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**DRESSEL 24 SIMILIS AMPHORAE OF ROMAN IMPERIAL PERIOD FROM ERYTHRAI**

*This study aims to present the locally produced Erythrai Dressel 24 Similis amphorae found during the excavations of the Erythrai 1977-1988 season. During the excavations, many amphora types were found dating from the 5th century BC to the 11th century AD. Dressel 24 Similis amphorae, also known as cup-shaped rims, is one of the most important finds from Erythrai, and is dated from the 1st century BC to the 3rd century AD. Erythrai Dressel 24 Similis amphora samples were evaluated for similarity with other production centers with their morphology and relative dating periods. Clay in two colors is an important feature of the group, it also shows similarity with Chian examples.*

Ionian – Erythrai – Amphorae – Dressel 24 Similis – Cup-shaped Amphorae

**1. Introduction<sup>1</sup>**

Erythrai, one of the 12 Ionian cities mentioned by Herodotos (Herodotos I.142), is located on the west coast of the Karaburun (Mimas) (Strabon XIV, 645; Cramer 1832: 346; Morton 1998: 170-171) peninsula, overlooking the Chios (Chios) Island, in the Ildırı Gulf, just North of the Modern Çeşme district of İzmir (Akurgal 1979: 1; Akalın 2008:299; Akalın 2009: 139). Erythrai was built between two streams, Aleon Stream (Ildırı) (Plinius V.31, 17; Bayburtluoğlu 1975: 15) in the South and Aksos Stream in the valley to the North of the city (**fig. 1**) (Bayburtluoğlu 1975: 4; Akurgal 1979: 1).

Erythrai is settled from the 3rd millennium BC, the city was founded by Cretan colonists. Erythrai was a member of the Panionion / Ionian League in the 9th century BC and city's name is listed in the Athenian Tax List in the mid-5th century BC and is known to have been a member of the Delian League (Uzunoğlu 2012: 241-259; Lewis 1994: 293, 296, d. 51; Carlson 2013: 16-17). It is known that the city established commercial relations with the Phoenicians, as well as with Chios, Corinth, Cyprus and Samos, based on imported finds dating to the end of the 7th century BC.

Erythrai amphorae are divided into four types as: Tall rounded rim (Type 1), Mushroom rim (Type 2), Band rim (Type 3) and Cup shaped rim (Type 4). The first three types are dated from the end of the 5th century BC to the 3rd-2nd century BC. The Cup-shaped amphorae, named Dressel 24 Similis by Opaît, which were produced in Erythrai from the



**Fig. 1.** Map of Ionia (Carlson 2004: 155).

1st century BC to the middle of the 3rd century AD (Lawall 2004: 185; Bezechky 2013: 72; Opaît 2007: 632), constitute the most dense and important group of amphorae dating to the Roman Period. Cup-shaped amphorae are similar to Zeest 90 or Dressel 24 (Zeest 1960: Pl. XXXVII, 90; Manacorda 1975: 379, f; Opaît 2007: 629).

Seriation based on fragments of rims or spikes is very difficult and for many amphora types it is often aspects of vessel analogies, sizes and capacities that developed over time rather than individual formal characteristics. However, the fact that Erythrai is a production center and that there are many examples of cup-shaped amphorae and that these examples

<sup>1</sup> The author would like to thank Assoc. Prof. Ayşe Gül Akalın, Director of Erythrai Excavations for permission to study and publish this group of amphorae in memoriam of Prof. Dr. E. Akurgal and Prof. Dr. C. Bayburtluoğlu. And I would like to thank Prof. Dr. Billur Tekkök Karaöz, Assoc. Prof. Çiğdem Gençler Güray, Dr. Andrei Opaît and Dr. Deniz Tamer who have always given me great support and help.

have subtypes with similarity in form made it possible to carry out a typological study. The presence of cup-shaped amphorae in many ancient cities from the Late Hellenistic Period to the 3rd century AD has enabled the determination of chronology and various subtypes. Although the context information of the amphorae from Erythrai excavations is limited, it is possible to make an approximate dating based on parallel samples.

The Cup-shaped amphorae produced at Erythrai are divided into three main types as A, B, C. All types of Cup-shaped amphorae have two different fabric colors; pink and gray. Gray fabric amphorae were consciously produced using different firing technique and probably there have been different workshops.

