For a long time it has been believed that those people belonging to the so-called “barbarian world” surrounding ancient Greek towns were the manufacturers and users of handmade pottery. Finds of recent years, however, allow us to propose that this statement is only partly correct. In order to establish a fresh approach to the study of the interrelations between the local and Greek populations of the ancient centres of the northern Black Sea littoral, it is necessary to analyse the archaeological materials from each of these centres. Only interdisciplinary studies of pottery assemblages in their entirety (handmade, wheelmade tableware, cookingware, containers) will enable us to arrive at grounded conclusions as to the use and production of each particular group of pottery, the ratio between the barbarian and Greek components in the material culture of the Greeks of the northern Black Sea region and the history of each Greek polis. The evidence from Olbia, an exemplary site for the study of antiquity in the northern Black Sea littoral, is, in this aspect, of special importance.

RESEARCH HISTORY

The handmade pottery of Olbia was first considered as a separate find category by T.N. Knipovič.\textsuperscript{733} Simultaneously, an attempt was made to apply chemical and technological analyses to studies of Olbian pottery,\textsuperscript{734} and the hypothesis was proposed that a proportion of the handmade pottery belonged to the indigenous population.

A differing view about the pottery assemblages of ancient sites was held by V.V. Lapin. Based on the study of handmade pottery from Berezan’ and its comparison with the evidence from other Greek sites including Olynthos, he proposed that the handmade pottery from Berezan’ belonged to the material culture of the Greek population. He believed that “the existence of the two types of pottery production – the handmade and wheelmade – is a natural phenomenon in a society with an insufficiently advanced system of commodity production”. He explained the much greater proportion of handmade pottery in sites of the northern Black Sea littoral as compared to Greece proper by the fact that “in the Black Sea area, more elements of the natural economy were preserved and the spread of pottery of domestic manufacture under these conditions must have been taking place on a wider scale than in the mother country”.\textsuperscript{735}

The first monographic study of the handmade pottery from Olbia and Berezan’ within a wide chronological frame and on the basis of mass finds was by K.K. Marčenko.\textsuperscript{736} He was the first to apply a statistical treatment of the material on the basis of the find lists. Having carried out calculations and obtained the ratios between the main groups of pottery (handmade/wheelmade; handmade/tableware) he succeeded in making very interesting observations concerning the organization of the everyday life of the first Greek settlers and in tracing its development over the course of several centuries from the 7th to the first half of the 1st century BC. For instance, Marčenko noted that the proportion of handmade pottery increased in the Hellenistic period. Although earlier the percentage of handmade pottery did not exceed 4%, in the second half of the 3rd century BC it grew to 5%. In the 2nd-1st century BC, this percentage rose further and reached approximately 10%.\textsuperscript{737}

\textsuperscript{733} Knipovič 1940a.
\textsuperscript{734} Kul’skaja 1940, 171-185; Kul’skaja 1958, 77-91.
\textsuperscript{735} Lapin 1966, 162, 165.
\textsuperscript{736} Marčenko 1988b.
\textsuperscript{737} Marčenko 1988b, 22.
Another important trait of Marčenko’s work was the fact that a quantitative evaluation of the entire pottery assemblage of such complex ancient sites as Olbia and Berezan’ was conducted for the first time and the ratios between the main groups of wares were determined, thus allowing comparison of the pottery assemblages from different sites.

Notions regarding the pottery of the barbarian surroundings of Olbia were established only in the 1980s-1990s. The wide chronological (from the late Bronze Age to the late Scythian period) and territorial frame of these studies have made it possible to trace the appearance and formation of the main types of handmade pottery and to distinguish a number of ethnically non-homogeneous groups among the handmade pottery of the northern Black Sea region in the early Iron Age. One of the results of this work was the conclusion that the pottery complex of the Scythian steppe culture proper was shaped only at the turn of the 5th and 4th century BC. Several groups of handmade pottery of different origins have been discriminated: Kimmerian, Kizil-Koba (north Caucasian), the forest-steppe group of the pre-Scythian and Scythian periods, the proper Scythian, Thracian and Greek groups.738 It has been noted that the pots with a flaring rim (or funnel-shaped mouth according to the classification of B.N. Grakov) first appeared in the Archaic layers of sites in the region of the Lower Bug River – Berezan’ and Bol’šaja Černomorka 2.739 It is probable that the residents of the first Greek settlements of the northern Black Sea littoral brought with them certain habits of making handmade pottery, which were later borrowed by the local steppe population. This supposition is confirmed by studies of handmade pottery from other ancient sites, primarily from Olbia in general and the Lower City in particular.

THE HANDMADE POTTERY OF SECTOR NGS

In this present publication, handmade pottery is considered within a single functional group of “cookingware” which comprises also the wheelmade cookingware pottery. About 60% of the handmade and wheelmade cookingware of Olbia comes from the layers of Sector NGS. About 30% of this derives from datable structures, such as rooms, basements, etc. The portion of handmade and wheelmade cookingware from locations which cannot be dated is inconsiderable, not exceeding 10% (Table 1). This fact attests that we are dealing with a quite valuable archaeological source. Throughout NGS, we observe an almost constant ratio between handmade and wheelmade cookingware, both in independent layers and in the fills of rooms and basements –fragments of wheelmade cooking ware are four to five times more numerous than handmade fragments (Table 1).

<table>
<thead>
<tr>
<th>Provenance</th>
<th>Wheelmade number</th>
<th>Wheelmade %</th>
<th>Handmade number</th>
<th>Handmade %</th>
<th>Wheelmade/ Handmade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent layers</td>
<td>37,332</td>
<td>54.73</td>
<td>9,140</td>
<td>57.86</td>
<td>4.1</td>
</tr>
<tr>
<td>Rooms and basements</td>
<td>19,016</td>
<td>27.88</td>
<td>4,191</td>
<td>26.53</td>
<td>4.5</td>
</tr>
<tr>
<td>Structures</td>
<td>7,134</td>
<td>10.46</td>
<td>1,301</td>
<td>8.24</td>
<td>5.5</td>
</tr>
<tr>
<td>Clearing, spoil heap</td>
<td>4,729</td>
<td>6.93</td>
<td>1,164</td>
<td>7.37</td>
<td>4.1</td>
</tr>
<tr>
<td>Total</td>
<td>68,211</td>
<td>100.00</td>
<td>15,796</td>
<td>100.00</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Table 1. Distribution of handmade and wheelmade cookingware among the contexts of NGS (according to find lists for the years of 1985-2002).

In order to develop a classification, 589 fragmentary and complete handmade vessels of the Hellenistic period unearthed in Sector NGS were selected. Below, the classification of the handmade pottery by morphological features is presented. The data are grouped according to ethnic groups. The pottery of these groups differs not only in terms of shape, but also in the character of the treatment of the external and internal surfaces and the composition of the fabric and its tempers. All these peculiarities are determined by visual examination and already during primary analysis of the finds.

738 Gavriljuk 1981.
739 Gavriljuk & Otreško 1982.


K Handmade pottery

<table>
<thead>
<tr>
<th>Categories of vessels</th>
<th>Types</th>
<th>Amount number</th>
<th>%(^{40})</th>
<th>Ethnic group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooking bowls (casseroles)</td>
<td>Cooking pots (two types)</td>
<td>57</td>
<td>9.45</td>
<td>Greek</td>
</tr>
<tr>
<td>Pan-braziers</td>
<td></td>
<td>5</td>
<td>0.83</td>
<td>Greek</td>
</tr>
<tr>
<td>Pots</td>
<td>With a short, concave neck</td>
<td>56</td>
<td>9.29</td>
<td>Greek</td>
</tr>
<tr>
<td>With a flaring rim</td>
<td></td>
<td>254</td>
<td>41.96</td>
<td>Greek</td>
</tr>
<tr>
<td>Lids</td>
<td></td>
<td>15</td>
<td>2.49</td>
<td>Greek</td>
</tr>
<tr>
<td>Pots, cooking bowls</td>
<td>With a ledge to accommodate a lid</td>
<td>14</td>
<td>2.32</td>
<td>Greek</td>
</tr>
<tr>
<td>Jugs</td>
<td></td>
<td>5</td>
<td>0.83</td>
<td>Greek</td>
</tr>
<tr>
<td>Krater-like vessels</td>
<td></td>
<td>7</td>
<td>1.16</td>
<td>Greek</td>
</tr>
<tr>
<td>Open Footed cups</td>
<td></td>
<td>20</td>
<td>3.31</td>
<td>Greek</td>
</tr>
<tr>
<td>Frying-pans</td>
<td></td>
<td>9</td>
<td>1.66</td>
<td>Greek</td>
</tr>
<tr>
<td>Lamps</td>
<td></td>
<td>2</td>
<td>0.33</td>
<td>Greek</td>
</tr>
<tr>
<td>Pots</td>
<td>With a concave neck</td>
<td>80</td>
<td>13.27</td>
<td>Scythian</td>
</tr>
<tr>
<td>Indistinctly profiled</td>
<td></td>
<td>12</td>
<td>1.99</td>
<td>Scythian</td>
</tr>
<tr>
<td>Bowls</td>
<td></td>
<td>2</td>
<td>0.33</td>
<td>Scythian</td>
</tr>
<tr>
<td>Storage pots</td>
<td></td>
<td>6</td>
<td>1.00</td>
<td>Thracian</td>
</tr>
<tr>
<td>Tulip-shaped pots</td>
<td></td>
<td>5</td>
<td>0.83</td>
<td>Thracian</td>
</tr>
<tr>
<td>Canister-shaped jars</td>
<td></td>
<td>11</td>
<td>1.82</td>
<td>Thracian</td>
</tr>
<tr>
<td>Open bowls</td>
<td></td>
<td>7</td>
<td>1.16</td>
<td>Thracian</td>
</tr>
<tr>
<td>Colanders</td>
<td></td>
<td>1</td>
<td>0.17</td>
<td>Thracian</td>
</tr>
<tr>
<td>Kernoi</td>
<td></td>
<td>1</td>
<td>0.17</td>
<td>Thracian</td>
</tr>
<tr>
<td>Thymiateria</td>
<td></td>
<td>2</td>
<td>0.33</td>
<td>Thracian</td>
</tr>
<tr>
<td>Total of identified examples</td>
<td></td>
<td>589</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. The main groups of handmade pottery from Sector NGS.

