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The Evolution of the Archaeological Landscape of the Armenian Highland during the Iron Age

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Abstract

The present paper aims to evaluate the archaeological landscape patterns of the territory of the present-day Republic of Armenia and Autonomous Republic of Nakhchivan. The area has been divided into six main regions which are considered in three different epochs, the Early Iron Age, the Urartian and the Achaemenid periods, which also express three different models of territorial control and organization. The distribution and features of the main archaeological sites (namely fortified and unfortified settlements, and cemeteries) are described in order to analyze the transformation of the archaeological landscape over three different chronological and political phases.

Keywords

Armenian Highland – archaeological landscape – Early Iron Age – Urartian kingdom – Achaemenid period

Introduction

In the past two decades there has been renewed interest in Transcaucasia, facilitated also by the changed political situation. Along with a considerable amount of new archaeological fieldwork, many studies have been dedicated to various aspects of the ancient cultures of the lands of the republics of Armenia, Azerbaijan and Georgia.

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During the Soviet era, archaeological efforts were mainly directed towards investigating remains of the Kura-Araxes, large Urartian and Hellenistic period settlements and, especially, the many burial-grounds scattered all over Transcaucasia.

In recent years, on the other hand, much archaeological fieldwork has been dedicated to surface surveys and the study of the archaeological landscape. Such studies have been devoted especially to the territory of present-day Armenia, providing a picture of the settlement patterns, while less information is available about the modern countries of Azerbaijan and Georgia.

The purpose of this work is to outline the main features of the settlement patterns and to trace its evolution during the Iron Age.

The Armenian highland is somewhat arbitrarily subdivided; most is included in the Republic of Armenia. Although the neighbouring Nakhchivan Autonomous Republic is also included in this study, other surrounding areas are not taken into account due to the lack of detailed documentation. The eastern part of the Armenian highland, currently part of Turkey, has been only partially investigated; detailed publications are still lacking or those available mostly relate to Early Iron Age features.[1] The region of Nagorno-Karabakh and other areas of western Azerbaijan have been partially investigated, especially by German teams along with members of the "Imperial Archaeological Commission" during the late 19th and early 20th centuries, but the information available mostly regards pre- and protohistoric burial-grounds, and is thus too limited for this study, since the only long chronological sequences come from the area of Mingechaur,[2] in north-western Azerbaijan.

Each area will be treated separately on the basis of the currently available literature. The Armenian highlands may be tentatively divided into six main areas (Fig. 1):

1) Mt. Aragats and Shirak Plain;
2) Lake Sevan Basin;
3) The Ararat Valley and Yerevan Basin;
4) Nakhchivan Autonomous Republic;
5) Syunik area;
6) Tavush and Lori areas.

1 Belli & Konyar 2003a, 2003b; Marro & Özfırat 2003, 2004, 2005.

2 Aslanov *et alii* 1959.

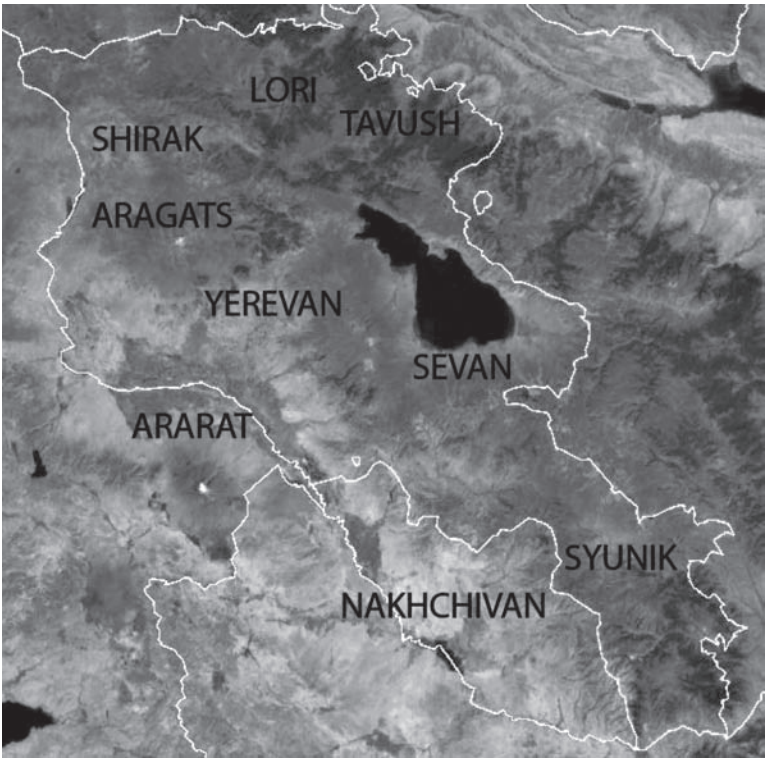

FIGURE 1 *Subdivision of the Armenian highland.*

A site distribution map is given for each area. The sites are divided according to their characteristics:

a) unfortified settlements (circular symbol in the maps);
b) fortified settlements and cyclopean fortresses (square symbol);
c) cemeteries (triangular symbol).

Moreover, every area has been divided into three different chronological phases, although these are defined somewhat arbitrarily since there is not complete agreement on a common chronology:

a) the Early Iron Age, 12th-9th centuries BCE, characterized by the progressive appearance of iron objects and the emergence and spread of cyclopean fortresses. A clearly identifiable gap between the last stage of the Late Bronze and the Early Iron Age is often lacking, especially with regard

to the fortresses' architectural features; remains datable to the 14th-13th century have often been included in the Early Iron Age group.

b) the Middle Iron Age, 8th-7th centuries BCE; its main feature consists of the Urartian control of the southern part of Transcaucasia;

c) the Late Iron Age, beginning with the end of Urartian dominion (middle or late 7th century BCE[3]) and covering the entire Achaemenid period until the emergence of the independent Orontid kingdom in the 4th century.

A consideration of the evolution of the landscape during this time period would provide an interesting perspective on the development of human activities and succession of political authorities over the centuries. Such a topographic study is, however, rendered difficult by several problems related to the distribution of sites. Most fieldwork activity has been concentrated on the highlands surrounding the agricultural plains; good information for the latter is not available. During the Soviet era the political authorities launched a comprehensive programme of food production development through extension of the agricultural plains, which concerned the Caucasus and Siberia in particular. This programme of agricultural land-use probably resulted in the destruction of many sites located in the plains, which nowadays have completely disappeared or been covered by the expansion of modern settlements.

Other problems might be encountered due to the difficulty of a reliable chronological subdivision. Few sites have yielded complete and well defined (or published) ceramic sequences for the Iron Age. Moreover, apart for the typical Urartian *Biainili* pottery and the Early Iron Age types of the so-called "Metsamor-Lchashen" culture, there are few ceramic typological groups that are clearly recognizable for specific periods. Several local pottery types continued to be produced for long periods without significant changes; this is particularly evident in the Late Iron Age. For example, during the Achaemenid period several pottery types that had been used in preceding centuries were still the same, while other types continued into the subsequent Hellenistic period. However, it also possible to establish that after the collapse of Urartian dominance, slight alterations in the old pottery forms occur.[4]

3 The time and the causes of Urartian downfall are still a matter of debate. For a clear picture of this problem see Hellwag 2012.

4 Stronach *et alii* 2009, 192.

The period between the fall of Urartian authority and the onset of the Achaemenid epoch is referred to as the Median period, which is archaeologically very difficult to bring into focus. In this period, however, some new forms are attested which are linked to the pottery tradition that has been found farther south in Media at Nush-i Jan[5] and Godin Tepe.[6] Kroll has rightly proposed to call it the "Median pottery tradition", a term used, however, in a wider geographical sense, because the first and possibly earliest evidence for this pottery comes from the region of ancient Media.[7]

Evidence of a later date consists also of the presence of "Scythian-type" objects, which start to appear in several graves and sites of Transcaucasia starting from the late 7th century onwards, although their occurrence is more frequent in present-day Georgia than in Armenia.[8]

The Achaemenid presence in Transcaucasia is mostly known due to the occurrence of several luxury objects, and few architectural features such as column bases or capitals,[9] but their dominance did not modify the human landscape, thus making it difficult to date the various evidence reliably. However, recently some detailed studies have been published that aim to clarify various aspects of the Late Iron Age.[10]

Various problems concerning dating are to be encountered in the available literature for a variety of reasons. First of all, several publications and proposed chronologies might today be considered partially outdated, since most are from the Soviet era (and some even before it); however, for some areas this evidence is the only information available since no further studies have been carried out.

Another problem is related to the different methods used by the various survey projects involved in landscape studies, in which the terminology used is not always concordant (Early, Middle or Late Iron Age, Achaemenid or Early Armenian periods, *etc.*).

The most remarkable limit is, however, related to the fact that several sites have yielded very few or even no potsherds and thus chronologies have been proposed on little evidence or just architectural features; these attempts are often far from being reliable.

Considering such problems, the chronological subdivision of various sites proposed in this article might be open to question. Moreover, evidence from

5 Stronach 1978.

6 Gopnik 2011.

7 Kroll 2014, 205.

8 Tekhov 1980; Esayan & Pogrebova 1985; Mehnert 2008.

9 Ter-Martirosov 1998; 2000; Bill 2003; 2010; Kroll 2003; Knauss 2005; 2006.

10 Karapetyan 2003; Khatchadourian 2008.

nearby locations has been grouped together under one site for the sake of simplicity. It must be emphasized that the sites shown on the maps are usually the most important ones; in the huge available literature many other discoveries are reported but they mostly refer to chance finds of burials or objects, or have not been fully published. In any case, their inclusion would not modify the general pattern presented below.

Mt. Aragats Area and Shirak Plain

Mount Aragats is a large, high (4.083 m) inactive volcano located in northwest Armenia, bordered by the river Akhuryan to the west and the river Kasakh to the east. The southern slopes of the mountain gradually finish on the Shamiram plateau, beyond which runs the large and fertile Ararat valley, containing the river Aras. To the north is present the smaller Shirak Plain.

The surrounding area is currently one of the best studied areas in modern Armenia, thanks to a series of recent extensive archaeological campaigns and detailed publications.

The most important fieldwork has been led over the last decade by a team from the University of Chicago, directed by Adam T. Smith, along with the Institute of Archaeology and Ethnography of the Academy of Science of Yerevan. This joint expedition conducted an extensive and intensive survey along the northern slopes of Mt. Aragats and test excavations were carried out in four cemeteries and five other sites in the area in order to provide ceramic sequences. This long-term project has recently produced a complete series of reports presenting all the collected data.[11]

Using both pottery sequences and radiocarbon dating, the team has been able to subdivide the Late Bronze-Iron Age into six sub-phases, referred to as "Lchashen-Metsamor".[12] Evidence regarding the Achaemenid period is, unfortunately, less abundant; the authors point out the difficulties of correctly dating the phases following the collapse of Urartian authority, the so-called Iron III-IV periods.[13]

Moreover, a few years ago two Armenian scholars published another wide-ranging volume concerning the Mt. Aragats area, presenting the most recent results together with all the data collected in previous decades, especially those from Soviet times which (for various reasons) have remained mostly

11 Smith *et alii* 2009; Badalyan *et alii* 2014.

12 This chronological division is based on the excavated sites of Metsamor and the cemetery of Lchashen, although they have not been fully published.

13 Smith *et alii* 2009, 40-41.

inaccessible to Western scholarship.[14] This new book is mainly dedicated to the Bronze Age-Early Iron Age period, but also contains some information regarding the Achaemenid epoch.

Early Iron Age **(Fig. 2)**

The Early Iron Age generally begins in the south Caucasus around the 12th-11th century BCE and is marked by various changes in the social and cultural sphere. Paradoxically, the spread of iron use is not one of these, since this diffusion seems not to have been regular. Although some of the earliest examples of iron objects are probably the finds from the Beshtasheni cemetery, in Georgia,

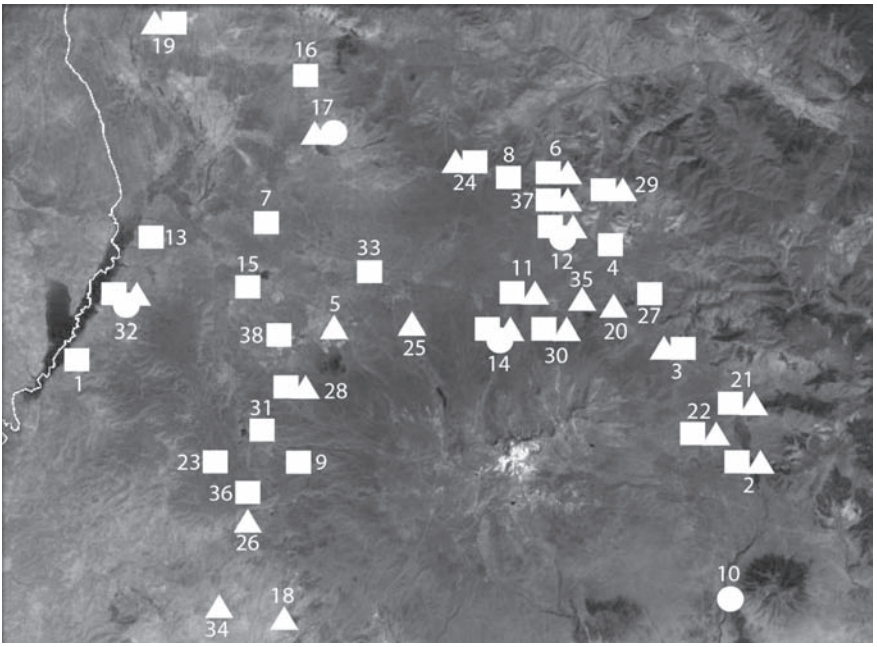

FIGURE 2 *Mt. Aragats area and Shirak plain. Sites of the Early Iron Age. 1 — Agin; 2 — Aparan II; 3 — Aparani berd; 4 — Aragatsi berd; 5 — Artik; 6 — Ashot-Yerkat; 7 — Aygabats; 8 — Berdidosh; 9 — Garnovit; 10 — Gazanots; 11 — Geghadzor; 12 — Gegharot; 13 — Gusanagyugh; 14 — Hnaberd; 15 — Horom; 16 — Kamo; 17 — Karnut II; 18 — Katnaghbyur; 19 — Keti I; 20 — Korbulag; 21 — Kuchak I; 22 — Kuchak II; 23 — Lanjik; 24 — Lernapar; 25 — Mantash; 26 — Mastara; 27 — Mirak; 28 — Pemzashen; 29 — Polot-sar; 30 — Sahakaberd; 31 — Sarnaghbyur; 32 — Shirakavan; 33 — Spandaryan; 34 — Talin; 35 — Tsaghkahovit; 36 — Tsaghkasar; 37 — Tsilkar; 38 — Tufashen.*

14 Badalyan & Avetisyan 2007.

dated to around the 14th-13th BCE,[15] in most of the Armenian highland their use became common starting only from the 9th-8th century BCE.

One of the most distinct features of the period, is the emergence of local chiefdoms centred on fortified sites. This tendency is particular evident in the Mt. Aragats area, where it has been widely studied by A. Smith and other members of the Aragats project. The beginning of the 1st millennium BCE saw the rise of many cyclopean fortresses, especially on the northern slope of the volcano; several, however, were already present in the Late Bronze Age.

Few unfortified settlements are known for this period and none have been extensively excavated. The best example is the site of Shirakavan,[16] where several buildings and a cemetery were unearthed. However, the presence of some burial-grounds not associated with any nearby fortresses raises the possibility that further unfortified settlements may exist, as yet unidentified.

These Early Iron Age fortresses are often located in isolated positions at high altitude, on top of rocky outcrops or indeed mountains, without direct connection to the fertile plains. As Smith suggests,[17] movement between agricultural areas on the plain and political centres on the mountain slopes must have had an important vertical component.

The fortresses are usually quite small in size, with irregular defensive walls. They mostly follow natural landforms and are made of big, unworked stones, with other smaller ones used to fill in the spaces. Some fortresses also feature towers and buttress, usually placed on the less-steep slopes. A few also have a second, internal circle of walls, probably some sort of "citadel" (Fig. 3).

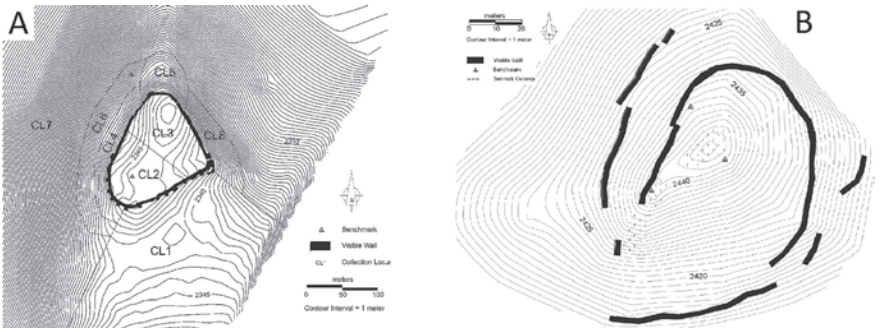

FIGURE 3 *Fortresses of Hnaberd* (*A*) *and Polot sar* (*B*) (*after Smith* et alii *2009, pls. 28, 30*).

15 Akhvlediani 2001.

16 Torosyan *et alii* 2002.

17 Smith 1999, 53.

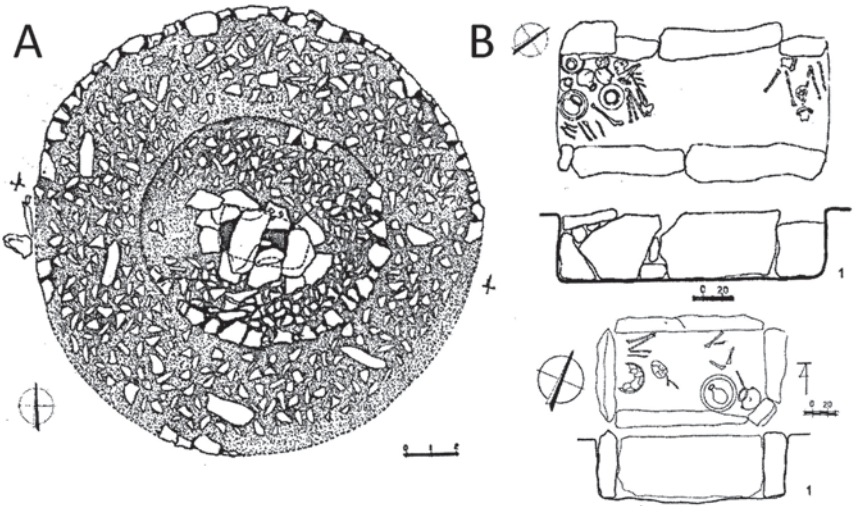

FIGURE 4 *Late Bronze (A) and Early Iron Age (B) graves from Talin (after Badalyan & Avetisyan 2007, 250, pl. 6; 254, pl. 8; 258, pl. 12).*

The most striking feature of such fortresses is their inaccessibility, obtained by a combination of choice of topographic location and use of cyclopean masonry in the construction.[18] There is an absence of clear political integration and each fortress seems to have been the centre of an autonomous polity. Worth mentioning is the recent discovery of three shrines within the Late Bronze Age fortress of Gegharot.[19]

Burial evidence is, as is typical of the whole of Transcaucasia, very abundant. Particularly common is the single cist grave, with the deceased placed in a crouched position on one side and accompanied by a rich repertory of funerary goods. Often there is a mound above the cist, as well the presence of a cromlech, a circle of irregular stones along the perimeter of the mound, which is a typical trait of Late Bronze–Early Iron Age burials in Iron Age southern Transcaucasia (Fig. 4). There are also several cases of multiple burials.

Besides the large Late Bronze–Early Iron Age cemetery of Artik,[20] few others in this area have been extensively dug and published; several have been partially investigated by the Aragats project team,[21] and others excavated by Armenian teams. A comparison between the well-published cemetery of Artik

18 Smith 1999, 54.

19 Smith & Leon 2014.

20 Khachatryan 1979.

21 Smith *el alii* 2009, 112-253.

with graves dating to the 15th century BCE, and other Early Iron Age burial-grounds in the area, makes clear one of the typical features that characterized the Iron Age in Transcaucasia. In the 1st millennium graves tend to be simpler, mostly represented by single cist-graves usually accompanied by a low mound and/or a cromlech, while in the preceding era they often showed a more complex construction technique. Moreover, the presence of metal objects strongly increases, especially the presence of a rich repertory of weapons in male graves, while Late Bronze Age graves contain mainly pottery.

Middle Iron Age **(Fig. 5)**

In the first half of the 8th century BCE the Urartian king Argishti I (785/780-756 BCE) began to conquer the lands north of the Aras river, annexing them to his kingdom. These conquests were followed by an intensive building programme which transformed the landscape of part of the Armenian highland. This new imperial policy, well illustrated by the foundation of the fortresses of Armavir and Erebuni in the Ararat valley, is discussed in the following sections.