First and Second Phase of excavations carried out in 1977 have focused on the Athena Temple, Building with Toichobate and in 1977-78 excavations were at the Terrace Walled Structure on the East of Athena Temple and Hellenistic House, between 1978 and 1983 Cennettepe<sup>2</sup>, in 1977 Peristyl House with Mosaics<sup>3</sup>, in 1980 Theatre excavations, in 1988 Museum Sounding Excavations by Özyiğit<sup>4</sup>. Sixty seven percent of the amphorae is from the excavated quarters around Aksos River area by Özyiğit (Özyiğit 1990: 125-138), thirty three percent is from different parts of the city<sup>5</sup> (Bayburtluoğlu 1975: 79-83; Akurgal 1979: 5-26).

## 2. Fabric

Type 1 (Tall rounded rim) and Type 2 (Mushroom rim) amphorae of Erythrai, have only red colored fabric with dense lime and less black inclusions than lime. Red fabric and the similar temper are seen in all types of Erythrai. Gray fired samples of the same texture of fabric were found in only one waster of Type 3 (Band rim) amphorae. During the Roman Period, Erythrai amphorae with cup shaped rim (Type 4) were extensively produced in both red colored fabric and gray fired.

The first group of fabric has colors ranging from red and light red to reddish yellow (2.5 YR 5/6, 2.5 YR 6/6, 5 YR 4/4). The clay structure of all evaluated samples is as follows: Finely tempered and hard-fired with small pores contains very dense and small pieces of lime. In addition to small or medium-sized black inclusions, red and yellow inclusions can also be seen. Although it is not seen in all samples, there is a small contribution of mica. However, an intense mica was not observed in any of the samples. In some samples, the intense

lime inclusions is quite high, even only visible to the naked eye; some samples have medium density.

The amphorae (Type 1-4) in the first group in section have light red core and in pinkish exterior. On the surface, amphorae have thin self-slip mostly pink or close to pink tones.

The Hellenistic band rim (Type 3) and cup-shaped rim (Type 4) amphorae have similar clay and are in the second fabric group, the colors range from light red, reddish gray, light brownish gray, gray to dark gray (2.5 YR 6/6, 2.5 YR 6/4, 5 YR 6/1, 2.5 YR 6/1, 2.5 YR 3/1, 7.5 YR 4/1). It shows the same morphological features as the first fabric group. The clay contains very dense fine lime and small amounts of black inclusions. The fabric of this type is basically red and the outer surfaces are gray due to firing conditions.

In some examples, the clay is fired completely gray both on the surface and core. There are also samples showing slight hue differences depending on the firing condition. The gray must have been a conscious choice of the atelier as seen in the many examples found, rather than misfiring.

## 3. Erythrai Type 4 amphorae

Type 4 of Erythrai production is Dressel 24 Similis amphorae with cup-shaped rims, this group constitutes the most common group of finds among the Erythrai amphorae. It has been observed that this form was produced in both pink-red and gray fabric in Erythrai (Özyiğit 1990: 128).

The earliest examples of Erythrai Type 4 forms with mouth diameters varying between 9-18 cm are seen in the 1st century BC (Opaît and Tsaravopoulos 2011: 280, 317). Their form is characterized by its long, outward-widening mouth and a curved neck, continuous with the ovoid body. Oval section handles start from the middle of the neck and are joined at the shoulder. The bottom is a spike (Lawall 2004: 185; Bezeczky 2013: 72).

Although it has undergone a long evolution from the late Hellenistic period to the late Roman period, its mouth and base profile are similar to Zeest 90 dated to the 1st century AD or Dressel 24 forms in H. Dressel's typology of 1899 (Manacorda 1975: 379, f; Zeest 1960: Pl. XXXVII, 90; Opaît 2007: 629). In the study conducted by Beltrán, amphora samples with similar forms were classified as Form 71 (Beltrán Lloris 1970: 573, Similis: Form 71, Fig. 236,4). Lungu has classified the group as "Hellenistic Erythrai Type B" amphora (Lungu 2009a: 21; Lungu 2009b: 48). Carlson and Lawall was defined the 4th group as "cup shaped rim" (Carlson and Lawall 2007: 37). It is mentioned in detail in the study of Dressel 24 Similis amphorae by Opaît, he grouped them under Dressel 24 Similis B, C and D (Opaît 1980: 296; Opaît 2007: 630-633). The cup-shaped amphorae was grouped under Type 25 by Dyczek and dated to the 1st-3rd centuries AD (Dyczek 2001: 173). The mouth form continued to expand further during the first two centuries AD, making the interior of the mouth concave, causing it to be named Dressel 24 Similis (Opaît 2007: 627-633; Opaît and Tsaravopoulos 2011: 275-323).

