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"Northeast Anatolien in der Late Bronze to Early Iron Age

(14th – 7th Millennium BC)"

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Annotation

of the Dissertation submitted for the Academic Degree of

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General Description of the Thesis

Topicality of the thesis: In this study, the location designated as a research area is limited from *Yeşilırmak*, which pours into the Black Sea by crossing the *Çarşamba Plai*n in the west and the *Çoruh/Chorokhi River*, which pours into the Black Sea near Batumi in the east. Between these two rivers, in the west, the eastern part of the *Canik Mountains*, *Giresun Mountains*, *Doğu Karadeniz Mountains* and the north part of the *Yalnızçam Mountains* lie. These mountain ranges draw a 470 km long curve in the southeast corner of the *Black Sea*. The southern border of the research area was determined by the valleys of the*Kelkit Stream* and *Çoruh/Chorokhi River*.They extend to the south of the mountain ranges. Therefore, the width of the region in question in this study is approximately 87 km between the *Perşembe Cape* and *Reşadiye* in the west, approximately 108 km between the *Yoros Cape* in the west of *Trabzon* and the *Kelkit* town centre in the middle and approximately 55 km between the Arhavi beach and the southeast of the *Artvin* where the *Çoruh/Chorokhi River* bends.This area covers an area of 147,738 km^2 along the coast of the Black Sea.

The archaeological researches conducted in the subject area are forced out by many archaeologists because of the challenging terrain and dense vegetation of the region. For this study all the archaeological activities are put together and described chronologically (Chapter II).

The historical geography of the study area was examined in a chronological perspective. The historical process developing in the region from the Palaeolithic period to the present day.In this context it is tried to explain the effects of historical events, such as of the Hittites, Colchis and Urartu were detailed to the region.

The shaft-hole axes that form the findings of the thesis and some other archaeological findings are recorded and defined in the regional museums. 8 of

29 shaft-hole axes are registered in *Samsun Museum*, 10 of them are in *Trabzon Museum*, 5 of them are in *Rize Museum* and 6 of them are in *Giresun Museum* inventory. In this section, on the subject other metal objects, which have been previously published, are also evaluated (Chapter IV).

A very broad list of publications was used for the study. References are indicated in the text in parentheses as the name of the author, year of publication and page number. The references of Ancient and Medieval ages are not listed in the bibliography; they are indicated in the text in parentheses as the author, title and chapter number.

Aim of the Study: The aim of the dissertation is to study certain issues of archaeology of the transition period from the Late Bronze Age to the Iron Age South-Eastern Black Sea (Northeast Turkey in particular) on the basis of comparing the shaft-hole axes and other metal and ceramic artefacts. Moreover,

that the archaeological researches in the region as a transition zone between Anatolia and Caucasus has been put together so far. The publications of these researches can create a basis for future works which will go on the subject.

The material base for the thesis is from the local museums and research conducted by the Museums of Samsun, Ordu, Giresun, Trabzon and Rize.Some of the findings were already published, but not evaluated in a chronologically and geographycally broad perspective, which is the main aim of this study.

Novelty and Importance: Archaeological studies, which began to intensify right after the First World War, also refer to cultural connections between Anatolia and the Caucasus. Those most important substrates are commonly shaft-hole bronze axes which are uncovered in the Eastern Black Sea region of Turkey, and spreaded within the Caucasus. Today, these relations have been revealed with other concrete archaeological findings especially for Paleolithic Ages and Bronze Age. However, the research area of this thesis, which has been neglected to investigate archaeologically until now, has created a large gap between Anatolia and the Caucasus for the prehistoric time. Of course new archaeological studies in recent years quickly fill this gap, and it is clear that this dissertation will contribute to this effort in order to analyze the situation in the Bronze Age and the Iron Age. In this regard, all prehistoric finds in the research area are listed alphabetically in the Chapter IV. This list will be useful to show the archaeological potential of the region.

Structure and volume of the thesis: The structure of the dissertation is determined by the research goals and objectives. The thesis consists of a general description, six chapters and results. The tesis is followed by the list of references, abbreviations, list of figures and figures of maps, photos and drawings. It has been prepared in accordance with the format of the University of

Shota Rustaveli, and consists in 224 pages, 193 footnotes, 441 referances and 35 figures.

The Study Area

In determining the boundaries of a region, geographical location, climatic conditions, earth structure, soil characteristics and vegetation flora, population structure, industrial and agricultural potential, transportation and tourism capacity are taken into consideration. The geographical regions determined by taking these features into account mean nothing in terms of archaeological cultures. The extent of archaeological cultures that have emerged as a result of excavations and surveys is determined by evaluating different data. However, when studying the historical geography of a determined region, the characteristics of its geography should be reviewed.

The first serious steps were taken for determination of Turkey's

geographical regions in Geography Congress organized by the Ministry of Education in 1941. Today, the borders and names defined in this congress are still used. Accordingly, the region extending parallel to the Black Sea coast is called "Black Sea Region". This area covers an area of 147,738 km^2 along the coast of the Black Sea. This area covers the 18.85% of Turkey's land area and in general stands out as the mountains of northern Anatolia. It is approximately
1400 km long from west to east and 100-200 km wide from north to south. While
the eastern part of the region rests on the Georgian border, the western part of the valley shaped by the *Sakarya* River is introduced into the eastern parts of the valley. The southern border of the region has been passed from the heights to the south of the *Çoruh/Chorokhi* and *Kelkit* valleys in the east. This border includes the morphological structure around the valleys of *Kars* and *Ardahan*, on the edge of the high eastern plateau, which has not yet been split, and the morphological structure of strongly split geological layers by sweeping the volcanic cover by the *Çoruh/Chorokhi River* and its tributaries. In the middle, *Yeşilırmak* basin, where the mountains descend and the sea effect is introduced, penetrates into the region. The border of the region passes here over the mountains forming a set to the north of the high plateau of Central Anatolia in the west. Although the northern part of this section is covered with a large forest cover, the south has the appearance of a sparsely wooded steppe.

The region is under the influence of climatic conditions of the Black Sea. The sea not only determines the lifestyle of the inhabitants of the coastal region, but also of the inland population, which has long established social, cultural and economic relations with other places through the piers on the coast. In addition, the forests in the region are under the influence of the sea and the rivers flow into the sea.

In terms of surface structure, the Black Sea Region is divided into two longitudinal sections. The northern band of these is covered with lush vegetation because it receives abundant and continuous rainfall. Here, natural and social relations developed

under the influence of the sea are experienced. On the other hand, although the effect of the sea is still important in the southern band, there is an interaction with some more internal parts both in natural and social terms. For example, the agricultural products in the upper parts of the *Çoruh/Chorokhi* valley are different from the agricultural products of the Eastern Anatolian highlands. Olive and citrus trees that grow in *Artvin* and *Yusufeli* do not grow in inlands where it has harsher continental climatic conditions. The geographical conditions around *Bayburt* sometimes overlap with the Eastern Anatolia Region.The line separating the region from the Central Anatolia in the Upper *Yeşilırmak* basin is controversial. At the western end, valleys between the extensions of the *Köroğlu Mountains* and the geographic conditions of the *Kocaeli Peninsula* and *İznik* region have been included in the Black Sea region.

However, it should also be said that the lines chosen when determining the regional boundaries often coincide with today's provincial or district boundaries.

Experts say that it is possible to find traces from any geological time in the Black Sea Region. In the depression areas on both sides of the mountain belt extending along the north of Anatolia, the Tertiary lands formed in the III. Geological Time (65 - 2.5 million years ago) indicate that the mountains in question came up on the water at the end of *Kratesa* and these depressions were covered with separate seas at the beginning of Tertiary. Some of the layers observed in the *Kırklar M.* (3038 m) in the south of *Giresun* and *Deveboynu H.* (3082 m) in the northeast of *Gümüşhane* province should belong to the geological times before the formation of these mountains. In addition, since the depth between *Artvin* and *Borçka* reaches 3000 m, the *Çoruh/Chorokhi* valley must have existed before the formation of these mountains. Morphology of the mountains extending parallel to the Black Sea shore has been developed, as it is the case at Taurus Mountains in southern Turkey, in relation to the geological process from the beginning of the continental collision movement, where the Arabian and African plates entered under the Eurasian plate. This process is thought to have started 12 million years ago.

The height of the mountains extending parallel to the Black Sea coast is

2000 m in the west, it goes down to 1000 m in the middle and up to almost 4000 m in the east. The highest point of the North Anatolian mountain belt is the summit of *Kaçkar Mountains* in the eastern part with 3937 m. This mountain is located on the Doğu Karadeniz Mountains extending from the *Harşit* valley on the west to around *Artvin* on the east. To the south, behind the deep *Çoruh/Chorokhi* valley lie *Mescit M.* in the west and *Kargapazarı Mountains* in the east. In the east of these mountains, *Yalnızçam Mountains* and *Karçal Mountains*, which are extensions of South Caucasian Mountains, are located.

The *Doğu Karadeniz Mountains* merge with the *Giresun Mountains* behind the upper basin of the *Harşit Stream*. Famous

Zigana Pass is located right here. The *Giresun Mountains* are surrounded by the *Melet River* in the west and the *Kelkit Stream*, a branch of *Yeşilırmak* in the south. The deep splits of the rivers along the northern slopes of the Eastern Black Sea Mountains and the *Giresun Mountains* are aligned side by side. These rivers, which are not more than 50 km in length, collect water from 3000 m high mountain slopes and flow towards the sea. Similarly, streams lined up along the southern hillside sometimes collect water from the same heights and mix into the *Çoruh/Chorokhi* and *Kelkit* rivers. These rivers flow from valleys the west of *Bayburt* in the form of deepening water-coarse to the west and east. It was interpreted as unusual to have a fairly straight line in both water-coarses. Now it is known that *North Anatolian Fault* (NAF) is passing from this water-coarse system of *Kelkit Stream* part in the north section of Turkey.

Kop M. (2918 m) should be crossed to reach the upper basin of *Karasu* valley in the south from *Bayburt* region. The southern border of the Black Sea Region passes over the *Mescit M.* range, which determines the mountainous region to the north of the Erzurum plain, and the *Otlukbeli M.* range in the west. Further east there are the *Dumlu M.* (3169 m) at the eastern end, one of the peaks of the *Mescit M.* range, the *Güzelyayla Pass* (2090 m), which is separating the basins of *Karasu River* and the *Tortum River*, and the Kargapazarı Mountains that shape the east of the valley *Tortum*. The mountainous area here is different in character, as *Tortum*, *Oltu* and *Ardanuç* are torn by deep valleys.

The research area is defined between the river *Yeşilırmak*/*Iris*, which passes through *Çarşamba Plain*/*Samsun* in the west, and the river *Çoruh/Chorokhi*, which flows in the Black Sea near Batumi in the east. The topography of the region is shaped from the west to the east by the mountains; they are called *Canik*, *Giresun*, the *Doğu Karadeniz* and *Yalnızçam*. These mountain ranges create an arc about 470 km long at the south-eastern corner of the Black Sea. The northern boundary of the study area is determined by the coast of the Black Sea. The southern boundary extends to the south slopes of above mentioned mountain ranges, where the valleys of *Kelkit* and *Çoruh/Chorokhi* spread. So that the width of the study area is approximately 87 km between the cape *Perşembe* (Vona) and the city of *Reşadiye* in the west; approximately 108 km between the cape *Yoros* (west of Trabzon) and the town of *Kelkit* in the middle; finally, about 55 km between the coast of *Arhavi* and the elbow of the river *Çoruh/Chorokhi* in the south of the city *Artvin*. These measurements show that the study area is approximately 39,000 square kilometres.

The study area covers the provinces of *Ordu*, *Giresun*, *Trabzon*, *Gümüşhane*, *Bayburt*, *Rize* and *Artvin*, as well as the surrounding province- districts. They are the districts of *Ayvacık*, *Çarşamba* and *Terme* in the east of *Samsun* province; the districts of *Erbaa*, *Niksar*, *Başçiftlik* and *Reşadiye* in the north of *Tokat*

province; northern parts of the districts of *Suşehri*, *Akıncılar* and *Koyulhisar* in the north of *Sivas* province; district of *Pazaryolu and the north of the district of İspir* in the north of Erzurum province.

