

Praktika tou Tritou Diethnous

Kypriologikon Synedrion (Lefkosia, 16-20

Aprilou 1976) Tomos A, Archaion Tmema.

SOPHOCLES HADJISAVVAS

Department of Antiquities, CYPRUS

ASHLAR BUILDINGS AND THEIR ROLE IN LATE BRONZE AGE CYPRUS

What we usually call an ashlar building in Cyprus is a structure partly or wholly built of rectangular cut blocks. The common practice is to include into this category buildings which only incorporate some ashlar masonry (Hult 1983).

It is widely accepted that ashlar buildings appear during the LC IIC period as a result of the establishment of complex societies on the island. Such ashlar buildings have been found at eight sites:¹ Enkomi, Dromolaxia-Vyzakia (wrongly called Hala Sultan Tekke), Kalavassos-Agios Dimitrios, Myrtou-Pyghades, Kition, Maa-Palaeo-*kastron*, Maroni-Vournes and Alassa-Paliotaverna (Fig. 1). Some are more impressive

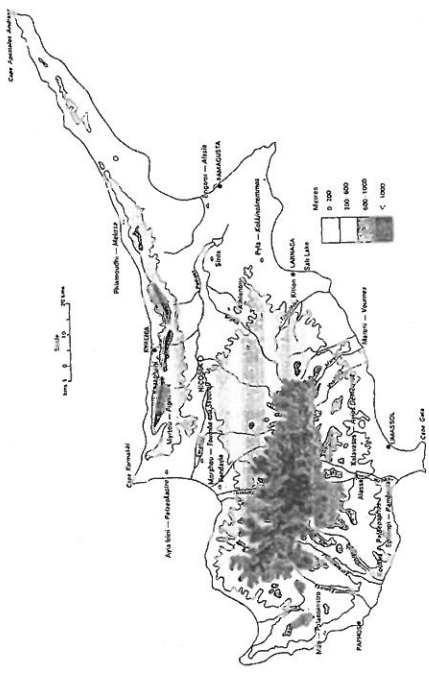


Fig. 1. Map showing Late Cypriot sites.

1. Ashlars have been noticed by the writer at a LC settlement accidentally discovered at Akaki-Chalopetra. However, is not included here as there is no evidence to relate them with a building.

~~G.K. Iannidi &~~

G.K. Iannidi &

SA. Hadjistylis (eds)

Nicolaus
Harris Foundation

than others but always their predominance over the remaining architecture of the settlement is obvious. The construction techniques are similar all over the island although in certain regions thanks to the availability of stone with good carving properties the blocks differ considerably in size.

The three ashlar buildings currently under excavation at Maroni, Kalavassos and Alassa share some common characteristics which could justify a special classification. All three stand out of the ordinary settlement architecture. They are built on high commanding positions at the northern end of the sites. In addition they are provided with some spacious rooms and considerable storage facilities. In at least two cases the buildings are somehow related to production of olive oil while all of them were storing this most precious commodity. The thickness of the walls in all cases are suggestive of, at least, a second storey.

While the ashlar buildings found earlier in the coastal towns have been identified as residences or sanctuaries, the recently discovered buildings cannot easily be identified.

At Maroni the Ashlar Building was built on a knoll dominating the locality of *Yournes* some 500m. from the coast and the main body of the Late Bronze Age settlement at the localities of *Tsaroukas* and *Yalos*. The building is aligned southeast-northwest and measures about 30.5m. along its main axis by about 20.5m. along the south façade narrowing to about 18.5m. further north (Cadogan 1989, 46). It is partially built of finely dressed ashlar blocks while many of the internal and some of the external walls are of mudbricks originally covered with white plaster to resemble ashlar masonry. The building has a tripartite plan (Fig. 2). The East wing mostly built of mudbricks is occupied by a succession of 7 rooms including the Room of the Olive Press. Most likely the east wing formed the industrial quarters of the building. The main part of the building, measuring internally about 19.5x9.5m. was built wholly of ashlar to judge from the surviving remains of the plinth and the stone robbing trenches (Cadogan 1992, 54). At least two long and narrow rooms were used for storage purposes and the stone stands recovered are in favour of this suggestion. It is possible that a staircase leading to the upper floor was associated with the narrow rooms. Probably the most centrally located room (no. 18) may have been a space open to the air.

