AGGETLEK CAVES, HUNGARY–SLOVAKIA: ARCHAEOLOGY

The Baradla–Dombica Cave System, one of the most important archaeological sites in Central Europe, where artefacts of the Neolithic Bükk culture have been found, straddles the boundary between northeastern Hungary and southern Slovakia. The cave system is almost 25 km long and is the most important landform of both the Aggtelek (Hungary) and the Slovak karst. It was excavated by the erosive activity of the underground Styx River, mainly in Middle Triassic (Ladinian) Wetterstein limestone. However, there are substantial cave deposits consisting of gravel and cave loam. The Baradla–Dombica caves probably served as temporary or permanent dwellings for palaeolithic hunters. In the Middle Ages they also provided sanctuary from the invading Tartars and Turks. But the people of the Bükk culture inhabited the caves for the longest period—during the Middle Neolithic, c.6000–4500 BC.

The Bükk culture derives its name from the Bükk Mountains in northeastern Hungary, which was the main centre from which it spread. The people subsisted by farming, animal husbandry (especially sheep and goats), the obsidian trade, and textile and ceramic production. Their ceramics include some of the finest examples of Central European Neolithic pottery. Apart from their settlements on the river terraces and hillsides, the people also favoured caves as dwelling-places. From this point of view, the Baradla–Dombica Cave System (especially the Dombica Cave in Slovakia) represents the most important archaeological site for the Bükk culture.

The first archaeological discoveries in the Dombica Cave sediments were made in 1926. However, the first archaeological research only began in 1932–33, about 50 years later than in the Hungarian Baradla Cave, where Jenő Nyári had already begun work in 1876–77. Jaroslav Bohm led the research at Dombica Cave in the 1930s, in cooperation with American archaeologists (V.J. Fewkes and his team). The Hungarian scientists Hubert Kessler and Maria Motl also excavated in this cave during World War II (in 1940). New research into the cave settlement was initiated by the Archaeological Department of the Slovak Academy of Sciences in 1956 (by Juraj Bártta) and continued in 1963 (Bártta, 1965; Lichardus, 1969).

A large quantity of new data on the occupancy of the Dombica Cave have been collected during this research. The finding of palaeolithic leaf-shaped stone "spike" (tool) of the Szelét culture in allochthonous sediments was especially noteworthy. This is evidence of the presence of prehistoric hunters in the cave or nearby. However, a substantial proportion of the cave artefacts date back to the Neolithic Period. In the cave, six cultural horizons (Dombica Ia, Ib, IIa, IIb, III, and IV) have been found (Lichardus, 1969). These horizons cover the time span from the end of the Early Neolithic to the Middle–Late Neolithic boundary. The painted ceramics of the older Neolithic cultures (a sphere from the Starčevo–Karanovo–Kriš culture and pottery shards from the Gemen painted ceramics culture) have been found in the Dombica Ia to IIa horizons, whereas artefacts of the Bükk culture have been excavated only from younger horizons (Dombica IIb to IV) (Bártta, 1965; Lichardus, 1969).

Unlike the painted ceramics, the basic motif of the Bükk cave culture pottery is a spiral, sculpted decoration, often encrusted with white, yellow, and red pigment. Round vessels predominate, with amphora-like vessels being less common. Bone tools (awl, smoothers, comb-like tools, grinders, rods, a bone ring, pendants, needles, and daggers), stone tools (polished axes and splintered blades), and earthen spindles (evidence of the textile production) have also been found here. Post-holes, connected with the Bükk culture and also known from the Baradla Cave, suggest that dwellings were constructed inside the caves. Several fireplaces were also found, some of which served as sources of charcoal for radiometric dating. On the basis of radiocarbon analysis, the Bükk cave charcoal layer was dated to 6122 ± 75 BP (4120 ± 75 BC). This is in good agreement with the age (6492 ± 100 BP, 4490 ± 100 BC) obtained by radiocarbon dating of samples from the Bükk cave settlement of Arkatul, near Kortlát in Hungary (Bártta, 1965).

The unique discovery of three geometrical Neolithic charcoal drawings in 1931 was the most important find both in the Dombica Cave (Beníčkov, 1945) and the whole cave system. These drawings (see Figure)—the only prehistoric murals found in Central Europe—may represent symbols of fertility, and a stylized female figure. They are situated in the back of the cave section known as the "Sacred Corridor", which has a shape of a female lap. The way in which the drawings are located in this part of the cave is presumably related to a sacred site in which religious ceremonies could take place. The corridor was separated from the other cave spaces in two places, probably by some kind of curtains fastened to wooden beams. Traces of post-holes on the cave floor tend to confirm this theory (Bártta, 1965).

From the anthropological point of view, only two human jawbones (one of which belonged to an elderly individual) have been found in the Dombica Cave, whereas a Neolithic burial-ground with 13 human skeletons has been discovered in Baradla Cave. The individuals were buried in a crouched position, face down, and were covered by large flat stones. Along with these
human bones, footprints of Neolithic people were preserved on the floors of both caves. Unfortunately, these footprints were inadvertently destroyed during the first exploration of the cave system.

See also Aggtelek and Slovak Karst: Art: Cave Art in Europe

Further Reading

AKIYOSHI-DAI KARST AND CAVES, JAPAN

The Akiyoshi-dai (plateau) karst is located in Yamaguchi Prefecture, in the western part of mainland Honshu, the largest of the Japanese islands, and is the most famous and largest karst plateau in Japan. Permo-Carboniferous limestones crop out over an area of some 130 km² in one of the main caving regions in Japan. The limestone plateau is shaped like a parallelogram, measuring 17 km in an eastnortheast–westsouthwest direction and 8 km in a northnorthwest–southsoutheast direction, and is surrounded by mainly clastic facies of Permo-Carboniferous age. The western part is covered by Triassic and the northern part by Cretaceous rocks.

The limestone plateau is at an altitude of 100–400 m with a gently undulating surface and is mostly surrounded by steep marginal slopes. The valley of the Koto River cuts through the central part of the area from north to south, and divides the Akiyoshi-dai (plateau) into two areas: Higashino-dai in the east and Nishino-dai to the west. About 2200 dolines have been located, and the mean doline density for the total area is c. 20 per square kilometre on the plateau. The highest doline density is 140–160 per square kilometre in the central part of the Higashino-dai (Miura, 1991). There are also 81 karst springs and 429 caves distributed all over the plateau. About 45 km² of the Akiyoshi-dai Plateau was designated a Quasi-National Park of Japan in 1955, and 13.8 km² was designated a Special National Monument of Japan in 1964, based on its great significance to the geological sciences.

It is known that the Domica Cave was settled by the Bükk people, especially during the winter, when it was warmer in the cave than outside (the average temperature in the cave is 10°C). The cave could have served as a religious site and/or a ceramics production centre. Artefacts of the Bükk culture have also been discovered in other caves of the Baradla–Domica system (e.g. Baradla Cave, Čertová pec Cave, etc.), but their importance is not as great as those in Domica Cave. However, because of the presence of unique karst phenomena and rare archaeological finds, the Baradla–Domica Cave System was registered as a UNESCO World Heritage Site in 1995.

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Works Cited
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