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Restoration and conservation of Tilmen Mound ceramics

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Tilmen Mound in the province of Gaziantep in southeastern Anatolia in Turkey was first discovered by Prof. Bahadır Alkim and his assistant Refik Duru in 1958. Excavations were carried out until 1972 and restarted in 2003 within the framework of Turkish-Italian cooperation conducted by Nicolò Marchetti from the University of Bologne; this work was continued through 2007. Restoration and conservation work was carried out on site and in the laboratory, in the latter case including ceramics from various seasons, which differed in their state of disintegration depending on how well they had been fired and the quality of the original craftsmanship. The article presents conservation practices applied to the ceramics from the Tilmen Mound and the results that were achieved.

KEY-WORDS: Tilmen Mound, ceramics, restoration, conservation

The İslahiye region is a narrow strip of land 80 km long, extending from the southwest to the northeast between the Amanos and Kurt mountains, surrounded by the provinces of Osmaniye, Kahramanmaraş, Gaziantep, Kilis and Hatay. In geomorphological terms, it is a land-filled fault line. A series of small plains: Hassa, Altıntop, İslahiye, Zincirli and Sakçagözü are located along this line. The İslahiye valley extends from the Taurus Mountains to the south, through the Biga and Jordan valleys to Syria, Lebanon, Palestine and Israel, and to the Red Sea and East Africa. Karasu is the most important stream of the region and it flows into the Amik plain.

Archaeological research in the region began in 1883 with the discovery of a large number of engraved stone orthostats. Osman Hamdi Bey who excavated the stone slabs, was the first Turkish archaeologist on the mound that is the site of the village of Zincirli near Fevzipaşa. Excavations unearthed evidence of cultures going back as far as the 6th millenium BC. An extensive archaeological research program was carried out in the İslahiye Region in 1955–1972, headed by Prof. Bahadır Alkim of the İstanbul University Faculty of Letters, Department of Ancient Near Eastern Languages and Cultures. Almost all of the ancient sites in the area were surveyed in 1958 and Tilmen Mound was first identified then. Excavations were carried out in the years that followed, up to 1961, at the site of the so-called Yesemek Sculpture Workshop, which had

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become important for local tourism, and then at Tilmen, Gedikli Karahöyük and the Kırışkal Mound. Excavations were restarted in 2003 and continued through 2007 by Nicolò Marchetti from the University of Bologne working within the framework of Turkish-Italian cooperation. With this new project, old centres from the mountainous regions to the plains, including some ancient settlements in Islahiye were examined for conservation (Duru 2000, 2001, 2003; Marchetti 2008).

Tilmen Mound is situated in a mountainous plain with a large number of hill peaks and basalt veins, on the coast of Karasu stream to the east of Islahiye town in the province of Gaziantep. Nine building phases over a period of one thousand years between 3000 BC and 2000 BC accounted for the accumulations. During the first five phases, walls of mud brick were raised on the walls of earlier settlements; later stone architecture was introduced. The current project aims at reevaluating old settlement patterns, learning about land cultivation models and understanding society development, which reached a peak during the Roman Empire with the highest density of settlement in the valley and the hills bordering it.

Ceramics were an important find at Tilmen Mound. The main difference between the Late Chalcolithic and Early Bronze Age was the disappearance of 'Obeid like' pottery, replaced by a local wheel-made fabric with a reddish orange paste, which was generally in the third millennnium BC the main pottery found in the Islahiye plain; it is known from the mounds in the Plain of Amik and the Çukurova 'Gözlükule Mound' where it is referred to as 'Brittle Orange Ware' or 'Red Gritty Ware'. The most developed examples of this pottery have been found in the İslahiye region. The people here from 3000 BC to 2000 BC were apparanetly native to the region, but under strong cultural and material influence of their neighbors, especially from central Mesopotamia, as attested by individual finds of a pointed base belonging to a Syrian bottle and a bulla from the Akkadian period.

CONSERVATION WORK

Restoration and conservation work was carried out on site and in the laboratory. Interventions on site included ground consolidation and integration of displaced stone parts, wall bondings and plaster at risk of collapse.