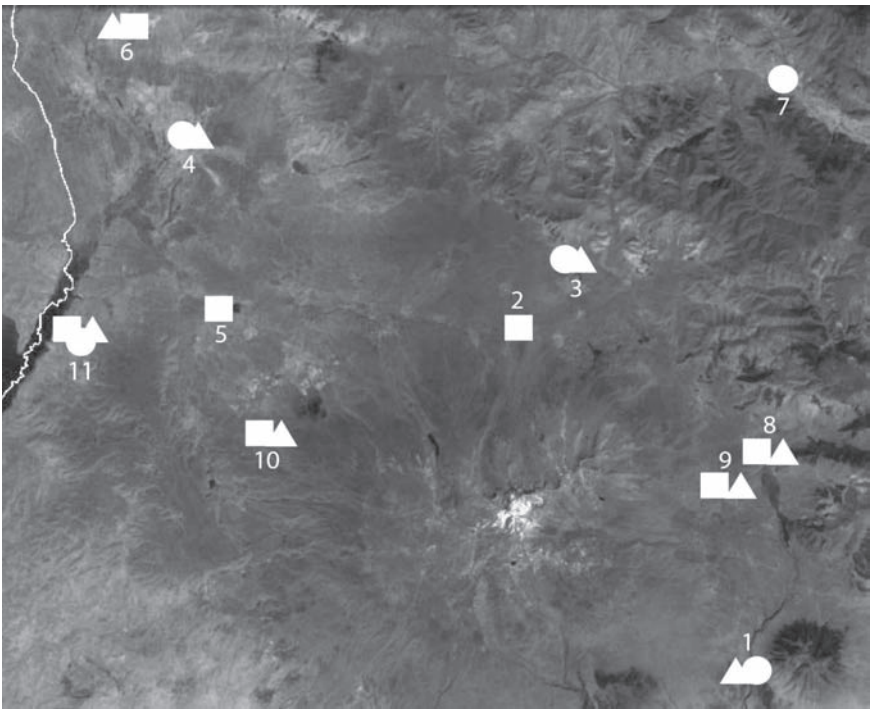

FIGURE 5 *Mt. Aragats area and Shirak plain. Sites of the Middle Iron Age. 1 — Gazanots; 2 — Geghadzor; 3 — Gegharot; 4 — Gyumri; 5 — Horom; 6 — Keti I; 7 — Kosi Choter; 8 — Kuchak I; 9 — Kuchak II; 10 — Pemzashen; 11 — Shirakavan.*

The area surrounding Mt. Aragats, on the other hand, contains few Urartian remains. It was, however, the target of military raids led by Argishti I, since he left two inscriptions in the villages of Gulidzhan (today Spandaryan) and Marmashen, both located in the area of the city of Gyumri, where he mentions the conquest of various lands and towns.[22] Moreover, a grave with clearly Urartian material was found in the outskirts of Gyumri,[23] where there are also remains of a Middle Iron Age settlement.[24] This northern area was presumably not incorporated into the Urartian kingdom since it has not revealed any clearly Urartian settlements.

The only well-established Urartian site is that of the great fortresses of Horom, located on the northern slope of the volcano, which also contains traces of the destruction of an Early Iron Age settlement,[25] probably connected with the Urartian conquest. Horom was probably the most northern point of the Urartian frontier since no other sites have been identified beyond it. The Urartian presence is particularly visible in this site, due to the construction of a massive defensive wall with the typical alternation of towers and buttresses, one of the most distinguishing features of Urartian defensive architecture (Fig. 6).

The other areas seem not to have been directly affected by Urartian domination, but it is possible to observe a clear change in the organization of the human landscape. The location of political centres shifted dramatically from the mountain slopes toward the plain. Most of the fortresses of the previous era were abandoned in favour of sites near the plain, probably indicating the direct control of the newly established political authorities over the exploitation of agricultural resources. Scarce traces of dwellings are attested around some fortresses.

The presence of important Urartian centres in the southernmost part of the Aragats area (which is discussed below) has led to the conclusion that even the zone closest to the mountain was under Urartian control. Probably the independent political authorities centred on these fortresses kept some sort of autonomy under Urartian dominance. As well as fortresses, it is possible to detect the presence of some unfortified settlements which were closely linked to the agricultural plains.

In general, the funerary evidence resembles that of the previous era. The only new feature consists of the appearance of Urartian-made objects in

22 Salvini 2008, 349-350, A 8-9; A 8-10.

23 Martirosyan 1964, 284, fig. 110.

24 Martirosyan 1952.

25 Kohl & Kroll 1999, 251.

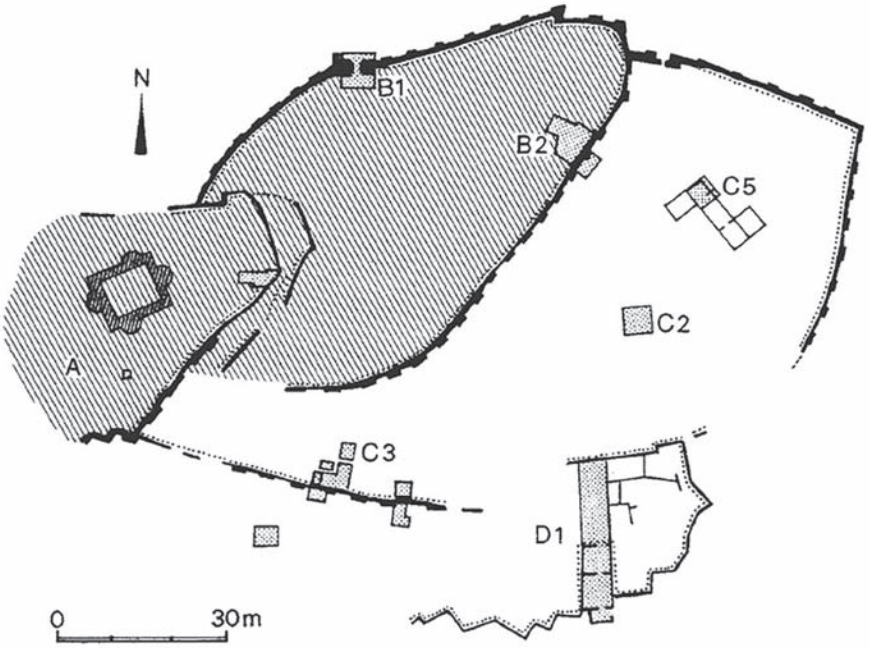

FIGURE 6 *Fortress of Horom* (*after Kohl & Kroll 1999, 251, fig. 2*).

some graves, which occur alongside those that are an expression of the native cultures.

This peaceful interaction between local and new elements is well represented by the excavation of Horom. Here the northern citadel was constructed with typical Urartian architectural features, but the Urartian presence was not exclusive since local Late Bronze/Early Iron Age grey and black wares continued in use as well as the typical Urartian wares, although to a lesser degree.

The Urartian citadel was abandoned in the late 7th century BCE, but pottery and stratigraphic evidence demonstrates the continuation of local traditions in subsequent decades.

Burials are less abundant than in the previous era and are mostly associated with a nearby fortress. They show no particular changes in tomb structure or grave goods.

Late Iron Age (Fig. 7)

As mentioned above, it is not easy to get a clear picture of the passage from Urartian dominance to the following period. Archaeological deposits generally show abundant traces of destruction in most of the former Urartian administrative centres, but the lack of undisputed Urartian settlements, apart from

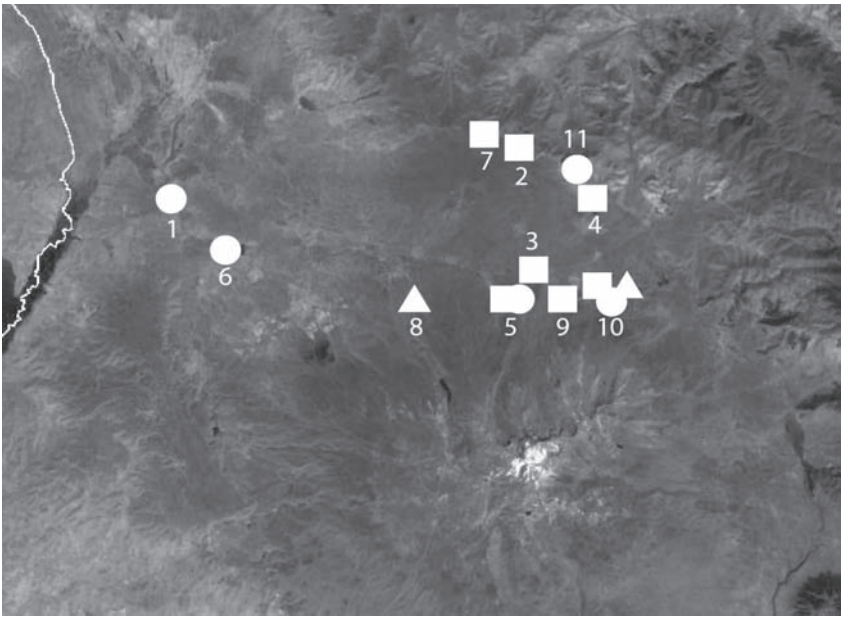

FIGURE 7 *Mt. Aragats area and Shirak plain. Sites of the Late Iron Age. 1 — Benjamin; 2 — Berdidosh; 3 — Geghadzor; 4 — Gegharot; 5 — Hnaberd; 6 — Horom; 7 — Lernapar; 8 — Mantash; 9 — Sahakaberd; 10 — Tsaghkahovit; 11 — Tsilkar.*

Horom, in the area adjacent to Mt. Aragats limits our understanding of how this zone was affected by the collapse of Urartian authority and the subsequent Achaemenid dominance.

Using the recently established radiocarbon-dated ceramic sequences from Tsaghkahovit, it is possible to observe a change in urban settlements around Mt. Aragats. Some of the oldest fortresses that had been abandoned during the Urartian kingdom, were reoccupied, but none were newly founded. Most of the settlements were located on the northern slope, but this is also the most intensely surveyed area, whereas the southern part has unfortunately been less studied.

In Horom the fortified citadel seems to have been abandoned at the end of 7th century BCE and no traces of destruction have been found. Local grey wares were still in use after the Urartian collapse and new pottery types testify to a post-Urartian occupation phase.[26] An Achaemenid occupation of this site is also indicated by the Persian seal found by a local peasant in 1997 (Fig. 8).

26 Kohl & Kroll 1999.

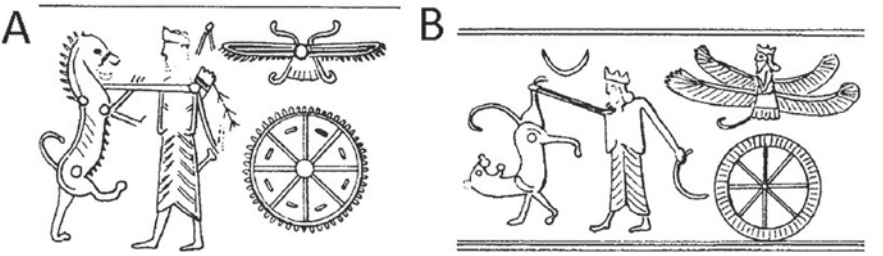

FIGURE 8 *Persian seals from Horom* (*A*) *and Pasargadae* (*B*) (*after Kohl & Kroll 1999, 258, fig. 7*).

One of the most important sites that has yielded evidence of Achaemenid presence in the Armenian highland is the unfortified settlement of Benjamin, located only 5 km from Horom. The excavator, Ter-Martirosov, has identified four stages of occupation, dating from the 5th to the 1st century BCE, of which two – Periods Ia and Ib – date to the Achaemenid epoch.[27] The site is composed of an Achaemenid-era palace on a hill and a Hellenistic lower settlement.

The palace is located on a hill bordering the site to the north and overlooking the Shirak Plain. The southern side of the building is flanked by a large rectangular court (28.5 × 17 m), whose limits have been recognized on three sides although no traces of the east wall remain.

The Achaemenid-period palace is composed of four large rooms (Halls A, B, C and D) which are adjoined to the east, west and south by a series of rectangular rooms (Fig. 9). Deposits from the first period of use, dated to early Achaemenid occupation, have yielded few remains since they have not been extensively excavated.

The wall construction technique consists of two lines of basalt blocks flanking a central rubble fill; not more than two courses of the standing walls survive. The walls are 1.1 m wide, with the exception of the perimeter walls of the building, whose width is 1.4 m. The northern facade of the palace is marked by the presence of buttresses; these are poorly preserved, but perhaps number eight in total.

In the second period (Ib) rooms within the palace were subdivided; this is seen in both Rooms A and C, and suggests a clear change in the function of the rooms (Fig. 9), despite the reuse of most of the previous walls. The former entrance to the southeast is preserved, although reduced in width. A difference in construction technique may be observed; no mud-brick fragments

27 Ter-Martirosov *et alii* 2012.

FIGURE 9 *Benjamin, Achaemenid Palace* (*after Ter-Martirosov* et alii *2012, 203, figs. 3-4*).

were found and some of the surviving parts of walls suggest an increased use of earth.

At the end of Period Ib the building was destroyed, and an interval of disuse of the site occurred before the rebuilding of the structures in Period II.

Inside Room B were discovered, although not in situ, several bell-shaped column bases which are now preserved in the Museum of Gyumri. These indicate an Achaemenid occupation – or at least their strong influence on the local architecture. Some of the bases were broken and at times incorporated into walls.

Below the hills, traces of a settlement were unearthed. Part of a building consisting of two big rooms, each covering an area of about 150 m^2, was investigated. The walls were built using only basalt blocks and each room had four central stone bases for wooden columns; six main periods of occupation have been identified. The oldest (Ia), dating to the late 6th-early 5th century BCE, has left few traces due to subsequent occupation. The following period Ib is marked by the construction of the new Room B; in both rooms evidence survived of 5th century metallurgical activity.[28]

In the following Periods IIa and IIb, dated to around the mid 5th century BCE, the industrial activity was abandoned in favour of rearing livestock, as shown by the construction of floors and cattle troughs. The eastern part of Room B, on the other hand, seems to have been used as a dwelling. Both

28 Ter-Martirosov *et alii* 2012, 199-200.

structures appear to have been destroyed sometime in the first third of the 4th century BCE.

Besides the two aforementioned sites, there are no other clear Persian traces in the Aragats area. Evidence of Achaemenid authority is thus limited to an area probably concerned with the exploitation of the Shirak Plain's agricultural resources but others sites show traces of occupation that probably postdates the collapse of Urartian authority.

In conclusion, based on the few excavated sites, this area seems not to have been violently affected by the nomadic invasions of the late 7th century BCE, since no clear and extensive destruction layers have been recorded. The population was still concentrated on the northern slope where the site of Benjamin probably played the role of the local centre of Achaemenid power.

Lake Sevan Basin

Lake Sevan is situated in the Gegharkunik Province, central Armenia, at an altitude of 1900 m above sea level. It is the largest lake in the south Caucasus with a surface area of 940 km^2, while the area of its drainage basin is about 5000 km^2. It is fed by 28 rivers and streams, but only 10% of the outgoing water is drained by the river Hrazdan which continues southwards and flows into the river Aras; the remaining 90% evaporates.

A first study of the cyclopean fortresses of the region was carried out in the 1968 by Mikaelyan.[29] To date, this is still the most complete available source concerning the western shore. Tens of fortresses are reported around the towns of Sevan and Gavar but their precise dating cannot be established. Evidence regarding the Lake Sevan Basin is thus mostly limited to the southern shore, which has been insensitively studied.

From 1994 to 2000 a joint expedition of the former Italian *Istituto per gli Studi Egeo-Anatolici* (now ISMA) and the Institute of Archaeology and Ethnography of the Academy of Science of Yerevan conducted an extensive survey on both the southern and western shores of the lake. The data concerning the southern part have been fully published[30] and those on the western shore are expected to be published soon.

In the past, two main roads connected the Lake Sevan basin with the fertile Ararat valley; they have been recently described by Biscione & Dan.[31] One road

29 Mikaelyan 1968.

30 Biscione *et alii* 2002a.

31 Biscione & Dan 2011.

cuts the Gegham range, which runs north-south parallel to the western shore of the lake, at a 2700 m high pass, while the other takes a route further south through the Selim pass which is marked by a network of small fortifications at both ends of the road. Urartian activities on Lake Sevan were mainly centred on the southern shore; evidence from the western part is quite scarce, consisting of an inscription of Argishti I[32] in Lchashen and several pottery scatters in Ayrivank.[33]

A total of 82 sites were identified by the Armenian-Italian mission. However, many of these did not provide any pottery or other diagnostic material and thus could not be dated. For other sites without diagnostic sherds, fortresses in particular, dating was based on architectural features, but this system might not always be very reliable.

It is interesting to note that in the southern Sevan basin, most of the pre-Hellenistic period settlements were fortified[34] and those unfortified are distinguished principally by the presence of scattered pottery without clearly visible building remains.

Urartian inscriptions, though, suggest the presence of "villages"[35] in the alluvial plain, but these have probably been destroyed by agricultural activity or covered over by modern settlements. Hence the only remaining evidence pertains to fortresses, forts and fortified settlements, which are located in the hills overlooking the plains.

Early Iron Age (Fig. 10)

From the beginning of the Iron Age a strong increase in the number of cyclopean fortresses may be noted, some of which had been founded during the Late Bronze Age.

The Armenian-Italian expedition led to the discovery of about 27 fortified settlements dating to this period,[36] all characterized by the use of cyclopean masonry. Their military architecture takes various forms. Most of the fortresses possessed only one line of defensive walls, but in some cases multi-line fortifications are present (Tsovak, Nagharakhan); the walls were sometimes strengthened with buttresses and towers – thus anticipating a typical feature of Urartian military architecture.

32 Salvini 2008, 350, A 8-11.

33 Biscione & Dan 2011, footnote 1.

34 Biscione 2002, 352.

35 Hmayakyan 2002.

36 Sanamyan 2002, 331.

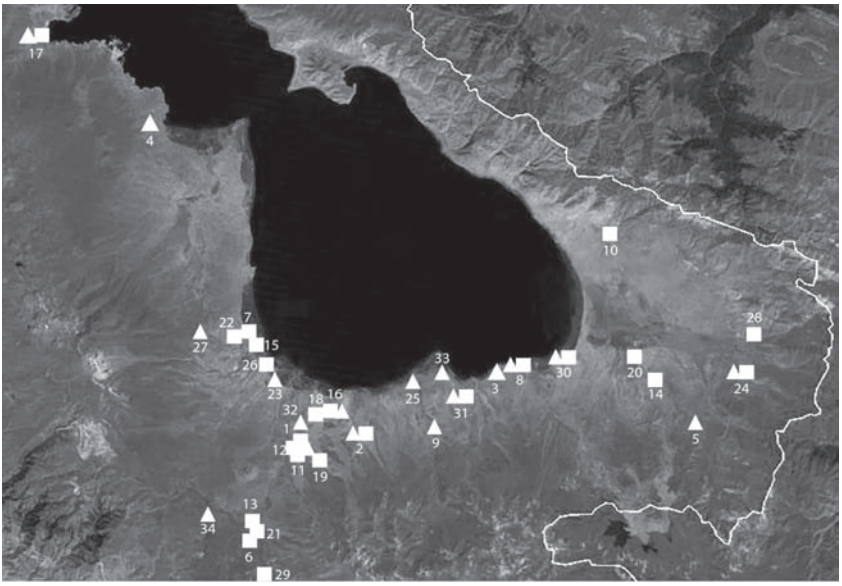

FIGURE 10 *Lake Sevan basin. Sites of the Early Iron Age. 1 — Al Berd; 2 — Aloyi Kogh; 3 — Artsvanist; 4 — Ayrivank; 5 — Ayrk 2; 6 — Belÿï Klyuch; 7 — Berdi Dosh; 8 — Bruti Berd; 9 — Darband; 10 — Geghamasar; 11 — Heri Berd 1; 12 — Joj Kogh; 13 — Kare dzi; 14 — Kol Pal; 15 — Kra; 16 — Kyurdi Kogh; 17 — Lchashen; 18 — Martuni; 19 — Mtnadzor; 20 — Murad Khach; 21 — Nagharakhan; 22 — Negh Boghaz; 23 — Nerkin Getashen; 24 — Norabak; 25 — Perei Dzor; 26 — Sangar; 27 — Shoghan Aghbyur; 28 — Sotk 2; 29 — Tatev; 30 — Tsovak 1; 31 — Tsovinar; 32 — Vanki Dur 2; 33 — Yerku Jur; 34 — Yerku Sirt.*

Twelve of the fortresses were founded in the Late Bronze Age, while the other eleven were established at an earlier date. A careful analysis of their spatial distribution has revealed that they are arranged in groups, each consisting of a larger fort associated with some smaller ones nearby, 1-2 km apart.[37] Five regional complexes have been identified, each formed of a large settlement with minor fortifications in the surrounding area. This makes it clear that already in the Early Iron Age a hierarchy of settlements existed, and the fact that they were all fortified indicates their military character.

Considering the length of the perimeter of the defensive walls, at least six main fortresses have been identified which seem to have been the basis of some sort of regional powers. The most important ones are: Nagharakhan with its 1420 m of defensive walls, Tsovak: 950 m, Sangar: 935 m, Norabak: 800 m, Mtnadzor: 750 m and Kol Pal with 736 m.

37 Biscione 2002, 353; Parmegiani & Poscolieri 2003.

Urartian inscriptions, dated to the reign of Argishti I, refer to the presence of at least five political entities, "the city and land of Tulihu" and "the four kings of Uduri-Etiuni". According to the topographic information provided by these inscriptions, it has been proposed to identify Tulihu as Sangar, and Nagharakhan as one of the centres of Uduri-Etiuni. Considering its size – much bigger than the others – it seems likely that the latter fortress functioned as the capital of some sort of confederation.[38]

On the western shore the most distinguished site is the large fortress of Lchashen, which covers an area of 35 hectares and extends along fifteen ridges. At the foot of the settlement there is a large necropolis, 1.5 km long and 200 to 300 m wide, which was for a long time submerged beneath the waters of the lake. The walls of the fortress are very thick, up to 3.5 m, and reinforced by buttresses. At the centre of the fortress there is a citadel with the main entrance on the north-west side and a postern on the opposite one. Other Early Iron Age remains are to be found in Ayrivank.[39]

The funerary evidence of the Early Iron Age is very abundant, consisting typically of cemeteries near fortresses, with burials characterized by low mounds surrounded by cromlechs. Few, however, have been investigated by the Armenian-Italian expedition along the southern shore; more detailed information is available from previous Soviet-era works.[40] On the western shore, on the contrary, the Lchashen necropolis is one of the largest in all of Transcaucasia, with about 500 excavated graves (although very few of them have been published). The Lchashen necropolis is famous due to the discovery of very rich graves, with wooden chariots inside, dated to the Late Bronze Age.[41]

Middle Iron Age (Fig. 11)

As recorded by several royal inscriptions, Urartian control over the Lake Sevan basin was established by the military campaign of King Argishti I, who defeated the confederation of Ethiuni and brought the area under Urartian dominion. Despite its *manu militari* conquest, no traces of destruction have been recognized in the archaeological layers of these fortresses – although this may be because none has been intensively investigated.

