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A Note for the Preliminary Report of the Ardahan-Horasan Archaeological Survey in North-Eastern Turkey, 2001*

The archaeological survey of the Ardahan-Horasan section,[1] part of the BAKU-TBILISI-CEYHAN Pipeline Project, was completed between October 3 and 17, 2001 (pls. I*a-b*). The area covered by the survey extends from the village of Tepesuyu, a few kilometres south of Ardahan, to Horasan, in the province of Erzurum. It crosses the provinces of Ardahan, Kars, and Erzurum from northeast to southwest for a total of 160 km (pl. I*b*). The area has never been previously analysed by archaeological surveys and excavations. Thus, it was difficult for us to predict the outcome of our final results.

Introduction

This region was an important passageway through the millennia and served as a bridge linking the eastern regions of Transcaucasia, the northern Caucasus, and the central Asian steppes to the western Anatolian areas (Burney – Lang 1971). Geographically the route of the survey, which started at the south-western limit of the Lesser Caucasus nearby the Kura valley, is characterized by mountains, large depressions (valleys), and high plains with an average altitude of about 2000 m above the sea level originally formed by volcanic activities that ended during the Quaternary Era between 15000 and 20000 years ago (Sagona 1984: 21-31; Chataigner 1995: 13-30; Brennan

* The survey has been organized by Botaş in collaboration with Taçdam and the Middle East Technical University (METU) of Ankara under the direction of Prof. N. Tuna and Ms. J. Velibeyoğlu, to whom go my best acknowledgements. In the field the survey was performed by Ms. Ö. Gokdemir (METU, Ankara), and Mr. R. Valentini (Istituto Universitario Orientale, Naples). The material culture was analysed by Dr. Nicola Laneri (Istituto Universitario Orientale, Naples), and Mr. Giulio Palumbi (University of Rome).

[1] Due to meteorological conditions (rain and snow) we were not able to fully complete the last 13 km of our survey area (from km 217 to km 230). This section was visited from the van, but still needs further analyses.

2000). The climate is continental with very cold winters, during which the entire area is covered by deep blankets of snow. The annual rainfall is *ca.* 400 m and a strong wind normally blows from the Georgian steppes. The natural vegetation in the valley and high plains is steppe (pl. II*a*), while the mountains are usually covered by oak forests, fruit trees, and alpine vegetation (Chataigner 1995: 24-27).[2] The extreme climate conditions are deleterious to agriculture activities, which serve as a secondary economic resource for local communities even now. Instead animal farming, and dairy products are the most important part of the communities' economy. The high availability of raw materials, especially metals (primary copper and iron), wood, and obsidian have characterized the production of material culture and have focused the interest of other populations towards this particular area throughout the previous millennia (Burney – Lang 1971).

The geographical and climatic conditions have probably played a fundamental role in how humans have settled in and used this specific region throughout history. The majority of the settlements, both ancient and modern, are in the valleys where the climatic conditions (wind, cold, snow) are less severe. People in movement, such as nomads or shepherds, still characterize the landscape of the mountainous regions and highlands, following routes that are likely to have changed only slightly throughout the history of this region's occupation.

Method

The survey was conducted along an artificial transect of 500 m wide and 160 km long, in which the pipeline will be positioned in the future (pl. I*b*). During this first preliminary survey our aim was to recognize and map all of the possible historical, archaeological, and ethnographic sites which will be affected by the construction of the pipeline. In some cases, such as valleys, we broadened the area we sampled in order to analyse other sites that were out of the assigned transect. We decided to assign increasing numbers, from north to south, to each site, relating them to the number of the military maps used during the survey. Thus, in the case of site G49-B01-01, G49-B01 stands for the number of the military map and 01 is the number of the site within that map.

Results

Even if the pipeline's route is artificial, it generally follows natural routes from the Georgian area towards the valley of the Araxes. It is still difficult today, as it was in ancient times, to cross the high mountains of the lesser Cau-

[2] The continuous use of wood as a resource has caused the mountainous areas to become almost completely deforested.

casus without following certain passageways. Thus, as Burney and Lang have pointed out, the movements from northeast (Georgia) to the western region of Central Anatolia should have followed a northern route which passes through the province of Kars, and then follows the upper Araxes valley leading to Pasinler (Burney – Lang 1971: 7; Sagona 1999).