Laboratory applications, which constitute the subject matter of this paper, include clay objects found during different excavation periods. Their state of preservation depended on their firing and quality of craftsmanship.

In 2006, a kiln and two large clay vessels were discovered in the courtyard of the Big House. The pottery was studied and documented prior to conservation and found to be handmade with a porous structure dependent on the degree of firing, covered

with surface dirt and partly deformed, but in a condition that permitted conservation without the need to consolidate.

Following documentation, the objects were cleaned of the surface dirt using a soft brush and 50% solution of alcohol and water or water alone, and were left to dry in a shady place under control. To enable temporary assembly, the pieces were numbered from the inside, the surface being treated first with an acryllic resin (Paraloid B72) solution; numbers were introduced with an acetate pen which is easy to remove later using acetone. Vinyl resin K60 in alcohol was used for assembly of the smaller parts in order to ensure reversibility. In the assembly of base parts or bigger pieces, a two-component epoxy resin (Sintolit C) was preferred, being heat resistant and having a high binding power. Pieces were fitted together experimentally first. They were fixed from inside and braces of epoxy resin were introduced to enable better fastening in view of the size and weight of the vases. Epoxy resin was also used to assemble parts, the surface of which was covered with white plaster to have a better appearance. Missing parts were completed after the parts were assembled and the surfaces were sanded using sandpaper of various thickness to remove any irregularity. Integration not coloured at once for lack of time was coloured later during four days of work at Gaziantep Museum where the objects are kept. Lastly, the remaining adhesive and plaster were cleaned and the last touches were made. As the overall condition of the pottery was good, it was not necessary to apply any kind of surface protector or consolidator.

In 2007, excavation of a monumental stairway of stone leading to the palace quarter in the lower city and acropolis uncovered a great deal of pottery. It belonged to three different periods. A jar for storing food was found in very good condition in the Palace Region. The object was cleaned of surface dirt by brushing with water. Lime-stone covered parts were cleared off mechanically using a bisturi. The jar was handmade and had a porous structure like the vessels from the Big House treated earlier. Their state of preservation was good and did not require pre-consolidation. The dirt was removed by washing with water and leaving to dry in a shady place under control. The insoluble salty efflorescence was treated with a chemical solution by immersion in a bucket filled with formic acid (10% in water), but only after the pieces had been soaked in water for 5 hours to avoid penetration of the acid solution into the porous structure. After the acid treatment the pieces were left in distilled water for 24 hours, the water being changed every 5 hours. Lastly, the pieces were tested one by one with a Ph meter. Broken parts were assembled using a two-component epoxy resin (UHU Hart). The pieces were fixed from inside considering the size and weight of the object and to enable better fastening, fillings were made with another epoxy resin (Sintolit C), which was also used to assemble the parts, the surface of which was covered with white plaster. The missing parts were completed with quick-drying plaster and coloured in a paler

shade than the clay itself. By applying a second coat of paint where necessary, the homogenous spread of paint on the surface was attained. Based on the original colour of the surface, a different colour was prepared, and spurted on the first application by the help of a toothbrush. In this way, the porous structure of the object and variations of shades of colour were emphasized.

Other finds were also reassembled following cleaning. Pieces were all brushed with water to remove surface dirt and earth. Mechanical methods were applied to hard soil covering some pieces. Assembly was done with an acryl resin (Paraloid B72 in 45% acetone) to ensure reversibility. However, some objects needed to be assembled and filled with epoxy resin (Sintolit C) to enable better fastening. The missing parts and the epoxy fillings were completed using quick-drying plaster. Surfaces were sanded using sandpaper. Lastly, surfaces were coloured a paler shade than the clay itself.

CONCLUSION

The excavation officially ended in 2007 and the Archaeological Park project applications which started in 2006 were resumed and the park was officially opened on 24 October 2007. The Tilmen Mound ceramics and other finds are exhibited at the Zeugma Mosaic Museum in Gaziantep.

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