

On the Chronology of the Earliest Greek Metallurgy in Apollonia Pontica

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Apollonia in the Black Sea (present-day Sozopol in Bulgaria) was founded by Milesian settlers in the late 7th century BC.¹ It possessed an excellent harbour, the first safe stop after the Bosphorus and a vital port of call for the ships sailing up along the coast. While the place did not command vast arable land – a shallow coastal plain, encompassed from the southwest by the chain of Medni Rid (Bulgarian for “Copper Ridge”), it had another advantage, namely its proximity to the metal deposits in the hills. Although the scarce written sources remain silent about the exploitation of those riches, a telling hint is offered by Pliny’s information (*NH* 34, 18) of the colossal (c. 13 m high) bronze statue of Apollo, created by Kalamis and erected by Apollonians in the second quarter of the 5th century BC.²

In these circumstances, only archaeology is able to shed light on the beginnings of the Greek metallurgy in Apollonia. Already in the early 1970s, field surveys detected traces of ancient mining on the western slopes of Medni Rid,³ to the west and northwest of Apollonia. A recent campaign added a wealth of new information, including finds of Late Archaic pottery.⁴

Since 2009, investigations on the small offshore island of St. Kirik revealed the main *temenos* of Apollonia with two temples, one Archaic with a large altar, and one probably Early Classical, as well as traces of the early Archaic settlement that emerged in the late 7th century BC.⁵ A conspicuous specific of the Archaic cultural layer on the island are the omnipresent traces of metallurgy, mainly pieces of slag that are found in all contexts on the island (pits, dwellings, etc.).

Due to limitations of space, the present paper will discuss shortly the pottery from only one such context that could shed light on the chronology of the process. While it is not the earliest possible assemblage, it presents a clear-cut situation that is sufficiently revealing. The so-called “House 1” is a small (c. 5 × 5 m), almost square structure that is overlain by the Archaic altar,⁶ thus it could serve as a *terminus post quem* for the first monumental structures in the *temenos*. An important circumstance is that part of the floor was levelled with pieces of slag, plastered with clay. Therefore, the materials from the layer above the floor provide a *terminus ante quem* for the metallurgical activity that produced the slag.

Unsurprisingly, the assemblage has a pronounced East Greek character. There are quite a few fragments of North Ionian and related cups. There is at least one bird-bowl, of which only a hatched diamond between vertical lines is preserved (figs. 1. 1; 2. 1). More numerous and of varying size are the rosette-bowls, some of which illustrate early types with purple-and-white stripes in the interior (figs. 1. 2–6; 2. 2–3, 5–8) and could be dated to the first decades of the 6th century BC.⁷ One larger example with a basket of