Many fortresses have yielded Urartian-epoch layers (Jaghatsadzor, Kol Pal, Tsovak, Kari Dur, Vardenik, Martuni, Al Berd, Tsovinar, Kra) but only two of these (Sotk 1, Ayrk), built in the eastern part of the area to protect zones of

38 Biscione 2002, 359.

39 Khachatryan 1957.

40 The most distinguish work has been carried out by Lalayan. See Lalayan 1931.

41 Mnatsakanyan 1957, 1960, 1961, 1965.

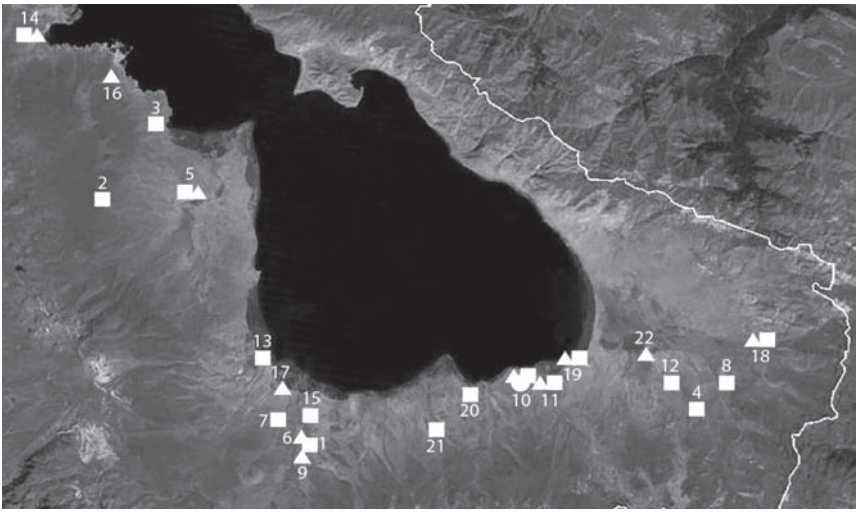

FIGURE 11 *Lake Sevan basin. Sites of the Middle Iron Age. 1 — Al Berd; 2 — Arvuyti Dash; 3 — Ayrivank; 4 — Ayrk; 5 — Gavar; 6 — Geghovit; 7 — Ishkhan Nahatak; 8 — Jaghatsadzor; 9 — Joj Kogh 1; 10 — Karchaghbyur; 11 — Kari Dur; 12 — Kol Pal; 13 — Kra; 14 — Lchashen; 15 — Martuni; 16 — Mucan; 17 — Nerkin Getashen; 18 — Sotk 1; 19 — Tsovak 1; 20 — Tsovinar; 21 — Vardenik; 22 — Vardenis.*

access, were new foundations; to the west there is the fortress of Dvor which, however, yielded no material and thus its dating to the Urartian period is hypothetical. The defensive system of the period was based on a chain of eight fortresses built on the foothills of the mountain ranges overlooking the lake's southern shore and the road that ran along the lake shore.

This newly-established Urartian control did not lead to a change in spatial organization, since in the Urartian period too the settlement pattern was based on fortifications. The only evidence of probable open-area settlements come from Kra, where a pottery scatter was found east of the fortification but no structures have been identified, and from Karchaghbyur, where, on the contrary, a large settlement is attested but its dating not specified.

The Urartians did not found any big administrative centres (such as, for example, Armavir and Erebuni in the Ararat Valley), but they undertook large-scale rebuilding of the occupied fortresses. Such rebuilding is particularly evident in the fortress of Kra, where the perimeter defensive walls reach 1890 m in length. Similar work may also be seen in other fortresses, such as Lchashen and Tsovinar.

Urartian craftsmen did not usually smooth the stones used in the fortifications, but just left them partially dressed; often the proportion and the spacing

of the buttresses do not conform to habitual Urartian practice,[42] the use of mud-bricks is however attested.

Urartian control over the southern shore of Lake Sevan seems at this time to have been based on three main fortresses: Kra, Tsovinar and Tsovak; in the last two, or in the close vicinity, Urartian royal inscriptions were also found.[43]

Urartian and Urartian-period sites, unlike those of the Early Iron Age, are not grouped in clusters and are mainly distributed around the Masrik plain and on the coastal road joining it with the Martuni plain.[44] All traces of Urartian occupation are thus known from sites up to a height of 2000 m and concentrated in the hilly area immediately overlooking the plain.

The higher settlements have yielded mostly Early Iron Age pottery, and very scarce traces of typical Urartian sherds. However, it is not possible to establish if these sites were actually abandoned during Urartian times since the cultural continuity of local artefacts from Early to Middle Iron Age is very marked.

This pattern of spatial organization of settlements is typical of the Urartian state and its control over conquered lands. The Urartians organized their settlements according to two different considerations: military and economic, with interactions between. Thus the main sites are located in the areas just overlooking the plain; these are the economic and administrative centres of the exploitation of agricultural resources.

Smaller sites, such as forts and outposts, are placed – usually at a regular distance from each other – along the roads connecting the main plains with their administrative centres, at the approaches to mountain passes (such as the important Selim pass), or near important mining resources (for example the Sotk gold mine).

On the western shore there are several fortresses. In Lchashen no Urartian pottery was found and neither does the architecture show clear signs of Urartian intervention. The inscriptions by Argishti I do not mention the building of fortifications or other structures[45] and thus the enlargement of the fortification might be ascribed to the local pre-Urartian tradition.

Other settlements which have revealed Urartian traces are the fortresses of Gavar, Arvuyti Dash, and Ayrivank.[46] The last two were probably meant to protect the connection route leading to the fortress of Aramus, to the west, and thence to the Hrazdan and Yerevan basins.

42 Hmayakyan 2002, 286.

43 Salvini 2002.

44 Biscione 2002, 362.

45 Salvini 2002, 40-45.

46 Biscione & Dan 2011, 111-112.

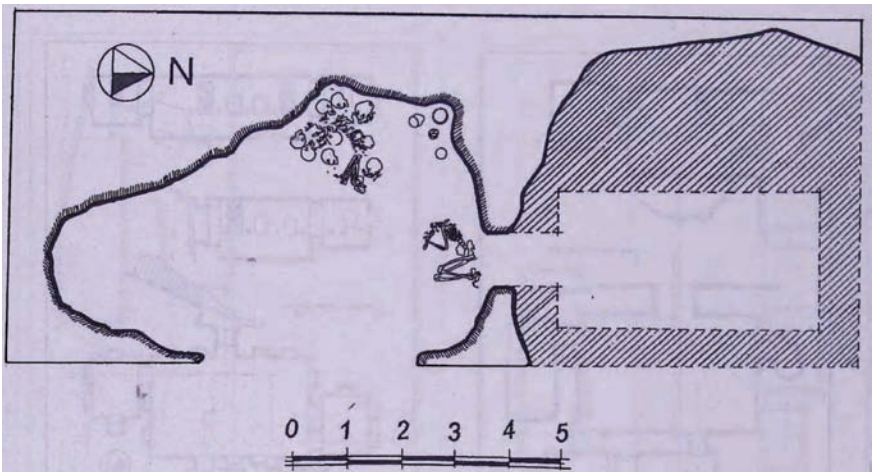

FIGURE 12 *Urartian cave-tomb, Geghovit* (*after Piliposyan & Mkrtchyan 2001, 129, pl. 3*).

Burials are particularly abundant and they generally resemble those of the previous epoch, but the coexistence of local production and Urartian materials may be noted. Apart from Lchashen, other Middle Iron Age material comes from the cemeteries of Vardenis[47] and Mucan.[48]

Typical Urartian burials known from the Lake Sevan Basin are few, having generally been found by chance during construction work. Two cases are known of chamber tombs, typical Urartian funerary constructions not previously known in Transcaucasia: one is located near the fort of Kari Dur, now turned into a chapel;[49] the second is a rock-cut tomb[50] discovered by chance near the village of Geghovit, near the Selim pass. Several individuals were placed in the rock-cut chamber (Fig. 12), some even seem to have been slaughtered as a sacrifice to the high-ranking person buried in the grave.[51] The wealth of the funerary goods is further underlined by the presence of several bronze objects pertinent to a chariot. Other graves containing Urartian material have

47 Mnatsakanyan 1955.
48 Avetyan & Biyagov 1977.
49 Biscione *et alii* 2002b, 121-122.
50 Piliposyan & Mkrtchyan 2001.
51 Piliposyan & Mkrtchyan 2001, 100-106.

been found in Sotk,[52] Tsovinar,[53] Kharchaghbyur[54] and Nerkin Getashen.[55] They generally date to the second half of the 7th century BCE.

Late Iron Age **(Fig. 13)**

The lack of archaeologically excavated layers means that we do not know how the Lake Sevan area was affected by the end of Urartian rule, possible raids by the Scythians, and the subsequent occupation in Achaemenid times.

The pottery of this period cannot be dated precisely, and shows a continuation of the traditional forms and technical heritage of the preceding epoch. Moreover, various pottery types also remain in use in the subsequent Hellenistic period, making it difficult to recognize pottery typical of the Achaemenid era.

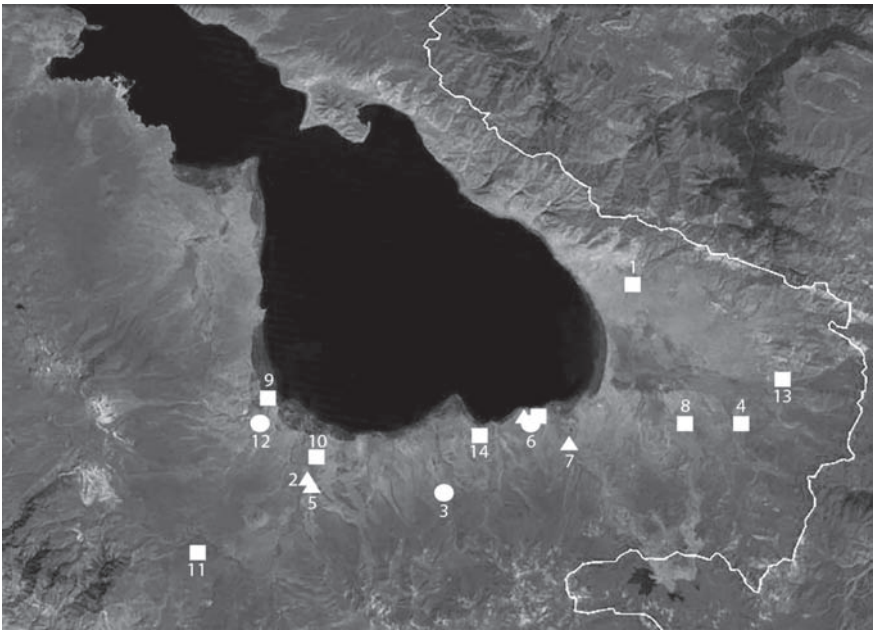

FIGURE 13 *Lake Sevan basin. Sites of the Late Iron Age. 1 — Geghamasar; 2 — Geghovit; 3 — Goler 1; 4 — Jaghatsadzor; 5 — Joj Kogh 1; 6 — Karchaghbyur; 7 — Karmir Averakner; 8 — Kol Pal; 9 — Kra; 10 — Martuni; 11 — Nagharakhan; 12 — Poghosi Averakner; 13 — Sotk 1; 14 — Tsovinar.*

52 Esayan 1979.

53 Piotrovskiĭ 1944, 101.

54 Yengibaryan 2002.

55 Biscione *et alii* 2002b, 213.

According to the information gathered by the Armenian-Italian expedition, no new fortress foundations date to this period and of those inhabited were all already in use during the Urartian period. It is also interesting to note that all of them survived until the subsequent Hellenistic period, when nine more fortifications were also re-settled.

In the forts Geghamasart and Sotk 1 no clearly Achaemenid-period pottery was found, but inside the fortification or in the village nearby column bases with torus, probably of Achaemenid manufacture, were discovered. Sotk 1 is located in a strategic position, straddling the road to the Sotk gold mines and the pass leading to Artsakh-Kelbajar. The Jaghatsadzor and Kol Pal fortresses have both yielded a small number of potsherds dating to Achaemenid times (around 10% of the total collection); both are located in strategic positions: the first blocks the road to the Selim pass, while Kol Pal controls the western part of the Masrik Plain. The site of Klor Dar is heavily disturbed and thus difficult to date; it definitely furnished Hellenistic, but probably also Achaemenid material. The fortress of Vardenik is, on the contrary, abandoned.

It is interesting to note that in the great fortress of Tsovak, which has yielded pottery from Late Bronze Age to Roman times, only the Achaemenid period is absent: probably the site was abandoned then and not reoccupied until the Hellenistic period. Other fortresses which revealed traces of Achaemenid-era occupation are those at Martuni, Nagharakhan and Karchaghbyur; the cemetery of the latter also probably dates in part to the Achaemenid period. The large Tsovinar fortress also seems to have been still in use in this period, while in the large site at Kra test excavations have revealed Urartian and Achaemenid period buildings and pottery.

Scattered pottery dating to the Achaemenid period has been collected from some unfortified sites, such as Goler and Poghosi Averakner. Burials probably dating to Achaemenid times have been identified, although not investigated, in Geghovit and Karmir Averakner. The data available show no marked change in the spatial organization of settlements between the times of Urartian and Achaemenid rule. Inhabited sites remain concentrated in strategic positions, but no rebuilding or restoration of the protective walls can be ascribed to the latter period. It is possible, however, to recognize two small but significant changes: there is a decrease in the number of inhabited sites and more unfortified settlements are present in this period.

The Ararat Plain and Yerevan Basin

The Ararat plain is one of the largest agricultural areas of the whole Armenian highland, stretching from the foothills of Mount Aragats to the north to the

Gegham ridge in the east and the base of Mount Ararat to the south. It is a lengthy fertile strip, about 100 km long and from 15-20 up to 45 km wide; the total area is about 2400 km^2, at an altitude of 800-1000 m. The plain is crossed by the Aras river, which today marks the border between Armenia and Turkey. There are several other watercourses, such as the tributaries of the Aras and the rivers Hrazdan, Azat, Vedi and Metsamor, all flowing in north-south direction.

Given its economic importance, this area was target of a vast land-amelioration project during Soviet times, which unfortunately caused the destruction of many sites located on the plain. The Ararat plain is also one of the most urbanized and industrialized areas of Armenia. The capital of modern-day Armenia, Yerevan, along with all its satellite towns, greatly expanded during the last century and now covers a large part of the northern plain; this resulted in the destruction of many archaeological sites which were only briefly investigated or observed.

However, some of the most important achievements of Caucasian archaeology consist of investigations of several important sites in this area, such as the Urartian centres of Karmir blur, Erebuni and Armavir, the Hellenistic cities of Artashat, Dvin and Garni as well as the Early Bronze Age settlement of Shengavit.

No extensive surveys were ever carried out and knowledge of the archaeological landscape is mostly based on the evidence from excavated sites, many of which, unfortunately, were not fully published.

Since 2012, however, a joint Italian-Armenian expedition has taken on the task of surveying the upper Hrazdan area, in order to clarify the urban settlement pattern between the Yerevan and Lake Sevan basins.[56] In the north-western part of Kotayk province, along the River Marmarik, a survey was carried out by a joint expedition of the University of Idaho and the Institute of Archaeology and Ethnograhy of Armenia, but a report has not yet been published.

Early Iron Age (Figs. 14-15)

In their recent publication concerning the Mount Aragats area, the Armenian scholars P. Avetisyan and R. Badalyan also presented a list of archaeological sites in the surrounding areas, with bibliographical references.[57] The whole area seems to have been densely inhabited and they report the presence of at least 15 archaeological sites, albeit without specifying whether they are

56 Castelluccia *et alii* 2012; Petrosyan *et alii* 2015.

57 Badalyan & Avetisyan 2007, 291-295.

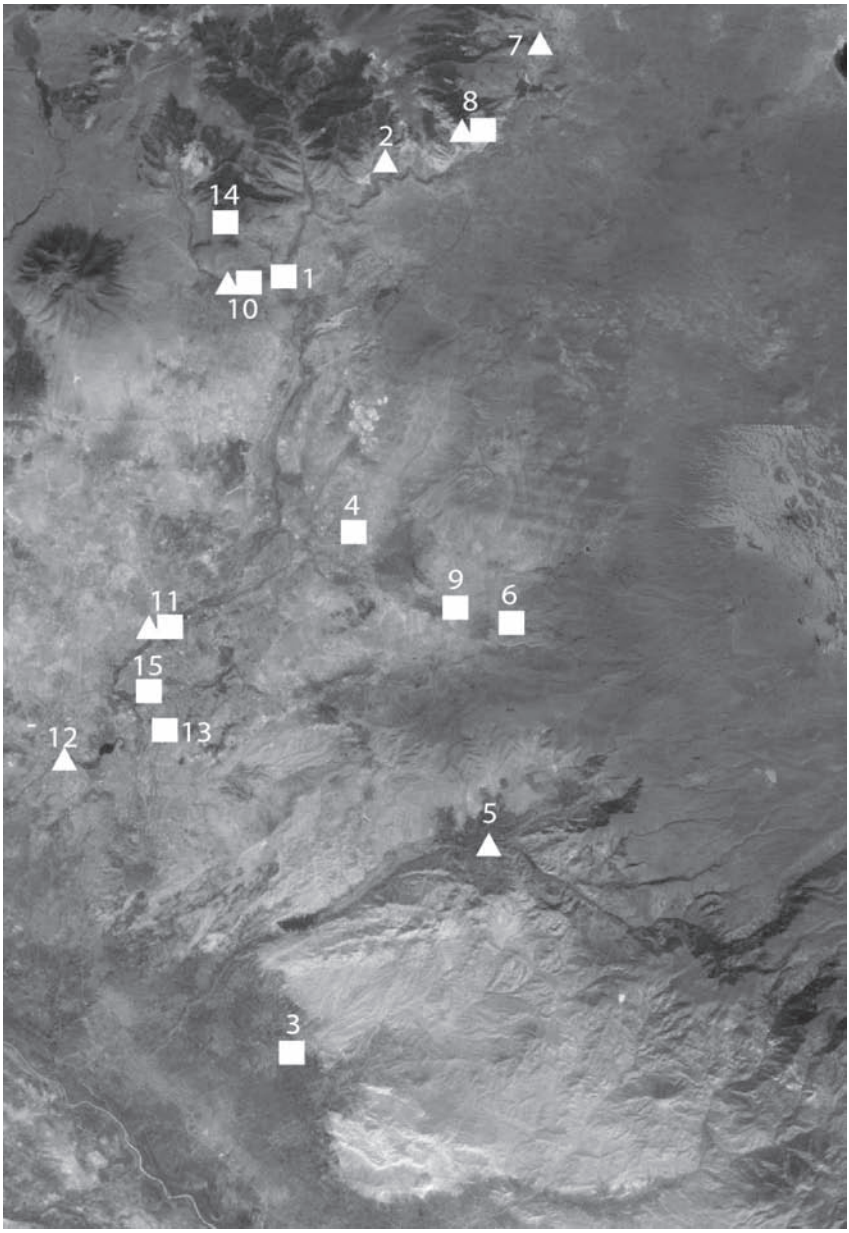

FIGURE 14 *The eastern part of the Ararat plain and Yerevan basin. Sites of the Early Iron Age. 1 — Avazan; 2 — Bjni; 3 — Dvin; 4 — Elar; 5 — Garni; 6 — Gyamrez; 7 — Jrarat; 8 — Kaghsi; 9 — Kamaris; 10 — Karashamb; 11 — Karmir-berd; 12 — Karmir blur; 13 — Mucchanat-tapa; 14 — Teghenik; 15 — Tsitsernakaberd.*

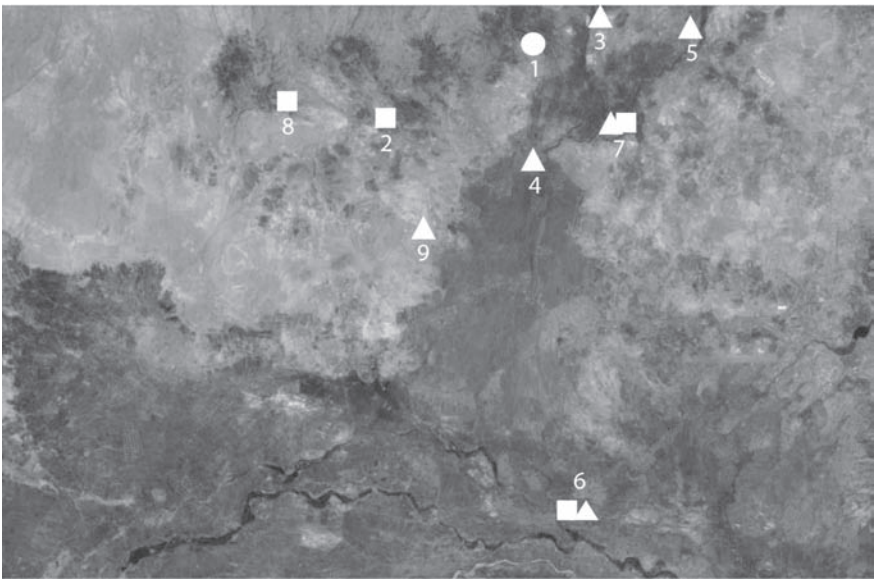

FIGURE 15 *The western part of the Ararat plain and Yerevan basin. Sites of the Early Iron Age. 1 — Agarak; 2 — Aragatsotn; 3 — Byurakan; 4 — Franganots; 5 — Khojabagher; 6 — Metsamor; 7 — Oshakan; 8 — Shamiram; 9 — Tsaghkalanj.*

settlements, fortresses, cemeteries or just find-spots. It is thus difficult to draw a complete picture of the landscape in the Ararat plain during the early stages of Iron Age.

