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An Early Bronze Age Hoard of Bronze Tools from Dvin, Central Armenia

We describe a hoard found in 2018 on a hilltop near the village of Dvin, Armenia, and comprising seven daggers and six adzes. Similar pickaxes and adzes were found in caches at Dzhrashen, Yerevan, and at Nahal-Mishmar, Israel. A peculiar feature of the Dvin adzes is that their blades are sharply rounded, resembling those of the Bronze Age battle axes. All the Dvin daggers belong to a single type, similar to tangless daggers of the Maikop culture, but more robust. Results of an X-ray diffraction analysis show that the Yerevan, as well as the Dvin, specimens are made of arsenic bronze, whose source is hard to determine. Judging by the typology and the presence of blanks, the Dvin hoard indicates local metalworking, a production of artisans working in the southern part of the Alaverdy mining area. According to GPS, the direct distance between the Dvin and Yerevan hoards is just 13 km. Both locations apparently belonged to one and the same metalworking region in Armenia, and both hoards date to the late 5th to early 4th millennia BC.

Keywords: *Armenia, hoard, dagger, adze, axe, dating.*

Introduction

Hoards of weapons from the Early Bronze Age are very rare in the Caucasus and the Middle East. On the territory of modern Armenia, one such complex is known, the Yerevan hoard (Martirosyan, Mnatsakanyan, 1973). It included bronze axes, one socketed axe, and flat adzes. The Yerevan hoard was repeatedly highlighted in literature and was considered as belonging to the Kura-Araxes culture, although there were no accompanying ceramics.

The field of study of the Early Bronze Age on the territory of modern Armenia acquired a completely new perspective after the discovery of another hoard of bronze items. It was found in the vicinity of the village of Dvin, therefore it was named the Dvin hoard. Information about this discovery was received in April 2018.

Materials and research results

In May 2018, we examined the place where the hoard was found. It was in private ownership, on a high (5.6 m) hill. The surrounding area was a flat plain at an altitude of 948 m above sea level. According to amateur antiquarians, from whom archaeologists received the

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hoard, the owner of the site decided to plant rosehip bushes on a hilltop, but at a depth of one shovel he came across compactly lying bronze items. Hill coordinates: 40° 00′ 45.5″ N, 44° 35′ 45.0″ E (Fig. 1, 2). Particular interest in the location of the hoard was added by the coordinates of the area where the famous Yerevan hoard was discovered, near the village of Dzrashen, located 16 km north-west of the city of Artashat (Martirosyan, Mnatsakanyan, 1973): 40° 07′ 30.4″ N, 44° 34′ 24.7″ E. It is located 12–13 km in a straight line to the south of the place of the Dvin hoard discovery. So, they are located at a relatively short distance from each other.

The surface of the hill where the Dvin hoard was found is covered with sod, overlying gravel. The cultural layer was not identified. On the hill and the surrounding arable land, no fragments of ancient ceramics were found. The location of the hoard clearly coincides with the center of the hilltop. A piece of a bronze adze was found at a distance.

The Dvin hoard includes six flat adzes and seven daggers (Fig. 3, 4). The total mass of finds without a fragment of an adze is 2474.7 g, adzes 1940, daggers 534.7 g; the average mass of adzes is 323 g, daggers 76 g. Adzes have a significant length for tools of this category—from 234 to 264 mm (Table 1). The sharpening is double-edged. One adze is blunt (see Fig. 3, *5*). The thickness of the chopping edge is 2 mm. This product is a blank (a semi-finished product), like one pickaxe from the Yerevan hoard, with an unfinished wedge design. A unique feature of the Dvin adzes is a strong expansion of the flanged edge and its rounding. To calculate the coefficients of roundness, we will make several simple measurements (see Fig. 3, *8*). Take the bend of the blade as the arc of a circle and connect its ends with a chord A–A′, from the middle of which we lower the perpendicular to the apex of the arc (A1–B). The ratio of the segment A1–B to the length of the chord A–A′ will be the desired coefficient. In the adzes of the Dvin hoard, it is very large (Table 1). Some adzes have a narrowing towards the heel with a bend, like adzes from the Yerevan hoard. Considering the originality of the form of the weapons and their large size, it makes sense to put them in the category of their own as "adzes of Dvin type".

