GLASS VESSELS DISCOVERED IN DACIAN BURIDAVA*

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Keywords: pre-Roman Dacia, Romania, *Buridava*, glass, ribbed bowls, beaker, bottles, carchesium, skyphos, rython, sagging, mold-blowing, free-blowing, splashed glass, cut-faceting, inscription

Abstract: The article presents glass items discovered over time during archaeological excavations performed on the Dacian site of *Buridava* and preserved in the collection of the "Aurelian Sacerdoțeanu" Vâlcea County Museum. The analyzed fragments were once part of glass vessels created in different techniques: sagging, mold-blown, free-blown, cut-faceted, and splashed glass. Most identified shapes are ribbed bowls, but one could also mention one cylindrical beaker with inscription, a beaker with cut-faceted decoration, one "*carchesium*" fragment, two fragments from bottles handles, one skyphos (?) handle, and one fragment from a rython(?). Though the analyzed lot includes a relatively small number of items, it draws attention due to the variety of production techniques employed and the variety of identified shapes. Taking all these into consideration, one may say that the lot represents a group of glass items typical to the chronological interval between the end of the 1st century B.C. and the beginning of the 2nd century A.D.

Rezumat: Articolul prezintă obiecte de sticlă descoperite pe parcursul săpăturilor arheologice sistematice efectuate în așezarea dacică de la *Buridava*, jud. Vâlcea, aflate în colecția Muzeului Județean "Aurel Sacerdoțeanu" din Râmnicu Vâlcea. Fragmentele analizate provin de la obiecte de sticlă realizate în tehnici diferite: presare în/pe tipar, suflare în tipar, suflare liberă, fațetare și sticlă pătată. Cele mai multe piese – șapte fragmente - provin de la boluri cu nervuri în relief, alături de care au mai fost identificate și fragmente de la un pahar cilindric cu inscripție, un pahar cu decor polifațetat, un "carchesium", două butelii, un skyphos (?) și un rython (?). Chiar dacă lotul prezentat este alcătuit dintr-un număr mic de exemplare, el atrage atenția prin tehnicile variate de realizare a pieselor și prin varietatea formelor de vase identificate. Se poate spune că el reprezintă o sinteză a tehnicilor de prelucrare a sticlei și a celor mai frecvente forme confecționate din acest material în intervalul cronologic cuprins între sfârșitul secolului I a. Chr. și începutul secolului I p. Chr.

The items included in the present catalogue were discovered during archaeological excavations performed during the 1970s and 1980s in the Dacian settlement of Ocniţa - Fundătura Cosotei, known in specialized literature as Dacian *Buridava*. Just like the whole material discovered on the site, these items are currently preserved in the collection of the County Museum Vâlcea. The sixteen items under analysis (out of which 14 could be determined) do not represent the entire lot of glass objects discovered in *Buridava*; existing publications also list items that are not part of the lot received for research.¹

According to the production technique, the items under discussion can be grouped as follows:

Cast vessels (sagging glass). This category includes five fragments of ribbed bowls (no. 1-5) created through the pressing of a heated piece of glass on a semispherical mold placed on a wheel. As the wheel was slowly turned, the edge of the bowl was created by pressing the margin of the glass disk against the mold with a metal bar, while another bar was employed in the formation of the ribs through rhythmical movements.² The earliest ribbed bowls were discovered in the Syrian-Palestinian area in contexts dated to the 3rd-2nd centuries B.C.³ Such vessels were exported to sites around the Mediterranean and there they generated local production that brought significant changes and improvements in the shape and decoration of glass vessels.⁴

The fragments identified at *Buridava* were part of deep semispherical bowls with rounded narrow rims, flared and slightly concave on the outside (*no. 1, 3*) or slightly in-turned (*no. 2*), and more (*no. 1*) or less (*no. 3*) concave walls. They are made of natural glass, of various colors: semi-transparent blue (*no. 1-2, 5*), semi-opaque white (*no. 3*) or yellowish-brown (honey-like) (*no. 4*). A single fragment (*no. 3*) was discovered in a closed context, inside a pit (subterraneous room?) – room/Gr. 2/73 –, inside a sanctuary on the acropolis

³ Jackson-Tal 2004, p. 27.

Caiete ARA 4, 2013, p. 5-14.

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¹ For example the items published in Berciu 1981, p. 51, Pl. 38/4-5; p. 94, Pl. 48/1.