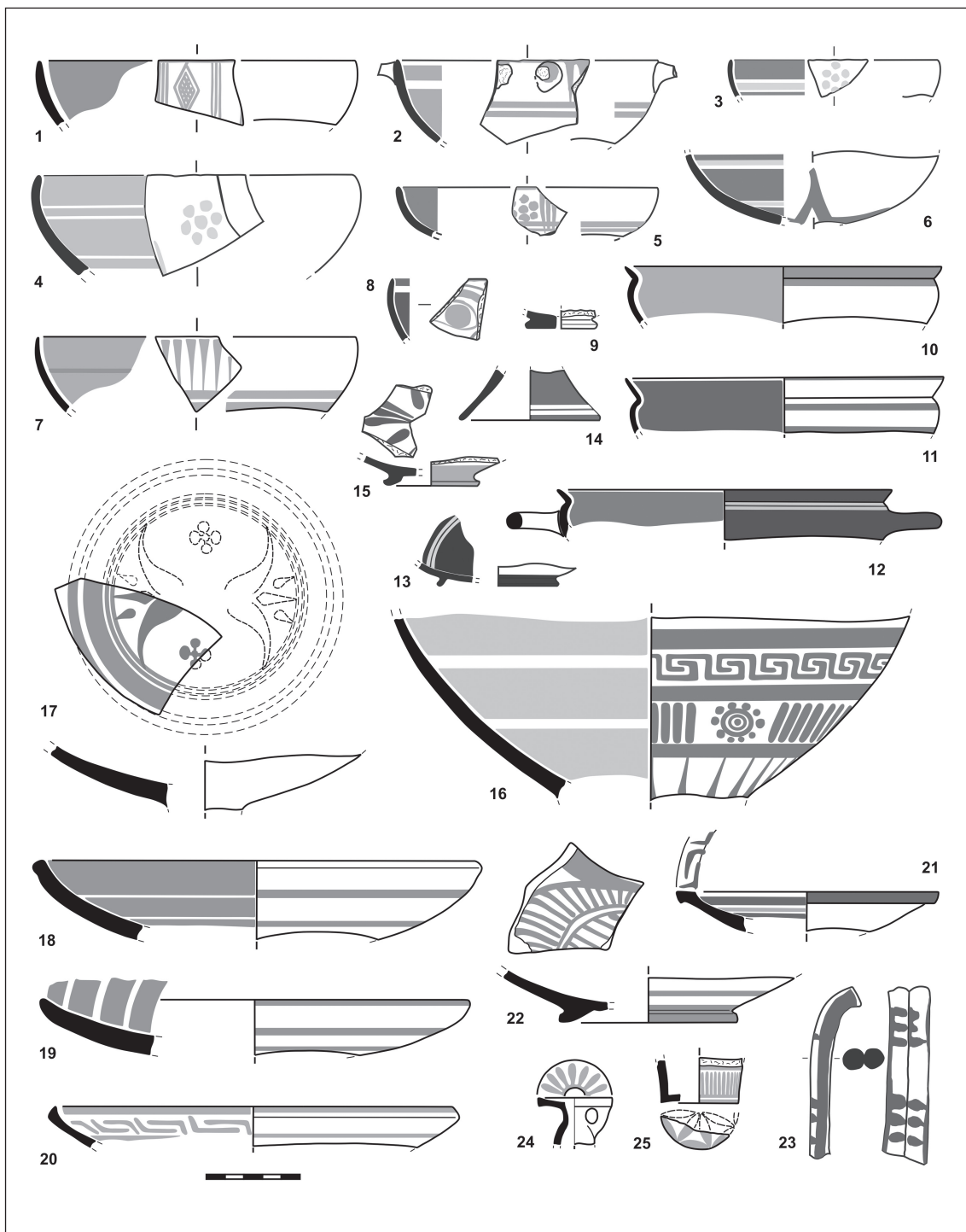


Fig. 1: Archaic fine wares from House 1 on the island of St. Kirik, Apollonia Pontica, first half of the 6th c. BC (excavations in 2010–2011).

outlined rays and without horizontal bands beneath the rosette has good parallels from the earliest levels at Tocra.⁸ A small fragment (figs. 1. 8; 2. 9) belongs to an eye-bowl that dates from the first quarter of the 6th century BC;⁹ such vases are well-presented in the early Milesian colonies in the Black Sea like Istros and Berezan.¹⁰ A rim with carefully drawn vertical rays (figs. 1. 7; 2. 4) belongs to a similar vase.

The fragments of Ionian cups (*Knickrandschalen*) are less numerous. The earliest is a Villard-Vallet B1, Tocra V, or Gravisca III.1 type that belongs to the early 6th century BC (figs. 1. 12–13; 2. 12).¹¹ Two more should be slightly later: one is of Villard-Vallet B2, Tocra VIII, or Miletos 9,1.C type (figs. 1. 11; 2. 13), reaching down to the mid-6th century BC,¹² and the other belongs to one of the variants of Group 10 from Miletos (figs. 1. 10; 2. 14), also from before 550 BC,¹³ with good parallels from the North Pontic region.¹⁴

A fragment from the foot of a Chian chalice (figs. 1. 14; 2. 16) should be added to the shapes for drinking and could be dated to the late first or early second quarter of the 6th century BC.¹⁵

Among the larger shapes in the assemblage, there are two or three fragments (figs. 1. 16; 2. 17–19) from an open vase, possibly a North Ionian *randlos Schale* – a shape that was very popular in Naukratis, but also with examples from the Black Sea, earlier in the first half of the 6th century BC.¹⁶ Above a basket of rays, there are friezes of groups of vertical sticks with rosettes between them and of meander, separated by solid bands; above them, there is an animal frieze.