The main entrance, which opens to the south, resembles a verandah with a large central pillar base. The north part of the building is occupied by a number of rooms symmetrically arranged and most probably was intended for domestic use. A side entrance communicates with a 4.50m. wide street which separates the Ashlar Building from the West Building (Cadogan 1992, 57).

The presence of a high capacity olive press within the building and its storage facilities leave little doubt about its involvement in food production. The Olive Press occupies the central room of the east wing while the adjacent rooms were used in other stages of olive processing such as crushing and oil separation (Hadjisavvas

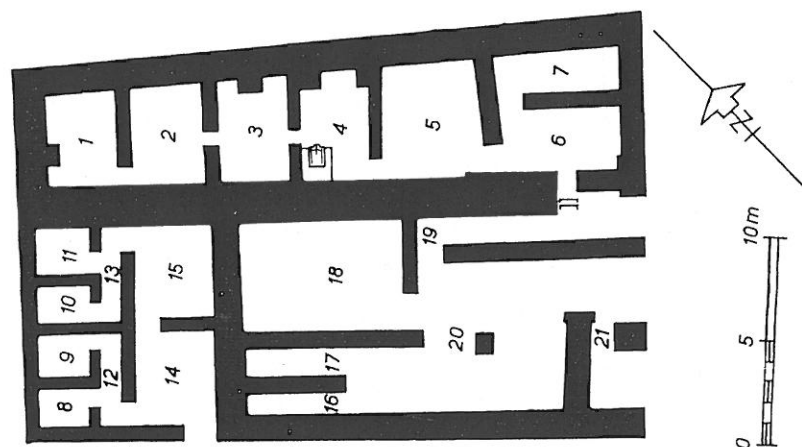


Fig. 2. Maroni-Yournes. Plan of the Ashlar Building.

1992, 21). Some pieces of oxide ingot, metal objects, casting pillage and fragments from furnace facing found in the building suggest some secondary metallurgical activity, or metal working, while some loom weights point to yet another occupation of the inhabitants.

According to the excavator the occupants of the Ashlar Building supervised and stored and doubtless taxed food production in the region (Cadogan 1988, 230).

At Kalavassos the ashlar building designated as Building X is situated in a commanding position at the northernmost area of the large settlement at the locality of *Agios Dimitrios* on the west bank of the Vasilikos river (Fig. 3). It is by far the largest



Fig. 3. Kalavassos-Agios Dimitrios. Aerial view.

building at the site and the only one with ashlar masonry (South 1984, 25). The main part of the building is square each side measuring about 30.5m. with a tripartite plan around a central square courtyard. The various components of the building are symmetrically distributed around the courtyard (Fig. 4). Two north-south corridors are flanking the courtyard both of which run the length of the building. The east wing is occupied by a series of rooms which run parallel to the east corridor. The north wing is occupied by two pairs of rooms. The largest architectural unit is a rectangular hall occupying most of the west wing of Building X. It measures 19.5x7.25m. with six monolithic stone pillars to support the ceiling. At least 47 pithoi stood in double rows on the floor while six others were sunk in pits below floor level (South 1984, 23).

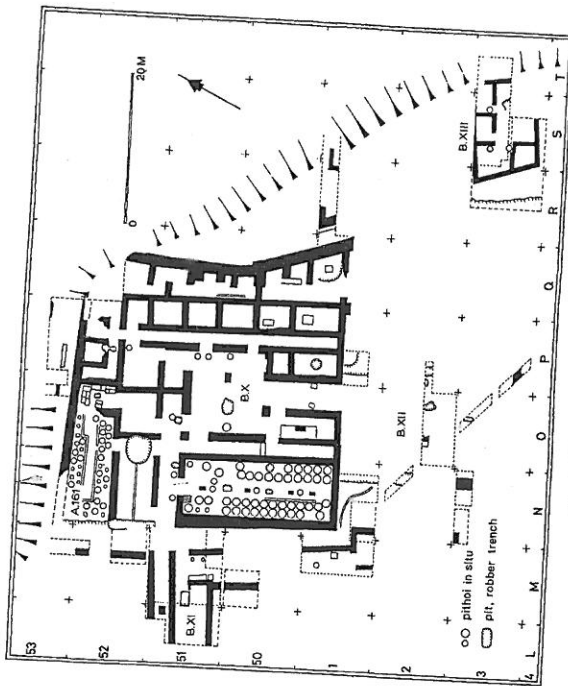


Fig. 4. Kalavassos-Agios Dimitrios. Building X.

