teleor 008. Sondajele 36 i 39/41/44. Faza Boian-Giule ti. Cupe (1-5), Pahare (6-10.)

1. S44-267, 2. S36-233, 3. S36-278, 4. S36-233, 5. S44-267, 6. S39-240, 7. S36-278, 8. S36-278, 9. S44-267, 10. S36-233.

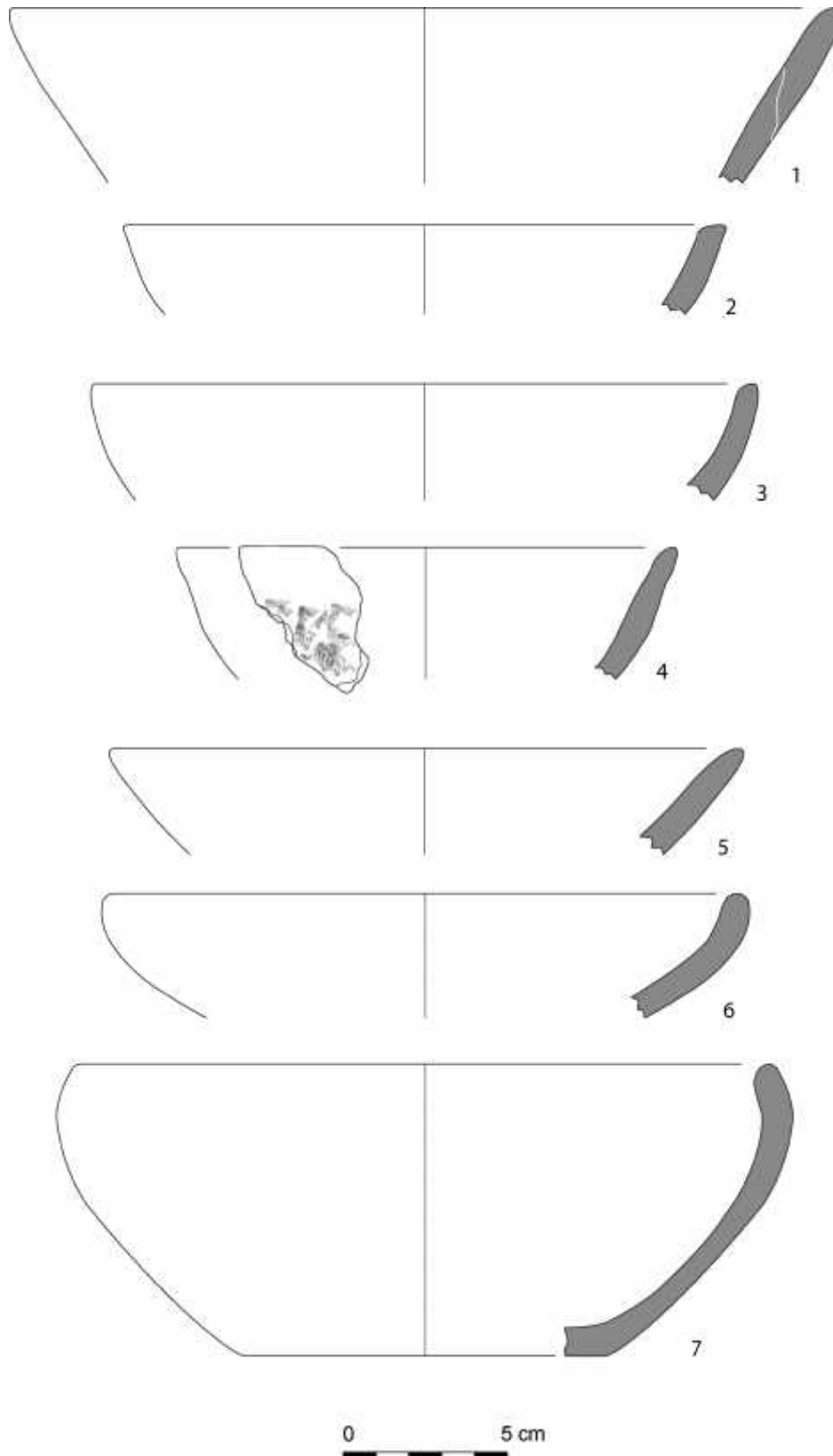


Fig. 8. Teleor 008. Sondages 36, 39/41/44 and 24/48. Boian-Giule ti phase (1–4), Boian-Spanțov phase (5–7). Dishes.

