PALAEOLITHIC RESEARCH IN ANATOLIA
-HISTORY, PROBLEMS AND PERSPECTIVES-

A Master's Thesis

by

ELİF NURCAN AKTAŞ

Department of Archaeology
İhsan Doğramacı Bilkent University

Ankara

April 2018

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To my parents Kiraz & Nazım Aktaş

&

The memory of Talât Sait Halman & Nimet Kaya

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The Graduate School of Economics and Social Sciences
of
İhsan Doğramacı Bilkent University

by

ELİF NURCAN AKTAŞ

In Partial Fulfillment of the Requirements for the Degree
of
MASTER OF ARTS IN ARCHAEOLOGY

THE DEPARTMENT OF
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İHSAN DOĞRAMACI BİLKENT UNIVERSITY

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in the Department of Archaeology.

Asst. Prof. Dr. Thomas Zimmermann

Thesis Supervisor

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in the Department of Archaeology.

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Examining Committee Member

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in the Department of Archaeology.

Assoc. Prof. Dr. Marie-Henriette Gates

Examining Committee Member

Approved by the Graduate School of Economics and Social Sciences

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ABSTRACT

PALAEOLITHIC RESEARCH IN ANATOLIA
-HISTORY, PROBLEMS AND PERSPECTIVES-

Aktaş, Elif Nurcan

M.A., Department of Archaeology

Supervisor: Asst. Prof. Dr. Thomas Zimmermann

April 2018

The main purpose of this thesis is to try to evaluate Palaeolithic archaeology according to the academic atmosphere in Turkey and its current situation independent from the events which lie in its background. The Palaeolithic Period covers the first and the longest period of human history. The development of the discipline in both practical and theoretical aspects began in the first quarter of 19th century in Europe. In Turkey, however, it was only a century later that this discipline became popular.

This thesis explores the research history of Palaeolithic archaeology in Turkey and the current status of the discipline, which began in the 1930s under the auspices of the government with the objective of forming and strengthening a national identity. Within this context, academic analysis was based on the data of

material culture; this research then played an important role in constructing a local chronology. In this thesis, the current state of the discipline is also considered. The history and problems encountered during the emergence of this academic discipline are addressed. Inspections of both European and Turkish research agenda, as well as the academic education policies are evaluated and compared. Efforts of public education with the goal of increasing awareness of Palaeolithic Archaeology are also analyzed. Lastly the applicability and contribution of these research projects and publication disseminating Palaeolithic archaeology analyzed and presented.

Keywords: Anatolia, Europe, Palaeolithic Archaeology, Problems of Palaeolithic Archaeology, Research History.

ÖZET

ANADOLU'DA PALEOLİTİK ARAŞTIRMA
-TARİH, SORUNLAR VE PERSPEKTİF-

Aktaş, Elif Nurcan
Yüksek Lisans, Arkeoloji Bölümü

Tez Yöneticisi: Dr. Öğr. Üyesi Thomas Zimmermann
Nisan 2018

Bu tezin amacı Paleolitik arkeoloji disiplinini, arka planındaki olgu ve olaylar silsilesinden bağımsız, günümüz Türkiye'sinin akademik atmosferine ve güncel durumuna göre değerlendirmeye çalışmaktadır. İnsanın kök atalarının düşünce ve hareketlerini yansıtan birincil verilerin analizi esasına dayanan akademik bir disiplin olarak Paleolitik arkeoloji, insanlık tarihinin kaynağının ortaya çıkarıldığı ve sunulduğu yöntemsel bir disiplindir. Avrupa'da Paleolitik arkeoloji disiplininin teori ve uygulama alanındaki gelişimi 19. yy'ın ilk çeyreğinden başlayarak aynı yüzyılın sonuna değin sürmektedir. Türkiye'de ise bu disiplin Avrupa'dan 100 yıl kadar sonra popüler olmaya başlamıştır.

Bu tez, 1930'larda ulusal kimlik oluşturmada önemli bir araç olarak devlet tarafından kullanılarak gelişmeye başlayan disiplinin, Türkiye'deki araştırma tarihi ve günümüzdeki potansiyelini incelemektedir. Bu bağlamda materyal kültür verileri temel alınarak oluşturulan akademik incelemeler, yerel bir kronoloji oluşturmada

büyük rol oynayan araştırmalar ve akabinde disiplinin güncel durumu dikkate alınmaktadır. Bu akademik çalışma ve incelemelerin Avrupa ve Türkiye'deki gelişim tarihi ve oluşum sürecindeki problemlerin yanında akademik eğitim politikaları ayrı ayrı incelenip karşılaştırılmaktadır. Paleolitik arkeoloji disiplinin tanınabilmesi amacıyla halka aktarımı ve sosyal politikalar ile bu alandaki hem geniş ölçekli hem de bireysel tabanlı araştırmalar incelenmektedir. Bu araştırmaların uygulanabilirliğiyle halka aktarım sürecinde kullanılan medya dâhil diğer yayın organlarının katkıları analiz edilerek sunulmaktadır.

Anahtar Kelimeler: Anadolu, Araştırma Tarihçesi, Avrupa, Paleolitik Arkeoloji, Paleolitik Arkeolojinin Sorunları.

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I am appreciative of Dr. Berkay Dinçer who has made a great contribution to my knowledge of Palaeolithic period and encouraged me to study on this topic that was alien to me. Dr. Dinçer helped me with finding out the thesis topic and provided all resources related to the thesis for me.

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Finally I owe the most and indebted to my mother, father and my sister Merve Aktaş who have always supported me and my decisions with great sacrifices during the all my life.

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ABBREVIATIONS

AAA: American Anthropological Association

AÜDTCF: Ankara University, Faculty of Language, History and Geography

BCE: Before Common Era

BC: Before Christ

DÖSİMM: T.C. Kültür ve Turizm Bakanlığı, Döner Sermaye İşletmesi Merkez Müdürlüğü (Republic of Turkey Ministry of Culture and Tourism, Central Directorate of Revolving Fund Management)

EMH: Early Modern Humans

HES/HPP: Hydroelectric Power Plant

Ka: Kilo annum (Thousand years)

Ma: Mega annum (Million years)

MA: Master of Arts

METU: Middle East Technical University

MTA: Turkish Geological Service

PhD: Doctor of Philosophy

SAA: The Society for American Archaeology

TANAP: Trans Anatolia Natural Gas Project

TAY Project: Turkey Archaeological Sites Project

TEMPER: Training, Education, Management and Prehistory in the Mediterranean

TTK: Turkish Historical Society

TUBITAK: Scientific and Technological Research Council of Turkey

UNESCO: United Nations Educational, Scientific and Cultural Organization

WHE: World Heritage Education

YÖK: The Higher Education Institution of Turkey

INTRODUCTION

Prehistory is literally defined as "before history". Human prehistory began with the first appearance of –sensu stricto– humankind on earth and ended with the first instance of recorded history. The Palaeolithic or *Paleolithic*[1] era in the prehistoric period is the earliest and by far the longest period in the era of humanity. The first stone tools to be evaluated as artifacts of material culture were made and used in the Palaeolithic period. This period began approximately 2.6 million years ago on African continent with reference to lithic finds[2] and ended around 10.000 BCE (for Anatolia) with the beginning of the Neolithic age in the Holocene, which refers to the geological epoch after the Pleistocene (Tourloukis, 2010: 15).

Palaeolithic archaeology as a discipline is associated with the fields of anthropology and geology. For this reason, the discipline can be evaluated as an integral part of the historical human and geological past. Palaeolithic archaeology also involves the study of the cultural aspects in regard to the origins and the evolution of the human species. When considered from this point of view,

[1] The term "Paleolithic" is specialized in US English. "Palaeolithic" is mainly used in UK English (e.g., en.oxforddictionaries.com, dictionary.cambridge.org)

[2] There is still an ongoing discussion about whether apes are able to shape (and use!) pebble stones meaningfully. As some studies indicated, chimpanzees and capuchin apes in West Africa manufactured stone tools as hammers. It is morphologically proven with the comparison of hominid's brain and hand anatomy. The hand anatomy is suitable for manufacturing stone tools (Panger et al., 2002: 235-243). If we have had a taxonomic approach to the phenomenon, the lowermost beginning date of the Palaeolithic would have been different. There is not certain *terminus ante quem* of Palaeolithic with regard to manufacturing/shaping the pebble stones. It is always used the usage of stone tools intentionally as base of Palaeolithic *terminus ante quem* (Mercader & Barton et al., 2007: 3045-3047; Wood & Collard, 1999: 13-19).

Palaeolithic archaeology cannot be separated from the archaeology discipline. The beginning of these disciplines in Europe served the same purpose as in Turkey: *Nationalism.* Archaeology, anthropology, and accordingly, Palaeolithic archaeology, all played a significant role in the development of a common cultural, linguistic and historical past – a national past which could fuel nationalist ideologies and unite a nation of different peoples together, in both Europe and Turkey as the beginning of the 20th century. These disciplines were strong tools, which supported the move to engrain a sense of national consciousness within a state (Tanyeri-Erdemir, 2006: 381-383; Arnold, 1990: 464-467).

In Turkey, the history of institutionalized archaeological research can be traced back to the beginning of the 20th century. Various excavations were undertaken so as to reveal and connect the peoples of Turkey to a long and deep historical past in Anatolia, with the goal of fostering a strong national feeling that could be planted within the community. After the proclamation of the Republic, archaeology was particularly seen as a usual instrument for the building of national sentiment, and therefore, was a respected academic discipline (Özdoğan, 1998: 113; Tanyeri-Erdemir, 2006: 384). Archaeology as a means of studying prehistory, or the prehistoric past of Turkey, at this time was still in its infancy, although the first Palaeolithic find was already explored in 1884 (Chantre, 1898: 131-132; Kökten, 1947: 225; 1952: 174; Yalçınkaya, 1980: 397). Following these initial projects, Turkish archaeologists have been contributing to the development of the field extensively, through various surveys, excavations and other scientific projects for the past century. The development of the discipline, therefore, can be divided into three sub-periods, which can be examined and analyzed to precisely understand the evolution of archaeological research in Turkey.

The first period contains studies in Pleistocene archaeology, between the years 1884 and 1940 (Taşkıran, 2016: 43). Archaeological surveys were at the forefront of this research, which marks the beginnings of professional prehistoric research. This period is marked by very few cave excavations. The knowledge concerning archaeological data in Turkey was particularly limited at the time. Eugene Pittard's discovery and research of the Palanlı – Pirun rock shelter in the vicinity of Adıyaman province in 1938 marks the point at which Pleistocene archaeology came more into prominence in Anatolia (Yalçınkaya, 1990: 36; Harmankaya & Tanındı, 1996). In this regard, in 1938, a team under the direction of Şevket Aziz Kansu conducted a prehistoric research in some caves and rock shelters around Ankara and İnönü in Eskişehir province on behalf of the Turkish Historical Society (TTK) (Kansu, 1939: 93-97). The discovery of these places was one of the most crucial discoveries related to the Palaeolithic period. During this initial period of prehistoric research, however, no actual Palaeolithic material remains were uncovered (Kansu, 1939: 94-95; Toprak, 2011: 23). Furthermore, these excavations were only conducted in the Central Anatolian region, as exploratory campaigns rather than formal archeological excavations; they were more like a sounding for exploration, deprived of systematic processes and research purpose. In addition, none of these, with the exception of the İnönü Caves in Eskişehir province, was properly documented (Kansu, 1939: 94-95).

The second period in the development of Palaeolithic archaeology in Turkey occurred between 1940 and 1980. Cave excavations had increased and the resulting scholarship became more visible. İsmail Kılıç Kökten conducted versatile research, which included many parts of Anatolia, except for the Aegean, despite with very limited opportunities. Palaeolithic surveys and excavations became prevalent

throughout the country largely due to the works of several scholars such as Şevket Aziz Kansu, Enver Yaşar Bostancı, and Muzaffer Süleyman Şenyürek (Kökten, 1947; 227-235).

The third period within the development of Palaeolithic research in Turkey involves the most recent studies, beginning from the 1980s until present time. The first and second chapters will generally address and be a commentary on the studies of Pleistocene archaeology, their history, problems and perspectives.

This thesis contains six chapters, which will analyze the problem related to studying Pleistocene archaeology. The first chapter will explain the Pleistocene period and its place within the archaeology discipline. The close relation between Palaeolithic archaeology and anthropology, which is based on the biological and physical evolution of humans, will be explained. This chapter will also include an analysis of the development of cultural patterns reflected in the behavioral features of hominins, until their evolution into *Homo sapiens*. Furthermore, the dispersal of early human migration from inner Africa into Eurasia which is representative of the *Out of Africa* theory will be shortly outlined. The evolution, dispersal, their way of life, and the role of Anatolia in the contribution of this process will be commented on. Additionally, the historical development of Palaeolithic archaeology within the context of Eurasia will be briefly explained. The concept of Palaeolithic periods, worldwide, with the sub-periods of the Lower, Middle, and Upper Palaeolithic, and the cultural variations of local and nonlocal elements, within the context of Eurasia and the Near East, will be also clarified.

In the second chapter, I survey and outline the formation and development of Palaeolithic archaeology as a research discipline. The chapter analyzes the studies of early Pleistocene archaeology in a chronological order with an in depth literature

review. In this context, the most significant and seminal publications produced in the 19th century are reviewed one by one. The publications include the works of of John Frere (1800), Christian Jürgensen Thomsen (1836), Charles Darwin (1859), Sir Josef Prestwich (1860), Jacques Boucher de Crèvecoeur de Perthes (i.e., Boucher de Perthes) and Sir John Evans, Sir John William Lubbock (1865), Sir Edward Burnett Tylor (1871), Eduoard Lartet and Henry Christy's (1875), and Gabriel de Mortillet (1883). This chapter will analyze the contributions of these authors to the development of the field and their impact on its advancement in the academic world at large.

The third chapter aims to shed some light on the history of Palaeolithic archaeology in Turkey. The essential literature in this chapter comprises the contributions of Şevket Aziz Kansu (1939; 1940a; 1940b) and İsmail Kılıç Kökten (1943; 1947), who made a great effort to take initiative and therefore bring the study of Palaeolithic archaeology into the Turkish academia in the 1930s and 1940s. The role of nationalism and how it effected the contribution of the state and/or academia to initiate Palaeolithic research in Turkey during the 1930s will be addressed with the/a reference to the work of Afet İnan (Afet, 1939) and the initiatives of Mustafa Kemal Atatürk. The studies conducted throughout Turkey by such scholars as Şevket Aziz Kansu, İsmail Kılıç Kökten (1951; 1952; 1960; 1962; 1963; 1964), Enver Yaşar Bostancı (1962; 1964; 1965; 1969a; 1969b), and Muzaffer Şenyürek and Enver Yaşar Bostancı (1958) here play a significant role for the expansion of Palaeolithic research in Turkey. Their contributions will be likewise discussed in chronological order. Journals such as *Belleten*, which has largely published articles on the topics of language and history since 1937, issued by the Turkish Historical Society, and the Journal of Ankara University Faculty of Language, History and Geography (i.e.,

Ankara Üniversitesi Dil ve Tarih Coğrafya Dergisi-AÜDTCF Dergisi), are two of the primary sources referred to in this chapter. The conflict between several scholars and Kökten (1960; 1962), and their studies on Palaeolithic archaeology, will be addressed as well. The discourse of Enver Yaşar Bostancı (1971; 1975) about new anthropological discoveries in Turkey will also be noted. The first excavations at Karain and Yarımburgaz Caves (Arsebük & Özbaşaran, 1999; 2000; Arsebük & Howell et al. 2010; Özdoğan, 1990; 2000), two of the most significant excavation projects, as well as other important initiatives towards expanding Anatolian Palaeolithic research history beginning with the 1950s will be addressed. Of particular interest are sure enough rescue excavations and survey Dam Projects, which hold an important place in the archaeological research history of Turkey related to dam construction projects from the 1960s to recent times. Their contributions to this discipline, particularly with reference to the works of Mehmet Özdoğan (1977), Işın Yalçınkaya (1980; 1990; Yalçınkaya & Müller-Beck et al. 1987), and Harun Taşkıran (2002a; 2002b; 2015; 2016) is also put of this work.

The fourth chapter will discuss and analyze the past and present of Palaeolithic research in Turkey. As the first step of the chapter, the percentage of Master's theses and doctoral dissertations written between 1990 and 2017 in the field of Prehistory in Turkey published by YÖK (The Higher Education Institution), will be examined to understand how much academic literature has been produced by university students at the academic level. The chapter will also chronologically review the past and ongoing Palaeolithic research projects. The chapter is divided into five sections: The first section will outline the completed researches such as Kocabaş, Dursunlu, Euphrates and Tigris Basins, Kaletepe Deresi 3, Yarımburgaz Cave, and Öküzini Cave on the basis of their importance for Anatolian Palaeolithic

chronology. In the second section of the chapter, the ongoing excavation and mostly survey projects based on their most current contributions to Anatolian Palaeolithic archaeology will be surveyed and classified.

In the third chapter, the manner in which the Turkish Ministry of Culture and the Turkish Historical Society financially supports Palaeolithic reseach in Turkey, will be further surveyed. The forth section will focus on how much information high school students have about Palaeolithic archaeology. Here some of the problems and the perspective of Paleolithic research and the role of public education in this field in Turkey will be evaluated. In accordance with this purpose, several initiatives launched by local and/or international foundations which educated the public about Palaeolithic and archaeology in general such as TUBITAK and METU in Turkey; UNESCO, The Council of Europe, SAA, and AAA in Europe and the USA will be analyzed and shown one by one. This section will also refer to the TEMPER Project which aimed to educate the public about what Palaeolithic archaeology is (Doughty, 2003; Chowne, 2007; Apaydın, 2016). It will examine to some extend local attempts in educating primary school students about Palaeolithic archaeology, carried out by Gülay Sert (2013). In addition, a basic educational history textbook used by ninth-graders will be examined (Yılmaz, 2015; Önder, 2016). Here, the analysis of the education of pre-university students and the degree of public knowledge about Palaeolithic archaeology will be reviewed. The fifth section of the chapter will review the knowledge and perception of Palaeolithic archaeology in the Turkish public, by media and academia in a critical way. In this context, the approach of the media will be analyzed with reference to Berkay Dinçer (2014b), Çiler Çilingiroğlu and Necmi Karul (2003).

The fifth chapter examines the nature of Palaeolithic archaeology in Turkey and Europe as a whole, and proposes some solutions to the developmental problems of Palaeolithic research and its future. The presentation of Palaeolithic archaeology as an education model in universities in Turkey will be compared with Palaeolithic archaeology in several Europen universities. The subject of the exclusion of Darwin's evolutionary theory from the curricula of primary and secondary education, which is a topic that has recently produced much controversy and made an overwhelming impression on both the public and in mass media, will also be addressed. The chapter will be concluded with some tentative remarks concerning the outlook of the field in Turkey for the future. The sixth chapter is the conclusion section summing up this thesis.

CHAPTER 1

THE MAKING OF PLEISTOCENE ARCHAEOLOGY

1.1 From Hominins to Homo Sapiens

While anthropologists are interested in the typologies of hominins that evolved to become *Homo sapiens*, archaeologists have focused on the origins of hominins by revealing the material culture manufactured by them. Additionally, man's biological evolution and mental development have kept pace with his surrounding environment. As a consequence of this interaction, early tool-maker humans used their hands and brains, progressively without any need for strong teeth (Gamble, 1999: 21-22). This cultural pattern of tool-making provides scholars with needed information regarding this progress. For instance, human beings taught themselves how to make functional tools, they created the ones that are suitable for use in their environment where he found himself in. These specific materials are useful in determining which assemblage was peculiar to which period in a cultural context.

Archaeology, palaeoanthropology and the evolutionary approach were rather recent applications when the first fossil human remains were discovered more than 150 years ago (Stringer & Andrews, 2011: 6-9). The study of human prehistory, combined with anthropology and archaeology, focused on remains related to human

behavior, and palaeo-anthropology has, particularly, concentrated on this aspect of human evolution. For archaeology, the most significant difference between an animal and hominins is that hominins are capable of making tools, whereas animals could only function by instinct. In this concept, material culture created by hominins and/or Early Modern Humans (EMH) is reflected as a particular behavior studied in the field of Palaeolithic archaeology (Stringer & Andrews, 2011: 24-25).

Notable amounts of fossil findings, which demonstrated the early evolution of hominins, have been found in Africa and Eurasia. Ever increasing findings indicate the early evolutionary process of humans and their mobility throughout and out of Africa (Stringer & Andrews, 2011: 100-103). Remarkable early human fossils found in Dmanisi, as well as stone tool kits provide a proof of man's cerebral development, revealing that the earliest ancestors of *Homo sapiens* emerged out of Africa around 2 million years ago (Ferring & Oms et al. 2011: 10432-10436; Gabunia & Vekua, 2000: 787-793).

1.2 Dispersal of Early Humans: *"Out of Africa"*

The African plate joined with the Eurasian plate approximately 17 million years before present. The remains of first fossile apes and primates were found in both Germany and Turkey as evidence of migration (Stringer & Andrews, 2011: 101). Tooth remains belonging to *Griphopithecus* in Germany and a very small group of fossil remains in the Czech Republic and in Paşalar in southwestern Turkey are the most significant indicators of the existence of ape-like primates (Stringer & Andrews, 2011: 101). These discoveries of course do not necessarily demonstrate the evolutionary relationship between apes and *Homo sapiens*, but these finds are

essential in determining the dynamics of dispersal. An ape skull from Ankara, named as *Ankarapithecus meteai* was dated to approximately 10 million years ago (Ma) before present, and is one of the most significant palaeo-anthropological finds, as it has some individualistic characteristics that are associated with Miocene hominoids and living apes. Also, its skull is one of the most complete examples of its kind which is known so far (Alpagut & Andrews et al. 1996: 349-351; Stringer & Andrews, 2011: 104-105).

One of the other earliest traces of early humans comprises stone tools and human bones, which are dated to at least 2.6 Ma, and were found in Africa (Fleagle et al. 2010: 9-74). These hominins migrated from Africa by using the Levantine corridor to Eurasia during the Early Pleistocene era around 1.9 Ma years ago (the date is questioned) and dispersed throughout most of Eurasia (Figure 1) (Fleagle et al. 2010: 5-7). The migration from Africa and the following dispersal throughout Eurasia are particularly associated with the search or associated need for food supply and the manufacturing of stone tools (Fleagle et al. 2010: 6). The Near East as an intersection point for Africa, Asia and Europe, catalyzes main routes for the dispersal of early humans into Eurasia (Leakey & Werdelin et al. 2005: 3-5; Adovasio & Soffer et al. 2007: 117-123). That being said, the Jordan Valley, the Northern Levant, Central Anatolia and the Caucasus have also yielded significant findspots for the Lower, Middle and Upper Palaeolithic periods (Figure 2). Hominin bones and stone tools demonstrate that *Homo erectus* reached the Levant approximately 1.6 million years ago (Bar-Yosef, 1987: 30-32; Tchernov, 1988: 63).

1.3 The Palaeolithic Framework on Grand Eurasian Scale

On a broader scale, traces of the earliest migrations were found in Ubeidia in Israel, Dmanisi in the southwest of Tbilisi in Georgia, and Atapuerca in Spain, throughout Eurasia and Europe. Early humans reached Western Europe around 1.2 million years ago. *Mousterian* tools and early human bones found in the Atapuerca in Spain (Gran Dolina) are the indicators for the existence and habitation of early humans in Western Europe. Atapuerca Sima de Los Huesos is one of the most remarkable prehistoric areas as having species with a wide range of physical variability in terms of sex and age(s) (Carbonell & Bermúdez de Castro et al. 1995: 826-829; Bermúdez de Castro & Martinón et al. 2004: 8-9). The data from Atapuerca shed light on the life expectancy of Middle Pleistocene population by comparing it with other Eurasian Pleistocene sites such as Dmanisi and Ubeidia (Fleagle et al. 2010: 72-74; Ferring et al. 2011: 10432-10436), again illustrating possible routes from Africa to Europe.

Early human remains, such as *Homo erectus* skulls dated to 1.6 – 1.8 million years from Dmanisi in southern Georgia, are evidence of hominin habitation in the Caucasus. In the following Middle and Late Pleistocene periods, early humans had already dispersed across a large part of the Near East and Eurasia (Stringer, 2002: 29-31).

1.3.1 The Lower, Middle and Upper Palaeolithic Periods

The Palaeolithic age (2.5 Ma to 12 Ka) is divided into three sub-periods based on blade-tool manufacturing processes. They are known as the Lower

Palaeolithic, the Middle Palaeolithic, and the Upper Palaeolithic, within the context of particular cultural features. The characteristics of the material culture of each sub-period, however, have their regional peculiarities (Gamble and Gittings, 2007: 98). The first real man-made stone tools that were found in this period belong to the Early and Middle Pleistocene.

The Lower Palaeolithic is dated between around 2.5 Ma and 300 Ka and is characterized with the first stone tools made by early humans in Olduvai Gorge in East Africa. This oldest tool tradition consists of Pebble Tool industries made of simple rounded river pebbles named *Oldowan* technique. These oldest simple tools manufactured by the toolmakers, *Homo rudolfensis* and *Homo habilis* living in Olduvai Gorge and Koobi Fora, were mostly used for food supply and they continued to be used until about 1.6 Ma years ago (Stringer & Andrews, 2011: 208).

The Lower Palaeolithic tool assemblage i.e., hand-axes were named as *Acheulean* after its key site, St. Acheul, in France. These stone tools belonging to the Lower Palaeolithic period were manufactured by *Homo erectus* and *Homo heidelbergensis* both in Europe and in Africa. The shape of hand-axes changed from region to region according to its function and raw material (Stringer & Andrews, 2011: 208-209).

The Middle Palaeolithic, for Eurasia at large, is dated from 300 Ka to 60 Ka years ago[3]. The stone tools of the Middle Palaeolithic period were manufactured and used by *Neanderthals*[4] in western Africa, Asia and Europe. The most distinguished

[3] 40 Ka in another resource i.e., Stringer & Andrews, 2011: 210.

[4] Homo neanderthalensis was a subspecies of Homo sapiens existing from approximately 200.000-35.000 BCE. The name comes from Neander Valley in Germany where their traces were initially found. The species is the closest relative of modern humans. Their traces, such as bones and lithic industries, are known from Eurasia and Western Europe to Northern, Western and Central Asia (Finlayson, 2004: 1-8; Stringer & Andrews, 2011: 154-157).

feature of the process in the tool manufacture is a special technique called *Levallois*[5]. The name of this technique comes from the site in France where it was first identified. This technique is the most significant novelty of the Middle Palaeolithic because it allowed manufacturing flake tools, whose final shapes were well designed geometrically by the toolmaker. Afterwards, it occurred in many local industries throughout Africa, Europe and Asia (Stringer & Andrews, 2011: 210). The tool industries manufactured by *Neanderthals* in the Middle Palaeolithic are named *Mousterian.* The name of this tradition comes from the cave, Le Moustier, in France where it was first recognized. The advanced tools of the *Mousterian* tradition are mostly characterized by knives, scrapers, and points. It is assumed that *Neanderthals* used wood, ivory, bone, and antler to produce tools and goods and also animal skins as clothing (Stringer & Andrews, 2011: 210; Gamble & Gittings, 2007: 98). Another feature of this period is, although still debated, the deliberate interment; practice of some evidence exists associated with the intentional burials dated between 120 Ka and 80 Ka as seen in Qafzeh, Skhul and Tabun (Stringer & Andrews, 2011: 163-211; Mustafaoğlu, 2010: 42-43).

Approximately 40 Ka years ago, in the Middle East and Africa, subsequently after spreading into Europe and the other areas, a new radical change in tool-making transpires. When the previous method in the Lower and Middle Palaeolithic produced just a few tools out of one single block of stone, this advanced procedure enabled to produce many geometrically shaped thin blades from a single core. Thus,

[5] Levallois (*Levalloisienne* in French version): The industry mostly consists of flint tools made with Levallois technique. This technique, used during the Palaeolithic period, is more sophisticated and refined than other early methods. The method was found in the Lower Palaeolithic and yet most was commonly related to Neanderthal Mousterian culture in the Middle Palaeolithic. The method was used in the Levant during the Upper Palaeolithic, even in the Middle Stone Age in East Africa, in Europe, in the Near East, and in India. Levallois cores show some changefulness in their planform but the cores resulted in the production of flakes show uniformity (Lycett & von Cramon-Taubadel, 2013: 1508-1517; Foley & Lahr, 1997: 3-36).

the Upper Palaeolithic is characterized by a distinctive material culture, ranging from approximately 60 Ka (i.e., 40 Ka in Stringer & Andrews, 2011; 210-211) to 10 Ka and varying from region to region (Gamble and Gittings, 2007: 98; Mustafaoğlu, 2010: 34). Lithic tool assemblages of the Upper Palaeolithic are mostly characterized by scrapers, borers, chisels, and knives. There is also an increase in the use of ivory, bone, and antler as materials to make tools along with working clay and basketry. A variety of evidence shows the use of ochre to paint objects, buried bodies and cave walls (Stringer & Andrews, 2011; 213). Regarding social and economic life, camp sites expanded and turned into more permanent households by the beginning of Epi-Palaeolithic. One witnesses greater variety in building materials, e.g., wood, bone, and skin tents. Fire also was used for cooking and providing light (Stringer & Andrews, 2011; 214). Food supply was enhanced with the development of traps, pits, fishing, and boats. The Pleistocene stone tool chronology in Europe is mostly named by French type sites with (*Aurignacian, Gravettian, Solutrean,* and *Magdalenian*) (Stringer & Andrews, 2011; 215). The *Aurignacian* industry is seen across Europe from about 40 Ka to 29 Ka years ago, indicating the beginning of the Upper Pleistocene. The earliest art created by EMH societies (the *Cro-Magnons*) is seen in this period. This era was followed by the industries of *Gravettian* (between 29 Ka and 22 Ka), the *Solutrean* (between 22 Ka and 17 Ka), and *Magdalenian* (between 17 Ka and 11 Ka) from the Lascaux Cave as one of the most famous features. Finally, the *Magdalenian* ended around 11.500 years ago when *Mesolithic* period began (Stringer & Andrews, 2011; 215).