A similar lack is particularly evident in modern-day Yerevan and its outskirts, since the expansion of the modern city has covered many probable archaeological sites. It is however possible to identify some cyclopean fortresses in the northern part of the Yerevan basin, such as Karmir-berd,[58] Kamaris[59] and Elar.[60]

Within the modern city of Yerevan at least two other cyclopean fortresses are known, Tsitsernakaberd,[61] in the north, and Muchannat-tapa,[62] located near the railway station (and now completely covered over). Traces of

58 Kushnareva 1960; Esayan 1969; Karapetyan 1972.

59 Smith & Kafadarian 1996, 25.

60 Khanzadyan 1979.

61 Smith 1996, 26-28.

62 Esayan 1969, 25-29.

pre-Urartian date are attested in Karmir blur[63] and scarce evidence was also found in Erebuni.[64]

The western part of the Ararat plain contains the large fortress of Metsamor, certainly one of the most important of the whole Armenian highland, since it possesses detailed stratigraphy and a huge cemetery dating back to the Early Bronze Age.[65]

The southern slopes of Mt. Aragats contain a number of cemeteries and fortresses. The most important site is Oshakan with its Early Iron Age necropolis;[66] a German team has however recently investigated a probable Early Iron Age fortress located near this best-known Urartian structure.[67]

The southern part of the Ararat Valley has not been fully surveyed, but some information can be obtained from several excavated sites. In the Hellenistic site of Dvin probable traces of a cyclopean fortress and settlement of the period have been identified; these apparently go back to the Early Bronze Age.[68] Unfortunately, the later constructions conceal and have disturbed most of the earlier layers. Evidence of settlement and burial of the Early Iron Age remains was also found in Garni,[69] site of the famous Hellenistic fortress and temple. The features of these structures (the fortress of an unfortified settlement?) are not particularly clear since they have been largely covered by the Hellenist layers, although the presence of cyclopean masonry is reported.

The Italian-Armenian expedition in the central Kotayk province has brought to light at least four fortresses;[70] three of which are located along the modern highway connecting Yerevan to Sevan, thus constituting a direct connection towards the surrounding agricultural plain. The other – which is also one of the most impressive fortresses in all of Armenia, with walls standing up to 5 m height – is located on the top of a mountain near the village of Teghenik (Fig. 16). However only a few of them have yielded a small number of Early Iron Age sherds, so their proposed dates are still hypothetical and based mainly on architectural features. In the same area the well known site of Karashamb is present, where a fortress and part of the cemetery date to this period.[71] In front

63 Early Iron Age graves were excavated in summer 2013 and 2014 by an Armenian team but, to my knowledge, have not been published yet.

64 Ter-Martirosv 2012b, 170.

65 Khanzadyan *et alii* 1973.

66 Esayan & Kalantaryan 1988.

67 Herles & Avetisyan 2014.

68 Akopyan *et alii* 2008, 203-204.

69 Khanzadyan 1969, 181-182.

70 Petrosyan *et alii* 2015.

71 The Late Bronze/Early Iron Age materials are, as far as I know, mostly unpublished.

FIGURE 16 *Teghenik fortress, Cyclopean walls* (*photos of the author*).

of it, on the opposite bank of the river Hrazdan near the village of Avazan, lie the remains of huge cyclopean walls. Surface pottery dates to the Early and Middle Bronze Age, but such masonry is typical of the Late Bronze/Early Iron Age.[72]

The landscape thus seems to have been dominated by cyclopean fortresses located near the rich agricultural plain. In this case, the situation observed by A. Smith on Mount Aragats – where, on the contrary, most of fortresses were located in isolated positions – is not found, and a direct control of agricultural resources and trade routes seems evident.

Several cemeteries are known but few of them have been investigated and well published; the most important is Karmir-berd, with many simple cist-graves with low mounds and/or cromlechs. Other funerary remains (Jrart,[73] Bdzni,[74] Kaghsi,[75] Karashamb, *etc*.) generally show the same features with cromlechs, low mounds and cist graves; some are still visible but have not been investigated yet. The graves are mostly single and the deceased usually placed in a crouched position. Grave goods typically include much metalwork, accompanied by pottery.

Middle Iron Age (Figs. 17-18)

After the conquest by the Urartians in the early 8th century BCE, the Ararat valley was subjected to an intensive building programme that greatly transformed the human landscape, in a clear manifestation of the power of the Urartian kingdom. Some of the extant fortresses on the Ararat plain were conquered and occupied by the Urartians, who usually undertook a programme of expansion or renovation of the fortifications, or built new fortresses.

72 Castelluccia *et alii* 2012, 29.

73 Mnatsakanyan & Tiratsyan 1961, 69; Castelluccia *et alii* 2012, 30.

74 Avetyan & Biyagov 1977.

75 Khanzadyan 1967, 18; Castelluccia *et alii* 2012, 30.

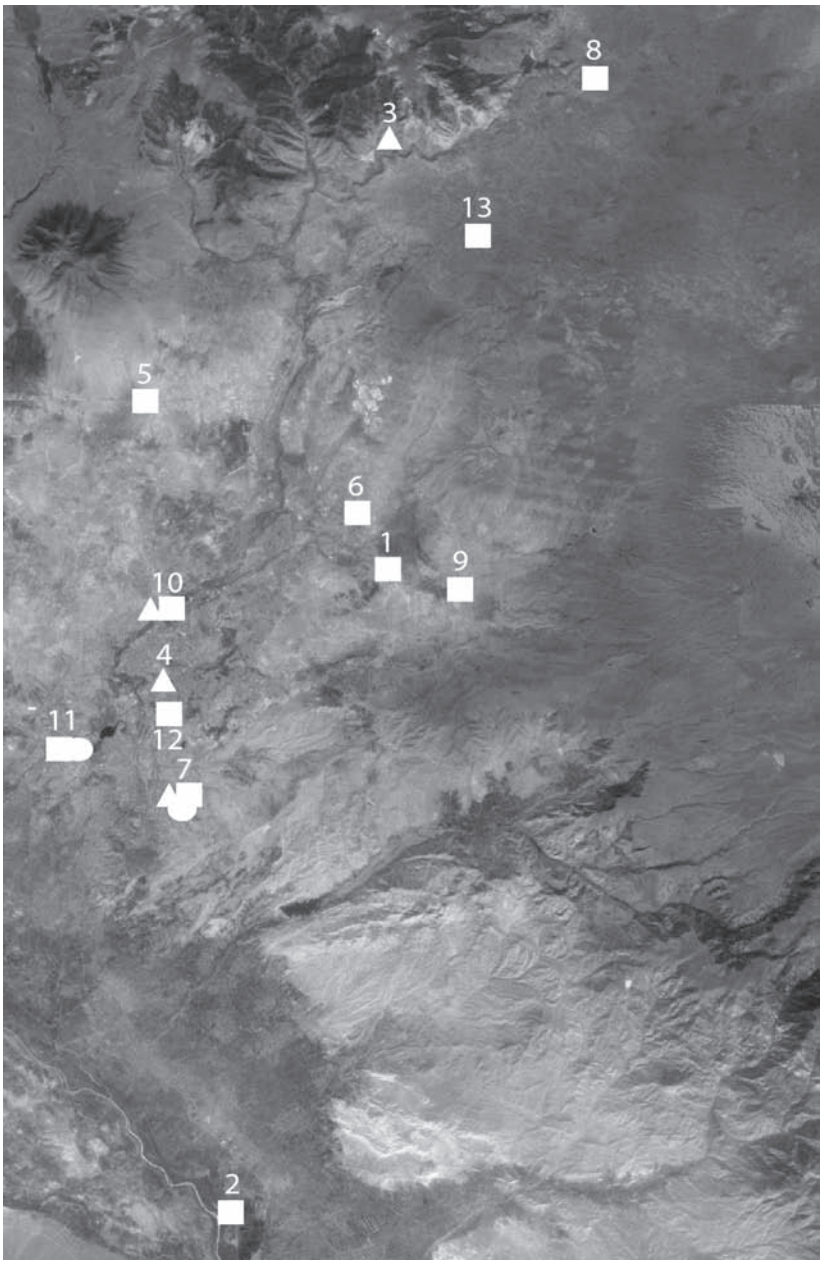

FIGURE 17 *The eastern part of the Ararat plain and Yerevan basin. Sites of the Middle Iron Age. 1 — Aramus; 2 — Artashat; 3 — Bjni; 4 — "Columbarium" Yerevan; 5 — Dovri; 6 — Elar; 7 — Erebuni; 8 — Hrazdan; 9 — Kamaris; 10 — Karmir-berd; 11 — Karmir blur; 12 — Mucchanat tapa; 13 — Solak.*

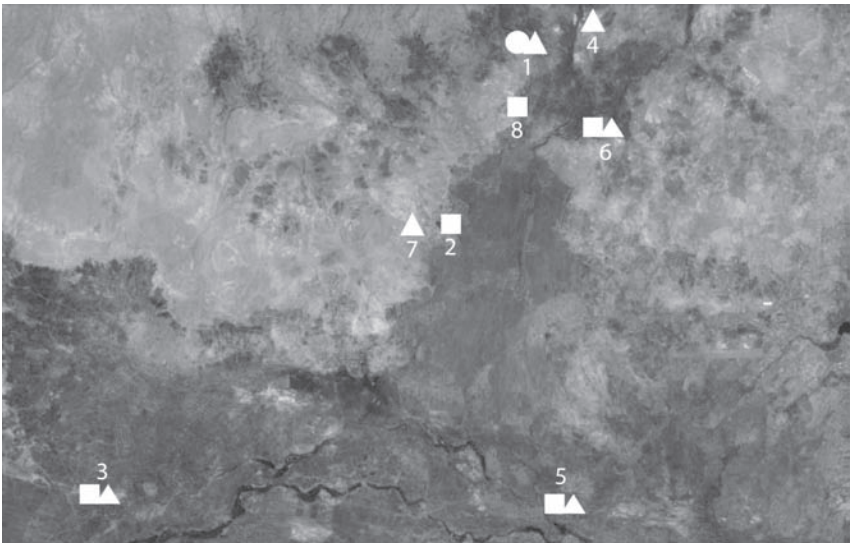

FIGURE 18 *The western part of the Ararat plain and Yerevan basin. Sites of the Middle Iron Age. 1 — Agarak; 2 — Aragats; 3 — Armavir; 4 — Byurakan; 5 — Metsamor; 6 — Oshakan; 7 — Tsaghkalanj; 8 — Voskevaz.*

The newly established Urartian authority is most clearly shown by the foundation of the fortress of Erebuni,[76] on the eastern outskirts of Yerevan, which probably served as the administrative centre of the area (Fig. 19). The fortress of Tsitsernakaberd has not yielded any Urartian material, while there are but few traces of Urartian-era habitation in the sites of Karmir-berd and Muchannat-tapa.[77]

The fortress of Aramus, which revealed only scarce traces of earlier occupation, was the site of intensive building work: the construction of massive cyclopean defensive walls.[78] The occupation of Elar is marked by an inscription of Argishti I found nearby,[79] while sparse remains were also found in Kamaris.[80]

76 Literature concerning Erebuni is very abundant and scattered over numerous journals. Here the most important works and the most recent ones are reported, which also make reference to all Soviet-era publications: Oganesyan 1971; Stronach *et alii* 2009; 2010; Dan & La Farina 2011; Deschamps *et alii* 2011.

77 An Urartian-style bronze belt and an Urartian seal were discovered; see Areshyan 1970, 243; Baïburtyan 1937, 212-213.

78 Kuntner *et alii* 2012.

79 Salvini 2008, 348-349.

80 Biscione & Dan 2011, footnote 2.

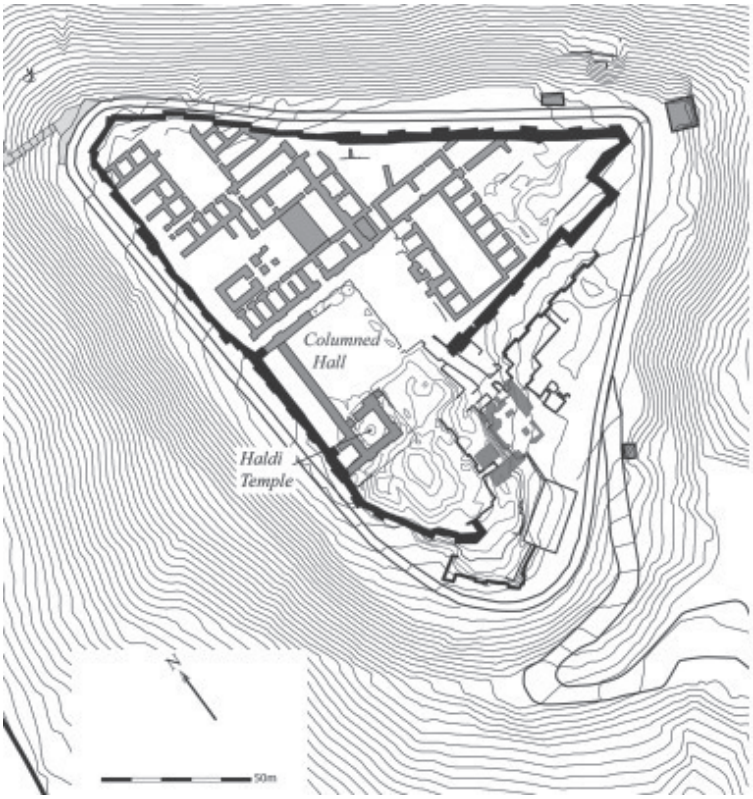

FIGURE 19 *Erebuni* (*after Deschamps* et alii *2011, fig. 1*).

The strategic position of Aramus, Elar and Kamaris was particularly important for the economic control of the rich agricultural plain and stock-farming resources of the Kotayk Plateau; they also constituted an important military outpost on the northern route leading to the Lake Sevan basin.

To the north, an Urartian fortress near the village of Solak has been recently identified, mid-way between the other Urartian site of Aramus and Lchashen. Test excavations have unearthed Urartian pottery as well as clear traces of destruction by fire.[81] A fortress with a double line of defensive walls, buttresses and towers has also been recently identified near the city of Hrazdan.[82] No pottery was found so, on the basis of architectural features only, it may only tentatively be ascribed to the period 9th-7th century BCE.

81 Castelluccia *et alii* 2012, 30-31; Petrosyan *et alii* 2015, 65-67.

82 Petrosyan *et alii* 2015, 62.

The site of Metsamor, in the western part of the Ararat plain, shows clear evidence of destruction dating to the late 8th century BCE and connected by the excavators with the violent conquest of the site by the Urartians.[83] The fortress was, however, not abandoned but improved by the construction of new fortifications with typical Urartian architectural features.

In the same area the Urartians founded two other important settlements, Armavir and Davt-i blur, where some scarce evidence of Late Bronze Age activity was also found.[84] The discovery of extensive rooms containing large storage jars in these sites can be explained by the extensive exploitation of the economic resources of the fertile Armavir plain. On the basis of its size, the Armavir fortress should probably be considered the most important site in the Ararat plain, since its perimeter wall is 1900 m long, whereas that of the second-biggest site, Karmir blur, is just 1100 m in length.[85] The importance of this area for the Urartian rulers is also demonstrated by the sites of Dovri,[86] Oshakan[87] and Voskevaz,[88] where clear Urartian architectural remains are attested.

In the 7th century BCE, King Rusa II undertook the construction of a new fortress in the Yerevan basin, Karmir blur,[89] which probably became the new administrative centre of the area – though it is not clear whether Erebuni was abandoned. Here a settlement also existed outside the main defensive wall of the fortress.[90] Traces of unfortified dwellings outside the fortress are also found in Erebuni[91] and Armavir.[92]

The southern part of the Ararat Plain has yielded no clear traces of Urartian occupation, but this may be considered probable given the economic importance of this fertile plain. It is still debated whether the Hellenistic city of Artashat might be considered to be of Urartian foundation, but some scholars are convinced that it is.[93]

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83 Khanzadyan *et alii* 1973, 194-195.

84 Martirosyan 1974.

85 Biscione & Dan 2011, 113.

86 Smith 1996, 261; the finds are, to my knowledge, still unpublished. Typical Urartian walls are however visible on the site.

87 Esayan & Kalantaryan 1988.

88 Pons 2001.

89 Piotrovskiĭ 1950, 1952, 1955; Oganesyan 1955.

90 Oganesyan 1955.

91 Chodzas 1982.

92 Martirosyan 1974, fig. 9.

93 Smith 1996, 259; Biscione & Dan 2011.

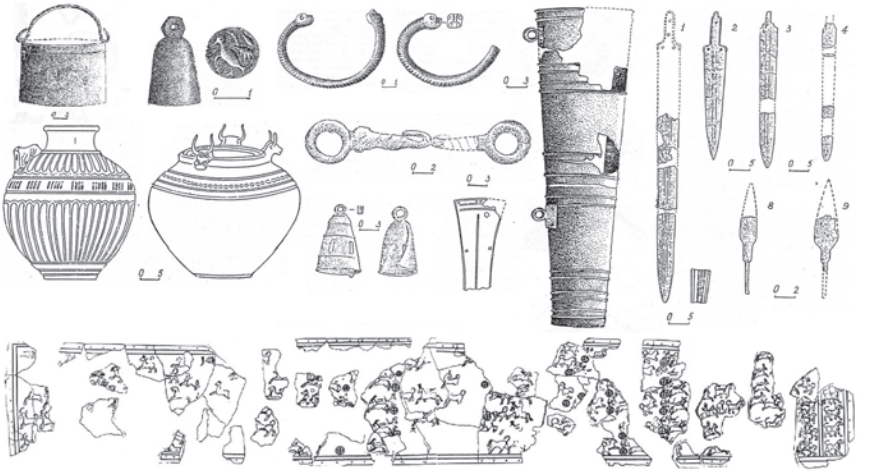

FIGURE 20 *Funerary set of the "Columbarium" of Yerevan* (*after Esayan* et alii *1995, pls. 5-17*).

Archaeological excavations have also provided some of the best available Urartian funerary evidence, represented by the rich finds from graves in the centre of Yerevan,[94] near Erebuni[95] and Armavir.[96] It is possible to observe the introduction of new practices typical of Urartian culture (although almost absent from Caucasian tradition), such as the use of cremation, which is preferred to inhumation, and the construction of underground stone chambers. The graves have yielded an abundant quantity of metalwork, such as weapons, bronze belts, various personal decorations (Fig. 20). Urartian grave goods are thus similar to those of the local Transcaucasian culture, and belong to the same tradition.

Late Iron Age (Figs. 21-22)

The Ararat plain was directly affected by the so-called nomadic invasion in the second half of the 7th century BCE. The available archaeological record clearly shows that the Urartian kingdom collapsed dramatically – and its material culture disappeared – at the end of the 7th century BCE. Clear traces of destruction, along with Scythian-type objects, have been found in Karmir blur especially, whereas it is not clear whether Erebuni was violently conquered or simply abandoned.

