

ABSTRACT

The rehabilitation process for the County Library *George Radu Melidon* in Roman, which began in 2012, required archaeological supervision, because the heritage building involved (also known as *Casa Ioachim*) was located within the Medieval settlement of Roman. The probing performed by the construction company (SC CONBAS SRL), both inside and outside the building, was aimed to test the depth and resistance of the foundation, as well as that of the soil. Until the end of 2012 they performed nine probes (indexed Sj. 1 - 9), out of which six were inside the library (Sj. 1-3, 6-8) and the others were outside. As for the finds, the ones done inside uncovered little material (especially from the 19th century), but the ones done outside uncovered various objects from the 14th - 19th century.

Among the objects uncovered inside there were decorative pottery items, in fragments, which were used as filling for increasing the floor level of a room dated to the 19th century. Out of those fragments they managed to put together two roof tiles, several lion paws (parts of two lions that flanked the entrance to the current library) and a plate with a child representation of the god Amor, bearing the stamp of the German manufacturer. According to the stamp (*KACHELOFEN-FABRIK. MORINTZ ROSENZWEIG. CZERNOWITZ*), those decorative plates were made in München (in the terracota factory founded in 1836 by Morintz Rosenzweig) and had been imported to Roman. Also outside, in Sj. 5, located next to Hotel Roman, in the foundation of the library they uncovered, among other objects, a knife with a bronze button, half of a rush-light and part of a cup with a stamp, of the Muşat type of vessels, dated to the 14th - 15th century.

In another probe, in the courtyard of the library, they uncovered part of a house, which required extending the research area and preserving the inventory of the closed complex. Thus, they planned a section (indexed S.I) 7m long and 1m wide, and opened 5 more squares (Cas. 1 - 5) of various sizes, with a final depth of 1.20 - 1.40 m. The research procedure involved handling a total quantity of approximately 30m³. Until they reached the floor of the house, 0.80m deep, in the Medieval layer, they found a construction mix of animal bones, fragments of pottery, stone and metal items. Among them there were three Medieval coins, a silver gros, issued by Petru Muşat during the last year of his reign (1391), a fake Greek Venetian ducat, made of gilded silver, from the 15th century and a Turkish coin, a silver akçe, issued by Murad the 2nd (the 15th century).

During the dig the investigated almost all of the Medieval house, finding intensely burned objects, as that house had been burned. The large number of metal items and the presence of a heart indicated that the building had been used as a workshop.

According to the stratigraphy, that workshop was oriented along the west-east axis and had a trapeze shape, with sharp corners and walls of adobe on a wooden structure, over which they fixed a simple roof with a longer southern plane that almost reached the ground. The entrance was on the western wall, as indicated by the objects uncovered there (door knob fragment, a key, a hinge frame, a slip bolt) and the heart was on the opposite side at the back of the room. Around the heart there were many objects (some were accessories) and some objects were on the heart (eight knives, four hooks, three nails, two pieces of cinder, a needle, an arrow tip, a tongue bit, a broken bronze spur, a buckle and a trilobed harness ring), which were either in need of repairs, or were to be processed. As indicated by their characteristics, those objects were made by forging, not by casting. Some of them were clearly broken, which indicated that the shop functioned both for repairs and for manufacture (they found a stove door, a shovel, a musket pipe, a tongue bit, spurs etc.).

Typologically the objects fit into the following categories: tools, household objects, harness accessories, locks, coins, decorative objects, clothing, weapons and construction materials. Even though all objects are valuable, we would like to mention a musket with a hook, whose pipe was hexagonal on the outside and round inside, 450 mm long. That type of weapon was rarely encountered in Medieval Moldavia, a similar one being found in 1929 at *Cetatea Albă*.

As for the dating of the workshop, our guidelines were two coins with certain and restricted dating, issued in 1611 and 1632, which indicated that the shop was active in the middle of the 17th century and after.

The metal items uncovered at *The Library* were studied in regard to the alteration suffered underground, focusing on their corrosion crusts, their internal and external structures, as well as their archaeometric characteristics, which led to the elucidation of specific underground alteration mechanisms.

The determination of their conservation state was done either directly on the objects, or by means of samples taken, without affecting their integrity or aspect, involving modern non-invasive techniques, such as optical microscopy and SEM-EDX. The results of our investigation revealed corrosion crusts of variable thickness, with complex structures, especially on iron alloys, or layered and with microstructures from the

soil, such as in the case of certain copper alloy items, with or without decorations.

The burning of the shop played an important role in the processes of chemical alteration and physical degradation during the underground stay of the objects and in the gradual degradation of those metal objects. The heat contributed to the alteration of the internal structure of alloys but remained entirely in its original state and with additional contact materials (microstructures, hay, coal etc.), which implied that specific interventions of restoration and conservation be applied.

In the case of the items uncovered in the burned shop, we did apply a complex set of restoration and conservation procedures. On one hand we aimed to eliminate certain active chemical compounds, such as chlorides, on the other hand we avoided to extrude the traces of materials integrated in the corrosion crust. On such objects we opted for gradual treatments by brushing with weak solutions. That procedure, applied repeatedly, prolongs the duration of laboratory interventions, but has the advantage that it allows a direct control of what products and microstructures are extruded. After stabilizing the items, we obtained a slight brassy patina on the bronze objects, while the iron objects preserved their dark brown crust formed during their underground stay.

In conclusion, the archaeologic material uncovered at the *George Radu Melidon* Library, in Roman, turned out to be extremely valuable, of great importance for the study of the local community in the current environment and during more or less distant past times. At the same time, the researches performed on those metal items set the basis for a comparative study on the degradation mode of metal items, the recommended restoration and conservation procedures and they offered new bibliographic and experimental data, as well as reference models for objects uncovered in archaeological sites with similar degradation states that resulted from their interaction with the environment.