1.3.2. The Palaeolithic in the Near East and Eurasia

It can be suggested that reproduction of *Homo erectus* and the necessity of a better food supply are eventually important factors for dispersal into a better environment, leaving the challenging African plains behind. Undoubtedly, the most suitable and fruitful areas that *erectus* could reach were Asia and Europe. According to recent studies, in East Asia, there were no hominins present earlier than 1.0 – 1.5 Ma (Stringer & Andrews, 2011: 162). Likewise, there are no remains dated before 0.9 Ma in Europe. Therefore, *Homo erectus* dispersed from Africa into Eurasia between 1.6 and 1.2 Ma, as has been suggested by many researchers (Bar-Yosef, 1987: 31). The key sites in the Levant "en route" to Eurasia in the Middle Palaeolithic are Qafzeh Cave, Amud, Kebara, Hayonim, Skhul Rock Shelter, and Tabun (Figure 3). Advanced stone tool artifacts (*Levallois* dominated industries) were employed in these key sites of the Levantine *Mousterian* industry (Bar–Yosef, 1998b: 39-42).

Ubeidiya located on the "Levantine Corridor", in the Jordan Valley, Israel, is one of the earliest sites demonstrating that *Homo erectus* arrived in the Arabian Peninsula ca. 1.5 Ma. The artifacts found in Ubeidiya show great similarities with the assemblages of the Olduvai Gorge, Upper Bed II. The tool repertoire which includes flakes, hand-axes, polyhedrons, core-choppers, and spheroids shows morphological and technological aspects related to the Early *Acheulean* period in Africa (Bar-Yosef, 1987: 31-32).

In the Levant, the detailed chronology of Middle Palaeolithic period is not well established, although it is significant for dating of a great deal of remains belonging to (the) hominins. This large specimen of hominins is frequently

subdivided into *Neanderthals*, i.e., the Tabun – Amud – Shanidar group, and into EMH, i.e., the Skuhl – Qafzeh group (Bar-Yosef, 1987: 33). Surprisingly, there is strong evidence supported with biological studies saying that the Southwest Asian *Neanderthals* arrived from Western Europe (e.g., Howell, 1957; Bar-Yosef, 1987; Stringer & Andrews, 2011: 163).

The Late *Acheulean* period, consisting of the *Levallois* technique and *Mousterian* sequences in the Levant, is interrupted by the presence of *Acheulo–Yabrudian* (*Mugharan* Tradition) including features of the use of *Levallois* technique. The typology of the tools is extensively characterized by the bifaces and the variety of shapes of scrapers, including transverse and canted forms (*déjeté*) with *Amudian* (*Pre-Aurignacian*) characteristics (Bar-Yosef, 1987: 33; 1998b: 41).

The Qafzeh Cave, known for its early *Homo sapiens* remains, is dated to 100 Ka. The evidence, such as stone tools, burials, and human remains belonging to the *Mousterian* up to the *Holocene* levels, are the clearest indicators of an uninterrupted inhabitance until the beginning of the *Holocene* period. Many human fossil remains, from the Lower Palaeolithic to the *Epi-Palaeolithic*[6] periods, confirm an extensive cultural sequence. The sequence of the Qafzeh Cave therefore is an excellent example for the Levantine Palaeolithic period. According to the geographic locations of the sites in western Asia and their dates, it is thought that *Homo sapiens* originated

[6] Epi-Palaeolithic and/or Mesolithic: The Mesolithic or Epi-Palaeolithic is an intermediate culture between Palaeolithic and Neolithic periods. The term Epi-Palaeolithic refers to the culture outside of Northern Europe, when the Mesolithic term was used for the sites in Germany, Scandinavia, Ukraine, Great Britain, and Russia. The Mesolithic is dated to different times in different parts of Eurasia from approximately 10.000 to 5.000 BCE according to post-Pleistocene and pre-agricultural materials from northwest Europe. On the other hand, the materials found in the Levant are dated to between approximately 20.000 and 9.500 BCE. The "Epi-Palaeolithic" meaning was also used for the industries of the Final Upper Palaeolithic in the last glacial period. Some authors state that Epi-Palaeolithic is characterized by late developments of hunter-gatherer. However some authors use the Mesolithic term for various cultures of the Late Palaeolithic. Mesolithic and/or Epi-Palaeolithic are characterized by chipped stone tools called microliths/microlithics which means small stone tools made of bladelets struck off single platform cores different from Aurignacian artifacts (Renfrew & Bahn, 2005: 60-61; Childe, 1996: 1-7; Trigger, 2006: 147-149).

in Africa even earlier than 100 Ka, and spread throughout the world via the Levantine corridor conjoining with western Asia and Northeastern Africa (Stringer & Andrews, 2011: 144). The importance of this site and its date is that it calls into question of how modern man evolved and dispersed. The characteristics of the skeletal fragments indicate that the initial evolutionary development of early sapiens in Skhul and Qafzeh can be traced back to this region and period. Remains dated to the Middle Palaeolithic and the Upper Palaeolithic have been also found in the caves (Bar-Yosef, 1987: 33; Stringer and Andrews, 2011: 162-163). Thus, the Levantine Palaeolithic region is an integral part of the cultural mosaic in the prehistory of the Near East.

During the Late Pleistocene, every region of the world underwent a substantial climatic change. A rapid warming began in 12.500-10.000 BCE (in the Earliest Holocene) and was followed by glacial conditions known as the Younger Dryas Event (12.800-11.500 BCE) (Shea, 2017: 117-118). After this cold snap, warmer conditions turned, continuing and increasing, into the conditions of present day (Shea, 2017: 117-118). This change created more convenient conditions to live in the Levant and its environs. Dry and cold conditions of the "Levantine Corridor" turned into more livable climate (Bar-Yosef, 1987: 34). The climatic balancing with humid conditions by about 12.500 BCE made the arid zones more attractive for hunter-gatherers in the Levant. Two groups, the people of the "Geometric Kebaran" culture which used stone knapping technique, and Mushabians who brought North African lithic flaking technique from the Nile Delta gave Levantine hunter-gatherers a ground for a new culture (Bar-Yosef, 1987: 35). Conclusively, the population dispersal from Northeast Africa played a significant role in the formation of the

Natufian Culture[7] adaptation, which instigated a change so essential that it led to the dawning of agriculture as a new subsistence system.

1.3.3. Early Human Dispersal – The Anatolian Contribution

> "…the Aurignacian originated in Europe and later spread into the Levant. If this is so, then the culture complex should have spread through Anatolia…" (Kuhn, 2002: 206).

The geographic location of Anatolia has a significant role in illuminating both the first migrations of hominid species and their subsequent migration routes, since it is a bridge between continents. The increase in anthropological and palaeoanthropological data coming from the Anatolian plateau has revealed that its location and appropriate atmosphere for living played an essential role in hominid dispersal.

Remains belonging to *Ankarapithecus*, *Griphopithecus*, *Ouranopithecus*, and *Kenyapithecus* species demonstrate that Anatolia was an important migration route in the Miocene era. Fossil hominids combined with two species identified as *Griphopithecus* and *Kenyapithecus* found in middle Miocene deposits in Paşalar and dated to 15 Ma, show that early hominids lived on the Anatolian plateau (Stringer

[7] Natufian Culture: The Epi-Palaeolithic Natufian culture is dated from 12.500 to 9.500 (at the end of Pleistocene and the beginning of Holocene) in the Levant. The most prominent feature of the culture is characterized by the semi-sedentary population before agricultural activity (Bar-Yosef, 1998a: 159; Lazaridis & Nadel et al. 2016: 419). The type site of the Natufian culture is Shuqba Cave in Wadi an-Natuf. The key sites are Shuqba Cave, Tell Abu Hureyra, Ain Mallaha, and Ein Gev. The Natufian culture is preceded by Kebaran culture and followed by Khiamian and shepherd and semi-sedentary Neolithic. The Natufian culture is also found in Jericho having a Neolithic sequence without pottery (Bar-Yosef, 1998a: 169). The culture is characterized by the microlithic industry, Helvan retouch, borers, burins, decorated bone objects, etc. The Natufian culture is divided into two sub-periods as the Early Natufian dated to between 12.500 and 10.800; the Late Natufian dated to between 10.800 and 9.500. Long distance exchange is proven by that obsidian coming from Anatolia and shellfish coming from the Nile valley were found at Ain Mallaha in Northern Israel (Bar-Yosef, 1998a: 168-173).

and Andrews, 2011: 64; Ersoy, 1998: 352-353). A hominid species taking place in palaeoanthropology literature as *Ankarapithecus meteai* and dated to 9.8 Ma (Alpagut & Andrews et al. 1996: 350) is also a significant evidence for the Anatolian contribution in early human dispersal. Skull fragments from Kocabaş, Denizli province belonging to *Homo erectus*, dated to approximately 1.2 Ma, is also proof that early humans used Anatolia as their migration route into Eurasia (Aytek, 2014: 72-75).

According to the latest findings, 490 Palaeolithic sites and findspots in Turkey have been listed by the TAY project (Archaeological Settlements of Turkey), the first electronic gazetteer on this subject in Turkey (www.tayproject.com). Significant information associated with EMH life in the Palaeolithic periods has been provided from Dursunlu, Yarımburgaz and Karain caves (dated to the Lower Palaeolithic), Merdivenli, Tıkalı, Kanal caves, and Beldibi-Kumbucağı (Middle Palaeolithic), as well as Öküzini and Üçağızlı (dated to the Upper Palaeolithic) (Kuhn, 2002: 200-207; Arsebük & Howell et al. 2010: 1-8; Mustafaoğlu, 2010: 274-276).

CHAPTER 2

HISTORICAL DEVOLOPMENT OF PLEISTOCENE ARCHAEOLOGY

2.1 Setting the Scene: Early Studies in Pleistocene Archaeology

The first Palaeolithic finds were identified in England at Hoxne in the last quarter of the 18th century by John Frere. He described flint stones, which he found in 1797, as the flint weapons manufactured by humans who had not yet the ability to use metals, however, he did not provide any timeframe (Figure 4). The article of Frere, titled "Account of Flint Weapons Discovered at Hoxne in Suffolk" was published in *Archaeologia* Volume 13 in 1800 (Frere, 1800: 204-205). This publication is considered to mark the beginning of Palaeolithic studies in archaeology.

Christian Jürgensen Thomsen, a Danish antiquarian, then developed the basic methodology for archaeological studies. Having been appointed by the Danish Royal Commission for the Preservation and Collection of Antiquities in 1807, Thomsen, a former salesman, became involved in archaeology. He published a guidebook for the National Museum of Copenhagen, which has a collection of antiquities amassed from all over Denmark, and was one of the largest and most representative assortments in Europe. Thomsen was invited and commissioned by Rasmus Nyerup

to catalogue the collection for a grand exhibition in 1816. He divided all prehistoric materials into technological and chronological sub-groups, to effectively display the exhibit in a chronological order. He classified the collection in the following order: age of stone, age of bronze, and age of iron, successively (Renfrew & Bahn, 2000: 25; Trigger, 2006: 123). The Museum of Northern Antiquity followed this epoch-making concept applied by Thomsen and opened it to the public in 1819. Therefore, Thomsen designated the exhibit to visitors in this particular chronological order, as Stone, Bronze and Iron Age. His study concerning the "Three Age System", became the fundamental division of archaeological materials into these three major groups, which is still valid today, and was published in Danish as *"Ledetraad Til Nordisk Oldkyndighed"*[8] in 1836 and translated into English in 1848 (Thomsen, 1836: 40-43; Trigger, 2006: 127-129).

In the following decades, Jacques Boucher de Perthes studied stone tools found in the erosion layers and previously unknown animal bones in the Somme Valley of northwestern France. He referenced Sir Joseph Prestwich's geophysical supposition, which was published in the middle of 1841. Boucher de Perthes pointed out that the finds could be Palaeolithic hand-axes, related to the extinct mammoth and the wooly rhinoceros' bones (Prestwich, 1860: 279-280; Frere & Moir, 1939: 28-31; Greene, 1983: 15-19; Trigger, 2006: 143-144; Renfrew & Bahn, 2000: 24). All of these studies did much to lay the foundation for what became an integral part in a growing awareness of antiquity in the 19th century.

[8] The guidebook to Scandinavian Antiquity (Guide to Northern Antiquity) of C. J. Thomsen was published in 1836 to describe his chronology along with comments about the finds. Stylistic analysis is combined with chronology as prove of stylistic development of collective finds from a wide heterogenous culture area as Stone Age, Bronze Age, and Iron Age. The book strongly influenced the development of theoretical archaeology and practice (Thomsen, 1836; Roe, 1970: 26; Renfrew & Bahn, 2000: 25).

In 1859, due to mounting interest in the early prehistory of humankind, geologist Sir Joseph Prestwich, archaeologist Sir John Evans, and Charles Lyell went to several sites in the Somme Valley. As suggested by Perthes, these scientists reached a consensus about the finds, which was found by Frere at Hoxne in 1797, well predating 4000 BCE. That being said British scientific associations like the Royal Society of London and the Geological Society of London agreed that humankind and extinct animals did exist at the same time, far from the present. The studies of Frere and Perthes were published in the *Proceedings of the Royal Society*, while at the same moment Charles Darwin published his iconic *The Origins of Species* in 1859, which can be considered as paving the way towards an evolutionary understanding of archaeology (Renfrew & Bahn, 2000: 24-25; Trigger, 2006: 146; Kartal, 2015: 146-147).

The further developments of Palaeolithic research were soon to follow: In 1863, paleontologist Edouard Lartet discovered that the Palaeolithic era was not a single phase. He determined four different periods, according to several faunal varieties of species, and a group of animals discovered in a cave in Dordogne in southwestern France (Trigger, 2006: 142-148). This study of Lartet was essential, as he established a chronological evolutionary order solely by examining animal bones. His classification based on prehistoric animal bones from the oldest to the most recent was: (1) Cave Bear Age; (2) Mammoth and Whooly Rhinoceros Age; (3) Reindeer Age; (4) Aurochs or Bison Age (Laurent, 1993: 23-26). Felix Garrigou, however, suggested that another fifth age should be added – then called the Hippopotamus Age – in which humans inhabited open sites (Mortillet, 1883: 19; Laurent, 1993: 22-30; Trigger, 2006: 148-149; Kartal, 2015: 147).

In the year 1865, Sir John William Lubbock published his pivotal book titled *Pre-Historic Times*, which was probably the most significant contribution to the development of research in this field during the late 19th century (Lubbock, 1865). He defined archaeology as a hybrid of geology and history. He also clarified what prehistoric archaeology actually should be, and grouped it into periods, beginning with the *'Palæolithic'* [sic!] age, starting with the words below.

> "…Pre-historic Archæology [sic!] may be divided into four great epochs. Firstly, that of the Drift; when man the shared the possession of Europe with the Mammoth, the Cave bear, the Woollyhaired rhinoceros, and other extinct animals. This we may call the "Palæolithic" [sic!] period…" (Lubbock, 1865: 2).

These sentences of Lubbock show how the Palaeolithic can be evaluated and where its place in the chronological order of the prehistoric ages actually is. The aforementioned "Three Age System" established by Thomsen was, therefore, divided into four sub-periods by Lubbock. In his book, he defined the "Palaeolithic" as the first era that was characterized by the mammoth, the cave bear, and other extinct animals, the "Neolithic" as the second, the "Bronze" as the third, and the "Iron" as the forth, defined by the development of elaborate tools and weapons (Lubbock, 1865: 2-3). Lubbock outlined these stages on the basis of technology, chronology, and economy.

Following the publishing of Lubbock's work, Sir Edward Burnett Tylor issued a book titled "Primitive Culture" in 1871 in two volumes (Tylor, 1871). The importance of the book was the use of *"prehistoric"* as a terminological word in English. He comprehensively expressed what prehistoric archaeology is (Tylor, 1871: 54-65; Trigger 2006: 143). His approach to prehistoric archaeology maybe illustrated with the following words:

"…Prehistoric Archæology extends the antiquity of man in low stages of civilization…" (Tylor, 1871: 26).

Significant distinctions were later introduced by Gabriel de Mortillet in his books *"Le Préhistorique"* in 1883 (Mortillet, 1883) and *"Formation de la Nation Française"* in 1897 (Mortillet, 1897). Mortillet identified the cultural classifications of Palaeolithic, such as *Acheuléen*[9]*, Moustérien*[10], and *Magdalénien*[11] (Mortillet, 1883: 16-22; 1897: 193). He labelled the period after the Palaeolithic as the –now anachronistic– *Robenhausien*[12] (Figure 5) (Mortillet, 1883: 367-376; 485-505). Especially geological investigations, instead of archaeological research, were the preferred method used to define possible subdivisions within the Palaeolithic, relying

[9] Achulean (*Acheuléen* in French version): Acheulean is an archaeological stone tool industry produced and used by early humans. The Acheulean culture is typified by peculiar pear-shaped and oval hand axes produced throughout Africa, much of West Asia, South Asia, and Europe during the Lower Palaeolithic. Acheulean technology was developed in Africa 1.7 Ma by *Homo habilis* and also used by *Homo erectus*. The Acheulean was named after the Saint-Acheul site in Amiens in northern France, where the first artifacts were found in 1859, however it was not named as Acheulean. Louis Laurent Gabriel de Mortillet defined and classified the distinctive hand-axe tools as belonging to *L'Epoque de St Acheul* (Mortillet, 1883: 133-145; Mortillet, 1897: 193; Bar-Yosef & Belfer-Cohen, 2001: 19-22).

[10] Mousterian (*Moustérien* in French version): Mousterian is a flint industry manufactured by Neanderthals. Mousterian is dated to Middle Palaeolithic 600 Ka – 40 Ka, the middle part of the European Palaeolithic. The Mousterian culture is characterized by hand-axes, flakes, racloirs (a type of side scraper), borers, points, scrapers, gravers, and Levallois technique or another prepared-core technique to make flint flakes found in all over Europe, the Near East, and North Africa. The type site of the Mousterian is a rock shelter in Le Moustier in Dordogne in soutwestern France (Haviland, 1994: 211-214; Trigger, 2006: 150).

[11] Magdalenian (*Magdalénien* in French version): Magdalenian dated to 17 Ka – 12 Ka years ago is a late culture from the Upper Palaeolithic in Western Europe. The name of culture comes from a rock shelter in Le Madeleine in Dordogne in southwestern France. The culture is typifyed by denticulated microliths, regular blades, specific varieties of scrapers, batons, figurines, perforated carnivore teeth, engraved projected points, and biserial harpoons made of antler, bone and ivory. The major sites are Cave of Altamira and Lascaux in France, Italy, and Eastern Europe (Moldavia and Romania). One of the most famous caves, Lascaux, was adorned with cave paintings by the Magdalenian people (Mortillet, 1883: 392-411; 1897: 238-240; Lartet & Christy, 1875: 139-168; Stringer & Andrews, 2011: 212-215).

[12] Robenhausen (*Robenhausien* in French version): Robenhausen is a Neolithic village in Switzerland. The settlement was a lakeshore – pile dwelling, built by Neolithic hunter gatherers, in 5.000 BCE. Remains of the settlement were protected by marshes. The settlement represents Neolithic and European Bronze Ages. The area was discovered by Jakop Messikommer, who also became the first excavator. The culture in this settlement is characterized by longbows, stone hatchets, stag horn, and ceramics. Also, textile production, braids and seeds for making butter, carved wooden knives, scoops, trowels, and flail were revealed by Messikommer in 1858. Mortillet identified this as a period following the Palaeolithic on the basis of Messikommer's excavations and the remains found at the site (Mortillet, 1883: 485-505; Trigger, 2006: 134-135).

on (geological) stratigraphies to form chronological sequences. In summary, chronological separation played a more important role than seriation (creating or putting finds in a chronological order in the first place) in 19th century Palaeolithic research.

Therefore, beginning with J. Frere, who identified flint weapons used by humans who had not yet the ability to use metal, Boucher de Perthes, who stated that the finds could be Palaeolithic handaxes, and C. J. Thomsen, who adopted the "Three Age System" for archaeology, E. Lartet was then able to establish a time-line based on animal bones, that aligned to a specific prehistoric chronology[13]. J. W. Lubbock and G. Mortillet, however, focused only on material for cultural classification of the Palaeolithic, Neolithic, Bronze, and Iron ages, rather than on the basis of technology and economy. This was due to the fact that technological and stylistic classifications were difficult to use in order to determine Palaeolithic stone tools and their

[13] Hesiod, a Greek poet, lived in 8th century BCE, and mentioned the "Five ages Man" in his book *Works and Days*, which is a didactic poem consisting of 800 lines. He discoursed ages and the aspects of the ages. Hesiod split the ages of man into five periods. The first of them is the Golden Age when the age humankind lived among the gods harmoniously. Humans did not have to work because nature provided plentiful food for them. Humans lived to a very old age and died peacefully. The second one is the Silver Age when men lived for one hundred years as a child under the control of their mother and lived a short time as an adult. The men did not pray to the gods and Zeus. Zeus killed all of them because of their disrespect, and after their death they went to the underworld as "blessed spirits". The third age is the Bronze Age, when men were tough and warlike. Bronze was used by men to create weapons, tools and building. Then they destroyed each other during the wars with their own violence. The forth age is the Heroic Age, when it did not correspond with any metal. The age was a progression of its previous ages. Men lived as heroes with features of semi-gods. The last age is the Iron Age, the time of Hesiod. This age is of pain, destruction, and desolation. The men toil and work during the day and writhe during the night. They dealt with constant trouble and had no joy in living during this age (Fontenrose, 1974: 1-16). The other chronological classification belongs to Ovid. Ovid, a Roman poet who lived during 1st century BCE – 1st century AD, tells a comparable myth in his book Metamorphoses. His expression of the Ages is similar to Hesiod's with the exception of Heroic Age. Ovid describes the Golden Age with peace and justice. In the Silver Age, men discovered agriculture and architecture. The Bronze Age was a warlike age. The last age, the Iron Age, was when men marked their boundaries. They lived in a warlike state and developed mining and navigation (Fontenrose, 1974: 4-7). Also, Lucretius a Roman poet and philosopher who lived in 1st century BCE, wrote that the cultural and technological advancement of man depended on the use of available materials for weapons and tools during prehistory, in *On the Nature of Things* in *Book V*. He describes the earliest weapons as teeth, nails and hands. It is followed by branches and stones, and then fire was used. This period was followed by usage of iron and copper. According to Lucretius, the development of language, clothing, family, and city-states was seen in this period. The men might have found ways to melt the metal and use an alloy of copper and tin (Bailey, 1910: 186-234). The concept of the three-age system of C. J. Thomsen in the 19th century is based on Lucretius's theory.

characterizations, as there was not yet any precedent, for example, to do so. The information regarding how stone tools were actually manufactured was insufficient in order to establish a chronology that was associated with the cultural aspects of these abovementioned finds. Consequently, Palaeolithic archaeology in the 19th century, was a process which aimed towards specifying a more detailed classification system, and in situating finds and features, of a still largely obscure human era, into chronological order. All of these early attempts, however, paved the way towards developing Pleistocene archaeology as an academic discipline.

CHAPTER 3

PALAEOLITHIC RESEARCH HISTORY IN TURKEY

3.1 Whence and Whither

Anatolia has a very rich diversity in regards to Palaeolithic culture. One of the well-known factors, which contributes to this cultural richness, is Anatolia's strategic location at the intersection point of three continents (Harmankaya, 1996: 8). The Anatolian peninsula, as well as Thrace is often quoted as having functioned as a bridge, that had very different ecological setups and paces in terms of human evolution. Thrace and Anatolia, therefore, do play a significant role in the transmission of technologies and ideas from Mesopotamia, Caucasia, and Africa into Europe (Arsebük et al., 2010: 1-3). In this sphere of interaction, Palaeolithic and Epi-Palaeolithic lithic assemblages have represented cultural interconnections in those regions, even in later periods. Within this context, the Anatolian peninsula has provided a variety of cultural materials from different periods for archaeologists to work with.

The earliest object associated with Anatolian Palaeolithic was found in Birecik (Southeastern Turkey, on the Euphrates) in 1884[14] by M. J. E. Gautier and

[14] The actual date is inconsistent in the relevant publications. Chantre published this find for the first time in 1898, giving 1884 as the date of retrieval *"Je n'ai constaté nulle part dans les régions que je*

published by Chantre in 1898 (Chantre, 1898: 132). The tool was dated to the *Acheulean* on the basis of having a typical biface form by Gautier. This very *Acheulean* biface was studied by Kurt Bittel and Kökten again at a later time (Bittel, 1934; Kansu, 1940b: 1; Kökten, 1947: 225-226; Kökten, 1951: 213; Kökten, 1952: 173; Kökten, 1960: 51; Çiner, 1958: 125; Yalçınkaya, 1980: 397; Yalçınkaya, 1990: 35; Yalçınkaya & Özçelik et al., 2009: 6-20; Taşkıran, 2016: 43; Harmankaya, 1996: 9). The tool undoubtedly proved the presence of Palaeolithic communities in Anatolia, (Figure 6a – 6b), although it could not be gone further of which indicated there were chipped stone tools in Turkey.

Palaeolithic archaeology began [as a formal discipline in Turkey] at the beginning of the 20th century when Eugene Pittard and E. Passemard found some Palaeolithic flint-stone tools in the Pirun Adıyaman surroundings, in the vicinity of Euphrates. Unfortunately, there is no certain information about where they specifically collected their findings, nevertheless later publications mention and describe those tools (Yalçınkaya, 1990: 36).

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viens de parcourir de ces ustensiles en roche dure taillés à grands éclats, comme celui que mon ami M. J. E. Gautier à recueilli en 1884 dans les alluvions anciennes des bords de l'Euphrate à Biredjik…" ("I have not found these hard rock-cut tools anywhere in the regions that I have just traversed, like the one my friend M. J. E. Gautier collected in 1884 in the ancient alluviums on the banks of Euphrates in Biredjik…" (Chantre, 1898: 132). Since then, a majority of scholars referred to this date as 1894 and found by Chantre (e.g., Kökten, 1951: 213; Kökten, 1952: 173; Kökten, 1960: 51; Yalçınkaya, 1980: 397-398; Çiner, 1958: 125; Yalçınkaya, 1990: 35; Harmankaya, 1996: 9; Yalçınkaya & Özçelik et al., 2009: 6-20; Taşkıran, 2016: 43-44). The date was correctly written as 1884 by Şevket Aziz Kansu in his article *"Türk Tarih Kurumu Tarafından Yapılan Etiyokuşu Hafriyatı Raporu-1937"* in 1940 and by Kılıç Kökten in an article titled *"Bazı Prehistorik İstasyonlar Hakkında Yeni Gözlemler"*, published in 1947 (Kansu, 1940b: 1; Kökten, 1947: 225). It would appear that 1894 is written by mistake and this fault has been perpetuated ever since.

3.1.1 Political Dimension of Pleistocene Archaeology in Turkey –Before Kökten–

The method by which sources or finds are revealed and made available, is determined by the academic discipline of archaeology, whose procedures endorse that in order to understand the thoughts and actions of our ancestor, the first steps must be a systematic excavation of the primary data. This non-renewable source is always protected and controlled by the governments all over the world as public property, as it documents the past and the ways of life of the ancestral population. In other words, archaeological finds tell the story of the country (Glock, 1994: 70-71).

The nationalistic movement beginning in the first quarter of the 20th century in Europe continued in the new Republic of Turkey in the 1930s. The dedication to Gustav Kossina's book *"German Prehistory: a preeminently national discipline"* and the German Society for Prehistory in Berlin founded by Kossinna at the beginning of the 20th century (Arnold, 1990: 465) resounds with similar examples in Turkey. Prehistory was used to rehabilitate both German self respect after the crisis of 1918 and to instill Turkish nationalism into Turkish people after the War of Independence, in the 1930s e.g., Turkish Historical Society, Turkish History Thesis, and anthropological studies to find an Anatolian link for prehistoric ancestors of the Turks. For the German example, Kossinna's approach in his book's 1921 edition is dedicated as the following:

> "To the German people, as a building block in the reconstruction of the externally as well as internally disintegrated fatherland." (as cited in Arnold, 1990: 465)

Germany's attempt to find a link between the German race and its past, beginning from prehistory, through the approach of Kossinna's theory, is comparable

to the phenomenon of initiating archaeological research in Turkey in response and as a tool to give the citizens of the new republic a unified identity (Özdoğan, 1998: 116-117). The rise of nationalism and afterwards, the efforts to determine that the Turks were a long-established race and that Anatolia was the motherland of this race, were the main reasons behind the emergence of the fields of anthropology and archaeology (Afet, 1939: 245; Tanyeri-Erdemir, 2006: 383-384). These fields were the most significant tools for supporting the Turkish History Thesis, associated with nationalism.

