

SWARMING ACTIVITY OF BATS IN THE VÂRGHIȘ GORGE - AN IMPORTANT SITE FOR THE EASTERN CARPATHIANS (ROMANIA)

CSABA JÉRE¹, LEVENTE BARTI², ANNAMÁRIA DÓCZY³, FARKAS SZODORAY-PARÁDI⁴, LÁSZLÓ SZÁNTÓ⁵ and SZILÁRD BÜCS⁶

¹Romanian Bat Protection Association, Independentei Str. 7/10, 535600 Odorheiu Secuiesc, Romania; E-mail: csaba.jere@aplr.ro

²Romanian Bat Protection Association, Dealului Str. 11 B/16, 520060 Sfântu Gheorghe, Romania; E-mail : bartilev@yahoo.com

³ Environmental Protection Agency of Harghita County, Márton Áron Str. 43, 530211 Miercurea Ciuc, Romania; E-mail: zsogod@freemail.hu

⁴Romanian Bat Protection Association, I. B. Deleanu Str. 2, 440014 Satu Mare, Romania; E-mail : farkas@aplr.ro

⁵Romanian Bat Protection Association, I. B. Deleanu Str. 2, 440014 Satu Mare, Romania ; E-mail : szantolaci@yahoo.com

⁶ Molecular Biology Centre, Institute for Interdisciplinary Experimental Research, Babeş-Bolyai University, Treboniu Laurian Str. 42, 400271 Cluj-Napoca, Romania; E-mail: szilard_bux@yahoo.com

In the period between 2000 and 2008, in the second part of August to the first part of September, regular mist netting was carried out in the Vârghis Gorge, in order to collect data about species composition and abundance of mating bats at different underground roosts. The study area, of c. 1,000 ha, is a Nature Reserve, and is one of the most important karstic areas of the Eastern Carpathians (more than 120 caves of variable length). During the study, bats were caught at five sites, these having lengths of between 90 and 1527 m. Altogether 18 different species were identified (a total of 1,678 individuals), representing 58 % of the Romanian bat fauna. The most frequent species were the greater mouse-eared bat *Myotis myotis* (36.5 % of all captured specimens), the noctule *Nyctalus noctula* (27.2 %), the barbastelle *Barbastella barbastellus* (13.8 %), the lesser mouse-eared bat *Myotis oxygnathus* (11.6 %) and Bechstein's bat *Myotis bechsteinii* (4.1 %). Our results show that some caves in the Gorge have an important role in the mating activity of bats and an important number of specimens, probably from a relatively large area, come here during this period. Some of the studied caves are unpopulated during summer and winter, but they become extremely well-visited during the mating period. Consequently, these caves could have an important role in bat conservation. Differences in species composition and abundance at different sites may suggest that certain bat species have their preferred mating places in a relatively restricted area with many suitable roosts. Our results also suggest that mist netting at swarming sites could be used for the monitoring of some forest-dwelling bat species, which appear in great numbers at underground swarming sites during the autumn mating period.