A fragment with a “cable” ornament (fig. 2. 21) probably belongs to the neck of a North Ionian LWG amphora,¹⁷ and there is also a handle of such a vase (fig. 1. 23). A few more fragments are from larger closed LWG vases with parts of animals and blobby rosettes (fig. 2. 22, 24).

There are numerous fragments of plates, among them two thick-walled stemmed examples (*Pokalfußsteller*) with decoration of concentric bands (figs. 1. 18–19; 2. 25–26) that have good parallels from Assessos with the respective early date (as early as late 7th century BC).¹⁸ To the first half of the following century belong fragments of the popular North Ionian plates with broken meander along the rim: one larger, stemmed (fruit-stand), and with slightly incurving rim (figs. 1. 20; 2. 29),¹⁹ and the other quite small, with flat rim, thick walls, and less careful decoration (figs. 1. 21; 2. 31).²⁰ Of the same period, there are more fragments of plates with floral and geometrical decoration (figs. 1. 17, 22; 2. 23, 27–28, 30, 32–34).

Thus, the painted pottery from the assemblage could be dated within the limits of the first and earlier second quarter of the 6th c. BC, with a few fragments possibly as early as c. 600–590 BC (the bird-bowl, the Villard-Vallet B1 cup), while others could continue down to the middle of the century.²¹ One Corinthian fragment also seems to be early (fig. 1. 24).

This impression is confirmed by the amphorae from House 1, where fragments of Milesian (or South Ionian), Klazomenian, and Lesbian containers were found. It has been noted that the same combination is typical of the earliest period of the settlement