Having been established the Turkish Historical Society on June 4 1930, the aim was to specifically study the history of Turkish civilization, which was at the center of Mustafa Kemal Atatürk's ethno-historical theory known as the "Turkish History Thesis" (Tanyeri-Erdemir, 2006: 382-385). The most essential tools supporting this thesis were archaeology, anthropology and philology, which the Turkish Historical Committee founded in order to research the history of Turks. This thesis was mainly focused on the origins of the *brachycephallic*[15] Turkish race and its supposed superiority. The main approach of this thesis was to intentionally use the prehistory of Turks to determine national history (Afet, 1939: 245; Akurgal, 1956: 582-583). The Turkish History Thesis' approach was an entirely political issue, concentrated on the prehistoric past of Turks, rather than a scientific endeavor with the aim of discovering prehistoric remains without bias. Therefore, the first steps taken to institutionalize the disciplines of archaeology and anthropology were a type

[15] Brachycephallic: The research on the measurement of the skull size on 64.000 people in 1947 made by Atatürk's adopted daughter Afet İnan was compiled in a book titled of "Anthropological Characters of Turkish People and History of Turkey". The book describes the qualities and skull measures of the pure Turkish race. According to results of the research, Laz, Kurdish, and Circassian included, regardless of whether there was a "race unity" in Turkey. The head of Turkish people "brachycephallic", those who were under the measure of 80 were not considered to be Turkish. The aim of this study was considered to be base the national identity of the Turkish race on anthropological evidence (Afet, 1939: 245; Demircioğlu, 1948: 49-57; Demirel, 2011: 130-132).

of governmental project whose goal was to create national pride. Palaeolithic archaeology was in its infancy when the Republic was proclaimed, and remained so for some time as the government preferred to turn to the discipline of anthropology (Özdoğan, 1998: 116-117; Tanyeri-Erdemir, 2006: 382-385). In fact, it used anthropology, together with Palaeolithic archaeology, to help scientifically create a new national identity. Palaeolithic archaeology, therefore, was focused on a limited area so as to explore Turkish racial origins by filling in the insufficient Anatolian Palaeolithic sites map (Tanyeri-Erdemir, 2006: 381-385). For this reason also, Atatürk encouraged his adopted daughter, Afet İnan, to write her doctoral dissertation on the history of Turkey, entitled *Description of Turk* (Özata, 2006: 43).

With political purposes at the forefront, the first excavation projects took place in Central Anatolia. For instance, Ankara and its vicinity were chosen intentionally as the location of first research projects so as to enable a connection between the new capital city of new republic and its first inhabitants (Tanyeri-Erdemir, 2006: 384). The problem was not only the determination of research locations, but also insufficiency of recorded data. While Muine Atasayan surveyed the region around Gaziantep where she lived, Şevket Aziz Kansu discovered some prehistoric places around Ankara. As a consequence of these findings, some materials were collected, but any data concerning the places about which the objects came from, was not recorded (Yalçınkaya, 1990: 36; Minzoni-Deroche, 2002: 26). Therefore, research conducted at this time can be evaluated as centering just upon the discovery of sites, except for those specific projects around Ankara whose designated purpose was the development of Turkish nationalism.

From 1884, when the first Palaeolithic find was discovered in Anatolia, until the 1940s, there were no scholarly or systematic projects such as excavations,

surveys, or publications related to the Anatolian Palaeolithic, carried out, with the exception of a small scale sounding in the deposit section of Çubuksuyu, having been found some chipped stone tools by chance when Etiyokuşu excavation was conducted by Kansu and Von der Osten in 1937. The place, Çubuksuyu in the vicinity of Etiyokuşu which is actually an Early Bronze Age mound, is located in the Ankara basin, and was one of the first excavations for the Palaeolithic period (Harmankaya, 1996: 12; Kartal, 2005: 52). These Palaeolithic finds, the first ones dated to the Middle Palaeolithic in the Ankara province, are not associated with the cultures revealed in the Etiyokuşu mound excavation. The place, the deposit bed of Çubuksuyu where Palaeolithic tools were found, is referred to as the Etiyokuşu Palaeolithic site in archaeological literature, due to the fact that it is located on next to the Etiyokuşu mound (Kansu, 1940b: 2-3). The tools found in 1937, during the excavation, were dated to *Levalloiso-Moustérien* by Kansu, through the evaluation of stylistic aspects (Kansu, 1940b: 4-5; Kartal, 2005: 52-56). The assemblage includes points, scrapers and cores (Kansu, 1940b: 4-5). There is a divergence of opinion about identification of the tools between Kansu and Kökten, with regards to the matter of whether they are hand axes and/or bifaces belonging to *Levalloiso-Moustérien* or *Acheulean* (Kansu, 1940b: 4-5). Having been reanalyzed by Kartal, this divergence was eventually solved (Kartal, 2005: 52-54). It can be seen that the identification of the tools was not clarified since there was no processed examples to compare when they were found in 1937.

With the intention of finding in particular Palaeolithic and Epi-Palaeolithic sites, Şevket Aziz Kansu carried out a survey in İnönü (Eskişehir province), the Salt Lake and Kirmir Suyu in the vicinity of Ankara in 1938 (Kansu, 1939: 93-97). Kansu and his team, which consisted of Muine Atasayan and Kökten, on behalf of Turkish

Historical Society, initially surveyed İnönü, Eskişehir and Kütahya provinces. İnönü region was known to be a region rich in naturel caves; however most of the shelters were used only in later periods, showing traces of Chalcolithic, Bronze, Phrygian, Byzantine, and Ottoman occupation. A satisfactory amount of scrapers and perforators belonging to the Palaeolithic period were, however, collected from Arapören village (Eskişehir province) and its surroundings. In the survey of the Salt Lake located in between Ankara and Aksaray provinces, became only a few limestone points belonging to the Late Middle Palaeolithic *Mousterian* were recorded in 1938. It was considered unnecessary to further extend this specific survey project. In the Ankara province, great quantities of limestone tools were collected from Etiyokuşu and Kirmir Suyu close to Güdül (Kansu, 1939: 94-97; Kansu, 1940a: 267-268; Kartal, 2005: 53-56). However, the documentation and publication of these short surveys were insufficient. It is not known what type of limestone tools had been collected, since no illustrations were mentioned to allow for any typological detection. Despite the obvious limitations in spatial covering and typological discussion, these pioneering studies should be praised as the starting point for the systematic surveying of prehistoric sites.

3.1.2 Scientific [Non Nationalistic] Research Projects –After Kökten–

Palaeolithic research in Turkey attracted serious scholarly attention much later than classical archaeology, which had been launched already in the late 19th century (Özdoğan, 1998: 115). In the first half of 20th century, Pleistocene Palaeolithic studies were considered as a sort of subfield of anthropology and/or

classical archaeology in Turkey (Minzoni-Deroche, 2002: 25). Furthermore, scholars interested in this field were not trained in the appropriate multi-disciplinary perspective, and thus were not able to conduct studies within a global perspective, in line with recent developments in Palaeolithic archaeology in other regions. In addition, the materials found were not evaluated properly, as no sufficient methodology was developed or applied in Turkey, to the discipline at the time (ibid.: 26). Nor was there pre-existing sufficient analogical material or published sources to reference associated with theories and methods that could be applied to the Anatolian Palaeolithic and anthropology (Demirel, 2011: 129-130; Minzoni-Deroche, 2002: 26). Consequently, despite a considerable array of Palaeolithic excavation activities, this particular discipline remained a wallflower amongst the archaeologists of Turkey. Some scholars, however, attempted to focus on the archaeology of early man in Palaeolithic Anatolia through the approach of physical anthropology (Özdoğan, 1998: 16-17; Tanyeri-Erdemir, 2006: 381-384).

Palaeolithic archaeology in Turkish academia was further developed by virtue of a few anthropologists, rather than archeologists, namely Şevket Aziz Kansu, İsmail Kılıç Kökten, Enver Yaşar Bostancı, and Muzaffer Şenyürek (Harmankaya, 1996: 9-10). Palaeolithic investigations began to gain momentum after the Turkish Institute of Anthropology moved from the İstanbul University Faculty of Science to the Ankara University Language, History and Geography Faculty, which established an Anthropology chair in 1935 (ibid.: 9). Şevket Aziz Kansu, who received training in Anthropology in France, after graduating from İstanbul Medicine Faculty, was assigned as director to this newly created institute. He also took the lead in founding a Prehistory Chair with Pleistocene archaeology as the main objective, in cooperation with Anthropology. The so-called "Anthropology Quartet", -Kansu, Kökten,

Şenyürek, and Bostancı– succeeded in organizing both surveys and excavations, in spite of adverse circumstances, such as, the lack of systematic studies at the time (Harmankaya, 1996: 10). Kökten, in particular, embarked on project to record the archaeological remains in most parts of Anatolia, by traversing Turkey on horseback between 1940 and 1949. The project was related to his Associate professorship thesis, titled *"Anadolu'da Prehistorik Yerleşme Yerlerinin Dağılışı Üzerine bir Araştırma"* ("A Research on the Distribution of Prehistoric Settlements in Anatolia"), in which he compiled and collected his data by travelling (Figure 7). He devoted himself to this project, despite such extremely limited resources, even putting his own life at risk. This can be understood from the following sentences:

> "Seyahatimin sonunda bütün zahmetlere dayanan ve Aras nehrine yuvarlanmaktan, gece yolculuğumda süratle giderken birdenbire durarak beni yıkılmış bir köprünün kalmış ayakları yanında ölümden kurtaran (Topuz) adlı hayvanımı hayatımda hiç unutmayacağım. Onun gıda ve bakım hakkını fazlasıyla ödediğim için seviniyorum. Ayrılırken bu sessiz ve sadık arkadaşımın gözlerini ağlayarak öptüm. Hayatımı kurtaran bu mübarek mahluğa ayırdığım bir kaç satırı hoşgörünüz." (Kökten, 1943: 603-604).[16]

Kökten worked under harsh conditions through his own means; he traversed Turkey on horse-back in order to determine and map prehistoric settlements, including Palaeolithic sites, caves, and rock shelters. He accurately mapped and published all then known archaeological sites along with his new discoveries in Turkey in 1952 (Kökten, 1952: 167-173). His article is still one of the most complete reference guides for the distribution of Palaeolithic sites in Turkey.

[16] "I will never forget my horse, whose name is Topuz, enduring all the trouble and saving me from death, from falling into the Aras river by stopping short next to the piers of an overthrown bridge, while I was riding him too fast in the night ride at the end of my travel. Nevertheless, I am glad to know that I have fed him well and maintained his well-being. I kissed his eyes by crying when I was splitting up with him. Look with favor on these several lines that I have spared for this holy animal saving my life." (Kökten, 1943: 603-604).

As mentioned above, the historical development of Palaeolithic research in Turkey originally began with the efforts of the anthropologists Şevket Aziz Kansu and İsmail Kılıç Kökten, before the 1940s. Kökten began his academic career in anthropology by participating in the Etiyokuşu excavation, under the directorship of Von der Osten and Kansu, while he was a student. Afterwards he continued to direct many of his own excavations at Samsun and Dündartepe including Tekeköy where he discovered Epi-Palaeolithic remains found in a rock shelter on behalf of Turkish Historical Society (Kökten, 1964: 18). His comprehensive research of prehistoric settlements in Anatolia was the first effort which resulted in a project that cumulated in mapping all historic places in Turkey. Kökten's map is still used today, with the new additions (Figure 8). Therefore, Kökten's work provided Turkish academia with the first scientific, non-nationalist introduction to many of the key sites for Anatolian Palaeolithic studies. However, as his work was only published in Turkish, Kökten's impact on Palaeolithic archeology in Anatolia was limited to the Turkish academic community, also before the great interest in population movement from Africa to Europe and Asia. Therefore, unsurprisingly, his works were not accessible to non-Turkish speaker scholars studying on the Palaeolithic.

The first more extensive surveys and excavations were launched after the 1940s, expanding into other regions all over Anatolia, where both cave and rock shelter excavations were conducted. In particular, the Mediterranean region rose to prominence with various cave excavations. However, many studies and excavations were limited to small sites and surroundings, and there are hardly any interdisciplinary studies in this era (Taşkıran, 2016: 43-44). The article of Kansu, entitled Prehistoric Research Projects of Turkish Historical Society *(Türk Tarih Kurumu Prehistorik Araştırmaları)*, published in the 9th volume of Belleten Journal,

can be given as a convenient example to illustrate this deficiency. There is no satisfactory description and illustrations of the finds, nor were the finds explained typologically (Kansu, 1939: 93-97) which concurs with the little developed methodology.

The Kızılkaya Cave in Haymana, Ankara province, the Ellice Cave in Felahiye, Kayseri province, and İnönü Cave in Eskişehir province had been excavated before a more systematic research method was implemented in the 1940s (Kökten, 1947: 225-236). A very limited number of Turkish researchers were active at this time, and instead, foreign researchers were the majority of scholars conducting research projects (Özdoğan, 1998: 117-118; Minzoni-Deroche, 2002: 26). Furthermore, anthropologists, geographers, or geologists and laymen, conducted studies on Pleistocene archaeology. Mostly Lower Palaeolithic finds were collected from the surveys, Middle Palaeolithic and a scarcity of Upper Palaeolithic finds were recorded in considerably smaller quantities (Taşkıran, 2016: 43). Some of sites where Lower Palaeolithic finds were collected are Birecik in Şanlıurfa province, Soğanlıdere in Kayseri province, Pirun in Adıyaman province, Burma/Gurma in Antalya province, and Dülük and Metgenge in Gaziantep province (Kökten, 1947: 224). More intensive research was carried out in large cities, such as Ankara and İstanbul, as the first prehistory departments were established at universities in those cities. Consequently, Palaeolithic research in Turkey between 1884 and 1940 was mostly intended to determine the dates of various Palaeolithic stone tools (Taşkıran, 2016: 43), rather than excavations and/or surveys which were deliberatively conducted in order to recognize Palaeolithic periods. After the 1940s, the main purpose of the research projects was to identify Palaeolithic periods in specific regions.

Dülük and Metmenge in Gaziantep are comparably rich sites where a diversity of stone tools belonging to various stages of the Palaeolithic period were retrieved and classified. The first research, which was not an excavation, was done by Muine Atasayan in 1938 and subsequently the systematic excavations were continued by Kemal Erguvanlı in 1945 (Erguvanlı, 1946), in 1946 by Kökten and Bostancı, Refakat Çiner in 1958 (Çiner, 1958), and several times, by Bostancı in 1954 and the 1970s (Bostancı, 1975). These artifacts are mostly characterized by combining *Chellean*[17]*, Acheulean, Micoquien*[18]*, Clactonian*[19]*, Levalloisian, Mousterian, Aurignacian,* and Epi-Palaeolithic features (Kökten, 1947: 234-236; Çiner, 1958: 125-128; Bostancı, 1975: 15-25). This peculiar diversity comprising few "arrow head" (Bostancı, 1975: 17) was named as *"Dülükiyen"* by Bostancı in an article he published in 1975[20]. The Dülük station keeps providing us with Pleistocene materials and was still one of the most active field projects, from 1938 to 1982 (Bostancı, 1961: 111-113; Bostancı, 1983: 49-51). The first research in 1938 was done in order to discover and determine Palaeolithic tools in the region within the

[17] Chellean or Abbevillian (*Chelléen* in French version): Chellean culture, also known as Abbevillian since it was collected similar findings with Chellean culture on the Somme River near Abbeville, is a Lower Palaeolithic culture dated to between approximately 700 Ka and 300 Ka. The culture was defined by G. de Mortillet on the basis of the finds from the type site of Chellean culture in Chelles, near Paris. Chellean culture spread throughout Europe, Africa, Southern and Southwestern Asia. It is represented by primitive implements such as cubic and spherical cores, choppers, implements like axe with a lateral cutting edge and thick stone flakes. Settlements consisted of hunter gatherer men with open sites and caves (Mortillet, 1883: 132-151).

[18] Micoquien (*Micoquienne* in French version): Micoquien dated to 130 Ka and 70 Ka is an industry from early Middle Palaeolithic. The Micoquien is preceded by the Acheulean culture and followed by the Mousterian culture. The industry is mostly characterized by asymmetrical bifaces. The name of the culture comes from La Micoque in Dordogne, France, where the excavation of these materials was found. The Micoquien artifacts spread through Central and Eastern Europe (Peyrony, 1938: 257-283).

[19] Clactonian (*Clactonienne* in French version): Clactonian culture is a European flint tool industry made by Homo erectus from the Lower Palaeolitic and dated to 450 Ka years ago. The culture is preceded by Achulean culture and followed by Mousterian culture. Clactonian culture is mostly characterized by flake, crude flint artifacts, and chopper-tool industries which were found in the Northern Europe and banks of the Nile River in Egypt (i.e., Afro-Eurasia) (Tester, 1984: 15-28; Ashton & McNabb, et al., 1994: 585-589).

[20] The publication is "İnsan Evriminde Okucu Kültürü Anadolu'da Dülükiyen Alt Taş Kültüründe Keşfedilen En Eski Acheuleen Devre Ait Tipik Bir Okucu" (A short English summary of the article is available within the same article between 26 and 27 pages titled Palaeoanthropo-Spear-Culture in Human Evolution One Tipical [sic!] Spear Point in Dülükiyen Culture of Acueuleen [sic!] Period).

first stage of the Palaeolithic archaeology in Turkey (between 1884 and 1940). Although, the subsequent systematic research projects after 1945 was carried out to identify Palaeolithic period in the same region within the second stage of the Palaeolithic archaeology in Turkey (after the 1940s).

Muzaffer Şenyürek and Enver Yaşar Bostancı studied at the Karain and Öküzini caves in Antalya and Palaeolithic caves in Hatay province, which had been explored by German geologists in the 1950s, herein below (Şenyürek & Bostancı, 1958). Previous works conducted by German geologists concentrated on the geological aspects of lithic artifacts, when Şenyürek and Bostancı initiated the archaeological excavations at the Tıkalı, Kanal and Merdivenli caves located in Hatay. Their findings revealed the mostly Middle and lesser Upper Palaeolithic industry of the Eastern Mediterranean expanding the environmental context of sites (Şenyürek & Bostancı, 1958: 147-210; Bostancı, 1965: 19-45; Harmankaya, 1996: 13; Mustafaoğlu, 2010: 280).

The caves in Mağracık and Altındere (Antakya province) where comprehensively researched by Şenyürek and Bostancı in 1958 for the purpose of reaching Palaeolithic layers. Burins, points, concave scrapers, bone tools, round-scrapers, end-scrapers, steep-scrapers, flake-scrapers, and borers belonging to Upper *Levalloiso-Mousterian* and Middle *Aurignacien* were typologically classified and compared to assemblages from the Tabun Cave and Mugharet el-Wad in modern Israel and Jabrud in Syria (Şenyürek & Bostancı, 1958: 171-187). For this site, careful stratigraphic observation was combined with a detailed typological classification of the lithic material.

Belbaşı rock shelter, discovered in 1959, is located near the Beldibi rock shelter in Antalya province. The surveys at Belbaşı and Beldibi were also begun by Bostancı in 1960, within a small scale surrounding, similar to the approach valid for most of the Palaeolithic sites in Turkey during that period. The artifacts comprised core and core scrapers, flake and blade scrapers, tanged points, microlithic tools, borers, and bone tools (Bostancı, 1962: 236-238). They again demonstrate rich cultural diversity in the Mediterranean Palaeolithic. The finds also show similarities with European, African, and Middle Eastern tool industries (Bostancı, 1962: 240-249). Carved stones, fish and human shaped, and wall paintings in the Beldibi rock shelter were an indicator of fishing activity and life style (Bostancı, 1964: 21-28). An article titled *"Beldibi Kazılarında Çıkan Önemli Sanat Eserleri"* ("Important artifacts recovered from Beldibi Excavations") by Bostancı made an inference regarding the way of life of Palaeolithic Man in light of materials found in Beldibi with a mostly hypothetical approach that finds could be related to a belief system, custom and even language of Palaeolithic human (Bostancı, 1964: 24; Kartal, 2003: 36). In a response to Bostancı's publication titled *"Beldibi Kaya Sığınağında Bulunan Üst Paleolitik ve Mesolitik Endüstri –Belbaşı Kültürü–"* ("The Upper Palaeolithic and Epi-Palaeolitic Industry Recovered in Belbaşı Rock Shelter –Belbaşı Culture–") (Bostancı, 1962), Kökten criticized information given about Belbaşı and Beldibi by Bostancı (Kökten, 1962: 137-141). It was the first critical article published on Palaeolithic history, despite the fact that it was also an article likely to be very open to criticism. Kökten's article is one early example of academic scrutiny of published work developed in Turkish academia. The tone of Kökten's article is quite strong and criticizes Belbaşı and Beldibi most severely. The following sentence may illustrate this:

> "Niteleme yolundan şişirilmiş, çevresi ve yurt buluşlariyle karşılaştırılması yapılmamış, yöntemsiz yazıya güzel bir örnek!..."[21] (Kökten, 1962: 141).

Another academic scrutiny of the development of Pleistocene archeological research in Turkey is the hoarding of sites or specific provinces by various researchers in the 1960s. Though many provinces in Anatolia provided abundant finds, they were not deeply explored on account of scholarly jealousy. For instance, two scholars intended to explore the same province and yet envy and competition or personal animosities prevented them from working with each other. From this point of view, it can be clearly seen in following sentences of Kökten the high level of resentment between scholars whose focus was the same areas:

> "Tam yazımı bitirip Müzeler Umum Müdürlüğü'ne teslim edeceğim sırada prehistoryamız ile ilgili bir yazı ile daha karşılaştım. Ne kadar güzel birşey, bu sahada çalışmak isteyen bir arkadaş daha kazanıyoruz. Bu yeni arkadaşın herşeyden evvel başarılı, memleket prehistoryası için hayırlı olmasını bekler ve dileriz. Yalnız, prehistorya araştırmalarına kendisini vermiş bir arkadaş sıfatıyla bilimce akraba, hatta yerce çok yakın, bölüm kapı komşusu olduğumuz arkadaşların gezilerine çıkmadan ve yazıları basılmadan önce benimle konuşmalarını beklerdim. Böyle anî, hele araştırdığım bölgeler hakkında pat diye ortaya çıkmak, dahası var; 20 yılda bulduğum ve bir bölge prehistoryası çıkarmakla meşgul bulunduğum yerlerin (Antalya Bölgesi), ricalarımıza rağmen sınırları içine sokulanları görmek ati için cidden üzücü hareketler olmaktadır." (Kökten, 1960: 50-51).[22]

Further important research projects which contributed to Palaeolithic archaeology in 1960s included the survey of the Mağracık, Şenköy and surroundings

[21] "It is a good case of an unmethodical writing, which was bloated in the sense of characterization and did not make a comparison with the finds of main area and its surroundings!..." (Kökten, 1962: 141).

[22] "I completed my article and was about to submit it to the General Directorate of Museums, then I encountered an article about our prehistory. What a nice news, we are making another friend who wants to work in this field. First of all, we expect and wish this new friend of ours to be successful and be beneficial to our country's prehistory. However, as a friend who devoted himself to prehistory studies I would expect this friend, who is a member and close kin of science and even a very close next-door neighbor to the department, to speak to me before going to such trips and publishing their research. As such, suddenly coming to light about those places I study; more than that, to see those who have entered into the borders of the region I found in 20 years and have been busy forming a regional prehistoric chronology (Antalya region) is really sorrowful news for the future –despite all our pleas against–." (Kökten, 1960: 50-51).

in Antakya province by Bostancı in 1967 and 1969. The collected artifacts consist of several cultures dated to the Lower, Middle, and Upper Palaeolithic periods. The finds of some caves in the neighborhood of Mağracık have *Levallois-Mousterian* and *Aurignacien* characteristics. In Şenköy, they exist together with *Acheulean* and Upper Paleolithic industry, alongside with the tools belonging to the Lower and Middle *Aurignacien* were found. (Bostancı, 1969a: 84-89). In addition, human bones found in the *Levallois-Mousterian* Kanal Cave and the Çevlik Cave in Antakya in 1969 can be counted among the most important Pleistocene discoveries in Turkey. The teeth remains were collected from *Levallois-Mousterian* and Lower *Aurignacian* contexts in 1969 (Bostancı, 1971a: 31-32). The measurements of the tooth draw a parallel between *Neanderthal* individuals of Skhul, Krapina 3, Shanidar, and Peeh de L'Azé. According to Bostancı, the initial anthropological evaluation suggested that a new species coined *"Homo sapiens çevlikiyensis"* had inhabited Çevlik 50.000 years ago (Bostancı, 1971a: 31-35). This exploration is significant as it was an independent evaluation of the find, which differed from the 1930s' fashionable phenomenon of the "Origins of Turks" discussed in the discipline of anthropology. However, there is no more recent data and/or offer that would verity or falsity related to this discovery of Bostancı.

Other projects conducted by Bostancı in 1969 included the investigation of Pirun and Palanlı in Adıyaman province. The cave in Palanlı yielded goat paintings on the cave wall, becoming one of the first wall paintings found in Anatolia with the Beldibi wall-painting. The cave wall painting in Palanlı, hence proof for the *Aurignacian*[23] culture, had been discovered by Eugene Pittard in 1939. The goat

[23] Aurignacian: The Aurignacian culture is the earliest Upper Palaeolithic phase and the earliest modern human culture in Europe. The culture is related to the immigration of modern humans from the Near East. It is dated to 43.000 – 36.000 BCE in Europe and succeeded by the Gravettian. The

painting was initially dated to the Epi-Palaeolithic by Emmanuel Anati, who visited Adıyaman province in 1964. In contrast to Anati, the painting was dated to the *Aurignacian* and *Levallois-Mousterian* by Bostancı, since *Acheulean, Levallois-Mousterian* and Lower and Middle *Aurignacian* materials were found around Pirun. Collected finds corresponding to the Upper *Aurignacian* and *Solutreen* culture has been named as *Adıyamaniyen* by Bostancı (Bostancı, 1969b: 45-63; Bostancı, 1971b: 89-96). Without a more recent approach or fresh data examination of the last publications of Bostancı (1971a; 1971b), the *Adıyamaniyen* culture suggested by Bostancı remained restricted to his four publications, without further discussion.

Many artifacts from the Lower Palaeolithic period to the Neolithic, such as skeletal remains, Pleistocene animal remains, and a variety of Palaeolithic stone tools, including bone tools, bifaces, scrapers, *Levallois* chipped stone and points, microlithic tools and pottery fragments belonging to Neolithic and Chalcolithic periods, were unearthed in Kökten's first systematic excavation of the Karain Cave, one of the most significant places which produced finds belonging to the *Acheulean, Mousterian I-II,* and Early *Aurignacian* (Anonymous, 1973: 1-2; Kökten, 1952: 172). The eight chambered Karain Cave was discovered in 1946, and excavated, with the exception of Chamber A, by Kökten between 1947 and 1973. The most significant chamber of the cave is Chamber E, as it yielded material from the Lower and the Middle Palaeolithic periods (Esin & Benedict, 1963: 340-341). The importance of the Karain Cave excavation is that it was the first systematic Palaeolithic cave excavation until 1985, when excavations with a well-developed methodology were

name of the culture comes from Aurignac in southwestern France. Aurignacian is characterized by leaf points, bone and antler points with grooves, pendants, bracelets, and ivory beads, special perforated rods, and human figurative art. The Venus of Hohle Fels (also known as the Venus of Schelklingen) and the wall painting at Chauvet Cave were made by the bearers of this culture (Gamble, 1999: 299-336; Stringer & Andrews, 2011: 210-223).

restarted by Işın Yalçınkaya with a multidisciplinary team. The Karain Cave excavations thus represented a breakthrough for Turkish Pleistocene archaeology. Cultural sequences of the Upper and Epi-Palaeolithic periods along with the new sequences of Lower and Middle were revealed by Yalçınkaya during these new excavations as well. Human activity was found to have continued uninterrupted into the late periods, such as Neolithic, Chalcolithic, Early Bronze, and Roman periods (Albrecht, 1988: 211-213; Otte & Yalçınkaya et al., 1995: 287-290; Gates, 1997: 245; Yaman, 2012: 167-172).

The Yarımburgaz cave excavation was another most decisive step in the advancement of contributing to the Pleistocene archaeology of Turkey in 1964-1965 (Kansu, 1972: 22-23). In the scope of the first prehistoric survey projects in northwestern Anatolia in 1947 and 1951, Kılıç Kökten with Şevket Aziz Kansu started successive expeditions at Küçükçekmece and Yarımburgaz (Kökten, 1951: 201-202; Kansu 1972: 22-32). The Yarımburgaz Cave consists of two chambers called the lower and upper cave. It was geologically and speleologically researched since the mid-19th century (Taşkıran, 2016: 45). The first study associated with Palaeolithic archaeology was carried out in 1959, again by Kansu. Excavations in the Yarımburgaz Cave extend over in three periods. During the first period, the excavations were carried out by Kökten in 1963 and took place in the entrance of the lower cave. After Kökten's small scale soundings, Kansu started systematically excavating the cave with an exploration of the Chalcolithic levels in the cave complex. In 1964 and 1965, excavations were conducted by Kansu, Kökten, and Necati Dolunay more systematically, with the introduction of several trenches. The excavations in this period demonstrated that the cave was used during the Middle Palaeolithic, Chalcolithic, and Byzantine periods. During these early excavations in

1964 and 1965, the Middle Palaeolithic period was thought to be the oldest phase in the cave occupation. Afterwards, the Lower Palaeolithic levels, which are actually the oldest stages, were uncovered in the following excavations. Since Yarımburgaz Cave is only site dated to the Lower Palaeolithic on the Thracian peninsula, the sequence from there is a key for establishing a Lower Pleistocene chronology. Only three other sites –Petralona in Greece, Gajtan in Albania, and Sandalja in Croatia– provide such similar early horizons (Dinçer & Slimak, 2007: 8).

Öküzini Cave, discovered by Kökten in 1956 in the vicinity of Karain Cave, is another important site for the history of Pleistocene archaeology in Turkey. The cave was excavated by Kökten in 1956 and 1959. Here, all stages of the youngest Pleistocene, the Anatolian Epi-Palaeolithic, were provided by Öküzini. The excavations of 1959 revealed Neolithic, Chalcolithic, and Early Bronze Age layers. Between 1989 and 1999, modern excavations were carried out by Işın Yalçınkaya and her interdisciplinary team (Taşkıran, 2016: 48).