94 Esayan *et alii* 1991, 1995; Biscione 1994.

95 Barnett 1963, 194-198.

96 Karapetyan & Yengibaryan 2010.

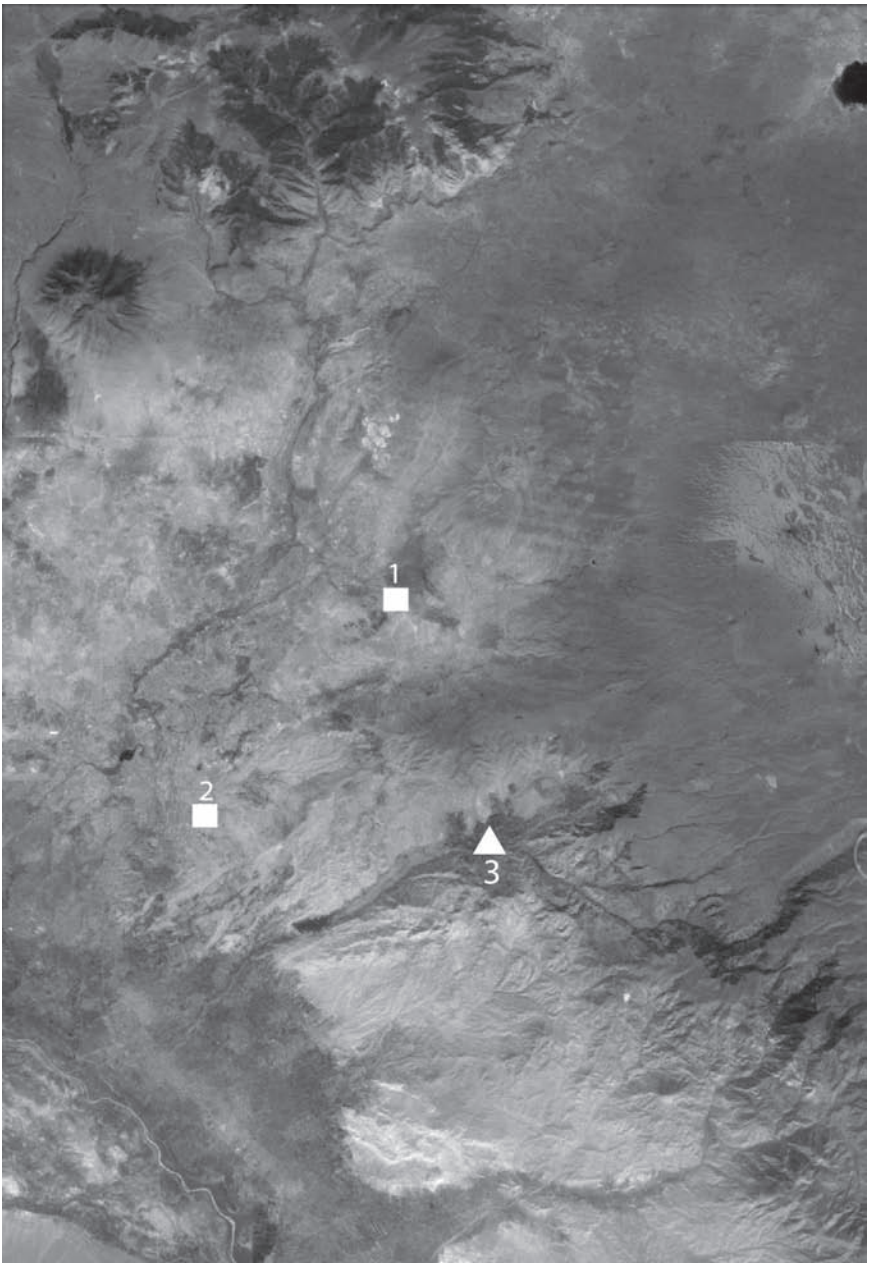

FIGURE 21 *The eastern part of the Ararat plain and Yerevan basin. Sites of the Late Iron Age. 1 — Aramus; 2 — Erebuni; 3 — Garni.*

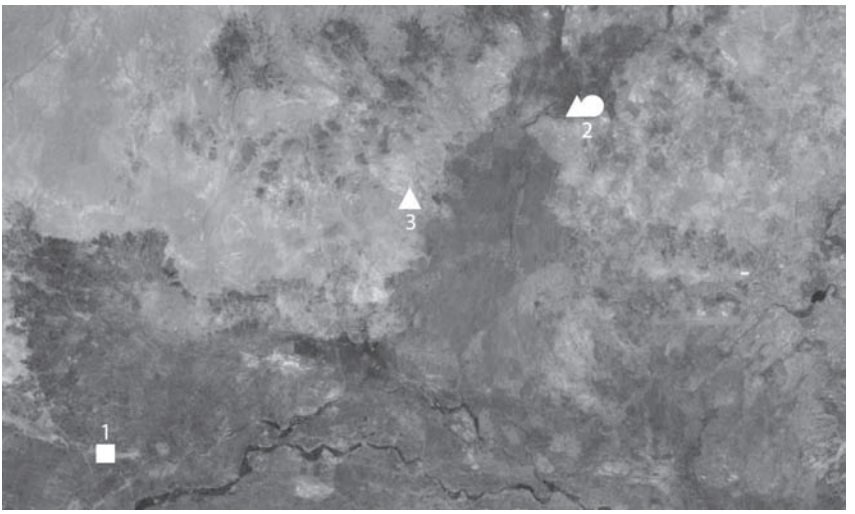

FIGURE 22 *The western part of the Ararat plain and Yerevan basin. Sites of the Late Iron Age. 1 — Armavir; 2 — Oshakan; 3 — Tsaghkalanj.*

About a century after the collapse of the Urartian kingdom, the whole area came under Persian domination. In keeping with its strategic and economic importance, the Ararat valley has revealed some of the most important Achaemenid features of the whole Caucasus area.

Erebuni is one of the most complicated sites with regard to the passage between the Urartian kingdom and subsequent periods and there is still no agreement between scholars even about the dating of the well-known columned hall, mostly due to the lack of detailed publications of Soviet-era digs, but also because of the non-historically-based 'restoration' work of the same period which has severely altered the whole site.

However, recent archaeological investigations carried out by Armenian, American and French expeditions have revealed that the site shows clear signs of human occupation during the 6th-5th century BCE.[97] Moreover, R. La Farina has recently re-analyzed all the material available from Erebuni, improving our understanding of the site's chronological sequences. He has suggested that the columned hall almost certainly dates to the late 7th and 6th centuries BCE, and should thus be attributed to the Median, rather than Achaemenid, period.[98] It must of course be remembered, however, that one of the most diagnostic discoveries indicative of the Achaemenid presence in Erebuni was that of

97 Deschamps *et alii* 2011.

98 La Farina 2013, 251-255.

FIGURE 23 *Silver* rhyta *from Erebuni* (*after Stronach 2012, figs. 1, 4, 8*).

three decorated silver *rhyta* (Fig. 23), found within a hoard of objects during building works at the foothill of the Erebuni citadel in 1968.[99]

Erebuni would thus appear to have been the most important administrative centre in the Yerevan basin and probably its only important site; it is however reported that in Muchannat-tapa Hellenistic deposits were found.[100] Unfortunately these data have not been published in detail, so it is not possible to re-examine the finds to see whether they should perhaps be dated back one or two centuries to the Achaemenid period.

To the west, the large settlement of Armavir was also destroyed by fire, while other important Urartian sites, such as Dovri, Metsamor and Voskevaz, seem to have been abandoned in the same period. Oshakan, on the contrary, has yielded evidence, both from the cemetery[101] and the lower settlements,[102] suggesting that it was occupied during this period, but the fortified Urartian building on the hilltop was also abandoned.

Other important sources of information are the two clay tablets written in Elamite discovered at the site of Armavir.[103] This fortress also contained a columned hall, which may be considered a construction dating to the Achaemenid period, as well as several objects (among which a gold pectoral) dating to the 6th-4th century BCE.[104]

A clear picture of the transition from Urartian to Achaemenid authority can be seen in the site of Aramus (Fig. 24), where detailed excavation has provided

99 Treister 2015.
100 Baïburtyan 1937, 212-213.
101 Herles & Mühl 2013; Herles & Piller 2013.
102 Ter-Martirosov 2001, 155.
103 Vallat 1997.
104 Arakeljan 1971, pl. 4 *a-d*.

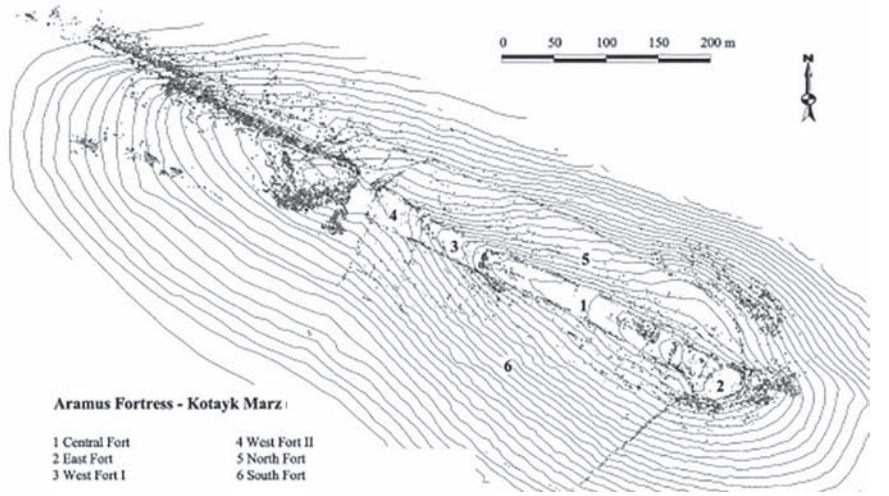

FIGURE 24 *Aramus fortress* (*after Heinsch* et alii *2012, 142, fig. 4*).

reliably dated layers. The most interesting feature is that this site shows no signs of having been destroyed; there is, though, an abandonment phase dating to the late 7th century BCE. From a military point of view, the fortress was obsolete and the previous structures were rebuilt during Achaemenid times, with the closure of large storage facilities located on the west and north forts present on the site.[105]

The data available indicate a strong reduction in urban settlements throughout the Ararat plain, although it is not possible to establish whether this change resulted from the relocation of the population or simply reflected a drop in the number of human inhabitants.

To the south, on the right bank of the river Aras, the Early Hellenistic period saw the foundation of the city of Yervandasht, a fortified residence of the Orontid kings of Armenia[106] which dates from the 4th to the 1st centuries BCE. The layout of the fortress, however, clearly resembles an earlier architectural style reminiscent of Urartu and – to a lesser extent – the Achaemenids. The same problem of recognizing this period concerns Artashat, where there are no clear signs of occupation during the 6th and 5th century BCE.

Burials of the period are virtually absent. The only well-known case might be several graves excavated in Garni[107] which, however, have mainly yielded

105 Kuntner *et alii* 2012, 409-410.

106 Ter-Martirosov 2012a.

107 Khachatryan 1976.

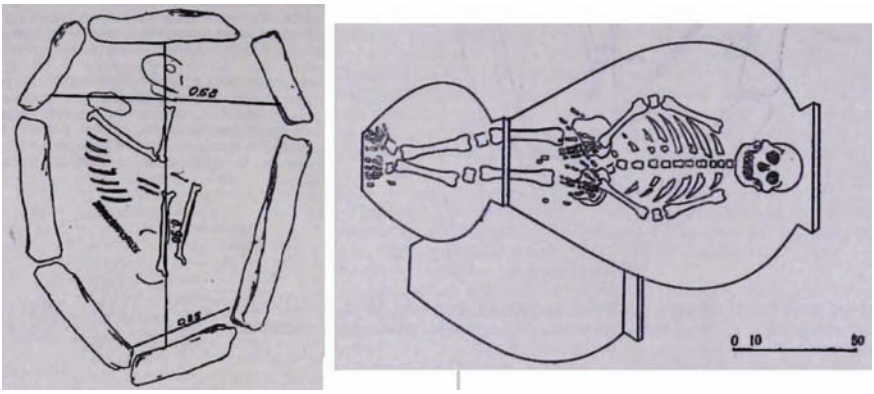

FIGURE 25 *Graves of the 6th-4th century BCE, Garni (after Khachatryan 1976, 19-20, figs. 3-4).*

Hellenistic-era evidence. Graves began to exhibit new features. Low mounds and cromlechs generally disappear and also the shape of the grave-cut changes, with various possible shapes (circular, oval), but simple rectangular cist-graves are no longer found. Typical of the period is also the placing of the deceased inside large jars (Fig. 25).

Nakhchivan Autonomous Republic

The Nakhchivan Autonomous Republic is a landlocked exclave of the Republic of Azerbaijan, in an extremely arid and mountainous area covering about 5.500 km^2. The Zangezur Mountains mark the border with Armenia while the Aras river constitutes that with Iran. Most of the country is rocky and desert-like, with the arable land concentrated along the River Aras and in the Sharur plain.

During Soviet times, several archaeological projects were conducted in the area but most of these were published only in Russian or even in the Azeri language.[108] In recent years, though, archaeological research conducted by the Autonomous Republic of Nakhchivan[109] has accomplished important progress due to renewed interest on the part of both local and foreign scholars and institutions.

The most important fieldwork underway at present is the "Nakhchivan Archaeological Project", currently dedicated to the study of the fortress of

108 Bahşaliev 1997; Bakhshaliev 1994.

109 Bahşaliev 1997; Belli & Sevin 1998; Bahşaliev & Marro 2009; Ristvet *et alii* 2011, 5-15.

Oğlan Qala.[110] A brief but thorough picture of the archaeological evidence from the Republic was also presented by the German scholar A. Schachner in his general review of the archaeology of Azerbaijan.[111]

Most of the available information, however, is the result of surveys or isolated finds, since only a few sites have actually been excavated. The most important site for the Iron Age is certainly the sizeable fortress of Oğlan Qala, which has yielded a complete ceramic sequence for the period.

Early Iron Age **(Fig. 26)**

The archaeological record concerning the Early Iron Age is particularly abundant and generally conforms to the typical archaeological features of Transcaucasia.

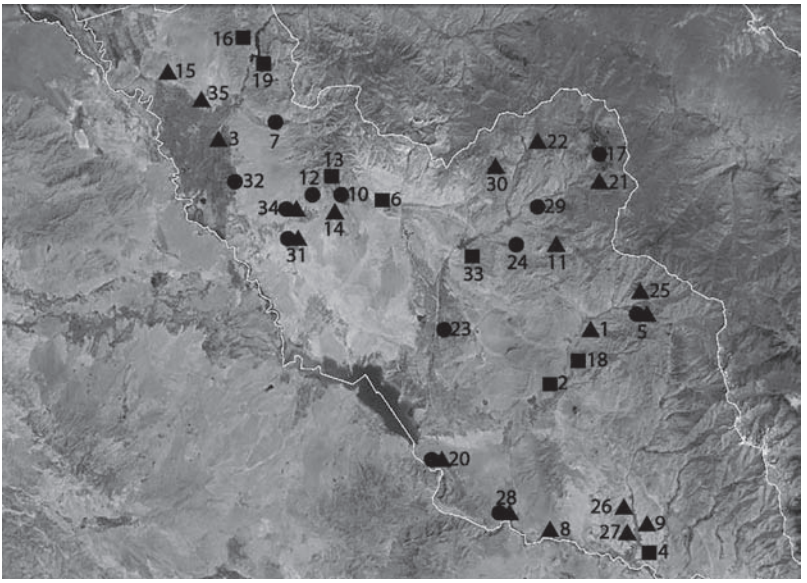

FIGURE 26 *Nakhchivan Autonomous Republic. Sites of the Early Iron Age. 1 — Aksal; 2 — Alincekale; 3 — Aşağı Taşark; 4 — Ayazköyü; 5 — Bayahmet; 6 — Çalhankala; 7 — Cennet Kayası; 8 — Culfa; 9 — Dalmatepe; 10 — Damlama; 11 — Hakkıhlık; 12 — Kalacik; 13 — Karabaglar Gavurkalasi; 14 — Karabağlar II; 15 — Karabulak; 16 — Karasu Kalası; 17 — Karnıjarik; 18 — Kazançıkale; 19 — Kız Kalası; 20 — Kızılvank; 21 — Kolani; 22 — Kükü; 23 — Kültepe; 24 — Kulus; 25 — Ləkətağ; 26 — Mərdangol; 27 — Muncuklutepe; 28 — Nəhərçir; 29 — Şamlar; 30 — Sarıdere; 31 — Şaxtaxtı; 32 — Şortepe; 33 — Vayxır Kala; 34 — Yurdçu; 35 — Zeyve.*

110 Ristvet *et alii* 2012, 321-362; http://www.penn.museum/sites/oglanqala/website/Home%20page.html.

111 Schachner 2001.

The landscape is marked by the presence of many cyclopean fortresses, located on both foothills and mountains slopes as well as in the plain. Moreover, several settlements quite distinct from fortresses are also known, notwithstanding the fact that some – such as Kültepe – are in fact fortified. These sites are mainly found on the plain.

In addition there are various cemeteries, especially known from chance finds or through test excavations; unfortunately none have been extensively dug and published. The few available data generally follow typically Transcaucasian patterns, with single cist-graves and rich collections of funerary objects, especially in bronze.

The material culture shows some similarity to the so-called Hocalı/Kedabeg culture,[112] a culture typical of western Azerbaijan and the eastern part of the Lake Sevan basin – as well as with contemporary eastern Anatolian culture, as seen in several cemeteries investigated by Turkish archaeologists in the Lake Van basin, such as Ernis-Evditepe,[113] Karagunduz[114] and Dilkaya.[115]

Middle Iron Age (Fig. 27)

Information regarding the Urartian presence in the area is not so abundant. The most important historical documents are an Urartian inscription of Minua/Išpuini at Ilandağı[116] which makes reference to the conquest of the cities of Arṣini, Aniani and Puluadi. Another possible Urartian inscription is known from Ferhat/Batabat.[117]

Until recently, only one large fortress – the site of Oğlan Qala located in the northern part of the Sharur Plain[118] – was thought to date to the Urartian period, but a recent survey by Bradley J. Parker has led to the discovery of some other Middle Iron Age fortresses in this region.[119] Moreover, R. Dan has just offered a new and precise picture of the Urartian presence in the Nakhchivan.[120]

In the plain of Şerur several archaeological sites were identified which yielded Middle Iron Age evidence: the settlement of Gulalıtepe, the cemeteries of Karabulak, Aşağı Taşark, Khalaç, Yurdçu and Şahtaxtı and Tazakend

112 Ivanovskiĭ 1911; Nagel & Strommenger 1985.
113 Belli & Konyar 2003b.
114 Sevin 1999.
115 Çilingiroğlu 1991.
116 Salvini 2008, 137, A 3-8.
117 Belli & Sevin 1999, 61-64.
118 Bahşaliev 1994, 106-120.
119 Parker *et alii* 2011; Parker 2012.
120 Dan 2014.

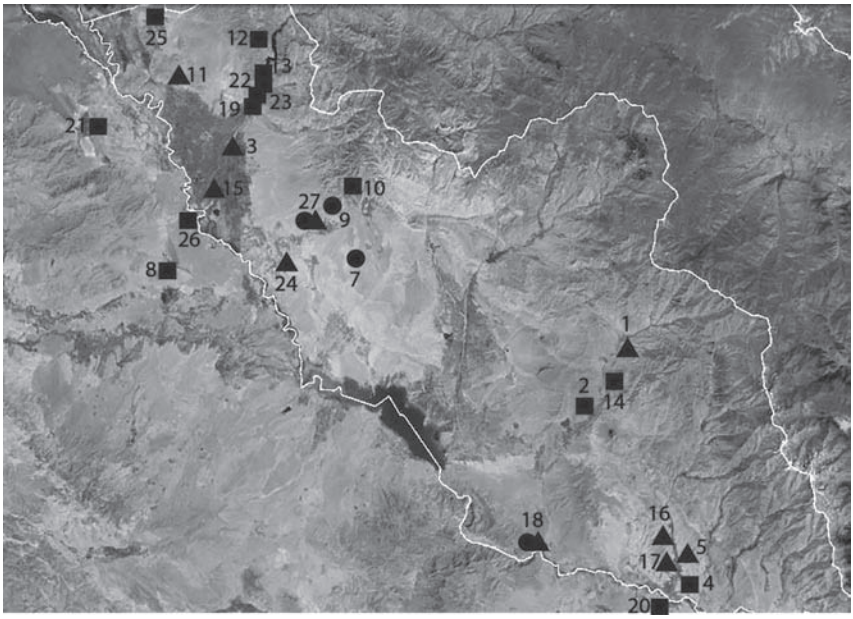

FIGURE 27 *Nakhchivan Autonomous Republic. Sites of the Middle Iron Age. 1 — Aksal; 2 — Alincekale; 3 — Aşağı Taşark; 4 — Ayazköyü; 5 — Dalmatepe; 6 — Ferhat (Batabat); 7 — Gulalıtepe; 8 — Ilan Qara; 9 — Kalaçik; 10 — Karabağlar Gavurkalası; 11 — Karabulak; 12 — Karasu Kalası; 13 — Karasuqala; 14 — Kazançıkale; 15 — Khalac; 16 — Mərdangol; 17 — Muncuklutepe; 18 — Nəhərçir; 19 — Oğlan Qala; 20 — Qal'eh Gavur; 21 — Qal'eh Sarandj; 22 — Qizqala 1; 23 — Qizqala 2; 24 — Şahtaxtı/Tazakend; 25 — Sederekqala; 26 — Verachrman; 27 — Yurdcu.*

and the fortresses of Karasuqala, Qizqala 1, Qizqala 2 and Oğlan Qala.[121] Another important fortress identified by Parker is Sederekqala, which is located further north.

On the Iranian side of the river Aras, surveyed by W. Kleiss and S. Kroll, only two major Urartian settlements have been found, the large fortresses of Verachram and (probably) Qal'eh Sarandji.[122]

According to the information provided by Schachner and Bahşaliyev,[123] a strong decrease in the numbers of inhabited settlements may be noted.

121 Two other unpublished fortresses, probably chronologically contemporary, are located near the border with Armenia (Parker *et alii* 2011, 195).

122 Kroll 1976, 166.

123 Schachner & Bahşaliyev 2001, 7-10.

Most Early Iron Age sites seem to have been abandoned; those that survived are concentrated in the northern part of the region.

The only well-excavated site is the fortress of Oğlan Qala. It is situated at the top of a 140 m high hill on the northern edge of the Sharur Plain, the largest fertile plain in Nakhchivan, and to the south of one of the major passes through the Zangezur Mountains. This strategic position controls one of the major routes between the Lake Urmia and Lake Sevan basins.

The site was briefly investigated by a Soviet team led by Bahşaliev in 1988 and became the main target of a recent American project which has been excavating the site since 2008. The results of this dig have been recently published,[124] and both the Penn University[125] and the dedicated project websites[126] give additional information about the results obtained.

The fortification walls enclose an area of about 10 ha, but there are traces of extramural occupation as well (Fig. 28). Excavations have identified five periods of occupation, four ancient and one modern. The first, Period V, refers to sometime between 1200 and 800 BCE during the Early Iron Age, when the fortress had probably already been built, although the pottery inventory contains only a few potsherds of the Late Bronze-Early Iron Age period.

Most of the architectural remains date to the subsequent occupation, Period IV (800-600 BCE), and the Late Iron Age, Period III (400-250 BCE). In Period II, dated to between 200 BCE and AD 100, the hilltop was covered by a large fortified town. On the top of the hill, a citadel containing two buildings was excavated. Radiocarbon analyses established that it was built in about 800 BCE and remained in use during Periods III and IV.

Of interest is the presence of a large square courtyard, 33 × 34 m, very similar in size and shape to the courtyard surrounding the temple at Altıntepe, Turkey. This courtyard was probably one of the main public spaces in the citadel. The town's role as administrative centre is supported by the presence of large fragmentary storage jars, some of which bore Urartian cuneiform signs of volume.

The question of whether the fortress of Oğlan Qala belonged to the Urartian kingdom is still under scrutiny; the discovery of pithoi with cuneiform signs and typical Urartian pottery seems (at least) to indicate Urartian presence in this area. However some scholars think that this site was instead the capital of an independent Middle Iron Age kingdom which, though, had close ties with Urartu.[127]

124 Ristvet *et alii* 2009; Ristvet *et alii* 2011; Ristvet *et alii* 2012.

125 http://www.penn.museum/sites/oglanqala/website/Home%20page.html.

126 http://www.oglanqala.net/.

