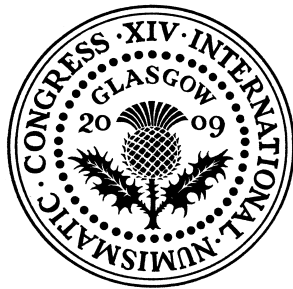


PROCEEDINGS OF THE
XIVth INTERNATIONAL NUMISMATIC CONGRESS

GLASGOW 2009

Edited by
Nicholas Holmes



GLASGOW 2011



International Numismatic Council



British Academy



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THE HOARD OF CYZICENES FROM THE SETTLEMENT OF PATRAEUS (TAMAN PENINSULA)

E.V. ZAKHAROV

The settlement of Patraeus is situated at the northern part of the Taman peninsula and at the northern shore of the Taman bay (Temrukskiy district, Krasnodarskiy krai). This archaeological site has a long and interesting history, dating back to the late Bronze – early Iron Age. Also the settlement has layers from the ancient and medieval periods. One of the most interesting periods in the history of Patraeus is the archaic, the time of the first steps of Greeks at that place during the Great Greek colonization.

The hoard of Cyzicenes is dated to the late archaic period. This hoard was found in the summer of 1998 by treasure-hunters. They informed members of an archaeological expedition about this. According to their information the hoard was found in the western part of the settlement in the flooded area (30m from the coast, the depth is about 40 cm).

The head of the archaeological expedition (Andrey P. Abramov) managed to take photos of all the coins of the hoard. Unfortunately he was not able to weigh them.

Information on the hoard was presented for the first time by A.P. Abramov and S.I. Boldyrev at the All-Russian Archaeological Conference ‘Bosporsky Phenomen (Bosporian Phenomenon)’ in 2001 (Abramov / Boldyrev 2001, p. 144). After that information about this hoard was published in my article about coins of the sixth to fifth centuries BC found in the settlement of Patraeus (Zakharov 2009, pp. 214-18).

The hoard contained three electrum coins of Cyzicus and one silver coin of Panticapaeum. There is a supposition that there were other coins in the hoard but there is not sufficient evidence.

Electrum coins of Cyzicus are represented by three types. The first is the most ancient coin which has on the obverse: tunny fish downwards between two heads of tunny turned at right and left side accordingly; also there are two dots on both sides of the fish. On the reverse is an irregularly shaped impressed square (*quadratum incusum*) (Fritze 1912, p. 3, No. 11 and Tafel I, 11). The size of the coin is 11 x 8 mm (**Pl. I, 1, 1a**). There is only a part of the coin type on the obverse: tunny fish downwards, the head of the tunny turned right and three dots. These components of the type give us only one option for reconstruction. This type was described by H. von Fritze among Cyzicenes of the first group which dated back to the first half of the sixth century BC.

The coin described was brought to Europe and sold by auction (Gorny & Mosch Giessener Münzhandlung Auction 130, 8-9 March 2004). In the description of this lot the weight of the coin was mentioned, which is 2.65 g. This identifies the coin as a hekte.

A few coins of such type are known. The first one was published by Fritze (1912, p. 3, No. 11 and Tafel I, 11). Probably another specimen was published by Hurter and Liewald (2006, p. 11, No. 18 and Tafel 2, 18.1) in their index of the most ancient coins of Cyzicus. It seems to us that the same hemiektion was represented by Babelon (1907, p. 155, No. 251 and Plate VI, 11). It is confirmed by the characteristic features of the obverse and similar weight of both specimen (1.35 g. for Hurter / Liewald and 1.33 g for Babelon). The other coin of this type was published in Hurter’s and Liewald’s article which was mentioned above. This coin is a different unit of hekte (it weighs 2.75 g). It was sold at auction by Hess-Leu (Hurter / Liewald 2006, p. 11, No. 19 and Tafel 2, 19.1). The fourth copy of the same type is in the Lockett collection. Its denomination is

also hekte (its weight is 2.69 g) (SNG, Lockett Collection, No. 2693). The fifth and last copy of a Cyzicene of the same type and denomination was found on the web-site of the auctioneers Gorny & Mosch Giessener Münzhandlung (Auction 152. October 10, 2006, lot number 1379). There is a hekte which was sold here, weighing 2.68 g. It is obvious that there are only five specimens of this type, which is represented by different face values: hekte and hemiekton. So the coin from Patraeus hoard is the sixth hekte of this coin type.

