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www.emu.edu.tr/underwater
burak.cicek@emu.edu.tr
hakan.oniz@emu.edu.tr



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Moderators of the Symposium

Assoc. Prof. Dr. Salih Aydın

Assoc. Prof. Dr. Zafer Tosunođlu

Editors

Dr. Burak Ali Cicek, Instr. Hakan Oniz

Address

EASTERN MEDITERRANEAN UNIVERSITY UNDERWATER RESEARCH AND IMAGING CENTER
EMU, Faculty of Communication and Media Studies. CMS 111 Famagusta TRN Cyprus, Via Mersin 10
Turkey

Tel: 90 392 6302589. 6302109, 6301546 Fax: 90 392 6302317

hakan.oniz@emu.edu.tr burak.cicek@emu.edu.tr www.emu.edu.tr/underwater

ISTANBUL-KUCUKCEKMECE LAKE AND RIVER BASIN ARCHAEOLOGICAL RUINS

S. AYDINGUN, H. ONIZ

Kocaeli University Faculty of Science and Literature Department of Archaeology
Eastern Mediterranean University- Underwater Research and Imaging Centre

sengul19@gmail.com

Summary

"Istanbul Prehistoric Researches" began the archaeological studies of coasts of Istanbul Europe side with an international science team as an inclusion of ITA project. During these studies, some proofs such as some agricultural and pots and pans production clues regarding prehistoric times and some trading methods of Hellenistic, Rome, Byzantium times, are found. The archaeological importance of Yarımburgaz Cave in prehistoric times is known. In 2007, there was found some clues about the production of PPNB Neolithic settlement in Avcılar Firuzkoy Coast of Kucukcekmece Lake. Besides this area, because of the defined well-arranged stone rows on the peninsula's edge reach inside the lake, this area is chosen for 2008 studies. During the studies, the ruins probably belongs to a lighthouse structure that was developed in two different times in Küçükçekmece Lake; many structure ruins that are thought that they are a castle-port structure on a peninsula in the lake and they are ruins on two coasts of the lake belonging to Hellenistic- Post-Rome- Byzantium times. The defined ruins show that the lake was a port for also trading and war ships.

In 2007, under the presidency of Kocaeli University, Faculty of Science and Literature, Department of Archaeology, Ass. Prof. Dr. Sengul Aydingun, with the permissions of Turkish Culture and Tourism Ministry, under the title "Istanbul Prehistoric Survey" an archaeological area research is begun. The prehistoric area survey part of the study is conducted by teams from Kocaeli, Bristol and Istanbul University. The geo-archaeological studies began in 2008, are done by the teams from Bristol and Yıldız Teknik University; underwater studies are done by teams from Eastern Mediterranean University and Cyprus International University. Underwater studies are administered by an Underwater Archaeologist Hakan Öñiz. The teams are supported by Avcılar, Kucukcekmece and Silivri municipalities and fuel needs are afforded by Shell.

PREHISTORIC SETTLEMENT:

In time that when Marmara Sea was a closed river basin, the area near Istanbul where Küçükçekmece Lake placed, included river valleys that were dig very deeply. When glaciation in the last geologic time ended the sea level increased and the sea water that separates Istanbul and Canakkale Bosphorus, filled Marmara hole about 90-120 m. As a consequence of this sea invasion, old valley edges were choked and thus "ria"s came out (Map 1).

The south side of Kucukcekmece Lake is in Avcilar boundaries. The investigations we did here, make us come across with very interesting information about especially prehistory of Istanbul. The ceramics that are spread out from the field owners who made two water holes to water the vegetable garden placed in 100 m. upwards of the point which Eskinoz River and lake are connected in Avcılar Firuzkoy, include the ceramic samples that have never seen before in Kucukcekmece such as hand-made, black-mud paste, mineral

additive and less-cooked primitive (Picture 1). Some ceramic pieces that are beige come from a culture layer of the sea level between (minus) -4-3.50 m.