Teleor 008. Sondajele 36, 39/41/44 i 24/48. Faza Boian-Giule ti (1-4), faza Boian-Spanțov (5-7). Str. chini. 1. S36-212, 2. S36-270, 3. S44-255, 4. S36-212, 5. S24/48-269, 6. S24/48-264, 7. S24/48-276.

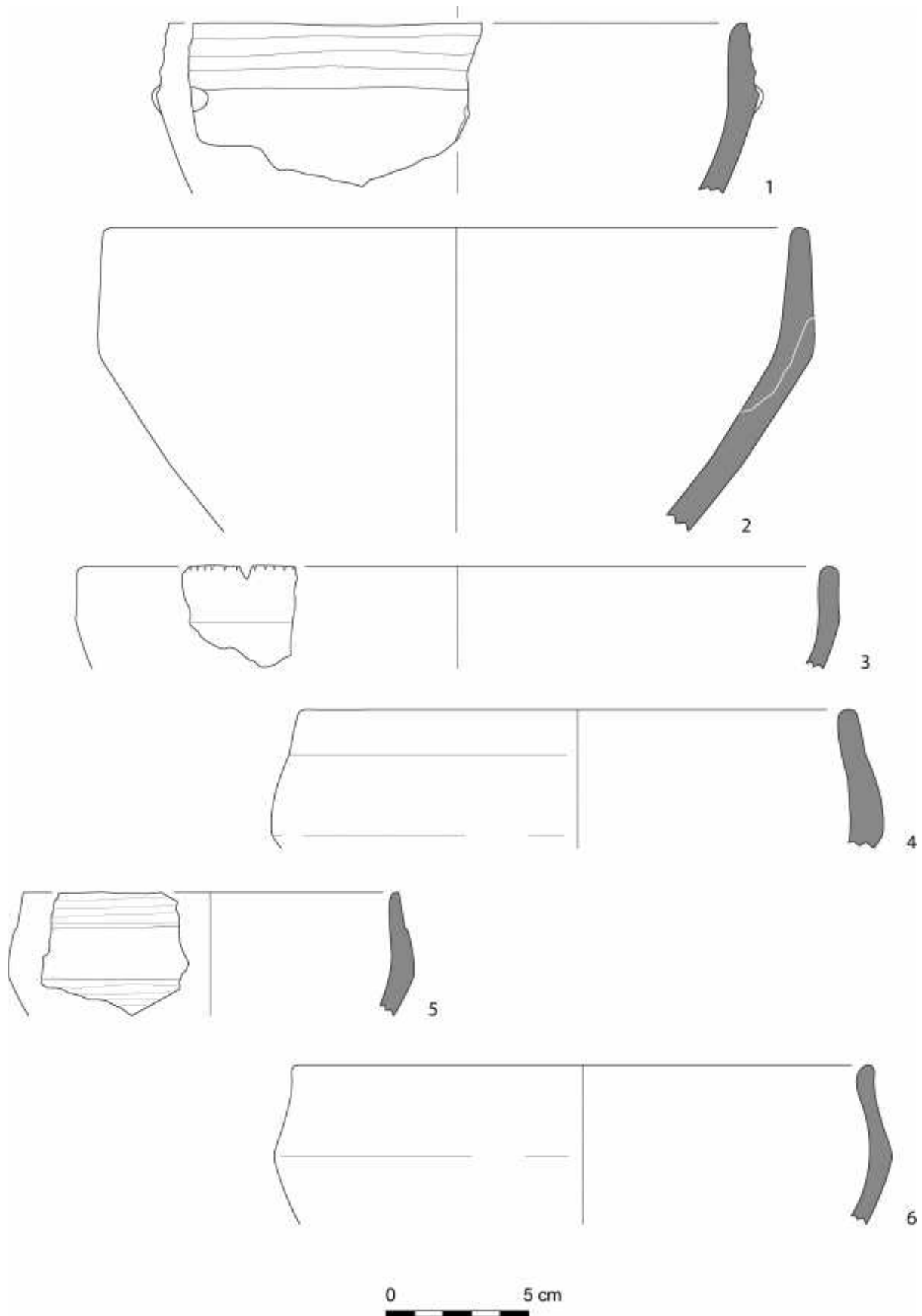


Fig. 9. Teleor 008. Sondages 36 and 39/41/44. Boian-Giule ti phase. Bowls.
Teleor 008. Sondajele 36 i 39/41/44. Faza Boian-Giule ti. Castroane.
1. S36-233, 2. S36-233, 3. S41-244, 4. S44-263, 5. S44-263, 6. S44-263.