The main entrance to the building lies in the centre of the south side and is 3.50m wide. It opens into a vestibule of the same width and is 7.40m. in length. The vestibule leads straight into the central courtyard which is paved with pebbles. Ashlar masonry was used on exterior and important interior areas. Ashlar blocks up to 3.20m. long many with drafted margins were used. Ashlar masonry also occurs in the form of monolithic stone pillars and rectangular pillar bases mostly in the Pithos Hall.

Another storage area called the North Pithos Magazine measuring 13.5x5m. average was found to the north of the western half of Building X. This storeroom is formed by the north outer wall of Building X and an enclosure wall at the northernmost limit of the settlement.

The massively constructed foundations sometimes up to 2m. thick suggest the existence of an upper storey accessible via a staircase near the main entrance. The occupation of Building X is dated to the LC IIC period and was abandoned some time during the same period. Most of the rooms have only one floor and in general the building underwent little change.

According to the excavator, Building X must have played some important role in the life of the community, and considerable resources of labour and skill went into its construction (South 1984, 25).

There is little doubt that the major preoccupation of the tenants of Building X was the control of production and storage of olive oil. According to the excavator the function of Building X could be that of an administrative centre or "residence for elite members of the society who had some control over the economic life of the community" (South 1989, 322).

The most recently discovered ashlar building is currently under excavation at Alassa-Paliotaverna located on the lower foothills of the Troodos massif on an altitude of 258m. (Hadjisavvas 1994 (a) 110) (Fig. 5).

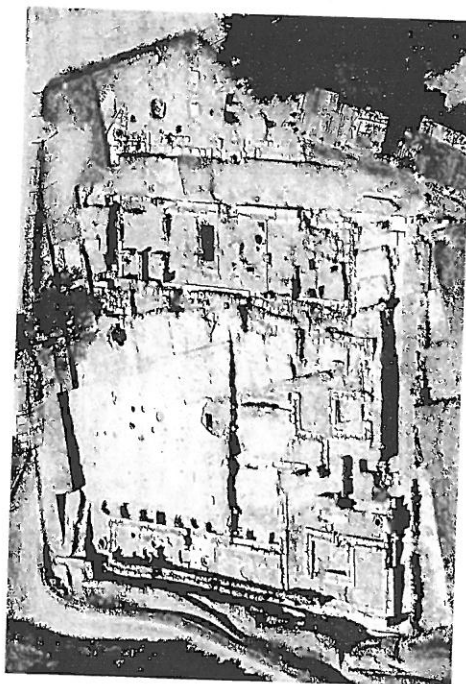


Fig. 5. Alassa-Paliotaverna. Aerial view.

The ashlar building at Alassa designated as Building II is the ashlar building *par excellence*. It is the only building, thus far excavated on the island, which is constructed entirely of ashlar masonry (Fig. 6). It is also a model as far as the architectural details are concerned. Straight lines, perfect right angles form a square building with a side of 38.70m, which makes it one of the largest single buildings of the Bronze Age ever excavated on the island (Hadjisavvas S. Hadjisavvas 1997, 143-148).

Building II in its original Π -shaped form was erected during the LC IIC period (Fig. 7). It seems *prima facie* that the building was abandoned some time during the

LC IIC period. Its cemented floors and ashlar walls were subsequently covered with alluvial washed down from the adjacent hill slopes. Some parts of Building II were re-occupied soon after by people who used red mortar and mudbricks made of terracotta. The interior of the south wing of the building was remodeled to resemble Aegean prototypes. Small dividing walls were built of ashlar, most probably taken from other parts of the building. Red mortar was used to fill the core of the thin shell-walls, while a retaining structure with the use of red mortar was built to support the north wall of the south wing. The superstructure was built of mudbricks, a material also used to raise up the eastern part of the north wing which was used as a store for a double row of large pithoi standing on stone slabs. The store is not fully excavated and the number of pithoi cannot as yet be estimated. The reddish layer covering the south wing and the Pithos Store is the only evidence of distinction showing the two different occupation periods of Building II. The floors are the same and only the thin dividing walls of the south wing provide evidence for the alteration of its original architecture.