Analogs to these adzes in the Southern Caucasus are limited. Apart from the Yerevan hoard, which contains, in addition to adzes, axes (Fig. 5, 6), it is difficult to give other examples. Adzes from this hoard are just as large; and some of them, as well as the pickaxes, have sharply rounded blades (Fig. 5, 6; Table 2). Adzes of the Dvin type were also found in one of the Late Chalcolithic complexes of the Ilpinar burial ground in Central Anatolia (Fig. 7, *4*, *5*) (Begemann, Pernicka, Schmitt-Strecker, 1994), and in the military graves of the Ikiztepe necropolis in northwestern Anatolia (Bilgi, 2005: 46, pl. 24), dating back to the time of Arslantepe VIA, i.e. to the late 4th millennium BC. Three adzes from the Nahal-Mishmar hoard (Israel) have an additional narrowing towards the

Fig. 1. Location of the Dvin (*1*) and Yerevan (*2*) hoards.

Fig. 2. View of the area of discovery of the Dvin hoard.

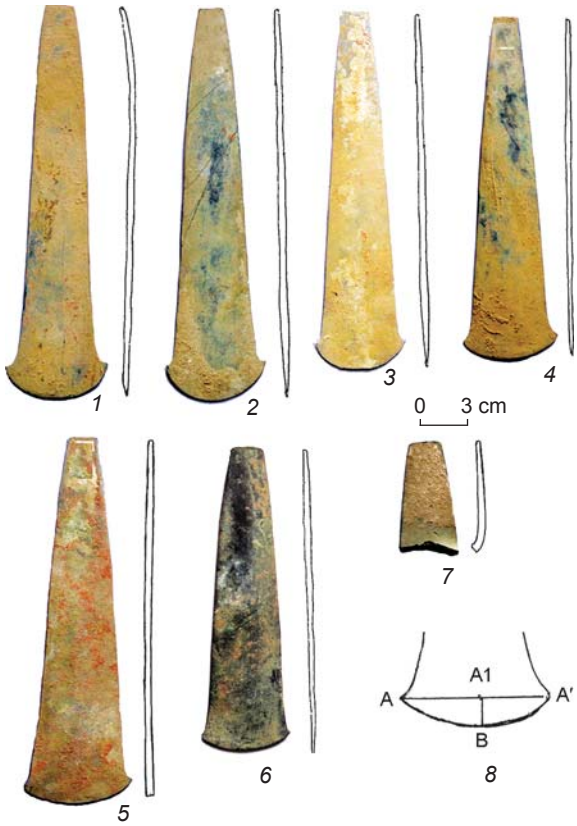

Fig. 3. Adzes from the Dvin hoard and the measurement scheme for calculating the coefficient of roundness of the blades (the numbers of the images of the adzes correspond to the serial numbers in Tables 1, 4).

heel and a strongly rounded blade (Bar-Adon, 1980: 113, 167–169) (Fig. 7, *2*, *3*). We are not aware of any other analogs. Adzes from the Maikop-Novosvobodnaya cultural cimmunity differ sharply from the Dvin in size and proportions, as well as the adzes from Suz I, the tomb of Si Girdan, Sialk III, and monuments of the Kura-Araxes culture (Korenevskiy, 2011: 60–66).

Seven daggers from the Dvin hoard are of the same type (see Fig. 4). The length of the items ranges from 181 to 250 mm, and their piercing-chopping part reaches 160 mm (see Table 1). In configuration, the Dvin daggers resemble the tangless daggers of the Maikop culture, which, however, have significant differences. The handles of the Maikop daggers are somewhat angular with a hint of highlighting shoulders. In addition, they often exhibit notches (Ibid.: 100, fig. 90, *1*), which is absent on the daggers of the Dvin hoard. Therefore, the artifacts in question were unlikely to be Maikop. However, it is obvious that the weapon makers of the Maikop-Novosvobodnaya cultural community and the Leyla-Tepe culture, and the craftsmen who made the Dvin daggers, were inclined toward the same shape with a wide trapezoidal handle, like the flint daggers of previous eras.

In the Southern Caucasus, analogs to daggers of the tangless type, as a general shape feature, are quite well-known. Such a dagger, a rare find, is present in the complex of the Kura-Araxes culture of the Kvatskhelebi S period (Tvlepias Tsqharo, burial 3) (Dzhavakhishvili, Glonti, 1962: Pl. XXXVI), but its proportions are somewhat different. Small daggers without a tang or with a semi-present tang were found at the settlements of Kyul-Tepe I and Teghut, in the early horizon (4000–3700 BC) of Areni Cave (Bobokhyan et al., 2014: 310, fig. 7, *3–5*). But all these finds are small daggers, while the daggers from the Dvin hoard are much larger in size, suitable for combat.

