

# EARLY SETTLEMENTS AND PRECUREMENT OF RAW MATERIALS - NEW EVIDENCE BASED ON RESEARCH AT AKANTHOU-ARKOSYKOS (TATLISU- ÇİFTLİKDÜZÜ), NORTHERN CYPRUS

## AKANTHOU-ARKOSYKOS (TATLISU- ÇİFTLİKDÜZÜ) KAZILARI IŞIĞINDA KUZEY KIBRIS'TA İLK YERLEŞİMLER VE HAMMADDE EDİNİMİ

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**Key words:** Cyprus, Tatlısu- Çiftlikdüzü/ Akanthou-Arkosykos, Aceramic Neolitik, obsidien, exchange, Anatolia.  
**Anahtar sözcükler:** Kıbrıs adası, Tatlısu- Çiftlikdüzü/ Akanthou-Arkosykos, Çanak Çömleksiz Neolitik, obsidyen, mal değişimi, Anadolu.

*Yakın zamana kadar Kıbrıs adası ile Anadolu arasındaki kültür ilişkileri, iki bölge arasındaki coğrafi yakınlığa karşın, pek önemsenmeyerek göz ardı edilmişti. Ancak son on yıl içerisinde gerçekleşen kazılar eski görüşleri tümü ile değiştirecek verileri ortaya çıkartmış, Kıbrıs'ın yerleşim tarihi ile ilgili kuramları çürütmüştür. Kıbrıs'ta bize bu verileri sağlayan iki önemli kazı yeri vardır; bunlardan biri adanın güneyinde, 1990' lı yılların başlarında kazılan Parekklisha-Shillourokambos, diğeri ise Kıbrıs'ın kuzey kıyısında, Anadolu'ya çok yakın bir konumdaki Akanthou- Arkosykos/Tatlısu -Çiftlikdüzü'dür. Çanak Çömleksiz Neolitik döneme ait bu yerleşimde çok sayıda Anadolu kökenli obsidyen bulunmuştur. Bunların sayısı adada şimdiye kadar bulunan obsidyenlerin toplamının birkaç katı daha fazladır. Tatlısu-Çiftlikdüzü kazısının bir diğer önemi ise Kıbrıs'ın Anadolu ile olan doğrudan bağlantısını kanıtlayan en kesin verileri ortaya çıkartmış olmasıdır. Böylelikle, Anadolu çıkışlı olan bir hammadde olan obsidyenin etkili olduğu ticaret ağına, Yakındoğu'nun yanı sıra Kıbrıs da eklenmiştir. Tatlısu-Çiftlikdüzü kazılarında Çanak Çömleksiz Neolitik dönemi çeşitli yönleri ile daha iyi anlamamızı sağlayan önemli buluntular da ortaya çıkartılmıştır.*

### INTRODUCTION

Earliest evidence of a human presence on Cyprus is of a few worked flint scatters found within cemented sand dune deposits (aeolianite formations) discovered by Ammerman at Nissi Beach and Akamas Aspros (Ammerman et. al., 2008). These flint scatters are described as contemporary with excavations at Akrotiri - Aetokremnos in the 1980's that is radiocarbon dated to c. 10,000 cal. BC; evidence of a human presence at Akrotiri itself is less conclusive

(Wigand, Simmons 1999). These early dated sites offer a tantalising glimpse of a human presence on the island at the same time as pygmy hippopotami and dwarf elephants amongst other fauna.

Until recently, evidence of early human settlement of Cyprus was believed to be much later, based on excavations of aceramic Neolithic settlement sites dating to 7000 BC and most

notably, Khirokitia (Le Brun 2001: 109; Dikaios, 1953: 339). Khirokitia culture is developed and complex but quite distinct from any known contemporary mainland cultures. The existence of a distinctive Khirokitia culture posed questions of what was its origins or where did they come from? Only a few artefacts from the Khirokitia culture sites are demonstrably from the mainland; these include a handful of obsidian blades from an original Anatolian source. These items are so few that they do not provide strong evidence for a direct link to Anatolia, however, indirect contact through the Levant has been suggested.

Excavations at Parekklisha-*Shillourokambos* and at Akanthou-*Arkosyko* (Tatlisu-Çiftlikdüzü) provide evidence of settlement a millennium or so earlier and initial findings illustrate how the distinctiveness of the Khirokitia culture is likely to be the result of continuous settlement on the island from more distant times. These two earlier sites, in turn, also pose the question of what are the origins of these cultures; are they examples of separate indigenous development from the mainland or do they represent the first settlers to the island from other shores?