Traces of production of this type of amphorae, whose rim forms were adopted by many amphora workshops in the

<sup>2</sup> Amphorae found during the excavations carried out in Cennettepe were recovered from Trench A1 and A2, East Trench 8 and 11, North Wall, Hellenistic Floor Sector and Triclinium.

<sup>3</sup> Amphorae found during the excavations carried out in Peristyl House with Mosaics were recovered from J, Y and M1 Room.

<sup>4</sup> The commercial amphora finds that were unearthed during the excavations carried out at intervals were studied as a master's thesis; Kırkanlı 2021.

<sup>5</sup> Additional dating evidence based on stratigraphic information from the excavations has not been detailed in past excavation reports. In addition, since the amphora shreds were transported from the Çeşme Museum to the excavation warehouse, there is no context information for each piece.

last phase of the Hellenistic Period, were found in Kouartou (Benea 2000: 437-438; Gabler et al. 2009: 64), Chios and, although uncertain, in the Phygela Peninsula near Kyme and Kuşadası (Dyczek 2007: 829, 834, Fig. 5, 3a; Chios: Opaît and Tsaravopoulos 2011: 275-280; Erythrai: Özyiğit 1990: 125-150; Kuşadası: Meriç 2002: 90). The products of these workshops suggested that a koine sharing the same amphora production was created in the center of the Aegean, starting from the Hellenistic Period (Küçüker 2017: 265-281). The cup-shaped rim amphorae discovered in the excavated workshops in Chios support the idea that the same type of amphora was a continuous production in both Erythrai and in Chios (Opaît and Tsaravopoulos 2011: 288, Fig. 13 a-b).

Although the lack of context information in the previous excavations created a difficulty in terms of searching for analogy, the kiln excavation on the island of Chios, just opposite Erythrai, has been an important guide. The historical development of the Dressel 24 Similis amphorae will be clarified with new excavations.

The cup-shaped amphorae produced by Erythrai are divided into three main types as A, B, C. All types of cup-shaped amphorae have two different fabric colors pink and gray (Kırkanlı 2021: 44-58).

In Erythrai, the body fragments were not found, the spike samples are quite uniform and do not have significant differences in form, being elongated or short depending on the subtypes.

#### *Erythrai Type 4: A1 - A1G and A2 - A2G*

Erythrai Type 4 A forms are similar to the amphora forms described by Opaît as Dressel 24 Similis C and D (Opaît 2007: 631-632).

Type 4A cup-shaped amphorae are divided into two subtypes, A1 and A2, depending on the difference in form. A1G and A2G type amphorae are gray fabric examples.

They have a wide mouth funnel-shaped with an internally thickened rim. The neck is conical. Mouth and neck are joined by drawing a soft S profile. Handles have an oval section and are attached to the mouth-neck of the amphora and to the neck-shoulder junctions. The traces of joins can be easily distinguished.

12 mouth fragments were grouped as Erythrai Type 4, A1; they have red fabric color and contain characteristic Erythrai clay inclusions. Only five samples are included in the figure 2 (**fig. 2, no. 1-5**: Opaît and Tsaravopoulos 2011: 286, Fig. 11.a-b, Fig. 13.a; Bezeczky 2013: Pl. 10,11. 105-106, 112-114, 127; Tekkök-Biçken 1996: Fig. 70, E10; Tekkök et al. 2001: Pl. 18. 168; Opaît 2007: 641, Fig. 7.36-37, Fig. 8.41, 46; Ardet 2009: Pl. XXIX. 102; Naumenko 2012: Pic. 2.10) (For other examples; Kırkanlı 2021, 320, 322, 324, 326, 329, 333, 366, Cat. no. 21, 23, 25, 27, 30, 34, 67).

