Derleme - Review

Historical Kestanbol Hot Springs: "The water that resurrects"*

Tarihi Kestanbol Kaplıcaları: "Ölü Dirilten Su"

Nilüfer Demirsoy[i], Cem Hakan Başaran[ii], Sema Sandalcı[iii]

[i] Yrd Doç Dr, Eskişehir Osmangazi Üniversitesi Tıp Fakültesi Tıp Tarihi ve Etik AD, orcid.org/0000-0002-2647-0807

[ii] Araş Gör Dr, Eskişehir Osmangazi Üniversitesi Tıp Fakültesi Tıp Tarihi ve Etik AD, orcid.org/0000-0002-4041-975X

[iii] Doç Dr, Trakya Üniversitesi Edebiyat Fakültesi Balkan Dilleri ve Edebiyatları Bölümü, orcid.org/0000-0003-0165-5941

ABSTRACT

Alexandreia Troas, is an ancient city located within the present boundaries of Dalyan Village, Geyikli town in Ezine district of Çanakkale Province. It is mentioned as "Eski İstanbul" or "Eski İstanbolluk" in Pir-i Reis's "Kitab-ı Bahriye". According to Pir-i Reis, the city known as "Troy" by the Greeks, was formerly called "Troas" or "Troad" by the Miletians. The city, which has been completely abandoned to its own fate after the 19th century, is nowadays defined as the city of healing waters known as "Kestanbol Hot Springs".

Our study is about the historical character of the ancient region of the ancient Kestanbol, known as the rich hot water springs, and its extant healing practices. Kestanbol hot springs is a healing resource that preserved its function and importance throughout the Ancient, Byzantine and Ottoman periods. It can be seen that its chemical properties today are very well preserved by looking at the reports of its analysis made in Paris, France 123 years ago. It has been proven that Kestanbol hot springs, which can be utilized with different cures, is effective in gynaecological diseases related to infection, rheumatic diseases, arthritis, some bone tuberculosis, lymphadenopathy in kids, upper respiratory tract and lung diseases.

Key Words: Kestanbol, Hot Springs, Alexandria Troas.

ÖZ

A1exandreia Troas, Çanakkale ili Ezine ilçesi, Geyikli bucağına bağlı Dalyan Köyünün bugünkü sınırları içerisinde yeralan antik bir kenttir. Pir-i Reis'in "Kitab-ı Bahriye"sinde "Eski İstanbul" veya "Eski İstanbolluk" adı geçmektedir. Pir-i Reis'in belirttiğine göre Yunanlılar tarafından "Troy" olarak bilinen kent, daha eskiden de Miletlilerce "Troas" veya "Troad" olarak adlandırılmaktadır. 19 yüzyıldan sonra tamamen kendi kaderine terk edilmiş olan kent günümüzde "Kestanbol Kaplıcaları" olarak bilinen şifalı suların kenti olarak tanımlanmaktadır.

Çalışmamız, zengin sıcak su kaynakları olarak bilinen tarihi Kestanbol Kaplıcalarının bulunduğu antik bölgenin tarihsel özelliği ve günümüze kadar şifa verici uygulamaları üzerinedir. Kestanbol Kaplıcaları; Antik çağ, Bizans ve Osmanlı dönemi boyunca işlevini ve önemini koruyan bir şifa kaynağıdır. 123 yıl önce Fransa'nın Paris şehrinde yapılan analizinin raporları ile de günümüzde kimyasal özelliğini çok iyi koruduğu görülmektedir. Farklı kürler ile faydalanabilen Kestanbol kaplıcasının, enfeksiyona bağlı jinekolojik hastalıklar, romatizmal hastalıklar, kireçlenme, bazı kemik tüberkülozları, küçük çocuklardaki lenf adenopati, üst solunum yolları ve akciğer hastalıklarında etkili olduğu kanıtlanmıştır.

Anahtar sözcükler: Kestanbol, Kaplıcalar, Alexandria Troas.