This coin is a very important find. There are only a few Cyzicenes of the first group which were found on the north coast of the Black Sea. So this coin is the most ancient numismatic find from Cimmerian Bosphorus and it is the only electrum coin of Cyzicus of that time which was discovered there.

On the obverse of the second type is: Head of a woman in Corinthian helmet turned left (Athena), there is a tunny fish on the right; on the reverse there is an impressed square divided on four small squares by a linear cross (Greenwell 1887, p. 62, No. 27 and Plate II, 3 (stater), 4 (hekte); Fritze 1912, p. 6, No. 64 and Tafel II, 17; Baldwin Brett 1974, p. 189, No. 1432 and Plate 72, 1432). The diameter of this specimen is 10 mm (**Pl. I, 2, 2 a**). There are a few coins of low denomination. One of them is a hekte (its weight is 2.69 g) from the Munich collection which was published by Babelon (1907, p. 162, No. 269 and Planche VI, 27). According to Fritze's classification this coin was included in the second group, which is dated back to 550-475 BC. But now there is a trend to divide this period into two phases (second half of the sixth century BC and first half of the fifth century BC). According to Baldwin Brett (1974, pp. 187-89), who made her own scheme of the electrum coinage of Cyzicus, this type is dated back to 550-500 BC.

The third type of electrum coins of Cyzicus from the Patraeus hoard has the obverse with the image: Dog turned left on a tunny fish, its right front paw is raised. The reverse image is an impressed square divided into four parts by a linear cross (Greenwell 1887, p. 115, No. 138 and Plate V, 34 (stater), 35 (hekte); Fritze 1912, p. 8, No. 93 and Tafel III, 12; Baldwin Brett 1974, p. 193, Nos. 1469-71 and Plate 73, 1469 (stater), 1470 (hekte), 1471 (hemiekton). The size of this coin is 11 x 9.5 mm (**Pl. I, 3, 3a**). The symbol of the city (tunny fish) is off the flan because the die was shifted in the process of minting. There are a lot of coins of this type. Many famous world collections contain them. There is a hekte in the British Museum (Wroth 1892, p. 31, No. 91 and Plate VII, 18). Hekte and hemiekton from Warren's collection are now in the Boston Museum of Fine Arts (Baldwin Brett 1974, p. 193, Nos. 1469-71 and Plate 73, 1469 (stater), 1470 (hekte), 1471 (hemiekton)). There is a hekte of the same type in the collection of the State Hermitage in Russia (Frolova 2004a, p. 55, No. 23 and Tablica III, 8). This coin was also included by von Fritze in the second group. Baldwin Brett (1974, pp. 191-93) dates this coin type back to 500-460 BC.

We have photos of these coins with a measuring scale, so we can reconstruct the face value of the last two coins. The diameter of these coins is 8-10 mm. According to their size these coins can be defined as hekte or hemiekton. The diameter of a stater is 15-20 mm. Diameters of hekte and hemiekton vary from each other by several millimetres. For this reason we can't be fully confident what the denomination of these coins is.

A silver coin of Panticapaeum has an obverse type: head of a full-face lion; on the reverse there is an impressed square divided into four parts like a 'windmill' (Frolova 2004b, Tafel 2, 32-50]. The diameter of this coin is 14 mm (**Pl. I, 4, 4 a**). Probably it is a hemidrachm which belongs to the second type according to the classification of Frolova (2004b, pp. 18-19). It is dated from the end of the sixth century BC to the first quarter of the fifth century BC.