Another site providing data related to Epi-Palaeolithic and Early *Natufian* periods is Direkli Cave in the Kahramanmaraş province. The cave was discovered in 1959 by Kökten, who conducted a small scale sounding at the site. Further research, however, was not done until 2007 when systematic excavations were started by Cevdet Merih Erek (Kökten, 1960: 42; Erek, 2012: 54). The industry of the Palaeolithic layer revealed by Kökten in 1959 shows similarity with the Upper *Aurignacian* of Karain and Öküzini Caves (Kökten, 1960: 48). Direkli Cave has a potential to contribute to Anatolian Epi-Palaeolithic cultures with its finds. The cave has the characteristics of an important place to link up with Anatolia-Levant-Zagros prehistory with its location and cultural aspects (Erek, 2012: 59).

Beginning in 1966, the Keban Dam Project was conducted for the first time by a team from the department of Restoration and Preservation of Historic Monuments at METU (Middle East Technical University), with the involvement of several foreign contributors. Investigations demonstrated that various archaeological communities inhabited this region throughout the ages, from the Palaeolithic to the Medieval Ages. According to Yalçınkaya this research represents the first systematic surveys in Turkey in terms of scope and planning (Yalçınkaya, 1990: 40-42). In the 1970s, new surveys and excavations with the systematic multidisciplinary approaches were again practiced in order to salvage cultural assets in the area where the Keban Dam was to be constructed. Some of the dominant projects in this time are as follows: Keban Dam and Lower Euphrates Projects were the initial projects surveyed intensively the 1970s afterwards (Kökten, 1971; 1974; Özdoğan, 1977; Taşkıran, 2015; 2016). Most of the *Acheulean* bifaces belonging to the Anatolian Palaeolithic in Euphrates Basin were collected in these surveys between 1966 and 1982. In the Euphrates Basin, the excavations started again with Kökten's research projects 24 years later (Kökten, 1971: 13-16; 1974: 1-5), and in the other hydroelectric dam projects such as Karakaya, Atatürk, and the Birecik Dam Projects, to follow.

Lastly, Pleistocene archaeology owes much to Mehmet Özdoğan from İstanbul University Department of Prehistory who made a number of contributions. He conducted extensive surveys in 1977, discovering many sites providing Lower and Middle Palaeolithic finds (Taşkıran, 2015: 115; 2016: 44). In 1979, other systematic surveys, as part of the Lower Euphrates Project, were carried out with cooperation of Ankara and Tübingen Universities, within the scope of the Karakaya and Atatürk Dam Projects. The interdisciplinary team at Şehremuz Tepe was the first

open site excavation in Anatolian Palaeolithic research history (Yalçınkaya & Müller-Beck et al., 1987: 29-30; Harmankaya, 1996: 14; Taşkıran, 2015: 115; 2016: 44).

Thus, scholars who studied the Palaeolithic found a new opportunity to discover further unknown sites. Many sites, especially in the Samsat district in Adıyaman province, yielded Palaeolithic assemblages dating to the Lower Palaeolithic, while other findings from subsequent periods were also discovered. Following these undertakings, H. Müller-Beck, G. Albrecht, and I. Yalçınkaya, within the scope of a Turkish-German joint project, elaborately surveyed Samsat in the Adıyaman province and Kuruçay in the Malatya province, research in both districts were based on previous surveys (Özdoğan, 1977: 115-117; Yalçınkaya, 1990: 36).

In addition to those systematic surveys in this region, the first Palaeolithic excavation in the Şarklı Cave in Dülük district was carried out by Bostancı in 1971. In 1982, a comprehensive excavation and small-scale surveys in Şehremuz Tepe in Samsat were also conducted by Ankara University Department of Prehistory of Ankara University again in cooperation with the Institute of Prehistory at Tübingen University (Yalçınkaya, 1990: 36-37).

Starting with the 1980s, the excavations at Karain Cave were re-launched with the team working at Karain expanding their work towards the neighboring Öküzini Cave by 1985 (Otte et al., 2003: 325-333). In the year 1986, Yarımburgaz Cave excavations were likewise resumed by the İstanbul University Department of Prehistory and the University of California Laboratory for Human Evolutionary Studies after Kansu's small scale sounding in 1964 and 1965. These studies at

Yarımburgaz were carried out with the particular intention to solely focus on Pleistocene archaeology (Arsebük & Özbaşaran, 2000: 5; Özdoğan, 2000: 9-13; Arsebük & Howell et al. 2010: 1).

More Palaeolithic rescue surveys were carried out by Taşkıran within the context of the Carchemish Dam Project. These surveys made a great contribution in identifying the richness of Palaeolithic cultures in the Euphrates Basin, as a potential dispersal route of EMH. The surveys in Carchemish reservoir area revealed that Euphrates basin are really substantial for *Acheulean* bifaces (Taşkıran, 2016: 44-45). Another foremost contribution of these surveys was the determination and introduction of approximately 70 Palaeolithic find-spots dated to the Lower, Middle, and Epipalaeolithic, with the Upper Palaeolithic, however, being conspicuously absent (Taşkıran, 2015: 115; 2016: 44). Furthermore, the researchers conducting these projects published their findings and articles with many foreign languages, which allowed for the data of the Anatolian Palaeolithic to become easily accessible for foreign researchers. When it is compared with the scarcity of articles published in foreign languages in the 1930s and 1940s, this was also a big step for the communication between Turkish and foreign scholars from all over the world. This very availability of data paved the way for multidisciplinary and foreign collaboration various projects in the following.

CHAPTER 4

CURRENT PALAEOLITHIC ARCHAEOLOGY IN TURKISH ACADEMIA AND MEDIA

As shown in the previous chapters, Pleistocene Archaeology has a considerable potential. Despite a wide array of Palaeolithic excavations and survey activities, this particular discipline remained a minor field of study amongst the archaeological endeavors in Turkey. The following chapter aims to discuss the various reasons that may provide an explanation as to why Pleistocene Archaeology has remained in the background in both Turkish academia and the media.

A respectable number of theses are completed in the field of archaeology every year. Master's theses and doctoral dissertations are the first building blocks of a scientific career, and also evidence of which field subject is being studied intensively. In this context, when one examines the number of both Master's theses and doctoral dissertations published on the website by YÖK (The Higher Education Institution of Turkey) up to now[24], it can be clearly seen that those concerning the topic of Palaeolithic archaeology are 28 theses out of all theses in archaeology.

[24] All theses, completed in universities in Turkey, have to be given to YÖK (The Higher Education Institution of Turkey). YÖK publishes the theses, which are open to the public, on its own thesis database, with the rights of publication depending on the author. All theses, associated with the Palaeolithic archaeology, were viewed by us within the scope of this study.

Between 1990 and 2017 in Turkey, both in the fields of archaeology and anthropology, 28 Master's theses and doctoral dissertations on Palaeolithic archaeology were written. Five of these theses are doctoral dissertations, one of them completed in a history department[25] (Arslantaş, 2003). The remaining 23 were written to complete a Master's degree, two of them were done in an anthropology department and one in a Archaeology and Fine Arts department[26] (Umutlu, 2004). In the light of these numbers, it appears that there is a lack of interest in this field. Since whatever sub-discipline in archaeology, Palaeolithic archaeology included, can only advance akin to the number of scientific debates (theses etc.), the number produced since the 1990s seems to be insufficient.

Many excavations and surveys related to Palaeolithic archaeology have been carried out by academicians for the purpose of establishing a more precise chronology. After the 1980s, modern systematic excavations and surveys have been conducted through interdisciplinary studies, at sites that provided the basis of Anatolian Palaeolithic chronology by providing exact data. Few of them, which have been excavated for approximately 30 years by Turkish academicians, play a significant role in for the Anatolian Palaeolithic cultural agenda. These excavations will be briefly addressed and put in chronological order, partly using the chronology table created by Taşkıran (Table 1).

[25] The doctoral dissertations related to Palaeolithic archaeology in the history department is "Economical condition of Anatolia in prehistorical [sic!] ages (from Paleolthic [sic!] to Assyrian Trade Colonies period)" (Tarih öncesi dönemde Anadolu'nun iktisadi durumu, Paleolitik Çağ'dan Asur Ticaret Kolonileri dönemine kadar).

[26] The Master's thesis about the Palaeolithic period written in the department of Fine Arts is "Examination the paleolithic age narration methods and their interpretion [sic!] on ceramics art objects and surfaces with up to date materials" (i.e., Paleolitik çağ anlatım yöntemlerinin incelenerek seramik sanat objelerinde ve yüzeylerde, güncel malzemelerle yorumlandırılması).

4.1 Completed Research Projects of Turkish Academia and Contributions to Palaeolithic Archaeology

4.1.1 Kocabaş

In recent years, one of the most significant finds are several fragments of a *calvarium* (skullcap) (Figure 9) belonging to *Homo erectus* recovered in the village of Kocabaş, province of Denizli. The fossils were dated to 510 ± 0.05 Ka, with the Thermoluminescence method at first, following the dating of the travertine deposits in this area (Kappelman & Alçiçek et al. 2008: 110). Palaeomagnetic method and cosmogenic nuclide method were tried on the fossil remains to determine the age more precisely. According to them, the Kocabaş fossil had to be re-dated to between 1.1 and 1.3 Ma, (Lebatard & Alçiçek et al. 2014: 13-14). It was recently dated to between 1.2 and 1.6 Ma after the paleomagentic, stratigraphic and sedimentological studies of the region (Aytek & Harvati, 2016: 84). The methodology indicates that Kocabaş fossil belongs to a *Homo erectus* group different from Middle and Upper Pleistocene species (Lebatard & Alçiçek et al. 2014: 9-10; Aytek, 2014: 66-67). Thus, these fossil skull fragments are so far the most ancient human findings in Turkey. Particularly fascinating is the diagnosis of *Leptomeningitis Tuberculosa* (TB) on the surface of frontal bone. Diagnosis of the lesions as being caused by tuberculosis is important, as it is the first indicator of the presence of this disease here in Anatolia (Kappelman & Alçiçek et al. 2008: 113-114; Aytek, 2014: 77; Taşkıran, 2015: 114). Kocabaş is therefore to be put in the earliest section of the Anatolian Palaeolithic chronology, being dated to approximately between 1.2 and 1.6 Ma according to the updated studies on it (Aytek & Harvati, 2016: 84).

4.1.2 Dursunlu

Another site that sheds light on the still obscure very early Pleistocene periods is Dursunlu, located in the Akşehir district in the province of Konya (Figure 10). Dursunlu is one of the oldest Lower Palaeolithic sites, dated to approximately 1 Ma. Researchers from the University of California at Berkeley, Ankara University and the Turkish Geological Service (MTA) started to conduct systematic studies there in 1993 and 1994. Archaeological and palaeontological deposits are situated in lignite beds. A diversity of plant macrofossils and micro-faunal remains were discovered. Lithic assemblages mainly consisted of quartz tools (Güleç & Howell et al. 2002: 82-85). The chipped stone industry made by *Homo erectus* is not characterized by bifaces (Kuhn, 2002: 200-207; Taşkıran, 2015: 114). The existence of these artifacts at Dursunlu provided conclusive evidence of the existence of hominins in the Central Anatolia in the early Pleistocene (Güleç & White et al. 2009: 19-20).

4.1.3 Euphrates and Tigris Basins

In the Carchemish Dam reservoir region, due to the last dam constructed on the Euphrates River between 1996 and 2011, extensive surveys were conducted by H. Taşkıran. Approximately 70 sites yielding bifaces typologically belonging to the Middle and Upper Acheulean were detected with during these investigations (Taşkıran & Kartal, 1999: 49-50; Taşkıran, 2002a: 395-397; Taşkıran, 2015: 115).

Despite the richness of Euphrates Basin, the Palaeolithic potential of the Tigris Basin in the same region was unknown until these surveys conducted in the 2000s. As a result of surveys carried out by Taşkıran in scope of the Ilısu Dam

Project, a considerable number of sites that yielded *(Acheulean)* biface tools were found (Taşkıran, 2002a: 427-429; 2002b: 8-10; Taşkıran and Kartal, 1999: 49-50).

The great number of finds within the Euphrates and Tigris Basins did not, however, help dating the Acheulean culture more precisely in this region. The only information on this subject was provided by Minzoni-Déroche, who researched the geomorphology and compared it with the Euphrates terraces in Northern Syria (Minzoni-Déroche, 1987: 275-295; ibid. 1988: 591-594). She made observations about the quaternary terraces around Gaziantep and collected some Acheulean bifaces in the conglomerates formed on these terraces. The material retrieved from the quaternary fluvial formation is dated to ±300 Ka. The bifaces collected from the quaternary fluviatile are dated to the Middle Acheulean, approximately ±700 Ka (Minzoni-Déroche, 1987: 275-295; ibid. 1988: 591-594; Taşkıran, 2002a: 426-428; 2002b: 8-10; ibid. 2015: 115; Taşkıran & Kartal, 1999: 50). Therefore, the the *Acheulean* remains of the Euphrates Basin and the Tigris Basin are to be dated later than Dursunlu site.

4.1.4 Kaletepe Deresi 3

Kaletepe Deresi 3, located on the eastern slope of the volcanic Göllü Dağ in central Anatolia, is another old site shedding light on the Lower Palaeolithic chronology of Anatolia. Twelve archaeological layers were found in excavations conducted between 2000 and 2006. The Lower Palaeolithic assemblage is characterized by the distinguished obsidian tools (Figure 11) made with *Levallois* technique (Kuhn & Dinçer et al. 2015: 6-8). Bifacial hand-axes in small size was thought to have dated to the Late *Acheulean* or to the Middle Palaeolithic (Kuhn &

Dinçer et al. 2015: 6-12). Kaletepe Deresi 3 is dated between 1 Ma and 160 Ka, and shows an undisturbed stratigraphy from the Lower Palaeolithic *(Acheulean)* to the Middle Palaeolithic *(Moustérien)* (Slimak et al. 2008: 100-108; Kuhn, 2009: 434-435). According to Taşkıran, Kaletepe Deresi 3 and its biface tools with Upper *Acheulean* characteristics should be later than Euphrates and Tigris Basin (Taşkıran, 2015: 115).

4.1.5 Yarımburgaz Cave

Yarımburgaz cave is located in the Thracean part of the Marmara region, and, as mentioned before, is the most significant cave excavation in Turkey. The archaeological excavations were conducted in three different periods since it was discovered. The excavations in Yarımburgaz revealed that the oldest layers of the cave belong to the Middle Palaeolithic period in the first stage of the excavation. The second stage of excavation activity was directed by Mehmet Özdoğan in 1986 (Özdoğan & Koyunlu: 1986: 4-6). Özdoğan proposed a profound re-dating of the site. According to Özdoğan's stratigraphic assessment, the lowest strata have to be dated much earlier, to the Lower Palaeolithic period (Özdoğan, 1990: 385-387) since the chipped pebble tools that belong to the beginning of the Middle Pleistocene could be dated to 1 Ma years ago (Arsebük & Özbaşaran, 1999: 59-64; Özdoğan, 2003: 179-183). The third stage of the excavations was carried out by Güven Arsebük and Clark Howell between 1988 and 1990, however the stratigraphy of the second period excavations did not change. The excavations in the upper chamber of the cave indicated the presence of remains from the Byzantine and Chalcolithic periods, as well as occupation during the Neolithic, Epipalaeolithic, Upper, Middle, and Lower Palaeolithic periods (Figure 12) (Arsebük & Howell et al. 2010: 1; Taşkıran, 2016:

46). As far as Taşkıran's chronological scheme is concerned, Yarımburgaz should postdate Kaletepe Deresi 3 (cf. Taşkıran, 2015: 116).

4.1.6 Öküzini Cave

Öküzini Cave is another significant site that is located 1 km northeast of the Karain Cave (Figure 13), representing all of the phases of Anatolian Epi-Palaeolithic. Discovered and first excavated by Kökten in 1956 (see Chapter 2). Modern and systematic excavations were carried out by Işın Yalçınkaya between 1989 and 1999 with an international team (Otte & Lopez-Bayon et al. 2003: 325-341). In these new excavations, in which 60 C14 dates were retrieved, the stratigraphy of Kökten was completely changed and four new archaeological phases were determined, three of which belong to the Epi-Palaeolithic. In the fourth and last phase, finds from the Late Neolithic, Early Chalcolithic and the Roman period, along with those of the Epi-Palaeolithic, were obtained (Otte & Lopez-Bayon et al. 2003: 326-338; Taşkıran, 2015: 117). The cave was used as a cemetery after Epi-Palaeolithic. The Öküzini Cave together with the Karain Chamber B is placed at the end of the Upper Palaeolithic *Aurignacien* in Anatolian Palaeolithic chronology table (Taşkıran, 2015: 117).

4.2 Ongoing Research Projects and Contributions to Palaeolithic Archaeology

4.2.1 Karain Cave

The Karain Cave is the cave that best represents the Palaeolithic period of Anatolia, as it is possible to see the cultures of the Lower, Middle, Upper, and Epi-Palaeolithic periods in the deposits to an overall height of about 11 m. Moreover, the cave was occupied in the Late Neolithic, Chalcolithic, and Early Bronze Ages, as well as during the Roman period. For this reason, the Karain Cave, similar to the Yarımburgaz Cave is one of the most important cave excavations not only in Turkey, but for the Near East at large.

After Kökten's discovery and excavations between 1946 and 1973 (Kökten, 1952: 172), new excavations, made with modern excavation systems and interdisciplinary collaboration were initiated in 1985, with an international team under the direction of Işın Yalçınkaya. Excavations (now under H. Taşkıran) are still continuing in the E and B chambers of the cave (Figures 14a – 14b), with the goal to turn Karain into a reference site for Anatolian Palaeolithic archaeology (Taşkıran & Özçelik et al. 2017: 521-538).

With the new excavations, the *Lower Palaeolithic Tayacien, Clactonian, Acheulean,* and the *Middle Palaeolithic* were identified. The fossil remains of *Neanderthals* were also provided from the layers dating to the Middle Palaeolithic (Taşkıran, 2015: 116). *Proto-Charentian, Charentian,* Karain type *Mousterian,* the *Upper Palaeolithic Aurignacien,* and Epi-Palaeolithic were the other identified cultures. This uninterrupted variety of layers in the Karain is dated to between 500 Ka and 15.500 years (Otte & Yalçınkaya et al. 1995: 290-297). The Karain Cave

chronology extends to younger Pleistocene levels than Yarımburgaz (cf. Taşkıran, 2015: 116).

4.2.2 Üçağızlı Cave

Üçağızlı Cave, one of the youngest Palaeolithic sites in the Anatolian plateau, is located in the southernmost part of Anatolia, the province of Hatay. Üçağızlı Cave reflects best the Anatolian Upper Palaeolithic period. The cave was first discovered and excavated by A. Minzoni-Déroche in the mid 1980's (Minzoni-Déroche, 1992: 89; Kuhn, 2004: 251; Güleç & Baykara, 2014: 153). Excavations have continued under the direction of Erksin Güleç since 1997 (Figure 15).

The earliest Upper Palaeolithic levels in the excavations were named as the "Initial Upper Palaeolithic", well known from Ksar 'Akil in Lebanon and dated from roughly 29 Ka to at least 41 Ka (Minzoni-Déroche, 1992: 91; Kuhn, 2004: 254-257; Güleç & Baykara, 2014: 155; Güleç & Özer et al. 2017: 361). Other Early Upper Palaeolithic levels, dated to 33 Ka and 28 Ka, show similarities to the *Ahmarian* culture of the Near East (Minzoni-Déroche, 1992: 95; Kuhn, 2004: 254-256; Güleç & Baykara, 2014: 151-153).

The resuming of excavations at Üçağızlı Cave along with Karain and Öküzini in 1997 was an important effort for the advancement of Palaeolithic studies in Turkey. The rich repertoire of finds collected from the cave indicates a 12.000-year uninterrupted occupation. The analysis of human teeth found in the Üçağızlı Cave showed that the individuals living there were similar to modern humans, though with some archaic features (Güleç & Baykara, 2014: 165-166). In the Anatolian

Palaeolithic chronology table, Üçağızlı Cave is placed between Öküzini, which is younger, and Karain B, which is older than Üçağızlı (Taşkıran, 2015: 117).

4.2.3 Direkli Cave

Direkli Cave, located in the province of Kahramanmaraş, is another Epi-Palaeolithic cave site excavated in recent years. The cave was discovered and excavated by Kökten for the first time in 1958 (see Chapter 2), while new and systematic excavations were begun again in 2007 by Cevdet Merih Erek. The 5th and 7th layers of the cave in the new excavations reflect an Epi-Palaeolithic culture parallel to the Early Natufian of the Near East. The C14 date of the 7th archaeological stratum is given with 10.730 BCE (Erek, 2012: 58-60). This carbon date is also equivalent to the Late Natufian culture of the Near East. This late date puts Direkli Cave in the upper bracket of Taşkıran's chronology table.

4.2.4 Palaeolithic Surveys in the Gaziantep, Konya and Hatay Provinces

Research was again conducted in 2011 by Erksin Güleç and her team to detect Palaeolithic finds in Gaziantep and Hatay provinces after an array of research projects carried out in the second half of the 20th century (Çiner, 1958: 125-129; Minzoni-Déroche, 1988: 591-594; Güleç & Özer et al. 2013: 257-258). From Başpınar district in Gaziantep, the tool corpus is in *Levallois* technique, dated to the Middle Palaeolithic (Güleç & Özer et al. 2013: 258-259). The assemblages of Samköy, Çatak and Yakacık villages were characterized by the Middle and Lower

Palaeolithic, including *Acheulean* bifaces (Güleç & Özer et al. 2013: 260-263). The finds illustrate that Sinanköy and Yakacık villages were workshops implemented in the Lower and Middle Palaeolithic (Güleç & Özer et al. 2013: 261-263). The finds discovered from a survey in 2011, in the Hatay province do not provide any examples pertaining to the Paleolithic (Güleç & Özer et al. 2013: 263), however the surveys in 2012 indicated that the region was occupied by the EMH and was home to raw material sources and workshops (Güleç & Sağır et al. 2014: 92). The corpus in the workshops detected between Yayladağ and Şenköy districts include tools dating to the Lower and Middle Palaeolithic (Güleç & Sağır et al. 2014: 92). A widespread occupation of EMH originated from the Levant was recognized (Güleç & Sağır et al. 2014: 92). According to the team who surveyed the region, the Palaeolithic in Hatay province was influenced from the Levantine cultures with the humans migrating from the south (Güleç & Sağır et al. 2014: 92). The surveys in Konya province done in 2012, which were conducted in order to recognize fossil remains dated to the Miocene Era, also identified finds from the Lower and Middle Palaeolithic (Güleç & Sağır et al. 2014: 91).

4.2.5 Pınarbaşı Rock Shelter

Pınarbaşı rock shelter in the Konya plain sheds light on the Epi-Palaeolithic period not only in the Central Anatolia but also in the Palaeolithic chronology of Anatolia as a whole (Baird & Asouti et al. 2013: 175; Kartal, 2003: 37; Yaman, 2017: 18-19) in terms of being the only place dated to the Epi-Palaeolithic period in the Central Anatolia (Kuhn & Dinçer et al. 2015: 2). The environment is surrounded by caves and rock shelters lying in the limestone hills of Bozdağ as a buffer against

the volcanic Karadağ in the Konya plain (Baird & Asouti et al. 2013: 179). Around Hotamış lake a wetland environment, in a rock shelter, small sized soundings were excavated and deposits earlier than Late Neolithic were identified. One of the distinctive aspect of the site is Epi-Palaeolithic graves discovered in this excavation. The earliest burial in the site, Grave 13, is dated to the Early Natufian between 16 and 15 Ka (Figures 16a – 16b) (Baird & Asouti et al. 2013: 180-185). The Burial 13 belongs to an adult male, *c*. 25-29 year old (Baird & Asouti et al. 2013: 180). Analyzes on the burial indicates that hunting techniques sharing between central Anatolia and the Levant (Baird & Asouti et al. 2013: 181). The second burial, Grave 14 dated to a period of several centuries (Baird & Asouti et al. 2013: 181). The Burial 14 belongs to an adult male older than the male in Burial 13 (Baird & Asouti et al. 2013: 181). The Grave 14 (Figure 17a) is especially specific because it was buried with a considerable collection of grave goods placed in a tortoise shell (Baird & Asouti et al. 2013: 182). The body and grave goods enwrapped with a basketry made of sedge (Baird & Asouti et al. 2013: 182). Grave goods consist of numerous *Dentalium*, 140 pieces of *Dentalium dentalis*, four *Nassarius* beads and three bone beads covered with red ochre (Figure 17b) (Baird & Asouti et al. 2013: 182). The coordination of the *Dentalia* resembles the coordination of *Dentalia* in the Natufian head coverings of El Wad burials (Baird & Asouti et al. 2013: 182). Thus, it seems that these kinds of practices in central Anatolia may have shared similarity with the Levant. Furthermore, the burnt material related to head shows practices associated with ritual purification reflecting ritual practices associated with the dead (Baird & Asouti et al. 2013: 182). The corpus of the Pınarbaşı site mostly includes microlith tools comprised of bladelets, flakes and small sized cores characteristic of Epi-Palaeolithic (Baird & Asouti et al. 2013: 185-189; Yaman, 2017: 19). Pınarbaşı is an

essential reference in terms of indicating human behaviour on the plateau from the Late Glacial through the Early Holocene and the development of the hunter gatherer communities' settlements in central Anatolia (Baird & Asouti et al. 2013: 202-204). As a result, strong interactions based on ritual practices between central Anatolia and the Levant suggest that the movement of EMH in Epi-Palaeolithic period was between in these two regions.

4.2.6 Palaeolithic Surveys in the Sakarya Province

The surveys in Sakarya province undertaken between 2013 and 2015 shed light on the presence of Palaeolithic period sites in northwestern Anatolia (Kartal & Karakoç et al. 2015: 9-10; Kartal & Erbil et al. 2016: 387; Kartal & Erbil, 2017: 87). The corpus comprises of a large number of tools made with the *Levallois* and *Clactonian* techniques (Kartal & Karakoç et al. 2015: 10-17; 2016: 391). It shows that the region was mostly occupied in the Middle Palaeolithic, although there are a few artifacts dating to the Lower and Upper Palaeolithic periods (Kartal & Karakoç et al. 2015: 10-17; Kartal & Erbil et al. 2016: 391). The research made in 2015 indicated that the region was occupied in the Lower, Middle, Upper and Epi-Palaeolithic periods (Kartal & Erbil et al. 2016: 391-399; Kartal & Erbil, 2017: 88-94). The corpus mentioned includes tools belonging to the *Mousterian* culture manufactured by *Homo Neanderthal* (Kartal & Erbil, 2017: 95) resembling the assemblage of the Middle Palaeolithic in Karain Cave (Kartal & Erbil et al. 2016: 395-396; Kartal & Erbil, 2017: 91). Moreover, chopper tools dated to the Lower Palaeolithic show similarity with the finds of Yarımburgaz Cave (Kartal & Erbil, 2017: 94).

4.2.7 Palaeolithic Surveys in the Kırıkkale and Çorum Provinces

Surveys in Kırıkkale and Çorum provinces carried out between 2012 and 2015 aimed to scrutinize the traces of EMH and fossil remains from the Pleistocene era (Sağır & Özer et al. 2014: 136-138; 2015: 23-24). The finds did not contain any recognizable Palaeolithic tools in Kırıkkale and Çorum provinces and their vicinities in surveys implemented in 2013 and 2014 except for a few *Levallois* cores dated to the Middle Palaeolithic period in the survey implemented in 2012 in Bahşili district of Kırıkkale province (Sağır & Özer et al. 2014: 136-138; 2015: 23-27; 2016: 145-149). The surveys conducted in 2015 in Mecitözü and İskilip districts in Çorum province revealed that the region was occupied by EMH in the Lower and Middle Palaeolithic which were characterized by the tools with *Levallois* technique (Sağır & Özer et al. 2017: 284-285).

4.2.8 Palaeolithic Surveys in the Denizli Province

Having found *Homo erectus* skullcap fragments in the Kocabaş district in Denizli province in 2002 (Kappelman & Alçiçek et al. 2008: 110; Lebatard & Alçiçek et al. 2014: 9; Aytek, 2014: 66), in 2014 and 2015, surveys aimed to recognize Palaeolithic tools manufactured by this species (Özçelik & Kartal et al. 2016: 377-378; Özçelik & Vialet et al. 2017: 505-506). The tools characterized by the Lower Palaeolithic comprise *Clactonian* chipped stones and one *Acheulean* bifaces (Figure 18) (Özçelik & Kartal et al. 2016: 380-382; Özçelik & Vialet et al. 2017: 507-511). Although several tools pertaining to the *Mousterian* culture of the Middle Palaeolithic were found in the survey conducted in 2014, the team did not

recognize tools from the other stages of the Palaeolithic except for the Lower Palaeolithic in the survey in 2015 (Özçelik & Kartal et al. 2016: 382-387; Özçelik & Vialet et al. 2017: 513).

