

To the Origins of Iron Production in Colchis (2nd half of the II millennium BC - 1st half of the I millennium BC)

Revaz Papuashvili^{*}, Nana Khakhutaishvili^{}, Amiran Kakhidze[§]**

^{*}National Museum of Georgia, Tbilisi, Georgia

^{**}Faculty of Humanities, Department of History, Archaeology and Ethnology, Batumi Shota Rustaveli State University, Batumi, Georgia

[§]Ajara Museum-Batumi Archaeological Museum, Batumi, Georgia

(Presented by Academy Member David Muskhelishvili)

The paper deals with the issue of conception and development of iron metallurgy and the establishment of iron in the society of old Colchis, which aroused great interest of this region in the civilized world at that time. The presentation and establishment of iron items in the life of the ancient Colchians are best traced to the cemeteries found in the western part of the Colchis Plain. Up to 40 collective graves have been excavated at the mentioned cemeteries. On the basis of formal-typological analysis of separate categories of artifacts in each burial complex, it became possible to allocate separate stages and present the formal-technological innovations that took place in Colchis during the transition from the Bronze Age to the Iron Age. We were able to divide the burial complexes into relatively narrow chronological groups. According to this principle, five chronologically alternating groups were distinguished, where the tendencies of the appearance and gradual establishment of iron inventory are well observed. We find the appearance of iron items in the cemeteries of group 2nd, which date back to the beginning of the I millennium BC. The cemeteries of groups 3rd and 4th are distinguished by the abundance and variety of inventory, the date of which, in general, is defined by the 8th-7th centuries BC. Thus, the multi-faceted information obtained on archaeological sites along with written sources clearly shows the process of appearance and establishment of iron as a means of production in Colchis. © 2021 Bull. Georg. Natl. Acad. Sci.

Colchis, iron metallurgy, iron age, Greeks

The importance of iron as a metal in the history of mankind is well known and we will not continue to talk about it. This time our interest is the issue of what role the conception and development of iron metallurgy played in the formation and development of the Colchis society known for its

ancient Eastern, Greek, Roman and Byzantine sources.

In the territory of present-day Colchis, predominantly in its coastal zone, from the beginning of the 7th century BC, foreign products, made in particular in the ionic centers of Greece,

appeared [1]. At the end of the same century and later, the number of products imported from Ionic centers as well as from continental Greece gradually increased [2-4]. From this time on, regular contacts between Colchis and the Aegean world are already in sight, but we are faced with the issue, whether there were any relations between the two regions before the 6th century BC or before the start of Ionic colonization, or not, and if it's so, what kind? How are they reflected in literature, art, material culture?

According to tradition, the Argonauts are the pioneers of relations with Colchis. The primary purpose of the Hellenic heroic epic – "Argonautics", is to convince us that the Argo, sailed from Greece (Iolkos) and led by Jason, reached the kingdom of Aeetes on the eastern Black Sea coast. They fulfilled the strict requirements of the Colchian king Aeetes, took the Golden Fleece and also the king's daughter Medea [5-7].

Even the short story of the legend raises two difficult questions for researchers of the past-when was the myth about the Argonauts created and is there any real story in it?

Individual plot, characters, and geographical names of "Argonautics" were first introduced in the 8th century BC with the authors: Homer, Hesiod, and Eumelus of Corinth. It is obvious that the core of the myth of this time already existed. The stories reflected here have already happened and belong to history. The issue of how distant history it is for the 8th century BC is still unclear. There is also speculation that the first Greek voyage to the Black Sea coast took place in the post-Mycenaean era, and that this voyage is reflected in the legend of the Argonauts. This journey may have taken place during the trade and colonization movement of the Euboeans in the 9th century BC. Items of the relevant epoch imported from the Near East found on the island of Euboea, may be indicative of this assumption [3:187].

It is thought that crossing the straits leading to the Black Sea, traveling to foreign lands, paving the

way to an unknown world, must have been the heroic deed that brought the ship "Argo" and its crew with the immortality of halo and the goddess comparable glory. According to Academician Otar Lortkipanidze, such a trip would not have been considered a heroic deed in the 8th century BC or later, because from this period the crossing of the straits connecting the Black and Aegean seas is already a common case [3:180-190].

It is difficult and no less interesting to know the purpose that put the brave sailors on such a difficult and dangerous path (Were they really looking for golden sheepskin?).

This question is answered directly, almost without further due by the 1st century geographer Strabo – the wealth of this country (meaning Colchis) with gold, silver, iron and copper is the right excuse for the (Argonaut) expedition [8]. According to Otar Lortkipanidze, therefore, we can assume that the Greeks were interested in the metal wealth of Colchis and this led to the establishment of Greek colonies [3].