**GREEK GROUP**

All the vessels of this group were manufactured from clay tempered with gravel and grog (made from amphoras or wheel-made, greyware pottery). Sometimes spangles of mica are discernible. In section, the sherds are mostly three-layered – the core is black, the outer and inner surfaces are orange or grey, well smoothed and occasionally slightly burnished. The colour of the vessels varies from black to orange or orange-grey. The majority of handmade vessels of this group imitate in their shape wheelmade cookingware.

Handmade *cooking pots* are represented by fragments of 57 vessels corresponding to about 9.45% of the total repertoire (Table 2). According to the shape of the handles, it is possible to distinguish several types of handmade cooking pots.

\(^{40}\) It should be noted that these figures relate to the group of identifiable handmade pottery, not the entire ensemble of handmade pottery found in Sector NGS (editors).
Type 1, with applied horseshoe-shaped handles, are distinctly profiled vessels with a sharply out-turned rim, bulging shoulder, the utmost width of the vessel in the lower part and a round bottom. They are thick-walled and covered with soot; the surface is carefully smoothed and slightly burnished. Cooking pots K-1, K-3, K-8, K-13-K-14, K-19-K-20, K-22 and 89-707 have horseshoe-shaped handles positioned immediately below the rim. On K-11 and K-18, the handles are loop-shaped and positioned on the shoulders of the vessels. Pots of this type have been found in Houses IV-2 (Basement 280, Wall 300) and VII-1 (Basement 618).

Type 2, with horizontal handles, includes sharply profiled cooking pots with an out-turned neck, uniformly bulging body and a flat bottom (K-5, K-7, K-9-K-10, K-15, K-21). Only K-2 and K-4 have horizontal handles of a nearly rectangular shape. K-10 and K-69 have the handles placed immediately on the rim. The handle of one of the pots is vertical (K-16). Occasionally the cooking pots bear traces of repair (92-719).

The largest amount of fragmentary cooking pots was found in the Western Block: during clearing of Stove 329 (House III-1) and in the fill of Basement 368 (House III-3). Two pots come from each of Houses III-2 (Rooms 164, 389, 591), III-3 (ashy spot in Room 278), IV-2 (Room 302), IV-1 (Basement 257) and VII-1 (Rooms 615, 618). One pot was found in each of Houses II-5 (Room 294), IV-1 (Basement 253), IV-3 (Room 343) and IV-4 (Room 351). Thus, the layer richest in finds of handmade cooking pots is the grey, clayey filling of the underground and above-ground rooms of the Western Houseblock.

In the opinion of K.K. Marčenko, the date of the appearance of pots of the types described above was the second half to the end of the 4th century BC, and the period of their utmost spread was from the second half of the 3rd to the 2nd century BC.741 However, the beginning of the manufacture of handmade cooking pots in the Lower Bug region must be dated as early as the late Archaic period.742 Undoubtedly, these vessels imitate in the handmade technique one of the most widespread forms of wheelmade kitchen pottery. Imitations of Greek wheelmade pottery manufactured from local clay but using the potter’s wheel are known in other regions of the ancient world.743

Pans-braziers (for instance, K-23-K-24, 96-88) are squat vessels with a widely out-turned rim having a low ledge and with a sharp carination at the point of transition to the rounded bottom. These, as a rule, have horizontal handles. Only five examples may be attributed to vessels of this type, constituting 0.83% of the total (Table 2). Handmade pans-braziers repeat the shapes of wheelmade cooking vessels. Pottery of this type has been found in House IV-2 (Room 302) (K-131) and in the grey, clayey layer of the Central Block (K-23, 96-88). Another two fragments were recovered during cleaning of the excavation area. Pans-braziers are described by K.K. Marchenko as type 4 in his classification of cooking pans of the Hellenistic period.744 They are contemporary with their wheelmade prototypes.745

Pots with a short, concave neck, spherical belly and a small flat bottom, imitating the shape of corresponding wheelmade vessels, are represented by 56 fragments. They constitute 9.29% of the identifiable pottery from Sector NGS (Table 2). Among the material from other ancient sites, handmade vessels of this type are encountered extremely rarely, whereas wheelmade examples with this shape are fairly numerous at these sites. They have a rounded or a pointed edge to the rim. The curvature of the neck inside the vessel probably had the function of supporting a lid. The belly of these vessels is either spherical or flattened. The bottom is flattened and small in diameter (under 6 cm). Occasionally, such vessels have a vertical handle attached to the rim and shoulder. These pots are very rarely decorated. Only 14 (22%) of the vessels have decoration. In terms of the ornamentation, oblique finger-nail notches (e.g. 90-318) ranged around the outer edge of the rim are predominant. Only in a single case do the impressions decorate the base of the neck. Five pots with a short, concave neck are ornamented with finger indentations ranged on the rim or shoulder of the vessel (e.g., K-29, K-42).

The greatest number (nine specimens) of these pots has been retrieved from House III-3: five examples come from Basement 368 (K-39-K-40, 93-485-487), two from Basement 278 (K-36-K-37) and one from each of Rooms 164 and 359 (K-35, 93-367). Fragments of two vessels were found during clearing of Stove 329 in House III-1 (K-33-K-34). In House IV-2, six fragments of these pots were uncovered: in Room 280 (91-28), Room 287 (90-500) and in Room 302 (K-27-K-30). One fragment was found in each of Rooms 248 (House II-1), 294 (the general fill) (House II-5), 395 (House

741 Marčenko 1988b, 87.
742 Marčeňko & Domanski 1983b, fig. 8.20.
743 Harlaut 2002, 280, fig. 5c.
744 Marčenko 1988b, 86, fig. 16.1.
745 Harlaut 2002, 280, fig. 4c, 4e.
VI-2), 615, 618 (House VII-1) and in Basement 195 (House II-6), and during clearing of Wall 414 (House VI-2). Thus
the majority of handmade pots with a short concave neck comes from houses of the Western Houseblock (predominantly
from House III-3), where they are dated to the 4th-2nd century BC.

The group of pots with a flaring rim comprises 254 pots constituting 41.96% of the identifiable handmade pottery
from Sector NGS (Table 2). These are vessels with a sharply out-turned rim, a lip which is rounded (21 specimens), flat
(49 specimens) or pointed in section (six specimens) and a body with the maximum width in its middle part or with a
spherical belly. The pots with flaring rims from Sector NGS include 15 vessels of a large size (rim diameter 28-32 cm),
ten small examples (rim diameter 7-12 cm), with the others being of medium size (rim diameter 12-28 cm).

Of the 253 pots, 184 are ornamented (73%), mostly with finger impressions. On the majority of the vessels, the
impressions are ranged around the outer edge of the rim (71 specimens). Some similarly ornamented pots have finger
impressions at the base of the neck. Occasionally, finger impressions are ranged on the lip and have the form of pinched
pieces of clay. K-53 is decorated with oblique double incisions. Nineteen pots are ornamented with finger and finger-nail
impressions ranged mostly around the outer edge of the rim or the lip. Occasionally, in each finger impression two im-
prints of finger-nails are noticeable (e.g., 89-493). Seven pots are decorated with an encircling relief fillet at the base of
the neck. The fillet is additionally decorated with oblique finger-nail impressions (K-61). One vessel is ornamented with
an encircling high-relief fillet with finger impressions (K-58) and two vessels are decorated by smooth fillets. Sixty one
pots are decorated with oblique incisions (made with finger-nails and a pointed tool) on the external edge of the rim and
on its lip. On one of the examples, the decoration is in the form of a herring-bone pattern. On two vessels, the oblique
finger-nail notches are ranged at the base of the neck. Ten pots are decorated with stamps ranged most frequently at
the base of the neck. Predominant are jabs made with the end of a stick. Impressions made by a more complex stamp are also
found – triple jabs, imprints of a rectangular, circular or triangular stamp. The lip of the rim of one pot is decorated with
imprints of a triangular stamp. Four vessels are decorated with an incised pattern. Mostly, such a pattern is composed of
oblique incisions on the lip. Pots with a double pattern are few in number. K-59 is decorated with finger impressions on
the outer edge of the rim and at the base of the neck. The decoration of pots with flaring rims (e.g., K-52) is fairly peculiar.
Their rims are ornamented with finger imprints while on the shoulder there are “bunches” of three finger indentations.