Most probably the last coin dates the hoard. Electrum coins of Cyzicus belong to the first two groups according to the classification of von Fritze. These groups are dated to a very long period

- from the early sixth century BC to the second quarter of the fifth century BC. The coins made of precious metals (especially Cyzicenes) must have been circulating for a long period. There are a lot of hoards which prove this fact. The hoards from Piraeus (IGCH 47), Clazomenoi (IGCH 1194), Prinkipo (IGCH 1239), Jivkovo (IGCH 714) and Mirmekium (Abramzon / Frolova 2007-2008, pp. 79-94) contain electrum coins of Cyzicus of the last three groups. These coins are dated back from the middle of the fifth century BC to the middle of the fourth century BC. We have to be careful about the dating of Cyzicene complexes. The coin of Panticapaeum corrects the date of the hoard because it has a more accurate date. As mentioned above, this coin type is dated back to the first quarter of the fifth century BC. This coin is the latest in the hoard and determines the *terminus post quem* of the hoard, that is the first quarter of the fifth century BC. So we can suppose that the burial date of the hoard is after the first quarter of the fifth century BC. There is a supposition that the hoard might have contained other coins.

There is another hoard which has a similar burial date to the hoard from Patraeus. It was found in Olbia in 1965 and it also contained Cyzicenes (IGCH 1002). It was found by local residents and now there are only five coins from the hoard kept in the museum in Kiev. S.A. Bulatovich, who explored this hoard, examined eight Cyzicenes. All of these coins were included by von Fritze in the second group according to his classification (550-475 BC). So this hoard must be dated back to the period after the first quarter of the fifth century BC.

The hoard from Patraeus is a unique complex including Cyzicenes and silver coin of Panticapaeum. This hoard and the hoard from Olbia reflect the early stage of circulation of electrum coins of Cyzicus on the North Coast of the Black Sea. According to the dating of these two hoards and other individual finds of early specimens of Cyzicenes, this process must be dated back from the late sixth century BC to the early fifth century BC. During the fifth and sixth centuries BC electrum coins of Cyzicus were the most popular foreign coins in the region and supported large-scale trade between the Pontic area and Greece.

The catalogue of electrum coins of Cyzicus and silver coin of Panticapaeum from the Patraeus hoard

Electrum coins of Cyzicus

I group. 600–550 BC.

1. Hekte.

Obv.: tunny fish downwards between two heads of tunny turned at right and left side accordingly; also there are two dots on both sides of the fish.

Rev.: irregularly shaped impressed square (quadratum incusum)

Weight: 2.65 g. Diameter: 11 x 8 mm. **Pl. I, 1, 1 a.**

Literature: Fritze 1912, p. 3, No. 11 and Tafel I, 11; Hurter / Liewald 2006, p. 11, Nos. 18, 19 and Tafel 2, 18.1, 19.1.

Publication: Abramov / Boldyrev 2001, p. 144; Abramzon / Frolova 2007–2008, p. 61, No. 1.

II group. 550–475 BC.

2. Hekte or hemiekton.

Obv.: head of a woman in Corinthian helmet turned left (Athena), there is a tunny fish on the right.

Rev.: impressed square divided on four small squares by linear cross.

Diameter: 10 mm. **Pl. I, 2, 2 a.**

Literature: Greenwell 1887, p. 62, No. 27 and Plate II, 3 (stater), 4 (hekte); Fritze 1912, p. 6, No. 64 and Tafel II, 17 (stater); Baldwin Brett 1974, p. 189, No. 1432 and Plate 72, 1432.

Publication: Abramov / Boldyrev 2001, p. 144; Abramzon / Frolova 2007–2008, p. 61, No. 2.

3. *Hekte or hemiekton.*

Obv.: dog turned left on a tunny fish, its right front paw is raised.