² Hayes 1975, p. 16; Grose 1984, pp. 28-29, Fig. 4; Fleming 1996, p. 20, Fig. 14 A, B, D; Ferrari *et alii* 1998, p. 185; Jennings 2000, p. 42.

⁴ Fleming 1996, p. 20.

of Fortress 1, the filling of which was dated to the end of the 1st century B.C. and the beginning of the 1st century A.D.⁵ Overall, on the basis of their analogies and technical characteristic, the ribbed bowl fragments identified at *Buridava* can be dated to the end of the 1st century B.C. and the 1st century A.D.⁶

Up to the present state of research, cast ribbed bowls from the Dacian environment have been published from Poiana,⁷ Popești,⁸ and Răcătău.⁹

Mold blown vessels. Specialists generally agree that the great tradition of mould blown glass started in the coast region of Syria/Palestine, even if a great number of items dated to the 1st century B.C. were discovered in Italy and this might suggest local, north-Italian production prior to that in Syria/Palestine.¹⁰ In Italy and in the western provinces of the empire, the earliest mold blown vessels date to the end of Tiberius' reign and the type disappears in the middle of the Flavian Dynasty.¹¹ The case of early oriental products is slightly more ambiguous, but there are arguments supporting the identification of the technique's first use during the first years of the 1st century A.D.¹²

In Buridava, we have identified three fragments of mold blown vessels.

Fragment *no.6* is part of a semispherical bowl made of blue, semi-transparent glass paste, with rounded inwardly turned rim, narrow edge, concave on the outside, rounded walls, high base concave on the outside, and faceted leaning surface. It is a type of bowl modeled in a bivalve mold, in an attempt to recreate ribbed bowls through casting, dated to the second half of the 1st century A.D.

Bowls of this type were used all around the Mediterranean; examples have also been found in the north-western Roman provinces and in sites around the Black Sea, including Histria, and it is difficult to establish if the item under discussion is of Syrian or North Italian origin.¹³ In pre-Roman Dacia, such bowls have been published so far from Poiana¹⁴ and Răcătău.¹⁵

Two other fragments (no. 7a, 7b) are part of a semi-opaque white *cylindrical beaker* with rounded flared rim, straight walls and straight cut base, with two grooves placed in the upper and lower part of the body. It is decorated with two horizontal garlands, one placed in the upper and one in the lower part of the body, and two other vertical garlands that divide the body in two equal parts. On the body one can also see two adjoining letter fragments, *AP*, part of the inscription *[KATAX]AI[PE] [KAI] [EYPAINOY]* ("rejoice and be happy, to your health!").

Harden included vessels bearing the inscription *KATAXAIPE KAI E\Psi \Phi PAINO\Psi* in group F; they are Syrian products dated to the 1st-2nd century A.D.¹⁶

⁵ Berciu 1981, pp. 61-62, 80.

⁶ Isings shape3b; Grose group C; Morin-Jean 1913, shape 68, p.122-123, Fig. 152; Davidson 1952, no. 595 p. 79-80, 95, Fig. 6; Buechner 1960, no. 1, p. 110, Pl. 36/TG1; von Saldern 1962, no. 4a, p. 6-7, Pl. 5/Fig.4; Bucovală 1968, no. 28 a-b, p. 37; Davidson-Weinberg 1970, no. 35, p. 25-27; Hayes 1975, no. 51, p. 20, Fig. 2, Pl. 4; Kraskovska 1981, p. 13, Fig. 3; Lightfoot 1993, p. 22, 30-31, Fig. 30; Cool 1996, p. 56-58, Fig. 9A; Jennings 2000, Group 4, p. 47-50, Fig. 4/2; Jackson-Tal 2004, p. 21-24, Fig. 13/3; Mandruzzato, Marcante 2005, no. 187, p. 26, 89, 137; Foy 2005, p. 20-23, Fig. 16/6; Weinberg, Stern 2009, cat. 45 (G 605), p. 69, Fig. 3, Pl. 4.

⁷ Teodor, Chiriac 1994, no. 3-19, pp. 187, 194-197, Pl. I/3-4, Pl. II/1-11, Pl. III/1-7, Pl. X/1-4, 6; Pl. XI/1-2, 4, 7.

⁸ Vulpe 1960, p. 330, Fig. 7/4; Glodariu 1974, no. S12/c, p. 227, Pl. XLIX.

