Rc Metal objects

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The metal objects from excavations in Sector NGS constitute a fairly small group of finds. The classification of this category of artefacts is based on the principle of their functions, which allows us to discern groups as well as different types and variants of objects (classification developed by V.V. Krapivina). All the artefacts are divided according to their material: bronze, iron and lead. The bronze objects found in the area under consideration include the following groups of items: tools and household articles, toiletry items and personal ornaments, and weaponry. Iron is represented by tools and household furnishings; lead by household articles and ornaments.

Bronze tools and household implements include bodkins, pipes and rods for various purposes, knives, tweezers, a stylus, knives, a door hinge, a handle of a vessel and nails. The nails are subdivided into three types: type 1 has a long shaft, square in section, and a rounded head for carpentry; type 2 has a circular long shaft and a round head for joinery work; type 3 are small upholstery nails, usually with a square shaft and a round, flattened head. Weapons are represented by bronze cast trilobate arrowheads with a protruding or hidden socket and a cross-section shaped as a three-pointed star or an equilateral triangle (types 4-7, 9, 10 according to A.I. Melyukova’s classification).

Iron tools and domestic implements from Sector NGS comprise fragmentary sickles, knives with a “humped” back, rods, clamps and nails of two types: type 1 has a long shaft with a square section and a circular head; type 2 has a circular shaft and round head.

Domestic articles of lead include spindle whorls of various shapes, fishing-net weights and plates.

Ornaments made of precious metals are very rare in NGS, for example, a lunate silver adornment.

1155 Krapivina 1993, 129.
1156 Krapivina 1993, 131.
1157 Meljukova 1964, 28, fig. 1.
1158 Krapivina 1993, 134.
**Tools and household implements**

**Re-1** 95-437, II-5 B 390/35. Pl. 362
Bronze bodkin, nearly rectangular in section. H 2.6; W shaft 0.15-0.2; W handle 0.5.

**Re-2** 97-23, VI-3 B 489/292. Pl. 362
Bronze bodkin, rectangular in section, flattened at one end and slightly convex. H 3; W 0.1-0.3.

**Re-3** 99-626, VI R 591/241. Pl. 362
Bronze bodkin, square in section, bent. H 3.9; W 0.2. Possibly the shaft of a nail of type 1 without a head.

**Re-4** 94-222, II-5 B 390/29. Pl. 362
Bronze rod, circular in section, pointed at one end. H 14.6; Ø 0.2-0.5.

**Re-5** 94-570, VI-2 R 410/250. Pl. 362
Bronze rod, square in section, pointed at one end. H 14.6; Ø 0.2-0.5.

**Re-6** 95-172, VI-3 B 434/275. Pl. 362
Bronze rod, circular in section. H 5.2; Ø 0.3.

**Re-7** 94-350, IV-2 B 302/182. Pl. 362
Fr. of a bronze tweezers, rectangular in section. H 6; W 0.2-0.5; D 0.1. Finds of tweezers are rare in Olbia,1159 and they are altogether fairly uncommon throughout the northern Black Sea region.1160

**Re-8** 94-393, IV-2 B 302/184. Pl. 362
Bronze pipe, flattened at one end. H 7.3; Ø 0.8; thickness of the pipe 0.1.

**Re-9** 94-394, IV-2 B 302/184. Pl. 362
Fr. of a bronze pipe. H 5.7; Ø 0.7; thickness of the pipe 0.1.

**Re-10** 94-430, VI-2 R 410/247. Pl. 362
Bronze stylus, circular in section. H 11; Ø 0.2-0.5; W flattened end 0.65.

**Re-11** 94-351, IV-2 B 302/182. Pl. 362
Two frs. of bronze knife. H 11; L tang 2.9; W blade 0.8-1.2; W tang 0.4-0.8; thickness of the knife 0.15-0.2. No parallels known.

**Re-12** 91-236. Pl. 362
Fr. of a handle of a bronze vessel(?). 3.2 x 1.4-1.7 x 0.65. No parallels known.

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1159 Krapivina 1993, 131, fig. 88.33.
1160 Korpusova 1983, 119.

**Tools and household implements**

**Re-13** 87-844, II-1 R 156/7. Pl. 362
Valve of a furniture door hinge, rectangular in shape with one hole. 2.3 x 1.7 x 0.2; Ø hole 0.2.