Outside the Caucasus, in Iran, daggers of a tangless or semi-tangless shape were found in layer 9 of Tepe Ghabristan II (Korenevskiy, 2011: Fig. 13, *1–3*; Majidzadeh, 1979: 87), contemporaneous with layers 3–5 of the Uruk time of Sialk III. Daggers with a semi-present tang are known from Tepe Hissar I (Korenevskiy, 2011: Fig. 13, *7*, *8*; Schmidt, 1933: Pl. XC, No. 930; 1937:

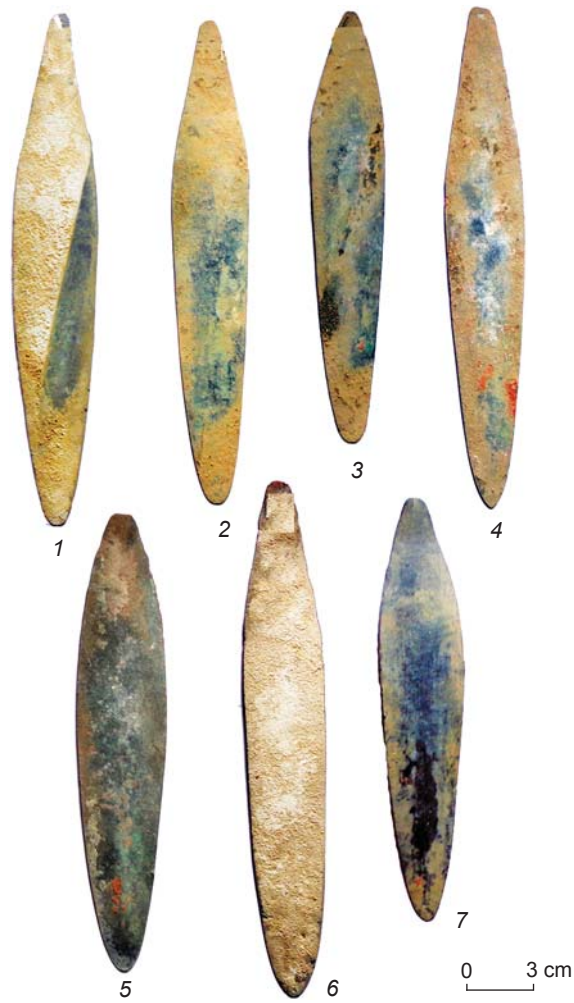

Fig. 4. Daggers from the Dvin hoard (*1–7* – No. 8–14 in Tables 1, 4, respectively).

Table 1. **Measurements of tools from the Dvin hoard and battle axe from Areni Cave**

Item	Tool	Length, mm	A, mm	B, mm	B/A	Mass, g	Adze heel, mm
1	Adze	264	76	25	0.32	370	22
2	"	247	67	26	0.38	290	15
3	"	253	60	19	0.31	340	18
4	"	239	61	18	0.29	305	17
5	"	238	62	14	0.22	340	15
6	"	234	58	13	0.22	295	15
7	Piece of adze	70	–	–	–	–	25
8	Dagger	250	–	–	–	74.4	–
9	"	225	–	–	–	73.4	–
10	"	215	–	–	–	72.18	–
11	"	207	–	–	–	58.84	–
12	"	195	–	–	–	54.88	–
13	"	181	–	–	–	68	–
14	"	185	–	–	–	133	–
15	Battle axe (Areni)	140	77	24	0.31	133	23

Note. A – length of the blade (A–A′ in Fig. 3, *8*) , B – height of the arc (A1–B in Fig. 3, *8*), B/A – coefficient of roundness of the blade.

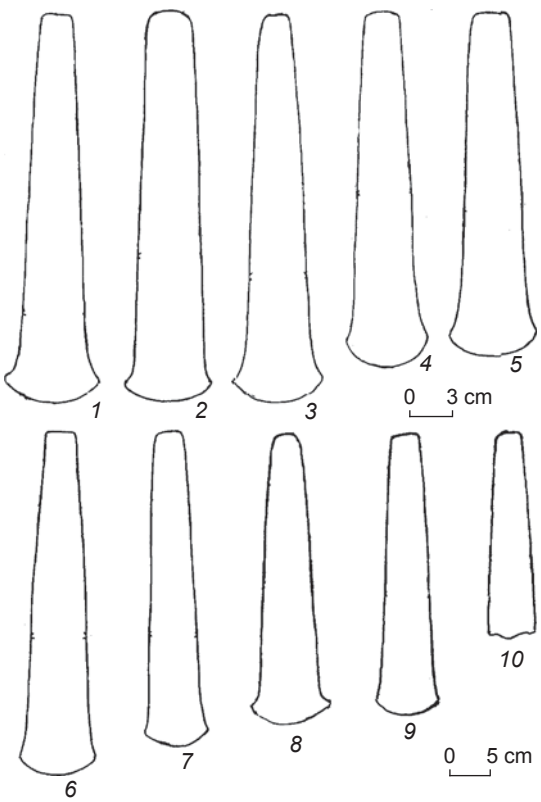

Fig. 5. Adzes from the Yerevan hoard (after (Gevorkyan, 1980)).