Because of the hole 2 which is opened about 80 m. far away in north from the hole 1, is wider and deeper this formation is understood more clearly (Picture 2). In the hole 2, the bottommost level 2-2.25 m. is made up from coarse sand, thin pebble, fossiliferous horizontal layer, grey and yellow level. The level on it is made up of 50-60 m thickness grey sandy clay stones. Being grey of this level reminds a marsh atmosphere. The base of this level contains an abundance zone of *Ostrea* covers that reach 20 cm (Picture 3). This zone is sometimes inconstant and lens-shaped. Among the grey level on the *Ostrea* abundance zone, there are much smaller sea shells. Probably, for the ceramic these clays are used. The best sample of it is hand-made, black-grey, less-cooked primitive ceramic pieces that are thought being come from this level.

The highest level is made up of about 1-25 cm. thick vegetable soil. On its base it is confronted with yellow clay levels. In these, there are culture layers. According to the investigations done by geologists Dr. Şükrü Ersoy and, Ass. Prof. Dr. Timur Ustaomer in both of the watering holes that ceramics are found; just above the lowest water level, -2.20 m, the existence of *Ostreas* (sea mussels) shows the formation of sea. Our observations show that just above the *Ostreas*, ceramics come from the muddy sand additive area. Much above it is seen that there is a layer full of with pebbles of stream sediments. Pebbles are generally silica gels occurred from circle pebbles such as silex, agate, kalsedon. Moreover, there are circle-formed volcanic lava pebbles. Some of these pebbles are milky quartz pebbles. According to these conclusions, this point equals to the parts of old riverbed's terrace and bend of point set. It is 15-20 m. higher than present river base. In this area, it is understood that one time the sea fill the valley then drew back, so the area was under the control of the stream. The flint tools and naviform seeds on the peninsula placed on the lake and the soil threw out from these openings (Picture 4), are expressed as the first encountered foreign materials in the area by Prof. Dr. Mehmet Ozdogan and are dated as PPN B Pre-Pots and Pans B.

As a conclusion of the data from archaeogeophysic GPR method in Kucukçekmece river basin, in this area it is realized that probably there was a village belonging to prehistoric times. As a result of GPR; if it is payed attention, the sloping area which is created by the filling of Kucukçekmece Lake in Avclar-Firuzkoy from Eskinoz river, gives an old small bay vision. This small bay should have been filled with landslides. When it is gone upwards from two watering holes opened in this area, a culture level about 50 cm. size is observed in all of the profiles. In the measurement area taken 300*100 m., this 300*70 m. size culture layer is followed (Picture 5-6). The defined layers compared by considering the discriminations of the thickness in them and in the areas that are thicker, the probable areas where an ancient settlement ruins are, are pointed. As the result of all measurements, the layer which is defined as organic materials contented and clay, is evaluated as a life layer. By thinking that there are structure equipments formed of tree and vegetable tissues used a long time since Neolithic time in that area, it is supposed that there are structures where the thicknesses are placed. The location of the area in that time, the water and productive soil creating a suitable atmosphere for the agriculture- as it is today- create suitable conditions of agriculture-based settlement in that time as well.

When the area where ceramic and its tools come from, is examined from the geographical way, it is understood that the area was made up as a small bay that connected of a river coming from the front of it before the thousands of years and the lake, and it is found that it is at an appropriate location for life. The opposite side of the river is like a peninsula that was made up later. On the south of this peninsula, there was gotten many meat cleavers, weight and stone tools which were very similar to the stone tools industry of Yarımburgaz's Palaeolithic time. So, this situation makes us think that the people living in Yarımburgaz, might have been hunted around Kucukçekmece. It is possible that on the peninsula that is in the 6 km. south of a cave near Firuzkoy, the Palaeolithic people flay and treat the animals they hunted; also by rubbing the bones and trees they might sharpen them. Therefore, we think that we can find the answers with the studies we will conduct later about the mentioned area whether it is a Palaeolithic workshop or not. In this area, naviform seeds which are dated as PPNB by Ozdogan are gotten as well. These seeds are very important because they are found the first time in European geography.

UNDERWATER STUDIES

For defining underwater studies, four different methods are applied. The first of them is the eye-pursuit of the blocks that form on the coast; the second one is the pursuit with mask/ palette/snorkel of the structure ruins; the third one is the research method done by using Side Scan Sonar ship. The results of these studies used by these methods are mentioned below. The fourth method is the definition of the ruins by examining the grass/shadow clues by benefiting from the space photos. These studies still continue, the physical definition of the first results have not done yet.