This time, we will try to briefly touch on the factual material that is somewhat related to the first contacts between Colchis and the Aegean world, and in this way, to distinguish the relatively real ones from the many elements contained in them.

As it is known, according to Eumelus of Corinth, in the 8th century BC Colchis was first mentioned as a geographical nomenclature [7]. At the beginning of the 8th century BC Hesiod mentions the river Phasis among the largest rivers in the world. It is noteworthy that the same period coincides with the mention of Colchis (as Colchis) in ancient Eastern sources, in particular, Urartian sources [9].

It is noteworthy that in Cherveter images of Olpe dating from the 7th century BC and a Proto-Boeotian python from the same period are considered to be episodes of an Argonaut expedition. It has been suggested that the myth and a face of Medea, the protagonist of the myth, is already firmly entrenched in the public

consciousness of the 7th century BC. One of the reasons for this is the universal interest in the search for metal typical of that era [6:17].

The beginning of the I millennium BC is defined by the majority of iron industry-workshops, which are found in large numbers (more than 400) by Gdzelishvili and D. Khakhutaishvili in the Eastern Black Sea region, present-day Samegrelo and Ajara-Guria regions [10, 11]. It should be noted that the study of metal production issues in these regions in 2010-2014 was continued by the joint Georgian-British expedition, which explored a number of workshops related to the production of bronze and iron [12:159-180; 13:401-419]. The recent discoveries related to the forerunners of ferrous metallurgy are particularly interesting (5th - 2nd millennium BC). There are a number of innovations related to the production of non-ferrous metals, which will be discussed in the monographic research related to the project [14:90-117].

In the first half of the first millennium BC, preferably the so-called Colchian-Koban type bronze items made in the 8th - 7th centuries BC are found in regions far from the Caucasus in the north of the Dnieper and the Volga, as well as in the south, around the lakes of Urmia and Van, and even in Byblos and Samos [15:63-69].

Special attention is paid to one group of bronze artifacts found on the island of Samos in Heraion (a Colchian-type buckle, bells, and an image of a woman on a horse with a baby on her chest). These items were considered to be products of Caucasian origin from the very beginning [16:80-84]. The image of a woman rider, based on analogues found in Colchis, was considered a typical Colchian product by T. Mikeladze [17:63]. According to the American researcher M. Voizatzis, the Samian woman rider must have been made in a workshop center of the 8th century BC, where Greek orientalized and Caucasian elements coexisted. It may have been made on the island of Samos itself [18:259-279].

In terms of early contacts, a plastic image of a "rider" made of bronze found in the Mukhurchi cemetery in central Colchis is very important. Academician O. Lortkipanidze considered it to be an imported product from the production centers of Greece [3:185-187]. Also noteworthy is the discovery cases of boat-shaped fibulae, so-called navicella, found in northwestern Colchis – New Athos and Psirtskha. They are also considered to be imported from the Greek world and date back to the end of the 8th century BC and the beginning of the 7th century BC. A flat fibula found in the Ureki cemetery is also considered to be imported from the Greek production center [19:88-103].

In the last twenty years of the last century, first in the famous town of Vani, then in Nokalakevi-Archeopolis and at the extensive settlement of Kulevi two-pronged images of various animals made of clay were found in the layers dating to the 8th - 7th centuries BC. It is unfamiliar for Colchian clay products of the 2nd millennium BC. First Academician Otar Lortkipanidze, then D. Lomitashvili related these sculptures found in Van and Nokalakevi to similar specimens widespread in Late Geometric Greece (Olympo). Their appearance in Colchis was considered to be an influence of Greek culture [3:188; 20:19-20].

It is believed that still in the archaic era (8th century BC), i.e. long before the Colchis coast was reached by the Miletus colonization wave, regular commercial relations began with the locals employed in iron production and, in general, in metal production. It is suggested that the formation of the earliest layers of Greek newcomers on the east coast of the Black Sea is related to the search for metal, primarily iron. According to M. Inadze, Aeolians from Asia Minor are the first partners with the Greek centers in establishing early contacts with Colchis. According to her, it is quite possible that the relations with the Aeolian centers (Kvimne, Larissa, Mytilene) had a significant impact on the further development of the spiritual and material life of the Colchis community [21:159-175].

The gradual establishment of the iron industry, the dynamics of spiritual and material life is more or less reflected in the cemeteries discovered in the Colchis lowlands. Bronze-Early Iron cemeteries in the central part of the Colchis Plain became known and studied in the 1970s.

The collective tombs studied in the Colchis lowland are divided into five chronological groups according to the characteristics and composition of the inventory.