The *Canik* and *Giresun Mountains* from the *Yeşilırmak* to the west and the northern part of *Yalnızçam Mountains* to the east of the eastern *Black Sea Mountains* and *Çoruh/Chorokhi River* extends in the Upper Cretaceous volcanic structure, consists of andesite and basaltic lavas, tuffs and agglomerates that stretches as a thick cover of 65 million years ago. On top of this, 55 - 35 Million years ago Eocene volcanic series observed in different thicknesses in *Akçaabat*, *Trabzon* and *Rize* surroundings and in the mountainous region to the north of *Artvin*, behind the plain of *Çarşamba*, in *Perşembe* cape, starting from *Gölköy* - *Mesudiye* to *İspir* - *Yusufeli* to the south of the mountain ranges observed to their

surroundings. The presence of a certain inconsistency between the Upper
Cretaceous and Eocene volcanic series is evident.

The oldest rocks of the whole region are the 250-300 million years old granite layers of the Permo - Carboniferous Period of Paleozoic Time, which forms the peaks of *Giresun* and Doğu Karadeniz Mountains masses.

The most recent geological formations are Pliocene formations of 2-5 million years old in the form of well-formed pebble and clay layers of sand in coastal areas such as *Akçaabat*, *Trabzon*, *Pazar* and *Ardeşen*. These structures may form regular surfaces in broad areas and may be mixed at the edges. These Pliocene sediments on the coast can only be observed up to 50-100 m above sea level.

Surveys in the region have been recorded as thick debris deposits of the last 2 million years of geological formations, which are only visible in the glaciers of the mountains, in the deep valleys, in the valley steps and in the moraine lakes. Alluvium deposits on the river mouths on the coasts and debris deposits on the slopes of steep can also be seen in large areas. Alluvial deposits in the form of pebbles and sand deposits in the coastal area generally showing a steep coastal type generally fill a narrow coastline or close to the rivers.

No research has been conducted related to the geology of the research area until the middle of the 19th century, except the investigation of mineral resources in the upper parts of the *Fol* valley in western Trabzon and in the *Helva* valley in the southeast of *Bayburt*. For the first time, W. J. Hamilton published in 1842 his observations on the geology of the region during his trips in 1836. A few years after this publication, C. H. E. Koch conducted geological surveys in the *Oltu* and *Narman* regions, followed by P. de Tchihatcheff. Later, in 1959, H. Abich worked in *Oltu* and *Artvin* regions and interpreted general geology for the first time. In later years, L. Batsewitsch investigated the lower parts of the *Çoruh/Chorokhi River*, A. Laroix investigated the leucite rocks

around *Trabzon*, N. I. Lebedev investigated the gold sands in the *Çoruh/Chorokhi* valley and A. Margolius investigated the possibilities of salt production around Oltu. F. Kossmat published his geological surveys related to the mineral resources in Trabzon in 1910 as a report. F. Oswald, on the other hand, has published general
geology and tectonic explanations about the whole region, taking into account the researchers conducted so far. During the First World War, researches were interrupted and only G. Stratil-Sauer conducted a geological and geographic survey.

Systematic geological research in Turkey has started with the establishment of M.T.A., research results was announced to the scientific world through the regular publication until the mid-1950s. In 1 / 500.000 scale Geological Map of Turkey within the layout of Samsun, Trabzon and Kars, and additional books are related to our research field that was generated as a result of

all these studies.

History of Archaeological Researches

It is understood from various ancient sources that the interest towards the Black Sea has existed since ancient times. The nature of the information provided in these sources should be considered within the scope of military, the maritime affairs and the trade relations. As a matter of fact, such interest continued in the Middle Age as it is seen in the detailed records about sea routes, transported material and ports.

Looking at the archaeological researches conducted in Northeast Turkey, many archaeologists are forced out because of the challenging terrain and dense vegetation of the region. Nevertheless, the first archaeological activities can be observed before the First World War.

Due to the new policies of the Republic of Turkey founded after the First World War the archaeological researches developed rapidly, and the interest particularly on the Hittite archaeology increased in 1930s. According to the inscriptions recovered in Hittite cities, in the second half of the 2nd millennium BC one of the most important problems of the state was the Kaskians who settled in north and northeast Turkey.

In the 1930s, it is believed that there is no archaeological settlement between *Alevitepe*/*Kümbettepe* in the *Suluova* district of *Amasya*, northeast of Anatolia and *Tilkitepe* in *Van*. A team under the direction of İ. K. Kökten has changed this judgment by starting archaeological studies in the region on behalf of the Turkish Historical Society since 1940. In addition to the excavations carried out around Samsun, surface surveys were continued, and in 1941 many mounds were recorded during the surveys in Bafra, Ladik, *Havza*, *Merzifon* and *Amasya*. One of these mounds is *İkiztepe*, whose excavations are still continuing in the *Bafra Plain*. İ. K. Kökten states that he did not come across any archaeological settlement traces that would illuminate the prehistoric ages, from Rize to 35 km from the coast in the east direction.

Since the 1950s many archaeological excavations and surveys are conducted in other regions in Turkey. However, no

archaeological activity was registered at the coast of the Black Sea, except from U. B. Alkım, who cunducted archaeological field survey between 1971-1977 in Samsun region, and recorded totally 141 archaeological finding places, many of them were registered for the firs time.

Looking the reports of archaeological researches in Turkey, which started to be published serially in 1983, it is observed that such project in the eastern Black Sea region of Turkey increased since the mid-1980s. Until the end of 1990s the archaeological researches didn't actually covered the coastal area of the south-eastern Black Sea in terms of the prehistoric sites.

Through all of these archaeological investigations it proves that the human activity exists since the beginning of human history in northeast Turkey. It is possible that the large gap for the last ten thousand years until the Hellenistic time, especially in the coastal region would be filled through more intensive archaeological researches.

Historical Geography of the Region

Bronze artifacts and other archaeological finds show that the coastal region of the southeastern Black Sea developed different as than Anatolia in the first millennium BC. Its isolated geographical position can be the most important reason for that.

It is known that various sources were interested in the Black Sea in the scope of military and commercial relations in Ancient times, and this sea and its shores were mentioned. As a matter of fact, it is observed that the same interest continued in the Middle Ages and detailed information about the port locations on the Black Sea coasts is included in various texts and maps.

North-eastern region of Turkey is characterized by the coast to the Black Sea and the mountains that lie behind it. This is a region where archaeologists have a hard time due to land conditions and dense vegetation. Nevertheless, it is seen that archaeological research has been carried out since the middle of the
19th century.

The thesis that the salty waters of the Mediterranean are mixed to the Black Sea, which was a freshwater lake before, attracts more and more attention. Researches show that salt is contaminated to the Black Sea some 8400 years ago. There is no doubt that this major environmental disaster has affected the settlement areas in the whole region. Accordingly, it is understood that the condition of the Black Sea in the Stone Age (Paleolithic) is not as it is today.

Archaeological Findings

1. Ceramic Findings: The Iron Age pottery repertoire generally includes bowls with simple or thickened out lips, rounded and sometimes sharp-bodied, and closed-mouthed, short and long-necked spherical jars. Grooved decorations appear both on the rim and on the body. Pottery flat bottom, groove and notch decoration and thick body are common. The outer surface primer can be rarely brown, but often brown-tile, tile, cream colours, as in the colour of the ceramic itself. Among the ware groups are black, brown, grey pink-buff collared goods. Sand and stone additives are seen. Baking quality varies; there are good baked goods as well as bad and medium baked goods. It is generally burnished and made of impellers. Some handmade and rimmed rim fragments are Early Iron Age features.

14 of the potsherds recovered during the surveys in *Dikkaya* village, dated

to the Early Iron Age, are evaluated here. There are several bowl mouth pieces. One of the pots is considered a small pot with a diameter of 14 cm. Two of the bowls show that the posture is the deep bowl. Almost all of the pieces, which have a generally brown coloured surface colour, are worn. However, beige coloured primer remains can be seen on the surface. Only two samples of red slip remains were found. Among the grooved pieces, characteristic of the Early Iron Age, one is remarkable with the horizontal spike motif under the mouth. In another example, a grooved decoration is seen as a "zigzag" series side by side. Embossed decoration is embedded in some pieces other than grooved decoration. In two examples, there is a series of cross cuts on the relief. Almost all of the samples were made of stone, sand and little mica added pulp. Abundant stone additives were observed in four samples. Three examples are included in the fine ware class. A certain amount of mica additive was detected in all samples. Only one sample shows the imprint of the wheel.

Preliminary investigations at *Konakdüzü* in *Trabzon-Maçka* suggest that the ruins can be dated to the Early Iron Age. The pottery pieces consist of small amorphous pieces, which are very fragile due to the humidity. Only a rim piece of a small jar decorated with dots and grooves was found. Its Mouth diameter is uncertain. The lip is flat. The body is straight up. Outer reddish brown, worn. The interior is reddish brown, worn. Section brown. Tempered with a lot of tiny stone, fine sand and little mica. Investigations are continued in this area and on the finds.

The pottery from the fortress of *Kalecik* (Mile), in the *Mulaga Valley* in *Maçka* show a sequence ranging from the Early Iron Age to the Middle Ages. The Early Iron Age potsherds can be compared with Eastern Anatolian Early Iron Age examples. Among them a groove decoration with oblique cuts between two parallel lines and an outer surface burnished bowl piece with dark gray paste attracted the attention. Investigations are continued in this area and on the finds.

2. Metal Findings: K. Bittel published some bronze object, which were uncovered by a school director in *Artvin* and send to Ankara. According to an attached letter, they have been discovered in a cave, which is located in the village *Balıklı*, district of *Zate* and in the forest called *Sazaskale*. In the same place there is also a castel called *Famara Dudubal* by local people. There is village *Balıklı* southeast *Arhavi*.

In the yearbook of *Artvin*, it is mentioned about a bronze axe discovered reportedly during a road construction around the village *Demirköy* near *Yusufeli*. The information is repeated by V. Ünsal without any document or photography. Unfortunately, these important find seems not to have been examined by anybody.

There are some bronze axes in the *State History Museum in Stokholm*
(Statens Historiska Museum). According to the museums record these finds have

been sold by an antique dealer, Kirkor Minassian in 1910. In the same record it is mentioned that the finds came from the province of Ordu in Turkey. The seven bronze axes are comparable with those from *Artvin*. According to the publication they should have discovered in a cave in the vicinity of *Ordu*. But, this is not a reliable information.

The region of Posof is mentioned first archaeologically in 1896, due to the hoard unearthed in the Village Meres. The hoard consists bronze objects, seven axes, a hook, a chisel, seven bracelets with some of them decorated, a dagger handle, horse harnesses and some fragments of a bronze vessel. Reportedly they are today at the collection of Saint Petersburg Ethnography and Archaeology Institute, and recorded as finds from *Mehçiz Castle*. This is known as *Mere Castle*, which is located in the east of the village of *Çakırkoç*, in the vicinity of *Posof*.

B. Y. Berry, during his task as diplomatic representative of the USA in the Middle East and Balkans, was interested for archaeological objects and created increasingly a collection with thousands of pieces. This collection was later donated to the Art Museum of Indiana University. It contains also a group of items from Trabzon, which is documented by W. Rudolph as the "treasure of Trabzon". Although the museums record said that they would be collected from the vicinity of Trabzon, it is not sure where they exactly discovered. For instance, for some of the objects W. Rudolph draws attention rightly to *İkiztepe* west of the Samsun. Under the grave gifts from the EBA cemetery there are some finds, which are similar with the spiral rings and pendants in the Berry"s collection. The totally 578 pieces of the "treasure of Trabzon" are entirely jewellery, and the majority is made of gold. Also B. Y. Berry published books for introducing his collection in 1969 and 1978.

A total of 20 axes were evaluated in a study conducted on the shaft-hole bronze axes in the inventories of the museums of Erzurum and Kars. Only 3 of those axes were unearthed in a scientific excavation, the others were purchased. There are two

typical Colchian axes in the Kars Museum. One of them was purchased from Kars, and for the other from the village *Gönülaçan*, which is located north of the district centre of *Posof*, at the Georgian-Turkey Border. Both are very similar to our two examples from the *Rize Museum* (Fig. 2.3, 5), due to their type of poll and circular bevel. Also one of these axes has incisedecorations at both front cheeks, as it is on one of our examples from the *Rize Museum* (Fig. 2.5).

