

E Red-glossed pottery

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Red-glossed ware is not very common among the finds from Sector NGS. Most of the fragments belong to the period when this part of the city was no longer inhabited. Nevertheless, this group of pottery is fairly important since it provides an indication of how long this area was still frequented.

Of particular interest are the finds of the early group of red-glossed pottery, dated to the second half of the 2nd and the first half of the 1st century BC. Firstly, they attest that the northern sector of the Lower City continued in use during this period. Secondly, where recovered from dateable contexts, they help us date more precisely this still poorly studied group of pottery. Some of the fragments of Asia Minor and Pontic production are published here for the first time and it has not been possible to find any parallels. For instance, Type 1 of the plates is to some extent close in shape to African red-gloss plates.⁴⁸⁰ For Olbia, such a late date is impossible, since the site was occupied only until the 4th century AD at the latest. Moreover, the features of the clay and slip of the plates from Olbia differ from the African ones, attesting an origin in Asia Minor. Probably, the provenance of the Olbian red-glossed plates should be sought in the beginning of the production of red-slipped ceramics in centres in Asia Minor not later than the second half of the 2nd century BC. This supposition is confirmed by the fact that a base of a cup with similar stamped ivy leaves was found in a late Hellenistic context (E-36).

Attributable to the group of late Hellenistic red-glossed pottery are jugs of Type 1, Variant 1, and Type 4, some of the large bowls of Types 1 and 5, cups of Type 1, plates of Types 1 and 2, skyphoi, a krater and a salt-cellar.

Most of the red-glossed vessels are dated to the 1st-2nd century AD, whereas the amphoras attributed to this period are very rare. Moreover, the problem of the occupation of NGS in the 1st-2nd century AD is so far unsolved.

A single plate of the 4th century AD, together with a fair number of contemporary amphoras and the extremely ruinous building remains, confirm the use of the northern sector of the Lower City of Olbia as an outlying zone of production during late Antiquity.

The following groups of red-glossed ware are distinguishable: jugs, bowls, cups, plates and rare forms to which the vessels represented by single finds are attributed (skyphoi, beakers, a kantharos, a lekane, a salt-cellar, a deep vessel and a lid).

Within the groups enumerated, differing types are discerned according to the shape of their bodies, and different variants of the vessel types are distinguished on the basis of the rim shapes. Plates and bowls predominate. Cups and jugs are considerably less numerous.

⁴⁸⁰ *EAA* 1985, 94-95, tav. XLII.3-5, *Ceramica Africana*, Type Hayes 104 A, B, 500-600 AD.

Catalogue

Jugs

As is characteristic of the red-glossed pottery in general, examples of this form are not numerous.

Type 1

Jugs with relatively high and broad cylindrical neck, with a ledge below the rim and an out-turned lip. Variant 1: the rim is out-turned horizontally and bent down. Variant 2: the rim is thickened and out-turned.

Jugs of this shape are generally dated to the time span from the mid-3rd century BC to the 3rd century AD.

Variant 1

E-1 87-516, II-3 B 89/10. Pl. 153

Fr. of rim and neck with traces of repair. H 10.7, Ø 11.7. Fabric: 2.5YR 5/8-6/8, with fine inclusions of lime and sand. Slip: 7.5YR 6/4-5YR 6/6, thin; irregular traces of the brush are discernible. The neck is high, cylindrical; the rim is horizontal, out-turned. A ledge below the rim. Traces of the handle are preserved, the chipped area left by the handle measuring 4.6 x 0.8-2.7.

Cf. Rotroff 2006, 248, no. 37 (P 16281), fig. 7, pl. 7, dated to ca. 250-210 BC; *EAA* 1985, 45, *sigillata orientale A*, tav. X.1, forma 109, dated to the 1st century AD; Roth-Rubi 1979, 22-26, Taf. 3 – similar jugs dated to the 2nd century BC-2nd century AD.

Variant 2

E-2 01-867. Pl. 153

Fr. of rim and neck. H 4.7, Ø 10.4. Fabric: 5YR 7/6-6/6, with light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/6, thick, lustrous, preserved only partly.

Parallels relatively close in shape: Roth-Rubi 1979, 29, Taf. 4.37, 58, Taf. 14.123, dated to the time of Claudius and Nero; also Krapivina 1993, fig. 60.1. T.N. Knipovič was of the opinion that jugs of this kind were manufactured in the region of Pergamon in the second half of the 1st-3rd century AD (Knipowitsch 1929, 42, 48, Abb. III.42).