Ancient City of Alexandria Troas

The earliest information on the hot water springs of the region is mentioned in **Homer's *Iliad:*** *"... (In Troja) came to two lovely springs where the waters rise to feed the eddying Scamander. One flows warm, and*

* *Lokman Hekim Dergisi, 2018; 8 (1): 23-32*
Geliş Tarihi – Received: 08.08.2017 ; Kabul Tarihi - Accepted: 13.11.2017
İletişim - Correspondence Author: Nilüfer Demirsoy <npoyraz@ogu.edu.tr> <nilufer_p2@gmail.com>

steam rises above it as smoke from a fire, while even in summer the other is ice-water, cold as freezing snow or hail. Nearby are the fine wide troughs of stone where the wives and daughters of the Trojans once washed their gleaming clothes in peace-time...[1]

Alexandria Troas was founded by Antigonus* Monophthalmus, one of the generals of Alexander the Great, with the name Antigoneia on the site of a small town called "Sigia" in order to reinforce and enhance the political and commercial relations between the Asia Minor and Macedonia in 310 BCE **(Figure 1)**.

Figure 1. Alexandria Troas Ancient City Map.

After a while, at the dawn of the 3rd century BCE, its name was replaced with Alexandria Troas by Macedonian Lysimachus** in memory of Alexander the Great. Alexandria Troas preserved its boundaries from the time of Lysimachus until the end of the Hellenistic Period.[2-4]

When the city was established, the communities around Gargara, Hamaxitus, Neandreia, Kolonai, Larisa, Cebrene and Scepsis cities were relocated in this region.[5]

Alexandria Troas, which was popular among Romans since it remained loyal to Rome in battles against the King Antiochus of Seleucid Empire (Syria), were granted all the privileges of Roman cities and became one of the most significant cities in Anatolia in the Roman Era.[2,3]

The city was shown great interest in the period of Caesar and it can be understood that the city was considered to be the capital of Rome. In the period of Emperor Augustus (BCE 27 - CE 14), nephew and successor of Caesar, the city was named Colonia Augusta Troas.

Alexandria Troas had become one of the biggest cities of Anatolia in terms of area. Hadrian (BCE 117 - CE 138), one of the emperors of Rome, also showed great interest to Alexandria Troas and helped the city, which was the center of the region, restructure.

It can be understood that Herodes Atticus[3]***, the regional governor in this period, had baths and cisterns, still standing up to this day, made for him, which is a sign that Atticus supported the city by popularizing it. There are waterworks 7-9 m. down below the ground in the temple area **(Figure 2)**.

* Antigonus Monophtalmos (Antigonus The One-eyed), (Ancient Greek: Αντίγονος ο Μονόφθαλμος, born 382 BCE - died 301 BCE, Ipsus, Phrygia) Macedonian under Alexander the Great.

** Lysimachus (Ancient Greek : Λυσίμαχος, 360 BCE – 281 BCE) Lysimachus, who reigned over Thrace, Asia Minor and Macedonia in 306, was a Macedonian officer and one of the governor's of Alexander the Great.

Figure 2. The Baths of Herodes Atticus, one of the largest structures of the ancient city.

Another element in dating the Alexandria Troas Nymphaeum (fountain) is the aqueduct, carrying water to the structure.

This incident is described as below in Philostratus' work titled “Lives of Sophists”: At a time when Herodes was governor of the free cities in Asia, he observed that Troas was ill-supplied with baths, and that the inhabitants drew muddy water from their wells, and had to dig cisterns to catch rain water. Accordingly, he wrote to Emperor Hadrian to ask him not to allow an ancient city, conveniently near the sea, to perish from drought, but to give them three million drachmae to procure a water-supply, since he had already bestowed on mere villages many times that sum. The Emperor approved of the advice in the letter as in accordance with his own disposition, and appointed Herodes himself to take charge of the water-supply.[6,7]

But when the outlay had reached the sum of seven million drachmae, and the officials who governed Asia kept writing to the Emperor that it was a scandal that the tribute received from five hundred cities should be spent on the fountain of one city, the Emperor expressed his disapproval on this to Atticus, whereupon Atticus replied in the most lordly fashion in the world: "-Do not, o Emperor, allow yourself to be irritated on account of so trifling a sum. For the amount spent in excess of the three millions I hereby present to my son, and my son will present it to the town. Rome has significant importance in the development of the ancient baths and bath culture in the Mediterranean region.[6,7]