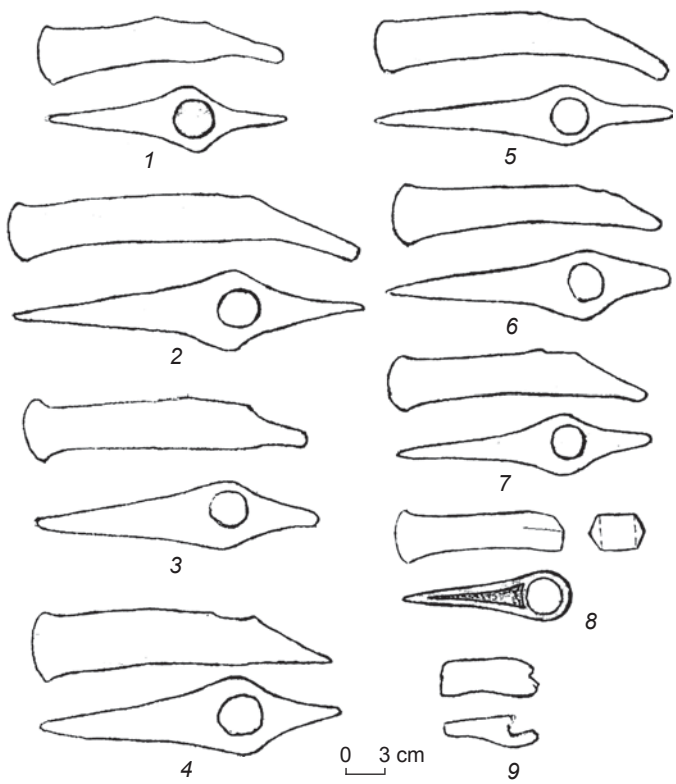

Fig. 6. Axes from the Yerevan hoard (after (Gevorkyan, 1980)).

Table 2. **Measurements of tools from the Yerevan hoard**

Lab code	Tool	Length, mm	A*, mm	B*, mm	B/A	Heel, mm	Hole diameter, mm
9751	Piece of adze	138	27	3	0.11	18	–
9750	Adze	220	47	12	0.25	20	–
9749	"	257	63	18	0.30	20	–
9748	"	257	67	8	0.11	28	–
9747	"	242	55	8	0.14	20	–
9746	"	255	64	18	0.30	18	–
9745	"	239	55	14	0.25	21	–
9744	"	224	45	12	0.26	20	–
9743	"	252	63	17	0.26	25	–
9742	"	252	60	20	0.33	24	–
9760	Pickaxe	220	48	14	0.29	–	30
9759	"	234	60	11	0.18	–	30
9758	"	206	44	13	0.29	–	27
9757	"	225	50	11	0.22	–	30
9756	"	230	42	9	0.21	–	29
9755	"	275	45	10	0.22	–	35
9754	"	190	45	10	0.22	–	32
9753	Axe	128	40	9	0.22	–	28

*See note to Table 1.