⁹ Căpitanu et alii 2010, no. 4-8, pp. 145, 149-150, Fig. 1, Pl. 1.

¹⁰ This issue remains unsettled, since none of the arguments is supported by irrefutable evidence. For discussion on the topic see: Harden 1935, pp.180-181; Hayes 1975, p. 33; Stern 1995, p. 65; Mandruzzato 2006, pp. 185-186; Price, *apud* Madruzzato 2006, p. 187; Buljevič 2006, p. 163;

¹¹ Three chronological groups were established for mold-blown glass vessels discovered in Europe and on sites in the Western Mediterranean: group 1. end of Tiberius' reign – beginning of Claudius' reign; group 2. Claudius – middle of Nero's reign; group 3. middle of Nero's reign – middle of the Flavian dynasty (Stern 1995, p. 66)

¹² Stern 1995, p. 66.

¹³ Hayes 1975, no. 82, pp. 33, 47-48; Withouse 2001, no. 498, p. 30; Alexandrescu 1966, pp. 219-220, XXV¹, 13, Pl. 101;

¹⁴ Teodor, Chiriac 1994, no. 42, pp. 190, 201, Pl. VI/1.

¹⁵ Teodor, Chiriac 1994, no. 42-43, pp. 201-201, p. VI/1-2; Căpitanu et. alii, 2010, no.10, p. 150, Fig. 1, Pl. 1.

¹⁶ Harden 1935, p. 181.

Similar items known so far from pre-Roman Dacia have been discovered on the sites of Poiana¹⁷ and Răcătău.¹⁸

Vessels made of splashed glass. Splashed glass seems to have been a Syrian-Palestinian product that imitated the more expensive (technologically, and probably also through their price), mosaic-vessels.¹⁹

In *Buridava* we have identified a single such fragment (*no.8*), most probably part of a *"carchesium"* with rounded, slightly thickened flared rim, with the edge delimited by a relief stripe with two concave segments on the outside. The fragment is made of cobalt blue glass with white and yellow "spots" on the outside and an opaque white stripe on the outer side of the rim. This type of items belongs to Frenersdorf's third group, with a production period starting in the beginning of the 1st century A.D., reaching a peak in the middle of that century and declining sometime around 70. A.D.²⁰

Most splashed glass vessels from known contexts were found in Italy – with the highest density of such discoveries in northern Italy and the surrounding areas – and the western provinces of the Empire.²¹ Two fragments were identified so far from pre-Roman Dacia, on the sites of Poiana and Răcătu.²²

Cut-faceting glass are represented among the items discovered in *Buridava* by a fragment made of white semi-transparent glass (no.9) that was part of a beaker, Oliver group II.²³ It was a cylindrical beaker with slightly flared walls in the upper part, flared rim, and the decorated area divided in two rows by grooves and relief lines.

Specialists generally agree on the oriental origin of cut-faceting glass, but the close connection between beakers with such decoration (Oliver's group I) and the Roman army rather suggests a western origin of the type.²⁴ The earliest items with cut-faceting decoration date to the last quarter of the 1st century/the beginning of the 2nd century A.D.²⁵

Vessels with this type of decoration spread over an extensive area, from China to Portugal and the Scandinavian Peninsula.²⁶ The only similar fragment published so far from pre-Roman Dacia was discovered in Poiana²⁷ and belonged to a beaker with cut-faceting decoration (group II in Oliver's typology).²⁸

Free blown glass vessels. Free blown glass vessels started to be popular during the reign of Augustus²⁹ and gradually replaced the other types of glass recipients. Blown glass production spread from northern Italy to the western provinces of the Empire, the Rhine area and Gallia reaching a flourishing production during the 3rd-4th centuries A.D.³⁰

Among the items discovered in *Buridava* we have identified a single fragment from a ribbed bowl (no.10) with deep semispherical body, rounded rim and flared edge. It is made of mauve semitransparent glass with opaque white filaments on the outside.

Similar published items were found in Poiana³¹ and Răcătău.³²

²¹ Whitehouse 1997, p. 207.