Kuçükçekmece Lake- The Peninsula (Map 2)

In 2007, during the surface research on the land done in this area, it is realized that 40-50 m. length wall form surround the tip of the peninsula and also it is found the existence of stone rows from tip to sea. Therefore, the first underwater investigation is done on this wall form that is found before. During this study, it is stated that there is an average 135 cm. width 95 m. wall form on the peninsula's northeast line, 200 m. length wall form on the peninsula's northwest line (Picture 7). The form is partially in the water and under the earth. All of the stone blocks belonging to the mentioned wall form are included to the plan by drawing. These two walls are connected with a structure (tower?) on the point of the peninsula. An investigation has not done yet about the deepness of wall structure that is partially in the water. The ruins giving an impression that the southeast side of the walls continues from under the earth towards southwest, are seen. The geophysics researches done on the land by the team of Bristol University, show that these two walls are connected to each other from the tips left on southwest and southeast (Picture 8). In this case, the revealed structure should be a defence wall.

There are equipments used as picking among the stone blocks used in the construction of the mentioned wall. Even though they have not been dated yet it is believed that these equipments belong to Hellenistic, Pre-Rome or Byzantium times. This area was developed in the Ottoman time as well. The wall forms inside the walls belong to Ottoman structures and pool structure on the peninsula, are partially standing. There are two structure pieces that are close to each other in the water on the northwest side of the wall form and a column piece on the land. Among these finds in water and on land, another wall form that is 55 cm-width, parallel to the main wall is seen. On the northeast side of the wall form, Arshitrav pieces are used as picking for the wall.

The form of the structure where the northeast and northwest walls on the tip of the peninsula are connected, could not be determined properly. The ruins belong to this structure similar to tower form continue under the water. The mentioned structure is on just the opposite of the lake's sea entry. Almost all coasts of the lake can be seen easily from a tower placed here. Consequently, from this structure that is on the most dominant point of the lake, it is possible to observe lake arrival and departures.

At the same time, the peninsula carries a natural breakwater feature. The lake becomes rough according to the strength of the dominant winds in Istanbul, northeast wind and southwest wind. Therefore, especially the west side of the peninsula is a safe anchor place for ships. Today, the average depth of the water in this place is 4 m. Because of the alluvial carried by streams, there is not enough information now about the depth of the water in the times the port was used. However, it is possible that the trading ships of that time came closer to the wooden quays which might have been built here.

Northeast and Northwest Coasts of Kuçükçekmece Lake

In the studies conducted on these coasts, many ruin clues are encountered. Because of Turkish Atomic Energy Institution is on the coast line and it is far away from the urban building, 5 small stone quay, many wall forms, many ceramic stuff and marble structure stuff are found in this coast. Among these, a marble Stel piece is taking part. In 2 of 5 stone quays that are found, their connections with wharf forms of quays are

seen. Some parts of walls belonging to the structure ruins, are underwater. The forms continue as walls without any connection with each other along approximately 2500 m almost continuously. The quays are large enough with their 5-8 m. length and 2-3 m. width for the small ships to approach (Picture 10). Present forms are similar to the coast villas belonging to the elites in Rome and Byzantium times.

During the studies towards the north side of the peninsula worked on, many ruin clues are found. In this coast too 5 small stone quay, many wall forms, many ceramic stuff and marble pieces are found. The forms continue as walls without any connection with each other partially in water along approximately 3 km almost continuously. As in the opposite coast, in this coast present forms show the Rome and Byzantium time coast villas. Unguenterium that is taken from here to be dated and had a seal on it (monogram) is dated as B.C. 5-6 centuries (Picture 11). In the first study done by team member archaeologist Serkan Doldur with the supports of Istanbul Museum experts, it is found that the monogram means ΗΠΑΡΧΟΥ (EPARKOU). It is thought that the name can belong to a male or an institution. During the scanning of catalogue for searching this name, the same name is found but it is realized that the monogram is different.

