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SPECIFICS OF TRADE-ECONOMIC RELATIONS WITHIN THE NORTH-WESTERN BLACK SEA REGION IN THE ANTIQUITY¹



In the article the specifics of coins circulation and the role of money in the trade-economic relations in the North-Western Black Sea Region in the antiquity are analyzed. Some coins distinctions in the ancient Greek period and Roman time are noted.

Key words: coins, hoards, North-Western Black Sea Region, Scythians, Thracians, Tyras, Kartal.

The area that we call the North-Western Black Sea region is not fully defined in geographical and historiographical ways. The actual term “North-Western Black Sea region” was created in the second half of the 20th century. There was a rapid increase in the newly identified archaeological sources. Archaeologists needed to systematize the data based on its geographic origins. So, they started to use the term “North-Western Black Sea region”.

Like most of the historical and geographic areas, the North-Western Black Sea region cannot be always defined by the linear boundaries. Some parts of it form the so-called “in-depth” boundaries, known to the specialists in the history of Early Medieval Europe as “die Mark” in German (Шервуд 1988, с. 120). The littoral line stretching from the Dnieper — Bug (Borysthene — Hypanis) Bay to the Danube Estuary serves as a natural linear boundary for the region. The other boundary of the region is not clearly defined. It lies somewhere along the landscape boundary of the Steppe and the Forest-Steppe.

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It is widely acknowledged that the North-Western Black Sea was the scene of the cultural interaction between the antique Greek city-states and the local indigenous populations (the Barbarians). In the Pre-Roman time the Barbarian population comprised of the northern Thracians, known as the tribes of Getae, and the Scythians (Hdt. IV, 118). The Scythians, for their part, were an ethnic and cultural mix of the original nomadic people joined by the local agricultural settlers inhabiting the Forest-Steppe area of modern Ukraine (Fig. 1). In the Roman time, the Barbaricum areas of the North-Western Black Sea Region were populated by numerous Sarmatian tribes as well as by the agricultural sedentary population associated with the Late Scythian culture. The local population of that period also included the tribes of the Etulia culture, which is a part of the historic Veneti (Гудкова 1999, с. 271, 378—379).

We recently carried out a research to establish the leading economic activities in the region during the antique period (VII c. BC — III c. AD) and to determine how the Greek and the Barbarian technologies influenced each other. The interinfluence appeared to be quite limited in economic activities; it was more pronounced in the craftwork. Overall, the interaction was unilateral, with the antique civilization influencing the Barbarians and not the other way round. It appeared that the trade was the main factor stimulating the cross-cultural interaction. Namely the trade and not farming or craftsmanship gave an impetus to the economic advancement within the Barbarian societies of the hinterland. The trade encouraged the native population to engage in both direct and indirect market relations with the Inner Pontic Area and as far as the whole Mediterranean region. The market basket of this period included, on the one hand, certain technologically produced goods of the agrarian sector, such as wine and oils and the



Fig. 1. North-Western Black Sea Region

craft production, while on the other hand it was the raw farm products, mainly grain (Бруяко, Секерская 2016, с. 201—202).

This apparently high level of trade between the Hellenes and the Barbarians raises a question of what was used as a trading equivalent. It is obvious that the Greek-Barbarian trade relations appeared to be a typical barter system of exchange as they did not use any monetary medium of exchange. Findings of coins in the Lower Dniester basin, which was one of the main centers of colonization in the North-Western Black Sea region, are mainly concentrated in the location of Tyras and Nikonion, two antique poleis, or the city-states. Findings of coins are exceptionally rare at the rural settlements in the same region and so far no more than ten coins have been found there overall².

In the hinterland settlements of the Barbarians, for example, in the Thracian lands, modern Bessarabia, and at the sites of the Getae culture, or the so-called “Getica”, the findings of coins are also rare (Нудельман 1976). The polis of Tyras holds the first place in a rather modest list of findings (Fig. 2).