During the survey we found a total of 40 sites. The average distribution of settlements noticed during our survey is of sites settled along the border of the valleys of Ağıl, Büyüksu Çay, and Karasu Çay. This system of distribution was obviously used to increase the potential space necessary for agriculture and animal feeding. Sometimes these sites were built underneath natural hills or cliffs.

In the valleys there are a few sites in the shape of mounds, typical of the Ancient Near Eastern tradition, and these are generally positioned in the middle of the valley, such as is with the case of Bahçecik in the Ağıl valley or G49-D4-02 in the Büyüksu Çay valley. Sites of larger size were usually found at the entrances of valleys, for example site G49-B1-01 in the Ağıl valley, in order to control both access to the valley and ways of communication within it.

In the case of G49-B1-01 the natural volcanic bedrock was shaped and adjusted to form cyclopean defensive walls, probably part of a fortress built to control the commercial routes (pl. II*b*). These types of sites characterize the landscapes of several regions of the Georgian and Armenian plateau. Their chronologies are still unclear, but running excavations, such as the site of Horom in Armenia, can provide further information about their lifespan and function (Badaljan *et al.* 1992: figs. 8-9). The first appearance of these fortresses is likely to have occurred sometime during the mid-late 2nd Millennium BCE (Badaljan *et al.* 1994: 12), but they did not flourish until the Iron Age (end of the 2nd/ beginning of the 1st Millennium BCE) when they probably played a fundamental role in terms of the exchange of precious raw materials, such as iron, with the kingdom of Urartu (9th-7th century BCE; Burney – Lang 1971: 127-80). The merging of the local and Urartian cultures, which was centred along Lake Van, is visible from the pottery found during the survey, and also by the planning of this and other similar sites. The site is usually built using a terrace system which also characterizes the Urartian town (*ibid.* 1971: 151), as is visible in the case of the fortress town of Çavuştepe (Erzen 1988). Another example that recalls the Urartian culture is the unique cyclopean structure of volcanic basalt built on the top of a cliff found along the Büyüksu Çay (G49-D4-05). In this instance a staircase, several constructed terraces, the total absence of remains of a collapsed roof, and a lack of material culture are reminiscent of the 'open-air shrine', which was a very common feature within the Urartian religious rituality (Burney – Lang 1971: 149; Işık 1995).

Most of these sites have complex stratigraphies that begin with the Early Bronze Age and extend to Modern times (Badaljan *et al.* 1994: 12), but it is still extremely difficult to outline even a preliminary diachronic site distribution of the diverse area. It is the hope that future research will give us the op-

portunity to produce a more coherent interpretation of the growth of this region, when an increased amount of data and reliable excavated comparisons are available.

In addition to evidence of ancient settlements visible on the surface or detectable by the presence of ancient material culture, we were also able to verify several surface anomalies recalling ancient tombs and cemeteries. These features varied in shape and distribution, depending on both cultural and chronological elements. One possible cemetery, Sarıçayir, was formed by circular depressions distinguishable as potential tumuli by a concentric disposition of medium sized stones (pl. III*a*). The very low density or absence of material culture on the surface of these cemeteries are characteristic of this region's 2nd Millennium BCE borrows, which have strong similarities to the funerary customs of the *kurgan*, a kind of multiple burial built of stone, which characterizes a wide geographical area within Central Asia (Russia, Georgia, Armenia, Azerbaijan, Turkmenistan, Ukrain, etc.; Burney – Lang 1971: 79-85; Edens 1995; Khanzadian 1995; Kushnareva 1997: 81-150). Single tombs are also scattered around the highplains without any associated traces of nearby human settlements (Edens 1995). The presence of only a few potsherds or pieces of worked obsidian indicate a possible relationship of these funerary structures to ancient temporary passageway settlements, which were used during seasonal movement by nomads or as refuges (Özfirat 2000: 117-19). This type of information is almost impossible to verify in the field during a survey, because «summer encampments in mountain pastures ... must likewise be hard to detect» (Burney – Lang 1971: 63). Approaching this problem requires supplemental ethnographic information, which in this particular case was provided by the study of summer encampments (*yayla*) by contemporaneous local people (pl. III*b*).