4.2.9 Palaeolithic Surveys in the Muğla and Çanakkale Provinces

In order to determine the range of fossil bed in Western Anatolia and to discover the evidence of fossil human presence in the Aegean region, surveys were conducted in Muğla and Çanakkale provinces between 2012 and 2015 (Özer & Sağır et al. 2014: 297; 2015: 279; Özer & Baykara et al. 2016: 323; Özer & Sağır et al. 2017: 315). Rich fossil remains belonging to the Middle and Upper Miocene eras, along with some clues of fossil human existence were explored in the surveys carried out in Muğla province in 2012 (Özer & Sağır et al. 2014: 297-299). A tool thought to have dated to Palaeolithic period was found in the Pleistocene surveys in 2013 conducted in one of the caves in Ölüdeniz district of Muğla province so as to find EMH presence in Palaeolithic period (Özer & Sağır et al. 2015: 282-283). The surveys started in Çanakkale province in 2014, and they revealed a few flint stone tools which were thought to have dated to the Lower Palaeolithic, some quartz blade tools thought to have dated to the Middle Palaeolithic and a variety of flintstone blades and flakes dated to the Early Upper Palaeolithic (Özer & Baykara et al. 2016: 326-327). In 2015 surveys in Çanakkale, many finds dated to the end of the Middle Palaeolithic and beginnings of the Upper Palaeolithic were revealed (Figure 19) (Özer & Sağır et al. 2017: 317). A biface and some chipped stone tools having

Middle Palaeolithic features are promising in terms of an occupation in the Middle Palaeolithic (Özer & Sağır et al. 2017: 318).

4.2.10 Palaeolithic Surveys in the Van Province

Van province located in the easternmost part of Turkey is important in terms of proximity to Dmanisi where one the oldest Palaeolithic sites outside Africa is dated to approximately 2 Ma (Ferring & Oms et al. 2011: 10432-10436; Gabunia & Vekua, 2000: 787-793; Stringer, 2002: 29-31; Baykara & Dinçer, 2016: 539-540). In 2014, the first surveys started in order to determine presence of Palaeolithic period and continued in 2015 (Baykara & Dinçer et al. 2016: 539; 2017: 295). During these surveys, a variety of obsidian tools, hand-axes, cores and flakes with *Levallois* technique and chipped tools with *Clactonian* technique from the Middle and mostly Lower Palaeolithic were revealed (Figure 20) (Baykara & Dinçer et al. 2016: 541-549). The corpus which includes tools made with *Acheulean* technique shows a more recent period than the one in Ankara (Baykara & Dinçer et al. 2016: 548). The surveys conducted in 2014 revealed that the obsidian sources in the vicinity of Van province were used for the raw material extraction (Baykara & Dinçer et al. 2016: 549). In 2015, the surveys implemented in the same area uncovered a substantial corpus which includes numerous tools dated to the Lower and Middle Palaeolithic (Baykara & Dinçer et al. 2017: 297-303). Sixteen new Palaeolithic findspots demonstrating that the easternmost of Turkey were occupied by EMH in Pleistocene period were discovered in the survey conducted in 2015 (Baykara & Dinçer et al. 2017: 312). The corpus comprises bifaces and the tools made with *Levallois*

technique dating to both the Lower and Middle Palaeolithic period (Baykara & Dinçer et al. 2017: 297-313).

4.2.11 Palaeolithic Surveys in the Aksaray and Niğde Provinces

Surveys in Aksaray province, in Central Anatolia, revealed Lower Palaeolithic tools made in *Clactonian* and *Abbevillian* techniques (Figure 21) (Yaman & Aydın et al. 2017: 117-118) and a *Levallois* core asserted to have attributed to the Early Middle Palaeolithic period (Yaman & Aydın et al. 2017: 111-118). The first expeditions in 2015, in which *Levallois* and *Abbevillian* type tools were recognized, show that the Aksaray province was occupied by *Homo erectus* in the Lower Palaeolithic (Yaman & Aydın et al. 2017: 116-118).

In Niğde province, one of the other Palaeolithic sites in Central Anatolia, prehistoric surveys conducted in 2014 and 2015 aimed to determine camp sites and workshops related to obsidian sources already known (Balcı & Çakan, 2017: 1). The corpus comprises many obsidian tools including tools made with *Levallois* technique (Balcı & Çakan, 2017: 8). Distribution of a few Palaeolithic finds in a wide area indicates that the region was occupied by EMH (Balcı & Çakan, 2017: 16).

4.2.12 Palaeolithic Surveys in the Karaburun Peninsula in İzmir Province

A large scale survey project documented many artifacts belonging to a wide range of time periods such as Neolithic period, Chalcolithic period, Early Bronze age, Late Ottoman time and Early Republic period in the Karaburun peninsula in

İzmir province was commenced in 2015 (Çilingiroğlu & Dinçer et al. 2016: 1-6; Çilingiroğlu & Uhri et al. 2017: 151-165). It is significant that a tool discovered in this survey represents the first archaeological material dated to the Lower Palaeolithic in Aegean Anatolia (Figure 22) (Çilingiroğlu & Uhri et al. 2017: 165). A tool made in *Levallois* technique was also found which is thought to have dated to the Middle Palaeolithic period (Çilingiroğlu & Uhri et al. 2017: 164). The flake-based microlitic technology dominative the assemblage in the Mordoğan district of Karaburun peninsula is thought to be Epi-Palaeolithic or Pre-Pottery Neolithic (Çilingiroğlu & Dinçer et al. 2016: 3-6).

4.2.13 Palaeolithic Surveys in the Western Black Sea Region

In 2016 and 2017, some surveys were conducted to identify the Palaeolithic period in the Ereğli district, in Zonguldak province, in the Western Black Sea region of Turkey. Research projects are prominent in evaluating the Palaeolithic period in the region. Survey projects were carried out by specialists from Bülent Ecevit University and presented in two international symposia: 10th International Symposium on Underwater Research "Black Sea Archaeology" in 2016 and IIIth International "The Black Sea in Antiquity and Tekkeköy: An Ancient Settlement on the Southern Black Sea Coast" in 2017 (Mustafaoğlu, 2016: 34; Kartal, 2017: 20). In 2016, four find spots and six caves were identified in the scope of Palaeolithic surveys in the vicinity of Heraclea Pontica (G. Mustafaoğlu, personal communication, January 25, 2018). The corpus including tools from the Middle Palaeolithic in which there are no tools in *Levallois* technique and the Upper Palaeolithic shows that the region was used by EMH (Mustafaoğlu, 2016: 34). A few

tools collected from Akkaya village are dated to the Middle Palaeolithic. In Dadalı village, numerous tools manufactured in low quality and a variety of debitage tool fragments demonstrate that the area was a workshop (G. Mustafaoğlu, personal communication, January 25, 2018). The finds of the first research in Tekeköy A Cave conducted by Kökten in the 1940s was reexamined and attributed to the Epi-Palaeolithic period by Kartal (Kartal, 2003: 35-37; 2017: 20). The research projects play an important role in order to shed light on Palaeolithic period of the Black Sea region.

4.2.14 Palaeolithic Surveys in the Kütahya Province

Within the scope of Kureyşler Dam Salvage Project, a series survey projects were implemented in order to identify Palaeolithic period in the northwestern Anatolia, between Eskişehir and Kütahya provinces between 2013 and 2017. In the survey, 54 Palaeolithic sites in which the corpus is characterized by mostly the Lower Palaeolithic tools along with a small quantity of tools from the Lower Palaeolithic and were determined (Dinçer, 2016: 50; Dinçer, 2017: 267-268). The corpus including Middle Palaeolithic tools manufactured in the *Levallois* technique is limited (Dinçer, 2017: 268-273). Surveys conducted in two different areas in Kütahya province revealed that two different technologies coexisted at the same time in the area. The main feature of the Middle Palaeolithic in the region is different raw materials which caused *Levallois* cores to be dissimilar lithic technologies (Figures 23a – 23b) (Dinçer, 2016: 50-53; Dinçer, 2017: 268-275). The survey projects in the region play an essential role with regard to identify Palaeolithic period in the

Northwestern Anatolia where it had not researched until systematical surveys starting in 2013.

4.2.15 Palaeolithic Excavations in the Keçe Cave

Keçe Cave located in Elbistan district of Kahramanmaraş province was discovered by Cevdet Merih Erek in 2012. In the survey, it was identified chipped stone tools belonging to Upper Palaeolithic and wall painting in which human, animal and geometrical figures was painted with red and black ochre and some figures was incised on the cave wall (Figures 24a – 24b) (M. Karakoç, personal communication, January 24, 2018). M. Karakoç stated that Keçe Cave shed light on the Upper Palaeolithic period with the wall paintings that it is rarely seen in Anatolia and the Near East (M. Karakoç, personal communication, January 24, 2018). The first excavation in the cave was started in 2015 and is still continuing since then (Figure 24c). The team revealed five different geological stratigraphies during the excavations. It has been thought that the studies in Keçe Cave to be pursued in the future will enable significant data associated with the Upper Palaeolithic in Anatolia (M. Karakoç, personal communication, January 24, 2018).

4.2.16 Palaeolithic Surveys in the Bursa province

In order to address the presence of the Palaeolithic period in Northwestern Anatolia, a survey started after the discovery of the Şahinkaya Cave in Bursa province in 2007 (Figure 25) (Dinçer, 2014a: 159). Earlier surveys (in the 1950s) in the region had not registered Palaeolithic sites systematically. Thus, no Palaeolithic

presence was recognized with the chance discovery of the Şahinkaya Cave in 2007 (Dinçer, 2010: 2; Dinçer, 2014a: 159-161). The assemblages of the region, which include a variety of tools mostly made with *Levallois* technique, were collected from three different find spots such as Belen Tepe, Topbaşı, and Gâvur Evleri with five find spots (Dinçer, 2010: 3-8; Dinçer, 2014a: 162-170). Belen Tepe is the only place dated to the Lower Palaeolithic with *Acheulean* tools (Dinçer, 2014a: 174-175). Results of the surveys conducted in the mountainous area in Bursa province play an important role characterizing the Palaeolithic of Northwestern Anatolia (Dinçer, 2014a: 162-175).

In the light of the information summarized here, the excavations and surveys which were conducted from the 1980s to the present day have contributed greatly to the formation of a concise Anatolian Palaeolithic chronology. They have demonstrated that the Lower and Middle Palaeolithic cultures were particularly very rich and present in all regions of Turkey. Lower Palaeolithic cultures, including *Tayacian* and *Clactonian* lithic industries and *Acheulean* and *Micoquian* bifaces are widespread in Anatolia, both in open camp sites and in cave stratigraphies. The *Mousterian* culture, which characterizes the Middle Palaeolithic period is encountered both in open-air sites and in cave deposits especially in the Mediterranean, Southeastern Anatolia, Central Anatolia, and Black Sea regions.

In recent years, the existence of Epi-Palaeolithic cultures in Anatolia has been determined with excavations in the Öküzini, Karain Chamber B, Üçağızlı, and Direkli caves. Epi-Palaeolithic traces were found also in the lowest strata of pre-Pottery Neolithic settlements, such as in the Hallan Çemi mound in the Batman

province and Körtik Tepe mound in the Diyarbakır province excavations in Southeastern Anatolia (Starkovich and Stiner, 2009: 41-55; Özkaya, 2009: 6-7). Despite this rich occurrence of the Lower, Middle and Epi-Palaeolithic periods, the Upper Palaeolithic is poorly documented in Anatolia. According to the finds documented from the excavations, Upper Palaeolithic cultures are limited to only the Karain Chamber B, Kanal and Üçağızlı Caves, in spite of the fact that there are more than 59 Upper Palaeolithic sites known on the TAY Project (Turkey Archaeological Sites Project) list (Güleç & Baykara, 2014: 150-156; Harmankaya & Tanındı, 1996; Kuhn, 2002: 204-205; Yaman, 2016: 34-38).

4.3 Financial Situation in the Palaeolithic Projects

For the current situation, the financial support of the government is not effective enough to support the surveys that need to be conducted, which are the most integral part of all archaeological projects including Palaeolithic projects. Most of the archaeological projects in Turkey are financially supported by the Ministry of Culture/DÖSİMM, the Turkish Historical Society and/or TUBITAK. Although the financial support of the Ministry of Culture has increased, particularly between 2000 and 2014, year by year (Figure 26), many projects are being carried out either with economic difficulties or end earlier due to economic reasons. In recent years, TUBITAK gives financial support to some projects if it is accepted the projects by the committee. For instance, there exist a few projects financially supported by TUBITAK in the field of archaeology at Ankara University[27] (Tübitak Sonuçlanan

[27] The projects financially supported by TUBITAK in the field of archaeology at Ankara University are *"Köşk Höyük Kazılarının Orta Anadolu'da Neolitik'ten Kalkolitiğe Geçiş Sürecinde Katkıları Projesi"* ("The Contribution of Köşk Höyük Excavations in Transition from the Neolithic to the Chalcolithic Period in the Central Anatolia"), *"Zeugma 'Dionysos ve Danae Evleri' Roma Dönemi*

Projeler, 2018). One of the six projects financially supported by TUBITAK is in the field of Palaeolithic archaeology which is *"Türkiye ve Fransa'nın İlk Sakinleri: Teknolojik ve Kültürel Açıdan Karşılaştırılması"* ("The First Inhabitants in Turkey and France: Technological and Cultural Comparison") conducted by Harun Taşkıran. However, the numbers of archaeological excavations suffering from financial difficulties has increased, resulting in a narrowing of their work areas. In fact, most excavations are obliged to narrow their work areas, as they cannot find sponsors, which are the indispensable providers of the financial supports (B. Dinçer, personal communication, January 25, 2018).

In addition, prehistorians whose field of study is Palaeolithic archaeology cannot work efficiently also due to regulations and administrative rules, which have not been adjusted to the specific techniques of the Palaeolithic notion of work. Ömer Gökçümen a Turkish anthropologist in his postdoc position at Harvard University did not prefer to work in Turkey to avoid battle with the petty bureaucratic works and politics when he wanted to carry out anthropological research in Turkey (Dalton, 2010: 177). The academic discord among prehistorians also slowed down his work. Dalton also noted that archaeologists studying on more recent periods in Turkey have more success working and publishing but unfortunately those who study on Palaeolithic are much slower because of petty obstacles to work (Dalton, 2010: 177-178). For instance, classical archaeologists have more reasonable opportunities to be able to work, mediated by both of the abovementioned official institutions. This is

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Konut Araştırması" ("Roman Period Dwelling Research at Zeugma 'Dionysus and Danae Houses'"), *"Magnesia Stadionunun Yapısal ve Sosyo Kültürel Özelliklerinin Bilimsel Açıdan Araştırılması"* ("Scientific Research of Structural and Socio-cultural Features in the Stadium of Magnesia"), *"Urla Yarımadası Prehistorik Kazı ve Araştırmalar Projesi"* ("Urla Peninsula Prehistoric Excavation and Research Project"), *"Türkiye ve Fransa'nın İlk Sakinleri: Teknolojik ve Kültürel Açıdan Karşılaştırılması"* ("The First Inhabitants in Turkey and France: Technological and Cultural Comparison") and *"MÖ 2. Binin İlk Yarısında Urla Yarımadasında Minos Etkinliği"* ("Minoan Activity in the Urla Peninsula In the First Half of the 2nd Millennia") (Tübitak Sonuçlanan Projeler, 2018).

evident when examining the graphics of excavations and surveys allowance, and the ratio between those allowances supplied by the Ministry of Culture and Turkish Historical Society. For instance, in 2016, 415 excavation and survey projects were carried out, according to the data published on the web site of the Ministry of Culture. Of those, 9 were survey and excavation projects done in the scope of Pleistocene archaeology, 4 out of the 9 prehistoric projects were geological surveys[28]. In 2016, only 10 Pleistocene survey projects were carried out from a total of 520 excavation and survey projects conducted by both Turkish and foreign academicians from universities, museums and other research institutions[29]. Furthermore 3 out of the 10 Pleistocene survey projects were geological surveys not directly associated with Palaeolithic archaeology. There are 4 Palaeolithic and anthropological excavation projects, which are carried out at the Karain Cave, the Direkli Cave, the Üçağızlı Cave and Kurutlu[30], which have been conducted with cabinet decree in 2016 (www.kulturvarliklari.gov.tr, 2016). The data reveals that there has not been any profound change. When determining the number of all Palaeolithic projects conducted, together they do not equal even ten percent of the total of current archeological projects, although there are many Palaeolithic sites in Anatolia. The low number of excavations can be associated with the low quantity of archaeologists whose field is Palaeolithic archaeology. As mentioned above, the

[28] The projects related to Palaeolithic archaeology are the Karain Cave, the Üçağızlı Cave and the Paşalar anthropological excavation. On the other hand, there is a rescue survey project in Ilısu Dam reservoir area in Diyarbakır and Batman provinces and a Palaeolithic survey project in Kahramanmaraş province. The remaining missions are directly geological fossil survey projects.

[29] The mentioned 520 excavation and survey projects include 29 excavation projects conducted by foreign academicians, 129 rescue excavation projects, 26 excavation projects stated as part of the public investment areas such as HES (HPP) i.e., Hydroelectric Power Plant and TANAP i.e., Trans Anatolia Natural Gas Project, 59 excavation projects conducted by museums, 112 excavation projects done with cabinet decree, 8 archaeological survey projects conducted by foreign scholars, and 94 archaeological surveys conducted by Turkish scholars.

[30] Kurutlu excavation is a fossil research project conducted by Ahmet Cem Erkman from Department of Anthropology at Kırşehir Ahi Evran University. The project began in 2011 and financially supported by both Ministry of Culture and Turkish Historical Society. It was not identified any Palaeolithic artifacts in Kurutlu located on Kırşehir province, although a *Hominoidae* remains was identified (Erkman et al. 2017: 457-464; www.kulturvarliklari.gov.tr, 2016; www.ttk.gov.tr, 2017).

situation coincides with the percentage of positions that professors fill in this field in the universities. The percentage of positions, according to the departments are, Classical Archaeology with 54%, Protohistory and Asia Minor Archaeology with 32%, and Prehistoric Archaeology, including Palaeolithic and Neolithic with merely 14% (Dinçer, 2014b: 161).

The other official institution providing financial support for excavation and survey projects is the Turkish Historical Society. However, only 4 of the 24 projects supported by the TTK concerned Palaeolithic research: 2 surveys (the other 2 were fossile/Miocene excavations) (www.ttk.gov.tr, 2017).

4.4 Palaeolithic Archaeology in Basic Education

The average individual living in Turkey, generally, has little knowledge concerning the history of humanity and their past. This paved the way for the misunderstanding of nation's history and the importance of protecting one's cultural heritage. In general, people do not understand the importance of and are not interested in efforts made to understand and protect a history that they are unaware of. The main factor is unawareness, and due to this, the nation's cultural assets enter into a process where they begin to disappear. Very little has been done in order to raise the awareness of the public and to prevent the destruction of cultural landmarks, except for some very small scale initiatives by the Ministry of Culture, TUBITAK or universities.

Large scale projects, however, remain quite rare. The purpose of these kinds of projects is to provide access and basic education about prehistory to every

segment of society and to create public awareness concerning the protection of cultural property.

The TEMPER Project (Training, Education, Management and Prehistory in the Mediterranean), which was both large-scale and multi-national project, ran from January 2002 to June 2004 (Doughty, 2003: 49-50; Sert, 2013: 101). The project was one of the first comprehensive activities for Turkey in this context. The TEMPER was financed by European Community Euromed II and has been carried out by a consortium of seven partner institutions in Turkey, Greece, Malta, the UK, and Israel (Doughty, 2003: 50-51). The main purpose of TEMPER was to allow the public, from local school-children to tourists, to become more familiar with Mediterranean prehistory, to reinforce the approach of an accepted Euro-Mediterranean heritage using prehistory, and to raise the awareness of how prehistory contributes to our cultural heritage today (Doughty, 2003: 50-52). The study achieved its goal by following the developments of the instructive programs at the pilot sites, and the site administration plans. The study also examined the conveyance of a related education program in these countries, and whether they developed a heightened awareness of the prehistoric cultural heritage of the Mediterranean, and finally the diffusion of the project results. The prehistoric sites carried out by the program were Ubeidia and Sha'ar Hagolan in Israel, Paliambela Kolindros which is a Neolithic and Chalcolithic site in Greece, Çatalhöyük in Turkey, and Kordin III in Malta (Chowne, 2007: 85-89; Doughty, 2003: 49-50). Education coordinatorship of this project was undertaken by the Economic and Social History Foundation of Turkey (Sert, 2013: 101). The project aimed to heighten the awareness of the public and of students about Mediterranean prehistory, since prehistoric finds and sites, which belong to Palaeolithic periods, have not been evaluated as a source for drawing interest of

visitors while prehistoric sites only receive the most committed visitors. At a national level, research carried out as a component of the TEMPER project found that history educational programs within these pilot countries excluded prehistory (Doughty, 2003: 50-53; Chowne, 2007: 77-83; Sert, 2013: 101).

Both academic and casual instructional training programs and activities were that teachers could use independently, despite a lack of prehistory in the curriculum prepared for the site. The first stage of the project related the archaeological research to the education system of the pilot countries, and gave advice to teachers to learn about various activities that they could take advantage of. A method that was tried included enhanced activities that provided students with the understanding of the methods used in archaeology and to the tools needed to improve the skills used, such as observation, questioning, research, and analyzing data. The TEMPER project also proposed to promote concern for prehistory among the local public and the visitors, by way of site tours, websites and guide books (Chowne, 2007: 77-80; Doughty, 2003: 52). The research programs and management plans were completed in 2003. The results were then presented at two scientific workshops (2003 and 2004) (Chowne, 2007: 78-85; Apaydın, 2016: 832; Ocal, 2016: 460).

An Archaeology Laboratory Project supported by TUBITAK was carried out by the PhD students and research assistants in the Department of Settlement Archaeology with the initiation of the Archaeological Museum in METU between 2015 and 2016 (http://arkeolojilab.metu.edu.tr/; https://muze.metu.edu.tr/bilim-toplum-projesi-tubitak-arkeoloji-laboratuvari-projesi). The project aimed to ingratiate the science and scientific thoughts to children at the age of 12 by the use of archaeology, and to introduce context of history and cultural heritage to participants (http://arkeolojilab.metu.edu.tr/). It was gave both theoretical information related to

archaeology, and had children do artificial excavated works within the Museum Week between 18 and 22 May in both 2015 and 2016 (https://muze.metu.edu.tr/bilim-toplum-projesi-tubitak-arkeoloji-laboratuvari-projesi).

In a smaller scale study, Gülay Sert, from the Prehistory Department of İstanbul University, conducted her own personal study named the Prehistoric Education Program to heighten awareness about prehistory and Palaeolithic archaeology among students in primary school. It examined the basic education program applied in Turkey and the text books used in the primary schools as the first stage of the study. She also researched to what degree prehistoric times were included in basic education, whether there was a source book published with new data or not, and whether children-oriented activities in the museums existed, by examining book catalogues, libraries, and fairs. She found nothing about prehistoric times in the Social Studies course book, although it had started to include subjects related to history, beginning in the fourth year of the 12-year compulsory education system in Turkey (Sert, 2013: 100; Birbiçer, 2015).

In the second stage of the study, Sert prepared a program pack to address the deficiency in Social Sciences programs plus a course book, related to the results of the first stage. The program pack included information concerning the biological and cultural evolutionary stages of humankind from the first appearance of hominins to the invention of writing, as well as various theoretical information related to introducing knowledge concerning the remains found in Turkey using various visual materials. The pack also included workshops, which provided ideas for ways to display some of the prehistoric artifacts available and museum tours to show materials within their own context (Sert, 2013: 100).

The theoretical information in this Prehistoric Education Program was compiled from Güven Arsebük's book *İnsan ve Evrim*[31], some other basic publications and information gathered during her education at the İstanbul University Prehistory Department. She also presented some plant fossils, prepared posters and made the students produce experimental artifacts, using cutting and grinding techniques of the past, as a supplementary resource, in order to strengthen the transfer of theoretical information. For the study, pretest-posttest design, which measured the success of this new education technique, was implemented to obtain hard data. The correctness of the information contained in the questionnaire and suitability of the questions regarding the area that was to be measured were examined by members of the Prehistory and Pedagogic Departments at İstanbul University (Sert, 2013: 100).

In the third stage, the preliminary study program was applied to students in the fourth and fifth-grade of one state and one private, primary school. The main study program, in two stages, was applied to students during the same period, at two state, and two private, primary schools. The observations from the preliminary study were used to measure the effectiveness of the program. In the main study, pretest and posttest booklets were used. The observations made during both the preliminary, and the main study, and the results reached in pretest evaluations, revealed a complete lack of interest among the students for prehistoric developments and their cultural assets (Sert, 2013: 100).

In a similar manner, in the context of this thesis I conducted a study to measure how much information ninth grade high school students held regarding the

[31] *Human and Evolution,* written by Güven Arsebük, presents about the evolution of humans from the emergence of EMH to *Homo sapiens sapiens* until the end of Palaeolithic period (Arsebük, 2014).

subject of the Palaeolithic period. I did this study during the spring semester of the 2016-2017 academic year, with ninth grade students, since the subject of the Palaeolithic period is only taught in the ninth grade. All the schools that we studied are state schools and the language of instruction on them is Turkish. Before the study, I obtained the necessary permissions from the Provincial Directorate of National Education for this research, and examined the curriculum and the content of the history text books provided by the Ministry of Education. In this context, I prepared a questionnaire, which included 6 basic questions about what the Paleolithic period is. The questions were as follows:

1) Do you have any information about the Old Stone Age (Palaeolithic period) (i.e., Yontma Taş Devri)[32]?
2) What is the Old Stone Age and your knowledge about it? (If yes for the 1st question)
3) Where did you learn all this information from? (in class, from television, from popular publications, such as magazines, books, newspapers)
4) What is a Neanderthal? If you know, could you shortly explain what it is?
5) Is/Are there any important cave(s) from the Old Stone Age in the world? What is importance of it/them?
6) What are the Old Stone Age sites (cave, campsite, findspot) in Turkey?

A total of 116 ninth-grade students, from 6 different schools answered the questions. Three of the schools are regular high schools (i.e., Anadolu Lisesi) providing basic higher education. Two of the schools are Technical and Vocational Education High Schools (i.e., Mesleki ve Teknik Anadolu Lisesi) offering basic

[32] The term is generally "Yontma Taş Devri" (i.e., Chipped Stone Age) or "Eski Taş Çağı" (i.e., Old Stone Age) in the text books.

vocational education, such as medical science, computer sciences and electronics. All students in the ninth-grade in these schools also have basic school subjects, such as Turkish literature, physics, chemistry, biology, mathematics, geography, history, sports, English language, religious culture and ethics, fine arts and music.

The results of the research show that most of the students participating in the research study did not know what the Palaeolithic period was, although they had learned about it in history class. 51.72% of the students (i.e., 60 students out of 116) answered "no" for the 1st question when asked whether they knew (or not) what the Palaeolithic period was (Figure 27). 70.69% of the students (i.e., 82 students out of 116) answered incorrectly and/or did not know anything about what occurred in the Palaeolithic period, as asked in the 2nd question (Figure 28). According to answers provided for the 3rd question, 53.45% (i.e., 62 students) learnt information regarding Palaeolithic archaeology in history class, whereas, 9.48% (i.e., 11 students) learnt about it from popular publications, such as magazines, newspapers and books, that all were independently from the history text book. Furthermore, 9.48% (i.e., 11 students) of the students learnt information about the period from television programs, such as documentaries and 27.59% (i.e., 32 students) of the students answered other or unknown (Figure 29). Only 1.72% of the students (i.e., 2 students) knew what Neanderthal was, according to the 4th question, while 114 students had no knowledge concerning the question (Figure 30). 10.34% of the students (i.e., 12 students) knew about important settlements and/or caves belonging to the Palaeolithic period such as the Altamira and the Laskö[33] [sic!] caves in Europe, and the Yarımburgaz Cave, Karain Cave, and even Şehremuz Tepe in Turkey, according

[33] The Lascaux Cave: Written as *Lasgue* [sic!] and *Laskö* [sic!] as translated into Turkish in history course books (Yılmaz, 2015: 50; Önder, 2016: 53) so the students who answered that question wrote "Lascaux" as Laskö.

to answers provided for the 5th question (Figure 31). 13.79% of the students (i.e., 16 students) knew about important settlements and/or caves belonging to Palaeolithic period in Turkey such as Yarımburgaz and Karain caves according to the 6th question (Figure 32).

I observed that students from Seydişehir Seyyid Harun Anadolu Lisesi (i.e., a regular high school) answered most questions more correctly than the other students from the other schools, because they had history lessons taught by a teacher whose interests lay in archaeology. The history teacher made the students partake in experimental archaeology in class, such as making hieroglyphic cuneiform tablets, wall paintings, a model of the Colosseum and a model of an ancient theater near the town of Seydişehir, as well as other castle models, and pottery making (Figures 33 – 34). He also took them to visit archaeological sites in the vicinity, such as Çatalhöyük, some other mounds around the town, and archaeological museums, in order to present them with actual archaeological finds and features (E. Arslan, personal communication, June 1, 2017).

In conclusion, it can be clearly seen that the students who saw real objects or places related to archaeology and/or the Palaeolithic period were able to better learn and retain the knowledge presented to them. Similar conclusions were demonstrated in the research of Sert in 2003 (Sert, 2013).

Conversely, it is clear that TUBITAK's popular scientific books for children, and school books published by the Ministry of Education for high schools[34], are insufficient when it comes to teaching Palaeolithic and archaeology in general. Especially in school books used for basic history courses (i.e., Ortaöğretim Tarih 9.

[34] The information about Palaeolithic archaeology is minimal and includes incorrect information in the books used as text book in the high schools.