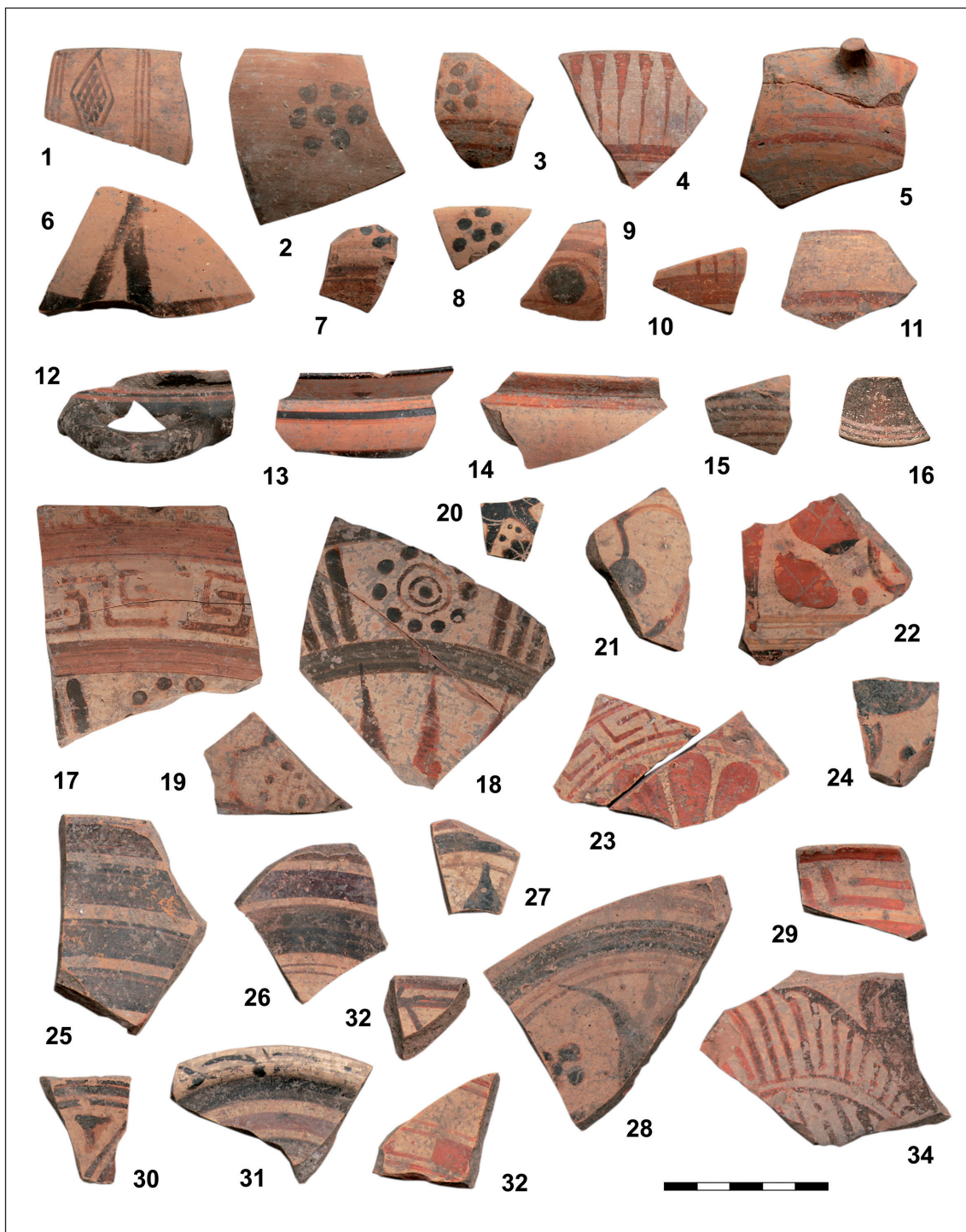


Fig. 2: Archaic fine wares from House 1 on the island of St. Kirik, first half of the 6th c. BC (excavations in 2010–2011).

on the island of Berezan, down to the middle of the 6th century BC.²² In fact, the assemblage of amphorae closely resembles the picture on Berezan.²³ Most numerous are the Milesian amphorae, mostly rims and a foot (fig. 3. 1–4, 12); the earliest types known in the Black Sea are not represented, but the specimens could be dated to the first half and the middle of the 6th century BC.²⁴ Two Lesbian red rims (fig. 3. 8–9) could be dated to the first half of the 6th century BC.²⁵ Among the more exotic specimens is the fragment of an Attic SOS-amphora (fig. 3. 11).²⁶

The assemblage is completed by other categories, among which numerous grey-ware vases. In addition to various bowls, more intriguing are several larger vases – a table amphora (fig. 3. 14), a mortarium (fig. 3. 15) and a dinos with incised decoration on the rim (fig. 3. 16). They all have parallels from other early contexts in Apollonia.²⁷

The brief overview of the pottery from the so-called “House 1” shows that the deposits that sealed the floor, insulated with pieces of slag, accumulated within the lifespan of the first-second generation of Milesian colonists, indicating they quickly gained access to the metal riches of Medni Rid. Other contexts with slag could be dated even earlier – with materials from the late 7th century BC (fig. 4), immediately after the colonisation. This fact and the location of the deposits in the wooded hills at a certain distance from Apollonia suggest some kind of agreement with the native population, or even joint efforts. In fact, all early contexts with slag contained also fragments of coarse hand-made vessels of Thracian shapes.

While the role metals played in the Greek colonisation has been questioned,²⁸ the case of Apollonia deserves reconsidering. The city was founded several decades after the first Greek ventures in the northwestern part of the Black Sea (Istros, Orgame, Borysthenes/Berezan), therefore Ionian settlers should have been able to collect information about the resources in the area. Respectively, it could be claimed that metallurgy played an important role in the economy of Apollonia in the Archaic Period and beyond.