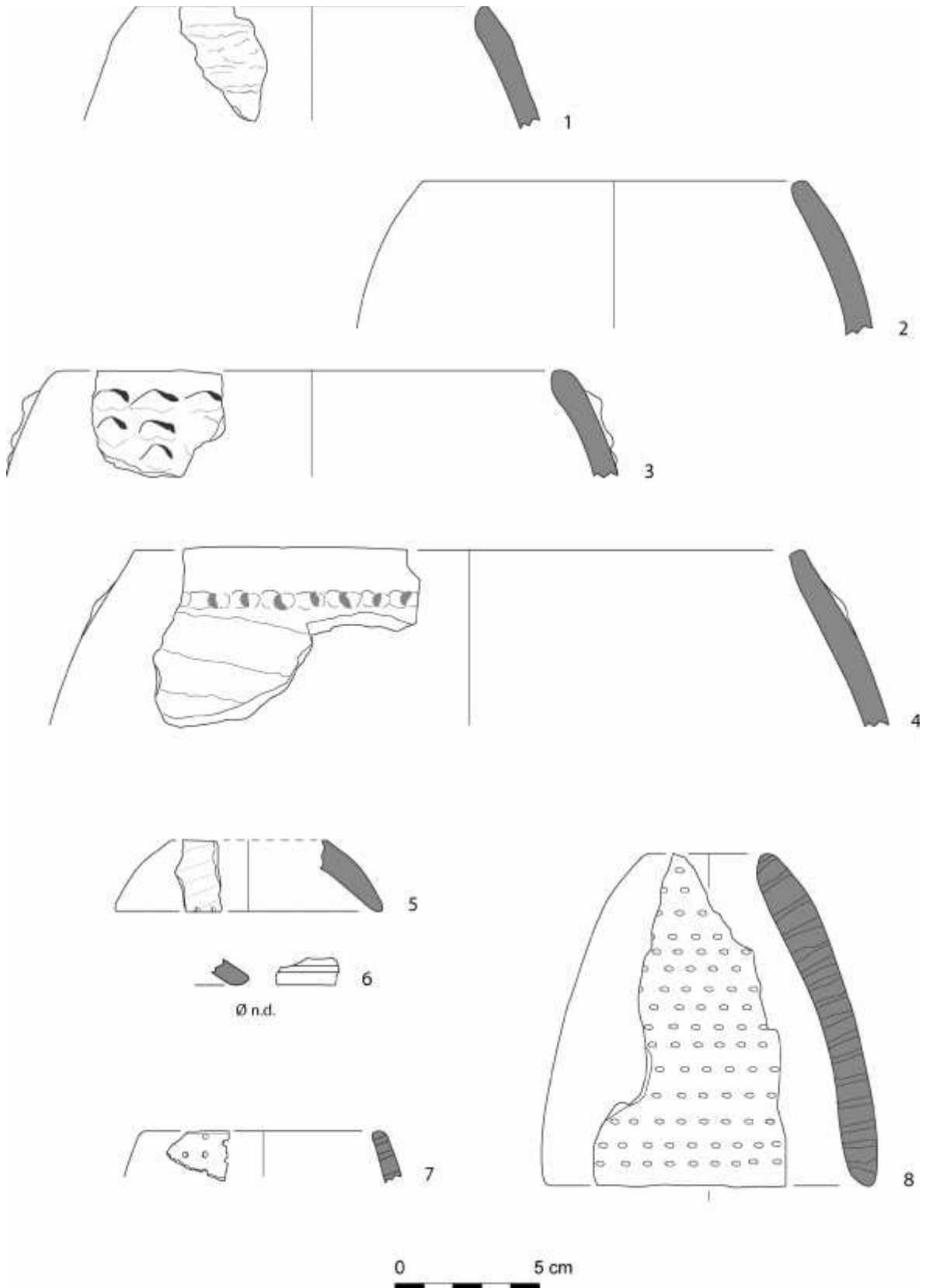


Fig. 10. Teleur 008. Sondages 36, 39/41/44 and 24/48. Boian-Giule ti phase (1–7), Boian-Spanțov phase (8). Pots, Lids and Sieves.

Teleur 008. Sondajele 36, 39/41/44 i 24/48. Faza Boian-Giule ti (1–7), faza Boian-Spanțov (8). Oale, Capace i Strecur tori.

1–4. S36-233, 5. S36-270, 6. S44-255, 7. S36-212, 8. S24/48-269.