² This number may be increased several-fold due to the active usage in the last 20 years of metal detectors and because of the illegal and truly astonishing in its scale activities of the so-called “black archaeologists”. Even though, it will not change our understanding that the regional trade during all antique period was barter-like in its nature.

At the same time, a number of significant treasure hoards was discovered in the North-Western Black Sea region. The treasures contained either coins or a mix of coins and valuable objects. They were found on the Barbarian lands. The coins were mainly made of precious metals and it may suggest that the treasures most likely belonged to the local elite of the time. All the treasures are dated by the Hellenistic period (Fig. 2)³.

List of treasures⁴

1. The treasure from *Olănești* (Сергеев 1966). It includes valuable objects and is traditionally dated by the time of Zopyrion’s military campaign in the North-Western Black Sea Region (against Olbia) ca. 330 BC.

2. The treasure from *Stolniceni* (coins — silver Histria, Philipp II imitations, type Huși-Vovriești) dated by the second half of the 4 c. BC, or middle — second half of the 3 c. BC (Levinschi 1997).

3. The treasure from *Lărguța* — mixed, valuable items and gold Macedonian coins. It is dated by the time of Zopyrion’s invasion, though alongside

³ To this day some researchers assume that the coin treasures including those with coins made of precious metals are evident of the commodity-money exchange in certain areas even though the findings of the small copper coins are almost non-existent (Топал, Чорев, Синика 2017, с. 135).

⁴ Numbered as indicated on the map (Fig. 2).

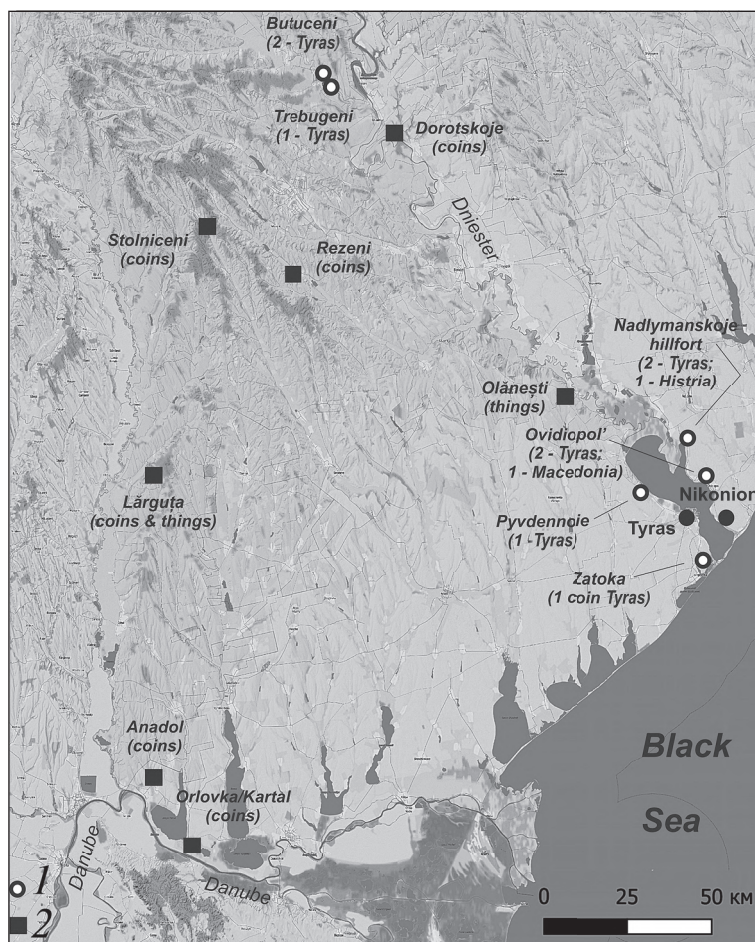


Fig. 2. North-Western Black Sea Region in IVth c. BC. Coin finds:
1 — settlements; 2 — treasures

the staters minted by Philipp II and Alexander III, there was found a coin minted by Philipp III Arrhidaeus (Нудельман 1969).