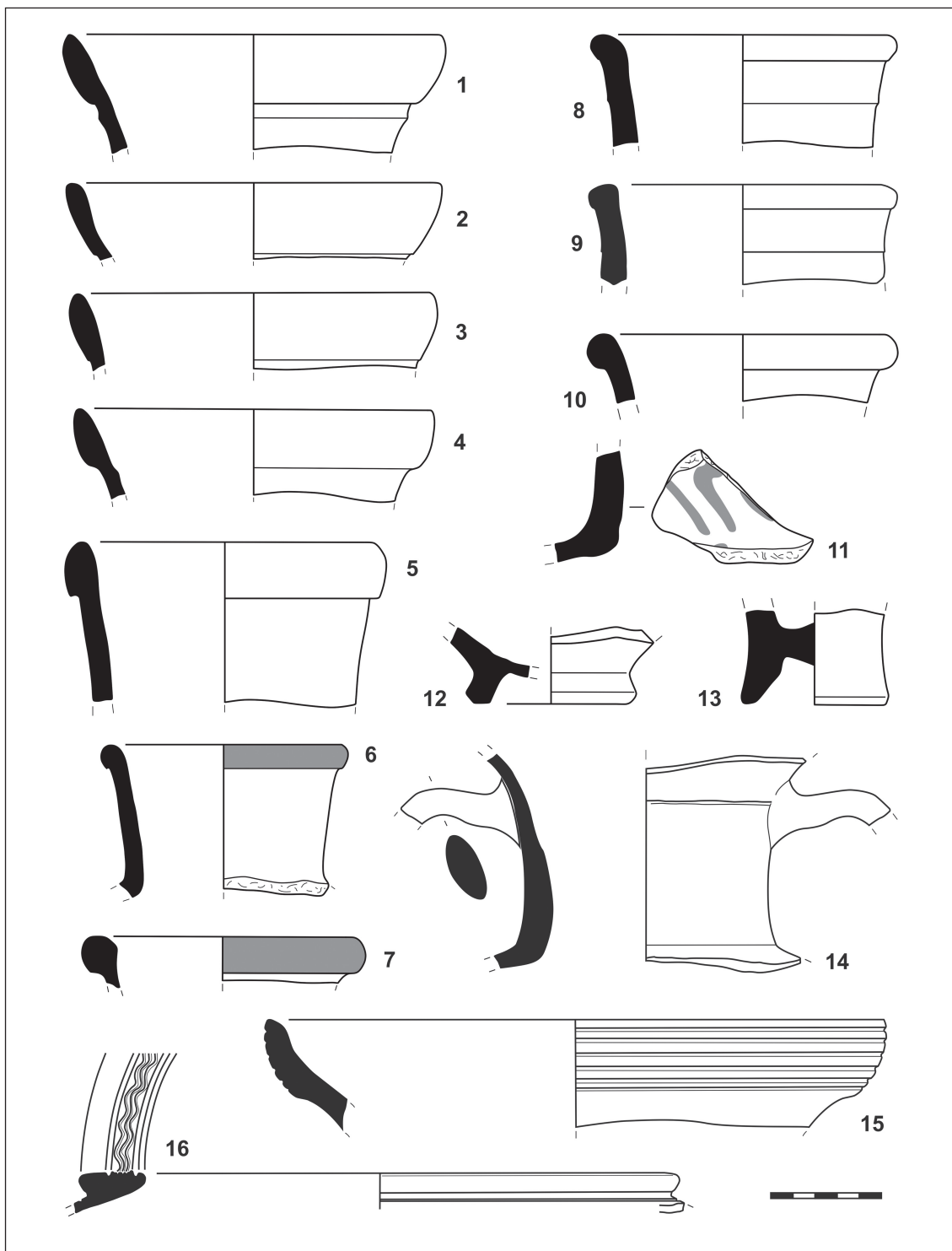


Fig. 3: Archaic transport amphorae (1–13) and monochrome grey-ware vessels (14–16) from House 1, first half of the 6th c. BC (excavations in 2010–2011).