In House II-5, seven fragments of pots were found (three in Basement 390 and two in each of Rooms 311 and 365); in
House III-3, 17 pots were found (nine in Room 278, six in Room 368, two in Courtyard 332); in House III-1, four
vessels were unearthed (three during clearing of Stove 329, one in Room 359); in House III-2, two were found (both in
Basement 255). In House IV-2, eight fragments of pots were found (six in Room 302 and two in Basement 280); from
House IV-4, one fragment was recovered (from Room 392). Fragments of 20 pots came from House VI-2 (nine from
Room 410, eight from Basement 395a, three from Room 395); in House IV-3, two fragments were found (one in each of
Rooms 459 and 515); House VII-1 yielded 11 pots (Rooms 615 and 618). Thus, the bulk of the fragments of pots with
flaring rims comes from houses of the Western and Southern Houseblocks, a smaller number has been yielded by houses
of the Central Houseblock. Fragments of 33 specimens derive from the grey, clayey layer, 35 from the yellow, clayey layer
and 13 from the ash layer.

One of the vessels is dated to the early 3rd or 2nd century BC (Room 353, House IV-4) and three pot fragments are
dated to the fourth quarter of the 3rd century BC (Room 253 and the basement of House IV-1). In addition, pots with
flaring rims have been retrieved from layers and the fills of rooms of the 5th-4th century BC. Thus, pots with flaring
rims encountered among the material of Sector NGS are dated very widely to the time-span from the late 5th to the 2nd
century BC.

Pots with flaring rims appear at the ancient sites of the Lower Bug region in the 6th century BC. The earliest of these
pots comes from a layer of the 6th century BC in Olbia.\textsuperscript{746} A fragment of a pot of the same type was found at an Ol-
bian sanctuary of the last quarter of the 6th to the first half of the 5th century BC.\textsuperscript{747} Such pots are rare in the Archaic
layers of these settlements. Among the handmade pottery from the settlement-site of Bol’šaja Černomorka 2, this group
constitutes 6% of all vessels, in the material from the Bejkuš settlement, 3.1% and in that from the Jagorlyk settlement,
3.3%.\textsuperscript{748} Only a single vessel of this type has been retrieved from an early steppe Scythian burial, namely a fragmentary
pot from the kurgan of Raskopana Mogila.

\textsuperscript{746} Marčenko 1976, fig. 3.7.
\textsuperscript{747} Kozub 1975, fig. 15.6.
\textsuperscript{748} Gavriljuk 1981, 80.
Besides the Bug sites, pots with flaring rims have been found in layers of the 6th-5th century BC in Myrmekion and Nymphaion, and among the material from Building U6 at the settlement of Panskoe I. They have also been encountered in the Hellenistic and Roman layers of Iluraton and Tanais. In the latest layers of Olbia, pots with flaring rims were borrowed by the steppe Scythians from the first Greek settlers, and in the 4th century BC it became an ethnic indicator of the steppe Scythians.

An independent group of vessels imitating a form of wheelmade pottery comprises cooking vessels with a ledge for a lid (14 specimens) (e.g., K-17, K-69). They constitute 2.32% of the identifiable handmade pottery from Sector NGS (Table 2). A proportion resemble in their shape the cooking pots with a concave rim (the first type). Nine pots with flaring rims and ledges for lids have been found.

Cooking pots with ledges for lids come from Courtyard 332 of House III-3, pre-Hellenistic Room 389 (House III-2), Rooms 410 and 395a (House VI-2), 474 (House VI-3) and 615 (House VII-1). The majority of them derives from late Hellenistic layers.

Lids may have belonged both to cooking bowls and pots. They constitute slightly over 2.49% of the handmade pottery (Table 2). The predominant type (15 examples) is conical (e.g., 92-48), the rest are flat (e.g., K-73). The lids have applied handles in the form of a rounded knob. The flat lids are ornamented with an incised band and finger and finger-nail impressions around the rim (one example) or with oblique incisions (one example from Room 392). The conical lids are mostly undecorated.

The lids have a thick layer of soot on the outside, hence they were used most probably to cover cooking bowls for stewing, pans-braziers and, rarely, pots. At least, the diameters of the lids are close to those of the vessels mentioned.

Lids were found in Basement 89 (House II-3), in Courtyard 332 (House III-3), Rooms 214 (House II-1), 392 (House IV-4), 469, 615 (House VII-1) (one in each); two handmade lids come from Room 618 (House VII-1). The earliest wheelmade vessels with lids date to the Archaic period. Probably, their appearance is connected with changes in the technology of cooking. On the Olbian vessels with ledges for lids, soot layers on the rims on the outside and partly on the inside, and also on the neck and shoulder are easily discernible. The soot is absent on the lower parts of the bodies and on the bottoms of the cooking pots and pots with ledges for lids. The outer surfaces of the lids are also always covered with a great deal of soot. Probably, the vessels were dug into ashes, with their lower part buried, covered with a lid and then a layer of burning coal. In other words, these pots were used for baking or stewing.

Jugs (K-74-K-76, 01-87, 01-656) constitute 0.83% of the identifiable handmade pottery from Sector NGS (Table 2). They differ from pots in their elongated proportions; the maximum width of the belly is in the upper part and its diameter is smaller than the height of the vessel. Jugs have a tall, narrow neck with a slightly out-turned rim. The lower part of the body is tapering and the bottom is flat. Occasionally on the rim of a jug there is a ledge for supporting a small lid (K-76). The handle is raised above the edge of the rim and is attached to the rim and shoulder. The handle of jug K-74 is nearly square in section and 01-87 has a fluted handle. Jugs are mostly undecorated.

Fragments of two jugs were found during clearing of Stove 329 (House III-1). The rim of jug 01-656 was found in the fill of Room 615 (House VII-1) and a fragment of vessel K-76 in the grey, clayey layer east of Partition 493 within the limits of House VI-3. The rest of the jug fragments come from the yellow, clayey layer.

The shape and dimensions of handmade jugs repeat those of their wheelmade counterparts. The small number of handmade jugs suggests that wheelmade jugs existed in sufficient quantity such that there was no need to model such vessels manually.

Krater-like handmade vessels are represented by seven base fragments. These constitute 1.16% of the handmade pottery from Sector NGS (Table 2). The bodies of these vessels resemble those of Scythian cauldrons, and they are, therefore, sometimes called handmade cauldrons. They have a short, concave neck and a regularly bulging body passing smoothly

749 Kastanajan 1952, 252.
750 Jakovenko 1978, 58, fig. 1.
751 Hannestad, Stolba & ščeglov 2002, pl. 137, nos. D 19, D 20, D 22, D 72, D 81.
752 Kastanajan 1981, figs. 29.1, 31.1.
753 Arsen'eva 1969, 182-183, fig. 2.2-3.
754 Marchenko 1975, 71, figs. 3-5.
755 Burakov 1976, 86, figs. 6, 10-12.
K Handmade pottery

into a bent, tall and concave foot. The diameter of the foot ranges from 9-11 cm and the presumed height from 5-9 cm. Sometimes krater-like vessels have two applied handles in the form of a horseshoe attached to the shoulder and pressed against the neck of the vessel.

Fragments of three vessels were found in the yellow, clayey layer of Room 302 in House IV-2 (K-78-K-79, 94-343). One example (K-77) comes from Basement 253 in House IV-1. The feet of another two vessels were found in the grey, clayey, ashy layer. Four of the seven vessels were found in rooms of the central quarter of NGS.

The closest parallels of these krater-like vessels can be found among the finds dated to the 4th-3rd century BC from the settlement-site of Didova Chata in the Olbian chora. V.V. Ruban has proposed that this group of pottery may serve as one of the ethnic indicators characteristic of the population of Olbia and its rural surroundings during the Hellenistic period.756 This proposal has been accepted by other researchers.757 The handmade kraters imitated the wheelmade examples of Corinthian manufacture.758 Therefore, there are grounds to agree with Ruban's supposition that the handmade kraters repeated the form of the Greek ones. However, his statement that the handmade kraters are widespread only in the Bug region finds no confirmation in the archaeological materials.

The frying-pans found amount to nine examples (1.66% of the handmade pottery) (Table 2). These are open vessels with a low, upright wall. The edge of the rim is, as a rule, rounded and only occasionally pointed or flattened. The walls pass smoothly into a bottom with a large diameter. One of the frying-pans (K-80) has a handle with a horizontal loop with a round hole. All of the frying-pans have an extensively sooted outer surface, and on the inside of the bottom there are remains of burnt food. Most probably these were vessels for baking cakes.

Handmade frying-pans were found in Basement 257 (House IV-1) (K-80), Room 618 (House VII-1) (K-83) as well as in Drain 585 (in House VI-3) (K-82). The remaining fragmentary pans were recovered from the grey, clayey layer outside the rooms.