127 On this topic see http://www.oglanqala.net/2009_Introduction.html.

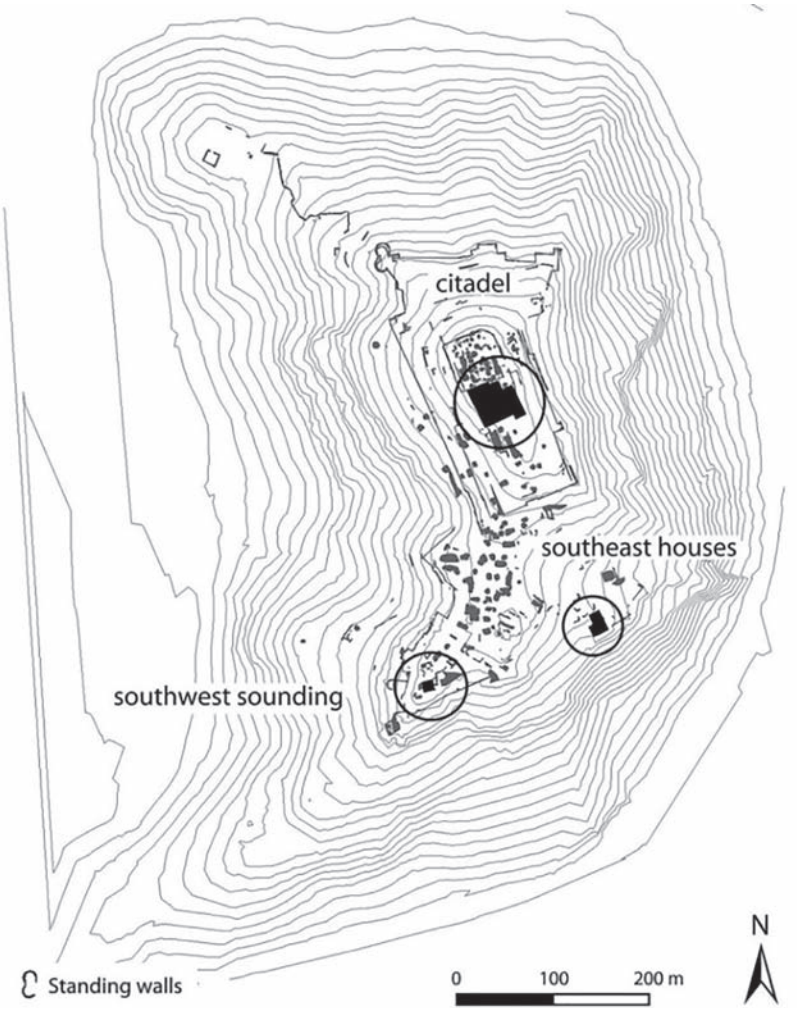

FIGURE 28 *Oğlan Qala* (*after Risvet* et alii *2012, 331, fig. 5*).

Other evidence of such a relationship consists of the remains of a bronze belt[128] of Urartian tradition, found presumably by local inhabitants near the cemetery about half-way between the villages of Şahtaxtı[129] and Tazakend next to the middle course of the Araxes, on the border with Turkey.

128 Bahşaliev 1997, 117, fig. 26.

129 Near the village there is a höyük and a necropolis which dates from the Middle Bronze to Iron Age I. Bahşaliev 1997, 111-113; Belli & Sevin 1999, 25-26; Bahşaliyev & Schachner 2001, 8; Bahşaliev & Marro 2009, 25, 29.

Considering the strategic importance of this area, which is on a principal route connecting two of the main zones of Urartian power (i.e. Lake Van and Lake Sevan), it seems unlikely that the Urartians would have let an independent kingdom survive here, a potential threat to an important trade and military route. However, since we have no clear Urartian inscription mentioning work in the fortresses, and in the absence of typical Urartian architectural features (such as a susi temple, well-built masonry, walls with alternating towers and buttresses), we cannot consider this site as being definitely of Urartian foundation. Probably, as is seen in other Transcaucasian sites, this fortress was the seat of local power and under Urartian control.

Late Iron Age **(Fig. 29)**

Archaeological evidence of Achaemenid presence in the area is virtually absent.

Only three sites were probably occupied during the Achaemenid period; two of them, Oğlan Qala and Verachram, were also in use during the Urartian period; the other, Čorbulaq, located on the Iranian side and investigated by Kleiss and Kroll in the late 1970s, seem to have been a newly established fortress. Qal'eh Gavur, previously also considered to date to the Achaemenid period, has been recently examined and dated to Hellenistic times.[130]

Since the other sites have not been excavated, most of the information available regards Oğlan Qala.

Although evidence of destruction has not yet been found, it seems that Oğlan Qala was briefly abandoned after the 7th century BCE. The next level of occupation dates to around the end of the 5th century BCE, when several structures were built over preceding ones, although other pre-existing Period IV constructions were still in use. The building technique showed some change: wall foundations were built of smaller, almost entirely unworked stones.

The most striking new element consists of a columned hall built over the previous courtyard (Fig. 30), with 29 column parts including bases, capitals and perhaps also square plinths (though these may have been column blanks). Identical pieces are not known from other sites; two columns are similar in size and shape to those found in Qaracemirli, Sarı Tepe, Gumbati[131] and Benjamin.[132] It is interesting to note that none of these items had been smoothed, polished or prepared for final decoration. Moreover, according to the documented

130 Kroll 2012.

131 Knauss 2006 with specific bibliography.

132 Ter-Martirosov *et alii* 2012.

FIGURE 29 *Nakhchivan Autonomous Republic. Sites of the Late Iron Age. 1 — Čorbulaq; 2 — Karasuqala; 3 — Oğlan Qala; 4 — Qizqala 1; 5 — Qizqala 2; 6 — Verachrman.*

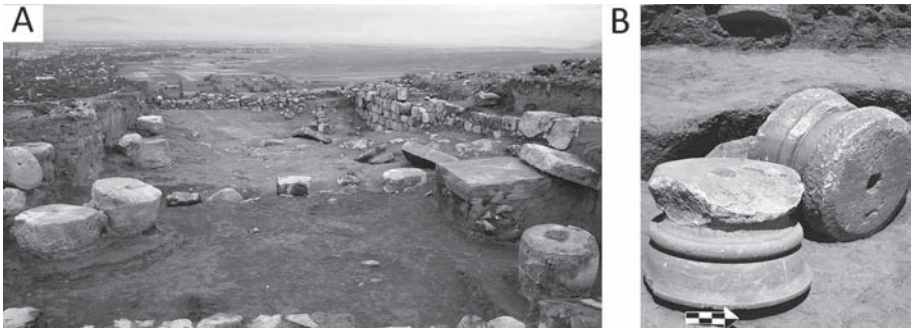

FIGURE 30 *Column hall and column bases from Oğlan Qala* (*after Ristvet* et alii *2012, fig. 12-13*).

architecture of Achaemenid apadana, there are not enough elements to compose enough complete columns to fill this large space – although this columned hall is smaller than those at Altıntepe and Erebuni. Radiocarbon samples from the layers containing column elements indicate a probable 4th or 3rd century BCE date for this construction site.

It seems plausible that the construction of this new building was abandoned for some (unknown) reason. The discovery of iron arrowheads and slingshot

stones in the ruins of this building could be evidence of a violent conflict at this time.

In conclusion, Nakhchivan archaeological remains of the Achaemenid period seem to show a mostly sparsely-populated area. There is a clear decrease in urban settlements and a notable absence of cemeteries or indeed isolated graves for the period as well. The few occupied sites are still fortresses and closely connected with the agricultural plain – suggesting, at least, a continuity in the exploitation of the fertile plain strip along the river Aras.

Moreover, Nakhchivan territory has not, to my knowledge, yielded any metalwork or precious metal objects showing typical Iranian/Persian style.

Syunik Area

The region of Syunik is the southernmost province of Armenia, located between the Nagorno-Karabakh and Nakhchivan autonomous republics, and stretching from the Vardenis mountain range (which overlooks Lake Sevan) to the river Aras. It is mostly a very mountainous and wooded area with few roads or access points. Nowadays the road leading to the Armenia-Iranian border is an important route, but it seems likely that in ancient times the connection between the Lake Urmia Basin, Yerevan and the Lake Sevan Basin that passed through the lands of modern-day Nakhchivan along the Aras Valley was preferred to that through the Zangezur Mountains. During recent decades, for political and economic reasons, it has not been possible to carry out detailed archaeological work. Most of the published data consists of short reports written in Armenian or Russian and generally concerned with chance finds made during construction work, especially in the Soviet era.

The situation changed greatly in 2003, when the Armenian scholar O. Xnkikyan published a detailed work on the archaeology of the Syunik area, gathering together in one volume all the data collected in the preceding decades. This covers the span from the Eneolithic period until the Middle Iron Age (but unfortunately does not include information regarding subsequent phases).[133]

In 2000 a joint expedition by the University of Munich and the Institute of Archaeology of the Academy of Science of Yerevan began a 3-year survey in the region and was able to record more than 150 sites dating from the Chalcolithic to Late Antiquity, taking also particular note of the many mines still active in the area, especially those for copper ore.[134] The results obtained were not

133 Xnkikyan 2002.

134 Kroll 2006.

homogeneous. Burials are widespread everywhere but settlements are rare, and the larger of these are to be found only near Sisian.

The results of this joint expedition have been partially published in a preliminary report, with a list of sites and their GPS coordinates, but unfortunately lacking a clear description of the sites and drawings of pottery and small finds.

A recent new American-Armenian expedition (the Vorotan Project) concerns the area, but to date the published results are very few.[135]

Early Iron Age (Fig. 31)

Most of the information regarding this period comes from cemeteries. Only a few, however, have actually been dug and most of the data available regard isolated graves or chance finds made during salvage work. Moreover, many of the recorded graves had been destroyed by agricultural or construction work, or – worse still – robbed, a tendency that seems to have increased since the fall of the Soviet Union.

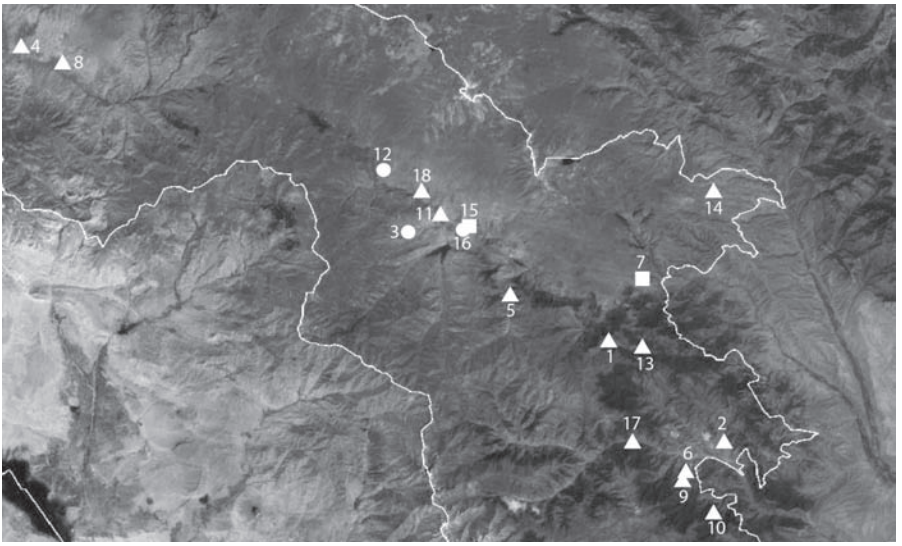

FIGURE 31 *Syunik area. Sites of the Early Iron Age. 1 — Aghvani; 2 — Ayunik Sowchos; 3 — Brnakot Vortsaberd I; 4 — Eghegnadzor; 5 — Gedatagh; 6 — Geghanush; 7 — Khot; 8 — Moz; 9 — Nerkin Hadjin Art; 10 — Shikahogh; 11 — Sisian I-II; 12 — Surb Vartan; 13 — Tanzaver; 14 — Tegh; 15 — Uyts I; 16 — Uyts II; 17 — Vahanavank; 18 — Zorakarer.*

135 http://proteus.brown.edu/vorotanproject/Home.

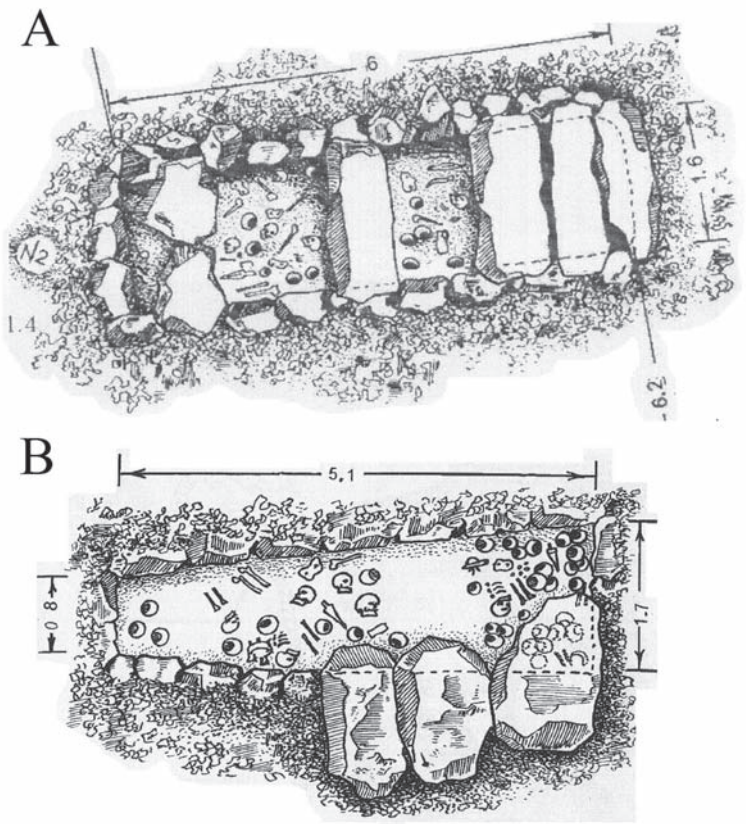

FIGURE 32 *Dolmen-type graves from Harzhis and Tegh* (*after Xnkikyan 2002, fig. 12, pl. 36*).

About 60 sites date to this period, but most are isolated graves or cemeteries.

Four settlements of the period are known: Brnakot Vortsaberd I, Surb Vartan and Khot are unfortified, whereas Utys includes both a fortified and an unfortified settlement. Plans of the sites have not been published yet.

Graves of the period are distinguished by the presence of low mounds with cromlech and an underground chamber; excavation of the Awazihanki Blur cemetery has brought to light more complex structures: this large burial ground consists of walled circular or rectangular open areas attached to one other.[136] Other complex structures, such as big dolmen-type graves, often with multiple burials (Fig. 32), have been discovered in other places in the

136 Kroll 2006, 25.

vicinity of Syunik, such as Sisian, Tegh and Harzhis;[137] the area seem to have been distinguished by these funerary practices. Despite the more complex tombs, the grave goods exhibit no peculiarities, being composed of the usual set of weapons, adornments and pottery.

This complexity of burial structures resembles funerary evidence from the region of Talesh[138] (between Iran and Azerbaijan) and Nagorno-Karabakh, rather than contemporary cemeteries from other parts of the Armenian highland. Simpler cist-graves are however also known throughout the region.

Middle Iron Age (Fig. 33)

An inscription found in the monastery of Thanahat, near Sisian, constitutes the only historical evidence of an Urartian interest in the area; it refers to a military expedition of Argishti I in the lands of Suluqu and against the cities of Irdua and Amusha.[139]

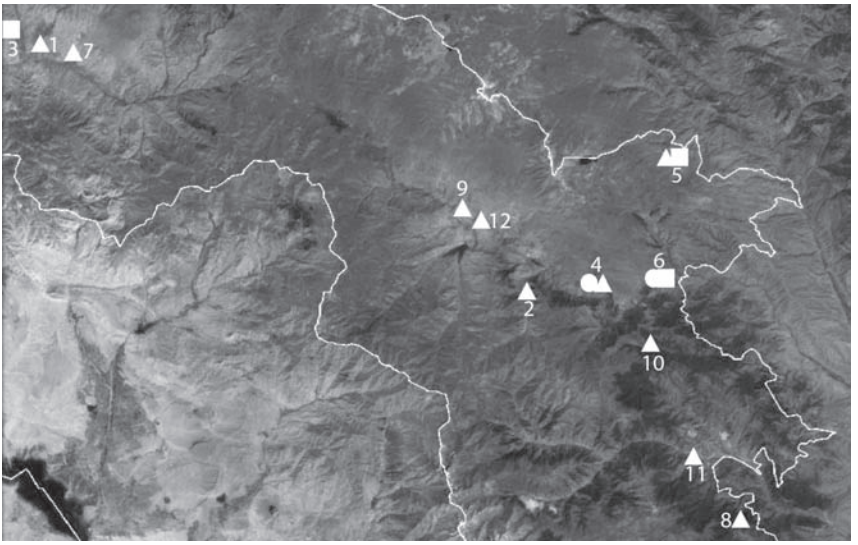

FIGURE 33 *Syunik area. Sites of the Middle Iron Age. 1 — Eghegnadzor; 2 — Gedatagh; 3 — Getap; 4 — Harshis; 5 — Khnachach; 6 — Khot; 7 — Malishka; 8 — Shikaohk; 9 — Sisian I-II; 10 — Tanzaver; 11 — Teghut; 12 — Uyts.*

137 Xnkikyan 2002, figs. 8, 10-12, pl. 36.

138 de Morgan 1896; 1905; Castelluccia, *in press*.

139 Salvini 2008, 540-542, A 11-3.

The material culture of the whole Syunik area, again mostly from cemeteries, together with the few identified fortresses and settlements of the period (Harshis and Khot, both unfortified), shows clearly that this zone was never part of the Urartian kingdom. However, its northernmost part probably belonged to the kingdom; an Urartian fortress has in fact been identified near Getap.[140]

Only a handful of fortresses are known and none have been properly investigated.

The abundant burial evidence, however, does demonstrate the influence of Urartian culture upon local traditions. Moreover, a sporadic Urartian presence in the area – probably the result of the military campaign – is attested by the discovery of clearly Urartian graves in both Malishka[141] and Yeghegnadzor.[142] Another probable sign of Urartian presence or influence consists of the chamber tombs identified at Uyts, Zoratskarer and Sisian.[143]

In addition to this Urartian influence, it may be noted that native Syunik culture was also influenced by northern Iran. This is particularly evident in the animal-shaped vessels and hollow-bodied ritualistic vessels which clearly resemble items found throughout Iron Age Iran.

Late Iron Age (Fig. 34)

In Kroll's publication the Achaemenid and Hellenistic periods are grouped together and thus it is not possible to ascertain the presence of sites unambiguously attributable to Achaemenid times.

The survey identified many fortresses and settlements, both fortified and unfortified, and in fact most of the inhabited settlements in the whole Syunik region date to this period: 19 sites are recorded, whereas only 4 belong to the previous era. However it seems that most of these were probably founded in the Hellenistic period.

According to Kroll's list,[144] the only probable Achaemenid-era settlement is Brnakot Vordsaberd I, while Achaemenid pottery from burials at an unspecified site has been identified in the Karahunj schoolhouse.

Having so few data to hand, it is not possible to propose a reliable picture of the landscape during the Achaemenid period.

140 Melkonyan *et alii* 2010.

141 Esayan 1977.

142 Xnkikyan 2002, 94-96.

143 Kroll 2006, 32.

144 Kroll 2003, 35.

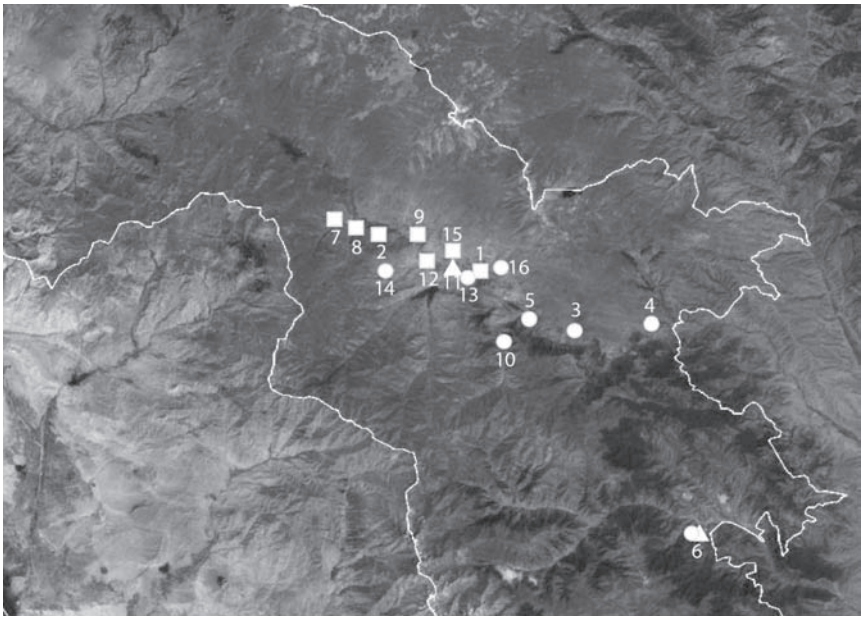

FIGURE 34 *Syunik area. Sites of the Late Iron Age. 1 — Aghitu; 2 — Balak; 3 — Harzhis; 4 — Khot; 5 — Ltsen; 6 — Nerkin Hadjin Art; 7 — Shaghat 1; 8 — Shaghat Narinkala; 9 — Shakeh; 10 — Shlorut; 11 — Sisian 11; 12 — Tsak-Kar; 13 — Uyts Eastern Terrace; 14 — Vordsaberd 1-11; 15 — Zoratskarer; 16 — Zor-Zor.*

Tavush and Lori Areas

The northern part of present-day Armenia is mostly divided between the provinces of Tavush, in the northeast, and Lori, in the northwest.