Sınıf Ders Kitabı), in basic education, the topics are mostly related to national and Islamic history. Prehistory as a topic is too short and in fact includes misinformation[35]. In these books, there is no information related to hominins and/or how the Palaeolithic period developed. In spite of the fact that there is a really comprehensive unit titled, "Uygarlıkların Doğuşu ve İlk Uygarlıklar"[36], which is composed to instruct students about the Sumerians, Assyrians, Hittites, Phoenicians, Phrygians, Greeks, Romans, Egypt, and China according to a cultural history approach (Yılmaz, 2015: 49-76; Önder, 2016: 51-81), its information regarding prehistory is both restricted and mis-informative. For instance, the prehistoric age started at 600.000 BCE in the history text book published in 2015 (to be used in the ninth year of basic education) (Figure 35) (Yılmaz, 2015: 49) despite the fact that the Palaeolithic chronology of Anatolia began much earlier in 1.6 Ma with the Kocabaş *Homo erectus* fossil remains (Aytek, 2014: 69; Aytek & Harvati, 2016: 84). In a similar manner, the beginning of the Palaeolithic period is shown as 60.000 BCE in the book authored by Önder (Figure 36), to be used in the ninth year of high school, and hardly more information than the names of the Yarımburgaz, Beldibi, Belbaşı, and Karain caves is given as examples for Palaeolithic sites in Anatolia (Önder, 2016: 52-53). Although this problem reflects a problem associated with the Palaeolithic period in the history text books to be used in the high schools in Turkey, it can be ignore since it is just from high school text book.

The issue of creating awareness regarding cultural heritage and historical artifacts is handled with great seriousness and considered as a part of basic education in most western countries. This consciousness is planted at a young age by parents

[35] Within the scope of this research, I investigated two text books used for history courses published by the Ministry of National Education in 2015 and 2016, to be used in 2014-2015 and 2015-2016 academic years in the basic education in Turkey.
[36] Dawn of Civilizations and The First Civilizations.

primarily, and afterwards expanded as very young individuals are brought into a systematic education policy that begins during the schooling period. A variety of attempts have been made in especially Europe and the USA to teach archaeology, and especially prehistory, in primary and high schools (Chowne, 2007: 79). Some of these promoters are UNESCO, The Council of Europe, The Society for American Archaeology (SAA), American Anthropological Association (AAA), or the Archaeological Estate Office. Within this context, some of the significant organizations of UNESCO to pursue these endeavors are the World Heritage Education (WHE, since 1999), the World Heritage Youth Forums (since 1995), and International Workshops and Conferences on World Heritage Education since 1999 (Chowne, 2007: 78; www.en.unesco.org). The Council of Europe is one of the most essential heritage education promoters. The council has been taking a lead for activities to initiate heritage awareness among the young, adopted from the French Ministry of Culture since 1998 (Chowne, 2007: 78; www.coe.int). The Society for American Archaeology and the American Anthropological Association likewise play a significant role in public education initiatives especially in North America (Chowne, 2007: 79; www.americananthro.org; www.saa.org). In Italy, the Cultural Estate Service and teachers have taken initiatives to give general knowledge of archaeology at local primary and secondary schools (Chowne, 2007: 80). In England, important organizations such as the CBA model of teaching archaeology, the Young Archaeologist Club and English Heritage have been attempting to teach what archaeology, cultural heritage and prehistory are to the public through simulated excavation activities (e.g., The Dig organized by the Museum of London) and media (e.g., television program like *Time Team* having 4 million viewers now) (Chowne, 2007: 80-82).

In sharp contrast, Turkey still displays deficiencies in awareness raising among the public. Cultural policies that have continued for years are partially responsible for this situation. Both children and the adult public, due to a deficiency and extreme restrictions in the curriculum of the public education system in regards to Palaeolithic archaeology (Sert, 2013: 100-101), cannot learn sufficient information about the Palaeolithic period. The situation is absolutely same with the "creationism" issue in the public education system in the United States. The situation always suffered from strict restrictions of governments and policies since it can be associated with the evolution, creationism and religion implicitly.

4.5 Palaeolithic Archaeology in the Turkish Public – A Critical Review

Scientific research can be considered complete when it reaches the public at large. The scholars who carry out studies through the use of public funding can use the media as a means to transmit and share archaeological news to a general audience. The media, in the news flow, however, has only occasionally given attention to archaeological news. Yet, this type of information can provide an increase in the knowledge among the public of archaeology and sense of responsibility to protect cultural property. However, reporters determine the final content, and it is up to the archaeologists to reduce the highly specialized information to an understandable level for the public (Dinçer, 2014b: 159).

In order to investigate the impact of the media, hundreds of news articles related to archaeology, published between 2011 and 2012, were evaluated and analyzed by Dinçer, in order to understand how many of them were scientific and at what level they were speculative (Dinçer, 2014b: 159). According to the reports on

the www.arkeolojihaber.net[37] web site, 1.240 news articles reporting on archaeology in the local and national press between the years 2011 and 2012, were published on the internet (Dinçer, 2014b: 159-160). The study conducted by Dinçer aimed to understand the summary of scientific work produced in the field of Turkish archaeology vis-à-vis its publishing in mass media yet; the study concludes that Palaeolithic archaeology is not a well-known field in Turkey (Dinçer, 2014b: 163-165).

It is seen that news related to Classical archaeology has the highest percentage of reporting, at the rate of 62%. This situation reflects a similar make-up of staff in the department of Classic archaeology at universities, which has a percentage of 54%. Departments of Proto-history and Anatolian archaeology[38] hold a percentage of 22%, similar to that in departments of Proto-history and Asia Minor archaeology, which have a 32% of staff. Prehistory, including Pleistocene archaeology, is at a percentage of 11%, which coincides with staff whose focus is Palaeolithic archaeology, at a percentage of 14% (Dinçer, 2014b: 161). This correlation demonstrates a similar low in Palaeolithic archaeology as represented in the media and among the public. In light of this data, it can be said that the transmission of Palaeolithic archaeology through the use of media is insufficient in Turkey on the contrary; it exactly reflects the percentage of actual fieldwork research. The place of Palaeolithic archaeology in the professional area reflects its accessibility in the nonscientific arena. Even in museums, the displays exhibiting Palaeolithic periods are limited to a few sections covering very general information

[37] Arkeolojihaber.net is a web site that publishes the news related to archaeology by compiling it from local and national press.

[38] There are two departments in Turkey associated with prehistory. When Proto-History and Asia Minor departments comprise Chalcolithic Age, Bronze Age, and Iron Age in Anatolia and the Near East, Prehistory departments basically involve Pleistocene Palaeolithic archaeology and the Neolithic period in Anatolia and the Near East.

and finds, although the Palaeolithic period, as shown, is of great significance in Anatolian prehistory, usually, however it does not offer much visual variety. For instance, in the Anatolian Civilization Museum, one of the most prominent museums in Turkey, the Palaeolithic period are exhibited in a quite small section (http://www.anadolumedeniyetlerimuzesi.gov.tr/TR,77778/paleolitik-cag.html).

In Turkey, media reporting about archaeology is usually reporting the number of archaeological finds. Consequently expectations demanded from the archaeologists are to always excavate, and discover as many as "finds" as possible and to deliver them to museums (Çilingiroğlu & Karul, 2003: 94). The archaeologists subjected to the media are those who appropriately fit this "proper model". Generally, the considered merit of excavations is directly proportionate to the quantity of finds revealed in that excavation, even in such news publications as the National Geographic, which includes extensive coverage of the relevant archeological sites. These kinds of broadcasts form the impression that archaeology is a "science of uncovering archaeological finds" to readers and audiences (Clarke, 1973: 6-7; Çilingiroğlu & Karul, 2003: 94). In spite of the fact that this is a superficial approach, the bias of the public is corroborated with these broadcasts by showing what people know already. That being the case, it is not unexpected that Palaeolithic archaeology, which has generally no spectacular finds except for stone tools and EMH fossils, does not draw increasing interest. Furthermore, as already pointed out, there are too few prehistorians whose field of work is Palaeolithic archaeology in Turkish universities (Dinçer, 2014b: 161). Those who are dedicated to the field are based at just two universities, at the Department of Prehistory and Department of Palaeoanthropology at Ankara University and the İstanbul University, Department of Prehistory for the undergraduate education. The few scholars struggle

with transmitting what Palaeolithic archaeology is to the public at large, apart from a few exceptions. For instance, there is a web site, which is a kind of blog page, that concentrates on not only Palaeolithic archaeology, but also on other archaeological issues named paleoberkay.blogspot.com[39], which has disseminated relevant publications, and is a reference for the developments in the field now for over 10 years.

Archaeology has been redefined since the theory of new archaeology arose as a theoretical concept. Within this context, the sense that archaeology is only related to the past gave way to the idea of finding a connection between the past and the present. Furthermore, discussions within the discipline of archaeology indicate that archaeology cannot be interpreted without political, economic, and cultural conditions. This new face of archaeology lays new burdens on archaeologists. Community oriented introductory studies should be carried out, together with the studies which have international and interdisciplinary sustainability. Unfortunately, this implementation has not yet been developed. It is thought that reaching the public at large decreases the scientific value of archaeological knowledge. In this sense, archaeology has come to be viewed as a discipline, which cannot properly transmit the purpose of its existence. The reason behind this thought process is due to the inadequacy of self-expression that exists among archaeologists (Çilingiroğlu & Karul, 2003: 98). Hence, there is a community interested in archaeology, who is receiving information concerning this field from the mass media, however publications related to excavations and surveys merely target the discipline and are full of archaeological terms, and thus largely inaccessible to the public. Very few

[39] The blog page administered by Dr. Berkay Dinçer, from İstanbul University Department of Prehistory, and had been broadcasted between 2001 and 2012. The blog page was one of the first and oldest blogs and especially the first website, directly related to palaeolithic archaeology in Turkey.

popular archaeological books written by archaeologists exist like *İnsan ve Evrim* ("Human and Evolution") and *50 Soruda Arkeoloji* ("Archaeology in 50 Questions") (Arsebük, 2014; Özdoğan, 2011). Publications targeting different groups in society and the use of media in introducing Palaeolithic archaeology could contribute to increased recognizability and applicability among the public. This would be provided both self-audit and motivation for the media by Palaeo-archaeologists who could engage with the general public (Çilingiroğlu & Karul, 2003: 94-95).

In the light of all the facts mentioned above, the current, deficient situation of ongoing research projects both in Turkish academia such as scarcity of Master's theses and PhD dissertations; and field works such as excavations and survey projects are insufficient to contribute to Palaeolithic archaeology as a discipline in Turkey, although there is a great potential provided from really significant the current projects such as Yarımburgaz Cave, Karain Cave and Kocabaş to be contributed to Anatolian Palaeolithic chronology. Palaeolithic excavation and survey projects in comparison with the other current projects mostly conducted in the fields of Classical and Proto-history and Asia Minor archaeology (see page 73-74), and the limited financial supports of the government and relevant institutions have not painted a promising picture in general. However, in academia, the percentage of departments and academic staff of Palaeolithic archaeology have smallest percentage when compared to the Classical and the Pro-history and Asia Minor archaeology. Palaeolithic archaeology has therefore remained a wallflower amongst the archaeologists in Turkey notwithstanding its great potential to develop more.

CHAPTER 5

OPEN QUESTIONS AND POTENTIAL FOR THE FUTURE

After decades of applying a rather conventional, antiquarian archaeological methodology, new postmodern theoretical approach has appeared. New Archaeology, is a rising theoretical approach before in the United States and after in Europe, recently has also being practiced throughout Turkey in the last two decades (Erdur & Duru, 2013: 275-277). In a global sense, the theoretical perspective has been restricted to artifacts in Europe while *agency* "individual" as opposed to mute artifacts, is more important than material culture in the United States and Europe (Erdur & Duru, 2013: 275; Fagan, 1994: 26). This chapter will compare the differences in the understanding of Palaeolithic archaeology, the way how it is communicated in European education, in contrast to Turkey.

5.1 The Understanding of Palaeolithic Archaeology in Europe Compared to Turkey

The number of archaeologists in each country is not an indicator of the archaeological activity in that country. However, the organizational form of archaeology, how the profession is defined, and especially the role of university

education are very important criteria. In spite of the fact that all countries signed the Valletta Convention (Council of Europe, 1992) indicating that archaeological excavations can only be directed by qualified archaeologists, there are significant changes in how this agreement is adequately implemented. The variability in applying this agreement can be seen by comparing two extreme cases. For example, in Greece, there is a legal definition associated with the legal permitting for excavations, whereas in Britain, there is no legal definition as to what defines a person as an archaeologist. This is related to the field of activity involving archaeological information technology, environmental studies, tourism, etc., but archaeologists are the ones who are engaged in fieldwork and are able to excavate directly (Collis, 2009: 3).

The legal definitions of an archaeologist differ from country to country. The structure of the education system in archaeology at the university level cannot also be simply classified, as there is great variability between countries. In general, there exist two paths that one can take to achieve a professional degree in archaeology. In the first, each level is hierarchically pursued, beginning with an undergraduate level and finishing with a doctorate level. In other words, known as the Humboldt Model, a student can study for five or more years and upon completion receive their final degree with professional status. In the second, archaeology has a status as an independent discipline or a branch of Art History or History as in Italy, France and Spain (Collis, 2009: 4). Likewise, a degree in archaeology, in many places can often be combined with a degree from another discipline such as a degree in History, Cultural Management or Geography. This is the case for a number of universities in United Kingdom or in countries such as Hungary, Greece or Cyprus (Collis, 2009: 4). In Turkey, one can receive the title of archaeologist after completing an

undergraduate program in an archaeology department, as a first degree in four years. After the undergraduate, one can pursue a Master of Arts or Master of Science (i.e., MA or MSc) for two or three years in Archaeology or History of Art departments. A degree in archaeology is not combined with any other programs such as History or Cultural Management. After completing a master's degree, one can then pursue a doctorate (i.e., PhD) in three to five years (Türk Eğitim Sistemi, 2015). It is also possible to participate in excavations. Students can determine in which field they want to specialize while attending undergraduate studies. The sub-disciplines are prehistory, including Palaeolithic combined sometimes with anthropology or Neolithic archaeology; Proto-history and Asia Minor archaeology, including the Neolithic to the Iron Age; and Classical archaeology, including Greek and Roman archaeology. When considered the range of departments related to a field of generally archaeology, there are 47 archaeology departments in Turkish universities (Arkeoloji Programı Bulunan Tüm Üniversiteler, 2016). These include 4 Proto-History and Asia Minor Archaeology departments, covering the Neolithic to Iron Ages (Protohistorya ve Ön Asya Arkeolojsi Bulunan Tüm Üniversiteler, 2016) and 2 independent Prehistory departments which can be counted as *ecole* and associated directly with Palaeolithic archaeology in Turkish universities (Tarih Öncesi Arkeolojisi Programı Bulunan Tüm Üniversiteler, 2016). There are also 10 Anthropology departments, independent from archaeology or prehistory; however some of them relate to prehistoric studies in excavations associated with the Palaeolithic period (Antrolopoloji Programı Bulunan Tüm Üniversiteler, 2016). Nevertheless, the total number of active Palaeolithic archaeologists in these 2 departments consists of 21 academic staff[40]. In the Prehistory Department at İstanbul

[40] The website of the YÖK (https://yokatlas.yok.gov.tr/lisans-bolum.php?b=19054) was beneficial for obtaining information related to the mentioned departments. There are active "Prehistory

University, there are currently 15 staff members, including 2 professors, 6 assistant professors and 7 research assistants (İstanbul Üniversitesi Akademik Kadro, 2012), while there are 6 academic staff, including 2 professors, 1 assistant professor and 3 research assistants at the Ankara University Prehistory department (Tarih Öncesi Arkeolojisi Anabilim Dalı, 2017). Taking into account all these current numbers, the development of Palaeolithic archaeology in Turkey, in its research history over 80 years, does not paint a promising picture for the future. These two Prehistory departments have dominated the mechanism of the Palaeolithic archaeology discipline in Turkey. However, the Prehistory Department of İstanbul University has followed the studies on the archaeology of Neolithic period with the influence of Halet Çambel. She worked in the Neolithic period excavation, Çayönü, in Diyarbakır province in the 1960s when the discipline started to implement intensively (B. Dinçer, personal communication, January 25, 2018). Today, the Prehistory Department in İstanbul University is following in the footsteps of Halet Çambel with research projects mostly concentrated on the Neolithic period (B. Dinçer, personal communication, January 25, 2018).

The Prehistory Department, in DTCF, in Ankara University has followed Kılıç Kökten's works focused on the caves such as Karain, Öküzini, Beldibi and Belbaşı in the Antalya region (B. Dinçer, personal communication, January 25, 2018). One of the main factors shaped this situation is that Işın Yalçınkaya was the student of Kılıç Kökten. The terminology of Palaeolithic discipline of Turkey, furthermore, is based on the French tradition because of language under the favor of

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Departments" Palaeolithic archaeology and staff in following universities: Bülent Ecevit University, Ahi Evran University and Düzce University. Information is available on the websites of these universities: (Bülent Ecevit Üniversitesi, Fen-Edebiyat Fakültesi-Arkeoloji Bölümü; Ahi Evran Üniversitesi, Fen Edebiyat Fakültesi/Arkeoloji Bölümü/Prehistorya Anabilim Dalı; Düzce Üniversitesi, Arkeoloji Bölümü-Prehistorya). Nevertheless, the "Prehistory Departments" in these universities are not independent departments giving education in the undergraduate level.

Işın Yalçınkaya's close association/collaboration with French Paleontologists in her fieldwork. The generation of the 1930s in the discipline's infancy period and the 1960s' generation in the development stage of the Palaeolithic archaeology were two main characters who formed two different Palaeolithic archaeology *ecole* in Turkey today (B. Dinçer, personal communication, January 25, 2018).

The perspective and approach towards archaeology and Palaeolithic archaeology differ from country to country. American archaeologists' perspective differs from Old World prehistorians, since the discipline of archaeology is regarded as a part of anthropology by archaeologists in the United States (Fagan, 1994: 26). In contrast, European archaeologists have attributed archaeology to an integral part of the discipline of history, instead. Excavations in Europe have been conducted with a distinctive historical tradition as a backdrop which started with A. H. L. Fox Pitt-Rivers and proceeded by Sir Mortimer Wheeler and the many archaeologists who emerged after the World War II (Fagan, 1994: 26-27). Tracking structures and settlement models, saving data, and examining typology of artifacts in detail have been highlighted by British and Continental prehistorians (Fagan, 1994: 27). European archeologists see prehistory as an integral part of their own past and the history of their peoples and country. In comparison with European archaeologists, American prehistorians prefer to study prehistoric people as separate from their own history (Fagan, 1994: 27). Nevertheless, taking into account the number of departments directly related to the Palaeolithic archaeology field in Europe, it is clear that there are indeed a large number of departments with many staff focusing exclusively on Palaeolithic archaeology. In Europe, the fields of Palaeoanthropology and Palaeolithic Archaeology, that some of them are specializations within the Institute of Archaeology, at University College London, the department of Early

Prehistory and Quaternary Ecology at University of Tübingen, the department of World Archaeology, including Human Origins, as a sub-department at University of Leiden in Netherlands, and the Palaeolithic department at the University of Oxford, are strong examples of effective departments with strong academic research for the study of Palaeolithic archaeology (www.ucl.ac.uk UCL Institute of Archaeology–MSc in Palaeoanthropology and Palaeolithic Archaeology, 2017; www.uni-tuebingen.de University Tübingen–Early Prehistory and Quaternary Ecology, 2017; www.universiteitleiden.nl Leiden University–World Archaeology, (n.d.); www.arch.ox.ac.uk University of Oxford–Palaeolithic–School of Archaeology, 2017).

In contrast, although Anatolia has a great potential to provide a number of breakthroughs in the field, the conflict which resides in Turkish Prehistory academia has resulted in hampering any progress. For instance, as a universal problem, some academicians in the field have been involved in disputes and arguments that sometimes ended in court. Even the progress of fieldwork has been disrupted by some of these conflicts (Dalton, 2010: 177). These disputes have been severely criticized as follows:

> "…Turkey has failed to live up to its promise in palaeoanthropology. For nearly 20 years, several leaders in the field have been locked in bitter personal conflicts that have stymied progress and have had a detrimental effect on some young scientists. When work does proceed, researchers rarely publish in a timely manner, and they keep their specimens stored for years…" (Dalton, 2010: 176).

Rex Dalton, who is a journalist, states the thoughts of David Begun, a researcher specializing in early hominids from the University of Toronto, who participated in a paleoecological survey, mostly related to hominid dispersal, in the

site of Çandır, Turkey (Geraads et al. 2003: 241; Begun & Geraads et al. 2003: 251; Begun & Güleç et al. 2003: 23). Begun's statements about the issue were expressed Dalton's article, published in *Nature*, as follows:

> "…the research atmosphere there (in Turkey) suffers because of infighting and a resistance by Turkish experts to work with foreign collaborators. It is a shame… They need to cooperate more. But I would not hold my breath on a quick solution. They may have to wait for the next generation of researchers to address the issues." (as cited in Dalton, 2010: 177)

The harsh criticism probably fuelled further by discouraging personal experiences might by subject to debate, however to some extent it might reflect some real issues of a polemical atmosphere in the field of Pleistocene Archaeology in Turkish universities. Together, these issues combine to produce a challenging work environment that eventually slows progress at large. Furthermore, the rise of Islamic fundamentalism in Turkey has definitely not improved the working environment for prehistorians, and especially anthropologists and/or palaeoanthropologists in the country. This changing environment has resulted in changes to the curriculum within basic education. The exclusion of Darwin's theory of evolution from the curricula of primary and secondary schools is one striking example (Yanarocak, 2016: 72-74). The omission of evolutionary theory and of Darwin from biology textbooks to be used in basic education must be considered as a radical change, since this issue had a broad repercussion on the world press and many of them reproached Turkey[41]. For instance, Reuters published this news with the title of "Turkey rolls out new school curriculum – without Darwin" (Solaker & Toksabay, 2017, July 18).

[41] The issue has widespread media coverage in the other presses globally known such as The New York Times, the Washington Times, and the CNN International of the USA, Independent, The Telegraph, The Guardian, and BBC World News of the UK, France24 of France, Arab News of the Saudi Arabia, and The Hindu of India. It can be clearly understood that the issue of exclusion of Darwin's theory of evolution rebounded across the world.

Undoubtedly, the evolution issue is an integral part of especially Pleistocene archaeology. The evolutionary concept established by Charles Darwin brought a new approach to archaeology, searching for the origins of humankind with the material record in the 19th century. With the *Origin of Species* published by Darwin in 1859, the process that had begun with the opposition of the Church in Europe (Renfrew & Bahn, 2005: 7), now, oddly enough, continues in the present-day United States and Turkey. In the United States the "creationism" issue, beginning with the "Scopes Monkey Trial" in 1925, has continued today whether "creationism" should be taught in the public education system or not (https://www.scientificamerican.com/article/timeline-evolution-in-public-education/; Jaffe, 2015, December 17; Emburry-Dennis, 2017, March 16). This is directly related to the issue of the Palaeolithic period, which is tightly associated with human origin and biological evolution. The importance of evolutionary theory is to provide an understanding of biodiversity, which is closely associated with the Palaeolithic archaeology, anthropology and/or palaeoanthropology, agriculture, and more contemporary fields like medicine and nanotechnology (Tavşanoğlu, 2017: 165).

As a result, vis-à-vis the structure of education system implemented in archaeology both in Europe and Turkey is the same in spite of the littleness of staff in the field. Furthermore polemical atmosphere in this field (Dalton, 2010) is another issue hindering the advancement of Palaeolithic archaeology in Turkey.

5.2 Outlook for the Future

The discipline of archaeology in Turkey was influenced by the German *ecole*, which was developed by the notions of Kossinna in the beginning of the 20th century and shaped by archaeologists who arrived from Germany. For this reason, archaeology in Turkey was generally characterized by *cultural history*. This phenomenon also exists in other European countries. For instance, in the United Kingdom, Grahame Clark and Gordon Childe, before applying a Marxist understanding of archaeology had praised and used to classify their own material with the *cultural group* approach described by Kossina (Çilingiroğlu, 2015: 19). This concept is one of the methods frequently used today as well. There exist few young archaeologists, who do not adopt traditionalism associated with cultural history in a traditional approach, and do apply a more recent reflexive approach in comparison with traditionalist approach, which includes Palaeolithic archaeology. Previous prehistory generations for the most part concentrated on a "Kulturhistorie" approach. Thus, according to Çilingiroğlu, this traditional outlook does not paint a promising picture for the future of Palaeolithic archaeology since theoretical archaeology did not draw interest among archaeologists after the publication of *"Analitik Arkeoloji"* ("Analytical Archaeology") by Ali Dinçol and Sönmez Kantman in 2003 (Çilingiroğlu, 2015: 19-20).

The discipline of Palaeolithic archaeology in the 1930s as an offspring of anthropology has been continued by shaping cultural history in a traditional approach in Turkey. As mentioned above, the number of archaeologists whose focus is Palaeolithic archaeology is not enough. Taking into account all of these developments, it seems difficult to be optimistic about the future of Palaeolithic archaeology. The training of a sufficient number of prehistorians and the

establishment of new Prehistory departments at the other universities in Turkey could provide fresh blood for the future of Palaeolithic archaeology, both in terms of increasing in diversity and bringing in new perspectives.

CHAPTER 6

CONCLUSION: PALAEOLITHIC ARCHAEOLOGY IN TURKEY SEARCHING FOR ITS OWN FUTURE IN THE SHADOW OF THE PAST

The Palaeolithic era is the longest epoch in human history, extending from approximately 2.6 Ma from its beginning in Africa to its dispersal into Europe and other regions of the world on the verge of the Holocene era, about 10.000 BCE. The discipline of Palaeolithic archaeology is not considered as a separate field from archeology or anthropology. Rather, these two fields are closely associated with Palaeolithic archaeology, also known as Pleistocene archaeology, Prehistoric archaeology, and/or Quaternary archaeology. Pleistocene and Quaternary, in a wider meaning, cover the geological era. Palaeolithic archaeology researches mostly material manufactured at this time, while anthropology researches the human remains. Prehistoric archaeology (in Turkey) concerns of the period from the derivatives of species homo, hominin, until the Neolithic about 10.000 BCE.

Palaeolithic archaeology, in the beginning, was closely connected to anthropology and palaeoanthropology in both Europe and Turkey, and it served the same purpose, such as promoting nationalism or satisfying scientific curiosity

concerning the origins of the human past during the beginning of the 20th century. Archaeology and anthropology were powerful tools used by governments to further support, develop and encourage the support of a national identity (Arnold, 1990: 464-467; Tanyeri-Erdemir, 2006: 381-383). In the Turkish academic world, the attention given to Palaeolithic archaeology occurred noticeably later than the interest shown in classical archaeology. It was either taught as a part of a physical anthropology course, or under the umbrella of classical archaeology and/or geology (Minzoni-Deroche, 2002: 25-26). This situation did not provide it with the same scientific tool kit and development as in other regions, such as in Western Europe, nor did it allow for a global perspective to develop within the discipline. Accordingly, scholars in prehistory were not provided with the same type of training and did not adopt a multidisciplinary approach to the field of Palaeolithic research as Western scholars (Özdoğan, 1998: 114-119). They preferred to remain focused on their own professional field and to retain a specific knowledge within the discipline, rather than broadening their own studies and concepts. Few foreign scholars cooperated to help widen this perspective, as no Turkish Palaeolithic scholar received training abroad (Minzoni-Deroche, 2002: 26) except for the earliest ones: Şevket Aziz Kansu trained at Sorbonne University, Muzaffer Süleyman Şenyürek trained at Harvard University and Afet İnan trained at University of Geneva, until quite recently, unlike the case of classical archaeologists. In lieu of executing a meticulous field methodology, lacking due to no precedence or reference guide existing related to methods and theory for Anatolian Palaeolithic archaeology, findings were simply analyzed according to key characteristics.

Conclusively, the historical development of the discipline of Palaeolithic archaeology in Turkey can indeed be divided into three sub-periods. The first period

is mostly characterized by a few unsystematic research projects between 1884, when the first Anatolian Palaeolithic finds were discovered in Birecik, and the 1940s (Taşkıran, 2016: 43-44). The 1940s, starting point of the second sub-period, cave excavations were initiated in increasing numbers, however they still did not endorse modern excavation techniques that were already being implemented in other contemporary European projects. There were only a few scholars active in this field, who attempted to bring this new discipline into better academic focus (Harmankaya, 1996: 9-10). A close analysis of all the developments made in the field between the 1940s and 1980, shows that Palaeolithic archaeology was in a period of infancy. The most salient projects begun with the explorations of the Karain Cave in 1946 and the beginning of small scale soundings in Yarımburgaz Cave after its discovery in 1963 (Harmankaya, 1996: 8-12; Taşkıran, 2016: 43-45).

Turkish Palaeolithic studies were unfortunately partly restricted to a narrow frame, due to heated debates and disputes that started in the 1960s and which have continuing to plague the field to this day (cf. Chapter 3 and 5; cf. the dispute of Bostancı, 1962: 240-249 with Kökten, 1960: 50-51; 1962: 141, as a telling example; Dalton, 2010). This case study clearly shows that, while some provinces were more thoroughly researched, many regions remained virtually unexplored. For instance, by the 1960s the Aegean region of Turkey still had not had any archaeological excavations done there while the following regions Mediterranean, vicinity of Antalya, Central Anatolia, Southeastern and East of Turkey had been extensively researched (Harmankaya, 1996: 10-11). The third period of development within Palaeolithic research involves all recent studies from the 1980s to the present (Harmankaya, 1996: 11). Most of research in this period is survey projects being prevalent all around Anatolia with the exception of several prominent excavation

projects such as Keçe Cave and Pınarbaşı Rock Shelter. Taking into account all of these most current projects, Anatolia has a great potential to study in Palaeolithic archaeology field.