Bronze Axes from the Giresun Museum.Six bronze axes with handle holes from Giresun Museum were examined and documented. One of them (Fig. 1.3) may be of late period coppersmith tools. Since other axes with handle holes were brought to the museum by purchasing from different people in 2004 and 2008, there is no question of being in bulk. There is no information about the finding places in the museum records. One of the axes (Fig. 1.6) was registered in

Samsun Museum inventory in 1992, and was transferred to Giresun Museum in
2016 with the approval of the Ministry. It was stated that this ax, which was mentioned in a previous publication, was brought to the museum by purchasing from Havza district of Samsun.

Fig. 1.1. Museum inventory number 457.Possibly purchased from G. Demirtaş in 2004. Complete. The shaft-hole has a round cross-section and its mass width in the middle of the body. The nape has round cross-section, and long hammer shape. From the front of the shaft-hole, the body with a round cross-section hangs slightly towards the mouth. The sharp and circular mouth expands to the top and bottom. The length is 23.1 cm. Width: 2 cm at the nape, 5.6 cm at the shaft-hole, 3.3 cm at the middle of the barrel, 5.4 cm at the mouth. Thickness:
1.9 cm on the nape, 6 cm at the shaft-hole, 3.7 cm in the middle of the barrel. Shaft-hole diameter 2.9 cm.

Fig. 1.2. Museuminventory number 442.Possibly purchased from M Yücel in 2004. Complete. The shaft-hole has a pointed oval section. Hammer- shaped nape stub, protruding at the top and bottom. Two parallel grooves extend towards the body on both sides of the shaft-hole. The hexagonal body expands suddenly towards the mouth and hangs towards the bottom of the mouth. The
upper edge of the mouth is protruding and pointed. The mouth is sharp and
circular. The length is 15.8 cm. Width: 3.2 cm at the nape, 2.4 cm at the shaft- hole, 2.5 cm at the middle of the barrel, 6.6 cm at the mouth. Thickness: 1.7 cm on the nape, 1 cm on the nape of the neck, 3 cm on the stem hole, 2 cm in the middle of the barrel. The shaft-hole width is 2.2 x 3.7 cm.

Fig. 1.3. Museum inventory number 443.Possibly purchased from M. Yücel in 2004. Complete. Axe eye round cross section. The neck with a sharp nape and a sharp tip at the end is of the same length, has a round cross section and hangs downwards from the shaft-hole. Traces of discharge from the mould are visible on its surface. Although it looks like a hammer used by today's
coppersmiths, it is obvious to date this axe that comes through the purchase. Length: 20.8 cm. Width: 1.2 cm in the middle of the neck, 2.4 cm in the shaft-

hole, 1 cm in the middle of the barrel, 0.7 cm in the mouth. Thickness: 0.7 cm at the nape of the nape, 2.5 cm at the shaft-hole, 1 cm in the middle of the barrel. Shaft-hole diameter 2 cm.

Fig. 1.4. Museum inventory number is 530. It was probably purchased

from Y. Karaçayır in 2008. Complete. The shaft-hole has a round cross section. Behind the nape is a pointed tab at the top and bottom. Two wide grooves rotate around the shaft-hole. At the bottom of these grooves, a rivet hole is seen. The barrel becomes thinner after the shaft-hole. The barrel rises in front of the shaft-hole and continues towards the mouth. Circular and sharp mouth expands to the top and bottom. Length: 16.2 cm. Width: 5.6 cm at the nape, 3.7 cm at the shaft - hole, 5.5 cm at the front of the shaft-hole, 4.8 cm at the middle of the barrel, 6.4

cm at the mouth. Thickness: 3.5 cm in the shaft-hole, 1.1 cm in the middle of the barrel. Shaft-hole diameter 2.7 cm.

Fig. 1.5. Museum inventory number is 458. It was probably purchased from G. Demirtaş in 2004. Complete. The shaft-hole has a round cross section. Backbone that rotates around the shaft-hole and extends to the cheeks. The upper edge of the muzzle, which is slightly tapered after the shaft-hole, is convex and the lower edge is flat. Circular and sharp mouth expands to the top and bottom. Length: 8.2 cm. Width: 2.3 cm in the shaft-hole, 1.4 cm in front of the shaft-hole,
1.8 cm in the middle of the barrel, 2.9 cm in the mouth. Thickness: 3.4 cm in the shaft-hole, 1.5 cm in the middle of the barrel. Shaft-hole diameter 1.6 cm.

Fig. 1.6. Museum inventory number is 37. With the approval of the Ministry, coming from Samsun Museum on 23.04.2016.Broken and missing from the front part of the shaft-hole. So the shape of the shaft-hole is uncertain. One arm each in front of the shaft-hole, top and bottom. The oval barrel hangs
towards the mouth after this. Circular and sharp mouth expands to the bottom. Existing length: 10 cm. Width: Approximately 3.5 cm in the shaft-hole, 5.7 cm in the arms in front of the shaft-hole, 2.4 cm in the middle of the barrel, 4.6 cm in the mouth. Thickness: 1.5 cm in the upper arm, 1 cm in the middle of the barrel. Shaft-hole diameter is uncertain.

*Bronze Axes from the Rize Museum.*A total of five shaft-hole bronze axes in *Rize Museum* were examined and documented (Fig. 2). The four other axes, except the axe, which was written in the museum records from B. Ergün in 1993, were seized in Istanbul where they were taken for sale in 1998 and were delivered to the *Rize Museum*. These axes were previously subject to a publication. Thanks to the researches carried out in *Rize*, it was understood that these four axes were found during a treasure hunter activity in *Dikkaya* village (*Mekaliskirt*) in *Çamlıhemşin*. In the museum records, the name of the person who caught the axes in İstanbul is mentioned. This situation and the axes being Colchain

type gives the impression that they are collectively. The bronze axe, which does not belong to this group and where its location is unknown, is older and can be compared with the axes belonging to the 3rd millennium BC.

The upper part of *Dikkaya* and *Behice* villages, located on the western slope of the *Fırtına* Stream valley, has a relatively flat land structure. The *Çay* neighbourhood (*Nahra Mevkii*), which is located in *Dikkaya* village, consists of houses around a rock ledge dominating the valley. According to the information given, axes were found in the north of this rock ledge. In the examination, potsherds were also recovered on the surface and it was stated that they could be dated to the Late Bronze or Early Iron Age.

Fig. 2.1. Museum inventory number is 1.1.1993. Arrival date to the museum: 24 09 1993. It was purchased from B. Ergün and brought to the museum. Deficiencies in the mouth. A piece was cut at the bottom of the mouth.

Curved from round neck to mouth. It is drooping from the bottom of the mouth to the mouth as it expands from the rounded shaft-hole to the mouth. The barrel becomes thinner immediately after the shaft-hole which is flattened on the sides. The long rectangular barrel edges are straight, the mouth is relatively flat and the surface is smooth. Length: 16 cm. Width: 4.4 cm in the shaft-hole, 3.9 cm in the middle of the barrel, 5 cm in the mouth. Thickness: 4 cm in the shaft-hole, 1.3 cm in the middle of the barrel. Shaft-hole diameter 2.3 cm.

Fig. 2.2. Museum inventory number 1.1/2004. Date of arrival to museum
22.12.1999. Seized. Complete. Axe eye oval cross section and front lightly protruding at top and bottom. Blunt and circular hammer type poll protruding at top and bottom. Two parallel grooves on both face-sides. Body with hexagonal section expands towards bevel and it hangs towards lower corner. The upper bevel-corner rounded. Bevel blunt and circular. Length: 20 cm. Width: 3.4 cm on poll, 3.1 cm on shaft-hole, 2.8 cm in middle, 7 cm on bevel. Thickness: 1.9 cm on poll, 3.6 cm on shaft-hole, 2.1 cm in middle. The eye width 2.6 x 4.7 cm.

Fig. 2.3. Museum inventory number 2.1/2004. Date of arrival to the museum 22.12.1999. Seized. Complete. Axe eye almond shape cross section and front lightly pointed at top and bottom. Blunt and concave poll.Ridge on both face-sides. Body with hexagonal section expands towards bevel and it hangs towards lower corner. Upper bevel-corner rounded. Bevel blunt and circular. Length: 16 cm. Width: 3.2 cm on poll, 1.6 cm on the shaft-hole, 2 cm in middle,
5.2 cm on bevel. Thickness: 2.5 cm on poll, 2.5 cm on shaft-hole, 1.9 cm in middle. Eye width 2 x 4.1 cm.

Fig. 2.4. Museum inventory number 3.1/2004. Date of arrival to the museum 22.12.1999. Seized. Complete. Axe eye almond shape cross section and flat. Hammer type poll protruding at top and bottom. Two parallel grooves on both face-sides and two cross line decoration on both side. Body with hexagonal section expands towards bevel and it hangs towards lower corner. Upper bevel-

corner pointed. Bevel blunt and circular. Length: 18 cm. Width: 3.5 cm on poll, 3 cm on the shaft-hole, 2.8 cm in middle, 6.5 cm on bevel. Thickness: 1.4 cm on
poll, 3.6 cm on shaft-hole, 1.9 cm in middle. Eye width
2 x 4.1 cm.

Fig. 2.5. Museum inventory number 4.1/2004. Date of arrival to the museum 22.12.1999. Seized.Poll missing from middle of shaft-hole. Axe eye oval cross section and front lightly protruding at top and bottom. Width groove on both face-sides. Body with hexagonal section expands towards bevel to upper and lower corner. Bevel blunt and circular.Various linear embellishments on body. On top thin band in front of shaft-hole filled with diagonal lines and after that thicker band filled with triangles. On bottom unclear figure. Then another thick band around the body filled with diagonal lines in different directions. A winged creature on one of the front cheeks. The figure on the other cheek is unclear due to attrition. Existing length: 13 cm. Width: 1.8 cm on the shaft-hole,

2.1 cm in middle, 5.5 cm on bevel. Thickness: 3 cm on shaft-hole, 2.3 cm in middle. Eye width c. 2.2 x 4 cm.

*Bronze Axes from the Samsun Museum.*Eight shaft-hole bronze axes were examined and documented in Samsun Museum (Fig. 3). Some of the axes were purchased from people living in different districts of Samsun and brought to the museum. For this reason, the finds of the axes, whose exact location is not known, can be considered as these addresses in the museum records. Except for the two (Fig. 3.4, 8), the axes, all of which have been the subject of previous publications, are as follows:

Fig. 3.1. Museum inventory number 11.1/1984: Date of arrival at the museum 20.12.1984. It was purchased from T. Kavak, who lives in the centre of Samsun. Complete. The shaft-hole has a circular cross-section, the barrel is slightly curved downwards and the mouth is circular. Both sides of the shaft-hole are slightly flat, the top and bottom edges of the barrel are flat. The sharp nape overflows under the shaft-hole and then continues to the mouth until the same width. Length: 13.4 cm. Width: 5 cm at the nape, 3.8 cm in the middle of the barrel, 4.2 cm at the mouth, 2 cm. Thickness: 4.2 cm in the shaft-hole, 1.4 cm in the middle of the barrel. Shaft-hole diameter: 3 cm.

Fig. 3.2. Museum inventory number is 10.1 / 1970. It was found in the village of *Bengü* in the districts of Bafra, and was purchased from İ. Önder. A small fracture in the upper part of the worn mouth.Flat arms in front of the shaft - hole, top and bottom. The upper arm is thicker than the other. Backbone extends to the barrel on both sides of the rounded shaft-hole. The semi-circular, wide-
backed neck overflows above and below the shaft-hole. The barrel becomes
thinner after the arms and then thickens again towards the mouth. The top and bottom edges of the barrel are round. Sharp mouth is circular. Length: 18.1 cm. Width: 5.9 cm at the nape, 3.5 cm at the shaft-hole, 7 cm at the arms, 2.5 cm at the middle of the barrel, 6 cm at the mouth. Thickness: 1.9 cm at the nape, 4 cm at the shaft-hole. 1 cm in the middle of the barrel. Shaft-hole diameter: 3 cm.