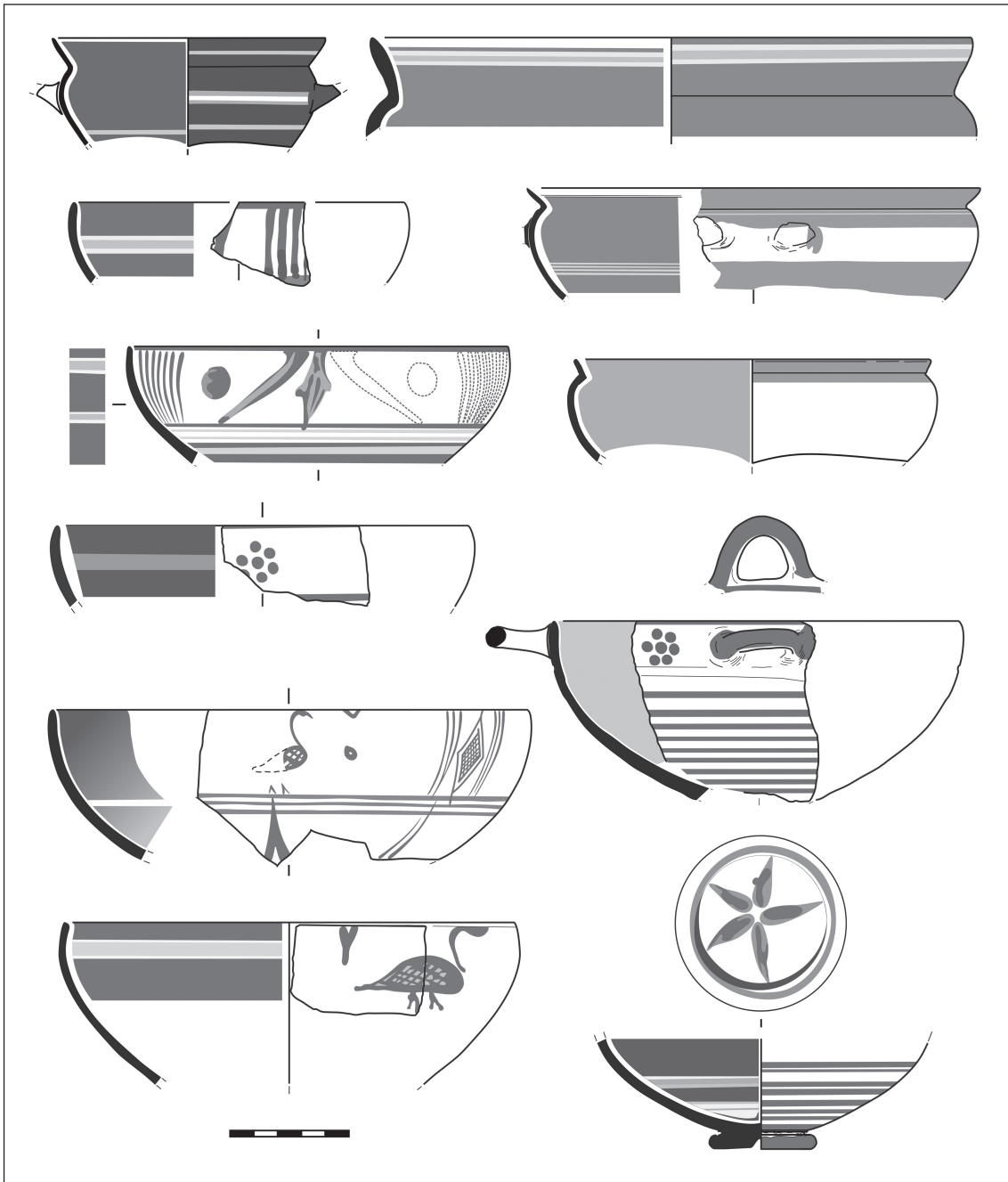


Fig. 4: East Greek cups from Archaic pits with pieces of slag on the island of St. Kirik, late 7th–early 6th c. BC (excavations in 2010–2011).