The fragment belongs to the production of a Pontic centre presumably of the 1st-2nd century AD.⁴⁸¹

E-3 01-126. Pl. 153

Neck fr. H 3, Ø at the top 8. Fabric: 7.5YR 6/4, with lime inclusions. Slip: 2.5YR 4/6-4/8, lustrous on ext., without lustre on int. of the vessel.

Parallels are difficult to find since the rim is not preserved.

Cf. Roth-Rubi 1979, 29, Taf. 4.42, dated to the time of Claudius and Nero.

Pontic, most probably 1st century AD.

Type 2

Jugs with a relatively low and narrow cylindrical neck and a ledge below the rim.

E-4 03-460a. Pl. 153

Fr. of neck and rim. H 6.2, Ø 4.7. Fabric: creamy on the ext. and pinkish on the int., 10YR 7/6. Slip: 5YR 6/6-7/6, dull.

A relatively close parallel, although without the ledge on the neck, is Roth-Rubi 1979, 78, Taf. 86, dated to the 2nd century AD.

Pontic production, probably 1st-2nd century AD.

Type 3

Jugs with a rounded, incurving neck.

E-5 92-488. Pl. 153

Neck fr. with broad, flat, ribbed handle. Ø of the neck at top 5.2, handle in cross-section 5.5 x 0.9-1.3. Fabric: 2.5YR 6/6, with lime inclusions. Slip: 2.5YR 5/4-3/1, dull, with dark spots caused by irregular firing.

Relatively close analogies: Roth-Rubi 1979, 42, Taf. 10.97-98, 46, Taf. 11.106, first half to middle of the 2nd century AD; *EAA* 1985, 45, *sigillata orientale A*, tav. X, 3, form 111, late 1st century AD.

Probably manufactured in an Asia Minor centre in the 1st-2nd century AD.

E-6 97-419. Pl. 153

Fr. of rim and neck. H 9, Ø rim 3, Ø neck 2. Fabric: 2.5YR 5/8-6/8, with extremely fine lime inclusions and sparse light-reflecting particles (mica?). Slip: 10R 4/6-4/8, of good quality.

No close analogies have been found; the specimen resembles a vessel of Roth-Rubi 1979, 46, Taf. 10, 103, of the period of the Flavii; and of Meyer-Schlichtmann 1988, 173, Taf. 25.388, of Pergamene production of the last quarter of the 1st century BC to the middle of the third quarter of the 1st century AD.

Possibly of Pergamene manufacture of the 1st century AD.

E-7 97-347. Pl. 154

Fr. of lower body and ring foot. H 5, Ø body 10.4, Ø base 5.4. This vessel is probably similar to E-6. Fabric: 5YR 6/6-6/8, with sparse light-reflecting particles (mica?), lime inclusions. Slip: 10R 5/8-4/6, applied irregularly.

Pontic production, 1st century AD.

Type 4

Jugs with rounded bulging neck and a spout.

E-8 03-320. Pl. 154

Fr. of rim and neck with spout. H 6, Ø 6.6. Fabric: 5YR 6/6-5/6, with lime inclusions and light-reflecting particles (mica?). Slip: 2.5YR 5/8, of poor quality, preserved only partly.

⁴⁸¹ I thank Krzysztof Domzalski for his advice concerning the identification of some of the fragments of red-glossed pottery.

Cf. *EAA* 1985, 44, *sigillata orientale A*, tav. IX, 6, form 105, dated presumably to the 1st century BC.

Bowls

Bowls are fairly numerous and represented by a number of types. Type 1 is the most common.

Type 1

Bowl-cups of various sizes. The variants have been distinguished on the basis of variations in the body and rim.

Variant 1

Relatively large bowls with rounded walls and incurving rims.

E-9 92-588. Pl. 154

Rim fr. Ø 26. Fabric: 7.5YR 6/4, with light-reflecting particles (mica?), lime and occasional quartz inclusions. Slip: 2.5YR 5/6-6/6, with brown spots. On the ext. only the rim and the area immediately below it are slipped.

Cf. Krapivina 1993, figs. 45.24, 26, manufactured in various centres in the 2nd-3rd century AD.

Variant 2

Bowls with rounded walls and the rim formed as a continuation of the walls. They are dated to a wide chronological span of the late 2nd century BC to the 3rd century AD.

Cf. Meyer-Schlichtmann 1988, Taf. 14.196,197, 201, attributed mainly to Pergamene manufacture, dated to the late 2nd century BC to the 1st century AD; Hayes 1972, 321-322, fig. 64, form 4, 3rd century AD.

E-10 92-302. Pl. 154

Rim fr. 28. Fabric: 10R 5/8-4/8, with fine sand. Slip: 2.5YR 5/6, dense, lustrous.