Fig. 3.3. Museum inventory number is 15.1 / 1976. The date of arrival at the museum is 29.09.1976. It was purchased from Ş

Dağdelen, who lives in *Havza*. Complete. Three grooves extend towards the barrel on both sides of the pointed oval-shaped shaft-hole. Wide back, almost flat. Slightly overflow the top and bottom of the hole. Sharp edges overflow at the top and bottom of the hole. The barrel contracts slightly from here onwards and continues by expanding
towards the mouth. The top and bottom edges of the barrel end sharply. Sharp
mouth is circular. The surface is porous. Length: 16.2 cm. Width: 5.5 cm in nape,
3 cm in shaft-hole, 5.2 cm in overflow, 3.6 cm in the middle of the barrel, 5.5 cm in the mouth. Thickness: 1.2 cm in nape, 3.4 cm in shaft-hole, 1.3 cm in the middle of the barrel. Shaft-hole width is 2.3 x 4.5 cm.

Fig. 3.4. Museum inventory number is 12.6 / 2001. The date of arrival at

the museum is 20.12.2001. It was purchased from A. Beşer, who lives in *Vezirköprü*. Fractures under the tip of the upper arm and the hole of the shaft. Three grooves on both sides of the round shaft hole. Slightly overflow the top and bottom of the sharp nape shaft-hole. There is a hole at the edge of the shaft- hole and a vertical casting cavity inside. A sleeve at the top in front of the hole. The barrel contracts slightly from here onwards and continues by expanding towards the mouth. The top and bottom edges of the barrel are armoured and round. The sharp mouth is almost flat. Length: 18.2 cm. Width: 5.5 cm in nape,
4.9 cm in shaft-hole, 7.8 cm in arm, 4.5 cm in the middle of the barrel, 7.3 cm in the mouth. Thickness: 4.1 cm in the shaft-hole, 0.8 cm in the middle of the barrel. Shaft-hole width is 3.2 cm.

Fig. 3.5. Museum inventory number is 9.1 / 1987. The date of arrival at the museum is 13.12.1986. It was purchased from R. Taş, who lives in Samsun. Fractures on one side of the neck. The shaft-hole has a round cross section, a sharp nape of a semi-circular shape and a long body. A slight overflow in front of the shaft-hole. The trunk, which continues almost the same width from the wide nape, gradually expands from the middle of the barrel, slightly protrudes above
the mouth. The top and bottom edges of the thick barrel are round. Sharp mouth is circular. The surface is porous. Length: 18.5 cm. Width: 5.5 cm at the nape, 2.8 cm at the shaft-hole, 2.7 cm at the middle of the barrel, 4.6 cm at the mouth. Thickness: 3.8 cm in the shaft-hole, 2 cm in the middle of the barrel. Shaft-hole diameter 2.1 cm.

Fig. 3.6. Museum inventory number is 5.1 / 1989. The date of arrival at the museum is not clear. According to the museum records, it was found in Samsun and purchased from A. Taş. Traces of destruction on its surface. The shaft-hole has a pointed oval section and a sharp neck. There was a slight overflow behind the shaft-hole to the top and a clear rise at the front and slightly at the top. The bottom of the barrel is deeper concave than the top, and the edges are thick armoured. The relief from the sides of the

shaft-hole on the cheeks narrows in the middle and expands towards the mouth. Sharp mouth is circular. Length: 14.1 cm. Width: 3.2 cm at the nape of the neck, 2.3 cm at the shaft-hole, 6.5 cm in front of the shaft-hole, 3.5 cm in the middle of the barrel, 5.5 cm in the mouth. Thickness: 2.8 cm in the shaft-hole, 1 cm in the middle of the barrel. Shaft-hole width is 1.8 x 3.7 cm.

Fig. 3.7. Museum inventory number is 2.1 / 1985. The date of arrival at the museum is 21.05.1985. It was purchased from N Apaydın, who lives in *Ordu*. Complete. The shaft-hole has a round cross-section, the neck surface is fluffy hammer-shaped and round cross-section. The nape becomes thinner towards the shaft-hole. The perforation perimeter thickens, becomes thin in the middle of the trunk and expands again in the mouth. From the front of the shaft-hole, sharp lines above and below the cheeks extend to the tip of the mouth. The upper and

lower edges of the thick barrel end sharply. Sharp mouth is circular. Length: 13.5 cm. Width: 2.7 cm at the nape, 1.8 cm behind the shaft-hole, 3 cm in the shaft- hole, 3.3 cm in front of the shaft-hole, 2 cm in the middle of the barrel, 4.1 cm in the mouth. Thickness: 2.2 cm on the nape, 1.8 cm behind the shaft-hole, 2.8 cm in the shaft-hole, 1 cm in the middle of the barrel. Shaft-hole diameter 2 cm.

Fig. 3.8. Museum inventory number is 2010 / 156A. The date of arrival at the museum is 20.12.2010. It was purchased from A. Yayla, who lives in Karaperçin village of Tekkeköy. Complete. Long arms with pointed ends on the sides of the round hole shaft-hole. Its body is thin and long. A rare type. The nape of the neck is hammer-shaped, and the circular sharp mouth widens to the top and bottom. The body cross section is square. Length: 27.8 cm. Width: 1.6 cm in the nape, 10.1 cm in the arms near the shaft-hole, 1.7 cm in the middle of the barrel,
3.5 cm in the mouth. Thickness: 1.4 cm on the nape, 3.6 cm in the shaft-hole, 1.5 cm in the middle of the barrel. Shaft-hole diameter 1.8 cm.

Bronze Axes from the Trabzon Museum. A total of 10 bronze axes with shaft-holes were examined and documented in the Trabzon Museum (Fig. 4). It is not clear where these works that were purchased and brought to the museum are finding located.

Fig. 4.1. Museum inventory number is A715. There is no information
about how and when the museum was brought to record. Complete. Oxidation and wear on the surface. The oval-shaped shaft-hole close to the round is short. The barrel with rectangular cross section and curvature first expands from here and then continues to expand towards the mouth. The top and bottom edge of the barrel is straight and the mouth is circular. Length: 12.7 cm. Width: 2.9 cm in nape, 1.6 cm in shaft-hole, 2.8 cm in the middle of the barrel, 4 cm in the mouth. Thickness: 2.8 cm in the shaft-hole, 0.8 cm in the middle of the barrel. Shaft-hole width is 2 x 2.9 cm.

Fig. 4.2. Museum inventory number is 26. The date of arrival at the museum is 06.08.1974. Purchase. Complete. The back of the short neck is flat. Two grooves on the sides of the

shaft-hole with pointed oval section. The barrel expands towards the mouth from the shaft-hole, the front part of which is slightly fluffy. Barrel edges are round, mouth is circular. Length: 16.2 cm. Width: 3 cm in nape, 2.4 cm in shaft-hole, 3 cm in front of shaft-hole. 3.5 cm in the middle of the barrel, 5.5 cm in the mouth. Thickness: 1.1 cm in the nape, 3.5 cm in the shaft - hole, 1.8 cm in the middle of the barrel. Shaft-hole width is 2.7 x 4.5 cm.

Fig. 4.3. Museum inventory number is 659. The date of arrival at the museum is 02.03.1989. Confiscation from H. Küçükosman. Complete. Oxidation and wear on the surface. Curved from sharp nape to mouth. It expands from the oval shaft-hole to the mouth. Barrel edges are round, mouth is circular. Length: 12.6 cm. Width: 2.1 cm at the nape of the neck, 2 cm at the shaft-hole, 2.3 cm at the middle of the barrel, 4.6 cm at the mouth. Thickness: 2.3 cm in the shaft-hole,

0.6 cm in the middle of the barrel. Shaft-hole width is
1.2 x 2 cm.

Fig. 4.4. Museum inventory number is 25. The date of arrival at the museum is 06.08.1974. Buy. Complete. The shaft-hole has an oval cross section and a round neck. The back and front of the shaft-hole are drooping at the bottom. From the front of the hole, an overflow extends along the upper edge, while the lower edge is deep concave. While the barrel with a rough surface is thin on the upper and lower edges, it is quite thick in the middle. The sharp and circular mouth widens at the top and bottom, and the tips are tapered. Length:
17.8 cm. Width: 5.5 cm in nape, 5.3 cm in shaft-hole, 4.3 cm in the middle of the barrel, 8.6 cm in the mouth. Thickness: 3.7 cm in the shaft-hole, 3 cm in the middle of the barrel. Shaft-hole width is 2.7 x 4 cm.

Fig. 4.5. Museum study number is 1977. The date of arrival at the museum is 22.10.2007. It was purchased from U. İskender. The nape of the neck is missing. The shaft-hole should be oval section. It expands from the shaft-hole to the mouth. The lower part of the mouth is more drooping than the top. The top edge of the barrel, which has a rough surface, is flat, and the bottom edge is sharp. The ends of the sharp and circular rim are pointed at the top and round at
the bottom. Existing length: 13 cm. Actual length: c. 17 cm. Width: 3.5 cm in the shaft-hole, 3.2 cm in the middle of the barrel, 7 cm in the mouth. Thickness: 4 cm in the shaft-hole, 2 cm in the middle of the barrel. Shaft-hole possible width 3 x 4 cm.

Fig. 4.6. Museum inventory number is 654. The date of arrival at the museum is 21.10.1988. It was purchased from M Tabakoğlu. Since one side of the fairly thin walled hole was missing, the hole was reduced by bending the ends. The real shaft-hole appears to be oval. Corrosion and spills on the surface. The protruding neck that slides sideways due to the bending overflows to the top. Elevated both above and below the shaft-hole. The edges of the barrel are concave at the top and bottom,

the cross section is thin at the edges and thick at the middle. The mouth expanding from the middle of the barrel is sharp and circular. It is understood that the scratches in the mouth and behind the handle are made later to understand the quality of the metal. Existing length: 12.5 cm. Actual length: c. 13.5 cm. Width: 3.7 cm at the nape, 2.5 cm at the shaft-hole, 3.7 cm in the middle of the barrel, 6.5 cm at the mouth. Thickness: 4.2 cm in the shaft-hole, 2 cm in the middle of the barrel. The possible width of the shaft-hole is 2.5 x 3.5 cm.

Fig. 4.7. Museum inventory number is 24. The date of arrival at the museum is 06.08.1974. Buy. Small fracture in the upper part of the mouth. The surface is smooth. The shaft-hole is round. Round nape slightly fluffy. The upper
and lower edges of the shaft-hole are puffy in the form of wiping, a slight rise at the top in front of it. After the barrel shaft-hole, it suddenly becomes thinner and turns downwards. The edges of the barrel section are round. The ever-expanding

mouth is sharp and relatively flat. Apart from the traces of use, it was also bent to one side due to a hard hit. Length: 13 cm. Width: 3.5 cm in neck and neck hole, 4 cm in the middle of the barrel, 5.5 cm in the mouth. Thickness: 3 cm in the shaft- hole, 0.8 cm in the middle of the barrel. Shaft-hole diameter 2.1 cm.

Fig. 4.8. Museum inventory number 180. Date of arrival to the museum
02.01.1978. Purchased from M. Özkarabekir.Lower corner of bevel little missing. Axe eye oval cross section and flat. Short poll protruding at top and bottom. Two parallel grooves on both face-sides. Body with bulged triangle section expands towards bevel and it hangs towards lower corner. Upper bevel-corner protruding.Bevel blunt and circular. Length: 13.6 cm. Width: 3.8 cm on poll, 2.6 cm on the shaft-hole, 2.8 cm in middle, 4.8 cm on bevel. Thickness: 1.4 cm on poll, 3.6 cm on shaft-hole, 2.5 cm in middle. Eye width 2.5 x 3.6 cm.

Fig. 4.9. Museum inventory number is 150. The date of arrival at the museum is 06.08.1974. Buy. Complete. Curved from a sharp neck to a mouth. The lower part of the mouth hangs as it expands towards the mouth from the oval shaft-hole. Linear inlay embellishments from a different metal alloy on the sides and top of the shaft-hole. Barrel edges are round, mouth is circular and surface is rough. Length: 22 cm. Width: 5.6 cm at the nape, 4.5 cm at the shaft-hole, 5 cm
at the middle of the barrel, 10.1 cm at the mouth. Thickness: 5 cm in the shaft-
hole, 2 cm in the middle of the barrel. Shaft-hole width
is 4 x 5 cm.