For the earliest, 1st group cemeteries we find pottery and bronze products typical for the second half of the 2nd millennium BC. In general, the inventory is poor. Metal items are mostly not present or very rare.

The pottery found in the 2nd group cemeteries, although somewhat different from similar products of the Late Bronze Age, still retains the traditions established in the 2nd millennium. There are a large number of bronze items in the tombs of this group. There is little iron. There are many beads, although it is not distinguished by diversity.

The 3rd group cemeteries already have a large number of metal items, but its range is limited. At the same time, they repeat the shapes of bronze prototypes. We do not find items (axe, hoe) that need a hole and for which special knowledge of blacksmithing and special tools are required. It is also noteworthy that in the tombs of this group, along with agricultural and combat weapons, a large number of bronzes, iron, silver and gold jewelry are presented. Along with locally produced carnelian and agate beads, there are also plenty of imported products, especially Egyptian faience and Syrian glass beads. Tin and amber products can also be found. The tombs of this group are stood out by wealth. We date them to the second half of the 8th century BC and the first half of the 7th century BC.

Innovations are observed in the assortment of the 4th group of burial inventories, namely: we find bronze and iron axes together, hoes, segmental weapons, separate categories of jewelry, etc. In the tombs of the same group, a large bent, so-called

Urartian knives, archaic-shaped Scythian double-edged swords, and akinaki-like swords. Iron plough also appears. The tombs of this group (like the 3rd group) are also distinguished by special wealth. They are generally dated by the 7th century BC.

In the 5th group tombs combat and agricultural weapons are mainly made of iron. These tombs are astonishing with the abundance of iron hoes, segments and ploughs. There are a small number of combat weapons. According to the Scythian akinakis and arrow heads, the burials of this group are dated back to the end of the 7th century BC and the beginning of the 6th century BC.

As we see, we have separated five chronological groups, where the tendencies of the appearance and gradual establishment of iron inventory are well observed. At the same time, it is easy to notice that the tombs of groups 3rd and 4th are distinguished by the abundance and variety of inventory, the date of which, in general, is defined by the 8th -7th centuries BC. The question arises as to what factors caused such richness and diversity of the tombs of this group compared to the tombs of earlier and later times. As we know, in the advanced countries of Egypt, the Middle East and the Aegean basin, the demand for iron and iron products increased especially from the end of the 2nd millennium BC. There is reason to believe that beyond the wealth accumulated in the tombs of this group, we can see the income from iron exports. It is natural to think that the desire to acquire iron, the ways and means of obtaining it became the reason for the activation of relations between the civilized countries of that time and the population of iron ore working in the Black Sea – the Colchis community with great traditions of metalworking. In this respect, the inhabitants of the Aegean basin seem to have stood out, which was reflected in material culture and literary tradition as a myth created about the Argonauts. It is true that the literature does not reflect the relations with the nomadic tribes living in the North Caucasus and the population settled in

Anatolia, but the individual items exported from Colchis in the mentioned regions [15:69] at least to some extent reflect the relevant contacts with these territorial units.

This work was supported by Shota Rustaveli National Science Foundation of Georgia (grant project NFR-19-14563). The authors are grateful to Academy Member David Muskhelishvili for his kind support.

არქეოლოგია

რკინის წარმოების სათავეებთან კოლხეთში (ძვ.წ. II ათასწლეულის II ნახევარი – ძვ.წ. I ათასწლეულის I ნახევარი)

რ. პაპუაშვილი*, ნ. ხახუტაიშვილი**, ა. კახიძე§

*საქართველოს ეროვნული მუზეუმი, თბილისი, საქართველო

**გათუმის შოთა რუხთაველის სახელმწიფო უნივერსიტეტი, ჰუმანიტარულ მეცნიერებათა ფაკულტეტი, ისტორიის, არქეოლოგიისა და ეთნოლოგიის დეპარტამენტი, ბათუმი, საქართველო
§აჭარის მუზეუმი-ბათუმის არქეოლოგიური მუზეუმი, ბათუმი, საქართველო

(წარმოდგენილია აკადემიის წევრის დ. მუსხელიშვილის მიერ)