It is possible to observe two or more public baths in immense sizes, various dimensions, and forms, composed of distinct places in most of the Roman settlements in almost each period. Alongside their hygienic function, the baths were used as institutions, enabling activities as sports and entertainment in the Roman Era. The baths were considered as a public bathing and socializing area. These public features brought along cultural and intellectual functions as well. Within this context, it is known that the Roman

[***] Herodes Atticus (Ancient Greek: Ηρώδης ο Αττικός Iródis o Attikos ; BCE 101-177), or Atticus Herodes, eminent and wealthy Greek aristocrat, sophist and Roman senator. According to Philostratus, Herodes Atticus is a major advocate for the Second Sophistic. He received a good education and became one of the best mentors for rhetoric and philosophy in both Greek and Roman culture. However, his whole cultural standpoint had been of Greek origin throughout his life. He has been commemorated as the great benevolent in Greece, especially in Athens from the 2nd century up to this day.

baths were utilized as major architectural compositions combining other structures such as gymnasium and library used by the community in common.[8]

Thus, around 40 ancient structure remains are observed on the left and right-hand side of the stream, formed by the hot springs. Therefore, Alexandria Troas is a city demonstrating its glory from the ancient ages and its 2300 year history.

While the city was dependent on Seleucids in the time of Antiochus; it became a center for the episcopacy in Byzantium era. According to the statements of the ancient authors Zosimus and Zonaras, the emperor Constantine planned to build Constantinople* there with the same opinions initially, which demonstrates the significance of the city. One of the primary reasons for this is likely to be the commercial wealth arising from the port of the city.[2,3,9]

However, today, there are not any significant remains from the era after early Christianity.

Demolition period in Alexandria Troas, just like in any other ancient city in Anatolia, began in the 7th century CE. A large amount of marble from Alexandria Troas was brought to Istanbul in order to utilize them in a variety of structures in the Ottoman era. In the meanwhile, the European explorers and sailors took away the decorative marbles from here to abroad as well. Since the city was located nearby the seaside, the remains end up getting transported to other places effortlessly. At the dawn of the XIX. century, the structure, which was largely still standing, collapsed as a result of an earthquake.[9]

The name “Old Istanbul” or “Old Istanbolluk” mentioned in Piri Reis' “Kitab-ı Bahriye,” is still used in the region. Again, according to the Piri Reis' statement, the city, known as “Troie / Troia” back then by the Greeks, had been named as “Troas” or “Troad” by the people living in the region. In the studies conducted by the early explorers, the city, again, was mentioned as “Troie / Troia.”[2,3,10]

In 1895, a facility was built in addition to the Kestanbol hot springs, during the reign of Abdul Hamid I, one of the Ottoman Sultans. It was reopened in the same place, where it is now, with bathing and treatment units; however, the facility lay in ruins since it had been burnt down in the World War I. Later on, Ezine Municipality reopened the facility in 1935.[9] It was reconstructed again with a contemporary design in 1963. The thermal water, carried naturally in a closed ecosystem, consist of radon gas, existing in only a few hot springs in our country and countries in the region.

Kestanbol in Tales

Rumor has it, Saint-Paul, one of the apostles of the prophet Christ, resurrected a dead body by means of washing him in the springs. This rumor is made up to express the positive effects of the hot springs to the health. There is an inscription in the hot springs as well. It is translated as: *“May God, who created illness and cure and who heals all kinds of diseases, shall restore the health of the visitors of this bath.”*[11]

The explorers mostly mentioned this place as “Lydia” now, its complete name is “Kestanbol Hot Springs” The thermal water was mentioned as “Hard water” or “Bitter stream” and it was known that the hot springs were beneficial for health.[2,9,10]

There is a story from the Ottoman era about the holy people walking on the water. While a group of holy people were eating food underneath a wild pear tree, a shepherd, who herded his sheep, came over and

* Probably, the name of this place was "Kestanpolis" due to Constantinos.

asked where they were heading to. The holy people responded *"Going to Tenedos"*, the shepherd insisted "Take me there too".