4. The treasure from *Dorockoe* (silver coins of Tyras and Histria); 330 BC (Нудельман 1969а; Загинайло, Нудельман 1971).

5. *Orlovka/Kartal* (the famous treasure of Syzicus staters), dated ca. 330 BC and associated with the time of Zopyrion's invasion (Булатович 1970).

6. The treasure from *Anadol* (modern Dolynske) — coins, staters of Macedonia, dated by 228—220 BC and associated with the time of the invasion of Bastarnae (Придик 1902; Seyrig 1969).

7. The treasure from *Rezeni* — coins, (silver drachmas of Histria), dated ca. 300 BC⁵.

⁵ Research paper on the treasure gives a later date — 250—225 BC (Топал, Чореф, Синика 2017, с. 132—133), where the dating is based on another research (Dima 2013, p. 7—72), rather than on the research of C. Preda (1998), Gh. Poenaru-Bordea (Rențea E., Poenaru-Bordea Gh. 2003), A. Нудельман (1985), A. Загинайло (Загинайло, Гребенкин 1984).

It is obvious that the cache of four out of seven treasures coincides in time with the ill-fated invasion attempt by Zopyrion, one of the Alexander the Great governors.

The settlement of Kartal/Orlovka, where one of the treasure hoards was discovered, is a place of a special historic significance and is widely known for its strategically important location. Perching on the bank of the river Danube it has been called “the Danube Lock” for a reason, as throughout thousands of years the inhabitants of the settlement had a full control over the only safe crossing of the Lower Danube that is available from the point where the Pruth River joins the Danube and to the end point where the latter empties into the Black Sea. It is not a surprise that the coins found in the area are different from those found in other places. Below is the list of coins found at Kartal/Orlovka during archaeological excavations.

— Histria — four coins, three of them are silver and one bronze coin;

— Macedonia — three coins, one of them is a gold stater and two bronze coins;

— Kallatis — one bronze coin;



Fig. 3. Location of Koshary and Luzanovka

— Cyzicus (or Kyzikos) — hoard of electrum staters.

It is evident that findings of coins are very rare even though the area was of strategic importance and most likely held some seasonal trade events (market, fair). The eastern part of the region, with Koshary settlement, scores better.

Koshary is another local settlement that stands aside, archaeologically speaking, from the settlements of the region. Koshary is located in the of the Tyligul Estuary — a small steppe river (Fig. 3)⁶. During the site excavations about 50 coins were found in Koshary, most of which are Olbian “Borysthenes”. Several coins were from Tyras and Histria. Koshary is an unusual and even unique settlement for this region, because judging by the archaeological findings, it was an agricultural place, set as a farmstead. Archaeological evidence shows that the land near the settlement had been divided in orthogonal way (Бруяко, Назарова, Петренко 1991, с. 42, рис. 4; Бруяко, Секерская 2016, с. 122, рис. 35). So far it is the only such example in the whole North-Western Black Sea region. All another sites, including large centres (Olbia, Nikonion) had an irregular system of land usage (Бруяко, Секерская 2016, с. 120).

There is a strong possibility that Koshary had its own harbour. Koshary, or Ordess/ Odessos as mentioned by the antique authors such as Arrian and Ps. Arrian (Arr. PPE. 31; Ps.-Arr. 87), is considered to be a part of the greater Olbian polis, and the ultimate point of the its western frontier (Диамант 1978).

The Luzanovka settlement is another place where more than average amount of coins was found. There are in total fifteen coins, though thirteen of them were found in a cache. All of them are Olbian denominations (Зорпаф 1957). Luzanovka

was one of the several antique settlements that were set in the Odessa Bay and held, at least in the 4th c. BC, under the Olbian polis auspices.

* * *

The Roman period appears to bring little change to the life of the region. Not many coins were found during the excavations of the long-established rural settlements or “chora” of the Greek poleis. Moreover, the overall number of settlements of Tyras and Nikonion’s “chorai” decreases. As compared to the Hellenistic period and Roman time, especially of the 2nd c. AD, there are more findings of single coins and those are randomly dispersed throughout the area, concentrating roughly in two areas. One of the areas lies near the Lower Dniester, which is explained by the economic presence of Tyras polis. The other area is located near the Lower Danube, which is where the Romans established their border defence system *Limes Transalutanus* and set a number of military camps.