Frying-pans are characteristic mostly of sites of the first centuries AD. They repeat the forms of Greek frying-pans with vertical or almost vertical walls.759

Frosted cups (20 specimens) constitute 3.31% of the handmade pottery from Sector NGS (Table 2). Two types of such cups are distinguishable. The first type comprises vessels on bases consisting of two reservoirs of conical shape. One small cup on a foot (95-26) has, in addition, a spout. A handmade lamp similar to this vessel with a pronounced spout was found in basement KE of house no. 21 in Tanais and is dated to the 2nd-3rd century AD.760 The diameter of the upper reservoir of the cups of this first type (from 8-12 cm) is always greater than the diameter of the lower reservoir (from 4-8 cm) and the height varies from 6-10 cm. As a rule, the inner surface of the upper reservoir is covered with an extensive layer of soot.

Fragments of three footed cups (K-92-K-93, 01-859) were found in Room 618 (VII-1). Fragments of two such vessels (K-88, 90- 439) come from Basement 280 (House IV-2), one example was found in each of Rooms 302 (House IV-2) (94-594) and 410 (House VI-2) (95-26) and Basement 368 (House III-3) (93-125). The other vessels were found in the grey, clayey layer.

Footed cups imitate Greek wheelmade examples.761 The earliest vessels of this type appeared at steppe sites in the 5th century BC.762 Among the materials from Iluraton,763 these vessels are dated to the end of the 1st to the mid-3rd century AD and are regarded as lamps. K.K. Marčenko, following T.N. Knipovič, calls these vessels “cups on feet” and attributes them to his 17th type of Olbian pottery. He supposes that they were used “as lids of jars, of incense cups, lamps or even of small altars-escharai”.764 He is of the opinion that the cups appear in Olbia in the second half, or even the end, of the 4th century BC. They became most widely distributed in the 2nd to the first half of the 1st century BC. The cups on feet are common in the pottery assemblages of the post-Scythian settlement-sites in the Lower Dnieper region, in the layers of which such vessels constitute from 4 to 12%.765 They are encountered among the finds from almost all sites of this

756 Ruban 1980, 290.
757 Kryžickij et al. 1989, 134-135, fig. 53.
758 Gauer 1975, 134, taf. 23.1.
759 Krapivina 1993, 77, fig. 80.
760 Arsen’eva & Naumenko 1992, 101, 205, fig. 89.2.
763 Kastanaijan 1981, 175, figs. 40.2, 40.5.
764 Marčenko 1988b, 98-99, fig. 29.
Footed cups from the Hellenistic layers of NGS and from post-Scythian sites continue the line of development of handmade cups deriving from Greek wheelmade pottery; contrary to N.N. Pogrebova’s opinion, they did not derive from pottery of the Geto-Dacian type. The use of these vessels as incense burners or lamps can hardly be disputed.

The second type of footed cups includes cups with reservoirs of an equal size resembling an hourglass. The diameter of the rim and bottom of such vessels is 5 cm and the height is 4 cm. The surfaces are smoothed and covered with soot. They may have been used as incense burners or lamps.

Small cups of this type were found in the grey, clayey layer and during clearing of Wall 266 in the Central Block of living quarters (K-84, 89-813).

A particular type is K-92 found in Room 618 (House VII-1). It has a rounded incurving edge to the rim. The vessel is thin-walled with slightly burnished outer surface. The bulging wall passes into a low, curving foot of small diameter with a deep conical hollow in the underside. There is no soot on the surface. Most probably, we are dealing here with an imitation of wheelmade beakers. The closest parallel of this vessel is a burnished beaker with a curving foot dated to the turn of the eras from trench 4 of the site at Annovskoe.

In Room 618 (House VII-1), two small truncated, conical cups (K-87, 01-679) were found which were laterally attached to the wall of a large vessel (probably to one and the same vessel) of the type of kernos dated to the 2nd century BC to the 2nd century AD.

Handmade lamps are almost absent from the material of Sector NGS and cannot be used to provide exact dating of the site.

Thus, handmade pottery, repeating the forms of Greek wheelmade pottery, is represented in the material from Sector NGS by fragments of 444 vessels. These are handmade cooking pots of two types (57 specimens), brazier-pans (five specimens), pots with a concave neck and vertical handles (56 specimens), pots with flaring rims (253 specimens), vessels with ledges for lids (14 specimens), lids (15 specimens), jugs (five specimens), krater-like vessels (seven specimens), frying-pans (10 specimens), two types of cups on pedestals (20 specimens), and lamps (two specimens) (Table 2). All these vessels constitute a group of handmade pottery of Greek origin. This pottery predominates, amounting to 75.38% (Table 3) of the identifiable handmade pottery from Sector NGS.

SCYTHIAN GROUP

All vessels of this group are made from clay tempered with crushed rock and grog (the crushed rock is coarse while the grog is composed by fine fragments of handmade vessels or, very rarely, amphoras). The vessels normally are without a core and relatively thin. The external surface is well smoothed. The colour of the vessels varies from grey to black. The majority of handmade vessels of this group have parallels among the pottery from Scythian steppe burials.

Pots with a concave neck are represented by fragments of 80 vessels constituting 13.27% of the handmade pottery from Sector NGS (Table 2). The majority of the pots of this type are fragmented, but the shape of the upper part of some of these fragmentary examples can be restored. K-104 and K-109 are complete in terms of shape. They were found in Basement 343 of House IV-3 and from the collapsed heap of stones of the Hellenistic period from Houseblock VII.

These pots have a rounded or pointed lip and a concave neck. The maximum width of the body is in its upper third or the middle. The lower part passes sharply (occasionally forming a ledge) into the flat bottom. In this group, vessels of a medium size with the diameter of the rim not exceeding 24 cm are predominant. Pots of larger dimensions (for instance

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766 Daševskaja 1958, 252.
767 Arsen’eva 1965, 172.
768 Kastanajan 1981.
769 Burakov 1976, 114.
770 Vlasov 1997, fig. 8.7.
771 Pogrebova 1958, 132.
772 Gavriljuk & Abikulova 1991, I, 21
773 Arsen’eva 1988, 90.
K Handmade pottery 343

K-95, K-103) are few: only five specimens have been identified. Pots of a small size (diameter of the rim up to 12 cm) are also encountered. The group of medium-sized pots with concave necks includes 69 vessels.

Of 80 vessels in total, 60 examples are decorated. Fifteen pots (for instance, K-99-K-101, K-105 and 02-347) are ornamented with finger-nail notches or imprints. As a rule, this decoration is arranged around the rim. Only a single specimen has oblique finger-nail notches around the base of the neck. In one case, the pattern of oblique finger-nail notches on the rim is supplemented with jabs made by stick around the base of the neck. Thirty five pots are ornamented with finger impressions. Eight of these vessels have finger and finger-nail impressions (for instance, K-98, 90-405 – on the finger impression, an imprint of finger-nail is discernible), the remaining 27 have just finger impressions (e.g., K-96, K-102, K-106, 01-832). On one of the pots, the finger impressions have the form of pinched areas of clay. In three cases, the decorations of finger impressions on the rim are supplemented with imprints of a circular stamp around the base of the neck (e.g., K-110). Two vessels (K-110, 92-258) are decorated with a high-relief fillet, which in turn is ornamented with finger-made depressions. The decoration of one of these examples includes, in addition, two wavy lines constituted by jabs made with a stick. The imprints of a stamp around the neck of K-108 are peculiar. These are long, thickly spaced incisions executed with an obliquely applied stick. One example of an incised band around the base of the neck of the vessel is recorded (K-107). One pot bears imprints of a plain weave textile on its bottom.

Seven fragments of pots with a concave neck were found in Room and Basement 302 of House IV-2, four in Room 315 of House IV-1 and two in Basement 253 of House IV-1. Single vessels have been found in each of the other rooms of the Central Block. Twenty one fragments were found in the grey, clayey layer and three in the yellow, clayey layer. The remaining fragments were found in connection with walls, stone heaps and pavements. The majority of these pots have been retrieved from buildings of the Central Block.

Pots of the type under consideration are known from all Greek sites of the northern Black Sea littoral. They constitute over 29% of the handmade pottery from the site of Bol’saja Černomorka 2774 and are found among the material from Nymphaion.775 The quantity of pots with a concave neck is considerably higher in the layers of the 4th-3rd century BC in other areas in Olbia and surrounding settlements,776 as well as in the sites of the Bosporos (Pantikapaion, Phanagoria and Myrmekion).777 They are also found at Bosporan sites of a later period,778 at Tanais779 and at Kozyrka.780 They are also common at Scythian sites of the steppe zone of the northern Black Sea region. They have been recovered from two early Scythian burials near Dneprorudnyi781 and in the territory of the village of Kirovskoe,782 as well as in the Elizavetovskoe settlement-site.783 Twenty six complete vessels derive from steppe Scythian burials of the 4th century BC in the Lower Dnieper region.784 In the layers of the Kamenskoe settlement-site and its surroundings, this type of pot constitutes 46.7% of handmade pottery.785 At post-Scythian sites of the Lower Dnieper (Annovskoe, Ljubimovskoe, Gavrilovskoe, Znamenskoe), pots with a concave neck constitute only 2 to 7%.786

Summing up, pots with a concave neck are dated to a wide chronological span (a continuous line of development of these vessels is traceable beginning from the late Bronze Age) and spread over a vast territory. However, the fabric and treatment of the outer surface of these vessels, as well as their frequent presence at steppe Scythian sites, enable us to attribute these pots to the Scythians.