Notes

- ¹ On Apollonia, see Nedev – Panayotova 2003.
- ² Mattusch 1988, 140–141.
- ³ Chernykh 1978, 19–24.
- ⁴ Kunze et al. 2018, 605–606 figs. 17–18.
- ⁵ Panayotova et al. 2014.
- ⁶ Panayotova et al. 2014, fig. 1: House 1 is numbered 1 on the plan, under the Archaic altar IV.
- ⁷ See Bujskikh 2013, 107.
- ⁸ Boardman – Hayes 1966, no. 723 pl. 38; Boardman – Hayes 1973, nos. 2031–2032 pl. 13.
- ⁹ Cook – Dupont 1998, 28.
- ¹⁰ Alexandrescu 1978, nos. 224–233; Solovyov 2005, no. 45; Posamentir 2006, 163 fig. 11.
- ¹¹ Cook – Dupont 1998, 131 fig. 18. 1b; Boardman – Hayes 1966, 112, no. 1197 fig. 55; Boldrini 1994, 158–159 tav. 8.
- ¹² Cook – Dupont 1998, fig. 18. 1d; Boardman – Hayes 1966, 113; Schlotzhauer 2001, nos. 174–179.
- ¹³ Cf. Schlotzhauer 2001, nos. 255–256. 296.
- ¹⁴ Cf. Bujskikh 2016, 38 fig. 7.
- ¹⁵ Cf. Boardman – Hayes 1966, nos. 783–784 = Lemos 1991, nos. 927–928 pl. 124.
- ¹⁶ Cf. Walter-Karydi 1973, nos. 1008–1021 pl. 124–125.
- ¹⁷ Cf. Boardman – Hayes 1966, nos. 580–581; Solovyov 2005, no. 53.
- ¹⁸ Kalaitzoglou 2008, nos. 295–301.
- ¹⁹ Cf. Boardman – Hayes 1966, no. 621; Solovyov 2005, nos. 62–63.
- ²⁰ Cf. Boardman – Hayes 1966, nos. 654–664.
- ²¹ Cf. Chistov 2012, 65–66 pl. 65–67.
- ²² Chistov 2018, 22.
- ²³ See Chistov 2012, 20–24 pl. 1, 7, 13.
- ²⁴ See Birzescu 2012, 127–143; Sezgin 2012, 150–159; Bujskikh 2014, 94–96 fig. 9.
- ²⁵ Birzescu 2012, 36–37; Sezgin 2012, 221–222.
- ²⁶ Cf. Birzescu 2012, 175–177; Bujskikh 2014, 96 fig. 12.
- ²⁷ See Nikov 2012, figs. 23. 37. 43.
- ²⁸ Treister 1996, 169–170; Tsetskhladze 2009, 335.

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Fig. 1–4: by Margarit Damyanov.

References

Alexandrescu 1978

P. Alexandrescu, La céramique d'époque archaïque et classique (VIIe–IVe s.), *Histria* IV (Bucharest 1978).

Birzescu 2012

I. Birzescu, Die archaischen und frühklassischen Transportamphoren, *Histria* XV (Bucarest 2012).

Boardman – Hayes 1966

J. Boardman – J. Hayes, Excavations at Tocra, 1963 to 1965. The Archaic Deposits I, BSA Suppl. 4 (London 1966).

Boardman – Hayes 1973

J. Boardman – J. Hayes, Excavations at Tocra, 1963 to 1965. The Archaic Deposits II and Later Deposits, BSA Suppl. 10 (London 1973).

Boldrini 1994

S. Booldrini, Le ceramiche ioniche, *Gravisca. Scavi nel santuario greco* 4 (Bari 1994).

Bujskikh 2013

А. Буйских, Архаическая расписная керамика из Ольвии (восточногреческая, лаконская, коринфская, имитации) (Киев 2013).

Bujskikh 2014

А. Буйских, Амфоры конца VII – первой половины V в. до н.э. из Борисфена, *Археологія і давня історія України* 1 (12), 2014, 88–100.

