

Helmut Schaefer importance for the knowledge of the development of the Tatra Mts. fauna

Význam Helmuta Schaefera pre poznanie vývoja fauny Tatier

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On the way back from a trip to the Caucasus in 1982, we had a day off in Kiev. I visited the Museum of Natural History, where I met a head of the Department of Paleontology, Dr. L. I. REKOVEC. Our discussion continued until the late evening departure of the train. He was mainly interested in Slovak paleontological sites and when I told him about the German scientist Helmut SCHAEFER, who found fossil nests of the snowy owl and eagle owl with thousands of animal bones in the High Tatra Mts., Dr. REKOVEC regarded it as an interesting story. Now 35 years later, I consider SCHAEFER's idea to use the knowledge about owl ecology and ethology in the search of bone deposits from different periods of the Pleistocene and Holocene as his greatest contribution to science. As a member of the "UTTENDÖRFER pellet school" he did not scan only fresh pellets, but also bones which were accumulated by owls in the past.

H. SCHAEFER had experience with nesting of the snowy owl (*Bubo scandiacus*) from Vorkuta in the Northern Ural Mts., but also from the trips to northern Sweden. He probably used this experience when collecting fossil material in the Jaskyňa vo vrchu Nový 3 cave, dated to the period 30,000 years ago (SCHAEFER 1975). I witnessed his process of finding fossil owl nest in the Jaskyňa vo vrchu Nový 1 cave (I use the cave names based on BELLA et al. 2007, while Schaefer used to call the upper cave Nový 1 and lower cave Nový 2): around the perimeter of the hall he dug about 20 small probes at a distance of 1 m from the wall and ran into a 5 cm thick layer of clean bones at a depth of 30 cm. The nest had 60 cm in diameter. Later I found a nest of the snowy owl at a similar place, 1 m from the cave wall in the Šarkaniana diera cave in the Súľovské skaly Mts. (OBUCH 2000) and also in the Šarkaniana cave in the Muránska planina Mts. (OBUCH 2006). I reported the differences between the fossil deposits of the eagle owl and snowy owl at a conference in Nitra (OBUCH 1976). Fossil material originating from the snowy owl contains, besides the remains of small mammals and birds, also fragments of bones of large animals. Perhaps they were remnants of prey of a large predator on which the snowy owl used to feed.

After the first publication about the diet of the barn owl (*Tyto alba*) from the church in the Ľubica village (Schaefer 1933), Schaefer focused his work on localization of nesting places of the eagle owl (*Bubo bubo*) at the eastern foothills of the Belianske Tatry Mts. In 1935 he collected food remains from the nest on the Kotka Mt. (Kusý vrch), and in 1937 near the Bušovce village. SCHAEFER published his results before the WWII (SCHAEFER 1938) and reported on them at the conference on the 20th anniversary of the designation of the Tatra National Park (SCHAEFER 1967). New samples were taken from three eagle owl nests in the Monkova dolina valley close to the Ždiar village in the years 1969 and 1970 (SCHAEFER 1972). After another 30 years, in 1997, I collected material from the same site in the Monkovska dolina valley to evaluate changes in the relative distribution of the eagle owl prey in 30 annual periods from the late 1930s, 1960s and 1990s (OBUCH 2002).

In August 1974 I visited the Muráň cave at the time when H. SCHAEFER together with V. LOŽEK dug the probe next to the rock window to the right of the cave. The location was called Muran II (SCHAEFER



Helmut SCHAEFER

1975b). I am acquainted with the bone deposit Muran I on a stone shelf in front of the Muráň cave, which he regarded as an eagle owl nest from the 18th century (SCHAEFER 1974). About two years later I found a similar place with layers of bones in the Havranovo valley close to Blatnica in the Veľká Fatra Mts. originating from the tawny owl. The bones fell from the top into layers of the probe (OBUCH & DAROLA 1980). I also found a few recent and subfossil deposits at the entrances to the caves with a high proportion of bats in the tawny owl diet. Therefore, in 1977 I came to assess the situation on the locality of Muran I. There was a funnel-shaped rock located above the finding place. The bones fell down and deposited in layers over a long period of several thousands of years. The tawny owl, but also some other predators used to sit in the chimney above the entrance to the cave, but also on the right wall inside the cave. Thus, already in the first paper on bats in the diet of owls (OBUCH 1985), I assign the data from Schaefer's sites Muran I and Muran II to the tawny owl food of a subfossil (Holocene) age. Probably most of the bones on the locality of Muran I come from the same period as the bones in the layer No. 6 on the locality of Muran II, and the dating by radioisotope C^{14} to the period 1900 to 2000 years ago, which SCHAEFER rejected, is probably correct. At rock sites, SCHAEFER had experience only with remnants of the eagle owl food. That is why he did not consider the possible origin of the bones from the tawny owl. Differences in the relative abundance of diagnostic species in the recent eagle owl food in the Tatra Mts. (Ždiar, Zuberec) and more numerous samples from Muran I and Muran II are described in OBUCH (2002).

SCHAEFER came to the Tatra Mountains for the last time in October 1975. It was already cold and sometimes snowing. His late arrival was explained by the fact that during the summer he visited four other European countries and he kept the Tatra Mountains to say goodbye at the end of the season. I asked him why he had not tried a search for bones in other karst areas in Slovakia, and he answered that the Tatras were close to his young age and that descendants of the Carpathian Germans still lived there, so he could

talk to them. SCHAEFER gave valuable documentary material from collections made in the Monkova dolina valley to the Tatra National Park Museum. I asked him to deposit it in the Považské museum, where I worked at that time and where the bone material would have been very useful for me. He turned it down based on his believe that they were important documents of the Tatra Mountains and should be returned to the Tatras. In 2007, I borrowed these bones from Dr. B. CHOVANCOVÁ so I could reclassify the material. They were 11 species of mammals, 8 species of birds, one frog and one trout species. Mammals had been determined by H. SCHAEFER, birds by J. LEPIKSAAR in Sweden. I found some inaccuracies in species determination. The results of the "UTTENDÖRFER pellet school" were characterized by determination of voles at the genus level (*Microtus* sp.) and mice at the family level (Muridae sp). SCHAEFER (1932), as a 20 year old student, created a key for determination of frog bones. Therefore, samples of UTTENDÖRFER publications (UTTENDÖRFER 1939, 1952) in which frogs are determined at the species level, were probably collected and determined by H. SCHAEFER.

After the publications on bats (SCHAEFER 1973) and the occurrence of fossil and recent species of the family Soricidae (SCHAEFER 1975), he probably prepared a manuscript on the family Arvicolidae in the Tatra Mts., in which also the fossil species from the Jaskyňa vo vrchu Nový 3 cave were included.

SÚHRN

Autor sa stretol s Helmutom SCHAEFEROM pri jeho dvoch posledných výpravách do Belianskych Tatier v rokoch 1974 a 1975. Oboznámil sa s jeho osteologickými náleziskami pri vchode do Muránskej jaskyne, ktoré publikoval pod názvom Muran I a Muran II. Spoločne vyzbierali kosti z fosilneho hniezda belane tundrovej v Jaskyni pod vrchom Nový 1. Tento zber SCHAEFER nestihol spracovať a po jeho smrti sa v Nemecku stratil. Ako mladý študent začal SCHAEFER využívať pri výskume fauny Tatier recentné zvyšky potravy sov. Na sklonku svojho života využíval svoje znalosti z ekológie a etológie sov pri vyhľadávaní rozsiahlych fosilných a subfosilných osteologických nálezísk, čím inšpiroval autora pri jeho výskumníckom smerovaní.

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