Undoubtedly, Palaeolithic studies still does not receive the attention it deserves in Turkish academia. Palaeolithic archaeology has certainly matured over the last three decades thanks to quite a few very active archaeologists, whose focus is Pleistocene archaeology (Taşkıran, 2016: 44-47). These studies have produced significant contributions to Palaeolithic archaeology and history in Turkey, both by continuing excavation of old sites and due to the additions of new, ongoing excavations.

The past of Palaeolithic archaeology defines the potential of the present. Some projects, both large scale ones initiated by the government, and small scale ones, carried out by individuals in recent times, have attempted to communicate what Palaeolithic archaeology is to the general public. These sorts of projects brought a new awareness to the field of Palaeolithic archaeology. It is striking, however, that there is a large deficiency in terms of introducing the Palaeolithic period to students in both primary and secondary educational levels. The students in primary and secondary schools have been exposed to erroneous information about Palaeolithic archaeology, as is clearly seen in their textbooks. The minimal amount of information students receive during their secondary school education, and the misinformation published the textbooks was revealed by the results of a small-scale study conducted under my supervision. Thus, we will not be able to reach a satisfactory level of understanding concerning Palaeolithic archaeology for the public, if there are no reforms to the curriculum at the primary and secondary levels.

Concrete steps have been taken in an attempt to move Palaeolithic studies into the future, such as carrying out international projects, following recent and new developments in the discipline, and highlighting the contribution of Anatolian Palaeolithic studies as an integral part of world prehistory. This means that an important exertion must occur in order to clearly "communicate" how to transmit information concerning the field to students, at every level of education, to museum curators, and to archaeologists whose focus is not Palaeolithic archaeology. It is clear that projects, research and the media need to be supported in terms of financial and political, with the purpose of transmission. In the long run, it will be beneficial that specifically Pleistocene archaeology is taught as a separate subject to students of all levels in the Turkish public education system.

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TABLES

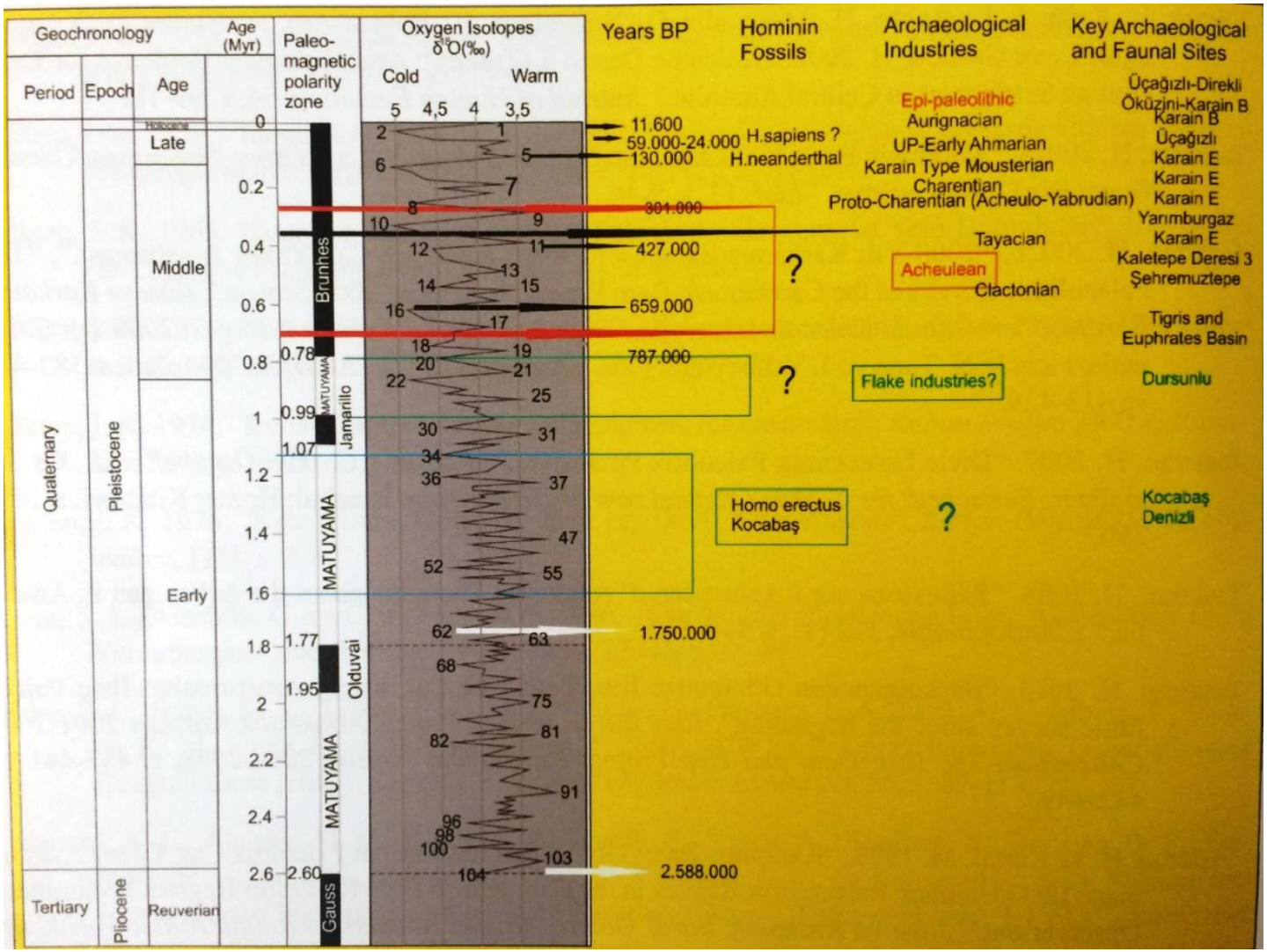


Table 1: Chronology table of Anatolian Palaeolithic periods (courtesy H. Taşkıran) (Taşkıran, 2015: 121)

FIGURES

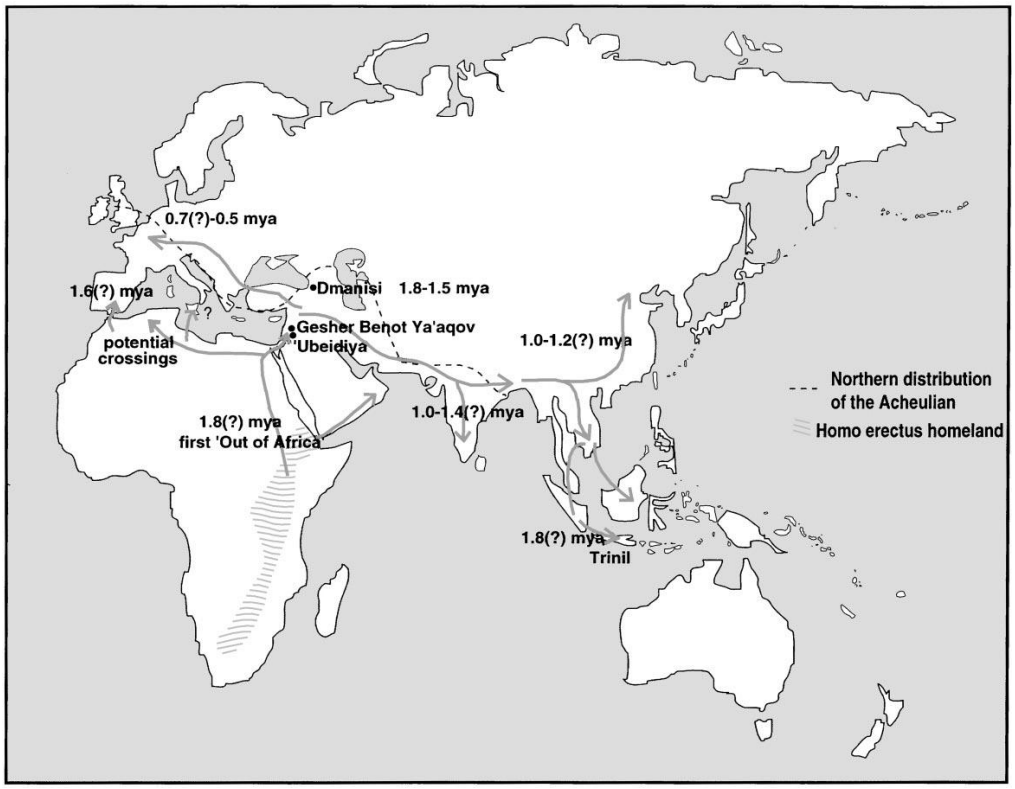


Figure 1: Suggested routes of *Homo* dispersal out of Africa (Bar-Yosef & Belfer-Cohen, 2001: 23)

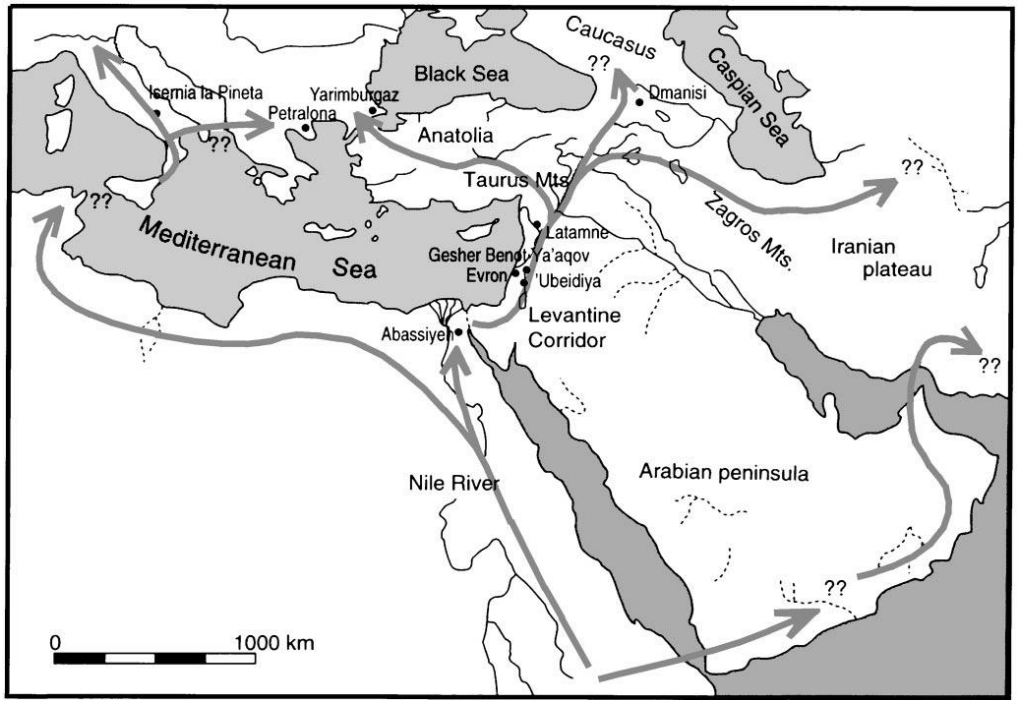


Figure 2: Suggested routes for the dispersal wave out of Africa in the Lower Pleistocene/Early Middle Pleistocene (Bar-Yosef & Belfer-Cohen, 2001: 25)

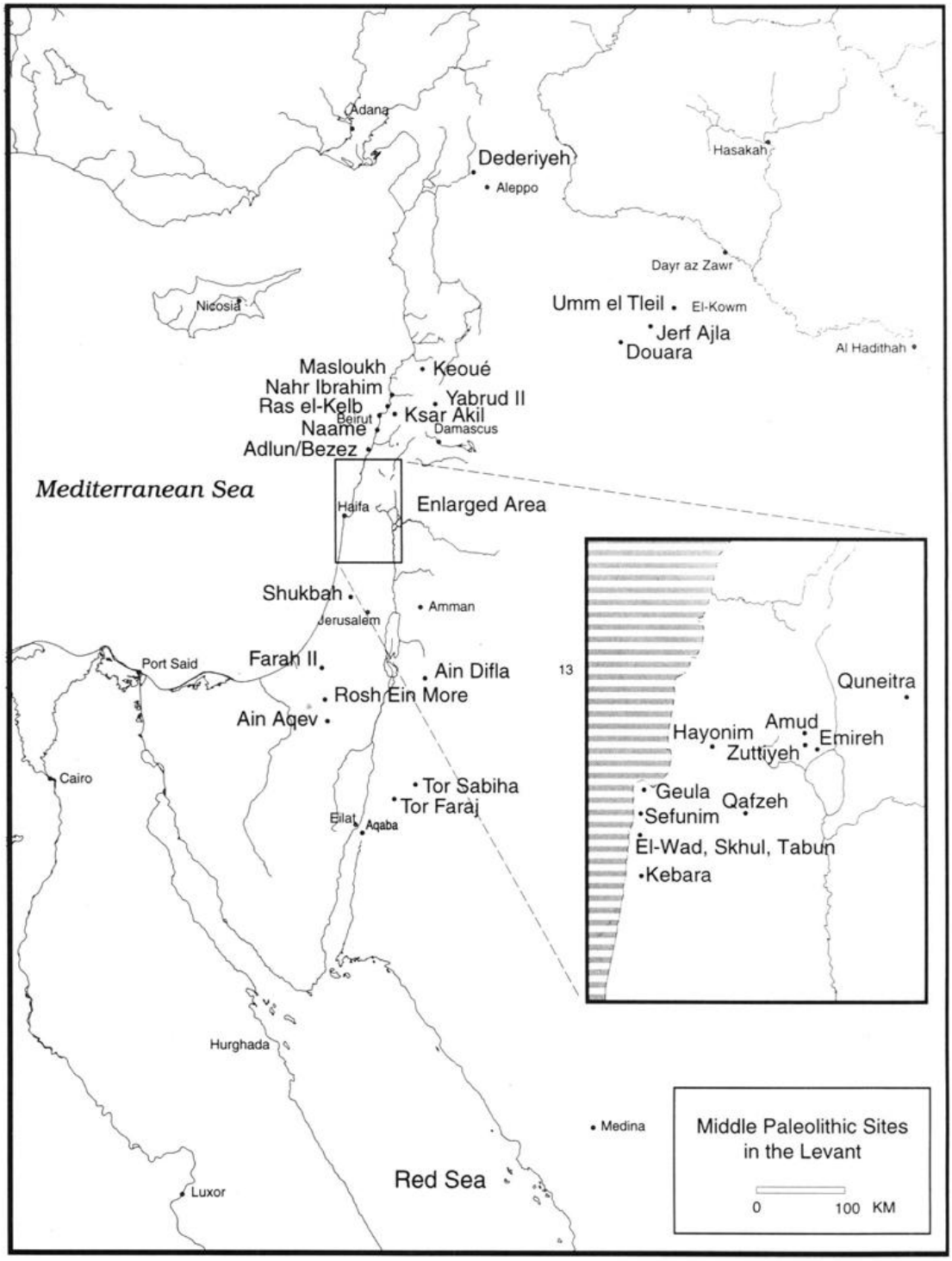
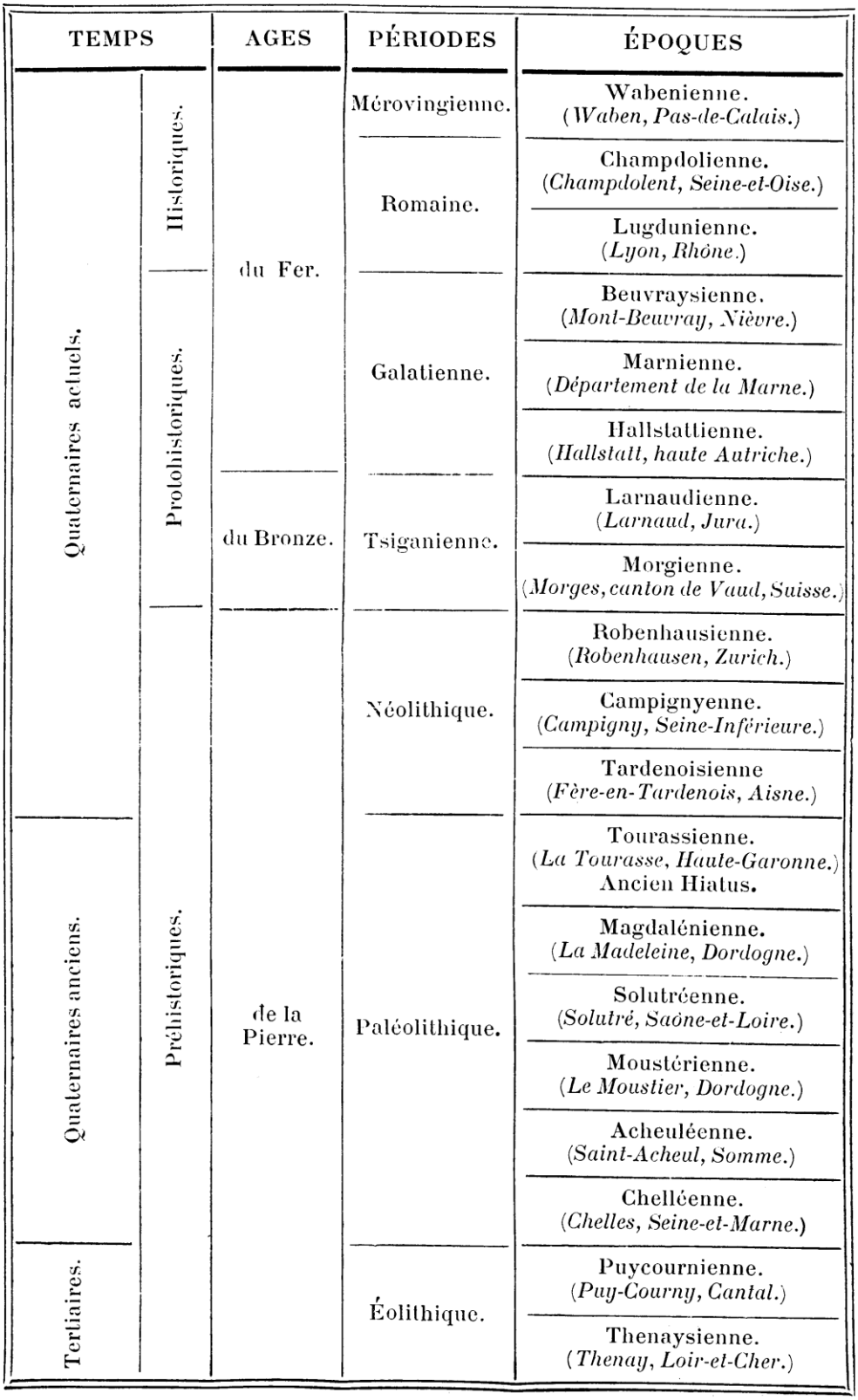


Figure 3: Key sites of the Levantine Palaeolithic (Bar – Yosef, 2001: 16)

Figure 4: *Acheulean* handaxe (i.e., Hoxne Handaxe) found in 1797 by Frere at Hoxne, Suffolk, published in *Archaeologia*, in 1800 (Trigger, 2006: 140)



TEMPS		AGES	PÉRIODES	ÉPOQUES
Quaternaires actuels.	Historiques.	du Fer.	Mérovingienne.	Wabenienne. (*Waben, Pas-de-Calais.*)
			Romaine.	Champdolienne. (*Champdolent, Seine-et-Oise.*)
				Lugdunienne. (*Lyon, Rhône.*)
	Protohistoriques.		Galatienne.	Beuvraysienne. (*Mont-Beuvray, Nièvre.*)
				Marnienne. (*Département de la Marne.*)
				Hallstattienne. (*Hallstatt, haute Autriche.*)
		du Bronze.	Tsiganienne.	Larnaudienne. (*Larnaud, Jura.*)
				Morgienne. (*Morges, canton de Vaud, Suisse.*)
	Préhistoriques.	de la Pierre.	Néolithique.	Robenhausienne. (*Robenhausen, Zurich.*)
				Campignyenne. (*Campigny, Seine-Inférieure.*)
				Tardenoisienne (*Fère-en-Tardenois, Aisne.*)
Quaternaires anciens.			Paléolithique.	Tourassienne. (*La Tourasse, Haute-Garonne.*) Ancien Hiatus.
				Magdalénienne. (*La Madeleine, Dordogne.*)
				Solutréenne. (*Solutré, Saône-et-Loire.*)
				Moustérienne. (*Le Moustier, Dordogne.*)
				Acheuléenne. (*Saint-Acheul, Somme.*)
				Chelléenne. (*Chelles, Seine-et-Marne.*)
Tertiaires.			Éolithique.	Puycournienne. (*Puy-Courny, Cantal.*)
				Thenaysienne. (*Thenay, Loir-et-Cher.*)

Figure 5: Mortillet's classification of the prehistoric epochs (Mortillet, 1883: 21; 1897: 193)

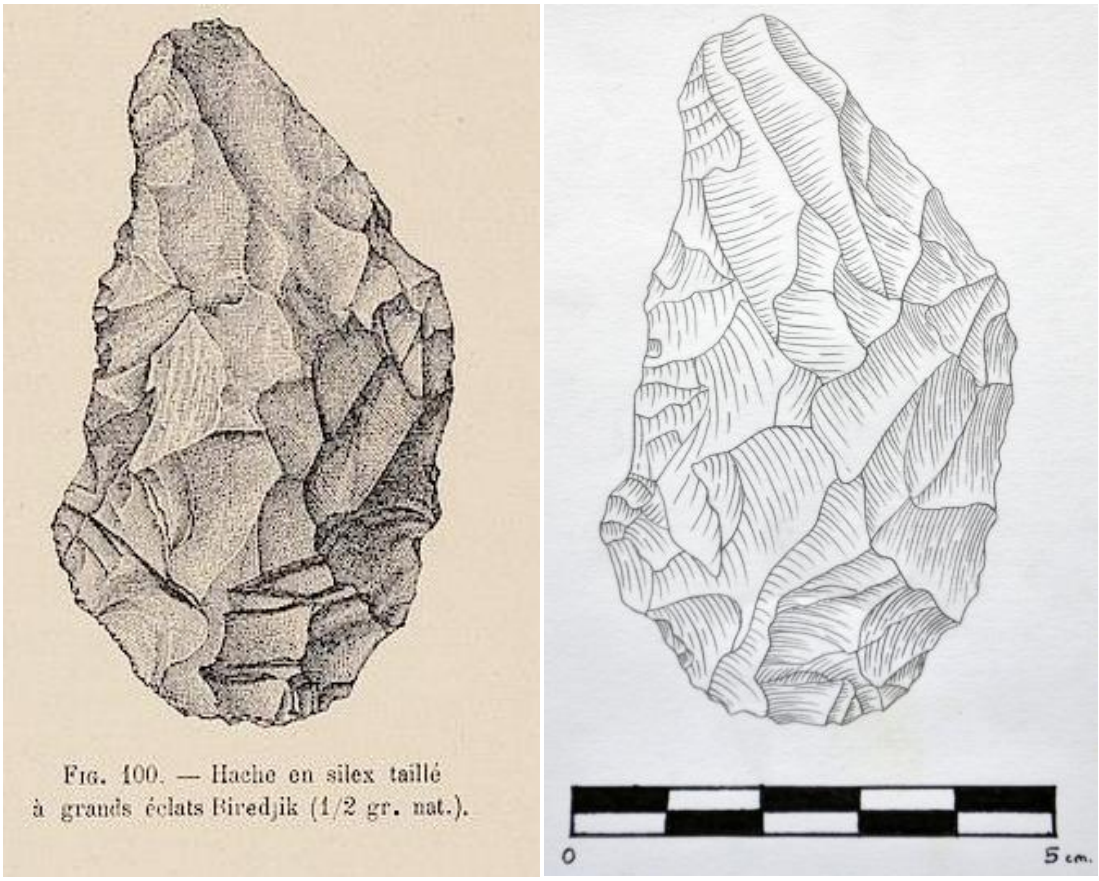


Figure 6a – 6b: The earliest reported find (biface) belonging to Anatolian Palaeolithic found in Birecik in 1884 by M. J. E. Gautier (Chantre, 1898: 131)

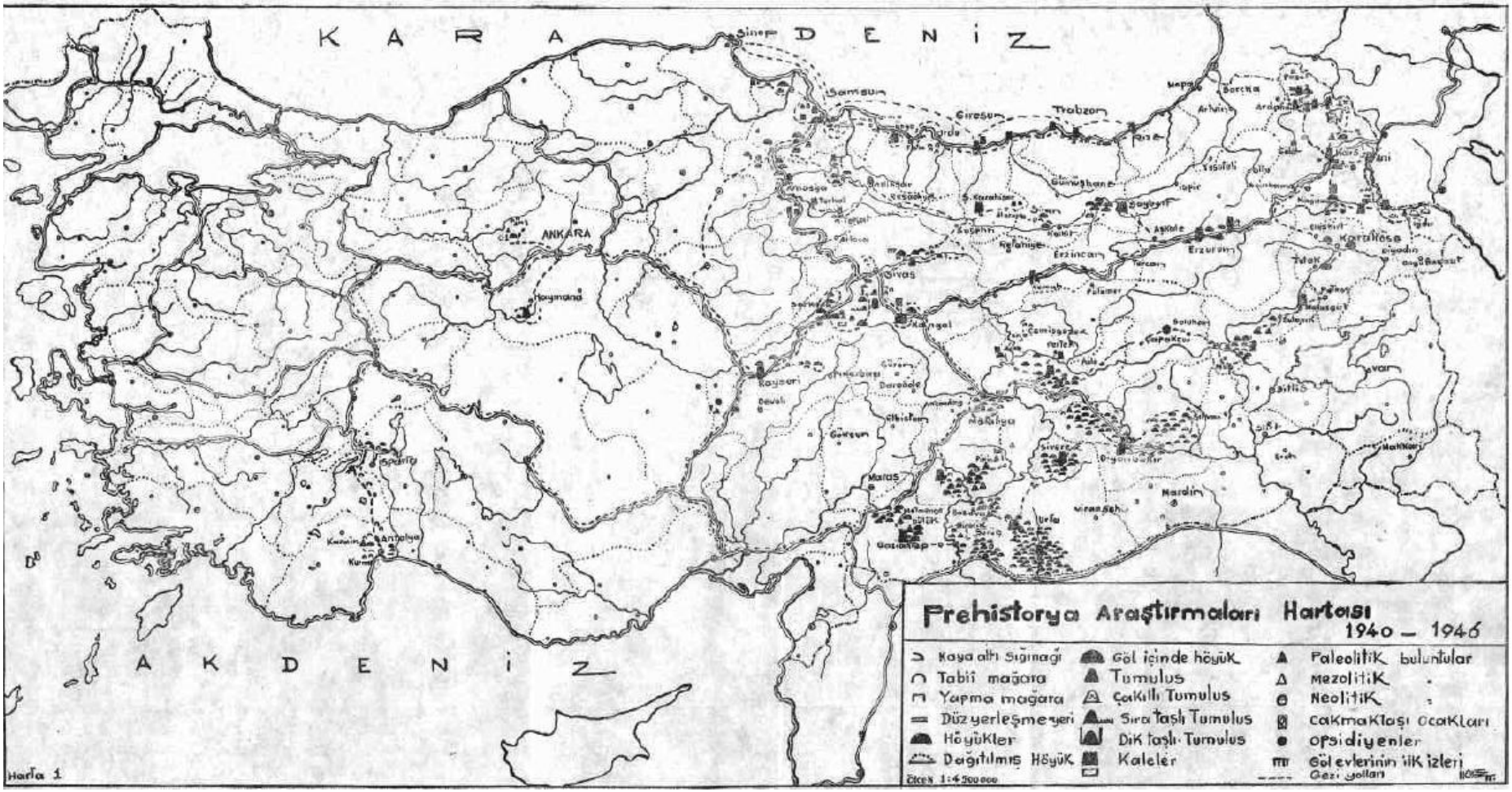


Figure 7: The archaeological places in Anatolia mapped by İ. K. Kökten between 1940 and 1946 (Kökten, 1947)

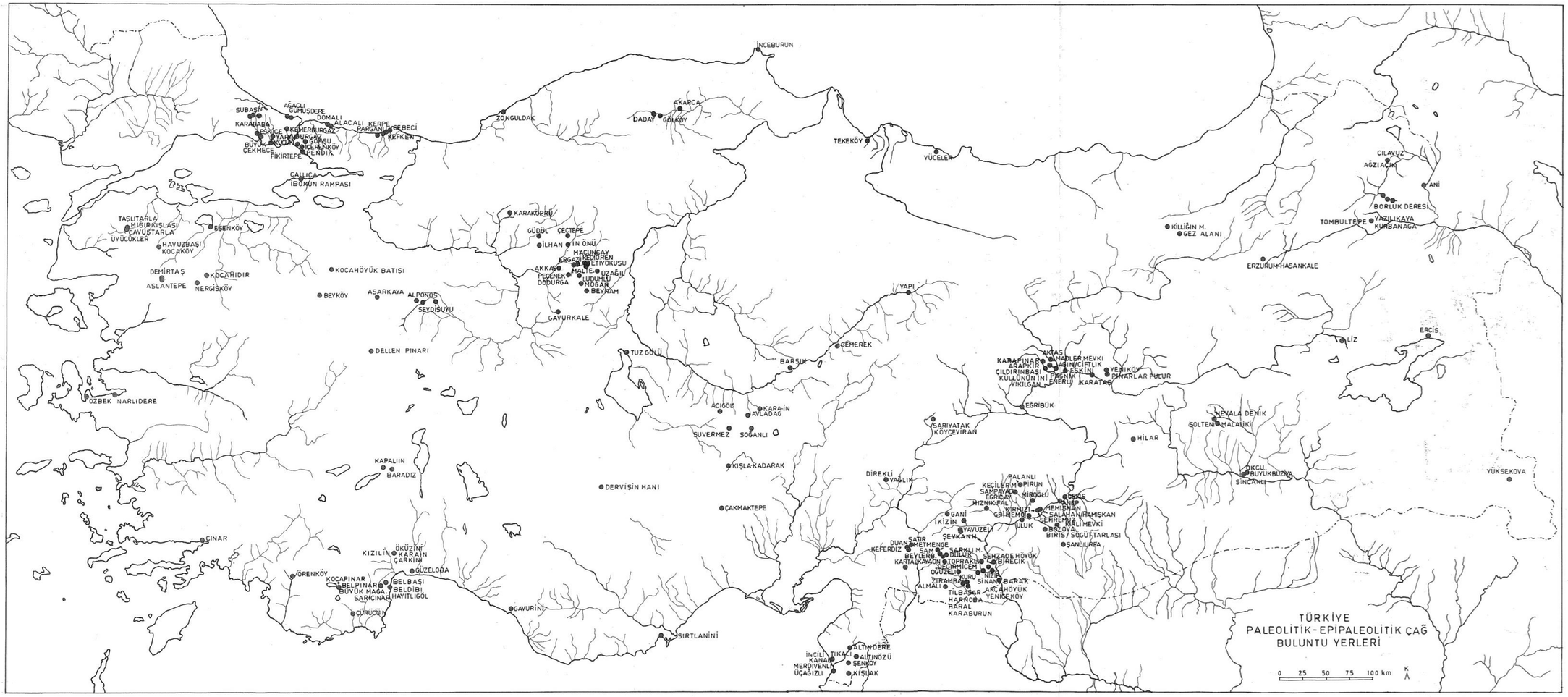


Figure 8: The map showing most of the Palaeolithic and Epi-Palaeolithic sites in Turkey (Harmankaya & Tanındı, 1996).