A Brief Analysis of the Material Culture[3]

Pottery

During the survey we were able to collect a considerable amount of objects, even if the percentage of diagnostic potsherds amongst them is very low. In fact, the majority of the shards have been badly eroded by natural meteorological events, giving us a lower range of opportunity for the interpretation of these materials. A second problem is the definition of a clear pottery typology which will then give us the ability to reconstruct a reliable chronological sequence for each site. For this purpose it was decided to classify the pottery within broad categories to avoid the risk represented by restricted chronological typology.

[3] This report is only a provisional analysis of the objects found during this first preliminary archaeological survey. A further and detailed interpretation of the materials will be done during the next campaign and will be published later on.

Within eleven of the sites we found fragments of vessels of the Red and Black Burnished Ware category, which belong to the so-called Kura-Araxes Culture horizon (Sagona 1984: tab. 3). Only a few of these potsherds can be used as diagnostics (pl. IV*a*), but they are a clear indicator of an occupation of these sites during the Early Bronze Age, that in the Transcaucasian regions has a very wide duration depending on the relative and/or absolute chronology used by the scholars (*ca.* mid of the fourth/beginning of the 2nd Millennium BCE; Edens 1995; Sagona 1998; 2000).[4] During the survey it was very difficult to distinguish other pieces which can be reconnected to this important period. This is probably the case of the Brown Burnished Ware found in no more then six sites together with the Red and Black Burnished Ware (Sagona 1984: 350-51). Another piece that can be pin-pointed to the same chronological horizon is a terracotta spindle whorl or chariot wheel, which is characteristic of many sites of this specific chronological period (Sagona – Sagona 2000: fig. 22.1-2).

More complicated is to establish a correct sequence for the following Middle Bronze Age period (last quarter of the third to mid-2nd Millennium BCE; *ibid.* 2000), because most of the known materials are available only from funerary contexts or are divided within several regional districts (the Western Transcaucasus Culture, the Trialeti Culture, the Tazakend Culture, the Sezan-Uzerlik Culture, and the Kizylvank Culture) which are difficult to connect to each other, even with the use of radiocarbon calibrated dates, and merged chronologically, such as in the case of the Trialeti horizon (Kushnareva 1997: 82-150). During the survey we were able to identify only a few clear diagnostic potsherds belonging to the Middle Bronze Age, these are: a painted rim of a jar, similar to the polychrome vessels found in the necropolis of Ani (Özfirat 2000: 68-70) (pl. IV*b*); an incised decoration probably belonging to the Trialeti Culture horizon and directly linked with the cultural horizon of the earlier Kura-Araxes III (Kuftin 1941: 483; Sagona 1984: tab. 3; Badaljan *et al.* 1994: fig. 14.1-3, 7; Sagona – Sagona 2000: fig. 8.4); and a few fragments of Black Burnished Ware with fine to medium grit inclusions of the Martkopi and Bedeni pottery type (Edens 1995; Sagona – Sagona 2000: 64-65). The lack of distinct urban stratigraphies was not helpful in the process of determining this phase throughout the survey. This absence of information is probably due to a change in the use of the territory by the communities of the Middle Bronze Age as compared to the previous Early Transcaucasian Horizon. While the later tends to be characterized as had having a stronger agriculture economy, in the former period of the 2nd Millennium BCE pastoralism seems to have been the primary mode of subsistence (Edens 1995; Sagona 1998; Özfirat 2000). Others ascribe this visible change to migrations of Indo-European speaking people moving from east to west towards Central Anatolia, where they succeeded in establishing their new political centre (Burney – Lang 1971: 86-126).