Most of the territory of the province of Tavush is at 800-1000 m above sea level. The landscape consists of rocky hillsides covered with dense alpine forests and is characterized by the abundance of rivers and other water resources. Two main rivers flow in this area. One is the river Debed, which forms a long, deep gorge (but most of its course is in the adjacent province of Lori), while the second is the river Agstev. In the zone there are also important mineral resources, especially in the river Debed gorge, which contains rich deposits of copper and silver ores. The central part of Lori province is of slightly greater altitude, with typical upland landscape.

The first archaeological work was undertaken in 1871 by A. D. Erinov in the town of Akner, where a number of Early Iron Age graves were unearthed.[145]

145 Piotrovskiĭ 1949, 5.

In subsequent years, the well-known French scholar J. de Morgan (at that time employed as a mining engineer) investigated the area surrounding the mining city of Alaverdi.[146] He undertook the excavation of several burial grounds and subsequently published only part of the material; no surveys were conducted in the area and no traces of ancient settlements were identified.

In the following decades brief excavations or chance finds enriched our knowledge of this peripheral area, but most of the objects were obtained from graves which gave useful information regarding the material culture and its relationship with neighbouring areas, but made no contribution to our understanding of the human landscape.

The southern part of this area, on the other hand, was the target of an unsystematic regional survey led by S. Esayan from 1960 to 1972. He published his results in 1976,[147] when little was known about the material culture of this part of Armenia and almost nothing of the post-Urartian phases. His survey was mainly directed at identifying the presence of the typical cyclopean fortresses and cemeteries of the area, and he thus concentrated his efforts in mountainous territory and on hill-slopes – rather than on the few strips of flat land in river valleys, where different archaeological patterns would probably have been identified.

Esayan carried out test excavations in 20 of the 57 fortresses he found in order to establish a new chronological sequence. As he himself recognized,[148] the post-Urartian and Achaemenid periods were the most difficult to date, due to the lack of any reliable material. Recently, the Armenian scholar I. Karapetyan returned to this subject, re-studying Esayan's material and providing some new interpretation and dating.[149]

Early Iron Age (Fig. 35)

About 8 of the fortresses mentioned above belong to the first centuries of the Iron Age, although only in five of them were test excavations actually carried out. These fortresses are mostly situated on mountain tops and are of limited size; the inner walled area usually covers 1-2 ha and there are no traces of nearby unfortified settlements. Construction typology follows the general outlines of the period, with cyclopean walls of irregular profile built of unworked and irregular stone blocks, featuring few towers and buttresses.

146 de Morgan 1889.

147 Esayan 1976.

148 Esayan 1976, 98.

149 Karapetyan 2003.

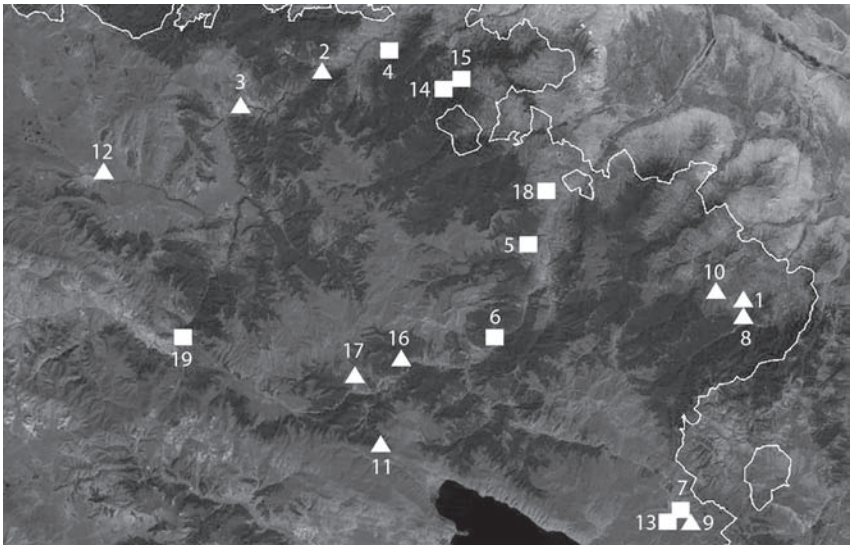

FIGURE 35 *Tavush and Lori Areas. Sites of the Early Iron Age. 1 — Ajgrani-tala; 2 — Akhatala; 3 — Alaverdi; 4 — Archik; 5 — Armung Achpjur; 6 — Barcraberd; 7 — Chortamboj; 8 — Churdzhin choger; 9 — Gegamiachpjur; 10 — Gmshkut; 11 — Golovino; 12 — Lori-Berd; 13 — Ordzhonikidze; 14 — Patashar; 15 —Poploz gash; 16 — Redkin Lager; 17 — Shamachjan; 18 —Surb Nartan; 19 —Vanazdor.*

Much more abundant is the evidence provided by funerary contexts, with several excavated cemeteries, amongst which those of Lori-Berd,[150] Redkin Lager,[151] Golovino,[152] Akhtala and Mouçi-yéri,[153] that have revealed hundreds of graves belonging to this era. These burials also follow the usual patterns found in the Armenian highland during the Early Iron Age, with many single cist-graves containing a rich repertory of grave goods, especially bronze and iron weapons and bronze ornaments (Fig. 36). The graves located in the Debed valley do not possess the typical mound with cromlech so often seen in other parts of the Armenian highland. However, in some cemeteries close to the Lake Sevan basin, such as Redkin Lager and Golovino, as well as Lori-Berd necropolis, several multiple burials, tumuli and large underground chambers are present.

150 Devedzhyan 1981.
151 Bayern 1885.
152 Martirosyan 1954.
153 de Morgan 1889.

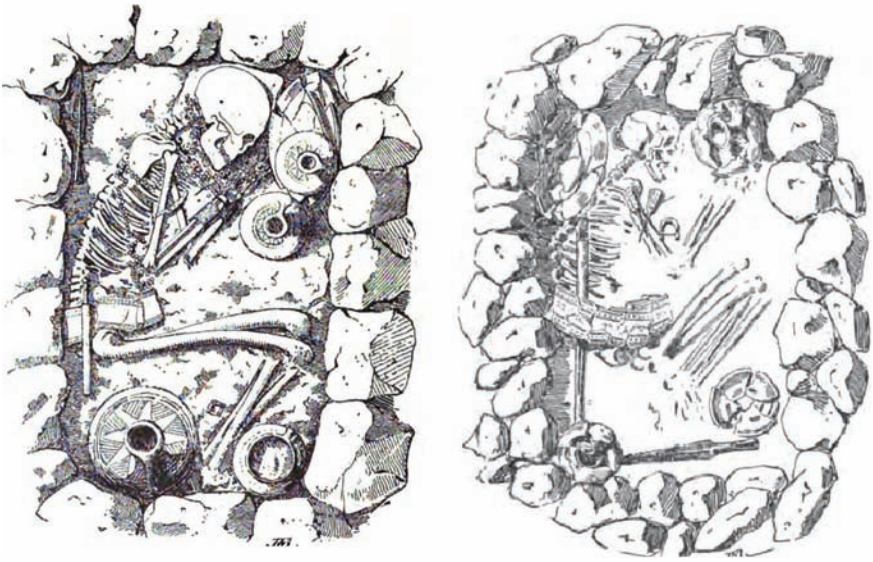

FIGURE 36 *Graves from Debed valley* (*after de Morgan 1889, 58, figs. 17; 71, fig. 28*).

Middle Iron Age (Fig. 37)

This part of the Armenian highland was not affected by the Urartian expansion of the 8th century BCE and it is thus not possible to observe any precise changes in either material culture or human landscape.

Urartian influence here was probably minimal and there are no records which suggest that this mountainous area was ever the destination of annual expeditions by an Urartian king – although it is known that they did launch some raids in the north-eastern area beyond the Shirak Plain. Some Urartian objects were discovered in the necropolises of Golovino,[154] Lori-Berd[155] and Vanadzor.[156] Near the latter, Martirosyan reported the presence of two cyclopean fortresses without providing any dating, but it seems plausible that these are Early-Middle Iron Age sites.[157]

Esayan's survey has shown that most of the fortresses of the previous period were still in use; some, however had been abandoned, while others exhibited only scarce traces of human occupation. Funerary evidence is still abundant,

154 Martirosyan 1954, pl. 4.
155 Devedzhyan 2010.
156 Martirosyan 1964, 212, fig. 84.
157 Martirosyan 1956, 61.

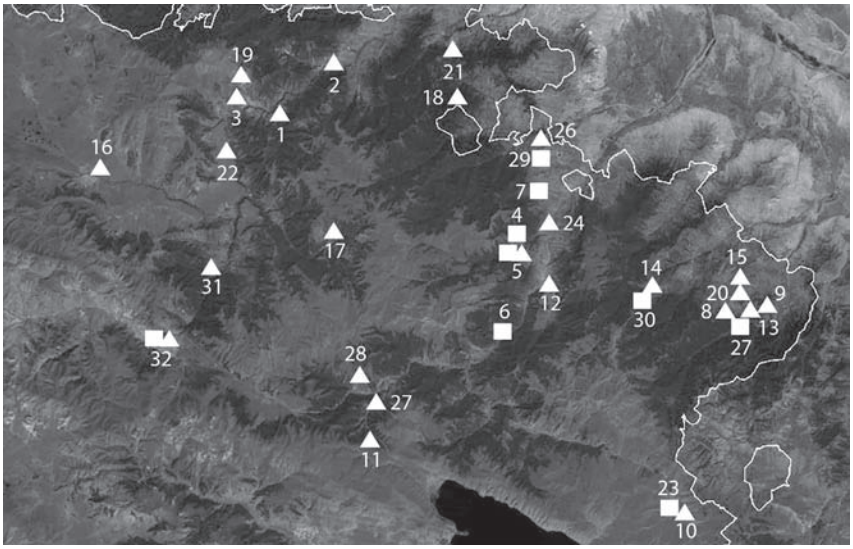

FIGURE 37 *Tavush and Lori Areas. Sites of the Middle Iron Age. 1 — Achpat; 2 — Akhtala; 3 — Alaverdi; 4 — Armung Achpjur; 5 — Astchi blur; 6 — Barcraberd; 7 — Berdatech; 8 — Buga kar; 9 — Darandzh; 10 — Gegamiachpjur; 11 — Golovino; 12 — Idzhevan; 13 — Kari dzor; 14 — Kari-gluch; 15 — Krapiashti jal; 16 — Lori-Berd; 17 — Lorut; 18 — Michi-mat; 19 — Mouci yeri; 20 — Nergishen; 21 — Noyemberyan; 22 — Odzun; 23 — Ordzhonikidze; 24 — Paker; 25 — Papanino; 26 — Sariguch; 27 — Seprik; 28 — Shamachjan; 29 — Surb Nartan; 30 — Tandzut; 31 — Vaagni; 32 — Vanadzor.*

especially in the Debed valley: most of the cemeteries of the previous period remained in use, and there were no marked changes in the material culture.

Late Iron Age (Fig. 38)

The lack of extensive excavations in any of these fortresses means that little is known of the transition from the Middle Iron Age to the subsequent period. We do not know if this area was partially affected by the collapse of Urartian authority nearby, and have no clear information regarding the possible presence of Scythian tribes in the area. Some scattered Scythian objects, however, have been found in a number of graves in the Alaverdi area,[158] on the river Debed, and typical Achaemenid-era metal horse bits are known from Agarak, near Vanadzor.[159]

158 de Morgan 1889, 100, fig. 57.

159 Devedzhyan 1981, pl. 23, *6*; Karapetyan 2003, pl. 45, *5*.

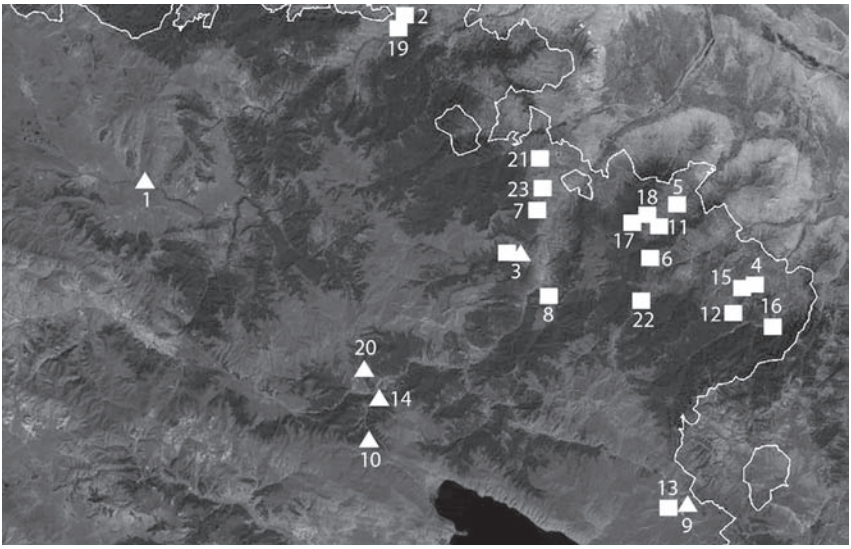

FIGURE 38 *Tavush and Lori Areas. Sites of the Late Iron Age. 1 — Agarak; 2 — Aghtanak; 3 — Astchi-blur; 4 — Azatavan; 5 — Bachri-chach; 6 — Berdakar; 7 — Berdatech; 8 — Buduri Kar; 9 — Gegamiachpjur; 10 — Golovino; 11 — Kal Kar; 12 — Norashen; 13 — Ordzhonikidze; 14 — Papanino; 15 — Pilor par; 16 — Salkar; 17 — Sev sev 1; 18 — Sev sev 2; 19 — Shaglama; 20 — Shamachjan; 21 — Surb Naatak; 22 — Tandzut; 23 — Tmbadir.*

The most interesting data for the period comes from the distribution of fortresses: a great increase in site numbers may be observed, with many fortresses that have layers and finds dating to this period. Some of these fortresses had also been occupied in the preceding centuries, but most of them seem newly founded. The majority were located in the eastern part of the province, in a very mountainous zone with few nearby agricultural areas. However, it is not possible to establish whether they definitely belong to the Achaemenid epoch, rather than the subsequent Hellenistic period when, as we have already seen, a revival of fortification building occurred.

The funerary evidence dating to this period is, on the contrary, quite scarce. It consists largely of isolated metal objects and pottery found in Middle Iron Age cemeteries, which can be dated to the 6th or 5th centuries BCE. The cemetery of Astchi-blur[160] seems to have been the only extensive graveyard, with numerous graves dating to this period. There is no evidence of any particular change in the material culture, but rather continuity with the previous era.

160 Esayan 1976, 131-133.

Conclusion

The archaeological landscape highlighted in this article will now be briefly discussed.

During the first centuries of the Iron Age a general development of urban structures may be noticed. The social organization of the Iron Age Caucasus shows a high degree of complexity, with sites distributed according to regional patterns; main centres controlled limited, defined spaces and resources, resulting in a typical locally-based model of social and urban organization. The products of this model are complex, non-urban societies characterised by an "active function of military leadership"[161] particularly evident in the foundation of fortresses and the widespread presence of weapons in burials of the period, which clearly highlight the presence of a military élite and a militarization of society that occurred in the Early Iron Age.

Most of these features were also present in the Urartian kingdom, although this also shows some marked changes. The spatial organization was reorganized according to a state-control policy: the settlements maintained their military character and were all located in strategic positions, controlling both economic resources and trade routes, all arranged in a region-wide pattern instead of the more limited extension of the pre-Urartian period.

Urartian authority over the Armenian highland was, though, based on a strong interaction with indigenous cultures, themselves involved in the control of the region. Local settlements and local-tradition pottery styles remained in use. Burial evidence clearly shows the presence of both Urartian and locally-made objects, even within the same grave.

Tracing the Achaemenid presence in the Armenian highland as a basis for understanding the organization of the political structure of imperial authority, is somewhat difficult due to the lack of sufficiently reliable information. Unmistakable signs of Achaemenid activity are generally few, and the evidence is often scattered and ambiguous. This situation depends in particular on the lack of well-documented excavated sites; too frequently the available archaeological evidence is inadequate for comparison with historical sources.

As may be seen from the picture outlined above the Achaemenid period seems to be characterized by a decrease in the number of known inhabited settlements: it appears that the whole Armenian highland was under-populated at this time.

161 Masson 1997, 129.

This reduction can be probably linked with the historical events of the 7th and 6th centuries BCE. It is generally considered, on the basis of both historical and archaeological information, that all of Transcaucasia was affected by the invasions of the Cimmerians and Scythians, who played a significant role in the collapse of the Urartian kingdom. The destruction of settlements, crops and other economic resources might have determined a marked reduction of the local population.

Moreover, the archaeological data do not indicate that this area was occupied by a new population, since no clear-cut new cultural features can be identified. It seems, on the contrary, that there was a continuation of the local traditions. It is, however, possible to establish a marked change in the organization of settlements. Most of the previous fortified sites had been either destroyed or abandoned, while those with 6th-5th century BCE occupation showed no signs of particular rebuilding or the construction of new defensive walls. Most sites seem thus to have lost their typically military features which were, conversely, major distinguishing characteristics of the Early Iron Age and the Urartian kingdom. It must be specified, however, that the development of the human landscape during the Achaemenid period is not uniform. In the Aragats and Tavush areas various fortresses were still in use or had been reoccupied and a few were even of new foundation, while in the Lake Sevan basin their number was much less. The Yerevan Basin and Nakhchivan area, on the contrary, show little archaeological evidence.

Such a change might be tentatively explained by the new political situation of the Achaemenid Empire: no longer was Transcaucasia divided into many independent polities fighting each other for the control of economic resources, but was finally united under a single power. The incompleteness of the archaeological information, especially concerning the possible presence of unfortified sites on the plains, does not allow us to establish whether this change and reduction of inhabited sites might be linked with population movements, perhaps (*e.g.*) from cyclopean mountain fortresses to (hypothetical) unfortified sites on the plains. Achaemenid authority seems to have been centred in a few major settlements, such as Armavir, Erebuni and Benjamin, the latter of which probably served as seat of the Persian governor.

As has been recently demonstrated by Kroll,[162] during the Hellenistic period a revival in the building of fortified sites can be observed. In addition to the construction of new settlements, old Urartian ones were reused and renovated, especially by adding walls in a zig-zag pattern, a typical feature of Hellenistic-era military architecture.

162 Kroll 2012.

Another interesting phenomenon in this period is the almost total absence of funerary evidence – although it is, on the other hand, plentiful for the preceding centuries. This lack is hardly explicable on the basis of the available data, since many burial-grounds used for long periods have not provided funerary evidence dating to the 6th-5th century BCE, and is particularly evident with regard to present-day Armenia, whereas from neighbouring Georgia several burial-grounds of the period have been investigated.

It would, however, be hazardous to connect this lack of burials with possible Zoroastrian influence, given that there are no tangible traces of the putative acquisition of this new religion in the Transcaucasian lands – and in fact this problem also concerns the core of the Persian Empire itself.

Bibliography

Akhvlediani, N. I. 2001: On the Dating of Burial no. 13 in the Beshtasheni Burial-Ground. *Ancient Civilization from Scythia to Siberia* 7/3-4, 273-285.

Akopyan, N. G., Babayan, F. N., Zhamkochyan, A. S., Kalantaryan, A. A., Kafadaryan, K. K. & Kocharyan, G. G. 2008: *Dvin IV. Gorod Dvin i ego raskopki* (*1981-1985*) (Yerevan).

Arakeljan, B. N. 1971: Alcuni risultati della ricerca archeologica ad Armavir. *SMEA* 14, 41-55.

Areshyan, G. E. 1970: Materialÿ iz raskopok karmirberdskogo (tazakendskogo) mogil'nika v muzee Gruzii. *Vestnik erevanskogo universiteta* 1/10, 239-247.

Aslanov, G. M., Vaidov, R. M. & Ione, G. I. 1959: *Drevniï Mingechaur* (*épokha éneolita i bronzÿ*) (Baku).

Avetisyan, P. & Bobokhyan, A. (eds.) 2012: *Archaeology of Armenia in Regional Context* (Yerevan).

Avetyan, V. & Biyagov, L. 1977: Novÿe nakhodki bronzovÿkh poyasov. *Vestnik Obshchestvennÿkh nauk* 12, 87-89.

Badalyan, R. S. & Avetisyan, P. S. 2007: *Bronze and Early Iron Age Archaeological Sites in Armenia. Mt. Aragats and its Surrounding Region.* Vol. I (Oxford).

Badalyan, R., Smith, A. T., Lindsay, I., Khatchadourian, L. & Avetisyan, P. 2014: Village, fortress, and town in Bronze and Iron Age Southern Caucasia: A preliminary report on the 2003-2006 investigations of Project Aragats on the Tsaghkahovit Plain, Republic of Armenia. *AMIT* 40, 45-105.

Bahşaliev, V. & Marro, C. 2009: *The Archaeology of Nakhichevan. Ten Years of New Discoveries* (Istanbul).

Bahşaliev, V. 1997: *Nahiçevan Arkeolojisi* (Istanbul).

Bahşaliyev, V. & Schachner, A. 2001: Das Kamraergrab von Yurdçu/Naxçivan. Ein Beitrag zur Archäologie der Früheisenzeit Transkaukasiens und Ostanatoliens. *SMEA* 43, 5-23.

Baïburtyan, E. A. 1937: Po povodu drevneï keramiki iz Shresh-blura. *SA* nº 3, 209-213.

Bakhshaliev, V. B. 1994: Arkheologicheskie raskopki na poselenii Oglankalk. *RosArkh* n° 3, 106-120.

Barnett, R. D. 1963: The Urartian Cemetery at Igdyr. *Anatolian Studies* 13, 153-198.

Bayern, F. 1885: *Untersuchungen über die ältesten Gräber und Schatzfunde in Kaukasien. Zeitschrift für Ethnologie* 17 (Suppl.) (Berlin).