- ²³ Oliver 1984, no. 90, pp. 36-38, Fig. 8.
- ²⁴ Weinberg, Stern 2009, p. 52.
- ²⁵ Oliver 1984, pp. 40-41; Weinberg, Stern 2009, p. 51.
- ²⁶ Weinberg, Stern 2009, p. 52.
- ²⁷ Teodor, Chiriac 1994, no. 44, p. 202, Pl. VI/4, XI/10.
- ²⁸ Oliver 1984, no. 29, p. 37, Fig. 6.
- ²⁹ For discussions on literary, archaeological, and iconographical sources on the introduction of blown glass technique in Italy see Grose 1977, pp. 9-29.
- ³⁰ Harden 1934, pp. 143-144.

¹⁷ Teodor, Chiriac 1994, no. 31-33, p. 200, Pl. V/2-5.

¹⁸ Căpitanu *et alii* 2010, no. 11, p. 150, Fig. 1, Pl. 2.

¹⁹ Wĥitehouse 1997, p. 207.

²⁰ Whitehouse 1997, p. 207.

²² Teodor, Chiriac 1994, no. 30, p. 199, Pl. V/1, X/10; Căpitanu *et alii*, 2010, no. 12, p. 150, Fig. 2, Pl. 2.

³¹ Teodor, Chiriac 1994, no. 62-63, p. 205, Pl.VIII/3-4.

³² Căpitanu *et alii* 2010, no. 13-14, p. 148, 150, Fig. 2, Pl. 2.

I could include in the same category several fragments from uncertain types of vessels, probably *bottles*: one fragment part of a bottle with cylindrical neck, rounded shoulder and fine belt handle with two veins and one groove on the outer surface (*no.11*) and one handle fragment with four veins in relief (*no.12*). Both fragments are modeled out of blue-greenish transparent glass. Bottles are typical shapes to the chronological interval between the 1st and 3rd century A.D. Taking into consideration the other glass items under analysis and the entire lot of imported objects discovered on the site of *Buridava*, one can estimate the fact that the two fragments are dated sometime during the 1st century A.D.

From pre-Roman Dacia jars have been published from Sarmizegetusa Regia,³³ Poiana,³⁴ and Răcătău.³⁵ In the same group one could also mention one handle (*no.13*) that might have belonged to a *skyphos* (?), made of transparent blue-greenish glass paste and a *rod fragment*, cylindrical in section, half tubular, that might have been part of a *rython* (Isings 73b?), made of colorless glass, semi opaque, covered with a fine pearly film on both outside and inside. Glass rythons are rather rare finds and can be dated from the 1st until the 3rd century A.D.³⁶ Taking into consideration the entire lot of imported items discovered in the settlement of *Buridava*, the item under discussion might be dated to the 1st century A.D.

All fragments under analysis are part of tableware vessels: bowls, cups, beakers, and bottles. Except for a ribbed bowl fragment (*no.3*) discovered in a complex extensively documented in the site's monograph,³⁷ all others were found in contexts that lack clear data and were thus dated through analogy with similar items found on sites around the Mediterranean and the Black Sea.³⁸ Though the lot is not very large, it is still remarkable through the variety of shapes and production techniques and one might say that, on a smaller scale, they represent the main vessel shapes and glass production techniques employed between the end of the 1st century B.C. and the 2nd century A.D.

Catalogue

Abbreviations: Cf. – confirmation; Obs. - observation; Of. – other findspots; Ref. reference; disr. – distance between ribs; fs. – fragment size; hp. – height preserved; rd. – rim diameter; tw. – wall thickness.

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Cast vessels

1. *ribbed bowl*; 1978, S XXXVIII, L. 6, civilian settlement (?); inv. no. 1704; rd. 12 cm, hp. 4.8 cm, disr. 2.5 – 2.8 cm, tw. 0.35-0.25 cm; Pl. 1/1a-b.

Fragment of rim and wall with three vertical ribs; rounded flared rim, narrow edge, slightly concave on the outside, slightly flared; deep semispherical body: blue, semitransparent glass; traces of polishing and leveling on both inside and outside; polishing mark outside the edge, above the ribs.

Italian or Syrian product from the second quarter of the 1st c. B.C. - end of the 1st c./beginning of the 2nd c. A.D.