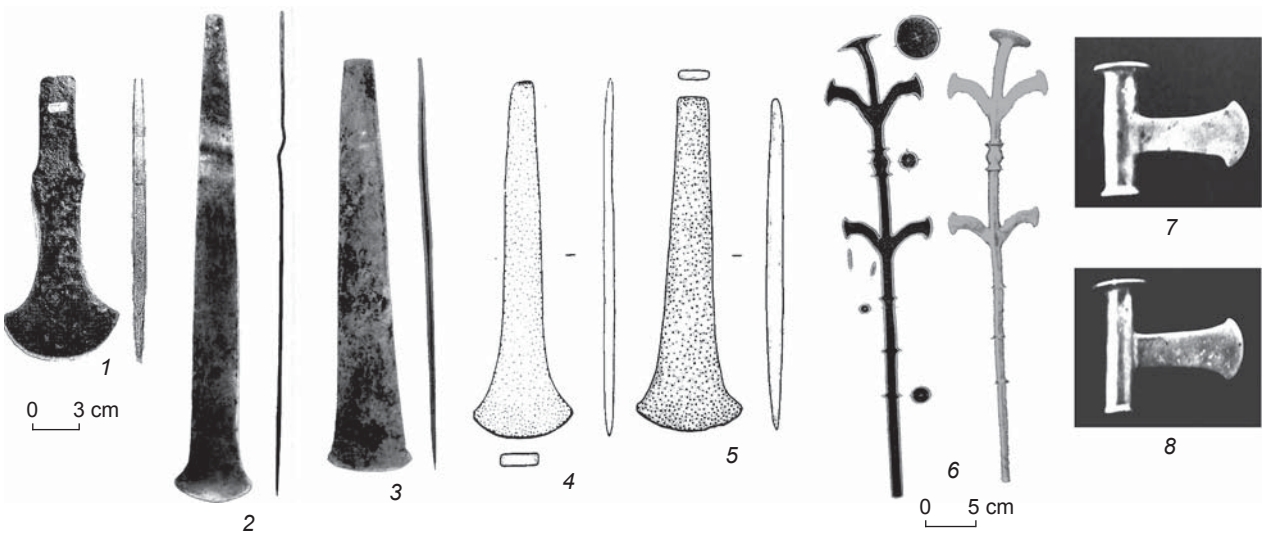

Fig. 7. Impact weapons and wedge-shaped pommels with rounded blades.
1 – Areni Cave, excavations by B. Gasparyan; *2, 3, 6–8* – Nahal-Mishmar hoard (after (Bar-Adon, 1980)); *4, 5* – Ilpinar (after (Begemann, Pernicka, Schmitt-Strecker, 1994)).

Pl. XVI, H. 3408, 3483, 4388) and II (Korenevskiy, 2011: Fig. 13, *4–6*, *9*; Schmidt, 1933: Pl. 1041, 1331, *21*, *31*). Tepe Hissar I (layers Tepe Hissar IA–C by E. Schmidt) is dated to the XL–XXXVII centuries BC (Schmidt, 1933: 323–483). Layer 9 of Tepe Ghabristan II belongs to the early 4th millennium BC (Majidzadeh, 1979: 87; Fazeli, 2004). In the Danube region, tangless bronze daggers were spread mainly in the cultures of the Tripoli BII period. For example, they are present in the Horodnica hoard of the XL–XXXVIII centuries BC (Videyko, 2004), which corresponds to the Early Maikop-Novosvobodnaya culture and the Early Uruk period of Mesopotamia (Korenevskiy, 2011: 21–40). In general, the daggers from the Dvin hoard reflect the incipient "blade revolution", which developed rapidly and had a tremendous impact on the militarization of many peoples of Western Asia, the Caucasus, and Europe in the 4th millennium BC (Korenevskiy, 2017: 59–60).

The specifics of the chemical composition of metal of the tools from the Yerevan hoard were studied by A.T. Gevorkyan and published long before the discovery of the Dvin hoard (Table 3). Emission spectral analysis was performed using the Kler method on a spectrograph with a 10-step attenuator. Data decoding was carried out using standards (Gevorkyan, 1980: 106). It was found that all items from the Yerevan hoard were made of arsenic bronze. The arsenic content ranges from 2.5 to 6.0 %. The rest of the impurities are present in fractions of a percent. Nickel, silver, and lead are noteworthy, present in the amount of tenths and hundredths of a percent. The impurities of tin, bismuth, antimony, and iron are extremely small.

Gevorkyan quite rightly noted that, using the results of the analysis, it is very difficult to associate the finished product with the geography of the ore origins. In practice, ore from various sources could be enriched and mixed. The alloying minerals introduced into the cast could also add their accompanying impurities. Also, there was a possibility of salvaging older items to produce new ones (Ibid.: 53).

The tools from the Dvin hoard were examined in 2019 using the modern method of X-ray fluorescence analysis on a Tornado Bruker spectrometer. It differs significantly from the Kler method used to determine

Table 3. **Elemental composition of metal of the tools from the Yerevan hoard, %***