**Re-14** 91-14, IV-2 B 280/165
Bronze nail (type 3). H 1.7; Ø shaft 0.2; Ø head 0.8.

**Re-15** 91-108, IV-1 B 253. Pl. 362
Shaft of a bronze nail (type 2), bent. H 6.8; Ø 0.3-0.4.

**Re-16** 91-173, IV-1 B 253/147. Pl. 362
Small bronze nail (type 3). H 1.8; Ø shaft 0.2-0.3; Ø head 0.7.

**Re-17** 91-174, IV-1 B 253/147. Pl. 362
Small bronze nail (type 3). H 2.1; Ø shaft 0.2-0.3; Ø head 1.2.

**Re-18** 91-232. Pl. 362
Small bronze nail (type 3). H 1.5; Ø shaft 0.3; Ø head 1.3.

**Re-19** 91-277, II-5 B 311/23. Pl. 362
Small bronze nail (type 3). H 1.7; Ø shaft 0.1-0.3; Ø head 1.5.

**Re-20** 91-278, II-5 B 311/23. Pl. 362
Small bronze nail (type 3). H 2; Ø shaft 0.1-0.3; Ø head 1.2.

**Re-21** 91-673, III-3 C 331/128. Pl. 362
Small bronze nail (type 3). H 1.5; Ø shaft 0.1-0.2; Ø head 1.5.

Fr. of a bronze nail (type 2). H 1.5; Ø shaft 0.7; Ø head 1.9.

**Re-23** 96-80, II-5 B 390/39. Pl. 362
Bronze nail (type 1). H 1.2; W shaft 0.3; Ø head 1.8.

**Re-24** 96-297, VI-3 R 474/287. Pl. 362
Bronze nail (type 1). H 5.4; W shaft 0.4-0.5; Ø head 1.1.

**Re-25** 96-391, VI-3 R 477/276. Pl. 362
Bronze nail (type 1). H 3; W shaft 0.5; Ø head 1.6.

**Re-26** 96-427, V R 465/230. Pl. 363
Bronze nail (type 2). H 2.7; Ø shaft 0.3; Ø head 1.2.

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**Toiletry items and personal ornaments**

**Re-27** 87-786, II-7 R 116. Pl. 363
Fr. of an ear-ring made from bronze wire. 1.7 x 1.1-1.7 x 0.35-0.4.
Two links of a chain made from a bronze wire. Ø rings 1.3-1.4; Ø wire 0.2-0.3.

Ring made from a bronze wire. Ø ring 2.1; Ø wire 0.15.

Weapons
All types based on the classification of A.I. Meljukova (1964).


Bronze trilobate arrowhead with a protruding socket (type 10, variant 11). H 2.4; Ø socket 0.6.

Bronze trilobate arrowhead with a hidden socket (type 4, variant 1). H 2.3.

Bronze trilobate arrowhead with a hidden socket (type 7, variant 7). H 2.1; Ø socket 0.3.

Bronze trilobate arrowhead with a protruding socket (type 4, variant 7). H 3 (the point broken off); Ø socket 0.5.

Bronze trilobate arrowhead with a hidden socket (type 6, variant 8). H 1.7.

Bronze trilobate arrowhead with a hidden socket (type 6, variant 8). H 2.2; Ø socket 0.7.

Bronze arrowheads similar to these are common finds both from the town and necropolis of Olbia and in the Olbian chora in Archaic, Classical and Hellenistic layers.\textsuperscript{1161}

Iron objects

Tools and household implements

Fr. of an iron sickle, triangular in section. 5.2 x 1.2-2.1 x 0.2-0.5. Similar sickles are widely known in the northern Black Sea area, particularly in Olbia.

\textsuperscript{1161} Nazarov 1988, 179-183; Nazarov 2006, 208-209.
LEAD OBJECTS

Household articles

Re-62 91-102, Pl. 364
Hemispheric spindle whorl. H 1.3; Ø 2.3; Ø hole 0.5.

Re-63 96-509, Pl. 364
Hemispheric spindle whorl. H 1; Ø 2; Ø hole 0.4.

SILVER OBJECTS

Jewellery

Re-68 91-416, IV-1 B 315/137, Pl. 364
Pendant of lunate shape. 4 x 3.8 x 0.25-0.4; Ø suspension ring 0.7. The horns of the crescent are shaped as flattened globules, Ø 0.35-0.4. Manufactured using the mould-casting technique. Lunate ornaments and moulds for their casting are rather rarely found during excavations in Olbia and its rural territory.\textsuperscript{1163} Pendants of this type were usually made from cheaper metals such as lead or bronze. In our case we are dealing with a silver specimen probably intended for the wealthy.

\textsuperscript{1162} Furmans’ka 1958, figs. 1, 2, 3, pl. II.3.
\textsuperscript{1163} Furmans’ka 1958, pl. III.3, VI.4.