Pergamon.

E-11 01-360. Pl. 154

Rim fr. 26. Fabric: 5YR 7/6-6/6, with very fine light-reflecting particles (mica?), lime inclusions, coarse quartz sand. Slip: 2.5YR 5/6-5/8, preserved only partly.

Manufacture of a Pontic centre in the 1st-2nd century AD.

E-12 01-403. Pl. 155

Fragment of the upper part of a bowl-cup. Ø rim 18. Fabric: 10R 5/8-4/8, with light-reflecting particles (mica?) and lime inclusions, well levigated. Slip: 10R 4/6-4/8, lustrous.

Pergamon.

E-13 01-619. Pl. 155

Rim fr. 16. Fabric: 10R 5/6-5/8, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10YR 5/6-4/6, lustrous, with brown spots caused by irregular firing on the ext.

Pergamon.

Variant 3

Bowls with less rounded walls, incurving and slightly sharpened rim.

A similar shape of black-glossed bowls is known from the first quarter of the 2nd century BC (see Rotroff 1997a, 162, nos. 1007-1008).

Cf. Zelle 1997, 72, Abb. 16, 171, 170, Pergamon, third quarter of the 2nd or first half of the 1st century BC; Meyer-Schlichtmann 1988, Taf. 30.90-91, Pergamon, last quarter of the 2nd to first quarter of the 1st century BC; Wintermeyer & Bumke 2004, cat. A, 99, 154, type Sch 1.1, 2nd-1st century BC.

E-14 92-75, IV-3 B 343/200. Pl. 155

Rim fr. Ø 15. Fabric: 10R 5/6, with very fine light-reflecting particles (mica?), well levigated. Slip: 10R 4/4-4/6, more lustrous on the ext. of the vessel, with brown spots in places.

Pergamon. Found in a late Hellenistic context.

E-15 93-35, III-3 R 278/98. Pl. 155

Rim fr. Ø 13. Fabric: 7.5YR 6/4-6/6, with very fine light-reflecting particles (mica?) and in places quartz. Slip: 10R 5/6-4/6, on the ext. along the rim and below it there is a band of slip up to 1.5 wide.

Pergamon. Found in a late Hellenistic context.

E-16 92-508. Pl. 155

Rim fr. Ø 23. Fabric: dark-red on the surface and dark-grey in the break, 10R 5/6-2.5YR 4/1-6/6, with lime inclusions. Slip: 10R 5/6, lustreless, with brown spots on the ext.

Production of a Pontic centre.

E-17 01-610. Pl. 155

Rim fr. Ø 23. Fabric: 5YR 6/6-5/6, with sparse light-reflecting particles (mica?), lime inclusions, pieces of quartz in places. Slip: 10R 5/8-4/8.

Production of a Pontic centre.

Variant 4

Small, relatively deep vessels with slightly thickened, incurving rim. The close parallels from Pergamon are dated to the mid-2nd century BC to the first half of the 2nd century AD (Meyer-Schlichtmann 1988, Taf. 11.89, Taf. 30.90-109).

E-18 01-191. Pl. 156

Rim fr. Ø 12. Fabric: 2.5YR 5/6, with very fine light-reflecting particles (mica?). Slip: 2.5YR 4/6-4/8, with dark spots on the ext.

Production of a Pontic centre of the 1st-2nd century AD.

E-19 03-383. Pl. 156

Rim fr. Ø 10. Fabric: 10R 5/6, with very fine light-reflecting particles (mica?), well levigated. Slip: 10R 4/6-4/2, more lustrous on the ext., in places with brown spots.

Pergamon.

E-20 03-399. Pl. 156

Rim fr. Ø 9. Fabric: 2.5YR 5/6-4/6, with very fine light-reflecting particles (mica?), well levigated. Slip: 10R 4/6-4/2, with brown spots in places.

Pergamon.

Type 2

Deep bowl-cups with rounded walls close to spherical in shape. On the basis of the shape of the rim, three variants have been distinguished.

Variant 1

The rim is accentuated by a groove on the ext. or both on the ext. and int.

E-21 86-628. Pl. 156

Rim fr. Ø 14. Fabric: 2.5YR 4/6-4/8, with fine lime inclusions. Slip:

2.5YR 6/6-5/6, dark-brown in the lower part. Below the rim there is a groove on the int.

A close parallel from Pergamon is dated to the first quarter of the 1st century BC to the early 1st century AD (Meyer-Schlichtmann 1988, 79, Taf. 9.64).

According to K. Domžalski's identification, Eastern Sigillata B, 1st-2nd century AD.