Lab code	Tool	Sn	Pb	Ag	Bi	Sb	Fe	Ni	As	Cu
9742	Adze	0.001	0.3	0.15	–	–	0.03	0.09	1.3	Base
9743	"	0.05	0.3	0.012	–	0.02	0.003	0.10	5.0	"
9744	"	0.02	0.15	0.14	–	–	–	0.30	2.5	"
9745	"	0.005	0.2	0.14	–	0.01	0.03	0.25	2.5	"
9746	"	0.04	0.16	0.2	–	0.02	–	0.22	2.5	"
9747	"	0.003	0.005	0.25	–	0.017	–	0.04	2.5	"
9748	"	0.003	0.6	0.5	0.002	–	0.07	0.35	5.0	"
9749	"	0.001	0.8	0.14	–	0.26	0.001	0.20	5.0	"
9750	"	0.009	0.15	0.05	–	–	0.03	0.20	2.5	"
9751	"	0.001	0.05	0.06	–	–	0.003	0.09	3.5	"
9752	Pickaxe, scrap	0.015	0.003	0.03	–	0.004	0.001	0.30	2.7	"
9753	Axe	0.04	0.05	0.15	–	–	0.008	0.09	4.0	"
9754	Pickaxe	0.009	0.015	0.1	–	–	0.03	0.70	5.5	"
9755	"	0.003	0.05	0.06	–	0.006	0.5	0.25	2.5	"
9756	"	0.003	0.015	0.06	–	0.1	0.003	0.30	4.0	"
9757	"	0.003	0.15	0.015	–	0.01	0.02	0.15	5.0	"
9758	"	0.003	0.2	0.1	–	0.015	0.02	0.60	6.0	"
9759	"	0.001	0.2	1.0	–	0.075	0.006	0.40	2.5	"
9760	"	0.003	0.003	0.1	–	–	0.002	0.10	5.0	"

*After (Gevorkyan, 1980: 104, 106).

the chemical composition of metal of the items from the Yerevan hoard. Furthermore, the qualitative and quantitative determinations of the elements, which are carried out by the apparatus itself, are important for us. In addition, the spectrometer allows us to investigate the liquation of trace elements scattered in the body of the analyzed product, providing such information in the form of tables. The sensitivity of the device is 0.01 %, which is sufficient to determine the components in the alloy. It is not known what the degree of liquation is for elements with a content of less than 0.01 % and how much it can affect the statistical layouts in determining the composition of metal.

Is it possible to judge the ratio of trace elements in the composition of the analyzed item and of the original ore from the source? There is no definite answer to this question. To determine the relationship of the finished product with an ore base, data on lead isotopes are often used (Bobokhyan et al., 2014), but such studies have not been carried out for the hoards under consideration.

The analyzed tools from the Dvin hoard were made of arsenic bronze (Table 4). The arsenic content ranges from 1.43 to 6.26 %. In one case, it reaches 7.17 %. But this item is a piece of adze. The nature of the deformation shows that the product was bent severely, to the point of breaking. Why did they do it? It is hard to say. It is only clear that such a high arsenic content could have made the item rather fragile. Maybe the ancient craftsman took this into account and turned the adze casting into scrap.

Noteworthy is the evenly increased content of nickel and iron: Ni shows hundredths and tenths of a percent, but not more than 0.25 %, Fe 0.1–0.2 %. Lead impurities range from 0.10 to 0.89 %. The zinc content is hundredths and tenths of a percent, the maximum being 0.7 %. Impurities of tin, silver, bismuth, antimony, etc., the content of which is less than a hundredth of a percent, were not determined by the device.

The arsenic bronzes of the Dvin and Yerevan hoards are similar in terms of nickel and lead contents. However, no zinc impurities were found in metal of the items from the Yerevan hoard, which may indicate different sources of ore, unless this is a result of using different methods for determination of composition of the elements.

Discussion

Comparing the metal in the items from the Dvin and Yerevan hoards indicates that the craftsmen who made these items had similar skills in casting arsenic bronzes, knowing well the tolerable content of arsenic in the alloy (no more than 5–6 %). The original source or sources of the metal in both cases has not yet been solidly confirmed. For the Dvin hoard, an association with polymetallic copper-zinc or lead-copper-zinc deposits has not been ruled out.

Now let's consider the possible versions of the serviceable purpose of the tools from the Yerevan and Dvin hoards. A.A. Martirosyan and A.O. Mnatsakanyan

Table 4. **Elemental composition of metal of the tools from the Dvin hoard, %**

Item	Tool	Cr	Fe	Ni	Zn	As	Pb	Cu
1	Adze	0.07	0.13	0.16	0.05	4.37	0.10	95.13
2	"	0.07	0.15	0.19	0.13	1.43	0.89	97.14
3	"	0.06	0.11	0.25	0.04	3.33	0.07	96.14
4	"	0.08	0.15	0.20	0.03	2.57	0.15	96.83
5	"	0.07	0.20	0.18	0.09	4.38	0.36	94.71
6	"	0.07	0.14	0.15	0.10	3.68	0.10	95.76
7	"	0.08	0.15	0.24	0.07	7.17	0.35	91.95
8	Dagger	0.06	0.13	0.14	0.05	3.68	0.81	95.13
9	"	0.08	0.14	0.18	0.04	4.30	0.05	95.21
10	"	0.05	0.15	0.24	0.06	6.26	0.38	92.87
11	"	0.06	0.14	0.23	0.07	4.01	0.12	95.37
12	"	0.06	0.17	0.23	0.11	2.42	0.05	96.98
13	"	0.06	0.14	0.20	0.70	3.89	0.15	94.83
14	"	0.09	0.14	0.15	0.11	4.57	0.05	94.88