As before Orlovka/Kartal hill-fort played an outstanding role in the Roman time with the Roman fortifications (the so-called “Castel”) constructed there. The military legions were posted to Castel from *Legio I (prima) Italicum*, to *V (quinto) Macedonicum*, *XI (undecim) Clavdium* and *Classis Flavia Moesia*. This is reflected in the high number of coins found in Orlovka/Kartal with more than 80 coins found during the official excavations (Бондарь, Булатович 2001—2002) and more than 1,600 found outside the official excavations⁷. More coins belonging to this period were found on the Left Bank of Lower Danube. Analysis of the Roman coin distribution in the Danube-Dniester area in the 1st c. AD shows a certain trend that is typical for the whole region of the Roman period. It appears that the coins found in Tyras are of the similar denominations and types as the ones found in Orlovka/Kartal, all of them dating to the Julio-Claudian dynasty (Носова 2014, с. 321 сн. 17). Considering that both Tyras and Orlovka/Kartal at the time hosted the Roman troops, this is the evidence that money was sent to both places at the same time.

To summarize the key findings, the scarcity of the coins in the North-Western Black Sea region for the Hellenistic and Roman periods is a direct evidence that at that time the trade relations in the area did not yet conform to the goods-monetary exchange model. The standard commercial model where the goods and commodities are exchanged

⁶ General information and references in: Редина 2013, с. 583 и сл.

⁷ Private, non-official information.

for money became prevalent in the region not earlier than the 4th c. AD when it was used in both internal and external market. The upgrade from barter to monetary trade relations happened due to the expansion of the Chernyakhov culture. The new-comers settled all over the territory of the modern Budzhak steppes. They had more than 200 settlements. Apart from the modern history there was only one other period when the North-Western Black Sea region became as densely populated, — the Late Bronze Age.

- Бондарь, Р. Д., Булатович, С. А. 2001-2002. Орловское городище в памятниках нумизматики. *Stratum plus*, 6, с. 171-182.
- Бруяко, И. В., Назарова, Н. П., Петренко, В. Г. 1991. Древние культурные ландшафты на юге Тилигуло-Днестровского междуречья по данным аэрофотосъёмки. В: Ванчугов, В. П. (отв. ред.) *Северо-Западное Причерноморье — контактная зона древних культур*. Киев: Наукова думка, с. 37-44.
- Бруяко, И. В., Секерская, Е. П. 2016. *Очерки экономики населения Северо-Западного Причерноморья в античную эпоху*. Одесса: Ирбис.
- Булатович, С. А. 1970. Клад кизикинов из Орловки. *Вестник древней истории*, 2, с. 73-86.
- Гудкова, А. В. 1999. I—IV вв. В Северо-Западном Причерноморье (культура оседлого населения). *Stratum plus*, 4, с. 235-404.
- Диамант, Э. И. 1978. Монетные находки Кошарского поселения (к вопросу о западной границе ольвийского полиса). В: Карышковский, П. О. (отв. ред.) *Археологические исследования Северо-Западного Причерноморья*. Киев: Наукова думка, с. 241-249.
- Загинайло, А. Г., Нудельман, А. А. 1971. Дороцкий клад древнегреческих серебряных монет IV в. до н. э. *Материалы по археологии Северного Причерноморья*, 7, с. 122-124.
- Загинайло, А. Г., Гребёнкин, В. Н. 1984. Классификация ранних серебряных монет Истрии. *Нумизматика и эпиграфика*, XIV, с. 23-39.