Debate amongst archaeologists since the discovery of Khirokitia in the 1930's has often centred around the question of how there came to be a distinctive Aceramic Neolithic farming community on Cyprus, with the implied assumption that there must have been a first migrant or settler from somewhere else. An equal and opposite assumption may be that settlement evolved in Cyprus, much as anywhere else, from the first evidence of flint scatters in 10<sup>th</sup> millennium BC through to the present

Discoveries at Parekklisha-*Shillourokambos* and Akanthou-*Arkosykos* in particular, show that there was contact with the mainland at a much earlier date from artefacts of obsidian and cattle bone, neither of which is indigenous to the island. Indications are that the exchange of items was significant and perhaps even com-

monplace. It may be reasoned that cultures developed in pace and in contact with the mainland cultures. The lack of similarity between island and mainland cultures is arguably not a result of isolation but reflects the opportunity for difference between cultures. Whilst there is difference, island culture was nevertheless influenced through contact and exchange through the millennia. The sea may not have been so much of an obstacle to cross, but more as the means of communication with opportunities for contact with many different locations, for resources, for exchange and other reasons.

#### REDISCOVERY OF AKANTHOU ARKOSYKOS (TATLISU-ÇİFTLİKDÜZÜ)

The site of Akanthou was first recorded by the Cyprus Survey in 1931 and later in 1945 and 1946 by researchers Anastasiou and Dikaios of Cyprus Museum. They reported finds of a Neolithic type that included: a stone axe; stone vessel fragments, chert flakes, blades and cores obsidian blades, animal bone (sheep/goat, pig and fallow deer (*dama mesopotamica*)) and a perforated shell (Stanley-Price, 1979: 119). In 1972 and 1973, Stanley-Price revisited the site and also discovered surface finds of similar artefacts. In 1996 this author conducted a systematic field walking of the site and also found similar artefacts, including finds of obsidian blades.

Obsidian finds have played an important role in the discussion of first human settlement of the island and relations with the mainland as this volcanic glass does not occur naturally on the island and must indicate contact in some form with the mainland. Previous excavations have recovered only a small number of obsidian, these are: Khirokitia 14 pieces, 0.5% of the lithic assemblage (Dikaios 1953), Klepini - Troulli 24 pieces, 2% of the lithic assemblage (Peltenburg, 1979), Cape Andreas Castros 13 pieces, 0.15% of the lithic assemblage (Le Brun, 1981), Kallavassos-Tenta 32 pieces, 0.03 of the lithic assemblage (Todd 1986: 15). More recently, as larger number of finds from earlier sites

became available, the presence of obsidian has come to greater prominence, indicating that there may have been more significant contact with the mainland at a date earlier than assumed. At the excavated site of Parekklisha-*Shillourokambos* the number of obsidian blades, evidently all of Anatolian origin, is 217 pieces, comprising 2% of lithic assemblage of the site (Guilaine et al., 1995; Briois, Guilaine 1997, 104). Excavations to date at the site of Akanthou have recovered over 5000 pieces of obsidian, also from an Anatolian origin; this large number further indicates a greater scale of contact with the mainland than previously thought.

#### THE AKANTHOU- TATLISU RESCUE ARCHAEOLOGY PROJECT

The 1996 field walking survey of Akanthou, conducted by the author, resulted in a rich collection of finds both from surface and also from the spoil of the modern pits that had been cut into archaeological deposits, revealing the potential importance of the site for the aceramic Neolithic period.. A poultry farm nearby had excavated a series of 38 refuse pits and used these for illegally discarding chicken remains. The spoil from these pits provided an opportunity to test the archaeological importance of the site and demonstrated the threat of modern activity to these fragile deposits. Action was taken to stop the immediate threat to the site; however there was also a clear need to evaluate the site further to demonstrate its importance and to ensure its future protection.