(1973) considered the heavy pickaxes as weapons; G. Areshian (2007) saw them as mining tools. All of these authors are probably right. Southern Caucasian pickaxes could have been used both for military purposes and for peaceful labor (Gambashidze et al., 2010: 254–259). However, the question arises: why was the shape of the pickaxe spread precisely in the Southern Caucasus, and was not accepted by the masters of the Danube region in the Chalcolithic, although they massively manufactured axe-hoes or axe-adzes? We can only answer this with a hypothesis. Probably, the Southern Caucasian pickaxes were more adaptable to work on stony soils, while the complex tools of the Chalcolithic era in the Danube region, alternatively, on the soft chernozems of the plains. Other alternatives cannot be ruled out. Those and other complex weapons were military-agrarian and reflected the level of development of military affairs, characteristic of the 5th millennium BC, when there were still no bladed weapons made of bronze.

For example, heavy hammer-axes served the Chalcolithic warriors in the Danube region. A set of figurines was found in the settlement of Stubline of the Vinča culture in Serbia, which depicted warriors apparently holding such weapons on long handles (Crnobrnja, 2011). Heavy axes, of course, were inferior in efficiency to lighter socketed short-butt axes, one of which was found in the Yerevan hoard. Distribution of the latter category of weapons in the 4th millennium BC coincides with the appearance of daggers in a broad range of territory, and is probably associated with the development of the art of close combat. Therefore, the presence of a socketed axe in the Yerevan hoard was under the influence of time.

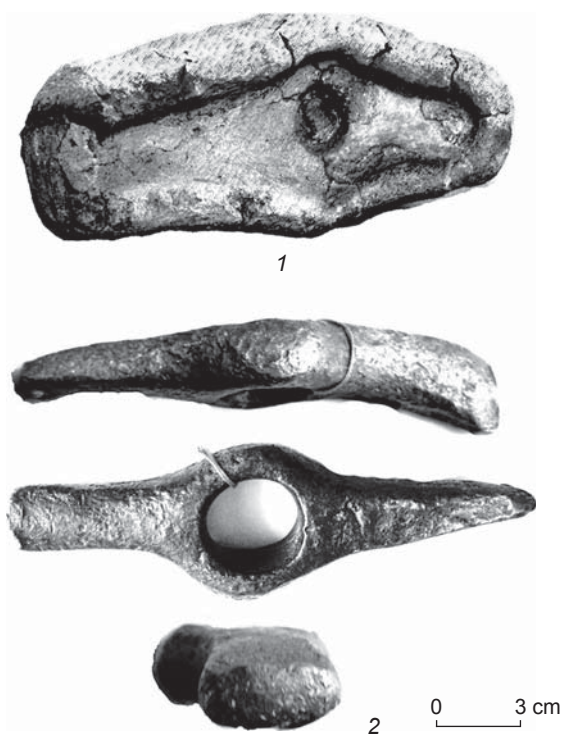

Fig. 8. Casting mold from Dzedzbebi IV (*1*) and an axe from Gyumri (*2*).

The interpretation of flat adzes from the Yerevan and Dvin hoards as woodworking tools is questionable. The reason for this is the blades of tools with coefficients of roundness of 0.2–0.3. With edges formed like this, the cutting effect inherent in a battle-axe is more pronounced. For example, we determined this coefficient for a flat battle-axe with flanges from Areni Cave of the late 3rd–2nd millennia BC (see Fig. 7, *1*). It turned out to be equal to 0.31. The coefficient of roundness for two pickaxes from the Yerevan hoard is 0.29, and for several others it is 0.22.

Thus, adzes from the Yerevan and Dvin hoards could be used as impact weapons. A sharply rounded, flanged blade is more characteristic of a battle-axe than a woodworking tool. It has the kind of extended blade that flat axes from the Nahal-Mishmar hoard have. On various standards from this hoard, the shape of such an axe, or its transformation into an axe with a long tubular socket, was often reiterated (Fig. 7, *6–8*). Therefore, one might surmise that for local warriors and foundry workers, flat axe was a familiar and well-known device for hand-to-hand combat (Bar-Adon, 1980: Fig. 27, 106, 148, 153).