E-22 01-36. Pl. 156

Rim fr. Ø 15. Fabric: 10R 5/6-5/8, with light-reflecting particles (mica?) and very fine grog, well levigated. Slip: 10R 4/6, thick.

Production of a Pontic centre, possibly of the 1st century AD.

Variant 2

The rim is a continuation of the wall.

E-23 01-392. Pl. 156

Rim fr. Ø 12. Fabric: 2.5YR 6/6-5/6, with very fine light-reflecting particles (mica?), lime inclusions. Slip: 10R 4/6-4/8.

The close parallels from Pergamon are dated to the first quarter of the 1st century BC to the third quarter of the 1st century AD (Meyer-Schlichtmann 1988, 157, Taf. 20.334).

Pergamon.

Variant 3

The rim is slightly out-turned and accentuated by a groove.

E-24 01-683 + 01-393. Pl. 156

Rim fr. Ø 20. Fabric: 2.5YR 6/6-5/6, with light-reflecting particles (mica?) and lime inclusions. Slip: 10R 5/6-5/8, dull.

The close parallels from Pergamon are dated to the second quarter of the 1st century BC to the early 1st century AD (Meyer-Schlichtmann 1988, 126, Taf. 15.224).

Production of a Pontic centre, probably of the 1st century AD.

Type 3

Ribbed bowl-cups on a ring foot with tapering wall and out-turned rim.

The close parallels from Pergamon are dated to the first quarter of the 1st century BC to the early 1st century AD (Meyer-Schlichtmann 1988, 79, Taf. 9.64).

E-25 96-118, VI-2. Pl. 157

Rim fr. Ø 14. Fabric: 2.5YR 6/6-5/6, with fine sand. Slip: 2.5YR 4/6, thick.

Pergamon.

Type 4

Deep bowls on a ring foot with tapering walls.

The close parallels, although without grooves are Hayes 1972, 321-322, fig. 64, form 1, 200-250 AD, production of Çandarlı. Most researchers convincingly date these bowls to the 2nd-3rd century AD (see Krapivina 1993, 110).

E-26 01-128. Pl. 157

Base fr. Ø 8. Fabric: 2.5YR 4/6, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 2.5YR 4/6-4/8, thick.

Type 5

Bowl-cups with straight walls, sharply carinated body and horizontal handles. Vessels of this type were imported to Athens from Knidos at least from the second quarter of the 2nd century BC. They had been manufactured for a long period in different centres with slight variations (Rotroff 1997a, 119). They were probably brought to Olbia mostly from Pergamon and are dated to the 2nd century BC to the 1st century AD.

E-27 93-506, III-3 B 368/104. Pl. 157

Rim fr. with horizontal handles. Ø 18. Fabric: 2.5YR 6/6-5/6, with lime inclusions, light-reflecting particles (mica?). Slip: 10YR 4/6-5/6, dull.

Found in a late Hellenistic context.

E-28 01-264. Pl. 157

Horizontal handle. Length of handle 6.8, cross-section 1.4 x 0.5. Fabric: 10YR 5/6, with light-reflecting particles (mica?) and rare lime inclusions. Slip: 2.5YR 5/6-6/6, thin.

Cups

The cups are rather uncommon and represented by two types. Two bases that are difficult to attribute to any definite type are presented separately.

Type 1

Cups on a profiled ring base with tapering walls and a small out-turned rim.

E-29 86-915. Pl. 157

Rim fr. Ø 12. Fabric: 2.5YR 6/8, with fine lime inclusions. Slip: 2.5YR 5/8-4/8. Below the rim there are two grooves on the int. and a fillet on the ext.

Cf. EAA 1985, 26, *sigillata orientale A*, tav. IV, 9, form 27, dated to 10 BC-20/30 AD.

E-30 86-531. Pl. 157

Base fr. Ø 8. Fabric: 2.5YR 6/6, slightly greyish in the break, with fine sand. Slip: 2.5YR 4/8, thick.

Bases of skyphoi and cups of Pergamene manufacture close in shape are dated from the late 2nd century BC to the second quarter of the 1st century AD (Meyer-Schlichtmann 1988, Taf. 7, 2, 3, 14, Sa 3, 9, 20, Sü 4, 29, 117-118, 158).

E-31 No number. Pl. 158

Base fr. Ø 6.5. Fabric: 10R 4/6, well levigated, with sand and fine lime inclusions. Slip: 7.5YR 8/4, lustrous.

As E-30.

Found in a late Hellenistic context.

Type 2

Cups with tapering walls and low, upright or slightly inclined flange. Common throughout the entire northern Black Sea littoral in the 1st-3rd century AD (Krapivina 1993, 113-114).