A more detailed description of Building II has already been given in the congress "Cyprus and the Aegean" organised by the Department of Antiquities in December 1995 (S. Hadjisavvas 1997).

Building II is situated at the northernmost end of a large LC II settlement occupying an area of about 50 hectares. It was built on a commanding position over the remaining settlement but also over the whole of the Kouris river valley. The easiest explanation for its location is the proximity of Alassa to the orebodies of the Troodos massif and the control of the river route which leads down to the coast of Kourion through a number of smaller sites including Episkopi-Bamboula (Hadjisavvas 1994 b).

It is difficult to identify the use of Building II at Alassa or at least its latest occupation phase. The large Hearth-Room measuring 16.70x6.8m. meant to satisfy communal rather than individual needs while its storage facilities point to the same conclusion. The presence on the other hand of two pairs of small rooms, one provided with a bathtub is not conclusive having in mind the ritualistic significance of bathtubs in the Aegean context.

The proximity of at least two of the ashlar buildings to the mining regions of the Troodos has often been used to justify their specific location. The role, however, played by these buildings and their tenants cannot be understood without an attempt towards the reconstruction of the LBA economy.

Already in 1962 Catling (129-69) based on the available evidence of the time suggested a tripartite system of settlement and economy of the Late Bronze Age in Cyprus. The system comprised of villages based on agriculture, copper mining sites on Troodos and coastal towns mostly engaged in copper working and international trade in copper. More recently Keswani (1993) suggested the application of the staple and wealth finance model for regional polities on the island where inter-regional exchange was the primary form of "trade". This last suggestion, however, is not con-

firmed by archaeological evidence; not only because of the absence of agricultural support villages, a gap which Webb and Frankel (1994) tried to fill in based on survey material, but also due to the absence of clearly mining oriented sites.

Although a large number of LBA sites has been excavated and published since Catling's suggestion we still don't know of any site specialized in a singular production. Even Apliki-Karamallos (Taylor 1952) a site situated close to Mavrovouni ore body and generally characterized as a miner's settlement produced evidence for production of agricultural commodities including olive oil (Hadjisavvas 1992).

The well-known smelting site of Athienou-Bamboular in *Koukouninas* associated with a sanctuary was provided with, at least, one olive press while a number of pithoi have been used for its storage (Dothan and Ben Tor 1983).

The available evidence shows that in LBA Cyprus there are no sites specialized in the production of a singular commodity, a fact which leads to the rejection of the models proposed in the past. What I had already suggested in 1989 is the dual character of the economy based on agriculture and metallurgy. In spite of the fact that a complete pot bellows and other finds related to metallurgy were found at *Alassa-Pano Mandilaris*, I suggested that the economy was mostly based on agriculture (Hadjisavvas 1989, 40). The dual character of the economy was confirmed by the discovery in ritual context of a miniature oxhide ingot along with a number of bull figurines.

In 1993 (Hadjisavvas 1994, (b)) I proposed a model for copper production suggesting that a great part of the smelted copper was the result of small production units most probably family based. This assumption was supported by the discovery in *Alassa* and other settlement sites, of small quantities of primary slag and the discovery of primary bun ingots in other sites not far from the mining districts, such as *Delikipos*.

One may argue that along with full time miners and metallurgists a large number of people, otherwise preoccupied in agriculture and stock breeding were also engaged in metallurgy on part time basis.

This model is also valid for olive oil and was confirmed by the discovery of small production units at *Kalavassos-Agios Dimitrios* along with the high capacity press associated with Building X. The installations at *Kalavassos-Agios Dimitrios* present an interesting case and should be considered as an insight into the structure of LBA economy.