Lighthouse

During the studies, distinct from approximately 250 m from the peninsula, two stone blocks are seen on the water's remaining part of shallowness in the lake. In the investigations done about these blocks, structure ruins, wall forms, marble flooring pieces, ceramic ruins and much amount of tile-brick pieces are found. In order to get information about the ruins, a drawing study is done on visible ruins. Two different bases of structure revealed (Picture 12). There is shallowness as a line between this structure and the peninsula. The defined elevation and this shallowness created a risk for the sea vehicles at past as it does today. Both in order to warn towards this shallowness and show the place of the port, lighthouses could have been built here in two different times. The mortar material gotten from structure ruins built by huge stone blocks and the mortar samples taken from Byzantium's out city walls placed in Sazlidere are compared with each other and it is understood that they were built with similar materials in the same way. The main function of the defined structure and its greatness and height can be barely understood with an archaeological excavation.

Regarding to the Area and Byzantium

According to the historian Procopius, noble Constantinople people spent almost all the year in their large estates on the sea coast outside of the city. It was written by various sources that with the suite of emperors, senators and nobles built palace and large estates outside of the city. It is also known that after 330 (Constantinus time), nobles built villas on Bosphorus coast. All of these show that because of Kucukcekmece is the closest non-salt water lake, has the connection with sea, has both land hunting and sea hunting, it is a holiday place. The Golden Gate (Port Aurea) on Zeytinburnu side of Constantinople was connecting to Region on the coast of Kucukcekmece Lake via Via Egnatia. However, again according to Procopius, this road was a marsh road until 1. Justinianus (527). Later, it was rebuilt by furnishing with huge stones.

The position of the lake does not only carry the holiday characteristic on it. Because of its intimacy of Istanbul, its connection with sea, being a safe port for many ships for every storm, it should have been very important for Byzantium. Especially, when the ships which come from the Dardanelles to Istanbul come across with the northeast wind and southwest wind, Kucukcekmece lake is the safest port for them. Every year, many foreign ships come to Istanbul, do loading-emptying or wait for this process. At those times, it was not safe to wait in open seas with anchors. The lake is appropriate for all these aims. In these kinds of ports, military service is essential. By examining both antique city ruins and doing this study, it is understood that the lake is safe in military ways.

Many studies done by beginning with prehistoric ruins, reveal the clues about the production of their own times. Regarding to the studies of the usage of the area in Hellenistic, Rome and Byzantium times, military and/or commercial characteristics continue. The excavations conducted on defined structures will completely reveal their functions, dates and other details. On the other hand, according to the results from both the

interviews with the area folk and the space images, it is known that there are the coast parts that have not treated yet and there are structure ruins inside the lake. The studies will continue in 2009.

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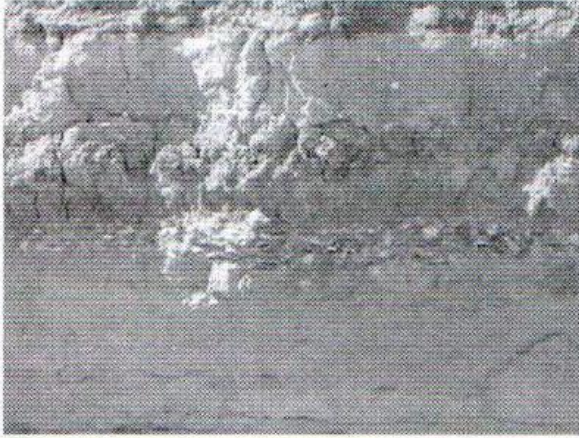
(Map 1)



(Figure 1)



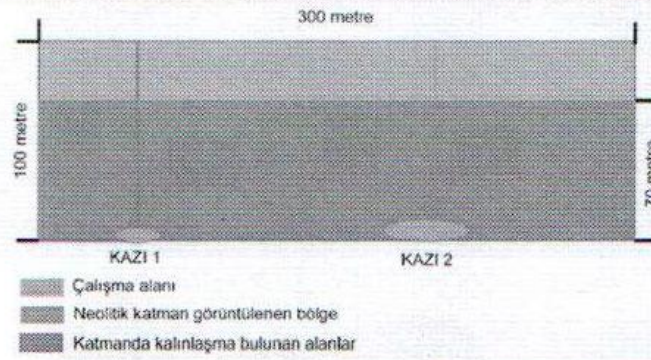
(Figure 2)