Pots with an indistinctly profiled body amount to only 12 specimens, that is slightly more than 1.99% of the handmade pottery from Sector NGS. These are vessels with a rounded or pointed lip, a hardly distinguishable neck and an indistinctly marked belly. Their height, as a rule, exceeds the maximum diameter of the body; the bottom is flat. The finds from NGS

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774 Gavriljuk & Otreško 1982, 76, pl. 2.
775 Jakovenko 1978, 38, fig. 2.
776 Marčenko 1975, 70-71.
777 Kruglikova 1951, 95; Kastanajan 1952, 252; Kruglikova 1954, 93.
778 Kastanajan 1981, 148, fig. 2.5.
779 Arsen’eva 1969, fig. 64-5.
780 Burakov 1976, 86, figs. 6.3, 6.12.
781 Murzin 1977, 60-61.
783 Marčenko 1972, 126-129.
785 Gavriljuk 1989, 51, pl. 7.
include only pots of medium size. These examples are decorated in a similar manner to pots of the types described above, with oblique or vertical incisions predominating. Occasionally, finger impressions are found (e.g., K-112-K-114). One of the pots is ornamented with finger and finger-nail impressions and one (K-115) with imprints of a stick with a square section.

One fragment of an indistinctly profiled pot has been found in each of three rooms of Sector NGS: Rooms 368 (House III-3), 459 (House VI-3) and 615 (House VII-1), as well as in the course of clearing Stove 329 (House III-1). The other fragments of pots of this type came from the yellow, clayey layer.

Indistinctly profiled pots appear at Scythian sites from the mid-4th century BC, deriving from an ordinary pot with a concave neck. While only single finds of these vessels are noted among the materials from sites of the 4th century BC, they predominate in post-Scythian handmade ware, constituting 28-32% of the entire handmade repertoire. At contemporary Crimean sites, pots analogous to those described above appear at the turn of the era. In Olbia, they are found in layers of the 1st-4th century AD, whereas at Kozyrka they are dated to not earlier than the 3rd century AD. Indistinctly profiled pots are present among the material from Tanais. These parallels allow us to consider indistinctly profiled pots made from clay similar to that of the Scythian pottery as a diagnostic element of the Hellenistic contexts of Olbia (not earlier than the 4th century BC).

From the yellow, clayey layer in Sector NGS, two fragmentary bowls of a small size with the shape of a truncated cone have parallels in steppe Scythian burials. They are dated not earlier than the 4th century BC.

In conclusion, the handmade pottery with parallels to steppe Scythian sites and manufactured from the same clay as Scythian pots is represented among the material from Sector NGS by fragments of 94 vessels. These are pots of two types: (1) with a concave neck (80 specimens) and (2) with an indistinct profile (12 specimens), as well as small bowls of a truncated, conical shape (two specimens) (Table 2). All these vessels constitute the group of handmade pottery of steppe Scythian origin and amount to 15.96% of the identifiable handmade pottery from Sector NGS (Table 3).

THRACIAN GROUP

The handmade ware from Olbia paralleled by the pottery of the Thracian tribes is represented mostly by closed vessels. In shape, they differ little from the pots of the Scythian and Greek groups. They can be distinguished on the basis of their fabric, which is rich in grog and mica, and the technique of treating their outer surface, which, as a rule, is grey, greenish-grey, brownish or black, well smoothed or burnished.

In the “Thracian” group of pottery from Sector NGS pots predominate (18 specimens). These are pots with a short, concave neck (K-118, K-122), pots with flaring rims (K-116, K-119-K-120) and indistinctly profiled pots (K-117, K-121), constituting up to 2.99% of the handmade pottery from Sector NGS (Table 2). The outer surface of these vessels is carefully smoothed. K-117 has a shoulder emphasized by a gentle rib. They have mostly relief decoration, such as applied loops of a horseshoe-shape, oval and sub-rectangular loops or ledges (e.g., K-122), on the walls of the vessels.

The mentioned pots were found in Basements 368 (House III-3) and 395a (House VI-2), Stove 440 (House VI-2) and Room 434 (House VI-3). The other fragments of Thracian pots come from the yellow, clayey layer.

Previously, Thracian pots have been recorded in Olbia, at a settlement-site near the village of Nikolajevka and at the site of Pivdennoe. The closest parallels are from the settlement of Gradenitsa 3 and a site near the village of...
similar vessels are also found at Geto-Dacian sites in Slovakia and Hungary, as well as in Tomis and Kallatis. I.T. Nikulice calls similar vessels “earthenware storage-pots (korčagi) with pronounced neck flaring upwards and passing into a funnel mouth” and dates them to the 4th-3rd century BC. E. Moscalu is of the opinion that pots with an indistinctly profiled body came to be widespread in Transylvania in the 2nd century BC, noting, however, these vessels also among the finds of the 3rd-2nd century BC. D. Berciu believes that the materials from the cemetery of Černavoda, dated to the 5th century BC, as well as that from the settlement of Tariverde were remains of the Getian population, the lands of which were exploited by Greek settlers. The handmade pottery reflects the process of partial assimilation of the local residents by the Greeks and, at the same time, the Hellenization of the Pontic coasts.

Storage pots (korčagi) are represented by fragments of six thick-walled vessels of large dimensions with burnished outer surfaces (e.g., K-123-K-125). They have a fairly large, out-turned, funnel-shaped or cylindrical rim, a high neck, a bulging belly and a flat bottom. The lower part is often narrowed. The clay is well levigated and the burnished outer surface is dark-grey, occasionally with a greenish hue; the vessels have a grey core and the fabric is black or dark-grey. The storage pots are decorated with nipple-like, horseshoe or rectangular appliqués on the shoulder.

The examples in the catalogue come from Basement and Room 351 (House IV-4) and Room 395a (House VI-2); other examples came from the grey, clayey layer.

Among the handmade pottery from Olbia and Berezan’ studied previously, the burnished storage pots with relief decorations have been classified as type 3. In the material from the settlement of Bol’šaja Černomorka 2, such storage pots constitute 2.1% of the handmade pottery and at the Bejkut settlement, 4.6%.

Storage pots make their appearance at Hallstatt sites during the late Bronze Age. Complete storage pots were found in the ditch of the town-site of Butuceni. Storage pots with a neck in the form of a truncated cone are known among the pottery from the Dniester sites of the 4th century BC (Nadlimanskoe) and continued in use into the late Getian period.

Tulip-shaped pots are represented by fragments of only five examples (for instance, K-126-K-128) constituting 0.83% of the handmade pottery identified from Sector NGS (Table 2). These are closed vessels of elongated proportions with a jar-shaped body but with a distinctly pronounced neck and rim, and with rounded appliqués or a relief fillet at the place of the maximum expansion of the body occasionally supplemented by deep finger impressions. Occasionally, the vessels are stamped, e.g. with long, triangular jabs (89-6) or perforations. The diameter of the rim varies from 13-17 cm and that of the bottom from 6-8 cm (K-126-K-128, 89-6, 02-798).

The tulip-shaped vessels come from the grey, clayey or humus layers; none of the vessels could be connected with building remains.

At north Thracian sites, vessels of this kind are widespread in the 6th-5th century BC and continue in existence, without major changes, until the 2nd-1st century AD. The closest parallel to the finds from NGS is a vessel with a completely preserved profile from a single-chambered dwelling of the 2nd century BC-1st century AD at the fortified settlement of Solovvino-Cetate.
Canister-shaped jars amount to 11 examples, that is 1.82% of the handmade pottery identified from NGS (Table 2). These are closed vessels without a neck. The diameter of the rim is close to that of the bottom (for instance, K-129, 96-302). They have a rounded (00-69) or a thickened edge on the rim and a slightly bulging wall gently tapering towards the flat base.

The ornamentation of the canisters is similar to that of the above-mentioned pots of the Thracian group. Only one vessel is decorated with an applied fillet, namely 00-1216 which has a fillet in high relief with deep and widely-spaced finger impressions. On this vessel, the fillet was located immediately beneath the rim.

K.K. Marčenko believes that canisters at sites of the Carpathian-Danubian basin "were the typical and almost single form of coarse cookingware" of the 8th-5th century BC. Canister-shaped vessels are recorded in burials of the 4th century BC at the Geto-Dacian necropolis of Gridęșta. They are well known from the Hellenistic layers of cities of the western Pontos, for instance Odessa, Tomis and Kallatis, and they are widespread at Thracian sites dated up to the 2nd-1st century BC.

Open bowls (seven specimens, 1.16%) are represented among the materials from Sector NGS by vessels of two types. The first type is a deep, hemispherical open vessel with a thickened or richly profiled rim (e.g., K-131) (three vessels). Examples of this type are not decorated, but the external and internal surfaces are burnished.

The second type is a richly profiled bowl represented by four examples (e.g., K-130, K-132). These are open vessels with widely out-turned walls with a sharp transition to the rim, 1.5-3 cm wide, and with a pronounced rib at the mid-level of the body.