The press associated with Building X in the most optimistic situation could produce 4,000 litres of oil yearly (Hadjisavvas 1996, 131). This is a very low figure compared to the 50,000 litres storage capacity of the building. It is clear that the extra capacity required to store oil was collected either as tribute in kind or by acquisition. This structure is suggestive of a kind of Palace economy known from Mycenaean

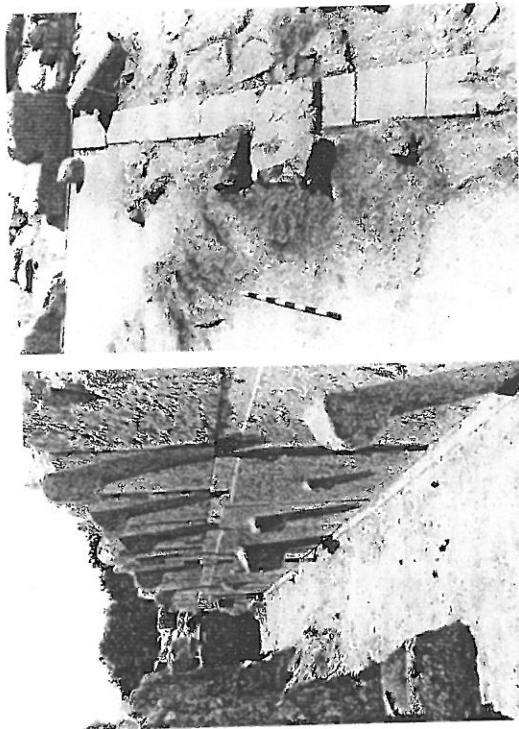


Fig. 6. *Alassa-Paliotaverna*. Building II. North wall.

Fig. 7. *Alassa-Paliotaverna*. The Hearth Room.



Fig. 8. *Alassa-Paliotaverna*. Impressed pithos sherd.

Greece and Ugarit where small primary units were controlled by centralized administration (Heltzer 1988).

The administrative control in Cyprus was exercised from the Ashlar buildings located close to rivers amidst large territories of arable land and not far from the source of copper. The commanding positions of their specific location was ensuring the control of land transport through the river valleys.

A number of Cypro-Minoan inscriptions (Masson 1983) and weights (Courtois 1983) discovered in Building X at Kalavassos-Agios Dimitrios supports its identification as an administrative centre. At Alassa no inscriptions have, as yet, been discovered but a large number of impressed pithos sherds could have played the role of inscriptions in store records (Smith 1994, 284) (Fig. 8).

The Ashlar Buildings therefore were symbols and shelters at the same time of the power administering a regional unit made of a number of settlements, whether that was a "complex chiefdom" a "regional government" or a "kingdom".

The absence of domestic implements is not conclusive for their use as residences. As it has already been pointed out these buildings had at least two floors and there is little doubt that the upper one was used for habitation as was the practice all over Cyprus where in traditional buildings the ground floor is reserved for the storage of large pithoi while the upper one as living quarters. The large Hearth-Room situated at the ground floor could have played the role of the Throne-Room of the Aegean world.

These are but some preliminary thoughts on the complex problem of the Ashlar Buildings. The almost complete absence of texts of economic and administrative interest which could clarify questions related to the nature of production and the role of the ashlar buildings in Late Cypriote societies remains a serious shortcoming. To conclude, however, with an optimistic view I expect that some kind of archives will be found in one of the many LBA sites currently under excavation and hopefully the Cypro-Minoan script finally be deciphered.