When the holy people said that they were going to sleep for a while and then set off; the shepherd, who was already tired, was very happy to hear the news and went to sleep immediately. After a while, he woke up and couldn't believe his eyes! The holy people laid their cardigans over the water and headed for Tenedos. The shepherd realized that he had to do something; otherwise, he would have fallen behind, so he filled his pockets with sand and began following them by sprinkling this sand over the water and stepping over it. The holy people figured out that they had no chance, but to allow the shepherd, who was very insisting to join them, and returned back and took him along as well. Even though they took the shepherd along, the places he sprinkled with sand remained the same.[12]

Nowadays, the place mentioned is known as Kumburnu and still remains as a mystery. The cape is a 500-meter long ridge, only composed of sand. Even though it is surrounded by currents coming from both sides, "the currents can't mess up with it" as the locals say.[12]

Kestanbol Nowadays

The waters of the Kestanbol Hot Springs, which have been healing people from the past to present, contain other substances besides calcium and iron. Kestanbol region consists of sufficient amount of radioactivity in its air and land due to its geological formation. Kestanbol Hot Springs are 18 kilometers from Ezine County. The source of the hot, sedentary, fossil waters down below the ground enabled them to be thinned with the cold waters seeping underground from higher layers of earth.[13]

There are two different water resources ranging between 125-150 ^{o}C. One of them contains sulfur. The thermal water, carried naturally in a closed ecosystem, consist of radon gas, existing in only a few hot springs in our country and countries in the region. Kestanbol region consists of sufficient amount of radioactivity in its air and land other than its water due to its geological formation. The radon water, known also as youth water, is considered to increase the cell renewal with its biological half-life, trigger cell repair mechanisms and healing process. Moreover, it is known that it functions as a painkiller and soothing effect.[14]

The existence of radon therapy units in many health centers in European countries is a sign of its significance. The water is primarily used in the treatment of scrofulous, lymphatism, anaemia, chlorosis successfully; and in the treatment of ganglion and muscle congestion, arthritis temperately in baths. Chronic muscle rheumatism, dermatological diseases originating from rheumatism and perhaps chronic gout disease are especially can be treated with this water.[14] It has been proven that the baths nowadays could be used by means of inhalation and sprinkle cures and are beneficial for the gynecological diseases arising from infection, rheumatic diseases, arthritis, bone tuberculosis, lymphadenopathy in children, upper respiratory infections, and lung diseases.[15]

Kestanbol, with its modern facilities, ranks second in the world's hot spring rankings. There is a facility owned by Ezine Municipality, however, operated privately. While the facility is open all year-long; the peak season is summer. The hot springs are 90 meters above the sea level. It is seen that the thermal water has a positive effect traditionally over rheumatism, gynecological diseases, respiratory diseases, nerve and muscle fatigue, osteoarthritis, and post-surgical complications. The patients are subject to bathing under

doctor control and medical examination; and physiotherapy under the supervision of physiatrists and under the control of physical therapist with new devices and equipment. Canakkale Ezine-Kestanbol Thermal Tourism Center has been allocated to be a "Tourism Center" in accordance with Tourism Incentive Law No. 2634. It entered into force on the date of publication in the official gazette No. 20876 and date of 05/20/1991 **(Figure 3)**.[16]


Bakanlar Kurulu Kararı

Karar Sayısı : 91/1514

Ekli liste ve krokilerde adları ve yerleri belirtilen alanların Turizm Merkezi olarak tesbiti; Turizm Bakanlığı'nın 6/11/1990 tarihli ve 24815 sayılı yazısı üzerine, 2634 sayılı Turizmi Teşvik Kanunu'nun 3 üncü maddesi ile 37 nci maddesinin (A) fıkrasına göre çıkartılan "Turizm Bölgeleri, Turizm Alanları ve Turizm Merkezlerinin Belirtenmesi için Çalışma Gruplarının Oluşturulması, Görev ve Yetkileri ile Çalışma Şekline İlişkin Yönetmelik" hükümlerine göre, Bakanlar Kurulu'nca 7/2/1991 tarihinde kararlaştırılmıştır.

İ. Kaya ERDEM
Cumhurbaşkanı V.

Y. AKBULUT
Başbakan

M. KEÇECİLER, K. İNAN, G. TANER, C. ÇİÇEK
İ. ÇELEBİ, V. DİNÇERLER, M. YAZAR, İ. ÖZARSLAN

7/2/1991 Tarihli ve 91/1514 sayılı Kararnamenin Eki LİSTE

Figure 3. Çanakkale Ezine Kestanbol Thermal Tourism Center has been allocated to be a "Tourism Center" in accordance with Tourism Incentive Law No 2634. It entered into force on the date of publication in the official gazette No 20876 and date of 05/20/1991.