(Figure 3)



(Figure 4)

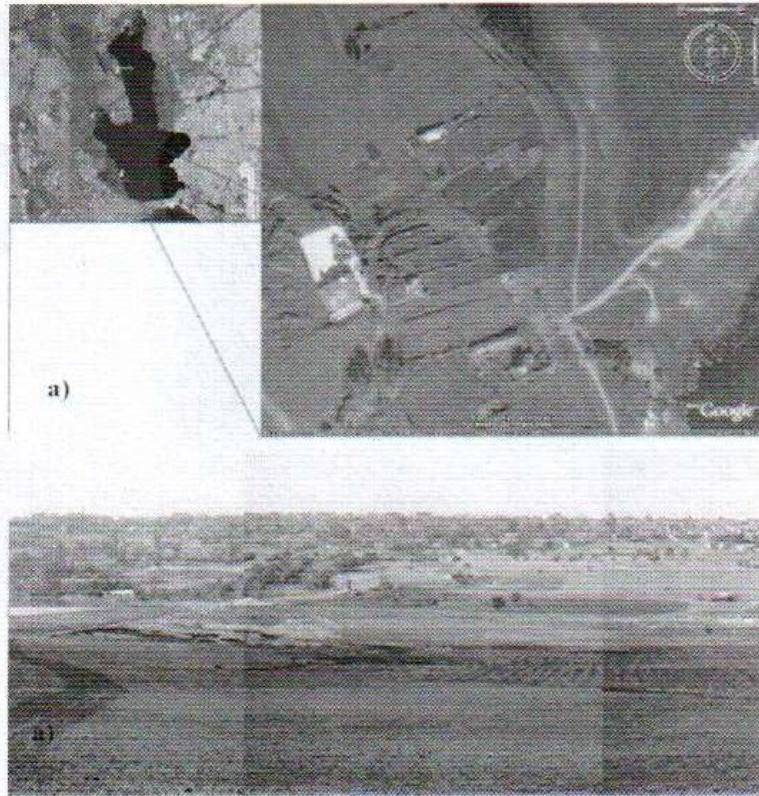


Çalışma alanında tespit edilen katmanlı seviye içerisinde rastlanan kalınlıklar ve yapılan yarımlar ile elde edilen alanlar.

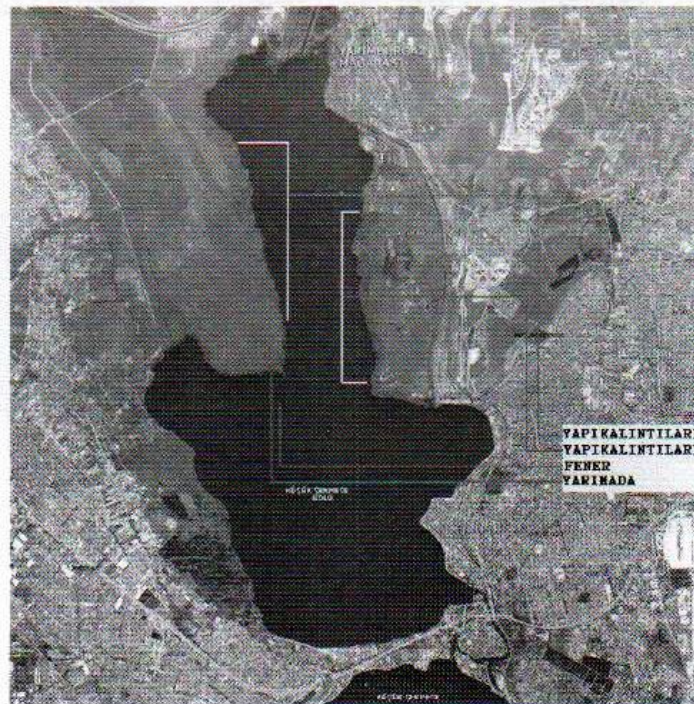


Çalışma alanında bulunan kazılı 2. kuyu. Kırmızı seviye neolitik alan.