In the A1 group of Type 4, four of the 16 mouth shreds have gray fabric and are called A1G. The surface and the middle part of the fabric (core) of the mouth pieces of A1G amphorae are gray and the edges are light red. It has typical Erythrai clay with little black, red and intense fine lime inclusions (**fig. 2, no. 6-9**: Opaît and Tsaravopoulos 2011: 286, Fig. 11.d, 316, Fig. 53.b; Tekkök-Biçken 1996: Fig. 70,

E10; Tekkök et al. 2001: Pl. 18. 168; Naumenko 2012: Pic. 2.10, 6.1; Ballet et al. 2012: Pl. 79. 717; Bezeczky 2013: Pl. 41, No. 551; Tiurin, Filippenko and Makaev 2020: Рис. 3.1, 3). This group date from the late Hellenistic Period to the 1st century AD (Opaît and Tsaravopoulos 2011: 280, 286, 287, Fig. 11, Fig. 12; Bezeczky 2013: Pl. 10-11, 105-129), same form is found in the 2nd to 3rd century AD contexts (Tekkök-Biçken 1996: Fig. 70, E10; Tekkök et al. 2001: Pl. 18. 168; Opaît 2007: Fig. 8.46) and interpreted as secondary use in some contexts (Tiurin, Filippenko and Makaev 2020: 208).

Cup-shaped amphorae in group A2 have a rounded and internally slightly thickened rim and a funnel shape by narrowing inward at the transition to the neck. Unlike the A1 group, the A2 specimens have a steeper neck angle; in other words, The junction of the neck and mouth has a slightly curved profile instead of an “S” (**fig. 2, no. 10-14**: Opaît 2007: Fig. 6.28; Naumenko 2012: Pic. 2.10; Bezeczky 2013: Pl. 11.119, 127; Auriemma and Quiri 2004: 50, Fig. 11). Two gray colored samples of the form were evaluated as A2G (**fig. 2, no. 15-16**: Opaît and Tsaravopoulos 2011, 316, Fig. 53.a; Bezeczky 2013: Pl. 41.551).