The temperature of the thermal water is 67 ^{o}C in the main source; 47 ^{o}C in the second source; 68 ^{o}C in the mud water; 31 ^{o}C in the bath source; and 21 ^{o}C in the eyewash. The pH value of the thermal water is measured to be 5.92 in the main source; 6.16 in the second source; 5.86 in the mud water; 6.92 in the bath source; and 6.94 in the eyewash.[9,17] The Kestanbol hot springs, especially resembling the theater thermal springs in Ephesus Ancient City and eastern thermal springs, are designed to be surrounded by walking trails. When the bath and gymnasium (education and training centers in ancient ages) are observed in the architectural aspect; they feature walls covered with marble sheets and arches on top **(Figure 4)**.[10]

Figure 4. Located near the "Herodes Atticus Bath", the "Kestanbol Hot Springs". It was demolished in a great earthquake in the Roman period. A new spa was built during the Ottoman period instead of the cappuccino. Antiquity properties were tried to be preserved. "Kestanbol Hot Springs" gives still in service today.

It can be seen that the accumulated water, which is carried over the aqueduct, is distributed into the structure. It has been reported that it is difficult to determine the functions of the places inside the bath

and gymnasium, since no excavation process is executed until today. The dimensions of this structure are 123 x 84 meters. It is known to be one of the largest of the baths during that period in Anatolia.[18]

In one of the first literary records of Pococke (1745), the Kestanbol water source is classified to be hot, sulfuric and saline; and saline and iron-based in Harless (1846). (Yearbook of the Vilayet of Bursa, 1927) It is expressed in Reman (1942) that the Kestanbol water source was 62.5°C and classified as hyperthermal. According to the findings of 02/24/1935, it was found out that the temperature of Küçük Çetmi source was 40 °C and its chemical content consisted of Na (0.1879 gr), Cl (0.1172 gr), HCO3 (0.4392 gr). The majority of the thermal mineral waters of Canakkale is Na-SO4. According to the long-term analysis results conducted between 1894-2004, the proportional variations of the waters and the change in their classification attracts notice. Nonetheless, only the Kestanbol main source is in the water group, (1969) whose non-carbonated water hardness is over 50% **(Table)**.[19]

Table. Mineral values of Historic Kestanbol Hot Springs at different dates

Minerals	According to Liebig, Temperature of Homburg Hot Springs is in between 10-12 º C	Temperature of Nauheim Hot Springs is in between 30-39 º C	Temperature of Old Istanbul Hot Springs is 62.5 º C on April 15th, 1894	Temperature is 62.5 º C Pococke (1745)	According to findings of 02/24/1935, it is 40 °C[20.]	Most recent measurements
Carbonic acid	Gr. 1.338	High	At Low level			Chloride (Sodium) Iron /Fluoride and radioactive composition.
Sodium chloride	“” 14.113	“” 14.210	“” 18.151			
Calcium chloride	“” 1.990	“” 1.300	“” 2.303			pH value is 5.9
Magnesium chloride	“” 0.769	“” 0.390	“” 0.261			The mineral value is
Potassium chloride	“” 0.050	“” 0.0	“” 1.258			21508 mg/liter.
Lithium chloride	“” trace amounts	“” 0.0	“” trace amounts	Classified to be sulfuric and saline	Na (0.1879 gr), Cl (0.1172 gr), HCO3 (0.4392 gr)	2650 picocurie / liter
Lime bicarbonate	“” 1.760	“” 1.910	“” 0.347			Temperature
Magnesia bicarbonate	“” 0.523	“” 0.0	“” 0.0			82 °C Radon value
Iron oxide bicarbonate	“” 0.086	“” 0.037	“” 0.039			
Lime sulphate	“” 0.028	“” 0.100	“” 0.146			
Alumina	“” 0.007	“” 0.108	“” 0.0			
Silica	“” 0.021	“” 0.108	“” 0.022			
Alkaline bromides	“” trace amounts	“” 0.005	“” 0.0			

In order to determine and define the therapeutic characteristics of these waters, the samples obtained from different sources were sent to Paris by taking into account their usefulness in 1895. The samples were examined by Mr. Adolphe Carnot, the principal of the experimentation major of the mining school and Chief Engineer of the French mines. He forwarded the report to Professor Armand Gauthier from Paris Medical Academy. This scholar noticed the medicinal and therapeutic characteristics of Kestanbol waters. This report was translated into Ottoman and Greek as well **(Figure 5)**.