- Зограф, А. Н. 1957. Монеты Ольвии из раскопок в Лузановке 1939 года. *Материалы по археологии Северного Причерноморья*, 1, с. 97-101.
- Носова, Л. В. 2014. Тира середины I в.н.э.: политическая история по нумизматическим данным. *Stratum plus*, 6, с. 315-326.
- Нудельман, А. А. 1969. Античный клад из с. Лэргуца. *Труды Государственного историко-краеведческого музея* (Кишинев), II, с. 129-134.
- Нудельман, А. А. 1969а. Монеты Истрии и Тирры из с. Дороцкое. *Труды Государственного историко-краеведческого музея* (Кишинев), II, с. 121-128.
- Нудельман, А. А. 1976. Топография кладов и находок единичных монет. *Археологическая карта Молдавии*, 8, с. 117-132.
- Нудельман, А. А. 1985. *Очерки истории монетного обращения в Днестровско-Прутском регионе*. Кишинев: Штиинца.
- Придик, Е. М. 1902. Анадолийский клад золотых статеров. *Известия Археологической Комиссии*, 3, с. 58-92.
- Редина, Е. Ф. 2013. Кошары. В: Бруяко, И. В., Самойлова, Т. Л. *Древние культуры Северо-Западного Причерноморья*. Одесса: СМІЛ.
- Сергеев, Г. П. 1966. Оланештский античный клад. *Вестник древней истории*, 2, с. 132-142.
- Топал, Д. А., Чореф, М. М., Синика, В. С. 2017. Клад серебряных истрийских монет из Резен. *Stratum plus*, 3, с. 129-138.
- Шервуд, Е. А. 1988. *От англо-саксов к англичанам*. Москва: Наука.
- Dima, M. 2013. Monedele de argint ale cetății Istros în epoca elenistică. *SCN*, s.n., IV (XVI), p. 7-72.
- Levinschi, A. 1997. Un tezaur monetar de la Stolniceni (considerații preliminare). *Tyragetia*, IV-V, p. 319-324.
- Preda, C. 1998. *Istoria monedei în Dacia preromană*. București: Editura Enciclopedică.
- Reștea, E., Poenaru-Bordea, Gh. 2003. Un important tezaur de monede de argint istriene și tetradrachme postume Filip II, originali și imitații fidile. In: Eugen Nicolae (red. resp.) *Simpozion de numismatică: Dedicat împlinirii a 125 de ani de la proclamarea independenței României*, Chișinău, 24-26 septembrie 2002. București: Editura Enciclopedică, p. 9-31.
- Seyrig, H. 1969. Date et circonstances du trésor d'Anadol. *RN*, 11, 40-45.

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СПЕЦИФІКА ТОРГОВО-ЕКОНОМІЧНИХ ВІДНОСИН У ПІВНІЧНО-ЗАХІДНОМУ ПРИЧОРНОМОР'І В АНТИЧНУ ЕПОХУ

Статистика нумизматичних знахідок на археологічних пам'ятках Північно-Західного Причорномор'я (Рис. 1) античного періоду (Рис. 2) дозволяє зробити висновок, згідно з яким протягом майже всієї цієї епохи грошового обігу в регіоні практично не існувало. Якщо не брати до уваги полісні центри (Тіра, Никоній), то на всіх інших поселеннях число монетних знахідок мінімальне — найчастіше, 1—2 монети. Подібна ситуація характерна не тільки для поселень далекого Барбарікума, але навіть для тих населених пунктів, які знаходилися в безпосередній близькості до полісу і входили в його сільську округу. Причому, сільські поселення округи Никонія і Тіри, де були виявлені монети, складають мізерно мале число (Рис. 2). Відносно велике число монет знайдено в Кошарах. Всі вони викарбувані в Ольвії. Даний феномен пояснюється по-перше, суто аграрною господарською орієнтацією цього селища, а, по-друге, його приналежністю до ольвійського полісу.