Cf. Isings form 3b; Grose group C; Morin-Jean 1913, form 68, pp.122-123, Fig. 152; Davidson 1952, no. 595 pp. 79-80, 95, Fig. 6; Buechner 1960, no. 1, p. 110, Pl. 36/TG1; von Saldern 1962, no. 4a, p. 6-7, Pl. 5/Fig.4; Bucovală 1968, no. 28 a-b, p. 37; Davidson-Weinberg 1970, no. 35, pp. 25-27; Hayes 1975, no. 51, p. 20, Fig.2, Pl. 4; Kraskovska 1981, p. 13, Fig. 3; Lightfoot 1993, pp. 22, 30-31, Fig. 30; Cool 1996, pp. 56-58, Fig. 9A; Jennings 2000, group 4, pp. 47-50, Fig. 4/2; Jackson-Tal 2004, pp. 21-24, Fig. 13/3; Mandruzzato, Marcante 2005, no.187, p. 26, 89, 137; Foy 2005, pp. 20-23, Fig. 16/6; Weinberg, Stern 2009, no. 45 (G 605), p. 69, Fig. 3, Pl. 4.

³³ Glodariu 1974, S8/a, b, p. 245, Pl. XLVIII; Gheorghiu 1994, p. 43, Fig. 1/1, 2/2.

³⁴ Teodor, Chiriac 1994, no. 57-59, pp. 204-205, Pl. VII/7-8, 10.

³⁵ Căpitanu et alii, no. 26, p. 151, Pl. 3.

³⁶ Mandruzzato, Marcante 2005, no. 288, p. 105.

³⁷ Berciu 1981, pp. 80-96.

³⁸ Glass vessels discovered on other Dacian sites were generally dated through analogy with similar items discovered outside pre-Roman Dacia.

Of. Poiana (Glodariu 1974, no. S11/8, 10-11, p. 246, Pl. XLVIII; Teodor, Chiriac 1994, p. 196, no. 13 Pl. III/ 1; XI/1); Răcătău (Căpitanu *et alii*, 2010, no. 5, p. 149, Fig. 1, Pl. 1).

Ref. Berciu 1981, p. 94.

2. ribbed bowl; inv. no. 3670; fs. 2.5-3.2 cm; tw. 0.40-0.35 cm; Pl.1/2a-b.

Fragment of rim and wall with part of a vertical rib; straight rounded rim, slightly in-turned: narrow edge, slightly in-turned; hemispherical body; transparent blue glass; traces of leveling inside and out.

Origin, dating, confirmation, and analogies similar to no. 1.

3. ribbed bowl; 1973, C.1, Gr. 2; inv. no. 1211; hp. 2.8 cm, disr. 0.45-0.50 cm, tw. 0.30-0.20 cm; Pl. 1/3a-b.

Fragment of rim and wall with two slightly oblique ribs; rounded flared rim; narrow, flared edge; deep hemispherical body; groove on the edge, on the inside; semi opaque white glass with pearly film; black coat that partially covers the fragment's outer surface.

Italic or Syrian (?) product; in the Athenian Agora discovered in a context dated to the beginning of the 1st century A.D. (Weinberg, Stern 2009, cat. 48 (G 605), p. 70).

Cf. Isings form 3; Grose group C, Weinberg, Stern 2009, p. 70, Fig. 3, Pl. 4. *Ref.* Berciu 1981, p. 94, Pl. 48/2.

4. *ribbed bowl*; "from one of the foundation trenches of the main palisade on the southern side of Fortress 1, § X1, namely on the outer one"; inv. no. 3667; fs. 5.2 x 5.1 cm, tw. 0.4-0.5 cm; disr. 0.40-0.80 cm; Pl. 1/4a-b.

Base fragment with six ribs; two fine grooves on the inside; semi-transparent brown-yellowish (honey-like color) glass, with fine air bubbles on the inside.

North Italic product, 1st century A.D.

Cf. Isings form17; Hayes 1975, no. 636, p. 153, Fig. 21, Pl. 40; Grose 1982, p. 28, Fig.11; Whitehouse 2001, no. 758-766, p.202-206; Mandruzzato, Marcante 2005, no. 223, p. 27, 95, 140.

Of. Poiana (Glodariu 1974, no. S11/6, p. 246, Pl. XLVIII; Teodor, Chiriac 1994, p. 198, no. 22-27, Pl. IV/4, 6, 9; X/12; XI/3); Răcătău (Căpitanu *et alii*, 2010, no. 13,14, p. 150, Fig. 2, Pl. 2).

Ref. Berciu et. alii 1984, p. 184, Fig. 11/3.