Variant 1

The wall edge is slightly inclined inwards.

E-32 92-216, III-1. Pl. 158

Rim fr. Ø 15. Fabric: 10R 6/6-5/6, with very fine light-reflecting par-

ticles (mica?). Slip: 10R 4/6, more lustrous on the ext., in some places with brown spots.

Cf. *EAA* 1985, 94, *Sigillata Pontica*, tav. XXIII, 7, form VI, probably the 2nd century AD. According to K. Domžalski's identification, from Pergamon, 1st century AD.

Variant 2

The wall edge is upright, decorated with a groove, the rib is slightly elongated.

E-33 03-393. Pl. 158

Rim fr. Ø 12. Fabric: 5YR 5/6-6/6, with light-reflecting particles (mica?) and rare lime inclusions. Slip: 2.5YR 4/6-5/6, lustrous, with brown spots.

Cf. *EAA* 1985, 74, Çandarlı, tav. XVI, 9, form A 7, 94, *Sigillata Pontica*, tav. XXIII, 6, form V, late 1st century AD; Meyer-Schlichtmann 1988, 113, Taf. 13.182, dated to the mid-1st century BC to the first half of the 1st century AD.

Production of a Pontic centre of the 1st century AD.

Bases

E-34 96-196, VI-3 R 459/273. Pl. 158

Base fr. of ring foot decorated with a scratched groove and four stamped palmettes. Ø base 8. Fabric: 7.5YR 8/4, well levigated, with sand. Slip: 10R 5/6-4/6.

The closest parallel to the shape of the foot is Meyer-Schlichtmann 1988, Taf. 5.36, VK 24. The closest parallel to the shape of the foot is Meyer-Schlichtmann 1988 Taf. 5.36, VK 19, 22, 89, 99-100, 125-126.

Pergamon, late 2nd century BC to early 1st century AD. Found in a late Hellenistic context.

E-35 01-82. Pl. 158

Base fr. of ring foot. Ø base 6. Fabric: 7.5YR 8/4, well levigated, with sand. Slip: 10R 5/6-4/6.

Cf. Meyer-Schlichtmann 1988, 95-96, Taf. 11.125. Pergamene manufacture, mid-1st century AD.

E-36 93-557, IV-4 B 351/218. Pl. 158

Base fr. with a stamped design. Ø base 6.2. Fabric: 5YR 7/4-7/6, dark-grey in the break, with mica, lime and occasional coarse inclusions of quartz. Slip: 10R 4/6-4/8, rather dull.

Parallels unknown. Possibly a centre in Asia Minor. Second to first half of the 1st century BC, in accordance with the context dating.

Plates

Plates are the most numerous group of red-glossed ware in the collection from Sector NGS. They are represented by seven types.

Type 1

Large, rather shallow plates on a ring foot with almost straight walls and a thick, rounded rim. They are decorated with a stamped pattern in the form of incisions and ivy leaves and often with grooves. Only the int. is slipped.

These specimens are possibly connected with the beginning of the production of red-glossed ware in centres in Asia Minor from at least the 2nd century BC. This supposition is evidently confirmed by the

find of the base of a vessel with similar stamped ivy leaves (E-36) in a late Hellenistic context. In addition, a similar ornamentation is noted on plates of another type from Pergamon which are dated to the 3rd to the mid-1st century BC (Meyer-Schlichtmann 1988, 147-148, Taf. 18.34-35).

E-37 96-93. Pl. 159

Rim fr. Ø 40. Fabric: 5YR 6/4-6/6, with river sand and rare light-reflecting particles (mica?). Slip: 2.5YR 4/4-4/3, irregularly applied. Decorated with two rows of stamped incisions separated by a double groove.

Asia Minor centre, possibly Pergamon.

E-38 96-94. Pl. 159

Rim fr. Ø 35. Fabric: 7.5YR 7/4-6/4, pink, greyish in the break, with coarse sand and rare light-reflecting particles (mica?). Slip: 10R 4/8. Decorated with two grooves with stamped incisions above.

Asia Minor centre, possibly Pergamon.

E-39 96-95. Pl. 160

Base fr. Ø 13. Fabric: 5YR 6/4-6/6, with river sand and rare light-reflecting particles (mica?). Slip: 2.5YR 5/6-4/2, irregularly applied. Decorated with grooves and stamped pattern of incisions and ivy leaves.

Asia Minor centre, possibly Pergamon.

E-40 92-268. Pl. 160

Base fr. Ø 14. Fabric: 7.5YR 6/6, dark-grey in the break, with light-reflecting particles (mica?), lime and isolated coarse quartz inclusions. Slip: 10R 5/6-4/6, rather dull. Decorated with grooves and stamped design of incisions and ivy leaves.