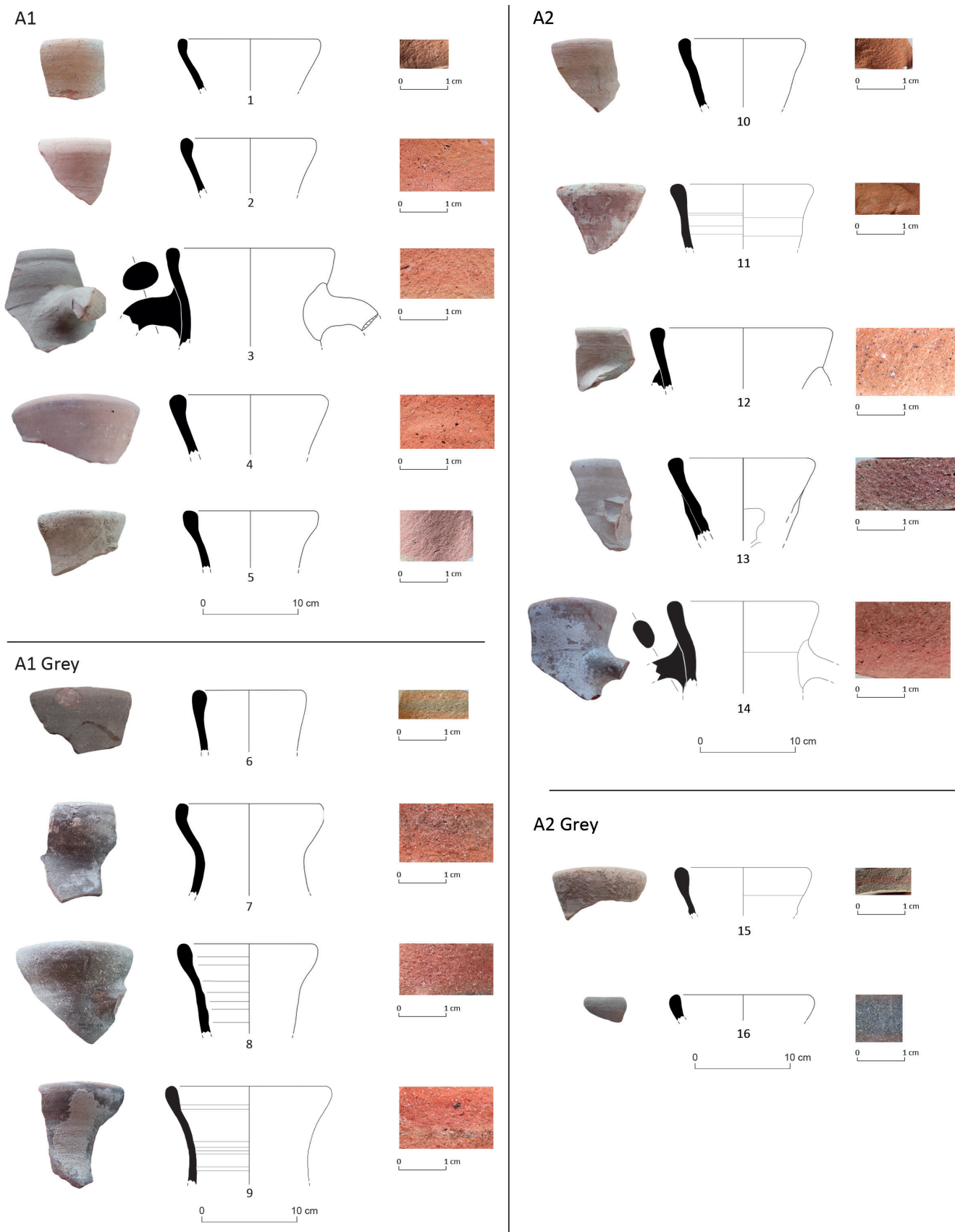
#### *Erythrai Type 4: B1 and B2 - B2G*

This group is similar to Opaît Dressel 24 Similis B (Opaît 2007: 631). Type B1 amphorae have a rounded and slightly thickened rim. The flaring mouth merges with the neck that narrows inwards. The neck smoothly widens and transitions to the shoulder. The separation of the mouth with the long and rather narrow cylindrical neck is emphasized by an incised line. The large-sized handles are oval in section (**fig. 2, no. 17-20**: Condurachi et al. 1957: 68, Fig. 50.1; Opaît 2007: Fig. 6.28-30; Tiurin, Filippenko, and Makaev 2020: Рис. 3.1; Opaît and Tsaravopoulos 2011, Fig. 13.b; Ballet et al. 2012: Pl. 79. 718) (Other samples see: Kırkanlı 2021: 337, 339, Kat. no. 38, 40).

Subtype B2 has thinner walls than B1, and although the transition is marked by a strong incised line on the outer surface of the amphora below the mouth, at the beginning of the neck (**fig. 2, no. 21-27; fig. 3, no. 21-27**: Condurachi et al. 1957: 68, Fig. 50.1; Opaît 2007: Fig. 6.28; Ballet et al. 2012: Pl. 79. 718; Bezeczky 2013: Pl. 11, No. 118-119, 125; Tiurin, Filippenko, and Makaev 2020: Рис. 3.1) (Other samples see: Kırkanlı 2021: 345, 349-353, Kat. no. 46, 50-54). In some examples inner surface of the neck is ribbed, unlike the B1 group. Type B2G amphorae are gray fabric examples (**fig. 3, no. 28-31**: Opaît 2007: Fig. 6.28, 32; Bezeczky 2013: Pl. 10.111). The development of the type continued through the 1st century BC and the 1st century AD (Opaît 2007: 631).

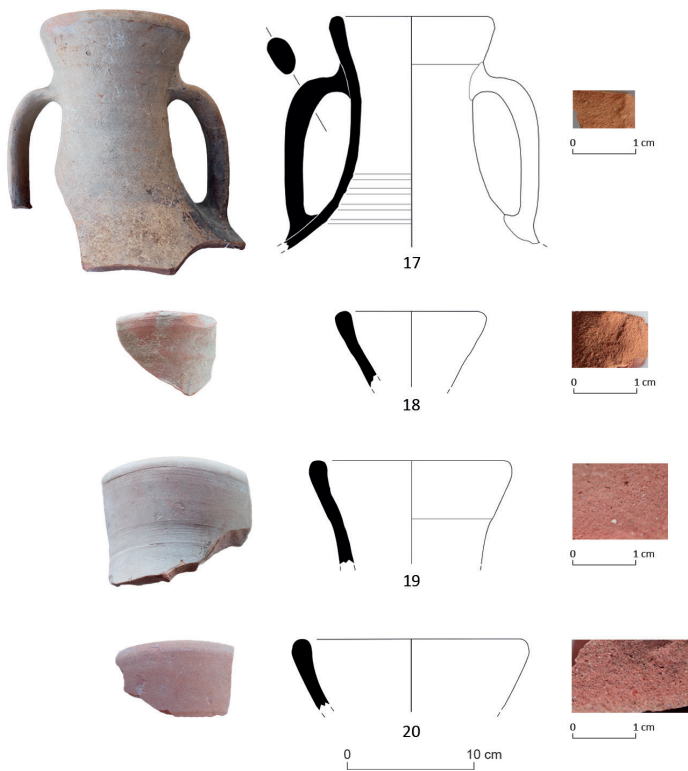
#### *Erythrai Type 4: C*

This group forms the latest type of cup-shaped amphorae, only one piece of type C was found. The mouth has a conical profile with an internally hooked rim and a triangular in cross-section on the outside. The funnel-shaped mouth is well separated from the neck. The downward-expanding neck merges distinctly with the sloping shoulder (**fig. 3, no. 32**).