5. *ribbed bowl (?)*; 1985, C.1, T. III –T.IV (among rocks); without inv. no.; rb. 11 cm, hp. 3.4 cm, tw. 0.30 – 0.20 cm; Pl. 1/5a-b.

Fragment of rim and wall. Rounded rim, slightly in-turned; deep hemispheric body, slightly in-turned wall; blue-greenish semi-transparent glass, gray-black deposits on both inside and outside; polishing mark on the outside, in the upper part of the fragment.

Origin, dating, confirmation, and analogies similar to no. 1?

Mold blown vessels

6. bowl with vertical ribs; inv. no. 3669; fs. 4.5x4 cm, disr. 1.2-1.4 cm; tw. 0.25 - 0.13 cm; Pl. 2/6a-b.

Fragment of base of wall with three vertical ribs; curved wall, concave on the inside; base slightly concave on the outside; ribs; semi-transparent blue glass with fine air bubbles inside.

Sidonian or north Italian, 1st century A.D.

Cf. Hayes 1975, no. 82, p. 48, Fig. 2; Alexandrescu 1966, p. 219–220, XXV¹, 13, Pl.101; Lightfoot 1993, pp. 36-37, Fig. 53-54; Whitehouse 2001, no. 498, p. 30; Mandruzzato, Marcante 2005, no. 201, p. 91.

Of. Poiana (Teodor, Chiriac 1994, no. 42-43, pp. 201-202, Pl. VI/1-2); Răcătău (Căpitanu *et alii*, 2010, no.10, p. 150, Fig. 1, Pl. 1).

7. cylindrical beaker; inv. no. 3675; fs. 3.8 x 5 cm, 2.5 x 3 cm; tw. 0.10 - 0.30 cm; Pl. 2/7a, a`, 7b, b`.

Two wall fragments with relief decoration and part of an inscription; white-greenish semi-transparent glass with fine air bubbles inside.

Decoration: on the first fragment: remains of two/three? palm branches placed vertically and horizontally; on the second fragment: two relief lines placed in the upper part of the fragment; underneath one horizontal palm branch, and yet under it two adjacent letter fragments $AI^{"}(?)$ from the inscription [KATAX]AI[PE] [KAI] [E $\Psi \Phi PAINO\Psi$].

9

Syria-Palestine, 1st century A.D.

Cf. Harden 1935, tip F, pp. 171-173, Pl. XXV, a-c, XXVII, a.; Whitehouse 2001, no. 485, 486, pp. 22-23. *Of.* Poiana (Teodor, Chiriac 1994, no. 31-33, p. 200, Pl. V/2-5); Răcătău (Căpitanu *et alii*, 2010, no. 11, p. 150, Fig. 1/11a-b, Pl. 2).

Splashed glass vessels

8. Carchesium? inv. no. 3671; rd. 13.2 cm, hp. 2.1 cm; tw. 0.25-0.15 cm; Pl. 2/8a-b.

Fragment of rim and wall; rounded rim, slightly thickened, flared; edge bordered by one line in relief in two segments concave on the outside; cobalt blue glass with white and yellow "spots" on the outside and one opaque white line on the outside of the rim.

East-Mediterranean or Italic product, 1st century A.D.

Cf. Whitehouse 1997, no. 363, p. 211; Mandruzzato, Marcante 2005, no. 169, p. 86.

Of. Poiana (Teodor, Chiriac 1994, no. 30, p. 199, Pl. V/1, X/10). Răcătău (Căpitanu *et alii*, 2010, no.12,p. 150,Fig.2, Pl. 2).

Ref. Berciu *et alii*, 1984, p. Fig. 11/1. *Obs.* variant Isings form 36?

Cut-facetted glass

9. trunk-shaped beaker? inv. no. 3668; fs. 3.6 x 3.3 cm; tw. 0.3-0.35 cm; Pl. 2/9 a-b.

Wall fragment; groove and relief stripe in the median area that separates two rows of prolonged, interposes ovoli. Colorless, translucent, compact glass; the ovoli show traces of faceting.

It is difficult to establish the center of production or the eastern/western origin of the type; third quarter of the 1^{st} century A.D. – beginning of the 2^{nd} century A.D.

Cf. Isings form 21; Oliver group II.