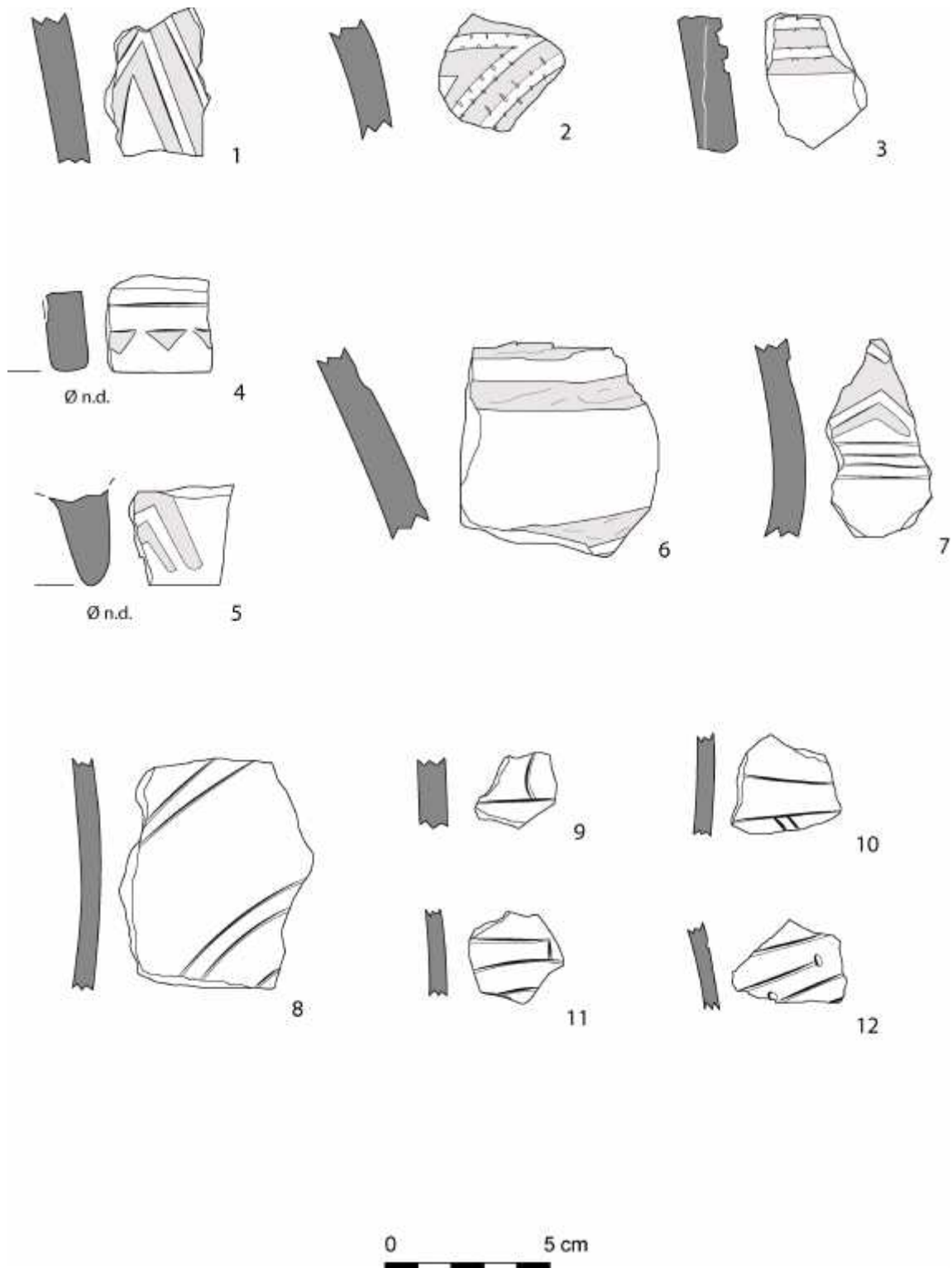


Fig. 11. Teleor 008. Sondages 36 and 24/48. Boian-Giule ti phase (1–6, 12), Boian-Spanțov phase (7–11). Excised vessels (1–7), Grooved vessels (8–12).

Teleor 008. Sondajele 36 i 24/48. Faza Boian-Giule ti (1–6, 12), faza Boian-Spanțov (7–11). Vase excizate (1–7), Vase cu incizii late (8–12).

1–6 S36-233, 7. S24/48-264, 8. S24/48-237, 9. S24/48-248, 10. S24/48-264, 11. S24/48-264, 12. S36-233.