In 1999 a survey of the spoil from these modern pits cutting into the archaeological deposits was undertaken. The author and students from the Eastern Mediterranean University Archaeology and Art History Department spent several weeks systematically dry sieving spoil from the disturbed archaeological deposits; this resulted in finds of 420 obsidian pieces, a number of well-preserved cattle bones, many small picrolite tokens and beads made of sea shells. The large number of artefacts recovered from the dry-siev-

ing project confirmed that an archaeological site of some importance lay preserved at *Akanthou*. Following on from this, a limited archaeological rescue excavation of the subsurface deposits was planned with the Department of Museums and Antiquities and sponsored by Eastern Mediterranean University. The excavation was to take the form of an evaluation trench to find architectural remains that correlate with the unstratified finds discovered during surface survey works. In this way, the aim was to demonstrate the physical existence of the site. Once the importance of the site could be established, measures could be taken to establish protection from future damage.

#### THE SITE AND ITS ENVIRONMENT

Akanthou is located on the north-east coast of Cyprus to the west of the Karpaz peninsula, situated on top of a 15 metre high extensive marine terrace terminating in limestone cliffs on the seaward side. Below the cliff there is a small bay and pebble beach. The site lies very close to the current coastline and was still close to a projected Neolithic coastline according to sea level changes suggested for some sites in Cyprus (Ammerman, 2008). Nearby there is still a fresh water spring and fossilized spring rock is evidence that there was a spring in ancient times sufficient to attract settlement. The terrain is flat and there were plentiful resources for hunting, proto agricultural activity (herding, corralling, plant gathering and cropping) and construction (timber, limestone and soils suitable for making mudbrick, plaster). As now, the sea was a rich marine sources of food and afforded opportunity for easy coastal travel and the potential to travel to farther shores; the Anatolian coast is visible from the site 55 kilometres away.

#### OVERVIEW OF THE ARCHAEOLOGICAL REMAINS

Archaeological excavations have been within an evaluation trench 15 metres by 24 metres in extent. Currently, settlement deposits excavated

have been dated to the early Pre-ceramic Neolithic Period, around 10,000 years ago and the site may prove to be earlier; a calibrated radiocarbon date of 8200-7800 BC has been established from carbonised seeds taken from a hearth contemporary with Phase C of the site. Five broad phases (A-E) of Neolithic activity have been established and within these are recorded the remains of six building structures, extensive plaster floor surfaces, a massive ditch, plaster lined pits, evidence interpreted as plaster manufacture and many pits and postholes. The site is rich in artefacts including: stone tools of worked flint, chert and obsidian, polished stone axes and picrolite 'chisels', stone vessels including flat querns and bowls, bone tools including needles and fish hooks, ornaments including incised picrolite and pierced shell. A large number of well preserved faunal remains have been collected including; pig, sheep/goat, fallow deer, fish bones, dog, fox, cat and turtle bone. The faunal remains also include some cattle bone, which is a non-indigenous species and indicator of mainland contact (Simmons 1999). Several fragments of human bone have been found, including a piece of skull and phalanges, however, no remains of structured burials have been uncovered so far.

#### **Pre-Ceramic Neolithic Period:**

##### **Phase A, Settlement Occupation**

The latest evidence of Neolithic settlement is mostly of fragmentary floor surfaces overlying earlier collapse debris. One of these fragmentary surfaces is a fine example of later floor construction technique; a whitish grey limestone plaster laid carefully on a foundation of closely packed stones and re-laid over an earlier floor surface. Set within these fragmentary surfaces were also the remains of four plaster lined pits c. 70 cm in diameter, which were most likely for storage. However, stones found at the base of one of these may have been 'potboilers' or stones heated in a fire and then transferred to the pit for heating as a means of cooking. In addition to these, there are more than twenty

pits and numerous postholes cut into earlier surfaces and collapse or demolition deposits.

An intriguing sub-rectangular feature with traces of a plaster lining and filled with heat fractured stones has been tentatively interpreted as possible evidence for limestone processing (Rollefson 1990; Kingery et. al., 1988). Limestone may have been heated in this pit to produce a workable material for making plaster; close by this pit are four shallower pits, each filled with several white layers plaster that may represent a further stage of plaster manufacture. (Garfinkel 1987a)

#### **Pre-Ceramic Neolithic Period:**

##### **Phase B, Building Collapse and Erosion Layers**

Separating occupation deposits of Phases A and C are a series of layers consisting of silts and mud brick debris formed from the collapse, erosion and possible deliberate levelling of the structures in Phase C. In one instance deliberate destruction a building wall is suggested by the numerous pieces of fine painted plaster that lie *in situ*, painted side down, sealed within collapse deposits. Some of these plaster pieces have moulded edges and surviving red, black and brown pigment shows that wall surfaces were probably decorated with specific designs or patterns. Collapse debris from Phase B also sealed several hearths in use at a near contemporary time and indicating a 'squatter' or continued use after earlier evidence of more organised settlement of Phase A. A single hearth fill contained some 200 carbonised seeds, a sample of which was carbon dated giving a calibrated date for Phase B of 8100-7800 BC.