Large daggers from the Dvin hoard were effective weapons with a piercing function when striking. Possession of such a means of attack gave a warrior an undeniable advantage over an enemy who did not have a similar weapon (Korenevskiy, 2017: 117–124). It is possible that the tangless blades could be attached to the handle and became spears with bronze tips.

All of the above about the possible functions of the tools from the Yerevan and Dvin hoards indicates that these were the complexes of the artisans who dealt directly with their manufacture. This conclusion is supported by the presence of foundry waste, scrap, and unfinished tools—a flat axe in the Dvin hoard and a pickaxe in Yerevan.

The age of both complexes is determined by analogy. First of all, one should pay attention to the fact that axe-adzes and copper hammer-axes were missing in the settlements of the Kura-Araxes culture 3500–3000 BC (Badalyan, 2018). The socketed axes found there had a cylindrical socket and a round butt. Casting molds for their manufacture were repeatedly found in the settlements of the Kura-Araxes culture. They testify to a qualitatively different technology of axe shaping, common to the Leyla-Tepe, Kura-Araxes, and Maikop-Novosvobodnaya cultures.

The casting mold for the pickaxe was found only at the Sioni-Tsopi settlement of Dzedzvebi IV 9 (Fig. 8, *1*),

near the town of Bolnisi (Georgia), on the northern periphery of the Alaverdy mining area (Gambashidze, Stollerr, 2010: 152, Add. 2). A hammer-axe or a pickaxe cast in a similar shape is known in Gyumri (Armenia) (Fig. 8, *2*). The Sioni-Tsopi culture dates back to the late 5th to early 4th millennia BC. (Sioni dates – 4055–3905 BC; 4065–3910, 4175–3955, and 4245–3975 BC) (Sagona, 2014: 36). The pit where the casting mold of the pickaxe was found, together with the ceramics of the Sioni-Tsopi culture, according to I. Gambashidze, refers precisely to the late 5th millennium BC (4318–4237 and 4327–4175 BC), which coincides with the dates of complex 17002 (hammer-axe and two adzes) from Ovchular-tepesi (Marro, Bakhshaliev, Ashurov, 2009, 2011) and axe-hoes of the Ariusht and Yasladan type of the tribes of the Danube region, Chalcolithic era (Ryndina, 2002: 257), late 5th to early 4th millennia BC (Tripolye BI-BII, BII).

The analogy given for the pickaxes of the Yerevan hoard can also be extended to the Southern Caucasian complexes with the adzes of Dvin type. To the south of Caucasus, such axes, being the weapons of the Eastern Mediterranean (Nahal-Mishmar) and Anatolian (Ilpinar) tribes, could have existed from the Late Chalcolithic to the Jemdet-Nasr (Ikiz-tepesi) period. But in the Southern Caucasus, at the monuments of the Kura-Araxes culture, they are unknown, as well as large daggers with a trapezoidal handle. These arguments allow us to consider the Yerevan and Dvin hoards as complexes of the pre-Kura-Araxes period, contemporaneous with the Sioni-Tsopi culture, early complexes of Areni Cave (layers IV, III, II) (Bobokhyan et al., 2014: 284, 285), Early Maikop, and Leyla-Tepe (in general, late 5th to the first half of the 4th millennia BC) (Museibli, 2020a; b: 279). They reflect a very ancient stage in the production of heavy hand-to-hand combat weapons and bladed weapons in the area of the Alaverdy mining area and adjacent territories.

Conclusions

An analysis of the materials from the Dvin and Yerevan hoards shows that they reflect a special pre-Kura-Araxes stage of metalworking of the Southern Caucasian tribes. This was during a period of expansion for clans of casters/artisans, who created military-agrarian weapons, in this region. Among them, new forms of light combat socketed axes and bladed weapons have already begun to appear. The spread of heavy flat axes in the areas where the hoards were found suggests their local manufacture and a special southern local area of metalworking within the Alaverdy mining field, about which A.A. Martirosyan and A.O. Mnatsakanyan wrote earlier (1973). This is also evidenced by the fact that the hoards were in relative proximity to one another.

The Dvin hoard was probably the sacrificial complex of a caster artisan, who buried his products on the hilltop as in a special sacred place. The items of the Yerevan hoard, apparently, were from the same series of sacrifices made by representatives of the blacksmith and foundry craft. After concealment, they were not intended for further use, just like the items that accompanied the dead to the country of "no return".

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