Asia Minor centre, possibly Pergamon.

Type 2

Deeper plates with slightly rounded walls and a thickened rim; possibly on a ring foot.

The closest parallels are black-glossed plates dated to 200-175 BC (Rotroff 1997a, nos. 670, 672, 673). Along with Type 1, these plates are probably connected with the beginning of production of red-glossed ware in centres in Asia Minor in the 2nd century BC and similar in shape to black-glossed examples.

E-41 96-61. Pl. 160

Rim fr. Ø 21. Fabric: 5YR 6/4-6/6. Slip: 10R 4/8.

E-42 96-91. Pl. 160

Rim fr. Ø 17. Fabric: 5YR 6/4-6/6. Slip: 10R 4/8.

Type 3

Plates with rounded walls and the rim forming a rounded continuation; possibly on a ring foot.

Fairly close analogies are *EAA* 1985, tav. CX, *Ceramica microasiatica*, 4, 5. Their manufacture was started in the region of Pergamon, continuing Hellenistic traditions (Meyer-Schlichtmann 1988, 134-136, Taf. 17.261, 265, 266, dated to the 1st century BC to the early 2nd century AD).

In Olbia, plates of this type are predominantly of Asia Minor and Pontic manufacture.

E-43 92-303. Pl. 161

Rim fr. Ø 26. Fabric: 2.5YR 5/6-5/8, with very fine light-reflecting particles (mica?) and coarse lime inclusions. Slip: 10R 4/6-4/8, dull.

E-44 01-80. Pl. 161

Rim fr. Ø 22. Fabric: 7.5YR 6/4-6/6, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 7.5YR 6/4-6/6, worn, on the ext. it is applied only on the edge of the wall.

Production of a Pontic centre.

E-45 01-192. Pl. 161

Rim fr. Ø 12.5. Fabric: 7.5YR 6/4-6/6. Slip: 7.5YR 6/4-6/6, with a dark stripe on the ext.

Asia Minor centre.

E-46 01-394. Pl. 161

Rim fr. Ø 23. Fabric: 2.5YR 5/8, with very fine light-reflecting particles (mica?) and fine lime inclusions. Slip: 10R 4/6-4/8, lustrous.

Pergamon.

E-47 01-396. Pl. 161

Rim fr. Ø 21. Fabric: 5YR 6/6, with light-reflecting particles (mica?) and lime inclusions. Slip: 2.5YR 4/6, thin.

Production of a Pontic centre.

E-48 01-430. Pl. 162

Rim fr. Ø 26. Fabric: 2.5YR 5/6-5/8, with sparse light-reflecting particles (mica?), lime inclusions and pieces of quartz. Slip: 10R 4/6.

Production of a Pontic centre.

Type 4

Relatively deep plates on a ring foot with incurving and slightly sharpened rim.

Cf. *EAA* 1985, 14, tav. I, *sigillata orientale A*, 8, form 3, late 2nd to first decade of the 1st century BC; Meyer-Schlichtmann 1988, 133, Taf. 16.248, dated to the second quarter of the 1st century BC to the beginning of the 1st century AD. Later, plates of this type were manufactured in Pontic centres.

E-49 01-412. Pl. 162

Complete profile. H 6.5, Ø rim 29.6, Ø base 10.5. Fabric: 5YR 6/6-6/8, with very fine light-reflecting particles (mica?), fine lime inclusions and sand. Slip: 10R 4/8, applied irregularly; on the ext. spots of dripped coat.

Production of a Pontic centre, 1st century AD.

Type 5

Plates with straight walls and a flat rim, horizontally out-turned or inclined; probably with a ring foot.

Cf. *EAA* 1985, 39-40, tav. VII, *sigillata orientale A*, 8, 12, forms 57, 59, first half of the 2nd century AD.

E-50 87-900. Pl. 162

Rim fr. Ø (ext.) 43, Ø (int.) 37.5. Fabric: 10YR 7/4, with rare coarse inclusions of lime, sand and pyroxene. Slip: 2.5YR 4/6, dense.

E-51 96-11. Pl. 162

Rim fr. Ø (ext.) 26, Ø (int.) 23. Fabric: 10YR 7/4-6/4, with fine lime inclusions and rare light-reflecting particles (mica?). Slip: applied only on the int. and on the top of the wall, and varies from light-orange to orange and brown, 5YR 6/6-6/8, applied irregularly.

Production of a Pontic centre in the late 1st-2nd century AD.

