

A HUNDRED YEARS OF ARCHAEOBOTANICAL INVESTIGATION ON A ROMAN FORTRESS IN PANNONIA

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One of the biggest Pannonian fortresses in Hungary is located on the west bay shore of Lake Balaton. The 14 ha fortress in Keszthely-Fenékpuszta was destroyed in the middle of the 5th century AD, probably by the Goths. Archaeological research started here in the second part of the 19th century. Plant macroremains were found in four excavation periods. The first botanical finds came to light in the year 1904 from a rubbish layer of a Roman villa built at the end of the 4th century AD. About 15000 diaspores of 19 species were found, mostly einkorn and emmer. The second archaeobotanical assemblage is known from the 1970-72 excavation campaign, in which the charred remains were systematically collected. The large number of seeds, the carbonized, metre thick layer of cereals found in front of the southern fortification gate, in a well and ovens imply that at least 1000 tons of cereals must have been stored within the walls, mainly in the horreum, before the attack and fire. More than half a million seeds and fruits of 53 taxa (cultivated plants, weeds and wild plants) were identified during the long-term archaeobotanical investigation. The third archaeobotanical collection is known from the excavation of the year 1993. Despite the systematic sampling, only a hundred carbonized remains of 13 plant species could be found in front of the west gate, mostly barley, emmer, common wheat, lentil and weeds of ruderal habitats and cereal fields. The fourth archaeobotanical research programme was done in 2009 within the framework of a joint German-Hungarian co-operation. The samples were taken systematically from a villa heating system of the early/mid 4th century AD. This time, 300 charred seeds of 42 taxa and hundreds of fragments of food remains were found. Keszthely-Fenékpuszta is outstanding among Roman age archaeobotanical sites. This is the only site in Hungary where a hundred years of archaeobotanical remains are available. At the same time, changes in methodology can be tested. With the help of plant remains we could reconstruct not only the cereal cultivation but also fodder production, horticulture and viticulture during the Roman occupation. During the hundred years research, 600,000 seeds and fruits of about 60 plant species have been found. They are mostly cereals, weeds and species of the contemporary natural vegetation. Some of the grains presumably came from other provinces. The most important cereals were barley, common wheat and rye. Einkorn, emmer, spelt and millet were also present. Among the poppy, pea, bitter vetch and horse-bean seeds there also occurred large-seeded lentil. Some evidence of local fruit growing and viticulture are available, from finds of peach, walnut and grape. Carbonised cereal gruel and leavened bread fragments indicate that the inhabitants had various and nutritional foods supplemented by imported figs and olives.

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