

## DETERMINATION OF ORIGIN OF TRANSPORT AMPHORAE OF HERACLEAN TYPE: LAB REASSESSMENT OF THEIR RECENT REALLOCATION TO APOLLONIA PONTICA

Pierre DUPONT

ArAr Lab, Maison de l'Orient, France ; e-mail : pierre.dupont15@orange.fr

**Keywords:** Apollonia Pontica, amphorae of Heracleean type, determination of origin, XRF chemical analysis

**Abstract:** XRF chemical results do not support the complete refutation of Balabanov's proposal of reattribution to Apollonia put forward by Vladimir Katz and Natalia Pavlichenko.

**Cuvinte-cheie:** Apollonia Pontica, amfore de tip Heracleea, determinarea originii, analize XRF

**Rezumat:** Rezultatele analizelor XRF nu sprijină pe de-a întregul propunerea lui Balabanov de reatribuire a acestui tip de amfore Apolloniei, așa cum a fost sugerată de Vladimir Katz și Natalia Pavlichenko.

Already intricate on the typological point of view, the determination of origin of transport amphorae of "Heracleean" type<sup>1</sup>, alias "with englyphic stamps" for part of them<sup>2</sup> was recently given a proposal of reattribution to Debelt *apud* Kostadin Tcheshma, in the vicinity of Apollonia Pontica by P. Balabanov<sup>3</sup>, about which preliminary lab results allow the following comments.

Concerning Apollonia proper, the XRF chemical measurements already obtained on an amount of some 273 samples include those of some ten sherds of amphorae of Heracleean type, supplemented by seven others from nearby Debelt.

On the general dendrogramme of classification of chemical results (Fig. 1), all our samples of "Heracleean" jars from both Apollonia (APO 37–40, 116–121) and Debelt (APO 136–144) are gathered within a homogenous cluster J, except a single fragment of terracotta sarcophagus and another one of roof tile.

Conversely, this homogenous chemical cluster J, grouping together all our samples of "Heracleean" jars appears completely separated from those of pottery finds of common wares B, E and I, both from Apollonia and D, most probably ascribable to local products of Apollonian rather than Debelt workshops.

Quite surprisingly, such a clear splitting into separate units between common wares and Heracleean transport amphorae from Apollonia contradicts the first archaeometrical results previously obtained by a Bulgarian

team<sup>4</sup>, melting together into a single entity both domestic pottery from Apollonia and Heracleean amphorae from both Apollonia and nearby Debelt.

After having evidenced the specificity of chemical pattern of these transport amphorae of "Heracleean" type from both Apollonia and Debelt, let's now focus our attention on their specificity in comparison with similar finds from more or less distant Pontic settlements, viz. seven additional samples of "Heracleean" amphorae from Orgame (Istros chora)<sup>5</sup> (ORG 32–38), as well as five from Callatis<sup>6</sup> (CAL 21–25) and five more from Tauric Chersonesus and Kuban<sup>7</sup> (TAM 60–64), both reported as Dorian foundations of Heraclea by ancient sources<sup>8</sup>.

For lack of any available sample of transport amphorae from the Ereğli workshop dump<sup>9</sup>, reported by D. Kassab-Tezgör<sup>10</sup>, eight sherds of humdrum common wares (HEP 1–8) from the modern town were at least added for comparisons, as well as five more of Sinopean amphorae (SNO 1–4 and BYZ 687) for testing casual typological misattributions.

The results of these regional comparisons centred on "Heracleean" amphorae proper, as expressed in the new dendrogramme of classification (Fig. 2), once again put forward the concentration of most of them within a single entity B, thus suggesting that we are most probably faced with the products of a major exporting centre of

<sup>4</sup> Kuleff *et alii* 1998.

<sup>5</sup> Courtesy V. Lungu.

<sup>6</sup> Courtesy L. Buzoianu.

<sup>7</sup> Courtesy S. Monakhov.

<sup>8</sup> See Avram 2009; 2022, *passim*.

<sup>9</sup> Incidentally, all of Shelov types A–B, D–E *et alii*, without englyphic stamps.

<sup>10</sup> Arsen'eva *et alii* 1997; Kassab-Tezgör 2013; 2020, chap. 2.

<sup>1</sup> Monakhov 2003, p. 123–144, pls. 86–99; Monakhov *et alii* 2019, p. 173–175.

<sup>2</sup> Garland 2019 (with previous bibliography).

<sup>3</sup> Balabanov 1985; Balabanov 2010, before stepping back lastly to Heraclea (Balabanov *et alii* 2016, p. 53–54).