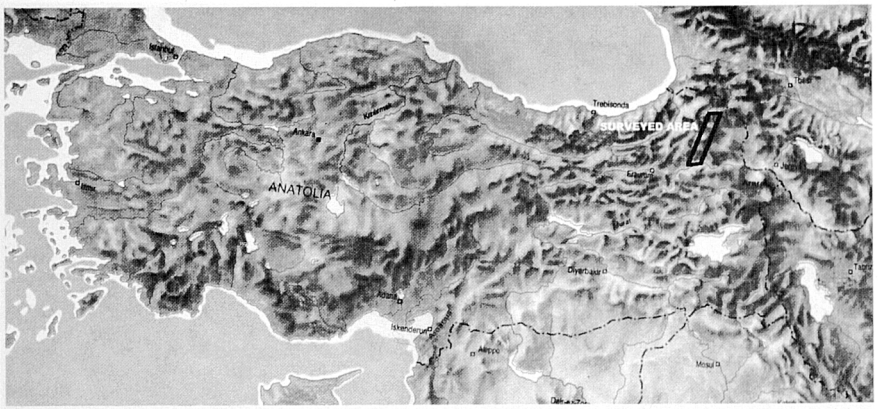
[4] The potsherds of this type of ware found during the survey are all undecorated.

It is very difficult to define the exact starting point of Late Bronze Age period in this area using the known archaeological data. Recent excavations in the plain around Erevan (Armenia) have finally demonstrated that those sites with cyclopean fortresses, mentioned in one of the previous paragraphs, had their first foundation during the mid-late 2nd Millennium BCE (Badaljan *et al.* 1994). These sites were then occupied for a long chronological range until the end of the Urartian period (7th century BCE). In terms of pottery typology, there are only a few indicators of the Late Bronze Age and 'Early' Iron Age period, for example the Dark Buff Burnished Ware and the Grey Ware with incised decoration (pl. IV*c*) that we found very infrequently during our research (Khanzadian 1995; Badaljan *et al.* 1992: fig. 7; Petrosian 1989: figs. 20-23).

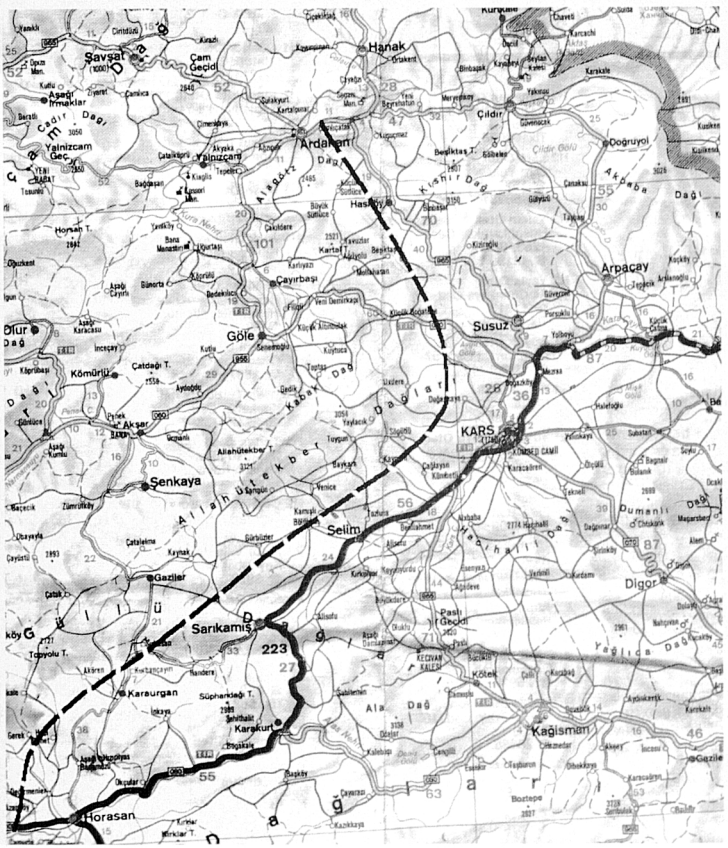
The Iron Age and the Urartian phases are instead fully represented in our survey, probably accounting for highest percentage of fragments within the classifiable potsherds. These categories are: Wavy-combed Ware; Corrugated Ware; Reddish Burnished Ware (pl. IV*d*); and Bright Red Burnished Ware (Badaljan *et al.* 1994: figs. 5-6). However, only a few of the potsherds of the latter two categories are clearly part of the 'Urartian palace' horizon, as it is also demonstrated by other archaeological surveys and excavations (Sagona 1999: 114). These have a thin, fine grit section with a uniform red coloured burnish on the outer surfaces and are usually fragments of hemispherical or carinated bowls.[5] Instead, the majority of the pieces are of a coarser ware and the outer decorations are of poor quality, showing visible traces of the patterns left during the burnishing process along with fingerprints, both clear indicators of a hand-made technique such as coil-building. These elements are sufficient in demonstrating a regional variant of the Urartian pottery in these areas between the 9th and the 7th century BCE. During this period the kingdom of Urartu was interested in having direct access to raw materials, primarily copper and iron, resources available in the Transcaucasian mountains area. The exchange between Urartian and local groups was both economic and cultural and produced an increase in wealth amongst the communities of these regions that belonged to the periphery of the Urartian kingdom (Burney – Lang 1971: 127-85).