The bowls described above come from Room 302 (House IV-2), from the grey, clayey (one specimen) and yellow, clayey (two examples) layers.

Among the finds from Olbia published previously, bowls of this type (type 18) are not numerous and they are dated to the 3rd to the first half of the 1st century BC. Bowls of the both types are reported from Hellenistic layers at sites of the western Pontos, e.g. from Odessa, Tomis and Kallatis. They appear at Thracian sites in the 6th-5th century BC and continue in use to the turn of the eras.

Fragments of a colander with a pointed bottom and small, densely spaced holes were found in the grey, clayey layer of the Southern Houseblock (K-133, 0.17%, Table 2).

Fragments of colanders in the form of small bowls have been reported among the finds from the settlement of Bol’saja Černomorka and the Archaic layers of an emporion on the island of Chios. However, the find from NGS resembles most closely the colander with a conical bottom from Tyras, which has been attributed to pottery of the Thracian group. Indeed, colanders with a conical bottom are typical of Geto-Dacian sites (e.g., at the settlement of Sibișoara).

Two specimens of a thick-walled, pot-like thymiaterion (0.33%) with a fluted body were identified. The sharply out-turned rim of these vessels is shaped like a cornice; they have a high, cylindrical neck, a bulging belly and a broad flat base. On the internal surface, traces of soot are found. Deep, vertical (K-134) or oblique (K-135 from the grey, clayey layer) grooves cover the walls. The clay is coarse, pinkish-orange. Fragments of thick-walled fluted incense burners are known in Olbia also among the finds from other sectors.

The oldest vessels of this type have been found in layers of the 4th-3rd century BC at the Elizavetovskoe site. E.V. Jakovenko related them to finds of the 7th century BC from Karmir-Blur and sites in the Kuban River region. However, A.I. Meljukova’s proposal of a Thracian provenance seems better grounded. E.F. Redina unites vessels similar to the finds

813 Marčenko 1988b, 85.
814 Culica 1968, 135-145, figs. 2-3.
815 Tontcheva 1967.
816 Scorpan 1970, figs. 1.6-7.
817 Nikulice 1987, 44, fig. 2.42-48.
818 Marčenko 1988b, 98-99, fig. 30.4.
819 Crisan 1969, 79, fig. 28; Nikulice 1987, 47.
820 Gavriljuk & Otreško 1982, 86, fig. 5.19.
821 Boardman 1967, 145, nos. 612-613, 147, fig. 96.
822 Crisan 1969, pl. CLIV.5.
823 Marčenko 1988b, 103, fig. 33.
825 Meljukova 1962, 159.
from NGS into the series of type 2 incense burners from the kurgan group of Čobruči, Kugurluy and Nadlimanskoe.826 These finds of incense burners with a fluted body from the Hellenistic layers of Sector NGS make it possible to expand the chronological frame of these vessels to the 2nd century BC.

Summing up, the handmade pottery with analogies at Thracian and Geto-Dacian sites and manufactured from fabrics similar to that of Thracian manufacture is represented by fragments of 51 vessels among the material from Sector NGS. These are pots (18 specimens), storage vessels (six specimens), tulip-shaped (five specimens) and canister-shaped (11 specimens) vessels, bowls of two types (in total seven specimens), one colander and two pot-like thymiateria (Table 2). They constitute 8.46% (Table 3) of the handmade pottery identified from Sector NGS.

GENERAL CHARACTERISTICS OF THE HANDMADE POTTERY FROM SECTOR NGS

A comparative typological analysis of the handmade pottery from Sector NGS makes it possible to distinguish several groups of different provenance. The most numerous (over 75%) is that of the “Greek” handmade pottery (Table 3). Predominant in this group are pots with a flaring rim which appeared in the Lower Bug region in the 6th century BC and became widespread in the 5th-4th century BC throughout the entire steppe northern Black Sea region. They are an ethnic indicator in Scythian burials of the 4th century BC.828 Thus, these vessels of Greek origin become an ethnic feature of the steppe Scythian culture, attesting a strong influence of Hellenic culture upon the culture and everyday life of the nomads of the northern Black Sea littoral from the late 5th century BC.

Vessels repeating the forms of Greek wheelmade pottery are cooking pots, pots with a short concave neck, krater-like vessels, pan-braziers and frying-pans. They are made from the same clay as the pots with flaring rims and constitute over 33% of handmade pottery from the Lower City (Table 2) (in Hellenistic Tyras, this group amounts to 41.5%). Handmade tableware is practically absent; only a few vessels had no traces of soot or burnt food on their surfaces. The ornamentation of vessels of this group is fairly restricted; only 10% of the pottery bears modest decoration. Handmade cult pottery and vessels for lighting are represented by footed cups and two lamps.

The distribution of the handmade pottery through the rooms and basements of the Lower City, as well as quantitative and morphological comparisons of the handmade pottery with the wheelmade cookingware (for instance, among the material from houses of the Western Houseblock), allows us to suggest that handmade pottery was produced only if there was an insufficient amount of the wheelmade ware; hence the numerous handmade vessels imitating the forms of wheelmade cookingware.

In terms of provenance and parallels, a group of pottery constituting about 16% of the identifiable handmade pottery from Sector NGS may be termed “Scythian” (Table 3). The set of handmade pottery of Scythian type among the material from NGS is fairly monotonous. It includes pots of three types and two bowls. In this group, pots with a concave neck deriving from the handmade pottery of the pre-Scythian period are predominant. In layers of the Hellenistic period in Sector NGS, pots with an indistinctly profiled body make their appearance (Table 2).

There are no grounds to conclude the permanent presence of Scythians in the city on the basis of these finds of handmade pottery. Perhaps foods, such as cheese, butter or curds, the products of cattle-breeding, were brought to the city in these vessels.

The “Thracian” pottery is represented mostly by cookingware (canister-shaped and tulip-shaped vessels, pots of three types) and tableware (jugs, cups, bowls of two types) or containers (storage vessels and large-sized pots), constituting about 10% of the handmade pottery from Sector NGS. Similarly to the group of Greek pottery, the Thracian pottery supplements the set of wheelmade pottery. However, unlike the Greek group, this pottery also includes handmade tableware. In other words, the entire spectrum of household wares is represented in this group. However, by contrast to the Thracian pottery from contemporary layers of Tyras (41.5%), the proportion of pottery of this type is relatively insignificant among the material from NGS.

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826 Redina 1989, 133-134.
828 Gavriljuk 1981.
Decoration of patterns of finger-made jabs and oblique incisions is typical to handmade vessels of both Greek and Scythian origin. Decoration with relief fillets is not characteristic of these vessels, although earlier fillets were the main ornamental motif.

The ornamentation of the handmade vessels of Thracian provenance is different. The density of the fabric and the decorative effect were realized through burnishing and smoothing. Relief ornamentations in the forms of oval appliqués, horseshoe appliqués (evidently the Greek settlers borrowed this type of decoration from the Thracians, which became characteristic of cooking pots of the Greek group) and loops, etc. are characteristic.

The peculiarity of the Olbian pottery assemblage from Sector NGS is the predominance of the Greek handmade pottery. Moreover, it seems that the pottery assemblage of the Greek population of the Lower Bug region, together with the limited pottery of local production deriving from pre-Scythian times, became the basis of the pottery set of the steppe Scythians. At least, vessels of the major types of handmade pottery found in the living rooms and other rooms in Sector NGS are distributed across a fairly wide chronological frame, appearing among the material of Olbia from the time of its foundation, whereas the main type of the steppe Scythian pottery (pots with a flaring rim) made their appearance in Olbia and in the settlements of its chora in the Archaic period to become widespread in steppe Scythian burials only at the turn of the 5th-4th century BC.

The group of handmade vessels encountered only at Scythian sites is not large. It is noteworthy that the percentage of vessels of that group is similar both in Olbia and Tyras. This coincidence is hardly fortuitous, reflecting the modest role that the food products of Scythian nomads had in the life of the dwellers of these ancient towns.

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Table 3. Groups of handmade pottery according to origin.

Comparison of the percentage ratios of the ethnic groups of handmade pottery from Sector NGS with those for finds from the contemporary layers of Tyras is also fairly indicative. In Tyras, the percentage of the Thracian pottery exceeds 40% while in Olbia it does not reach even 10%. In Tyras the Thracian pottery is related with definite dwelling buildings, while in Olbia this pottery was found mostly outside the houses. Thracian vessels (pots, storage vessels), and the goods stored in them, were brought to Olbia in smaller quantities than to Tyras. Food contained in Scythian pots was brought to Olbia from the nomadic Scythians in approximately the same quantity as it was to Tyras. Thus, the assemblage of handmade pottery from Sector NGS is fairly homogeneous, being represented predominantly by vessels produced at the site by residents of the Lower City of Olbia.

A COMPARATIVE ANALYSIS OF THE WHEELMADE AND HANDMADE COOKINGWARES

A comparative analysis of the two types of cookingware allows us to draw a number of conclusions. First of all, the vessel repertoire of the handmade cookingware is more varied, but also, many of the handmade vessels repeat the shapes of wheelmade ones. Though found in abundance and appreciated by the inhabitants of Olbia, cookingware was still a special type of pottery not accessible to everyone.