Fig. 4.10. Museum inventory number is A713. It is not clear when and how it was brought to the museum. Complete. The surface is rough. Curved from round neck to mouth. The lower part of the neck is drooping. The shaft-hole is round. The trunk expands towards the mouth. Barrel edges are round, cheeks are bulging and mouth is circular. The bottom of the barrel is concave. Length: 11.6 cm. Width: 4.8 cm at the nape of the neck, 4.5 cm at the shaft-hole, 4.5 cm at the middle of the barrel, 6.4 cm at the mouth. Thickness:

2.9 cm in the shaft-hole, 1.6 cm in the middle of the barrel. Shaft-hole diameter 2.4 cm.

Bronze Axes from Artvin. Since 1931, K. Bittel carrying out archaeological work in Turkey, Turkish History, Archaeology and Ethnography magazine's first issue (July 1933) mentions of the bronze axes which was found in *Artvin*. These axes, which are important for Georgian archaeology, especially attracted the attention of Georgian researchers like D. Koridze, Al. Ramishvili.

Bronze axes, which sent to Ankara by a school teacher in the region, are important in terms of archaeological history of the northeast region of Turkey. In the letter of the teachre, he mentions that he found the finds in a cave in the forest of *Sazaskale*, in the *Zate District* of *Balıklı* village. In the forest in question, there is a castle named by the locals as Famara Dudubal. It is uncertain that this place is *Balıklı* village, which is located in the southeast of *Arhavi* or north of *Şavşat.* Nevertheles O. Aytekin stated that the mentioned place should be in *Sazerğele*, neighborhood of *Akbıyık* (*Bzata*) in about 23 km northwest of *Şavşat*, very close

to the Georgian border. In addition, in the vicinity there is a *Tamara Fortress* (*Paris Kalesi*) which is built or repaired by Tamara Dodopali (1184 - 1213), the Georgian Queen. The information is compatible with the local names in the letter mentioned by K. Bittel.

Many similar bronze axes have been discovered in Georgia. For example, such axes include known in the hoard of *Tkhilnari* (Kakhidze and Mamuladze 2000:
62-64, Fig. 30, 31), *Makvaneti* (Ramishvili 1974). They are similar to two axes from Artvin-hoard, as well as such axes from the hoards of Ordu and Posof. These axes belong to type I of the colchian axes according to the typological classification of O.
Japaridze (1950: 59-60, Fig. 1) as well as to the classification by D. Koridze to type
1(1965: 60-63). . It is interesting to observe that the hoards of Artvin, Posof and Ordu are discovered in very close geography, but the Ordu-hoard is not clear where exactly this originate. The Colchian bronze axes of the type 1 are widely spreaded in the Eastern Black Sea and dated in the 2nd half of the 2nd millennium BC.

Studies on bronze axes have shown that especially those with shaft-holes are common in the Colchis region. The pipe-type axe is also no stranger to this region. To make a dating, it can be said that these axes were seen as early as the
2nd Millennium
BC.

As it is said that the axes of *Balıklı* village were not found through any excavation, but in the cave, they were found elsewhere and were brought to the cave later. In this regard, K. Bittel questions whether these works belong to a blacksmith. The bronze ingot among the works also supports this opinion. However, it remains a mystery where the artefacts were found and when they were brought to the cave.

Another confusion related to the issue arises due to the “Balıklı finds” mentioned by U. Esin. According to this, while the foundation of a house was excavated in 1940 in Balıklı, where registration information was probably given as "Çoruh", a copper

nugget, a shaft-hole axe and "aydemir mouthed" axe were found. U. Esin, who stated that there are very similar analogues of metal works published by K. Bittel with "aydemir mouthed" axes and copper ingots, writes that one of the finds in Balıklı has a small rivet hole in the handle. According to U. Esin, the shaft-hole axe reminds the samples published by K. Bittel, but it is not exactly similar. U. Esin gave the numbers "pl. 87.5" for copper ingot, "pl. 42.1" for axe with shaft-hole and "pl. 42.2-3" for axe axes, but since the second volume of the published book is not published, there is no possibility to examine these images. In addition, the analysis made on the mentioned finds dating to the Late Bronze Age showed that these finds were produced by adding 16.66% arsenic to natural copper.

Bronze Axes from Demirköy / Nizgivan. During the archaeological researches carried out by Veli Ünsal in *Yusufeli* district of *Artvin*, he learned that

there were some bronze axes in *Demirköy*, located in a deep valley in the northeast of the district centre. It contains this information in its publications on the history of the region, but it does not publish any details of these axes or any pictures. Unfortunately, these finds, which are of great importance to us, are not evident. Perhaps there are similar finds of *Balıklı* village axes.

Bronze Axes from Ordu. There are several bronze axes at the Stockholm State Historical Museum (Statens Historiska Museum) with a registration number of 15,576. According to museum records, the axes were sold in 1910 by a Parisian antique store named Kirkor Minassian, and originated from the province Ordu in Turkey. For this reason, the finds were mentioned in the archaeology literature as "the bronze axes found in Ordu". Nevertheless, it is not certain that where exactly they were found.

This collection consists of 7 objects. Only four of them are kept in the Stockholm Historical Museum, and the photographs of the other three examples were put in the museum archive, and it is not known where they are now.

These finds were explored by S. Przeworski in 1935 and discussed in a very detailed article published in the 7th (1935) and 8th (1936) issues of the Journal of the Institute of Eastern Sciences of Czechoslovakia (Československý Orientální Ústav V Praze). S. Przeworski writes that these axes were found in a cave near *Ordu*, that he must have mixed the information about how the Artvin hoard has been found. Because we have no information how and where the "Ordu axes" were found.

Because the axes of Ordu-hoard belong to the Colchian culture, one should say that all bronze objects of this hoard belong to this culture. According to the typological classification by D. Koridze, the hoard consists of a bronze colchian axe of type 1, an axe of type 2 and the other four axes belong to the first subtype of Type 2 (Koridze 1965: 61). As we well know, the bronze colchian axes were first discovered on the burial ground of Koban in North Ossetia. About 700 graves were excavated there and numerous bronze axes came to daylight

(Virchow 1883; Chantre 1886a, 1886b; Krupnov 1960, 1969; Kozenkova 1990,
1996 etc.). The similar axes were called as “Koban-axes”, because of the first
excavation place. Some authors refer to the Colchian bronze axes as Kolcian- Kobanian axes (Voronov 1984; Skakov 1997 etc.). They are especially common in the south of the Caucasian mountains, and registered as “finding place unknown” in the museum depots, as well as “excavation findings” unearthed at the Bronze Age cemeteries. During the many archaeologschen Excavations in western Georgia in 2nd half of the 20th century (Kuftin 1949, 1950; Mikeladze
1978, 1985a, 1985b; 1990; Kakhidze and Mamuladze 2000, 2017; Baramidze
2017; Pkhakadze 1993; Papuashvili 1998, 2004; Apakidze 2009 etc.) it is determined that the axes have indigenous origin and their homeland was Georgia. Based on the new researches, it was detrmined that the Colchian culture

developed in the central Colchis (Lordkipanidze 1986, 1991; Apakidze 1993,
2009). Accordingly, the development of the Colchian axes in the eastern Black Sea region should also proceed. That is why the Late Bronze and Early Iron Age axes from northeast Turkey are to be brought together with the Colchian axes, because numerous absolutely identical examples have been discovered in western Georgia.

Four of the shaft hole axes from *Ordu* take attention with the groove- shaped reliefs on their sides. So these axes are called as "Grooved Axe". Three of them belong to the 1st subtype of type 2 according to the typological
classification by D. Koridze (Koridze 1965: 61, 64-66). They have massive necks, which maybe also had a hammer function. The same can be said about a relatively small axe of type 2. The axe of type 1 with a sharp neck should be a
battle axe. On bouth outer sides of the shaft-hole and body, two longitudinal
beads run to the beginning of the cutting edge. Another small bead runs on the rear side of the shaft hole. Although these types of axes are called as "Hancar Type Axe", according to the name of the findings place of similar axes, the most comparable example is among the *Artvin* axes. The mouths of three hammer axes and the Hancartype axe expand like a bow. This is typical for *Colchis-Koban* axes.

There is also a Hellebarden-axe (Georgian „Tsaldi“ წაღდი) in the Ordu- hoard. The Hellebarden axes spread only in the Agricultural regions of Colchis. Such typ of axes are known from the hoards of Bobokvati, Zeniti etc. (Ramishvili
1974: 17, 20-22, pl. XA.1, XIVA.2, XIVB.1). They are unknown in de mountanious regions of Colchis and in Koban. The axes used in Caucasus in the Late Bronze Age are similar, and archaeologists explain that die small differences should be local nur als local peculiarities. The axes from the hoards of Ordu, Artvin and Posof are identical with the colchian bronze axes, which were for instance in the hoards in Colchis plentiful discovered.

The type known as the "Flat Axe" is common in Anatolia and the Caucasus in general, but there are also examples known from Iran, the Eastern Mediterranean shores and the Aegean islands. The axe coming from *Ordu* forms a separate group within the flat axes with its arms protruding from each other. In longer specimens, the arms may not be as prominent as in the Army axe, or the arm ends may be round rather than pointed. Flat axe patterns were also recovered
in archaeological excavations. It is seen that these axes are depicted in the ancient
rock reliefs of Anatolia (for example *İnbazar* in Afyon) and steals (for example *Hakkari* steals). Flat axes spread all over Anatolia were used from 2100 BC (Alişar) to 700 BC (Alişar, Gavur Castle). Other than bronze, there are also samples made of iron. Although Hakkari steles are not fully dated, the *İnbazar* rock relief is dated to the *Phryg* era, the 7th century BC.

The bronze axes that went from Stockholm to Stockholm what makes S.

Przeworski think, considering the archaeological information of the 1930s, it cannot be underestimated. Moreover, it is not known exactly where and in what form these finds were found, and moreover three of the axes can be given to the researcher as photographs. The researcher draws attention to the cultural relations between Anatolia and the Caucasus 4000 years ago from today with the not-so- extensive knowledge and seven axes in *Ordu*. Today, these relationships are determined by more concrete findings. However, until now hardly explored the eastern *Black Sea* coast of Turkey maintenance of archaeological remains such a big gap between these two regions. This gap hides many more historical secrets.

Bronze Axes from Posof. The *Posof* region first entered the archaeology literature in 1896 due to a group of finds located near the "Meres Village", possibly the current *Çakırkoç Village*. The hoard consists 5 bronze Colchian axes, 2 Eastgeorgiand or Eastcaucasian bronze axes, a decorated bronze flat axe with arms, 23 small bronze hoes, 7 solid rings (some of which are decorated with graphical decor), a small hoe, a piece of a Hellebardenaxe, a bridle, a dagger handle and pieces of a bronze container (Iessen 1935: 139-140; Kuftin 1944:
327-329, Fig. 21-22). Today, the group of finds in the collection of Petersburg Ethnography and Archaeology Institute is referred to as “Mehçiz Castle Findings”or “Mekhchis-Tsikhe” (Koridze 1965: 37-38, Fig. 30) in the museum records. This castle should be known as *Mere Fortress* in the east of *Çakırkoç* village.

Mere Fortress is located on a rocky ridge at the south coast of the Posof stream, about 1.8 km southwest of Posof. About 500 m soutwest the *Çakırkoç* (Mere) village is situated. The above-mentioned bronze items were probably found here. The north of the rocky ridge on which the fortress is built descends perpendicularly to the Posof Stream, and in the east, a valley stretches which is of a small stream flowing into the Posof Stream.

There are ruins of two fortresses on the ridge, one in the west and the other in the east. Of these, the walls of the east were

almost completely removed. The reused stones on the walls of the more robust western castle suggest that the stones of the eastern castle were used in the construction of this fortress. The western fortress, which consists of several sections, has a rectangular plan with rounded corners.

On the south slope there are traces of a lower city and an outer wall surrounding it. To the south of the lower city, there is a church near the outer wall. Here, the fortification wall was reinforced with semi-circular bastions with a diameter of 1.5 m. According to the villagers, the fortification wall was higher in the recent past and its stones were removed for modern construction.