Type 6

Flat, low plates with straight walls, probably on a ring foot. According to K. Domžalski's identification, they were manufactured in centres of Asia Minor in the 1st-2nd century AD.

E-52 01-399. Pl. 163

Rim fr. Ø 32. Fabric: 10YR 7/4, dense, with isolated inclusions of grog. Slip: 2.5YR 4/6, dense.

Cf. *EAA* 1985, tav. I, *sigillata orientale A*, form 3.

E-53 01-402. Pl. 163

Rim fr. Ø 23. Fabric: 2.5YR 6/6-6/8, orange hue in the break, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/8, int. lustrous, matt on the ext., preserved only partly.

Cf. Meyer-Schlichtmann 1988, 135-136, Taf. 17, T 4, 5, dated mid-1st century BC to early 2nd century AD.

Pergamon.

E-54 01-1028. Pl. 163

Rim fr. Ø 14. Fabric: 2.5YR 6/6-6/8, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/8.

Cf. Meyer-Schlichtmann 1988, 135, Taf. 17, T 4, mid-1st century BC to beginning of the 2nd century AD.

Type 7

Deep plates with an almost flat bottom, on a low ring foot, with slightly rounded, high peripheral walls.

E-55 91-188. Pl. 164

Complete profile. H 6; Ø rim 28.7-29, Ø base 20.5-20.7. Fabric: 5YR 6/6-7.5YR 7/4, well levigated, with fine river sand. The slip on the int. is regular, dark-orange with pinkish-orange spots; on the ext. the slip is thin, varying from 2.5YR 5/6-4/3 to 5YR 6/6. On the bottom there are dipinti in gloss.

Production of a Pontic centre in the 4th century AD (Arsen'eva & Domžalski 2002). In Olbia, this is the most common of the Pontic Red Slip Ware, form 1A (Krapivina & Domžalski 2008, 79, fig. 1.1).

Bases of plates

All the bases feature a ring foot and stamped decoration. However it is hardly possible to define the specific type of the plates on the basis of these features.

Cf. *EAA* 1985, 14-15, tav. I, *sigillata orientale A*, forms 2 A, 3, second half of the 2nd to 1st century BC; Meyer-Schlichtmann 1988, 188, Taf. 16.248, second quarter of the 1st century BC to the early 1st century AD. The clay and character of the slip suggest Pergamene or Pontic manufacture.

E-56 01-265. Pl. 165

Base fr. Ø 7.4. Fabric: 5YR 6/6, with light-reflecting particles (mica?) and rare lime inclusions. Slip: 10R 4/6. On the bottom there are graffiti formed by straight and broken irregular lines.

E-57 01-400. Pl. 165

Base fr. Ø 8. Fabric: 5YR 6/6, with light-reflecting particles (mica?) and rare lime inclusions. Slip: 10R 4/6.

E-58 01-407. Pl. 165

Base fr. Ø 8.5. Fabric: 5YR 6/6, with light-reflecting particles (mica?), inclusions of lime and coarse quartz. Slip: 10R 4/6, with runs on the ext. On the bottom there are graffiti: A and straight line to its right hasta.

E-59 01-408. Pl. 166

Base fr. Ø 7.7. Fabric: 2.5YR 6/8-5/8, orange-red in the break, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/6, with runs on the ext.

E-60 01-410. Pl. 166

Base fr. Ø 9. Fabric: 5YR 6/6, with extremely fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/8.

Pergamon.

Skyphoi

Skyphoi are represented by two fragments of the upper parts of two vessels: 92-509, 92-773. There are no close parallels. However, the shapes of the vessels undoubtedly imitate the shapes of skyphoi of Hellenistic Colour-Coated Ware A, which are dated to the 3rd-2nd century BC (Domzalski 2007, 172, fig. 4a-c). According to K. Domzalski's identification, the two fragments from Olbia are both products of Pontic centres. The appearance of vessels of this kind can be dated not later than 140 BC on the basis of the general dating of Context 151, in which E-62 was found. Nevertheless, this fact does not exclude the possibility that some specimens were manufactured in a later period. Olbia bowl Type 8 is a further development of this type of vessel (Krapivina 1993, fig. 47.7-8).

E-61 92-509. Pl. 166

Fr. of rim and upper body. Ø 16. Fabric: 7.5YR 6/4, with light-reflecting particles (mica?) and lime inclusions, well levigated. Slip: 10R 5/8-6/8, worn, on the ext. applied only on the upper part.

E-62 92-773, III-1 Stove 329/71. Pl. 166

Fr. of rim and upper body. Ø 15. Fabric: 7.5YR 6/4, with light-reflecting particles (mica?) and lime inclusions, well levigated. Slip: 10R 5/8-6/8, worn, on the ext. the slip is applied only on the upper part.