Rev.: impressed square divided into four parts by linear cross

Diameter: 11 – 9.5 mm. **Pl. I, 3, 3 a.**

Literature: Greenwell 1887, p. 115, No. 138 and Plate V, 34 (stater), 35 (hekte); Fritze 1912, p. 8, No. 93 and Tafel III, 12; Baldwin Brett 1974, p. 193, Nos. 1469–71 and Plate 73, 1469 (stater), 1470 (hekte), 1471 (hemiekton).

Publication: Abramov / Boldyrev 2001, p. 144; Abramzon / Frolova 2007–2008, p. 61, No. 3.

The silver coin of Panicapaeum

Type II. The end of the sixth century BC - the first quarter of the fifth century BC

4. *Hemidrachm.*

Obv.: head of a full-face lion.

Rev.: impressed square divided into four parts like ‘windmill’.

Diameter: 14 mm. **Pl. I, 4, 4a.**

Literature: Frolova, 2004a, Taf. 2, 32–50.

Publication: Abramov / Boldyrev 2001, p. 144; Abramzon / Frolova 2007–2008, p. 62, No. 4.

BIBLIOGRAPHY

Abramzon, M.G. / Frolova, N.A. (2007-2008), *Corpus bosporskich kladov antichnich monet. T. I, Simpheropol* - Kerch.

Abramov, A.P. / Boldyrev, S.I. (2001), ‘«Kladi» 1998 goda iz Patreia’, *Bosporsky Phenomen I*, pp. 143-46.

Babelon, E. (1907), *Traité des Monnaies grecques et romaines. P. II. T. I*, Paris.

Baldwin Brett, A. (1974), *Museum of Fine Arts, Boston. Catalogue of Greek coins*. New York.

Fritze, H. von (1912), ‘Die Elektronprägung von Kyzikos’ *Nomisma VII*, pp. 1-38.

Frolova, N.A. (2004a), ‘Kizikini iz sobrania Gosudarstvennogo Istoricheskogo museia’ *Vestnik drevnei istorii 4*, pp. 40-58.

Frolova, N.A. (2004b), *Die frühe Münzprägung vom Kimmerischen Bosporos (Mitte 6. bis Anfang 4. Jh. v. Chr.). Die Münzen der Städte Pantikapaion, Theodosia, Numphaion und Phanagoria sowie der Sinder*, Berlin.

Greenwell, W. (1887), ‘Electrum coinage of Cyzicus’ *NC VII*, pp. 1-125.

Hurter, S.M. / Liewald, H.-J. (2006), ‘Die frühesten Typen der Elektronprägung von Kyzikos.

Thunfische, Thunfischköpfe und –hinterhälften’ *SNR* 85, pp. 5-17.

Sylloge Nummorum Graecorum. Lockett Collection. Vol. III. P. 4. Peloponnes – Aeolis. London, 1945.

Wroth, W. (1892), *Catalogue of Greek Coins in the British Museum. Catalogue of the Greek Coins of Mysia*, London.

Zakharov, E.V. (2009), ‘Moneti VI – V vekov do naschei eri, naidennie na poselenii Garkuscha I (Patrii)’ *Drevnosti Bospora* 13, pp. 206-23.

Plate 1



1



1 a

x 2



2

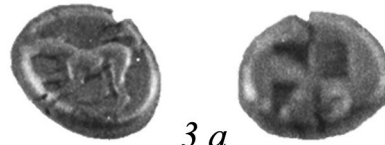


3



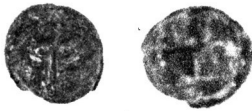
2 a

x 2

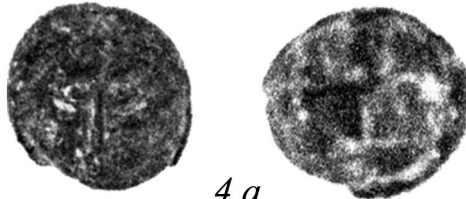


3 a

x 2



4



4 a

x 2