The wheelmade and handmade cookingwares from Sector NGS and other sites in the northern Black Sea area show a relatively constant percentage of the total amount of pottery found (from 31-40%). In the Archaic settlement Bol’saja Černomorka 2, cookingware (wheelmade and handmade) constitutes 31.9%. On Berezan’, the percentage of cookingware in relation to other functional groups is 34% and in Tyras 37%. In Sector NGS it amounts to 36.14% of the material. Thus, the almost constant percentage of cookingware and the relation between the wheelmade and handmade wares sup-
ports V.V. Lapin’s assumption that the handmade pottery supplemented the wheelmade cookingwares.\textsuperscript{829} They developed uniformly as functional groups, and the handmade pottery cannot be taken as an indication of the presence of a barbarian population among the inhabitants of Olbia or other ancient centres.

The composition of this group of pottery varies depending not only on ethnic factors, but also social. Surely, wheelmade cookingware prevailed in the houses of the more prosperous Olbians and handmade among the poorer. There is also a chronological perspective, since a high percentage of handmade pottery was found in the Archaic layers on Berezan’ and in the Archaic settlements in Olbia’s chora, for example in the settlement of Bolšaja Černomorka mentioned above.

A quantitative comparison of the cookingware pottery from the Hellenistic period in Sector NGS with the same type of pottery from earlier periods shows an increase in the quantity of cookingware over time, as well as an expansion in its variety. This conclusion proves K.K. Marčenko’s suggestions concerning pottery from other ancient settlements. Proceeding from social changes in the structure of the population in Olbia, it is possible to explain some paradoxes of the reconstruction proposed by K.K. Marčenko.\textsuperscript{830} Apparently in Olbia, in the second half of the 4th century BC, the size of the wealthy population capable of obtaining wheelmade cookingware increased.

It is notable that the growth in the quantity of handmade utensils started only in the 3rd century BC. This occurred in parallel with the increase of cookingwares. However, at the turn of our era, handmade pottery was by and large supplanted by wheelmade cookingwares. This contradicts K.K. Marčenko’s conclusion that in the second half of the 3rd century BC: “There is a significant deterioration of the general provisions in Olbia, on the one hand, and significant activity by barbarian tribes in the steppes of the northwest Black Sea coast”. Furthermore, based on the pottery, he reflects that “the equilibrium of the number of Greek inhabitants and inhabitants of a local origin in Olbia remained”.\textsuperscript{831} However, proceeding from this reconstruction it is possible to draw a different conclusion: at the turn of our era the balance of the population did indeed alter, but not with regards to the local population or the Greeks, but, rather, it seems there was an increase in the size of the wealthy population that was capable of buying wheelmade cookingware.

\textsuperscript{829} Lapin 1966, 168.
\textsuperscript{830} Marčenko 1983, 24.
\textsuperscript{831} Marčenko 1983, 25.
GREEK GROUP

Cooking bowls (casseroles)

K-1 90-319, II-5 R 294/20. Pl. 262
Rim fr. and part of body with horizontal handle on the shoulder. 8 x 8. Coarse clay. Faint traces of soot.

K-2 91-661, III-2 Stove 329/69. Pl. 262
Rim fr. with angular horizontal handle on the shoulder. 8.5 x 6. Orange clay.

K-3 91-519, III-2 Stove 329. Pl. 262
Rim fr. with horizontal handle on the shoulder. 5.5 x 4. Orange clay.

K-4 91-613, III-2 Stove 329/71. Pl. 262
Rim fr. with angular horizontal handle on the shoulder. 7 x 5.

K-5 91-614, III-2 Stove 329/71
Shoulder fr. with horizontal handle.

K-6 91-609, III-2 Stove 329/71
Fr. of casserole without handles.

K-7 89-93, III-2 R 164/80. Pl. 262

K-8 93-38, III-3 R 278/98. Pl. 262
Almost complete profile with horizontal handles. Grey clay with chamotte. Soot on the upper part.

K-9 93-497, III-3 B 368/104. Pl. 262

K-10 93-496, III-3 B 368/104
Fr. of short, everted rim with horizontal handle on the shoulder. Brown clay. Soot on the upper part.

K-11 89-846, IV-1 B 253/146. Pl. 262

K-12 89-705, IV-1 B 257/156. Pl. 262
Upper part with everted rim and loop handle on the shoulder. Coarse clay. Soot on the ext. and int. surfaces.
Context: late Hellenistic.

K-13 90-212, IV-2 B 280/160
Fr. of everted rim with horizontal handle on the shoulder. Orange clay.

K-14 90-213 + 90-214, IV-2 B 280/160
Fr. of everted rim with horizontal handle on the shoulder. Coarse clay. Thick soot deposit.

K-15 94-36, IV-2 B 302/178. Pl. 262
Rim fr. with horizontal handle on the shoulder. Soot on the upper part.
Context: late Hellenistic.

K-16 91-376, IV-2 R 302/181
Fr. with concave neck and vertical handle. Orange clay. Thick soot deposit on the lower part.

K-17 96-277, VI-3 B 477/287
Fr. of casserole.

K-18 91-562, III-1. Pl. 262
Fr. with closed loop handle.

K-19 92-514. Pl. 262
Rim fr. with horizontal handle. Coarse orange clay.

K-20 92-515. Pl. 263
Rim fr. with horizontal handle. Coarse orange clay.

K-21 85-705
Rim fr. with horizontal loop handle. Coarse grey clay. Some soot near the handle.

K-22 92-613, IV-3 B 343/204
Fr. with horizontal handle. Black clay. Soot on the bottom.

Pan-braziers (lopades)

K-23 94-488, VI-2 B 395/261
Body fr. with rim and a lodge handle with an aperture. Smoothed surface.
Context: mid-Hellenistic.

K-24 97-155. Pl. 263
Complete profile with wide rim and biconical body. H 6; Ø rim 14; Ø body 13; Ø base 2. Grey clay. Smoothed int. and ext. surfaces.
K Handmade pottery

Pots with a short, concave neck

K-25 89-207, II-6 B 195/56. Pl. 263
Context: early Hellenistic.

K-26 89-849, IV-1 B 253/146. Pl. 263
Almost complete profile. Greatest width is in the lower third. H 16; Ø rim 27; Ø body 31. Thick soot deposit on the rim.
Context: late Hellenistic.

K-27 94-3, IV-2 B 302/178
Rim fr. decorated with finger impressions on the lip. Black clay. Smoothed surface. Soot all over the surface.
Context: late Hellenistic.

Rim fr. with pointed lip. Grey clay.

K-29 94-174, IV-2 B 302/182. Pl. 263

K-30 91-306, IV-2 R 302/177

K-31 91-401, IV-1 B 315/137. Pl. 263

K-32 91-403, IV-1 B 315/137
Rim fr. decorated with oblique notches on the lip. Dark clay. Thick soot deposit.

K-33 91-610, III-1 Stove 329/71
Pot fr.

K-34 91-611, III-1 Stove 329/71
Pot fr.

K-35 89-317, III-2 R 164/81. Pl. 263
Almost complete profile. H 12; Ø rim 14; Ø body 24. Dark clay. Thick soot deposit on the rim and shoulder.
Context: late Hellenistic.

K-36 91-470, III-3 R 278/91
Large vessel fr. Dark clay. Thick soot deposit.

K-37 91-472, III-3 R 278/91
Rim fr. decorated with faint oblique notches on the lip ext. Dark clay. Thick soot deposit.

K-38 93-367, III-3 R 359/118
Fr. of a pot with a short neck. Grey clay.

K-39 93-494, III-3 B 368/104

K-40 93-495, III-3 B 368/104. Pl. 263

K-41 93-885, III-3 B 368/106
Fr. of a pot with a short neck decorated with finger impressions on the lip. Orange clay. Smoothed surface.

K-42 93-886, III-3 B 368/106
Fr. of a pot with a short neck decorated with finger impressions on the lip.

K-43 93-887, III-3 B 368/106
Fr. of a pot with a short neck decorated with finger impressions on the lip.

Pots with a flaring rim

K-44 85-49. Pl. 264
Rim fr. decorated with faint finger impressions on the lip. Ø rim 22; Ø neck 18.5; Ø body 24. Grey clay. Faint traces of soot on the shoulder.

K-45 89-77, III-2 R 255/83. Pl. 264

K-46 89-276. Pl. 264

K-47 89-304. Pl. 264
Upper part decorated with a rib around the base of the neck. Ø rim 12; Ø neck 8. Grey clay. Soot on the shoulder.

K-48 89-398. Pl. 264
Upper part. Ø rim 18; Ø body 20. Grey clay. Thick soot deposit.

K-49 89-493, III-2 R 255/85. Pl. 264

K-50 89-593. Pl. 264

K-51 89-847, IV-1 B 253/146

59 fr. of a pot with a flaring rim decorated with straight notches on the ext. of the lip and a pinch from three fingers on the shoulder. Ø rim 32. Grey clay.

K-53 93-1093, III-3 B 368/107. Pl. 265
Complete profile decorated with oblique double notches on the ext. of the lip. H 32; Ø rim 26; Ø body 34; Ø base 16. Grey clay. Thick soot deposit.

