

History of the site and its previous researches

Mosaburg/Zalavár an outstanding locality of the European cultural history. Between 840-907 it was the centre of Pannonia Inferior, the easternmost province of the Carolingian Empire. Here was the residence of Method's Pannonian archdiocese, and the seat of king (later emperor) Arnulf of Carinthia and his commissioner, prince Brazlav from the 880s until 907. In the 11-13th century a county seat (*Civitas Colonensis*) here lived in the neighbourhood of one of the earliest Benedictine monastery (1019) of the Hungarian kingdom. The latter was fortified in the 16th c. and was blown up in 1702.

In the Carolingian period three churches were built in Mosaburg. The remains of the wooden church of St John the Baptist erected at the beginning of the 840s were excavated between 2007-09. The private church of Priwina and Chezil was dedicated to Our Lady in 24 January 850. In the 18th c. the building was perished. Its place can be allocated by the surrounding churchyard. The ambulatory pilgrim church of martyr Hadrian was built around 853-855. Its total length reaches 50 m. The excavation of the remains was completed in 2000, nearly 2000 graves were unearthed of the churchyard, and further burials were found even in 2011. South of the church two large wooden palace and other simple timber buildings belonged to the residence ('Pfalz') of the archbishop of Salzburg in Mosaburg. The number and quality of the finds from the storage pits and craftsmen's workshops of the surrounding area attest the 'city status' of the settlement in the Carolingian period.

Archaeological research of Zalavár-Vársziget is in progress till 1948. Recording of the documentation of the huge quantity of unpublished finds has already started by the help of former projects. One of the main targets is the scientific processing of ceramics which were restauarated during former OTKA project and now stored in approx. 900 boxes. The other important theme is the processing of the churches and churchyards of the Carolingian period and of the 11-13th c. The first results - book manuscripts - of this processing were born in this project period, though slightly differing from the planned schedule and sequence.

The executed work

From the second half of 2007 the processing and recording of pottery finds found in settlement phenomena of the 1994-2005 excavations has been continued. The basic categories of pottery have been defined also by several **scientific analysis**. The first analysis from 2005 were focused on polished yellow ceramics, but from 2008 onwards analysis of pottery of special shape or of special function (bowls, cups, ember-covers, storage-pots,

moulding jars, pots of graphite-material) have been completed with the contribution of prof. Erik Szameit (Institut für Vor- und Frühgeschichte, Universität Wien) and Hajnalka Herold PhD (Vienna Institute of Archaeological Sciences Universität Wien) by the support of the 'Austrian-Hungarian Action' Foundation. The result of the polarizing and cathodoluminescence microscopy analysis is that the analysed potteries were mostly local products, except of those of graphite material, which were imported from the territory of Austria.

Dr Ivan Gresits senior research fellow (Budapest University of Technology and Economics, Faculty of Chemical and Biomechanical Engineering, Department of Chemical and Environmental Process Engineering) examined **moulding jars** (found mostly around the moat which defended Priwina's stronghold) and a mould by X-ray spectroscopy: They were used to melt metal of high silver content, suggesting that some jewels of the high-ranking women were local products.

Peter Milo (Department of Archaeology and Museology, Masaryk University Brno) and his team made a **geophysical survey** on the unexcavated agricultural area of the Vársziget (6-8 ha): both of the eastern third and the western periphery of the Vársziget are covered so densely by settlement phenomena, that there is no applicable method to define anomalies, to separate smaller units.

The transparency of categorisation of ceramics is supported by the definition of standards of tempering materials, which characterize the site. This method has been controlled in a smaller unit of finds, i.e. approx 4300 sherds excavated from 62 settlement phenomena in 1994, at '**Zalavár-Parkoló**'. The detailed excel database of the records of these ceramics and small finds (metal, bone, stone) together with photos and drawings was completed by the end of this project. The compilation of an analytic catalogue of settlement phenomena, pottery, together with the illustrations and diagrams will be the program of the next project (Béla Miklós Szőke – Katalin Gergely).

The same method was used by the processing of settlement phenomena and approx 3200 sherds from an excavation led by Ágnes Cs. Sós in the 1980s, on **the northern part of the Vársziget**. (MA thesis of Katalin Gergely, classification: excellent.)

We have finished the preparation of the catalogue on polished yellow ceramics, i. e. records of shapes and technologies of more than 4000 sherds were completed. 87 typological tables of drawings of the finds were compiled; photos were taken on the most interesting or characteristic pieces. The analytic evaluation will be one of the most important targets of the next OTKA project (Béla Miklós Szőke).

The **digital map** that shows all the graves and settlement phenomena of the 1994-2010 excavations of the Vársziget has been completed. The majority of the burials of the **Hadrian church** excavated before 1995 (approx 500 graves) has been redrawn and mapped. A **3D reconstruction** of the church and its surroundings has been made on the basis of the ground plan (Zsolt Vasáros – Narmer Studio of Architecture). Attaching the digital map of the Hadrian churchyard the basic database of approx 2000 graves has been compiled (before 1995 500 and 1995-2010: 1500 graves); the Carolingian and the 11-13th c. burials have been separated and in spring 2009 the preparation of the publication began. The final form of records of 930 graves and their finds of the 1995-2001 excavations has been completed until summer 2011.

The insert of the 500 graves of the earlier excavations into the catalogue induces difficulties because of their casual and unsystematic documentation. Only a previous reconstruction of the documentation can be succeeded by their mapping and final recording, together with the compilation of the catalogue.

At the end of this project period a PhD thesis (**‘Zalavár-Vársziget in the Arpadian Period’**) has been completed, which elaborates the 11-13th c. settlement phenomena, ecclesiastic (Benedictine monastery, parish church), and secular buildings (county seat, tower) and churchyards (more than 1000 graves) of the Vársziget (Ágnes Ritoók; result: summa cum laude).

A DSc thesis, **‘Pannonia in the Carolingian Period’** has also been completed. The work includes the reappraisal of documentary evidences of the period together with long chapters dealing with the history of the settlement of Mosaburg/Zalavár, the chronology and archaeological, art historical evaluating of strongholds, churches and graveyards (Béla Miklós Szőke).

Compared to the previous OTKA projects a significant development has been achieved in processing the anthropological and archaeozoological finds. Sándor Évinger (Department of Anthropology Hungarian Natural History Museum) has finished the recording and processing of 1010 graves of the Hadrian church cemetery excavated in 1995-96 and 2000-2009 (total amount of the graves from these years: 1410). Hopefully this work will be completed in the next project period together with the catalogue.

The recording and processing of the huge amount of animal bones proceed faster, since aside István Vörös Annamária Bárány has got into the Hungarian National Museum (Archaeological Department). 155 bags of animal bones have been investigated. The numbering of ceramics is one of the premises of processing them. The numbering of ceramics

temporarily stored in the Archaeological Institute (26300 sherds in 167 boxes) went on slower, since a member of the team found a better job.

Drawings and photos of the finds of **4/99 object** (glass workshop) and all the Carolingian glass finds have been made, but their catalogue could not be completed, because of the failing of scientific analysis.

Our results were presented on several international conferences: Graz, Frankfurt, Břeclav, Keszthely, Sopron and Budapest.

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