#### **Pre-ceramic Neolithic Period:**

##### **Phase C, Settlement Occupation**

The remains of an earlier phase of activity is better preserved; there are the remains of foundations and wall bases of six building structures, each constructed with a combination of stone

and mudbrick. The plans of buildings varies from round to more sub-rectangular, all being approximately 5 to 6 metres in diameter. Evidence of postholes within and beside the walls indicates that the roofs may have been made of timber rafters set on posts. The buildings all appear to have been built directly onto the extensive plaster floor surface, indicating that they are contemporary at some time in their usage. Many of the buildings abut one another or are very closely spaced so as to prevent passage between buildings; the structures appear to have developed from an initial single cell being developed over time with the addition of 'lean-to' single cells, almost as the addition of rooms. By inference, the building structures indicate close family or group ties where adjacent living space is added as the group grows in numbers of individuals.

The interiors of the buildings have not been fully excavated, however, evidence of internal features to date, includes hearths and plaster lined pits. In one of the structures there is evidence for a partition and a widened foundation indicates there may have been an upper room. Between the building structures and cut within the extensive plaster surface on which the structures stand, are four plaster lined pits and also the remains of a hearth.

A massive ditch running east to west across the southern edge of the evaluation trench has vertical sides, is 3.5 metres across and 2 metres deep. A preliminary ground radar survey of the ditch indicates that it may be a linear feature (approximately 90 metres in length) which does not enclose the settlement. However, a detailed and systematic survey of the ditch is required to fully establish its nature and help understand its function for the settlement.

#### **Pre-ceramic Neolithic Period: Phases D and E, Early Settlement Occupation and Deposits**

The plaster surface on which the buildings are constructed forms an extensive earlier surface

(Phase D) over 10 metres by 12 metres in extent and beyond the confines of the evaluation trench. This surface may have been in use for some time before it was used as a foundation for later structures as two plaster lined pits contemporary with the surface lie beneath the foundations of one of the building structures.

Beneath the plaster surface there are earlier deposits (Phase E) visible from cut features. In several places these are reasonably substantial occupation deposits; in other places the plaster surface lies close above natural bedrock.

#### **OBSIDIAN FINDS**

Perhaps the most significant of the artefact category of the assemblage is the large quantities of obsidian; 95% of the 5000 and more pieces collected so far are small blades or bladelets, being common in every Neolithic phase. As mentioned previously, the number of obsidian finds at the site far exceeds the numbers collected at any other site on the island and even amongst Neolithic settlements of the Levant. Finds of obsidian at Akanthou exceed total numbers of finds at other Cypriot sites by a factor of 10 compared to the similarly dated site of Parekklisha-*Shillourokambos* and a factor of 100 to other later Pre-Pottery Neolithic sites including Khirokitia.

Chemical analysis of 10 obsidian sample pieces has been carried out by Prof. Pernicka and his team at the Institute of Archaeometrie / Archaeometallurgie (Institut für Ur und Frühgeschichte und Archaeologie des Mittelalters der Universität Tübingen). The results demonstrate that the obsidian comes from two sources in Central Anatolia: 9 pieces from East Göllü Dağ and 1 piece from Nenezi Dağ .

Typological and technological analysis of the obsidian assemblage carried out by Lothar Herling has revealed that core revival parts are very few and that there are no cores, indicating that the bladelets were imported ready-made (or

less likely, manufactured elsewhere at the site?). These are prismatic bladelets obtained by pressure technique and they are known from Kaletepe workshop at East Göllü Dağ (Binder, Balkan-Atlı 2001). The presence of large amounts of these blades at Tatlısu-Çiftlikdüzü indicates a strong relationship between the settlement and Kaletepe workshop or/and similar workshops at Göllü Dağ, such as Kayırlı-Bitlikeler workshop (Balkan-Atlı et. al., 1999).