K-54 93-1148, IV-4 R 392/221. Pl. 265
Rim fr. decorated with a line of impressions made with a stick, triangular in section, at the base of the neck. Ø rim 17; Ø body 24. Orange clay.

K-55 94-8. Pl. 265
Rim fr. decorated with finger-nail impressions on the lip. Grey clay.

K-56 94-78. Pl. 265
Rim fr. decorated with finger-nail impressions on the ext. of the lip.

K-57 94-523. Pl. 265
Rim fr. decorated with finger-nail impressions on the ext. of the lip.
Pots, cooking bowls with a ledge to accommodate a lid

K-67 92-50, III-3 Courtyard 352. Pl. 266
Rim fr. Orange clay.
K-68 92-51, III-3 Courtyard 352. Pl. 266
Rim fr. decorated with finger-nail impressions on the ext. of the lip. Orange clay. Soot on the lower part.
K-69 93-337, III-2 B 389/87
Body fr. of a casserole. Coarse clay.
K-70 93-338, III-2 B 389/87. Pl. 266
Upper part. Grey clay.
K-71 94-554, VI-2 B 410/250. Pl. 266
Almost complete profile. H 11; Ø rim 18; Ø body 20; Ø base 16. Grey clay.
K-72 94-803, VI-2 B 395/270. Pl. 266
Rim fr. decorated with finger-nail impressions on the ext. of the lip. Grey clay.

Lid

K-73 93-1149, IV-4 R 392/221. Pl. 266
Flat lid fr. with oblique notches on the lip.

Jugs

K-74 91-662, III-1 Stove 329/69. Pl. 266
Upper part with vertical handle, rectangular in section. Orange clay. Smoothed surface.
K-75 91-663, III-1 Stove 329/69. Pl. 266
Vertical handle fr., oval in section.
K-76 97-153, IV-3. Pl. 266
Almost complete profile with a ledge for a cover and vertical handle, oval in section. Ø rim 12. Grey clay.

Krater-like vessels

K-77 89-848, IV-1 B 253/146
Base. Grey clay.
K-78 94-171, IV-2 R 302/182
K-79 94-362, IV-2 R 302/182

Frying-pans

K-80 89-704, IV-1 B 257/156. Pl. 267
Rim fr. with loop handle. Context: late Hellenistic.
K-81 97-234. Pl. 267
K-82 99-562, Drain 585. Pl. 267
K-83 01-675, VII R 618
Fr. with vertical side.

Footed cups

K-84 89-68(?)
Base fr. of a cylindrical bowl with a high, tapering, stemmed base. H 4; Ø rim 5; Ø body 4; Ø base 5. Orange clay.
K Handmade pottery

K-85 90-50. Pl. 267
Upper part of a cylindrical bowl with a high, tapering, solid-stemmed base. H 8; Ø rim 9; Ø base 3.5. Grey clay. Smoothed surface.

K-86 90-382. Pl. 267
Tapering ring base. H 3.5; Ø base 7. Orange clay.

K-87 90-439, IV-2 B 280/164
Bowl on a stemmed base. Part of a kernos. H 3; Ø rim 5; Ø base 2. Orange clay.

K-88 91-29, IV-2 B 280
Bowl on a stemmed base. Orange clay.

K-89 90-439, IV-2 B 280/164
Bowl on a stemmed base. Part of a kernos. H 3; Ø rim 5; Ø base 2. Orange clay.

K-90 97-494
Small bowl on a stemmed base. H 1.5; Ø base 5.5. Grey clay. Smoothed surface.

K-91 01-18. Pl. 267
Complete profile of a small bowl on a high, tapering, stemmed base. H 10; Ø rim 11; Ø base 4. Black clay.

K-92 01-638 + 01-639, VII R 618. Pl. 267
Almost complete profile of a bowl on a stemmed base. H 8.5; Ø rim 11; Ø base 5. Orange clay.

K-93 01-677, VII R 618. Pl. 267
Complete profile of a small bowl on a high, tapering, stemmed base. H 7; Ø rim 9; Ø base 7.5. Grey clay.

K-94 01-678, VII R 618. Pl. 267
Kernos fr. H 3; Ø rim 3.5; Ø base 1.2. Orange clay.

SCYTHIAN GROUP

Pots with a concave neck

K-95 89-76, III-2 R 255/83
Rim fr. decorated with finger-nail impressions on the ext. of the lip.

K-96 89-785, IV-1 B 253/145
Rim fr. decorated with finger-nail impressions on the ext. of the lip and a rib at the base of the neck. Grey clay. Thick soot deposit on the rim and shoulder.

K-97 89-786, IV-1 B 253/145
Rim fr.

K-98 89-811, IV-1 B 257. Pl. 267
Upper part decorated with finger-nail impressions on the ext. of the lip. Ø rim 22; Ø body 24.

K-99 90-167, IV-1 R 290/133

K-100 90-347, IV-2 B 280/161

K-101 90-528, IV-1 B 253/154

K-102 91-382, IV-2 R 302/181. Pl. 267
Rim fr. decorated with finger impressions on the ext. of the lip and on the base of the neck. Grey clay.

K-103 91-706, IV-1 B 315/142

K-104 92-97, IV-3 B 343/200. Pl. 267

K-105 92-775, III-1 Stove 329/71

K-106 94-745, VI-II B 395a/267. Pl. 267

K-107 97-324, VI-3 R 495/285
Rim fr. decorated with a incised stripe on the base of the neck. Grey clay. Thick soot deposit on the rim and shoulder.

K-108 97-353. Pl. 268

K-109 00-1069. Pl. 268
Complete profile. H 11; rim Ø 8; body Ø 12; base Ø 7. Grey clay. Smoothed surface.

K-110 01-481, VI-3 B 641/297. Pl. 268
Rim fr. decorated with pinched lip and two lines of pin holes on the base of the neck. Black clay. Thick soot deposit.

Indistinctly profiled pots

K-111 85-23. Pl. 268
Rim fr. Ø rim 16; Ø body 20. Grey clay. Thick soot deposit on the shoulder.

K-112 90-251. Pl. 268
Rim fr. decorated with finger impressions on the ext. of the lip. Grey clay. Thick soot deposit on the shoulder.

K-113 92-519. Pl. 268
Rim fr. decorated with finger impressions on the ext. of the lip. Ø rim 18; Ø body 22. Orange clay.

K-114 94-413, VI-2 R 410/247. Pl. 268
Rim fr. decorated with finger impressions on the ext. of the lip. Grey clay.
Rim fr. decorated with finger impressions on the ext. of the lip. Grey clay.
  Context: mid-Hellenistic.

THRACIAN GROUP

Pots


K-117 93-102, III-3 B 368/102. Pl. 268
Almost complete profile of a pot with a convex body. H 6; Ø rim 7; Ø body 8.5. Black clay. Smoothed surface. Thick soot deposit.

K-118 93-124 III-3 B 368/102

K-119 93-235, II-5 B 390/25. Pl. 268
Almost complete profile of a pot with a flaring rim. H 9; Ø rim 5; Ø body 6. Grey clay.

K-120 93-582. Pl. 268

K-121 93-662, III-3 B 368/105
Rim fr. of a pot with a convex body decorated with impressions made with a U-shaped stick. Grey clay.

K-122 94-473, VI-2 B 395a/261
Rim fr. decorated with impressions made by a round stick. Grey clay.
  Context: mid-Hellenistic.

Storage pots

K-123 92-676, IV-4 R 351/218
Fr. Smoothed black surface.

K-124 93-543, IV-4 R 351/218
Fr. Smoothed grey surface.

K-125 94-289, VI-2 B 395a/261
Fr. Smoothed black surface.
  Context: mid-Hellenistic.

Tulip-shaped pots

K-126 90-540. Pl. 268
Upper part of a pot decorated with a bolster with finger impressions. Ø rim 15; Ø body 19. Grey clay.

K-127 91-283. Pl. 269
Rim fr. decorated with finger impressions on the rim and a bolster
  with finger impressions at the base of the neck. Ø rim 18; Ø body 18. Grey clay.

K-128 94-13. Pl. 269
Rim fr. decorated with a bolster with finger impressions on the shoulder. Grey clay.

Canister-shaped jar

K-129 93-888, III-3 B 368/106

Open bowls

K-130 91-383, IV-2 B 302/181
Bowl with a wide rim and an edge in the middle part of the vessel. H 8.5; Ø rim 18; Ø body 16; Ø base 10. Smoothed grey surface.

K-131 94-594, IV-2 R 302/179. Pl. 269
Upper part of a semi-spherical bowl with a slightly everted rim. Smoothed black surface.
  Context: late Hellenistic.

K-132 94-302, VI-2 R 410/246. Pl. 269
Rim fr. of a bowl with an int. off-set, everted rim. Smoothed grey surface.
  Context: mid-Hellenistic.

Colander

K-133 99-364
Fr. with a conical base with apertures. Smoothed orange surface.

Thymiateria

K-134 93-126, III-3 B 368/102. Pl. 269
Complete profile of thick-walled vessel decorated with fluted walls. H 24; Ø rim 11; Ø body 19; Ø base 7.5. Orange clay.

K-135 90-582. Pl. 269
Four frs. of a thick-walled vessel decorated with fluted walls. Orange clay.