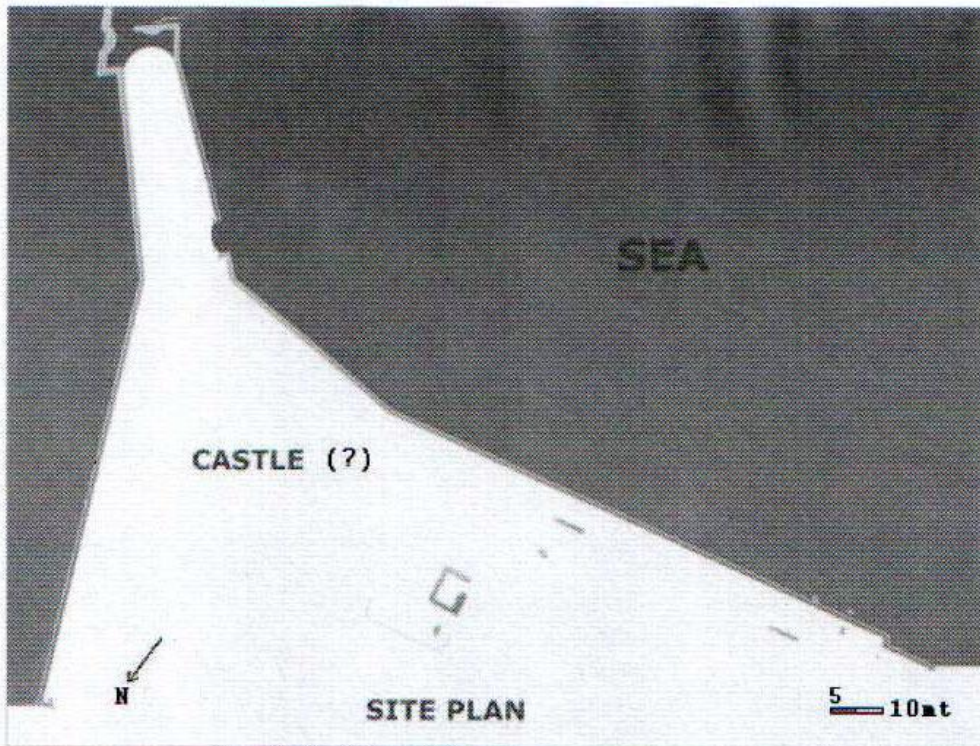
(Figure 5)



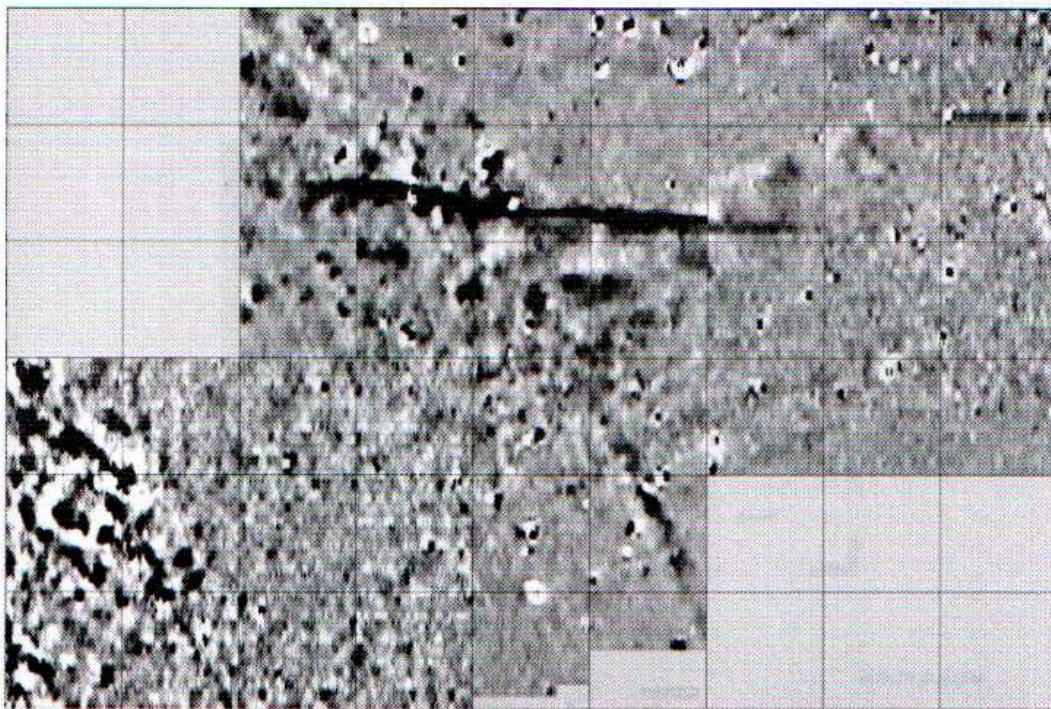
(Figure 6)



