CROP STORING AND PROCESSING, AND TIMBER EXPLOITATION AT ARSLANTEPE (MALATYA, TURKEY) DURING EARLY BRONZE AGE III

Diego SABATO, Laura SADORI

ARSLANTEPE (Malatya), located in south-eastern Anatolia near the upper Euphrates, was continuously inhabited from at least the end of the fifth millennium BC to the Byzantine age. The superimposed archaeological layers built up an artificial hill about thirty meters high. The place owes its name to two big lion statues found at the entrance of the Hilltop palace on the top of the hill (Akar: Lion; Toy: Sword), where the excavation started in the 70’s carried out by French archaeologists.

The Italian Archaeological Mission in eastern Anatolia of the University “La Sapienza” of Rome started the excavations in 1961 and at the moment these are directed by Prof. M. Fraginals. The extensive excavation of the site has required a rare opportunity to study the evolution of both farming and environment along time, shedding light on crops distribution, food-processing and plant landscape.

The most impressive period of the site took place in the Late Chalcolithic 5 (3500-3000 BC phase) when a huge palace was built on the top of the Hill. The palace had two important temples and richly decorated rooms. Probably the city ruled over the plain and is this is supported by the rarity of any other large occupation in that period. This city came suddenly and mysteriously around 3000 BC, when the palace was destroyed by a raging fire. After that normal and semi-nomadic populations frequented the hill with occasional settlements. By 2900 BC a new permanent little settlement (VBII), was founded, and the site was no longer abandoned completely for several millennia. At least four are the Early Bronze Age occupation phases at Arslantepe (VB1-2, VIC, VD), followed then by Middle and Late Bronze Age.

The painting shows the probable aspect of the village and the nearby landscape at the end of VIC phase. Outside the walls a large grain field and a little vegetable garden with pulses and vineyards is described. Among the three main crops poplars and small size oaks, junipers and hawthorns characterized the landscape. Crop storage and probably the last steps of crop processing occurred inside the village.

Seedfruits (total percentage) found in the VIC phase. The grass family plants show similar proportion in every area. Pulses, grapes, a high amount of barley and the wild plants come from a single little room at the village. Wild plants: 12.000.

The current work concerns the analysis of plant remains from the VIC phase of Arslantepe (Early Bronze Age II, 2500-2000 BC), characterized by a village arranged on several terraces and protected, at least in some of its phases by surrounding walls. The VIC contains many olive phials in which the buildings were destroyed and others 500 times, sometimes following the original plans, sometime in a new way. At the end of this period the village expanded outside the walls and this could indicate a low-conflict time area.

The plant remains presented here were brought to light during several archaeological campaigns, from 1957 onwards.

The study led to the identification of 17 taxa using seedfruits and of 13 taxa through charcoal analysis. A total amount of ca. 11000 seedfruits, mainly cereals and pulses, and ca. 10 kg of wood charcoal, is identified. Among cereals Triticum aestivum, T. dicoccum, Hordeum vulgare are the main taxa. Legumes are represented principally by Vicia villosa/Lathyrus and Poa. Woody taxa are represented mainly by charred remains of Populus, deciduous Quercus, Fraxinus, and Juglans.

The analyses allowed to assess differences in indoor and outdoor activities, with the potential of identifying patterns of spatial organization in the processing and storing of crops, and the preparation of food. Probably the crop cleaning practices were placed outside the houses or inside the settlement itself. In all of the samples, in fact, just rarely fragments, stamens, and wild plants were found. It is easy to believe that a second step of the food-processing was placed inside the village and often inside the houses. The contemporaneous presence of charred peas, spelt, and grapes suggests wine making practices. The occurrence of shiny agglomerates of free thorny caryopses, probably wet before charring, induce to think of cereal processing, something similar to the present-day Bulgar making. The storage of the crops was at times probably placed on the second floor of the building or on the roof (C) as is demonstrated in the previous building on the roof of the C phase is not in the precedes Bronze phases of the site.

The predominance of Paspalum sp. among the arboreal species and of free-threshing wheat (Triticum aestivum) among the grains reflects a relatively humid environment. This fact is in apparent contrast with the Anatolian climatic data available for the same half millennia. This difference could be attributed to the hydrography of the territory surrounding the hill, characterized by several natural springs, but it has to be confirmed by analyses of other environmental parameters still in progress.

The abundant finding of Vicia villosa instead of Cleora alstronon (the main pulse in the previous phase, VIC) is not clear yet. The bitter vetch has a bad flavour and is toxic if eaten in large quantities. Usually it is used during famines because it can grow spontaneously also in a dry soil. As there is no archaeological evidence of food shortage in the VIC period, maybe bitter vetch was used as animal feed, but this does not explain the reasoning for which just one single chalice was found in all the excavation. An answer to this question could be obtained if we consider a “seasonal distortion” of the finding; unlike other periods, the VIC phase does not finish in a single destructive event, but the findings come from many little fires occurred over 500 years. Given that the fires take place earlier in the dry season instead of wet season, this could explain the high disparity between grasses and pulse crops.

Some excavation photos (MAOA – Archives - Miestrione Antichità in Anatolia Orientale).