Разом з тим, в регіоні відомі знахідки щодо великих монетних скарбів, а також скарбів, змішаного, монетно-речового типу. Цікаво, що всі вони датуються доримським часом. І, приблизно половина з них пов'язується з

конкретною історичною подією — походом Зопіріона. Незважаючи на те, що до цих пір існує думка згідно з яким, грошові скарби можуть бути використані як доказ розвитку товарно-грошових відносин, все ж слід визнати, що в даному випадку, швидше можна стверджувати зворотне. Всі монети входили до складу цих скарбів були зроблені з дорогоцінних металів. І, таким чином, ці збори представляли собою по суті зібрання скарбів, або свого роду валютний депозитарій, який можна було використовувати для конвертації і грошових операцій тільки у великому античному центрі. Про початок повноцінного грошового обігу в північно-західному Причорномор'ї можна говорити тільки стосовно пізнього античного періоду, не раніше IV ст. до н. е.

Ключові слова: монети, клади, Північно-Західне Причорномор'я, скифи, фракійці, Тира, Картал.

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СПЕЦИФИКА ТОРГОВО-ЭКОНОМИЧЕСКИХ ОТНОШЕНИЙ В СЕВЕРО-ЗАПАДНОМ ПРИЧЕРНОМОРЬЕ В АНТИЧНУЮ ЭПОХУ

Статистика нумизматических находок на археологических памятниках Северо-Западного Причерноморья (Рис. 1) античного периода (Рис. 2) позволяет сделать вывод, согласно которому на протяжении почти всей этой эпохи денежного обращения в регионе практически не существовало. Если не принимать во внимание полисные центры (Тира, Никоний), то на всех остальных поселениях число монетных находок минимальное — чаще всего, 1—2 монеты. Подобная ситуация характерна не только для поселений дальнего Барбарикума, но даже для тех населённых пунктов, которые находились в непосредственной близости к полису и входили в его сельскую округу. Причём, сельские поселения округа Никония и Тиры, где были обнаружены монеты, составляют ничтожно малое число (Рис. 2). Относительно большое число монет найдено в Кошарах. Все они отчеканены в Ольвии. Данный феномен объясняется, во-первых, сугубо аграрной хозяйственной ориентацией этого поселка, а, во-вторых, его принадлежностью к ольвийскому полису.

Вместе с тем, в регионе известны находки относительно крупных монетных кладов, а также кладов, смешанного, монетно-вещевого типа. Любопытно, что все они датируются доримским временем. И, примерно половина из них связывается с конкретным историческим событием — походом Зопириона. Несмотря на то, что до сих пор бытует мнение согласно которому, денежные кладов могут быть использованы как доказательство развития товарно-денежных отношений, всё же следует признать, что в данном случае, скорее можно утверждать обратное. Все монеты, входившие в состав этих кладов, были сделаны из драгоценных металлов. И, таким образом, эти собрания представляли собой по сути собрания сокровищ, или своего рода валютный депозитарий, который можно было использовать для конвертации и денежных операций только в крупном античном центре. О начале полноценного денежного обращения в Северо-Западном Причерноморье можно говорить только применительно к позднему античному периоду, не ранее IV в. до н. э.

Ключевые слова: монеты, кладов, Северо-Западное Причерноморье, скифы, фракійці, Тира, Картал.