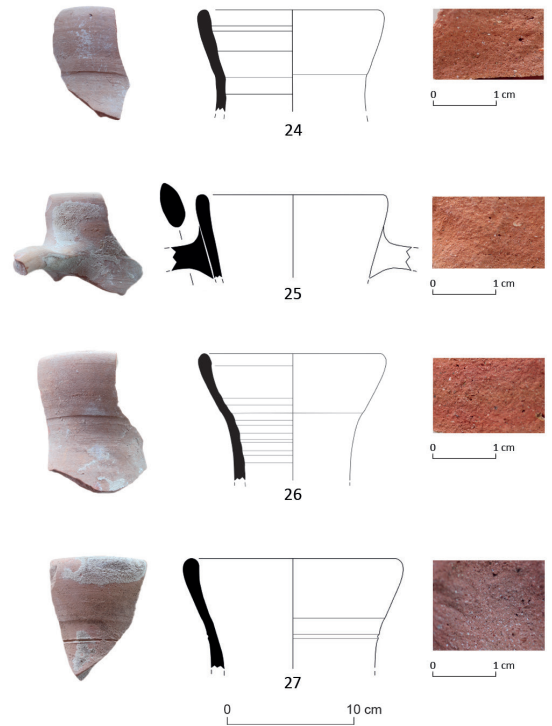


**Fig. 2.** Erythrai Dressel 24 Similis amphorae.

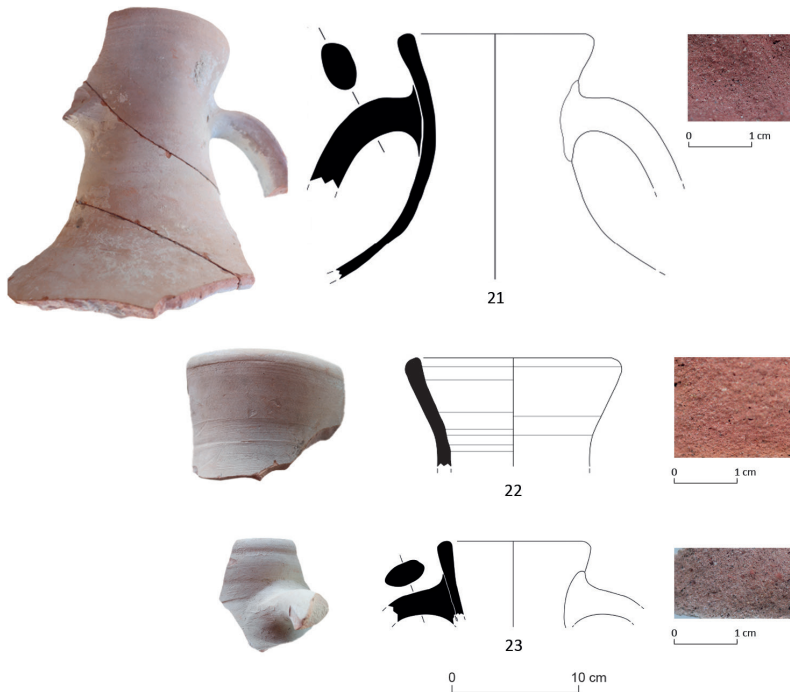
B1



B2