The Achaemenid and Hellenistic periods are also represented within our categories, with Orange Burnished Ware belonging to the former and Light Brown Burnished to the latter. Later periods such as Medieval, Islamic, and Modern are represented by Plain Simple Ware both undecorated and decorated with incised and applied patterning along the outer surfaces; Cream Slipped Ware, and Glazed Ware. A fine decorated Islamic pottery pipe was found nearby a tomb along the Büyüksu Çay (G49-D4-04). A Reddish-brown Burnished Ware category is over represented in our survey, and we must further

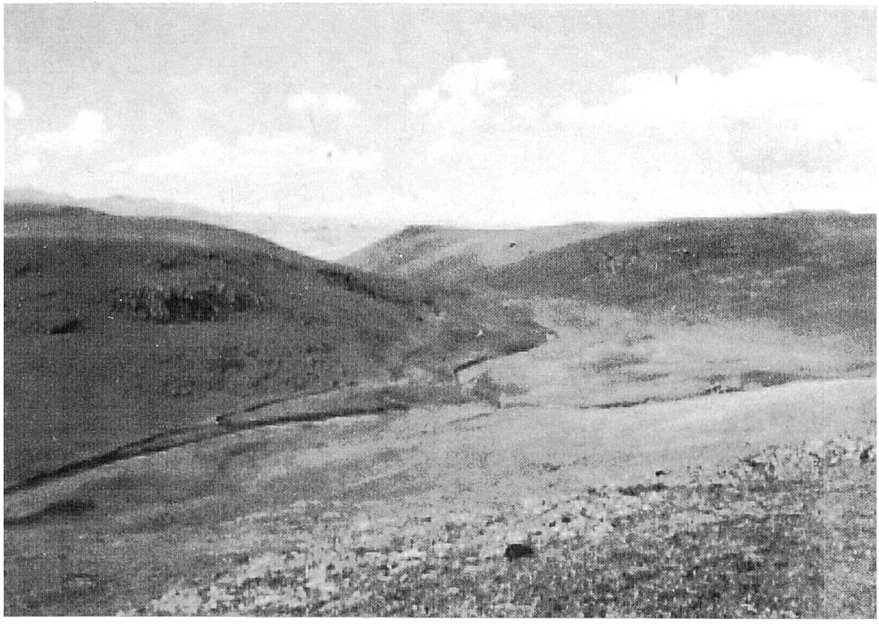
[5] In some cases we have also found traces of bowls with red paint over a cream slip. We have decided to assign these kind of pottery to the Urartian archaeological phase.



a) Map of Turkey.