ნაშრომი ეხება რკინის მეტალურგიის ჩასახვა-განვითარების და რკინის დამკვიდრების საკითხს ძველი კოლხეთის საზოგადოებაში, რამაც გამოიწვია ამ რეგიონისადმი დიდი ინტერესი. ძველი კოლხების ყოფაში რკინის ნივთების შემოსვლა და დამკვიდრება კარგად შეისწავლება კოლხეთის დაბლობის დასავლეთ ნაწილში გამოვლენილ სამაროვნებზე. სამარხეული კომპლექსების ანალიზის საფუძველზე, შესაძლებელი გახდა წარმოგვეჩინა ის სიახლეები, რასაც ადგილი ჰქონდა კოლხეთში ბრინჯაოს ხანიდან რკინის ხანაზე გადასვლის პერიოდში. მოგვეცა საშუალება, სამარხეული კომპლექსები დაგვეყო ვიწრო ქრონოლოგიურ ჯგუფებად. ამ პრინციპით ხუთი ქრონოლოგიურად ურთიერთმონაცვლე ჯგუფი გამოიყო, სადაც კარგად შეინიშნება რკინის ინვენტარის გამოჩენისა და თანდათანობითი დამკვიდრების ტენდენციები. რკინის ნივთების გამოჩენას ჩვენ II ჯგუფის სამარხებში ვხვდებით, რომლებიც ძვ.წ. I ათასწლეულის დასაწყისით თარიღდება. ამრიგად, წერილობით წყაროებთან ერთად, არქეოლოგიურ ძეგლებზე მოპოვებული მრავალმხრივი ინფორმაცია ნათლად გვიჩვენებს რკინის, როგორც საწარმოო საშუალების გამოჩენისა და დამკვიდრების პროცესს ძველ კოლხეთში.

REFERENCES

1. Kakhidze A., Khakhutaishvili D. (1989) Materials for the Ancient History of Batumi, collection: monuments of south-west Georgia, v. XVIII, 139 p., Tbilisi (in Georgian).
2. Lortkipanidze O. (1966) Ancient world and old Colchis, 228, Tbilisi (in Georgian).
3. Lortkipanidze O. (2002) To the origins of old Georgian civilization, 169, Tbilisi (in Georgian).
4. Kakhidze A., Kakhidze E. (2014) Greek colonization in the eastern Black Sea area, 124, Batumi (in Georgian).
5. Apollonius of Rhodes (1948) Argonautica, 232, Tbilisi (in Georgian).
6. Lortkipanidze N. (1998) Newly discovered ancient image of Medea, Tbilisi (in Georgian).
7. Urushadze A. (1964) Old Colchis in the legend of Argonauts, 558, Tbilisi (in Georgian).
8. Lortkipanidze O. (2010) Old Georgia (Colchis and Iberia) in the geography of Strabo, 296, Tbilisi (in Georgian).
9. Melikishvili G. (1959) K istorii drevnei Gruzii, 507, Tbilisi (in Russian).
10. Khakhutaishvili D. (1987) Proizvodstvo zheleza v drevnei Kolkhize, 262, Tbilisi (in Russian).
11. Khakhutaishvili D. (2009) The manufacture of iron in ancient Colchis, 147, Oxford: Archaeopress.
12. Erb-Satullo N. L., Gilmour B.J.J., Khakhutaishvili N. (2018) The Ebb and flow of copper and iron smelting in the South Caucasus; *International Journal Radiocarbon*, **60**, 1: 159-180, UK, Cambridge University Press.
13. Erb-Satullo N. L., Gilmour B.J.J., Khakhutaishvili N. (2020) The metal behind the myths: iron metallurgy in the south-eastern Black Sea region, *International Journal Antiquity*, **94**(374): 401-419, Cambridge University Press.
14. Kakhidze A. (2019) Newly discovered centers of metallurgy in Ajara, collection "Matsne", 90-117, Tbilisi (in Georgian).
15. Papuashvili R. (2003) Export of Colchian Bronze, *Dziebani, Journal of the Georgian Archaeology*, 12: 63-69, Tbilisi (in Georgian).
16. Jantzen U. (1972) Agyptische und orientalische Bronzen aus dem Heraion von Samos, *Samos-VIII*. 108: 632-633, Bonn.
17. Mikeladze T. (1985) Early Iron Age cemeteries of Colchis, 133, Tbilisi (in Georgian).
18. Voyatzis M. (1992) Votive riders seated side-saddle at early Greek sanctuaries, *Annual of the British School at Athens*, **87**: 259-279, Cambridge, United Kingdom.
19. Sulava N. (2005) Die Kaukasischen Fibeln, Metalla, 12 ½, Georgien, Schetze aus dem Land des Golden Vlies, Tagungsband zum Kollogium, 2/3 Dezember 2002. Wisbaden-Bochum.
20. Lomitashvili D. (2003) Central Colchis of the VII century BC - VIII century AD (Tsikhegoji Archeopolis, Nokalakevi), Doctor Thesis, Tbilisi (in Georgian).
21. Inadze M. (1999) Aeolian World and Colchis, early contacts (VIII-VI centuries BC), collection: philological-historical researches, 159-165, Tbilisi (in Georgian).

Received June, 2021