B2



B2 Grey

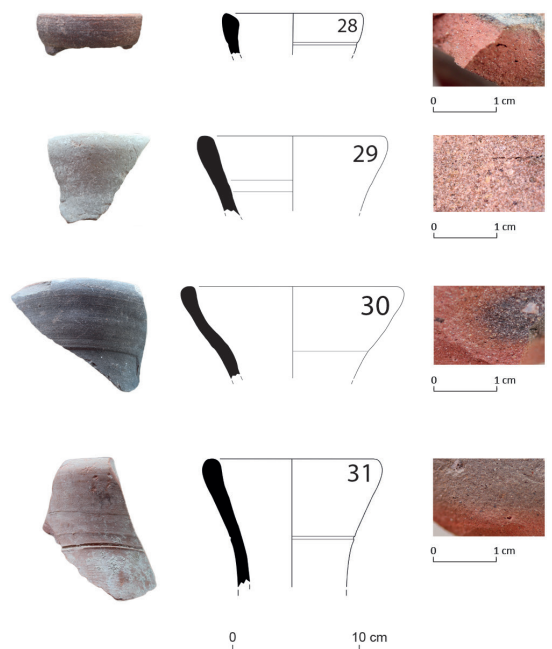
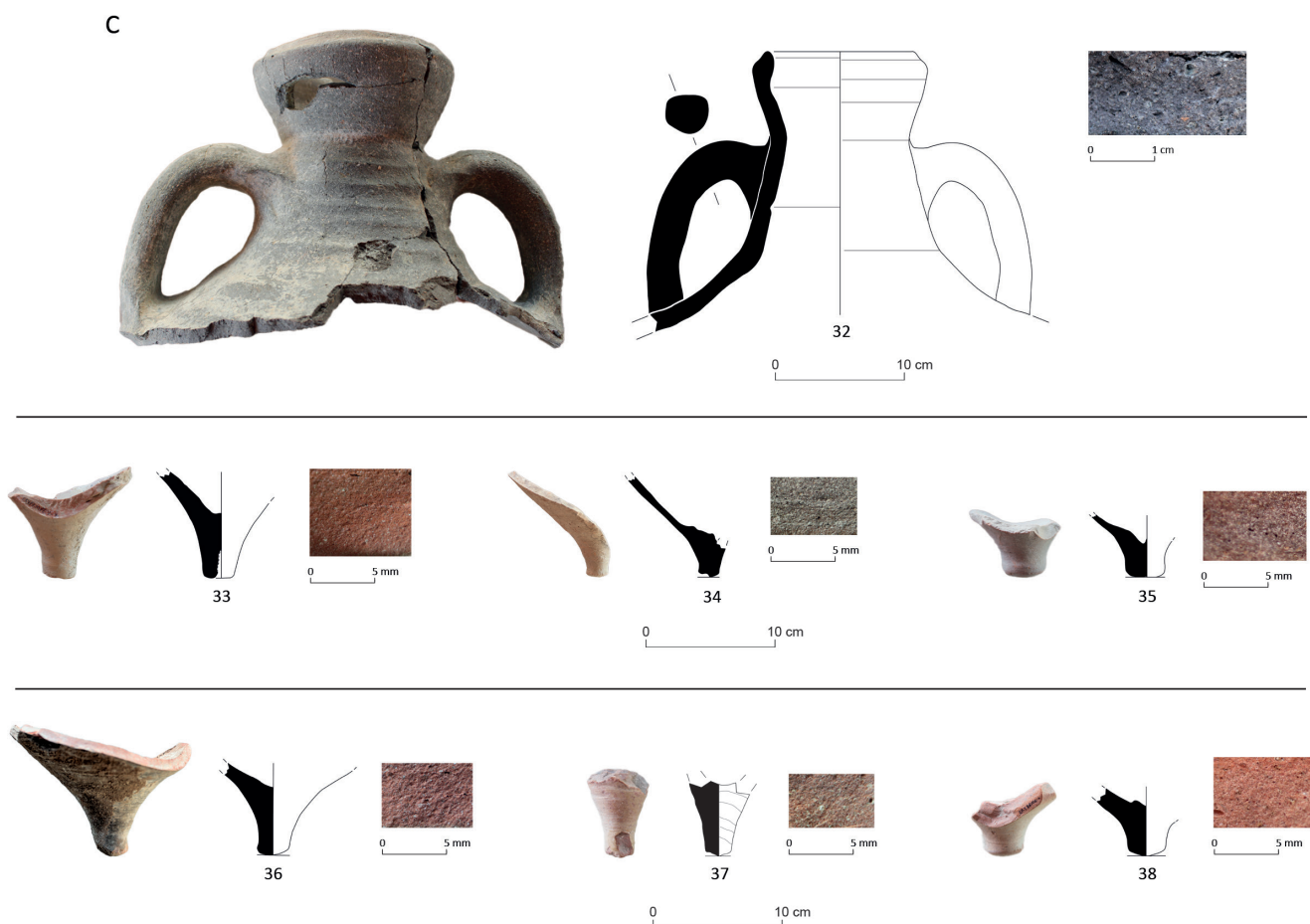


Fig. 3. Erythrai Dressel 24 Similis amphorae.