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Figure 13: General view of Öküzini Cave (Taşkıran, 2016: 48)

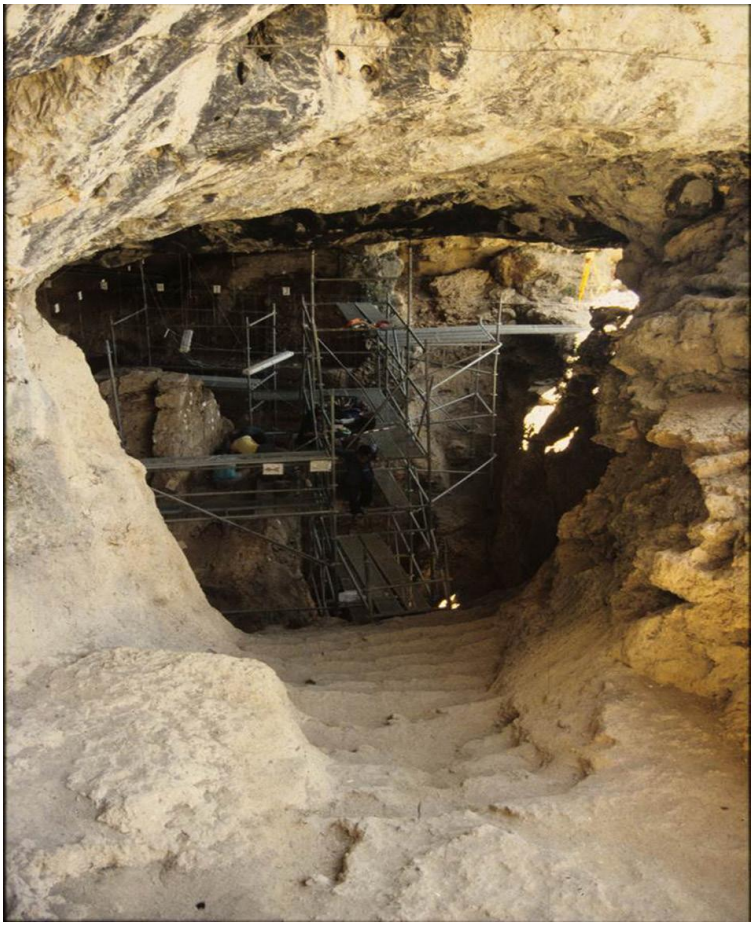

Figure 14a: General view of the excavations in Karain Cave Chamber E (Taşkıran, 2016: 46)

Figure 14b: Holocene and Pleistocene stratigraphies in Karain Cave Chamber B (Taşkıran, 2016: 47)

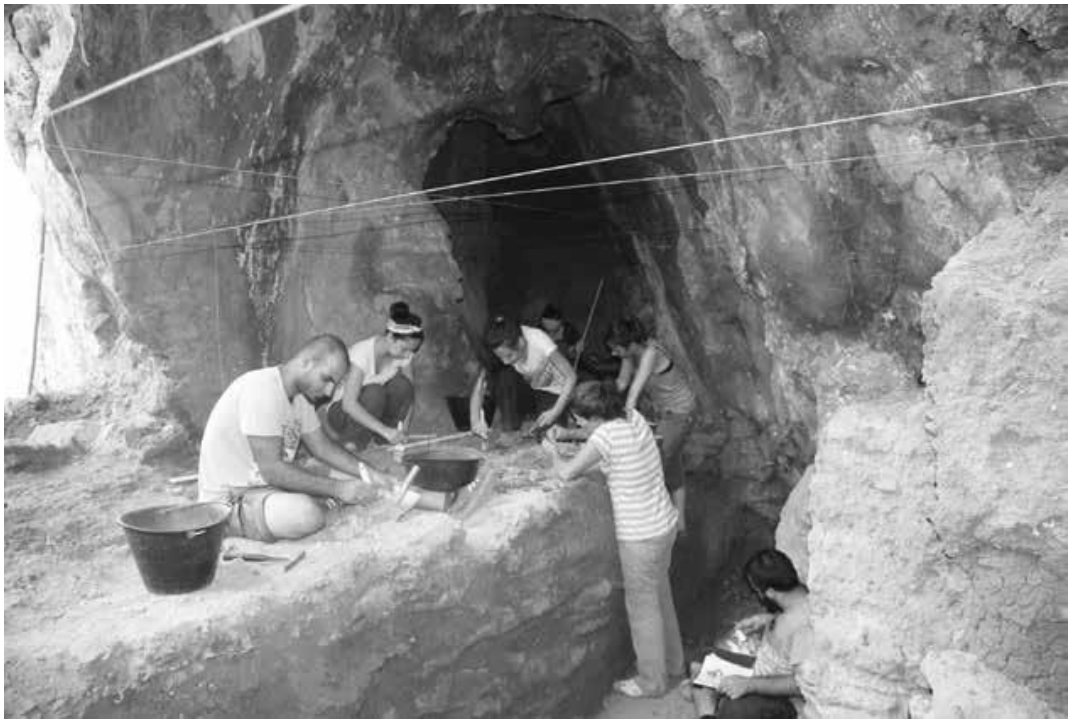

Figure 15: Excavations in Üçağızlı Cave, 2015 season (Güleç & Özer et al. 2017: 367)

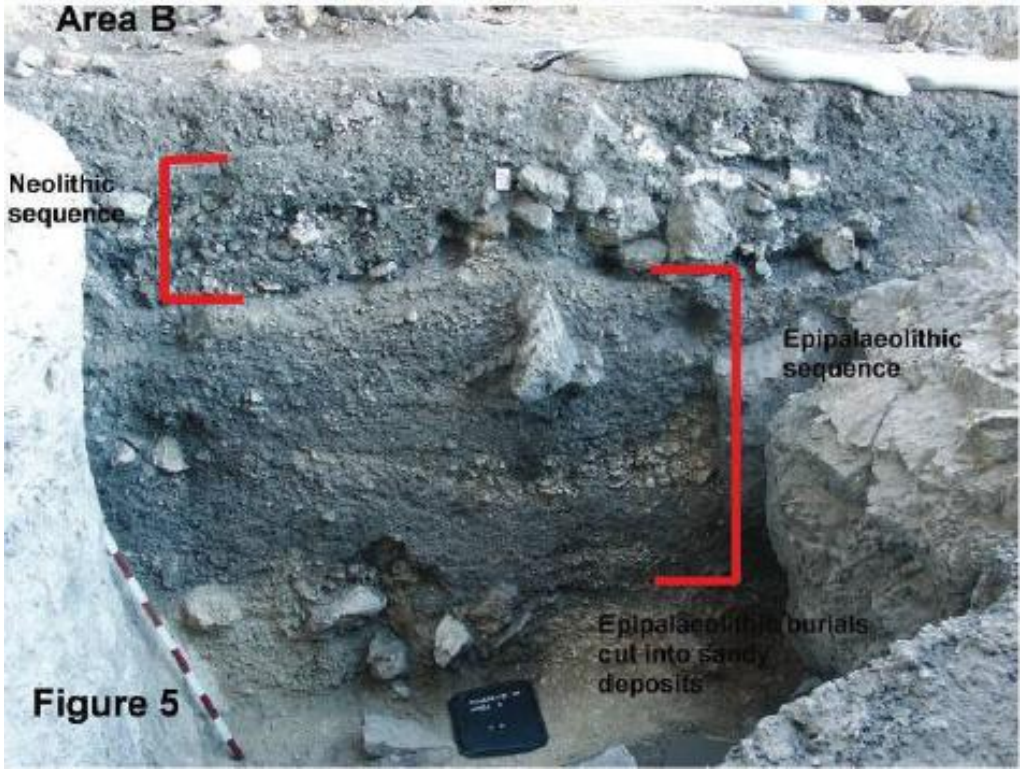

Figure 16a: Epi-Palaeolithic burials in Pınarbaşı, the Konya plain (Baird & Asouti et al. 2013: 181)

Figure 16b: Epi-Palaeolithic Grave 13 in Pınarbaşı, the Konya plain (Baird & Asouti et al. 2013: 182)

Figure 17a: Epi-Palaeolithic Grave 14 in Pınarbaşı, the Konya plain (Baird & Asouti et al. 2013: 182)

Figure 17b: *Dentalium* grave goods covered with red ochre of Grave 14 in Pınarbaşı, the Konya plain (Baird & Asouti et al. 2013: 184)

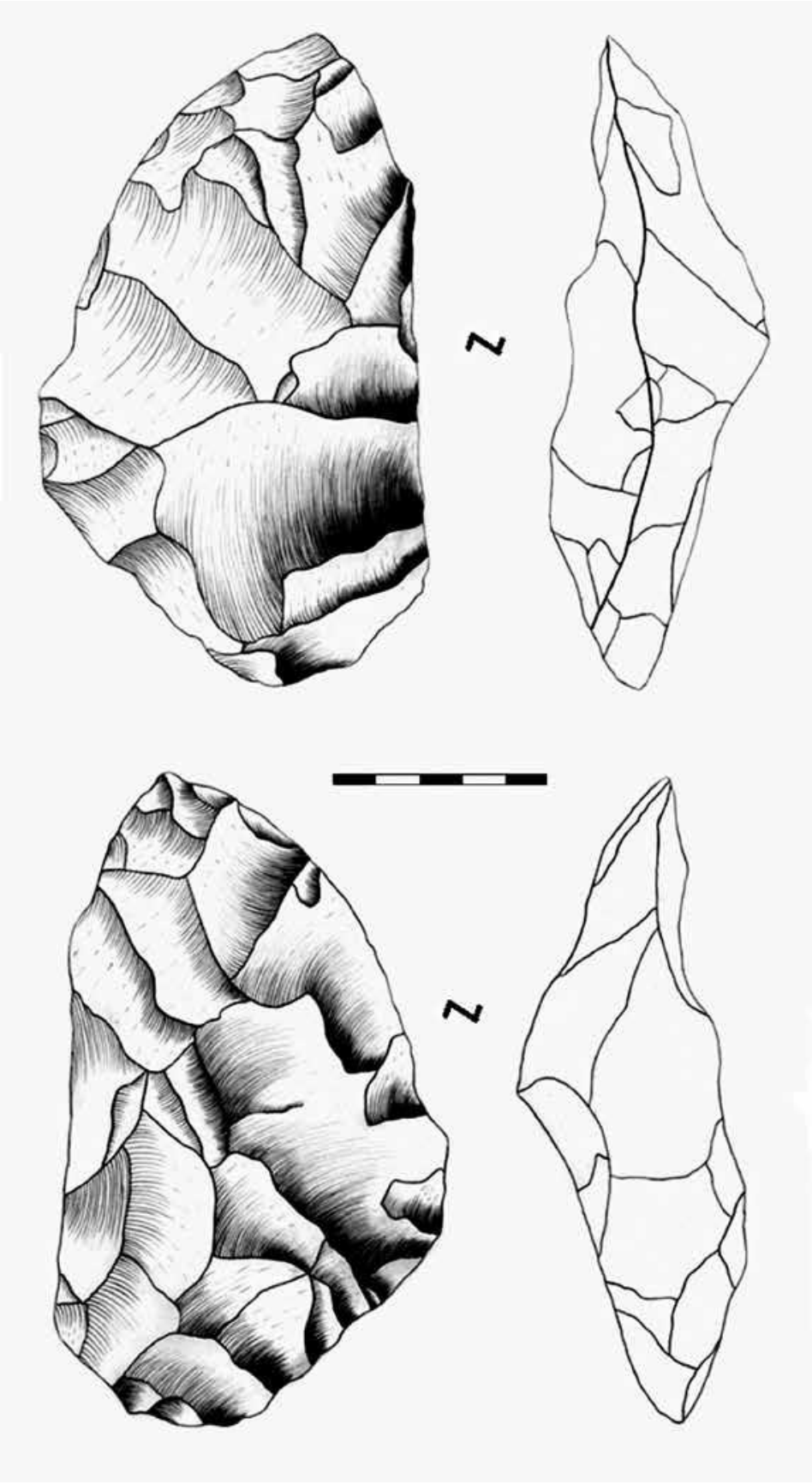

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Figure 19: Some finds collected in 2015 survey in the Çanakkale province (Özer & Sağır et al. 2017: 324)

Figure 20: A hand-axe dated to the Lower Palaeolithic from 2015 survey in the Van province (Baykara & Dinçer et al. 2017: 314)

Figure 21: Biface thought to have been *Abbevilian* type in Aksaray province (Yaman & Aydın et al. 2017: 121)

Figure 22: The first material dated to the Lower Palaeolithic in the Karaburun district (Çilingiroğlu & Uhri et al. 2017: 174)

Figure 23a: A side scraper with double patination found in Kureyşler surveys in 2015 (Photo: Author) (By the courtesy of Berkay Dinçer)

Figure 23b: A bifacial hand-axe found in Kureyşler survey in 2015 (Photo: Author)

Figure 24a: Keçe Cave wall paintings (Keçe Cave 2015 excavation archive, by the courtesy of M. Karakoç)

Figure 24b: Keçe Cave human figure incised on the cave wall (Keçe Cave 2015 excavation archive, by the courtesy of M. Karakoç)

Figure 24c: The excavation in Keçe Cave (Keçe Cave 2015 excavation archive, by the courtesy of M. Karakoç)

Figure 25: Internal view of Şahinkaya Cave (Dinçer, 2010: 8)

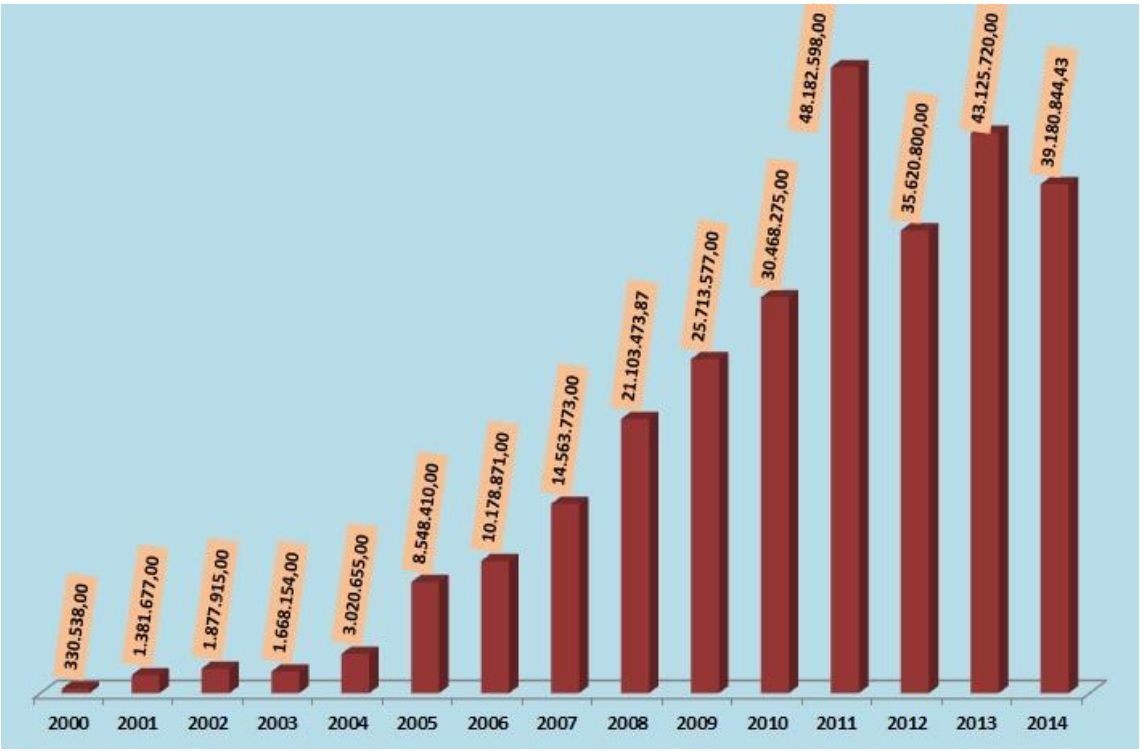

Figure 26: Diagram of appropriations provided by the Ministry of Culture for the excavations and surveys between 2000 and 2014 (in ₺ currency) (http://www.kulturvarliklari.gov.tr/TR,126086/2000-2014-yillari-arasinda-kazi-ve-arastirmalara-kultur-.html)

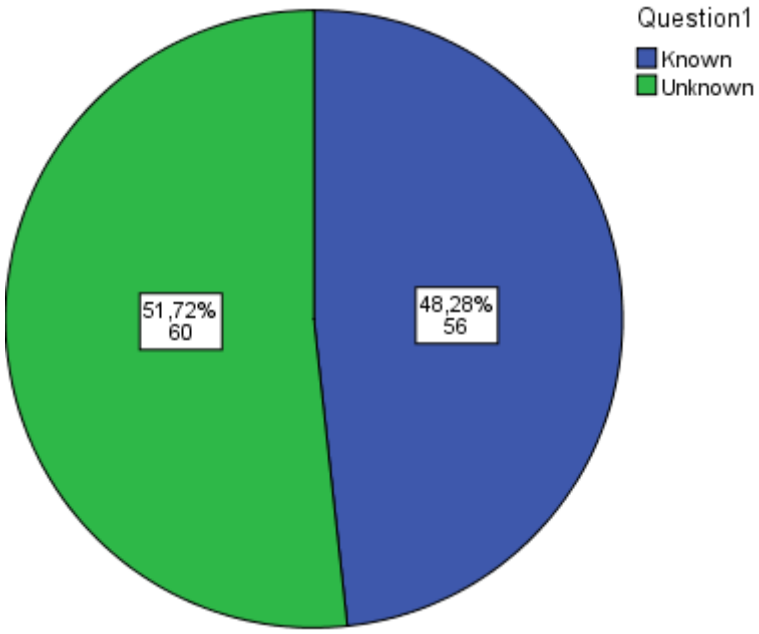

Figure 27: Ratio of students who answered question 1 (The ratio of students who correctly answered the question is indicated blue part; the ratio of students who answered the question wrongly is indicated green part in the table.)

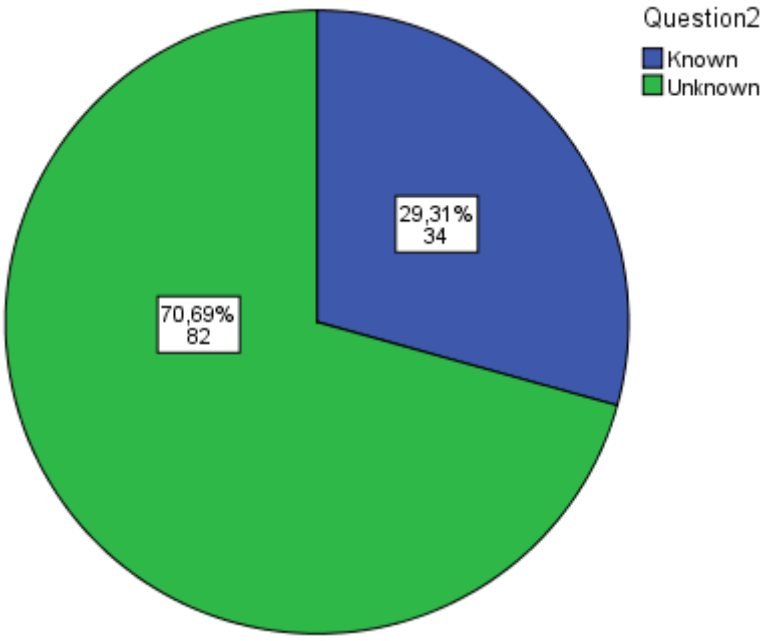

Figure 28: Ratio of students who answered question 2 (The ratio of students who gave correct information about the subject is indicated blue part; the ratio of students who give wrong information is indicated green part in the table.)

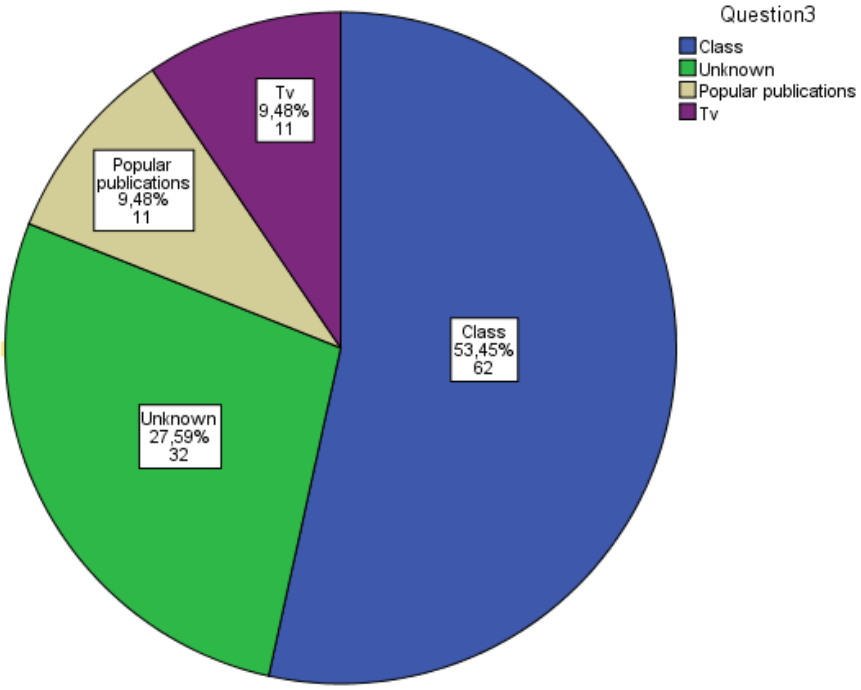

Figure 29: Table showing the ratio of the students who answered question 3 (Each part in the table represents where students learnt about the Palaeolithic period subject from i.e., in class, from popular publications, from television, and unknown representing those who did not answer and/or learnt through any other way.)

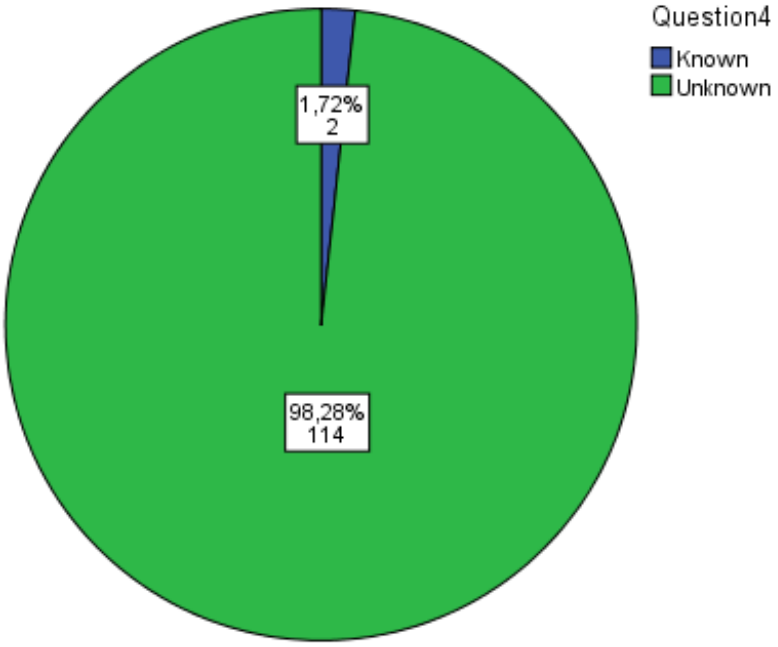

Figure 30: Ratio of students who answered question 4 (The ratio of students who correctly answered the question is indicated blue part; the ratio of students who wrongly answered the question is indicated green part in the table.)

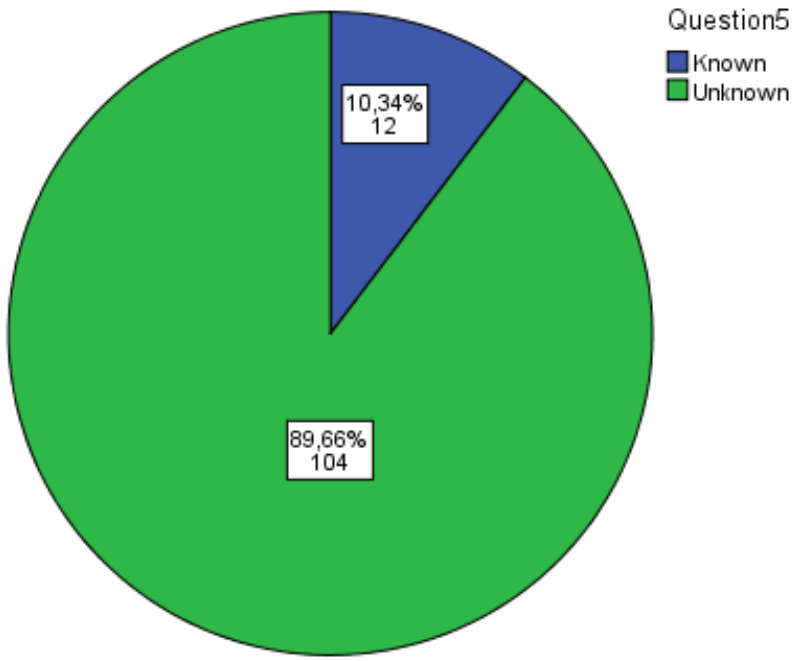

Figure 31: Ratio of students who answered question 5 (The ratio of students who knew that there are Palaeolithic sites in the world is indicated blue part and the ratio of students who do not know is indicated green part in the table.)

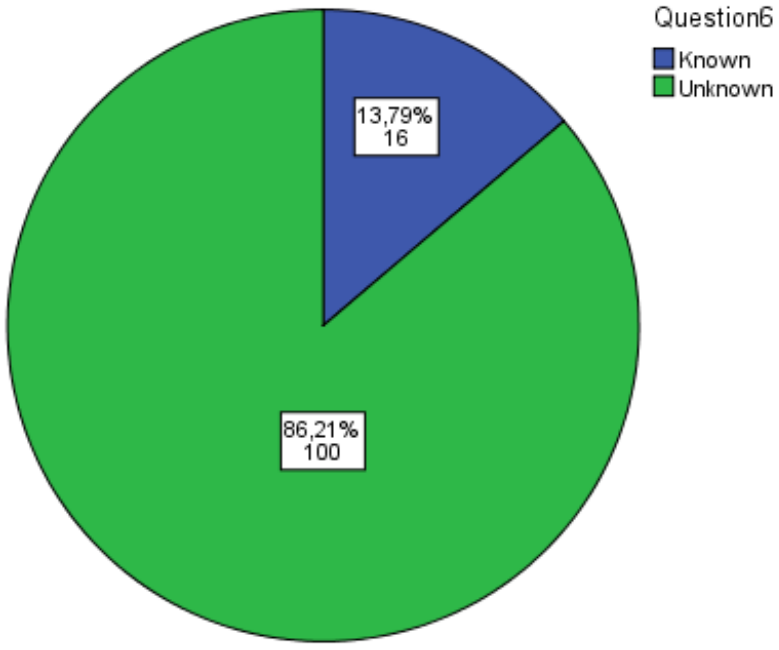

Figure 32: Ratio of the students who answered question 6 (The ratio of students who knew that there are Palaeolithic sites in Turkey is indicated blue part and the ratio of students who did not know is indicated green part in the table.)

Figure 33: Photo of the experimental archaeology project by the students from Seydişehir Seyyid Harun Anatolian High School. [Presented are a model of the Colosseum, a model of a theatre from neighborhood, ancient wall painting models, a model of the Ottoman castle, and a carved stone model] (Photo: Author)

Figure 34: A cuneiform tablet model as an example of experimental archaeology done by students from Seydişehir Seyyid Harun Anatolian High School (Photo: Author)

Figure 35: Erroneous date given to the Palaeolithic period (from 600.000 BC) in a history course book published in 2015 to be used in ninth-grade basic education (Yılmaz, 2015: 49).

Figure 36: Erroneous date given to the Palaeolithic period (from 60.000 BC) in a history course book published in 2016 to be used in ninth-grade basic education (Önder, 2016: 52).