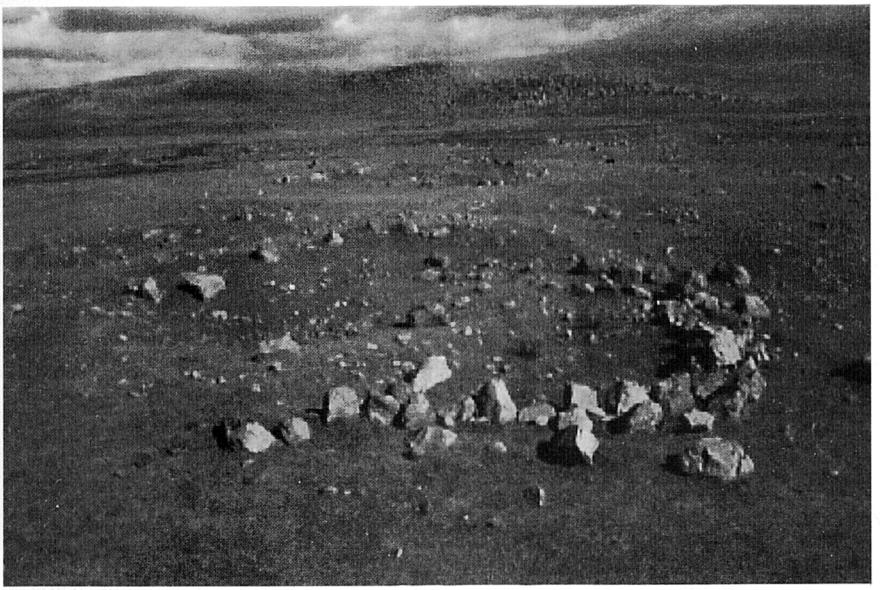


b) Map of the surveyed area (dashed line).

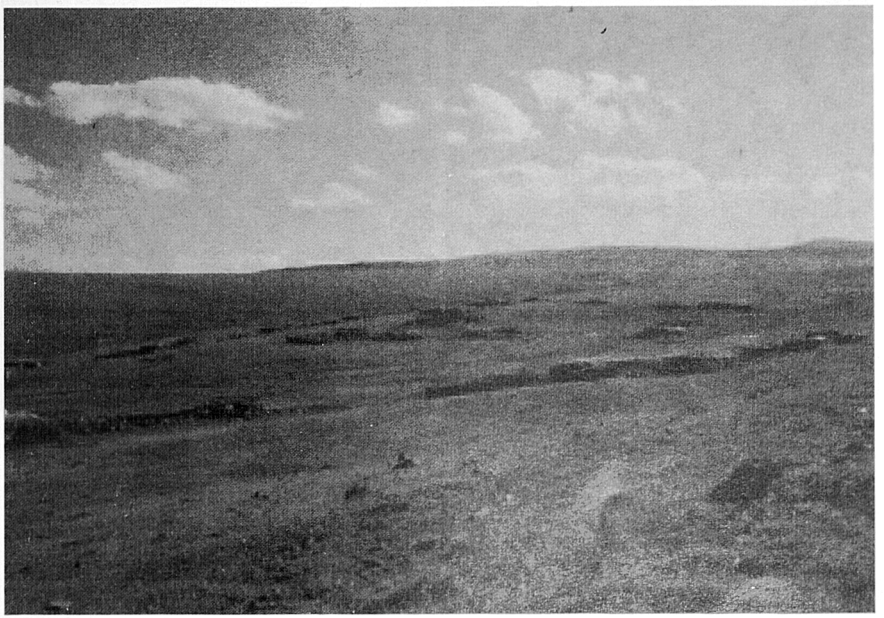


a) Ortakilis Highplain, 50 km North of Kars.

b) Naturally fortified site (G49-B1-01), 75 km North-west of Kars.

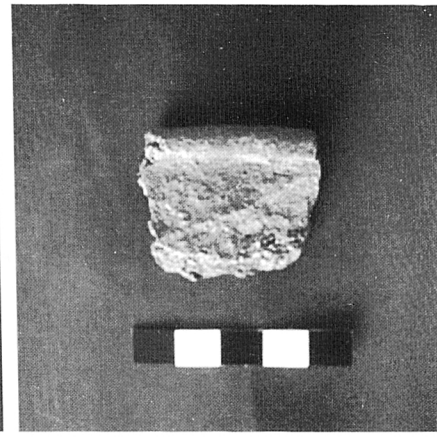


a) Circular stone borrows in Sariçayir, 60 km North-west of Kars.