The general outline of the report is as follows: "...*The newly built house, surrounding the baths, has twenty-seven, exclusive and completely quadrangular rooms. That two old baths, one for men and the other for women, has been repaired and annexed to waiting rooms with a cloakroom with them. Besides, six other small hot spring rooms, which are separated with by window walls for a single person use, were annexed to the building. The patients and visitors were able to fulfill their needs during the time they had had in the thermal springs. A bakery, coffee shop, restaurant and a grocery store were constructed in neighboring towns in an hour distance for the bath attendants. An oak forest surrounds the structures. At this place, a person can enjoy an amazing view. This can also make the stay of the patients, who are cured in the thermal springs, more pleasant. The physician of the Ezine township shall examine the health status of the bath*

attendants every day. As it is proven by means of chemical and in-depth analysis, the Kestanbol Hot Springs are both more qualitative and superior in terms of temperature and contents than all the thermal waters of the Ottoman Empire; and they can successfully compete with the hot springs in Jura, France; in Kreuznach, Prussia; in Hamburg, Germany; in Hesse and Nauheim, Prussia; in Hammam–Melouane, Algeria. [14]

Figure 5. In order to determine and define the therapeutic characteristics of these waters, the samples obtained from different sources were sent to Paris by taking into account their usefulness in 1895. The samples were examined by Mr Adolphe Camot, the principal of the experientation major of the mining school and Chief Engineer of the French mines. He forwarded the report to Professor Armand Gauthier from Paris Medical Academy. The book was published and translated into Turkish by Demirsoy N, Başaran CH, Sandalcı S in January 2017 (Nobel Tıp Kitapevleri, İstanbul).

The report of 1894 is a significant document for comparison between the ancient period characteristics and maintained characteristics of today. It, of course, specifies very clearly the temperatures, sicknesses, and complications that the waters are effectively beneficial over.

It is gratifying to know that some of the structures in the thermal springs exist robustly; however, the majority of them has not survived until today. The thermal sources, which are of high significance for our country, must be put at the disposal of the community and the national economy just like in developed countries. For this purpose, the thermal sources must be continued to be researched with scientific studies for sure.

Most of the characteristics and its healing effect are still preserved since the ancient days of the thermal springs. It must be emphasized the thermal springs still heal the sicknesses, which were thought to be cured in history. Therefore, they must be continued to be preserved. It is necessary to demonstrate its findings with the conducted scientific studies and pass the data on to future generations correctly.

Conclusion

Simply put, the water with mineral density above 1gr are considered to be spring. Besides having enough amount of radon, $C0_2$ or H_2S is another property which is sought. Kestanbol fluid shows a mixing type of meteoric or cold water and sea water. Thermal water are curing or healing not only by their hot nature but also with the amount and variety of minerals and existence of radon and $C0_2$ gases. ın our country, as in Europe and USA, spring water and mud cures can be prescribed by doctor. Many scientific studies reveal

that patient who receives these treatments get sick less and take less medication. Especially in the recent years, in the studies it's reflected that low dose radiation help DNA repair mechanisms. Proper spring treatment creates a psychological well-being as well as increasing body immunity along with benefits in dermatological, allergic, neurologic, urinary and respiratory diseases and especially.

The nature of high salt content of thermal water in Kestanbol is related to the age of it. More than 50 years age indicates that it has interacted with the host rock for a long time. Therefore, it is possible to increase the flow from these sources and obtain hotter than 100°C hot water by drilling with the help of field observations and the data obtained.