Free blown vessels

10. *ribbed bowl*; the civilian settlement; inv. no. 3673; fs. 3.2x1.7 cm, tw. 0.25-0.17 cm; Pl. 3/10 a-b. Wall fragment with rib; mauve semi-transparent glass with opaque white threads. *North-Italic product, the first three quarters of the* 1st *century A.D.*

Cf. Isings form 17; Morin-Jean 1913, form 69, p. 123, Fig. 153; Bucovală 1968, no. 32, pp. 39-40; Whitehouse 2001, no. 763-765, p. 204-205; Mandruzzato, Marcante 2005, no. 219, 220, pp. 27, 94, 140.

Of. Poiana (Glodariu 1974, no. S11/6, p. 246, Pl. XLVIII; Teodor, Chiriac 1994, p. 198, no. 22-27, Pl. IV/4, 6, 9; X/12; XI/3); Răcătău (Căpitanu *et alii*, 2010, no. 13,14, p. 150, Fig. 2, Pl. 2).

Ref. Berciu 1981, Pl. 120/17.

11. *bottle*; inv. no. 3666; fs. 2.8 x 4.8 cm; tw. 0.3-0.45 cm; Pl. 3/11a-c.

Fragment of handle and body; fine belt handle with two veins and one groove on the outer surface; cylindrical neck and rounded shoulder; blue-greenish glass; prolonged air bubbles inside.

Obs. Hard to establish if Isings form 50 or 51.

12. *bottle*; 1982, C 1, S. B.18, Gr. 2; inv. no. 1609; fs. 3.5 x 2.5 cm; tw. 0.3-0.45 cm; Pl. 3/12. Fragment of neck and belt handle with four rib fragments on the outer surface; blue-greenish glass. *Obs.* Same note as in the case of no. 02.

13. skyphos?,1979, C. 1, T II, S.D (cistern); inv. no. 1789; fs. 2.8 x 2.4 cm; tw. 0.1 cm; Pl. 13a-b. Fragment of handle and wall; rounded handle, draped in the upper part and with a median rib on the outer surface; very fine wall. Transparent blue-greenish glass.

14. *rython*? inv. no. 3674; fs. 0.4-0.8 x 4.2 cm; pl. 3/14a-b. Rod fragment, cylindrical in section; half of the section full, half tubular; colorless semi-opaque glass with pearly film.



PI. 1

Excerpt from ARA Reports 4, 2013.



Pl. 2



Pl. 3

Excerpt from ARA Reports 4, 2013.