(Map 2)



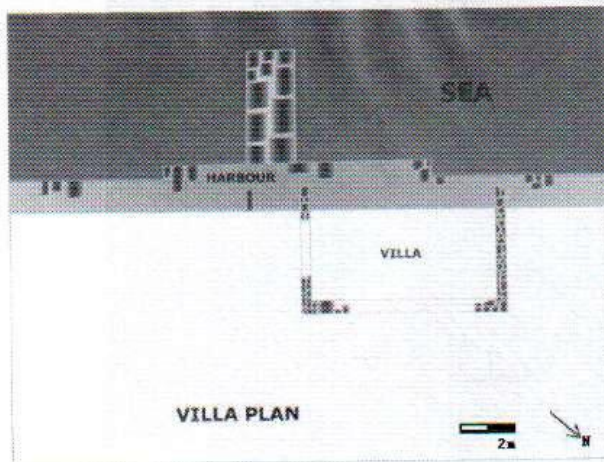
(Figure 7)



(Figure 8)



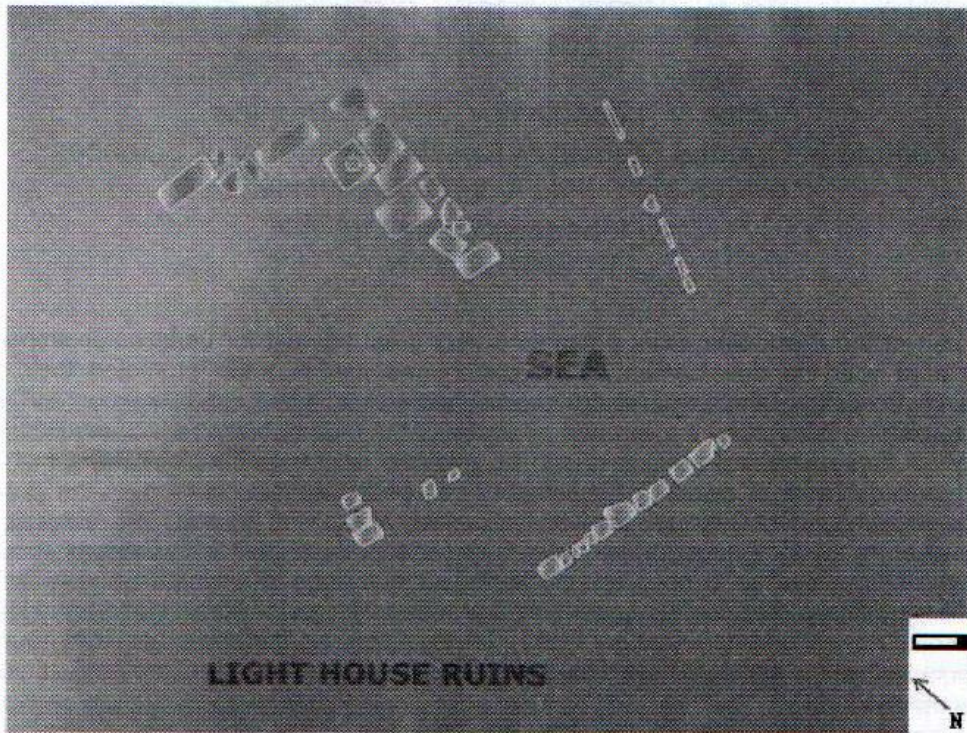
(Figure 9)



(Figure 10)



(Figure 11)



(Figure 12)