The potsherds found in *Mere Fortress* are dated to the Middle Age. On the rocks to the west of the fortress there is a round pit with a diameter of 0.2 m and a depth of 0.2 m which seem to be a mining pot. Also a pouring lip fragment of a

ceramic pot for metal melting points to the existence of workshop in the castle. This fragment can not be dated. In addition, red and brown burnished potsherds were found on the slopes that could be dated to the prehistoric period.

Burton Y. Berry Treasure from Trabzon. When Burton Y. Berry was the diplomatic representative of the United States in the Balkans and the Middle East. He was closely interested in ancient artefacts in these countries and gradually created a collection of thousands of pieces. In fact, he had been interested in ancient civilizations of Europe and the Middle East for a long time, thanks to his beloved aunt Lilian Gay Berry, a Latin professor at Indiana University. Berry collection was donated to Indiana University Art Museum in 1970 and started to be exhibited here.

Within the Berry collection, there are different finds in groups and it is noteworthy that these are especially small works. Other museums such as Chicago Art Museum, Metropolitan Museum, Boston Museum Fine Arts etc. in the United States also contain works from this collection.

Among the works donated to Indiana University Art Museum is a treasure to go from Trabzon region. This treasure was published in the museum bulletin in 1979 by the Museum Director W. Rudolph and thus it was transferred to the archaeology literature as “Trabzon Treasure”. However, it is not known exactly where the source of these works is, it is written that the museum records come only from the Trabzon region. Since the works reached the museum in two separate groups, they were recorded as 70.105.19 A-Z and 70.105.20 A-K under separate numbers. However, in terms of typological features, it can be said that the pieces belong to the same period and may even have been found in the same place. W. Rudolph rightly draws attention to *İkiztepe* excavations in Samsun's *Bafra* district, which was initiated by U. Bahadır Alkım in 1974. Among the grave gifts uncovered here in the cemetery belonging to

the Early Bronze Age are spiral rings and pendants that can be compared with the jewellery in the Berry collection.

The "Trabzon Treasure", consisting of a total of 578 items, consists entirely of jewellery. Most of them are pieces made of gold. Burton Y. Berry published books in which he introduced his works in his collection.

Comparisons and Dating

Shaft-hole bronze axes are considered among weapons in archaeological research. They point to an advanced stage in mining as they are produced with the dual-die core casting technique. Most samples in Turkey, it was determined that after casting hardened by cold forging. It is understood that the shaft-hole bronze axes, which began to appear in West Asia since the Early Bronze Age, are the advanced adaptations of earlier shaft-hole tools made of horns, bones or stones. However, stone samples continue to be seen in later periods. Examples of

stem-hole tool made of horn or bone are found in the finds from the Mesolithic and Copper Age periods of Northern and Central Europe. In addition, in the İkiztepe Mound in Samsun, which is located in the study area of this thesis, shaft- hole horn tools belonging to most Chalcolithic / EBA I levels were uncovered.

In the research carried out in the museums of the region, no axes with stem holes with a half-moon were encountered. However, in the Balıklı hoard, there are two half-moon axe mouth pieces with missing stem. Later, U. Esin mentioned that there are four half-moon-mouth axes coming from Balıklı and grouped them as "Type 21" and "aydemir and half-moon-bladed axes".

In the first half of the 20th century, when bronze axes were started to be evaluated collectively, it was thought that the origin of shaft-hole and halbmoon axes should be Mesopotamia and Syria. However, later studies emphasized that there were many variations of such axes since the early stages of the Early Bronze Age in Anatolia. U. Esin grouped such axes as "Type 22" under the name of "battle axes".

Cylindrical stem-hole and flat-barreled samples between the shaft-hole bronze axes were mostly found in Early Bronze Age graves in Central Anatolia or were purchased and brought to museum collections. One of the examples of this type is in the Rize Museum collection (Fig. 2.1) and the two are in the Trabzon Museum collection (Fig. 4.1, 7). Some similar examples are known in Ajara region in Georgia. The earliest bronze axe of this region was discovered in Naomani village, Khulo municipality. A similar example of this type of copper axes was discovered in Achkvistavi village, Kobuleti municipality, but it differs with is body structure that expands towards the blade. This unique axe type for Caucasus has two parallels in Trabzon Museum (Fig. 4.1, 7). A similar example, unknown finding plce, in Zugdidi Museum was dated to the Midle Bronze Age. It is worth to note that the axes from the museums of Rize and Trabzon are comparable to some of the axes of the earliest bronze hoards of Ureki (Koridze

1965: 10, pl. 2.1-12; Ramishvili 1974: 28-29, pl. 19.5-23, 20.5-7) and Sachkhere
(Japaridze 1961: pl. 14.1, 15.3,
16.6).

Although one each sample in Samsun (Fig. 3.1) and Trabzon (Fig. 4.3)
museums are basically the same, they appear a little different from this group due to their sharper neck. The first samples of these axes, which are generally associated with the 3rd millennium BC metal tools, were found in the stone chest tombs dated to the end of the Early Bronze Age in Ahlatlıbel. Here, in one of the graves in the southwestern corner of a room, there is a female and a male skeleton, and a halberd axe broken in the shaft-hole was found in the ribcage of the male skeleton. In a similar form, an entire axe was found near the female skeleton buried in a bent state in another stone chest grave. Some similar examples were also found in the Resuloğlu Cemetery, which was dated to the same period. D. B. Stronach identified similar examples as West Asian Types 1

and 3 by comparing them with the samples obtained in Anatolia. One of them is a surface find from Boğazköy dated to the last quarter of the 3rd millennium BC, and the other is the Kayapınar axe, dated between 2300-2100 BC and associated with Mesopotamia. Apart from the groove embellishments around the stem hole and the long nape part, a similar sample with a flat barrel was found in Hasanlu Höyük in the south of Urmiye Lake in Iran. This 13.5 cm long specimen is shown as a traditional weapon for the 3rd millennium BC Mesopotamia.

The hammer-shaped axe (Fig. 1.1) in the Giresun Museum collection is very similar to a shaft-hole axe that was purchased by the Istanbul Museum in
1971 and recorded to be from the Oymaağaç cemetery in Çorum. T. Özgüç also mentions the possibility that these metal artifacts purchased by the museum may come from the Göller cemetery near Merzifon. This axe is very similar to the stone axes in Treasure L, dated to the Troy II phase, in both form and size. For this reason, Anatolian stem-hole metal axes bring to mind allegations that stone axes are imitation. Although a sample found in Yortan Cemetery differs due to its length (10.4 cm) and its mouth structure, it is suitable for comparison due to the condition of the shaft-hole and hammer-shaped nape. Another similar example in the Amasya Museum collection is dated to the 22nd century BC. It is also suitable for comparison with an example in the Samsun Museum collection (Fig.
3.7), although smaller in size, similar to the EBA III period, found in Polatlı
Höyük. All these comparisons allow the axe to be dated to the second half of the
3rd millennium BC. B. A. Stronach states that these axes with sharp blades and hammer necks, which he describes as "Type 1", probably spread from Central and Western Anatolia to the Aegean and the Balkans, considering the stone axes of Troia II.

A Colchis axe in the Giresun Museum collection (Fig. 1.2) can be compared with the examples in the Rize Museum collection.

An example with a hammer-shaped nape is almost identical to the axe from the Giresun Museum (Fig. 2.4); only the diagonal groove on both sides of the nape differs. Similar examples are also observed in the horads of Ordu and Posof. While an example from Sochi is dated to the 13th century BC, some samples dating to the 10th century and the first half of the 8th century come from the Tli C phase. These examples show that this axe type has been used for a long time. Such axes belong to type 4 according to the classification by D. Koridze, and spread throughout the Colchian and in the Colchis - Koban culture area. Numerous non-ornamented axes of this type have been discovered here, but the axes, which are graphically decorated, are also common.

The axe in the Giresun Museum collection, with the groove decorated with a raised barrel top edge (Fig. 1.4), can be compared with the samples collected by H Erkanal under the "Acemhöyük Type" group (Fig. 5) and dated to the beginning of the second millennium BC. The example of Giresun shows great

similarity with the Sivas axe in this publication.

A similar example of the flat-barreled Poliochni hoard in West Asia Type 12, which is proposed to be dated to the end of the 3rd millennium BC, appears in the Giresun museum collection (Fig. 1.4). On the other hand, a similar example in the Trabzon Museum collection has a narrow angle with the stem, while in the example of Giresun Museum, there are short arms behind the stem hole and the perimeter of the stem hole is grooved.

A similar example with the small axe (Fig. 1.5) in the Giresun Museum collection was found in the Resuloğlu cemetery, at the left chest level of an adult's skeleton. There is also a similar axe in the Metropolitan Museum collection that comes through purchase. These examples differ from the Giresun axe with its rectangular barrel section, concave edges at the top and bottom, and a slightly bulging neck. The Resuloğlu sample is 6.9 cm and the Metropolitan sample is 9.7 cm long. However, it is similar in view of their top view and rounded shaft-holes. In addition, such small axes should be used in the same type of work.

The samples in Rize (Fig. 2.1), Samsun (Fig. 3.1) and Trabzon (Fig. 4.1, 3, 7) museums show a certain form feature since their barrels are drooping downwards from the shaft-hole. A similar axe was found in Karaz and was placed among the axes of the "Martkopi Type" (Fig. 5) with its counterparts in the Erzurum Museum. B. A. Stronach, on the other hand, states that this type of axes appeared mostly in Central Anatolia based on the sample found in Mahmatlar in 1949 and dates to the 3rd millennium BC. The axes from the Rize Museum (Fig. 2.1) are also close to some bronze axes from the Kurgans in *Sachkhere* (Japaridze 1961: pl. 14.1, 15.3, 16.6), as well as to the bronze axes of the similar type from the hoard of *Zeda Ilemi* dated also to the end of the Early Bronze Age (Apakidze und Hansen 2019: 275, 279-281, Fig. 3.1-2; Kvirkvaia and Jibladze 2019: 50-51, pl. 1-1, 1-2; Fig. IV-2, IV-4).

Two examples in the Rize Museum inventory stand out with their hammer-shaped nape (Fig. 2.2, 4). It is usually dated from the end of the 2nd millennium BC to the beginning of the 1st millennium BC. An example uncovered in Novoçerhansk (Russia) dates back to 8-7 centuries BC. Tli samples are dated between the end of the 10th century BC and the first half of the 7th century. It must also be emphasized here that such axes from the bronze hoard finds in western Georgia and in the Koban local variants in the North Caucasus are also known earlier (Apakidze 2006a, 2019b; Sakharova 1976). The few types of iron axes with hammer-shaped necks are also to date to the beginning of the 1st millennium BC.

An example in the inventory of Rize Museum (Fig. 2.3) can be compared with the 2nd millennium BC axes described by H. Erkanal as the Fıraktin type (Fig. 5) in terms of fish tail-shaped nape in this example both the sharp nape is

concave and there are no spurs in front of the stem hole. B. A. Stronach added similar axes found in Horoztepe and Ahlatlıbel into the "Type 2" group and stated that the collective Anatolian samples dated to the 2nd millennium BC could be developed from this type. Also, in terms of similarities, a similar axe (Fig. 3.5) and a smaller axe (Fig. 4.3) in the records of the Trabzon Museum should be noted. An axe from the Rize Museum (Fig. 2.3) is to be inserted under the type 3 of the Kolchian axes. Such axes are common in the Colchian bronze hoards. For example, they are to identify in the hoards of Chakvi, Parzkanakanevi and Dimi etc.

Late 2nd millennium BC and beginning of the 1st millennium BC in the Colchian culture the bronze objects decorated with grapic are widespread (Apakidze 2009: 174 - 181, 232, Fig. 65.1-6, 9, 13 - 15; 66.1-2; Pantskava 1988). The most striking axe example recorded in the Rize Museum inventory draws attention with its line decorations around the body and on both cheeks (Fig. 2.5). A similar axe was recorded near Kars. Although the body structure resembles Colchian type axes (Fig. 5) dating from the 2nd millennium BC to the beginning of the 1st millennium BC, the examples with similar decoration in the Tli/Tlia Cemetery D phase are dated from the end of the 10th century to the end of the 9th century. Colchian bronze axes or Colchian-Kobanian axes with graphic decoration have been examined by L. Pantskava in details (1988). V. I. Kozenkova dates the earliest examples of them to the end of the 2nd millennium BC. (Kozenkova 1990: 78 - 81, Fig. 7; 1996: 94.).