Bibliography

| Alexandrescu 1966 | P. Alexandrescu, Necropola tumulară. Săpături 1955-1961, Histria II, 1966, pp. 133-294. |
|---|---|
| Berciu 1981 | D. Berciu, <i>Buridava dacică</i> , București, 1981. |
| Berciu <i>et alii</i> 1984 | D. Berciu, M. Iosifaru, S. Purice, Gh. Andreescu, Descoperiri și însemnări de la Buridava |
| berefa to toto 1701 | <i>dacică</i> . II., TD, 1-2, V, 1984, pp. 177-186. |
| Bucovală 1968 | M. Bucovală, Vase antice de sticlă la Tomis, Constanța, 1968. |
| Buechner 1960 | T.S. Buechner, The Glass from Tarrha, Hesperia 29, 1, 1960, pp. 109-117. |
| Căpitanu <i>et alii</i> , 2010 | V. Căpitanu, V. Ursachi, M.C. Popescu, Glass discovered in the Geto-Dacian settlement of |
| - | Răcătău, Bacău District, Studii de istorie și arheologie, Cluj Napoca 2010, pp. 141-154. |
| Cool 1996 | H.E.M. Cool, The Boudican Uprising and the Glass Vessels from Colchester, Expedition vol. 36, |
| | no. 2, 1996, pp. 52-62. |
| Davidson 1952 | G.R. Davidson, The Minor Objects, Corinth XII, 1952. |
| Davidson-Weinberg 1970 | G. Davidson-Weinberg, Hellenistic Glass from Tel Anafa in Upper Galilee, JGS 12, 1970, pp. |
| | 17-27. |
| Ferrari <i>et alii</i> 1998 | D. Ferrari, A. Larese, G. Meconcelli Notarianni, Glossario del Vetro, Comitato Nazionale |
| | Italiano AIHV Contributi Storico-Tecnici, 4, Venezia 1998, pp. 171-226. |
| Fleming 1996 | S. J. Fleming, Early Imperial Roman Glass at the University of Pennsylvania Museum, |
| D 2005 | Expedition vol. 38, no. 2, 1996, pp. 13-36. |
| Foy 2005 | D. Foy, Une production de bols moulés à Beyrouth a la fin de l'époque hellenistique et le commerce |
| C1 1: 1004 | de ces verres en Méditerranée occidentale, JGS 47, 2005, p. 11-37. |
| Gheorghiu 1994 | G. Gheorghiu, Obiecte de sticlă descoperite în cisterna de la Sarmizegetusa Regia, in Studii de |
| | istorie a Transilvaniei. Specific regional și deschidere europeană, Cluj-Napoca, 1994, pp. |
| C_{1} de vier 1074 | 43-45. I Chair B h (i) in the height is the height in the height in the height in the height is the height in the height in the height is the height in t |
| Glodariu 1974 Grace 1979 | I. Glodariu, <i>Relații comerciale ale Daciei cu lumea elenistică și romană</i> , Cluj, 1974. |
| Grose 1979 | D.F. Grose, The Syro-Palestinian Glass Industry in the Later Hellenistic Period, MUSE 13, 1970 p. 54, 67 |
| Grose 1984 | 1979, p. 54-67. Grose D.F., Glass Forming Methods in Classical Antiquity: Some Consideration, JGS 26, 1984, |
| G10se 1784 | pp. 35-35. |
| Harden 1935 | D.B. Harden, Romano-Syrian Glasses with Mould-Blown Inscriptions, JRS 25, 1935, pp. |
| | 163-186. |
| Hayes 1975 | J.W. Hayes, Roman and Pre-Roman Glass in the Royal Ontario Museum. A Catalogue, Toronto, |
| | 1975. |
| Isings 1957 | C. Isings, Roman Glass from dated finds, Groningen/ Djakarta, 1957. |
| Jackson-Tal 2004 | R. E. Jackson-Tal, The Late Hellenistic Glass Industry in Syro-Palestine: A Reappraisal, JGS |
| 5 | 46, 2004, pp. 11-32. |
| Jennings 2000 | S. Jennings, Late Hellenistic and Early Roman cast Glass from the Soukas Excavation (BEY |
| | 006), Beirut, Lebanon, JGS 42, 2000, pp. 41-59. |
| Kraskovska 1981 | L. Kraskovska, Roman Glass from Slovakia, JGS, 23, 1981, pp. 11-17. |
| Lightfoot 1993 | C. S. Lightfoot, Some Examples of Ancient Cast and Ribbed Bowls in Turkey, JGS 35, 1993, |
| | pp. 22-38. |
| Mandruzzato, Marcante 200 | 0 |
| | Aquileia. Il vasellame da mensa. Corpus delle Collezioni del Vetro nel Friuli Venezia Giulia, |
| | Vol. II, Venezia, 2005. |
| Morin-Jean 1913 | Morin-Jean, La Verrerie en Gaule sous l'Empire Romain, Paris, 1913. |
| Oliver 1984 | A. Oliver, Early Roman Faceted Glass, JGS 26, 1984, pp. 35-58. |
| von Saldern 1962 | A. von Saldern, <i>Glass from Sardis</i> , AJA 66, 1, 1962, pp. 5-12. |
| Teodor, Chiriac 1994 | S. Teodor, C. Chiriac, Vase de sticlă din așezarea geto-dacică de la Poiana (jud. Galați) I, |
| Vulna 1060 | ArhMold 1994, pp. 183-221. P. Vulpa, Santingul gubackaria Potenti Matariala VII, 1960, p. 221, 228 |
| Vulpe 1960 Weinbarg Storn 2009 | R. Vulpe, <i>Şantierul arheologic Popești</i> , Materiale VII, 1960, p. 321-338. |
| Weinberg, Stern 2009 Whitehouse 1997 | G. D. Weinberg, E. M. Stern, Vessel Glass, The Athenian Agora, XXXIV, 2009. |
| Whitehouse 2001 | D. Whitehouse, <i>Roman Glass in The Corning Museum of Glass</i> , vol. I, New York, 1997. D. Whitehouse, <i>Roman Glass in The Corning Museum of Glass</i> , vol. II, New York, 2001. |
| · · · · · · · · · · · · · · · · · · · | 2. Trincenouse, Roman Grass in List Gorning Plastant of Grass, vol. 11, New 101K, 2001. |