References

1. Homeros. İlyada. Sandalcı S,trans. Edirne: Ceren Yayıncılık; 2016. p.22, 147-156
2. Umar B. Troas. Kültür Kitapları Serisi 7. İstanbul: Ak Yayınları;1983. p.1-21.
3. Sevinç N. Troas Bölgesinde Antik Bir Kent Aleksandria –Troas. Türkiyemiz Kültür ve Sanat Dergisi 1983; 41: 22-28.
4. Schwertheim E. Alexandreian Troas. In: Tolun V, editor. Çanakkale-Troas Arkeoloji Buluşması Bildirileri Kitabı. Çanakkale: Aynalı Maatbacılık; 2002.p. 55-65.
5. Canakkale.gov.tr. [Internet]. Çanakkale: Eski Yerleşim Kalıntıları [updated 2017 March 05]. Available from: http://www.canakkale.gov.tr/eski-yerlesim-kalintilari
6. Schwertheim E. 30th International Symposium of Excavations. Surveys and Archaeometry Archaeology of Turkey. Bayram F, editor. Ankara: General Dırectorate For Cultural Herıtage and Museums Main Publication No: 128; 2008.p.28-3. ISBN No: 978-975-17-3322-1
7. Öztaner S.H. Alexandria Troas Nymphaeum. Archaeology and Archaeologist Association Magazine 2002; 14: 6-9.
8. Tutkun M. Herodes Atticus Hamamı Kemer Restorasyonu (Strüktürel Sağlamlaştırma Projesi). Artium 2016; 4(1): 1-12.
9. Güdücü H. T.C. Kültür ve Turizm Bakanlığı Kültür Varlıkları ve Müzeler Genel Müdürlüğü Jeotermal Turizminde Türkiye'deki Antik Kentler. Ankara: Dokuz Eylül Üniversitesi Jeoloji Mühendisliği Doktora Tezi; 2012.
10. Taşçı M.A. Alexandreia Troas (Antigonia) Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi 1998; 168-187.
11. ezine.bel.tr. [Internet]. Çanakkale: [updated 2017 March 15]. Available from: www.ezine.bel.tr/
12. motorturk.org. [Internet]. Anonymous regional stories. [updated 2017 April 15]. Available from: http://motorturk.org/geziyazi/2005/dalyan/dalyan.html
13. Çam D, Bülbül E, Kılınç O, Şan Ö. Jeotermal Akışkanların Köken İlişkisi: Tuzla ve Babadere (Çanakkale) Sahaları Örneği. Ekonomi Bültenleri [Internet] 2013[cited 2017 March 16];(15):79-87.
14. Available from: http://www.mta.gov.tr/v3.0/sayfalar/hizmetler/kutuphane/ekonomi-bultenleri/2013_15/79.pdf
15. Demirsoy N, Başaran C.H, Sandalcı S. Kestanbolis Kaplıcaları, Kestampolis'in Nitelikli Sularının Tedavileri ve Şifaları Üzerine Bilgiler Biga Sancağı (Dardanellia) Ezine Kazası'daki Aleksandreia Troia Yakınındaki ve Bu Termal Sularının Kimyasal Tahlili Konstantınople Minhan Imprımeur. İstanbul: Nobel Tıp Kitapevleri; 2017.
16. Ezine Belediyesi Kültür ve Tanıtım Hizmet Kitabı. Ezine: Ezine Belediyesi Yayınları; 2015

17. Uysal A.O. Ezine/Akköy de Tarihî Anıtlar ve Seramikçilik. Akdemir A, Demircan O, Yılmaz S, Takaoğlu T, Akbulak C, editors. Çanakkale Onsekiz Mart Üniversitesi Ezine Değerleri Sempozyumu Kitabı. Çanakkale: Onsekiz Mart Üniversitesi Yayınları No: 86; 2008. Isbn: 978-975-8100-92-7

18. Palabıyık H, Yavaş H, Önder Ü. Çanakkale'de Çevre: Stratejik Çevresel Değerlendirme Yaklaşımı. Uluslararası Çanakkale Kongre Kitabı. İstanbul: 2006.p.1-14

19. Öztepe E. Çanakkale'deki Alexandria Troas Antik Kentindeki Kazıları. [Internet] 2014; cited 2017 March 20]

20. Available from: http://www.haberler.com/anadolu-da-roma-donemine-ait-bilinen-en-buyuk-5902721-haberi

21. Akkuş I, Akıllı H, Ceyhan S, Dilemre A, Tekin Z. Jeotermal Kaynaklar Envanteri. Ankara: MTA Genel Müdürlüğü Envanter Serisi-201; 2005. p.849.