**Fig. 4.** Erythrai Dressel 24 Similis amphorae.

This group has a completely gray colored clay and the colors range from 2.5 Y 3/1 (Very Dark Gray) to 7.5 YR 4/1 (Dark Gray). The amphora specimen, which is known to be among the late examples of its kind, is dated to the middle of the 3rd century AD (Hayes 1983: 148, Fig. 22, A46; Auriemma and Quiri 2004: 50).

### Spikes

It was observed that the spikes of the Erythrai cup-shaped amphorae were of two different types. It is seen that the bottom part of the form, which narrows down and forms a conical profile, is surrounded by shallow grooves in the form of spirals in some samples, and left flat in some samples. At the end of the spikes, some examples are chamfered, while others are rounded, with a hollow in the center or a slight taper outward<sup>6</sup>.

All of the spikes contain thin and dense lime inclusions in clay, which are typical of Erythrai amphorae, and clay has

rarely black, red or mica additives. The surface colors in all examples are shades of pink to red that are not far from each other (fig. 3, no. 33-38). All of these spike types mentioned above can be seen between the 1st century BC and the 1st century AD, when the production of cup-shaped amphorae peaked (Lungu 2009: 36, Fig. 14; Opaît and Tsaravopoulos 2011: 287, Fig. 12.a-f; Naumenko 2012: 80, Pic. 6.3; Opaît and Paraschiv 2013, 329, Fig. 3; Tiurin, Filippenko and Makaev 2020: Рис. 3.1, 4).

### Conclusion

The Erythrai amphorae discovered with the Tektaş Burnu Shipwreck provide definitive evidence for the export of wine and amphora, the local production of the Ionia Region. Although its agricultural and commercial potential has been overlooked, the stamps on it and its distinctive form made it necessary to identify it as a large Archaic Period Ionian amphora exported primarily to the Black Sea.

At the end of the last quarter of the 5th century BC, the modest-sized Tektaş Burnu Shipwreck contributed significantly to the amphora production in Erythrai (Carlson 2003: 586-590; 2004: 149-154; Carlson and Lawall 2007: 33-38;

<sup>6</sup> According to Opaît, the small foot of the Late Hellenistic time becomes bigger between the 1st century AD and first half of the 3rd century AD (Opaît 2007: 632).

Carlson 2013: 4-11, Fig. 1-3). The Tektaş Burnu shipwreck, which was interpreted as a local shipwreck along the Ionian coast, helped us understand the economic relationship between Erythrai and Chios. Shipwreck at Tektaş Burnu, the only Classical Period Shipwreck ever found in the Aegean Sea, provided important evidence for the maritime trade on the Ionian coast, the Ionian Revolution, and the periods following the rise of Athens.

It is known that the amphorae produced by Erythrai, one of the city-states that exported wine in the Hellenistic Period after the Archaic Period, existed in many regions from the Eastern Mediterranean to the Black Sea (Brashinski 1970: 15, Fig. 3.4; Domaneantu 1993: 66, Fig. 4.28; Finkielsztejn 2000: Pl. 109,f; Şenol 2007: 69, diagram 5; Marangou and Marchand 2007: 281, Fig. 46-47; Lungu 2009a: Fig. 2, 4-16; Marangou 2012: 386, Fig. 159b, P. 514; Ballet et al. 2012: 317, Pl. 79, no 717-720; Şenol 2018: 365-366: Fig. 310).

The presence of different subtypes of Dressel 24 Similis amphorae at Erythrai from the Hellenistic period to the middle of the 3rd century AD reveals the evolution of these amphorae in the historical process. Different types and two different colors of fabric and results from excavations are

evidence that more than one workshop operated around the Aksos River during the Late Hellenistic, Early and Middle Roman Imperial Periods<sup>7</sup>.

Erythrai workshops have been producing amphorae from the Late Hellenistic period to the middle of the 3rd century AD and exporting Dressel 24 Similis form of amphora. The fact that similar containers were imported from Chios despite this production chain indicates that the demand for Chios wine continues as well as Erythrai wine (Kırkanlı 2021: 75-76, 443-452, Kat. No. 144-153).

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<sup>7</sup> The 1988 sounding excavations were carried out in the area defined as Çömlekçi District, and it was determined that the ceramic workshops of the city were located on both sides of the shore of Aksos stream, just outside the northern city walls. Thousands of ceramic shreds, slags and wasters were found in this area. Additionally, thousands of amphorae of the same type (Cup shaped) were identified in trench no. 1, and in the studies carried out, it was determined that the trench was a ceramic workshop Özyiğit 1990, 125-127, Res. 4-5.

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