REFERENCES

- CADOGAN, G. 1988: "Maroni IV", *RDAC*, 229-31.
 — 1989: "Maroni V", *RDAC*, 177-81.
 — 1992: "Maroni VI", *RDAC*, 51-58.
 CATLING, H. 1962: "Patterns of Settlement in Bronze Age Cyprus", *Opuscula Aethiensia* 4, 129-69.
 COURTOIS, J.-C. 1983: "Le trésor de poids de Kalavassos-Agios Dimitrios 1982", *RDAC*, 117-30.
 DOTHAN, T. and A. BEN TOR 1983, *Excavations at Athienou, Cyprus 1971-1972 (EDEM 16 Jerusalem)*.
 HADJISAVVAS, S. 1989: "A Late Cypriot Community at Alassa" in *Early Society in Cyprus*, E.J. Peltenberg (ed.), 32-42 (Edinburgh).
 — 1992: *Olive Oil Processing in Cyprus from the Bronze Age to the Byzantine period (SIMA XCIX, Nicosia)*.
 — 1994 (a): "Alassa Archaeological Project 1991-1993", *RDAC*, 107-14.
 — 1994 (b): Alassa: "A Regional Centre of Alassa?" *Late Bronze Age Settlement in Cyprus: Function and Relationship*, Åström P. and Herscher, E. (eds.), 23-8 (Jonsäter).
 — and I. HADJISAVVA 1997: "Aegean Influence at Alassa", *Proceedings of the International Archaeological Conference "Cyprus and the Aegean in Antiquity, from the prehistoric period to the 7th century A.D., Nicosia 8-10 December 1995* (Nicosia 1997), 143-8.
 — 1996: "The Economy of the Olive", *The Development of the Cypriot Economy. From the Prehistoric period to the present day*, 127-38.
 HELTZER, M. 1988: "The Late Bronze Age service system and its decline", *Society and Economy in the Eastern Mediterranean (c.1500-1000 B.C.)*, *Proceedings of the International Symposium held at the University of Haifa from the 28th of April to the 2nd of May 1985*, 7-17.
 HULT, G. 1978: *Bronze Age Ashlar Masonry in the Eastern Mediterranean. Cyprus, Ugarit and neighbouring regions (SIMA LXVI, Göteborg)*.
 KESWANI, P.S. 1999: "Models of Local Exchange in Late Bronze Age Cyprus", *BASOR* 292, 73-84.
 MASSON, E. 1983: "Premiers documents Cypro-Minoens du site Kalavassos-Agios Dimitrios", *RDAC*, 131-40.
 SMITH, J. 1994: *Seals for Sealing in the Late Cypriot Period* (Unpublished Ph. Thesis, Bryn Maur).
 SOUTH, A. 1984: "Kalavassos-Agios Dimitrios 1983", *RDAC*, 14-41.

- 1989: "From Copper to Kingship: aspects of Bronze Age society viewed from the Vasilikos valley" in E.J. Peltenberg (ed.), *Early Society in Cyprus*, 315-24. (Edinburgh).
- TAYLOR, J. DU PLAT: 1952: "A Late Bronze Age Settlement at Apliki, Cyprus", *The Antiquities Journal* 32, 133-67.
- WEBB, J.M. and D. FRANKEL: 1994: "Making an impression: storage and surplus finance in Late Bronze Age Cyprus", *Journal of Mediterranean Archaeology* 7, 15-26.

G.R.H. WRIGHT
C.A.R.I., Nicosia, CYPRUS

SCHOOLS OF MASONRY IN BRONZE AGE CYPRUS

Recent circumstances in Cyprus have impeded an overall assessment of the fine stone masonry found at several sites on the Island, ca 1200 B.C. Although belonging to one basic category, significant variations occur between such masonry at Enkomi and that at Kition and other sites on the south coast, requiring some consideration of different schools of masonry in Cyprus. The differences not local and ad hoc, but align with characteristics of two different traditions of fine stone masonry in the ancient world. Outline of origin and development of fine stone masonry: Large block, Pharaonic Masonry; Small block, or Zoser Masonry; Bronze Age East Mediterranean/Levantine Masonry. Kition Masonry typical of Bronze Age East Mediterranean Masonry; but Enkomi Masonry evidences some characteristics proper to Pharaonic Masonry. Differential not to be explained by intrinsic, i.e. technical or functional considerations; but due to regional developments emanating in part from varied foreign connections. These differences reflect basic trends in the history of fine stone masonry at large—to some degree explicable in changing relative concerns for structure and aspect.

(1)

The recent history of Cyprus has affected the study of its ancient history in some unexpected details.

The regions of the Island most accessible to Nicosia are the Kyrenia and Famagusta Districts and, rather naturally, it was there that in the past excavation tended to be best established. In this way the great site of Enkomi has always been a centre of interest. Eventually the combined activities of Schaeffer and Dikaios showed the site to be a Late Bronze Age city girt about with walls and enclosing an area of ca 16 hectares—and Schaeffer with a Middle Eastern approach exposed sizeable tracts of buildings. This revealed the surprising fact that in considerable part these buildings were constructed of finely dressed stone masonry (Fig. 1). Schaeffer himself was not primarily concerned with building construction, nor was this a subject well studied in his generation. However subsequently fashions changed and ancient building design and construction once more became matters of prime archaeological interest. Unfortunately by this time the ruins of Enkomi were no longer accessible to archaeologists. On the other hand major excavations were then concentrated by the Department of