Belli, O. & Konyar, E. 2003a: *Early Iron Age Fortresses and Necropolises in East Anatolia* (Istanbul).

———. 2003b: Ernis-Evditepe: The Largest Early Iron Age Necropolis in Eastern Anatolia. *Tel Aviv* 30, 167-203.

Belli, O. & Sevin, V. 1998: *Nahçivan'da Arkeolojik Araştırmalar* (Istanbul).

———. 1999: *Archaeological Survey in Nakhichevan* (Istanbul).

Bill, A. 2003: *Studien zu den Gräbern des 6.-1. Jahrhunderts v. Chr. in Georgien unter besonderer Berücksichtigung der Beziehungen zu den Steppenvölkern* (Bonn).

———. 2010: Achaemenids in the Caucasus? In J. Nieling & E. Rehm (eds.), *Achaemenid Impact in the Black Sea: Communication of Powers* (*Black Sea Studies* 11) (Aarhus), 15-27.

Biscione, R. 1994: Recent Urartian Discoveries in Armenia: The Columbarium of Erevan. *SMEA* 34, 115-135.

———. 2002: The Iron Age settlement pattern: pre Urartian and Urartian periods. In Biscione *et alii* 2002a, 351-370.

———. 2009: The Distribution of Pre- and Protohistoric Hill-Forts in Iran. *SMEA* 50, 123-144.

Biscione, R. & Dan R. 2011: Dimensional and Geographical Distribution of the Urartian Fortifications in the Republic of Armenia. *Aramazd* 6/2, 104-120.

Biscione, R., Hmayakyan, S. & Parmegiani. N. (eds.) 2002a: *The North-Eastern Frontier. Urartians and non-Urartians in the Sevan Lake Basin*. Vol. I. *The Southern Shores* (Rome).

———. 2002b: Description of the Sites. In Biscione *et alii* 2002a, 61-251.

Castelluccia, M. *in press*: The Talesh Region in the Iron Age and its Relations with Transcaucasia. In E. Rova & M. Tonussi (eds.), *At the Northern Frontier of Near Eastern Archaeology: Recent Research on Caucasia and Anatolia in the Bronze Age. Proceedings of the Humboldt-Kolleg Venice, 09-12/01/2013.*

Castelluccia, M., Dan, R., La Farina, R., Petrosyan, A. & Raccidi, M. 2012: The First Season of the Kotayk Survey Project. Preliminary Report. *Aramazd* 7/2, 28-35.

Chodzas, S. 1982: Das Leben in der urartäischen Stadt Erebuni. *Archiv für Orientforschung* 19, 271-274.

Çilingiroğlu, A. 1991: The Early Iron Age at Dilkaya. In A. Çilingiroğlu & D. H. French (eds.), *Anatolian Iron Ages, The Proceedings of the Second Anatolian Iron Ages Colloquium held at Izmir, 4-8 May 1987* (Ankara), 29-38.

Dan, R. 2014: Inside the Empire: Some Remarks on the Urartian and Achaemenid Presence in the Autonomous Republic of Nakhchivan. *Iran & Caucasus* 18, 327-344.

Dan, R. & La Farina, R. 2011: Arin-berd: una fortezza dell'Età del Ferro nella valle dell'Arasse. *Bollettino della Unione Storia ed Arte* 6, 227-239.

de Morgan, J. 1889: *Mission scientifique au Caucase: études archéologiques & historiques* (Paris).

———. 1896: *La Mission scientifique en Perse. Recherches archéologiques.* T. IV (Paris).

———. 1905: Recherches au Talyche Persan en 1901. *Mémoires de la délégation en Perse, Recherches Archéologiques* 8, 251-342.

Deschamps, S., Fichet de Clairfontaine, F. & Stronach, D. 2011: Erebuni. The Environs of the Temple of Haldi. *Aramazd* 6/2, 121-140.

Devedzhyan, S. G. 1981: *Lori-Berd I. Rezul'tatÿ raskopok 1969-1973 gg.* (Yerevan).

———. 2010: Some Urartian Objects from the Tombs of Lori-Berd. *Aramazd* 5/2, 76-89.

Esayan, S. A. 1969: *Erevan, arkheologicheskiĭ ocherk* (Yerevan).

———. 1976: *Drevnyaya kul'tura plemen severo-vostochnoï Armenii* (*III-I tÿs. do n.é.*) (Yerevan).

———. 1977: Urartskiĭ poyas iz Malishki. *Vestnik Obshchesvennÿkh nauk* 4, 94-98.

———. 1979: Urartakan gotiov dambaran Zodum. *IFZ* 3/86, 277-280.

Esayan, S. A., Biyagov, L. N., Amayakyan, S. G. & Kanetsyan, A. G. 1995: *Biaïnskaya grobnitsa v Erevane* (2) (Yerevan).

———. 1991: *Biaïnskaya grobnitsa v Erevane* (Yerevan).

Esayan, S. A. & Kalantaryan, A. A. 1988: *Oshakan I. Osnovnÿe rezul'tatÿ raskopok 1971-1983 gg.* (Yerevan).

Esayan, S. A. & Pogrebova, M. N. 1985: *Skifskie pamyatniki Zakavkaz'ya* (Moscow).

Gopnik, H. 2011: The Median Citadel of Godin Period II. In H. Gopnik & M. S. Rothman (eds.), *On the High Road, The History of Godin Tepe, Iran* (Toronto), 285-362.

Heinsch, S., Kuntner, W. & Avetisyan, H. 2012: The Iron Age Fortress of Aramus, Armenia: Archaeological Evidence of the East and North Forts. In Avetsyan & Bobokhyan (eds.), 133-147.

Hellwag, U. 2012: Der Niedergang Urartus. In Kroll *et alii* (eds.), 227-241.

Herles, M. & Avetisyan, H. 2014: An Old Site at Oshakan in a Different Light: the Small Hill of Pokr Blur. *Aramazd* 8 1/2, 95-109.

Herles, M. & Mühl, S. 2013: Neue Forschungen an der Fundstätte Oshakan, Armenien. *Mitteilungen der Deutschen Orient-Gesellschaft* 145, 83-126.

Herles, M. & Piller, C. 2013: Urartäisch, Post-Urartäisch oder Medisch? Überlegungen zur mittel- bis späteisenzeitlichen Chronologie Armeniens am Beispiel einiger

ausgewählter Grabfunde aus Oshakan. *Mitteilungen der Deutschen Orient-Gesellschaft* 145, 195-226.

Hmayakyan, S. 2002: The Urartians on the Southern Coast of the Lake Sevan. In Biscione *et alii* 2002a, 277-300.

Ivanovskiĭ, A. A. 1911: *Po Zakavkaz'yu. Arkheologicheskie nablyudeniya i issledovaniya 893, 1894 i 1896 gg.* (*Materialy po arkheologii Kavkaza* VI) (Moscow).

Karapetyan, I. & Yengibaryan, N. 2010, A New Urartian Urn Burial from Argishtikhinili. *Zeitschrift für Assyriologie* 100, 264-270.

Karapetyan, I. N. 2003: *Material'naya kul'tura Armenii, VI-IV vv. do n.é.* (Yerevan).

Karapetyan, L. 1972: Raskopki Kamirberdskoï (Tazakendskoï) kreposti. *SA* nº 2, 164-170.

Khachatryan, T. 1957: Raskopki v Aïrivanke. *Izvestiya Akademii Nauuk Armyanskoï SSR* 12, 93-101.

Khachatryan, T. S. 1979: *Artikskiĭ nekropol'. Katalog* (Yerevan).

Khachatryan, Zh. D. 1976: *Garni V. Antichnyĭ nekropol'. Rezul'taty raskopok 1956-1972 gg.* (Yerevan).

Khanzadyan, É. V. 1967: *Culture of Armenian Highland in the IIIrd Millennium BCE* (in Armenian) (Yerevan).

———. 1969: *Garni IV. Rezul'taty raskopok 1949-1966 gg.* (in Armenian with Russian summary) (Yerevan).

———. 1979: *Élar–Darani* (in Armenian with Russian summary) (Yerevan).

Khanzadyan, É. V., Mkrtchyan, K. A. & Parsamyan, É. S. 1973: *Metsamor* (*Issledovanie po dannym raskopok 1965-1966 gg.*) (in Armenian with Russian summary) (Yerevan).

Khatchadourian, L. 2008: *Social Logics Under Empire: The Armenian "Highland Satrapy" and Achaemenid Rule, ca. 600-300 BC. PhD Dissertation of University of Michigan*.

Knauss, F. 2005: Caucasus. In P. Briant & R. Boucharlat (eds.), *L'archéologie de l'empire achemenide: nouvelles recherché* (Paris), 197-220.

———. 2006: Ancient Persia and the Caucasus. *Iranica Antiqua* 61, 79-118.

Kohl, P. L. & Kroll, S. 1999: Notes on the Fall of Horom. *Iranica Antiqua* 34, 243-259.

Kroll, S. 1976: *Keramik urartäischer Festungen in Iran* (Berlin).

———. 2003: Medes and Persians in Transcaucasia? In G. Lanfranchi, M. Roaf & R. Rollinger (eds.), *Continuity of Empire (?) Assyria, Media, Persia. Proceedings of the International Meeting in Padua, 26th-28th April 2001* (Padova), 281-287.

———. 2006: Southern Armenia Survey (Syunik), 2000-2003. *Aramazd* I, 19-49.

———. 2012: Ancient Armenian sites in Armenia and north-western Iran: Hellenistic period. In Avetsyan & Bobokhyan (eds.), 219-222.

———. 2014: Notes on the Post-Urartian (Median) Horizon in NW-Iran and Armenia. In A. Özfırat (ed.), *Scripta, Essays in Honour of Veli Sevin* (Istanbul), 203-210.

Kroll, S., Gruber, C., Hellwag, U., Roaf, M. & Zimansky, P. (eds.) 2012: *Biainili-Urartu. The Proceedings of the Symposium held in Munich 12-14 October 2007* (Leuven).

Kuntner, W., Heinsch, S. & Avetisyan, H. 2012: The Fortress of Aramus in Achaemenid Times. In P. Basello & A. V. Rossi (eds.), *Dariosh Studies II. Persepolis and its Settlements: Territorial System and Ideology in the Achaemenid State* (Naples), 403-416.

Kushnareva, K. 1960: Tazakendskiĭ mogil'nik v Armenii. *SA* nº 1, 137-147.

La Farina, R. 2013: *Tra Urartu e Armina. Una ri-considerazione dell'Età del Ferro III nell'altopiano armeno. Unpublished PhD thesis, University of Naples "L'Orientale".*

Lalayan, E. L. 1931: *Raskopki Kurganov v sovetskoï Armenii* (Yerevan).

Marro, C. & Özfırat, A. 2003: Pre-classical survey in Eastern Turkey. First preliminary report: the Ağrı Dağ (Mount Ararat) region. *Anatolia Antiqua* 11, 385-422.

———. 2004: Pre-classical survey in Eastern Turkey. Second preliminary report: The Erçis region. *Anatolia Antiqua* 12, 227-265.

———. 2005: Pre-classical survey in Eastern Turkey. Third preliminary report: Doğubayazıt and the eastern shores of the Lake Van. *Anatolia Antiqua* 13, 319-356.

Martirosyan, A. A. 1952: O drevnem poselenii okolo Leninakana. *Izvestiya akademii nauk Armyanskoï SSR* 10, 87-97.

———. 1954: *Raskopki v Golovino* (Yerevan).

———. 1956: Raskopki v Kirovakane i nekotorÿe pamyatniki ranneurartskogo perioda. *Izvestiya akademii nauk Armyanskoï SSR* 9, 61-83.

———. 1964: *Armeniya v épokhu bronzÿ i rannego zheleza* (Yerevan).

———. 1974: *Argishtikhinili* (Yerevan).

Masson, V. M. 1997: Kavkazskiĭ put' k tsivilizatsii: voprosÿ sotsiokul'turnoï interpretatsii. In *Drevnie obshchestva Kavkaza v épokhu Paleometalla* (*rannie kompleksnÿe obshchestva i voprosÿ kul'turnoï transformatsii*) (St.-Petersburg), 124-133.

Mehnert, G. 2008: *Skythika in Transkaukasien. Reiternomadische Sachkultur im archäologischen Fundkontext* (Wiesbaden).

Melkonyan, H., Karapetyan, I. & Yengibaryan, N. 2010: The Excavations of the Newly Found Urartian Fortress in Getap. Aramazd 5/2, 90-98.

Mikaelyan, G. A. 1968: *Tsiklopicheskie kreposti sevanskogo basseĭna* (Yerevan).

Mnatsakanyan, A. O. 1955: Arkheologicheskie nakhodki v selenii Basargechar Arm. SSR. *KSIIMK* 60, 39-44.

———. 1957: Raskopki kurganov na poberezh'e oz. Sevan v 1956 g. *SA* nº 2, 146-153.

———. 1960: Drevnie povozki iz kurganov bronzovogo veka na poberezh'e oz. Sevan. *SA* nº 2, 139-152.

———. 1961: Lchashenskie kurganÿ (raskopki 1956 goda). *KSIA* 85, 66-72.

———. 1965: Osnovnÿe étapÿ razvitiya material'noï kul'turÿ Lchashena. *IFZ* 2, 95-114.

Mnatsakanyan, A. O. & Tiratsyan G. A. 1961: Novÿe dannÿe o material'noï kul'ture drevneï Armenii. *IFZ* 8, 69-83.

Nagel, W. & Strommenger, E. 1985: *Kalakent. Früheisenzeitliche Grabfunde aus dem Transkaukasischen Gebiet von Kirovabad/Jelisavetopol* (Berlin).

Oganesyan, K. L. 1955: *Karmir Blur IV. Arkhitektura Teïshebaini* (Yerevan).

———. 1971: *Arin-Berd I. Arkhitektura Érebuni* (Yerevan).

Parker, B. J. 2012: In the Shadow of Ararat: Preliminary Results from Intensive Surveys in Naxçivan, Azerbaijan. In R. Matthews & J. Curtis (eds.), *7ICAANE Proceedings of the 7th International Congress on the Archaeology of the Ancient Near East, 12-16 April 2010, the British Museum and UCL, London.* Vol. 3. *Fieldwork & Recent Research* (Wiesbaden), 99-117.

Parker, B. J., Risvet, L., Bahşaliev, V., Aşurov, S. & Headman, A. 2011: In the Shadow of Ararat. Intensive Surveys in the Araxes River Region, Naxçivan, Azerbaijan. *Anatolica* 37, 187-200.

Parmegiani, N. & Poscolieri, M. 2003: Dem data processing for a landscape archaeology analysis (Lake Sevan – Armenia). *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences* 34-5/W12, 255-258.

Petrosyan, A., Dan, R., La Farina, R., Raccidi, M., Castelluccia, M., Gasparyan, B., & Babajanyan, A. 2015: The Kotayk Survey Project (KSP): Preliminary Report on 2014 Fieldwork Activity. *Aramazd* 9/1, 58-68, pls 18-29 (235-246).

Piliposyan, A. S. & Mkrtchyan, R. A. 2001: *The Vantospyan* (*Urartian*) *Cave-Tomb of Geghovit* (in Armenian with Russian and English summary) (Yerevan).

Piotrovskiĭ, B. B. 1944: *Istoriya i kul'tura Urartu* (St.-Petersburg).

———. 1949: *Arkheologiya Zakavkaz'ya* (Leningrad).

———. 1950: *Karmir-Blur I. Rezul'tatÿ raskopok 1939-1949* (Yerevan).

———. 1952: *Karmir-Blur II. Rezul'tatÿ raskopok 1949-1950* (Yerevan).

———. 1955: *Karmir-Blur III. Rezul'tatÿ raskopok 1951-1953* (Yerevan).

Pons, N. 2001: Les fouilles d'Akhtamir, Arménie (Fer Ancien): Aperçu des travaux de la Mission Belgo-Arménienne (1993-1996). *Akkadica* 122, 27-54.

Ristvet, L., Bahşaliev, V. & Ashurov, S. 2011: Settlement and Society in Naxçıvan 2006. Excavations and Survey of the Naxçıvan Archaeological Project. *Iranica Antiqua* 46, 1-53.

Ristvet, L., Bakhshaliyev, V., Ashurov, S. & Gopnik, H. 2009: 2008 Excavations at Oglanqala, Azerbaijan. *Azerbaycan Arxeologiyasi* 2008/2, 189-195.

Ristvet, L., Gopnik, H., Bakhshaliyev, V., Lau, H., Ashurov, S. & Bryant, R. 2012: On the Edge of Empire: 2008 and 2009 Excavations at Oğlanqala, Azerbaijan. *American Journal of Archaeology* 116/2, 321-362.

Salvini, M. 2002: The Historical Geography of the Sevan Region in the Urartian Period. In Biscione *et alii* 2002a, 35-60.

———. 2008: *Corpus dei testi urartei. Le iscrizioni su pietra e roccia* (Rome).

Sanamyan, H. 2002: Architectural structure, defensive system and building technique of the fortifications. In Biscione *et alii* 2002a, 325-350.

Schachner, A. 2001: Azerbaycan: Eine *terra incognita* der Vorderasiatischen Archäologie. *Mitteilungen der Deutschen Orientgesellschaft* 133, 251-332.

Schachner, A. & Bahşaliyev, V. 2001: Das Kammergrab von Yurdçu/Naxçivan. Ein beitrag zur Archäologie der früheisenzeit Transkaukasiens und Ostanatoliens. *SMEA* 43/1, 5-23.

Sevin, V. 1999: The Origins of the Urartians in the Light of the Van/Karagunduz Excavations. *Antolian Studies* 49, 159-164.

Smith, A. T. 1996: *Imperial Archipelago: The Making of the Urartian Landscape in Southern Transcaucasia. Unpublished Ph.D. Dissertation, University of Arizona, Department of Anthropology*.

———. 1999: The Making of an Urartian Landscape in Southern Transcaucasia: A Study of Political Architectonics. *American Journal of Archaeology* 103, 45-71.

Smith, A. T., Badaljan, R. S. & Avetisyan, P. 2009: *The Archaeology and Geography of Ancient Trascaucasian Societies*. Vol. I. *The Foundations of Research and Regional Survey in the Tsaghkahovit Plain, Armenia* (Chicago).

Smith, A. T. & Kafadarian, K. 1996: New Plans of Early Iron Age and Urartian Fortresses in Armenia: A Preliminary Report on the Ancient Landscapes Project. *Iran* 34, 23-37.

Smith, A. T. & Leon, J. F. 2014: Divination and Sovereignty: the Late Bronze Age Shrines at Gegharot, Armenia. *American Journal of Archaeology* 118/4, 549-556.

Stronach, D. 1978: Median Pottery from the Fallen Floor in the Fort. *Iran* 16, 11-24.

———. 2012: The silver rhyta from Erebuni revisited. In Avetsyan & Bobokhyan (eds.), 170-184.

Stronach, D., Ter-Martirosov, F., Ayvazian, A., Collins, W., Demos, C. & Ghanimati, S. 2009: Erebuni 2007. *Iranica Antiqua* 44, 181-206.

Stronach, D., Thrane, H., Goff, C. & Farahani, A. 2010: Erebuni 2008-2010. *Aramazd* 5/2, 99-133.

Tekhov, B. V. 1980: *Skify i Tsentral'nyi Kavkaz v VII-VI vv. do n.é.* (*Po materialam Tliiskogo mogil'nika* (Moscow).

Ter-Martirosov, F. I. 1998: Granitsy akhemenidskikh vladenii v Zakavkaz'e (V vek do n.é.). *IFZ* 3, 133-142.

Ter-Martirosov, F. 2000: Die Grenzen der achaimenidischen Gebiete in Transkaukasien. *AMIT* 32, 243-52.

———. 2001: The Typology of the Columnar Structures of Armenia in the Achaemenid Period. In I. Nielsen (ed.), *The Royal Palace Institution in the First Millennium BC: Regional Development and Cultural Interchange between East and West* (Aarhus), 155-163.

———. 2012a: Archaeological Research in Yervandasht, 2005-2008. In Avetsyan & Bobokhyan (eds.) 1977, 185-197.

———. 2012b: From the state of Urartu to the formation of the Armenian kingdom. In Kroll *et alii* (eds.) 2012, 169-176.

Ter-Martirosov, F., Deschamps, S., Fichet de Clairfontaine, F. & Mutarelli, V. 2012: Beniamin (5th-4th centuries BC): A palace and its dependencies during the Achaemenid period). In Avetsyan & Bobokhyan (eds.) 1977, 197-208.

Torosyan, R. M., Khnkikyan, O. S. & Petrosyan, L. A. 2002: *Drevniï Shirakavan. Rezul'tatÿ raskopok 1977-1981* (Yerevan).

Treister, M. Yu. 2015: A Hoard of Silver Rhyta of the Achaemenid Circle from Erebuni. *Ancient Civilization from Scythia to Siberia* 21, 23-119.

Vallat, F. 1997: La lettre élamite d'Arménie. *Zeitschrift für Assyrologie* 87, 258-270.

Xnkikyan, O. 2002: *Syunik During the Bronze and Iron Ages* (Barrington).

Yengibaryan, N. 2002: The Graves of the Urartian Period of Karchaghbyur. In Biscione *et alii* 2002a, 417-454.

Abbreviations

AMIT	*Archäologische Mitteilungen aus Iran und Turan* (Berlin).
IFZ	*Istoriko-Filologicheskiï Zhurnal* (Yerevan).
KSIA	*Kratkie Soobshcheniya Instituta Arkheologii Akademii Nauk SSSR* (Moscow).
KSIIMK	*Kratkie Soobshcheniya Instituta Istorii Material'noï Kul'turÿ* (Moscow).
RosArkh	*Rossiïskaya Arkheologiya* (Moscow).
SA	*Sovetskaya Arkheologiya* (Moscow).
SMEA	*Studi Micenei ed Egeo-Anatolici* (Rome).