References

- Bondar', R. D., Bulatovič, S. A. 2001-2002. Orlovskoe gorodišče v pamjatnikakh numismatiki. *Stratum plus*, 6, p. 171-182.
- Bruyako, I. V., Nazarova, N. P., Petrenko, V. G. 1991. Drevnie kulturnye landshafty na jube Tiligulo-Dnestrovskogo mezhdurechja po dannym aerofotosiemki. In: Vančugov, V. P. (ed.) *Severo-Zapadnoe Prichernomorie - kontaktnaja zona drevnikh kultur (North-Western Black Sea Region - Contact Zone of the Ancient Cultures)*. Kyiv: Naukova dumka, p. 37-44.
- Bruyako, I. V., Sekerskaja, E. P. 2016. *Očerki ekonomiki naselenija Severo-Zapadnogo Prichernomor'ja v antičnuju epochu*. Odessa: Irbis.
- Bulatovič, S.A. 1970. Klad kizikinov iz Orlovki. *Vestnik Drevnej Istorii*, 2, p. 73-86.
- Diamant, E. I. 1978. Monetnye nakhodki Kosharskogo poselenija (K voprosu o zapadnoi granice olvijskogo polisa). In: Karyshkovskij, P. O. (ed.) *Arkheologičeskie issledovanija Severo-Zapadnogo Prichernomoriia*. Kyiv: Naukova dumka, p. 241-249.
- Gudkova, A. V. 1999. I-IV vv. v Severo-Zapadnom Prichernomorie (kultura osedlogo naselenija). *Stratum plus*, 4, p. 235-404.
- Nosova, L. V. 2014. Tira seređiny I v. n. e.: polytičeskaja istorija po numizmatičeskim dannym. *Stratum plus*, 6, p. 315-326.
- Nudelman, A. A. 1969. Antičnyj klad iz s. Lärğuța. *Trudy Gosudarstvennogo istoriko-kraevedčeskogo muzeja (Kishinev)*, II, p. 129-134.
- Nudelman, A. A. 1969a. Monety Istrii i Tiry iz s. Dorotskoe. *Trudy Gosudarstvennogo istoriko-kraevedčeskogo muzeja (Kishinev)*, II, p. 121-128.
- Nudelman, A. A. 1976. Topographija kladov i nakhodok edinichnykh monet. *Arkheologičeskaja karta Moldavii*, 8, p. 117-132.
- Nudelman, A. A. 1985. *Očerki istorii monetnogo obraščeniija v Dnestrovsko-Prutskom regione*. Kishinev: Štiints.
- Pridik, E. M. 1902. Anadol'skij klad zolotykh staterov. *Izvestija Arkheologičeskoi Komissii*, 3, p. 58-92.
- Redina, E. F. 2013. Koshary. In: Bruyako, I. V., Samoilova, T. L. (eds.) *Drevnie kul'tury Severo-Zapadnogo Prichernomoriia*. Odessa: SMIL, p. 583-596.

- Sergeev, G. P. 1966. Olaneshtskij antichnyi klad. *Vestnil Drevnej Istorii*, 2, p. 132-142.
- Šervud, E. A. 1988. *Ot anglo-saksov k angličanam*. Moskva: Nauka
- Topal, D. A., Čoref, M. M., Sinika, V. S. 2017. Klad serebrjanykh istrijskich monet iz Rezen. *Stratum plus*, 3, p. 129-138.
- Zaginailo, A. G., Nudelman, A. A. 1971. Dorotskij klad drenegrečeskikh serebrjanykh monet IV v. do n. e. *Materialy po arkheologii Severnogo Prichernomor'ja*, 7, p. 122-124.
- Zaginajlo, A. G., Grebenkin, V. N. 1984. Klassifikacija rannich serebrjanykh monet Istrii. *Numizmatika i epigraphika*, XIV, p. 23-39.
- Zograf, A. N. 1957. Monety Ol'vii iz raskopok v Luzanovke 1939 goda. *Materialy po arkheologii Severnogo Prichernomor'ja*, 1, p. 97-101.
- Dima, M. 2013. Monedele de argint ale cetății Istros in epoca elenistică. *SCN*, s.n., IV (XVI), p. 7-72.
- Levinschi, A. 1997. Un tezaur monetar de la Stolniceni (considerații preliminare). *Tyragetia*, IV-V, p. 319-324.
- Preda, C. 1998. *Istoria monedei în Dacia preromană*. București: Editura Enciclopedică.
- Rențea, E., Poenaru-Bordea, Gh. 2003. Un important tezaur de monede de argint istriene și tetradrachme postume Filip II, originali și imitații fidile. In: Eugen Nicolae (red. resp.) *Simpozion de numismatică: Dedicat împlinirii a 125 de ani de la proclamarea independenței României*, Chișinău, 24-26 septembrie 2002. București: Editura Enciclopedică, p. 9-31.
- Seyrig, H. 1969. Date et circonstances du trésor d'Anadol. *RN*, 11, 40-45.