Based on the very large number of obsidian collected at Akanthou, the settlement may well have had an important role as point of distribution of obsidian for the island and even more widely across the Levant region. This evidence for significant contact with the mainland provides fertile ground for conjecture surrounding the nature of this distribution and the nature of society at Akanthou. The surviving finds of obsidian may be an indicator of a wider and more various contact or exchange with the mainland; perhaps the settlement also imported livestock (as evidenced by several cattle bones) and a range of other items that have left no trace in the archaeological record. The scale of the endeavour required to convey material from the mainland and Anatolia would have required a sophisticated level of social organisation and communication which by inference, suggests the people of Akanthou may have been a dominant social group on the island. Moreover, the investment needed to obtain the obsidian may indicate that these objects had an intrinsic value worth more than their value as tools alone; potentially these obsidian bladelets conferred status on the owner or carried currency for exchange for goods and foodstuffs.

#### **THE AKANTHOU-TATLISU RESCUE ARCHAEOLOGY PROJECT: NEOLITHIC HOUSE RECONSTRUCTION**

The remains of six mudbrick and stone building foundations at Akanthou have provided a wealth of information about the size and shape of dwellings and how they were constructed. To

understand these construction techniques better and to gain an understanding of the effort required to build these structures a Neolithic Hut was reconstructed close to the site.

The project to build a Neolithic Hut was also an opportunity to bring to life fragmentary evidence to show visitors to the site what a Neolithic building may have looked like and in turn to promote the site and its protection. The project was part funded by the UNDP PFF.

#### **SUMMARY AND CONCLUSIONS**

The Pre-Pottery Neolithic site at Akanthou is extremely rich in architectural structures, surfaces and artefacts. It is exceptional in Cyprus in terms of the breadth of types and recovered numbers of artefacts and the quality of surviving plaster and mud brick structures. A first carbon date from carbonised seeds recovered from a Phase B hearth has given a date of 8100-7800 BC and future dating of later phases may show the settlement to be considerably earlier. The current evaluation of the site is based on the systematic excavation of deposits and recovery of finds from a 15 by 24 metre evaluation trench. However, indications are that the settlement site may be as extensive as 210 by 200 metres based on distribution of surface finds and the results of a resistivity survey carried out across the area of the site.

The recovery of 5000 plus pieces of obsidian at Akanthou is of particular importance and is far in excess of any other Cypriot site, sufficient to raise questions about the nature of contact with the mainland at a very distant time in prehistory. The scale of the obsidian finds places Akanthou (and Cyprus) in a position of regional importance; where the economy of the settlement required mainland contact, so the archaeological inquiry needs to extend its scope. There may be as yet unfound Neolithic sites on the Turkish coast or other coasts of the eastern Mediterranean that were in contact with the settlement at Akanthou and can further help us

understand the nature of the contact between mainland and island. This future enquiry may finally answer the question of where the people of the Khirokitia Culture came from. The evidence from Akanthou shows that the Khirokitia people were likely to be the descendents of the settlements at Akanthou and Parekklisha-Shillourokambos rather than migrants from the mainland. In turn, the people of Akanthou were clearly capable of making extensive contact with the mainland, but there is no evidence that they were migrants or from the mainland themselves. The human settlement of Cyprus may prove to be not a colonisation event but an indigenous development of people who arrived as far back as 10,000 BC (Ammerman, 2008). Evidence for mainland contact may in fact represent the beginnings of influence from the mainland (in exchange and other contact) between two distinct peoples with two different cultural traditions.

The controlled and limited excavation of the Akanthou/Tatlısu Rescue Archaeology Project has so far served to demonstrate the archaeological and wider cultural importance of the Neolithic site at Akanthou. Previous damaging activity to the site has ceased and the area of the wider settlement is now protected from future development. The results of this limited rescue excavation are already sufficient to inform new arguments about the early settlement of Cyprus; continuity of settlement versus migration; the nature of contact between Cyprus and the mainland and many other questions.

The archaeological site at Akanthou is clearly a rich resource for inquiry and energy and resources are still required to ensure its continued protection for future generations and for further research.

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Fig. 1 : Akanthou/Tatlısu aerial view of the excavation.



Fig. 2: A view of the ditch.





Fig. 4: Turtle bones.



Fig. 3: Possible oven.



*Fig. 5: Plaster basin.*



*Fig. 6 : Obsidian.*



*Fig. 7: Flint tool.*