It is known that the Colchian bronze axes appear in different forms in the eastern Black Sea region from 15th-6th century BC (Fig. 5). In the 1930s, these types of axes were called "Koban Type" and a few examples were found in the north, upstream basins of the Volga River in the west of the Ural Mountains and in the west, Crimea and Kiev. In addition, a large number of finds were found in the south of the North Caucasus Mountains, where such axes were heavily captured, and even two examples that were said to have come to a private collection in Germany from

the surroundings of Urmia in northwestern Iran were evaluated. After the number of Late Bronze Age axes from West Georgia clearly exceeded the number of such axes from Norkaukasien, in the literatur these axes are mentioned as Colchian or Colchis - Kobanian.

The Colchian bronze Axes in the Museum of Rize (Fig. 2.2-5) should be dated to the end of the 2nd Millenium and the begining of the 1st Millenium BC. It is possible to date the Kolkhis-Koban type axes (Fig. 2.2-5) in the Rize Museum to the Early Iron Age according to the potsherds found in the field studies carried out in Dikkaya. For later, bronze axes disappear in the Urartu period and are replaced by iron-made axes. G. Kossack claims that these axes belong to the Scythians. It has to be mentioned in this point that numerous and also different types of local axes occur in Colchis during this time.

The axe (Fig. 3.2), which has arms on the top and bottom in front of the shaft-hole in the Samsun Museum collection, was shown among the Late Bronze Age weapons placed between 1400-1190 BC in previous publications. A similar axe that is brought from Samsun Museum and with a missing stem is included in the Giresun Museum collection (Fig. 1.6). H. Erkanal defines this axe type as “Fıraktin Type” (Fig. 5) and is dated to the Hittite Imperial Age. This type of bronze axe was found in the layers of the Post Hittite-Firig period in Alişar. This type of axe depictions, which we encounter in the Hittite relief art, appears in one of the Lion Door reliefs in Malatya Arslantepe. In the relief of the king, who libation in the presence of the gods, two depictions of gods carry an "Fıraktin Type" two-arm axe on their shoulders (Fig. 5). These are axes with straight shafts, nape, slightly curved barrel that expands towards the mouth and decorated with grooves around the shaft-hole. Another interesting example belonging to the Hittite period was found in Chapinuva / Ortaköy. This sample, made of diorite stone, is embroidered on it and its nape has three arms. While the trunk was found in structure C, which was partially fragmented in 2003, in the previous excavation season, the nape part was found outside the structure D, which is 150 m away. It is likely that the axe in question was used as a special item, not as a tool or weapon.

In an example with a groove decoration in the Samsun Museum collection, two projections are seen at the top and bottom in front of the shaft- hole (Fig. 3.3). A solid example with groove decorations around the stem hole in the Amasya Museum collection is dated to the beginning of the 2nd millennium BC.

Another example in the Samsun Museum with a top and groove decoration (Fig. 3.4) was defined by H. Erkanal as the “Acemhöyük Type” (Fig.
5). Similar to the upper-arm axes, we see the warrior reliefs on the pillars unearthed in Hakkâri in 1998. In one of them, a spur at the bottom draws attention in front of the shaft-hole. An example that can be evaluated between axes of the same type and

where the upper edge of the barrel is raised instead of the arm appears in Giresun Museum (Fig. 1.4). There is a similar one in the collection of Ankara-Anatolian Civilizations Museum and it is dated to the 18th century BC. H. Erkanal, who describes these axes as “Tepe Gaura Type” (Fig. 5), places them at the beginning of the 2nd millennium BC.

Although a similarity is considered between the round necked axe in the Samsun Museum (Fig. 3.5) and the Fıraktin Type axe in terms of the shape of the nape, there are no arms in front of the shaft-hole. In this respect, it can also be compared with Colchian type axes. The sharp back of a similar example in the Rize Museum (Fig. 2.3) is concave. B. A. Stronach mostly described similar axes that he encountered in Central Anatolia as “Type 2” and estimated that it was widespread in a wider region by dating to the 3rd millennium BC. Indeed, a

similar example with a bulkier neck appears in the Trabzon Museum records
(Fig.
4.8).

The example (Fig. 3.6), which has an excessively raised barrel upper in the Samsun Museum, can be compared with an example in the Kars Museum collection. This axe is classified as "Tazekent-Kirovakan Type" (Fig. 5). Two analogues of this type are included in the Trabzon Museum collection. One of them draws attention with its cylindrical stem and its flattened barrel (Fig. 4.4), and the other with its broken deformed stem (Fig. 4.6). Raised nape upper edge feature is also present in the axes that H. Erkanal defines as "Tepe Gaura Type" (Fig. 5). However, the long and relatively smooth-edged barrel of this type and the shaft-hole edges thickened differ slightly. A similar example was found at Hasanlu Höyük in the south of Lake Urmia in Iran. This sample, which is 18 cm in length, is shown as a traditional weapon for the 3rd millennium BC Mesopotamia.

The small axe (Fig. 3.7) in the Samsun Museum can be compared with the example of Polatlı, which is very similar in size and shape. Although the Polatlı axe (length 12.6 cm), which is 1 cm shorter than the Samsun sample, was found by the villagers during the soil collection from the mound before the excavations, it is thought that it might have come from a grave that should be dated to the first half of the 3rd millennium BC. The Samsun Museum axe was compared to a similar axe in the Amasya Museum collection in a previous publication, with a slightly longer nape, and was shown among the LBA weapons dated between
1400-1190 BC. In a later publication of the same author, the same axes are dated to the 22nd century BC. Although some samples made of iron are similar in terms of hammer nuclei, they were excluded from the evaluation both in terms of their body structures and their dating at the beginning of the first millennium BC.

The most interesting axe in the Samsun Museum collection is a thin long- bodied specimen with pointed arms up and down on the

sides of the shaft-hole (Fig. 3.8). An example that can be compared in terms of the branches next to the shaft-hole is in the Sadberk Hanım Museum Collection in Istanbul. This sample made of iron is dated to the 4th century AD. However, in this example, both the arms are very short and the nape of the neck is bent and lies in the form of a hook and a stylized horse head is located at the end. A similar axe in the Amasya Museum collection and without arms at the shaft-hole was shown among the LBA guns dated 1400-1190 BC in a previous publication. In a later publication of the same author, this axe was dated to the 22nd century BC.

An example in the Trabzon Museum collection (Fig. 4.7) shows great similarity with the shaft-hole axe found in Horoztepe, dated to the 3rd Millennium BC.

The most interesting axe in the Trabzon Museum collection is the large axe with inlaid metal decoration around the shaft-hole (Fig. 4.9). There is another

similarly shaped but smaller axe in the same collection (Fig. 4.10). Although these samples look similar to flat barrel axes at first glance, they differ due to the tapering of the barrel from the shaft-hole to the mouth and can be dated to the
2nd millennium BC like Colchian axes. The tradition of embellishing bronze surface with alloys with different content also appears with various examples in the mining art of this period in Anatolia.

The prospect of increasing the number of metal weapons belonging to the Bronze Age, which was found in the archaeological researches carried out in the Central Black Sea Region until the 1970s, has been met sufficiently with the
works found in various excavations or museums acquired through purchase in the following years. Shaft-hole axes between the weapons in question form an important cluster. Some of the Resuloğlu Cemetery finds dating to the early
stages of the Early Bronze Age show similarities with the shaft-hole axes
examined
here.

The barrel of an axe found in the Resuloğlu Cemetery is missing. It is stated that this axe fragment found at the mouth of a cube grave was particularly broken. Another broken axe with a missing nape was found in one of the graves unearthed in Ahlatlıbel, on the chest of the skeleton. These examples make it interesting to the broken axe examples studied here. Giresun Museum (Fig. 1.6), Rize Museum (Fig. 2.5) and Trabzon Museum (Fig. 4.5) samples were broken from the shaft-hole and the nape part is missing. Therefore, it comes to mind that the finds in question may have been particularly broken as gifts of dead. If the gifts of the dead were destroyed and placed in the grave in ancient times, some kinds of precautions are taken against the grave robbers, and at the same time, their belongings together with the dead may be symbolically killed.

The semples from Rize Museum (Fig. 2.2, 4) and Trabzon Museum (Fig.

4.8) reflect the nape features of the broken axe found in Resuloğlu Cemetery. In addition, an example in the Samsun Museum collection (Fig. 3.2) has comparable neck features, but differs with the upper and lower arms in front of the shaft hole. A similar axe, which is also among the Horoztepe finds, was once rightly identified as uniquely identified for Anatolia.

It is understood that similar to the four Colchian type axes in the Rize Museum, especially in the western part of Georgia. For this reason, A. Müller- Karpe incorporates the Northeastern Anatolia region into the cultural region of Colchis between the end of the 2nd Millennium BC and the beginning of the 1st Millennium BC, based on the examples of Ordu, Artvin, Possof and Kars. There were those who made this comment before him. However, the fact that these finds are hoard-fund and that they have been transferred to museums or private collections through purchasing makes a cultural region determined by these finds suspicious. With this in mind, it is unthinkable to spread the Colchis cultural region further south by looking at the similarly shaped axe reliefs on the pillars

found in Hâkkari in 1998.

There is an opinion that the Georgian axes are derived from the Anatolian axes of the 2nd millennium BC, considering the grooved decorations on the shaft-hole of bronze axes dated to the 2nd Millennium BC in the Samsun Museum. However, when the spread of bronze axes with shaft holes in Iran and the Caucasus is evaluated chronologically, it turns out that such an idea is groundless.

In a review of 122 metal weapons in Erzurum and Kars museums, it was stated that most of the weapons except copper and arsenic copper weapons dated to the Early Bronze Age should be placed typologically in the transition phase between the Late Bronze Age and the Early Iron Age. It is understood that among these weapons, which were mostly made of arsenic copper and bronze, a small group were bronze alloys with different contents.

In the comparison of the analyzes made on the metal finds obtained from the excavation sites in the Upper Euphrates valley with the samples taken from the copper mines in Anatolia, it has been shown that these finds were made with copper ores obtained from copper deposits in Kastamonu, Rize and Siirt regions. This result indicates that copper ore has been mined and traded since the Chalcolithic period in the east and north of Anatolia. As a matter of fact, in the mountainous and forested area about 9 km southwest of Erbaa district center of Tokat province, an ancient mine quarry that produced copper was found in Gümüşlük during the mining surveys conducted between 1972-1974. During the excavations carried out here, the logs used in the mine galleries were revealed and 14C analyzes were performed on the samples taken. The most recent 14C analyzes yielded the corrected 4650 ± 109 BC. Accordingly, it may have been used at the earliest in the Chalcolithic Age for the copper production of the mine deposit. Although it is suggested that the trade related to mining in Anatolia may have been provided through the nomadic communities in the 4th and 3rd millennium BC, the finds found in the provinces of

Amasya, Tokat and Ordu prove that there are enough settlements in the region.

According to the data obtained from the excavation sites in the south of the Caucasus, metal melting methods started to develop in the Chalcolithic Age. Analyzes of metal objects found in the important excavation sites in West Azerbaijan, Georgia, Armenia and Nachcivan generally revealed that the arsenic copper ore was processed. Arsenic copper items are also known from Armenia and Eastern Anatolia throughout the Bronze Age. For example, while arsenic bronze was common among the metal items found in the Early Bronze Age finds in Eastern Anatolia, in addition to the arsenic copper items, bronze with tin content also began to appear in the later stages.

In the axe reliefs of Hakkâri steles, which are very important findings for the shaft-hole axe examinations, the stance and shape of the shaft can also be

observed. Almost all are straight or slightly curved axe stems. The axeshaft in only two samples is sharply curved and short. Although the tools attached to this shaft are like an axe expanding towards the mouth like others, these tools are thought to be “flat adze” due to the different shaft.