Found in a late Hellenistic context.

Beakers

The beakers found in NGS are extremely fragmented and limited in number.

E-63 92-891, IV-4 B 353/222. Pl. 166

Fr. of rim and upper body. Ø 8. Fabric: 2.5YR 5/6, well levigated, with fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/6-5/6, dull, on the int. it is applied only on the rim.

No close analogies have been found. According to K. Domzalski's identification, this fragment belongs to a Pontic centre. Found in a late Hellenistic context.

E-64 03-400. Pl. 166

Fr. of wall with rounded handles. H 3, cross-section of the handle 1.8 x 0.5-0.7. Fabric: 10R 5/6-6/6, with lime inclusions and light-reflecting particles (mica?). Slip: 2.5YR 5/6-4/6, with a metallic lustre, absent on the int.

Cf. Krapivina 1993, fig. 54.4. Similar beakers are characteristic of Pergamon in the second half of the 1st century BC to the first half of the 1st century AD (Knipowitsch 1929, 24, 26-29, Taf. I.18).

E-65 01-331. Pl. 166

Base fr. Ø 3.3. Fabric: 10R 4/6-5/6, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 4/8-5/8, rather dull.

Cf. Hübner 1993, 48-50, Abb. 8.109, 160-60 BC. Pergamon, 160-60 BC.

Miscellaneous

E-66 92-680, IV-4 B 351/218. Pl. 167

Fr. of rim and base of krater. Ø rim 24, Ø base 12.8. Fabric: 7.5YR 6/4-7/4, well levigated, with sparse light-reflecting particles (mica?) and lime inclusions. Slip: 2.5YR 4/6, worn, applied only on the int.

The shape of this krater possibly derives from the kraters found in the Athenian Agora (Rotroff 1997a, nos. 590-591) and dated to the third quarter of the 3rd century BC to 180 BC (Rotroff 1997a, 138-139). The krater published here evidently belongs to the products of centres of Asia Minor, and, on the basis of the general dating of its context, it may be dated to the late Hellenistic period.

E-67 93-407. Pl. 167

Fr. of rim and upper part of lekanis. Ø 21. Fabric: 5YR 6/4, well levigated, with fine lime inclusions and rare light-reflecting particles (mica?). Slip: 10R 4/6-5/6, applied on the rim int. and ext., and below the rim as a band 2 cm wide and a band 0.4 cm wide int. Presumably traces of repair.

No analogies have been found. According to K. Domzalski's identification, this fragment belongs to the production of a Pontic centre. Vessels of this type were manufactured in the 2nd century BC to the 1st century AD.

E-68 93-965. Pl. 167

Fr. of rim and upper part of salt-cellar. Ø 9. Fabric: 10R 6/8, with very fine light-reflecting particles (mica?), well levigated. Slip: 10R 5/8, more lustrous on the ext., in places with brown spots.

A similar shape in black-glossed ware is known from the last quarter of the 4th century BC (Rotroff 1997a, 162, fig. 62.992; Jantzen 2004, 317, Taf. 84.1851, first half of the 2nd century BC).

E-69 97-100. Pl. 167

Complete profile, salt-cellar with rounded walls, out-turned rim, on a ring foot. H 3.5, Ø rim 9, Ø base 5. Fabric: 2.5YR 4/8, with very fine light-reflecting particles (mica?) and lime inclusions. Slip: 10R 5/6-4/6.

A close parallel was manufactured in Pergamon in the first half of the 1st century AD (Meyer-Schlichtmann 1988, 188, Taf. 35.189). Pergamon.

E-70 97-292. Pl. 167

Fr. of lid. H 3.5, Ø 4, Ø handle 4, H of handle 1.7. Fabric: 10R 6/6-7/6, well levigated, with fine lime inclusions and light-reflecting particles (mica?). Slip: 10R 4/6-5/6, dense, matt. The external surface is not slipped.

Lids of similar shape, although with a slightly different handle, were produced in Pergamon in the 1st-2nd century AD (Meyer-Schlichtmann 1988, 180, Taf. 28.411).

E-71 01-127. Pl. 167

Fr. of the upper part of a vessel. The shape is rounded, the rim is sharply out-turned and decorated with fluting. Ø rim 16. Fabric: 7.5YR 6/6-7/6, with light-reflecting particles (mica?) and inclusions of lime and very fine grog. Slip: 10R 4/8-5/8, thin, running on the int.

No parallels have been found. According to K. Domzalski's identification, this fragment belongs to the production of a Pontic centre in the 1st-2nd century AD.