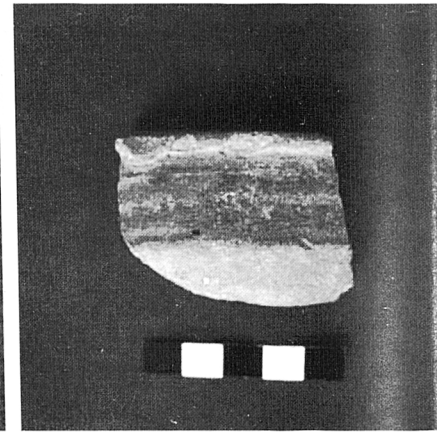
b) Yayla (summer encampment) in the Ortakilis Highplain.

a) Rim of a large bowl of Black and Red Burnished Ware.



b) Rim of a jar of Polychrome Ware.

c) Fragment of Gray Incised Ware.



d) Rim of a carinated bowl of Reddish Burnished Ware.

analyse the shards belonging to this group in order to understand if they are uniformly part of a later modern type of pottery or a medieval one.

Obsidian

Volcanic obsidian is one of the most common raw materials available in this area. It has been used to make objects and traded to nearby regions since prehistoric times. The area between Erzincan and Kars is probably one of the most prolific deposits of obsidian due to the natural volcanic formation of these regions (Brennan 2000). One of nearest deposits along the survey route is located in Sarıkamış, about 50 km south of Kars (*ibid.*: 117). All of the surveyed sites are characterized by the presence of scattered obsidian debris of at least three types of stone: black; translucent light grey; and black with reddish/pink striations. These differences are related to variations in chemical structure and geographical provenance. We were able to find complete instruments in only two cases, such as an arrowhead of light grey translucent obsidian, probably belonging to the 3rd Millennium BCE (Düz Tepe; Kushnareva 1997: 22-26),[6] and a simple long blade of black obsidian (H48-B4-06). Two sites, Topkaya and G49-D4-03, contain areas densely covered with obsidian debris that should probably be considered part of ancient workshops.

Metal slag

Metal slag of both iron and copper alloys were found on the surface of a few sites, such as Hacıali, G49-C4-03, Oyuk, H48-B4-05, H48-B4-06, and Körgöze Sr., concentrated in specific areas. The presence of such objects usually corresponds to a decrease in superficial obsidian debris, suggesting a change in the use of raw materials and a subsequent dramatic transformation of economic needs. These changes become more clear with the dawn of the Iron Age, when military and daily life expectations of the Near Eastern communities undoubtedly underwent a transformation.

Conclusions

The aim of this first preliminary report was to give a general overview of the distribution of archaeological sites in a wide geographical area that has never before been investigated through either surveys or archaeological excavations. At the conclusion of the initial analysis of this survey several questions have emerged, such as: how can we determine archaeologically the trend in the movement of nomads from the eastern regions of Transcaucasia to Central Anatolia in the area analysed within the survey, primarily during the third and 2nd Millennium BCE, in order to determine the cultural background

[6] This arrowhead has been found in a passageway area with none visible pottery associated with it.

of the ancient communities? What kind of interactions did these nomads have with the local communities? Should these movements be considered to be migrations? Why during the end of the 2nd Millennium BCE did this area suddenly become characterized by cyclopean fortresses which indicate a link to a need for a stronger control over the territory?

To answer to these questions we need to implement further investigations with the aim increasing the amount of useful archaeological information. Thus, we suggest to concentrate future intensive archaeological surveys and excavations in the valleys, such as Ağıl, Büyüksu Çay, and Karasu Çay valley, which have the best environmental potentiality for human settlements, and also to methodically survey at least one of the highplains in order to better understand the structure of ancient pastoralism.

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