Bujskikh 2016

А. Буйских, Йонийские килики из Борисфена, *Археологія і давня історія України* 1 (18), 2016, 29–42.

Chernykh 1978

Е. Черных, Горное дело и металлургия в древнейшей Болгарии (София 1978).

Chistov 2012

Д. Чистов (ed.), Материалы Березанской (Нижнебугской) античной археологической экспедиции, Том 2, Исследования на острове Березань в 2005–2009 гг. (Санкт-Петербург 2012).

Chistov 2018

Д. Чистов, Импорт товаров в амфорной таре на Березанское поселение в VI–V вв. до н.э. (по материалам раскопок участка “О-Западный” в 2004–2016 гг.), *Боспорские исследования XXXVI*, 2018, 19–36.

Cook – Dupont 1998

R. Cook – P. Dupont, *East Greek Pottery* (London 1998).

Kalaitzoglou 2008

G. Kalaitzoglou, Assesos: Ein geschlossener Befund südionischer Keramik aus dem Heiligtum der Athena Assesia, *Milesische Forschungen* 6 (Mainz 2008).

Kunze et al. 2018

R. Kunze – J. Abele – P. Leshtakov – K. Dimitrov – R. Krauß – T. Rödel, Archaeometallurgical Projections in the Highlands of Medni Rid, Southeastern Bulgaria. Preliminary Report on Fieldwork 2013–2015 with a Focus upon Remote Sensing Methods by Means of LiDAR, *JASc* 19, 2018, 596–617.

Lemos 1991

A. Lemos, *Archaic Pottery of Chios: The Decorated Styles* (Oxford 1991).

Mattusch 1988

C. Mattusch, *Greek Bronze Statuary, From the Beginnings through the Fifth Century B.C.* (Ithaca 1988).

Nedev – Panayotova 2003

D. Nedev – K. Panayotova, Apollonia, in: D. Grammenos – E. Petropoulos (eds.), *Ancient Greek Colonies in the Black Sea, Vol. I* (Thessaloniki 2003) 95–155.

Nikov 2012

K. Nikov, *Grey Monochrome Pottery from Apollonia Pontica* (Veliko Tarnovo 2012).

Panayotova et al. 2014

K. Panayotova – M. Damyanov – D. Stoyanova – T. Bogdanova, Apollonia Pontica: The Archaic Temenos and Settlement on the Island of St. Kirik, in: J. M. Alvarez – T. Nogales – I. Roda (eds.), *Centre and Periphery in the Ancient World. Proceedings of the XVIIIth International Congress of Classical Archaeology, Vol. I* (Merida 2014) 595–598.

Posamentir 2006

R. Posamentir, The Greeks in Berezan and Naukratis: A Similar Story?, in: A. Villing – U. Schlotzhauer (eds.), *Naukratis: Greek Diversity in Egypt. Studies on East Greek Pottery and Exchange in the Eastern Mediterranean* (London 2006) 159–167.

Schlotzhauer 2001

U. Schlotzhauer, *Die südionischen Knickrandschalen. Eine chronologische Untersuchung zu den sog. Ionischen Schalen in Milet* (Inauguraldissertation, Ruhr-Universität, Bochum 2001).

Sezgin 2012

Y. Sezgin, *Arkaik Dönem Ionia Üretimi Ticari Amphoralar* (Istanbul 2012).

Solovyov 2005

C. Соловев (ed.), *Борисфен-Березань. Начало античной эпохи в Северном Причерноморье* (Санкт-Петербург 2005).

Treister 1996,

M. Treister, *The Role of Metals in Ancient Greek History* (Leiden 1996).

Tsetskhladze 2009

G. Tsetskhladze, The Black Sea, in: K. Rauflaub – H. van Wees (eds.), *A Companion to Archaic Greece* (Oxford 2009) 330–346.

Walter-Karydi 1973

E. Walter-Karydi, *Samische Gefäße des 6. Jahrhunderts v. Chr., Samos VI.1* (Bonn 1973).