Two of the other axes raised in the Hakkâri steles have a hollow hole around the stem hole, but without a sleeve; one is cheek embossed; both are flat. In one of the axe depictions seen in two of the line decorated steles, the lines drawn on the back of the axe must again represent the grooves around the shaft- hole. The axe in another highly worn stele is flat.

Unfortunately, Hakkâri steles were not found in an archaeological stratification like the axe samples studied here. By looking at the characteristics of the objects in the reliefs, it was concluded that the steles "appear to have been erected for several centuries from the middle of the 15th century BC". However, the processing techniques of the reliefs on the steles are so close to each other that they give the impression of the same master or group of masters. It is possible to assume that the steles with line embroidery are still in the preparatory phase and therefore placed on the same date. Accordingly, these steles can be dated to the 2nd millennium BC, but it is not possible to point to any century within this millennium BC.

Axe samples with grooved edges around the shaft-hole and with a front upper arm appear in the early stages of the Colonial Age in Anatolia. Karum- Kaniş II and Ib, Acemhöyük III examples are the Central Anatolian examples of this type (Fig. 5). The grave in Çagar Bazar, where a dead axe was placed as a dead gift, dates from 1750 to 1700 BC. A similar example was found in Nimrud in a tomb whose dating is controversial. While R. Maxwell-Hyslop defined such axes as "Typ 18" between 17-16 centuries BC, J. E. Curtis dates them between
1550-1500 BC. Whereas similar axes were found in the layers in Ras Şamra (Ugarit) dated between 1450-1365 BC, Tel Açana / Alalah, in Level V, which ended in 1460 BC and in Büyükkale III

in *Boğazköy* (*Hattusha*) with a bulla belonging to I Shuppiluliuma (first half of the 14th Century BC). In the examples in these three places, there is a heel at the bottom of the shaft-hole and this type appears in an axe relief in Hakkâri steles.

Results

In this study, the morphological structure of the research area from west to east will be examined. The river of *Yeşilırmak* and one of its main arms *Kelkit Stream* as well as the *Çoruh/Chorokhi River* together with the Black Sea coast constitute the boundaries of the research area. The mountains of the *Doğu Karadeniz Dağları* extend within these borders. A closer look reveals that the valley systems, which are separated from each other by high mountain ranges, have very difficult conditions and are connected to each other. In most places, the

connection roads, which continue as broad asphalts, but which have not lost their pedestrian way features, continue to be used today. It is clear that these road networks are connected to the market places which are centres of a closed culture and production zones with obvious limits at the micro level, thus creating a natural economic environment. These centres still retain their toponymia that provide clues about their function. *Noğedi* at seacoast of the province *Artvin*, *Pazar* (*Atina*), *Derepazarı* (*Filandoz*) and *Eskipazar* (*Holonte*) at seacoast of the province of Rize and *Dernekpazarı* (*Kondu*), *Çarşıbaşı* (*İskefiye*) and *Şalpazarı* in the province Trabzon are examples of this.

At the macro level, it is possible to communicate with each other and to the more distant habitats through the road networks that are articulated to each other. This system connects the production areas in the *Çoruh/Chorokhi* valley, which is quite challenging but also productive, to the natural economic environment of *Bayburt* on the road connecting the Black Sea coast to Aras and Euphrates habitats in the west, and to the *Batumi* natural economic environment which connects the Black Sea coast to the whole *Caucasus* habitats in the east. The *Kelkit* valley, which extends further west, connects the natural economic environments in the *Çoruh/Chorokhi* valley to the Central Anatolian highlands. This economic communication network in the region is connected to the Black Sea shores via mountain passages. The archaeological findings show that these passages, for example, have been used since the Early Bronze Age in the west around *Ordu-Mesudiye* and *Ünye*, and since the Early Iron Age in the east around *Trabzon - Maçka*and *Rize - Ardeşen*.

It is clear that the southeast area of the Black Sea, which is the research area of this study, is a transition region connecting the Caucasus to Anatolia. This situation has been revealed in the region with some findings previously published. Apparently in the Late Bronze Age and the Early Iron Age, the southwestern Black Sea region seems to belonge to the distribution zone of the Colchian culture. For example, the bronze axes of the Ordu hoard are absolutely identical to objects of the Colchian culture respectively of the Colchis-Cobanian

culture. For this culture S. Reinhold uses the term “Koban-Colchian culture” (Reinhold 2007: 324). Such bronze objects have been discovered numerously in the tombs and hoards dated to the Late Bronze and Early Iron Age in Colchis. Based on archaeological excavations in Georgia in the 20th century, it was found that so-called “Koban axes” are much more common in the South Caucasus.
Therefore, sach axes are defined here as “Colchian Type” (Fig. 5). In the research
area, the hoards of Artvin, Ordu and Posof also contain axes of the same type. In a study conducted in the regional museums, it was found that similar axes were found in Giresun, Rize, Samsun and Trabzon museums.

The most typical feature of Colchian axes are circular rims with groove- shaped reliefs on the sides. The nape of some examples is hammer shaped. Such

examples in the research area can be seen in the inventories of the musaums of Giresun (Fig. 1.2), Rize (Fig. 2.2, 4), Samsun (Fig. 3.3) and Trabzon (Fig. 4.8), as well as among the hoards of Ordu and Posof. Three of the Ordu samples with groove decoration are two grooved, and one of them is three grooved. One of the two grooved samples shows a different character from the others in terms of body form.

The bronze axes with sharp necks and ridges on bouth outer sides are very interesting. These types of samples, defined as "Hancar Type Axe", are evaluated here in Colchian type (Fig. 5). These axes are seen in the Rize Museum inventory (Fig. 2.3), as well as among the hoards of Artvin, Ordu and Posof. In addition, two of the Posof samples have line decorations on the cheeks. In this regard, the Rize sample with a cheek decoration without a back can also be considered in this type (Fig. 2.5).

The bronze Colchian axes are seen during the 2nd half of the 2nd Millenium BC and 1st half of the 1st Millenium BC. In this regard, Colchis axes recorded in the research area are the most important finds of the transition period from Bronze Age to Iron Age. Small differences between these axes should be interpreted as local features.

In the hoard of Ordu there is a specific axe (Hellebarden axe), which is called "Tsaldi" in Georgian. Except Ordu-hoard, such axes have only been discovered in the Kolchian agricultural region. For example, these axes occur in the hoard of Bobokvati, Laituri etc. An analogy of this type, which are not different from the axes used today, is unknown, so this axe appears as a region-specific type.

Considering the archaeological information of the 1930s, it cannot be underestimated what the bronze axes from Ordu to Stockholm suggest to Przeworski. Moreover, although it is not known exactly where and how these finds were found, the researcher drew attention to the cultural relations between Anatolia and the Caucasus 4000 years ago with the not-so-extensive knowledge and via seven axes in Ordu. Today, these relationships

have been revealed with more concrete findings. However, until now archaeologically unexplored eastern Black Sea coast of Turkey has created a large gap between these two regions. New archaeological studies in recent years quickly fill this gap.

On the map showing the types of bronze axes with shaft-holes in Southwestern Asia (Fig. 5), it is seen that Emirdağ type axes are specific to Central and Western Anatolia. Adze type axes, which are defined with examples in Kars Museum, are an axe type foreign to Anatolia and the Caucasus. Despite that there are examples in the Aegeis and North Iran.

Through archaeological surveys conducted in northeastern Turkey, Ordu and Samsun in the west, the south, Bayburt, Erzurum, Kars and Ardahan were put forward, including a large number of the existence of Bronze Age

settlements. No archaeological data from this period has been obtained in other parts of the region until today. The shaft-hole axes recorded in museums that control these empty spaces indicate an important potential for the Bronze and Iron ages of the region, although most of them are not known exactly where they are located. It should also be noted that the finds located in the area marked as Late Chalcolithic are dated to the middle of the 4th Millennium BC and should actually be considered as the first phase of the Early Bronze Age. Finds marked as Bronze Age are generally the places where potsherds belonging to the Early Bronze Age were found and in few of them ceramic fragments belonging to the Middle and Late Bronze Age were found.

For the Turkey's eastern Black Sea region is difficult to say that the systematic and ongoing archaeological research already done. In the museum studies I have been doing for a while, it has been observed that only archaeologists working in the region museums in the region do their best in terms of contributing to the archeology of the region. The results of the archaeological studies conducted in the research area of this thesis for the last few years are also taken into consideration. I personally participate in the Trabzon section of these studies. The potsherds obtained from the finds between Maçka - Gümüşhane and Ardeşen - İspir show the road routes used in the Iron Age and perhaps earlier.

A subject about the transition from Bronze Age to the Iron Age at the end of the 2^{nd} millennium BC in the study area of this thesis is examined here for the first time, although it has been a focus of research in Turkey, Caucasus and in the Eastern Mediterranean for a long time. It is obvious that for the moment, not much can be done with the bronze axes with shaft-holes that we have recorded and known in the museums of the region. Nevertheless, it is important to consider all thesefindings whichwerepartly not been known yet, in the light of known examples from Anatolia and the Caucasus.

It is also importand to continue to study without interruption in the study area, which is neglected to investigate archaeologicaly until now.

სურათები / **FIGURES**

სურ. 1. ბრინჯაოს ცულები გირესუნის მუზეუმიდან.

Figure 1. Bronze axes from the Giresun Museum.

სურ. 2. ბრინჯაოს ცულები რიზეს მუზეუმიდან. 1. ყუამაილიანი ცული;
2-5. კოლხური ცულები.

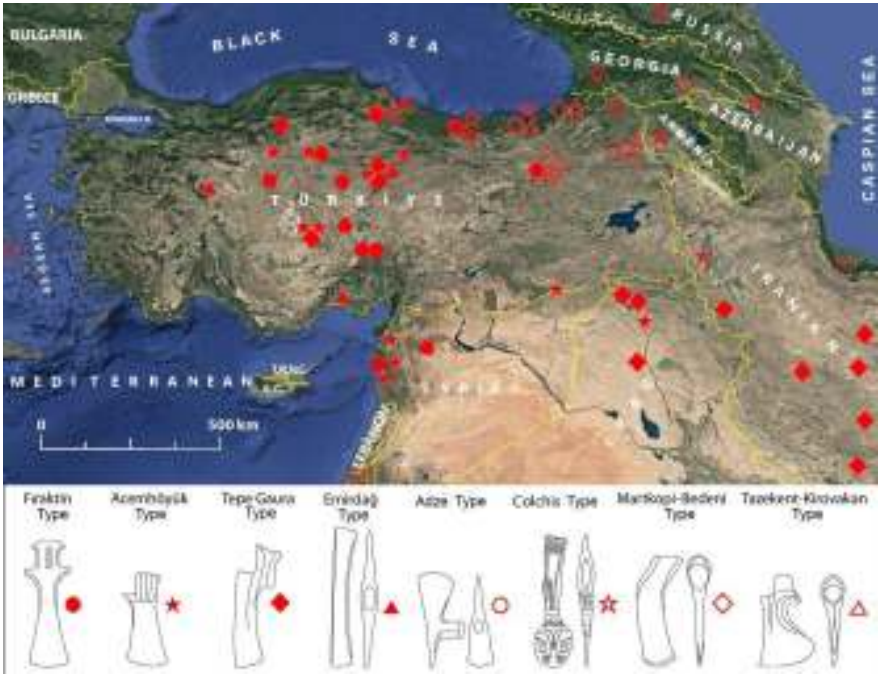
Figure 2. Bronze axes from the Rize Museum. 1. Shaft-hole axe;
2-5. Colchian axes.

სურ. 3. ბრინჯაოს ცულები სამსუნის მუზეუმიდან.

Figure 3. Bronze axes from the Samsun Museum.

სურ. 4. ბრინჯაოს ცულები ტრაპიზონის მუზეუმიდან.

Figure 4. Bronze axes from the Trabzon Museum.



სურ. 5. ანატოლიაში აღმოჩენილი ბრინჯაოს ცულების ტიპები და მოსზღვრე რეგიონებში (ერკანალი 1977, იშიკლი და ბაშთურკი 2016 და ახალი კვლევები).

Figure 5. Types of bronze axes detected in Anatolia and its surroundings

(Erkanal 1977, Işıklı and Baştürk 2016 and new researches).

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