

## Late Pleistocene birds of Karlukovo, Bulgaria

Jiří MLIKOVSKÝ

Karst fissures in northern slopes and outscops of the Balkan Mts. (Stara planina) in Bulgaria yielded interesting record of birds (BOEV, 1992). The number of excavated avian bones is usually small (but see BOCHENSKI, 1982; BOEV, 1994). Nevertheless, a variety of boreal birds used during the late Pleistocene to meet limits of their distribution in the Balkans (TYBERG, 1991; 1995), so that these records are of particular value in distributional analyses.

In the present paper, I will describe avian bones collected in the Karlukovo 4 cave. The cave and its vertebrate fauna were described by HORÁČEK (1982), who studies the site in 1976 and 1979. The cave is located north of Karlukovo village (ca. 43°12' N, 23° 02' E) in a cliff of the Iskar river, some 50 m above the river, and ca. 300 m a.s.l. According to HORÁČEK (1982), the site is probably identical with "Locus 4" of GARROD and HOWE (1939). The vertebrate taphocenosis of the cave originated during the last glacial (HORÁČEK, 1982).

I am obliged to Ivan Horáček (Praha) for handing the avian bones over to me. They were originally mentioned as "Aves g. spp." by HORÁČEK (1982: 100), and are currently deposited in my private collection in Praha.

Avian bones from Karlukovo 4 belong to two species: specifically unidentified thrush (*Turdus* sp.), and the Alpine Chough *Pyrrhonorax graculus* (Linnaeus, 1766). The remains are distributed as follows:

*Turdus* sp.: symphyisial fragment of mandibula, cranial fragment of scapula sin.; MNI (sensu GRAYSON, 1984) = 1.

*Pyrrhonorax graculus*: cranial part of scapula sin., phalanx prox. digiti majoris sin., 2 femora (sin., dex.), tarsometatarsus sin.; MNI = 1.

So far, the Alpine Chough was recorded in the late Pleistocene of Bulgaria only twice, in the Bacho Kiro cave (BOCHENSKI, 1982), and in the Temnata cave (BOEV, 1994). The record from Karlukovo 4 is thus the third. The Alpine Chough is still inhabiting the Balkan Mts. (ПАТЕВ, 1950). Birds are only accidental component of fossil bat assemblages formed in caves (HORÁČEK, LOŽEK, 1988), as is the case of Karlukovo 4 (HORÁČEK, 1982). Hence, they are of no cue for their taphonomical and ecological analyses. None of the identified bones showed any signs of injuries or pathological changes. After the addition of birds to other vertebrate groups identified earlier (HORÁČEK, 1982), the vertebrate fauna of Karlukovo 4 consists of 32 species (1 frog, 1 lizard, 2 birds and 28 mammals, include 13 bats).

## References

- BOCHENSKI Z. 1982. Aves. - In: Kozłowski J. K.(Ed.). Excavations in the Bacho Kiro cave (Bulgaria). Final report. Warszawa, PWN, 31-38.
- BOEV Z. 1992. Paleornithological studies in Bulgaria. - In: Campbell K. E.(Ed.). Papers in avian paleontology honoring Pierce Brodkorb. Los Angeles, Natur. Hist. Mus. Los Angeles County, Sci. Ser., 36: 459-463.
- BOEV Z. 1994. The Upper Pleistocene birds. - In: Kozłowski J. K., H. Laville, B. Ginter (Eds.). Temnata cave. Excavations in Karlukovo karst area, Bulgaria. Kraków, Jagellonian University Press, 55-58.
- CARROD D., B. HOWE. 1939. Report on cave in the neighbourhood of Karlukovo, northern Bulgaria. - Bull. American School of Prehistoric Research, 15: 81-84.
- GRAYSON D.K. 1984. Quantitative zooarcheology. Orlando, Academic Press. 202 p.
- HORÁČEK I. 1982. K poznání glacialních poměrů v krasu severního Bulharska. - Československý Kras, 32: 95-103.
- HORÁČEK I., V. LŮZEK. 1988. Palaeozoology and the Quaternary past: scope of the approach and selected results. Academia, Praha. 120 p.
- TYRBERG T. 1991. Arctic, montane and steppe birds as glacial relicts in the West Palearctic. - Ornithologische Verhandlungen, 25: 29-49.
- TYRBERG T. 1995. Palaeobiogeography of the genus *Lagopus* in the West Palearctic. - Acta palaeornithologica, Senckenberg, 181: 275-291.
- ПАТЕВ П. 1950. Птиците в България. - Фауна на България, No. 1., С., БАН, 364 с.

Received on 31.5.1996

Author's address:

Dr. Jiří Mlíkovský

Vršovická 11

CZ-101 00 Praha

Czech Republic

## Късноплейстоценски птици от Карлуково, България

Иржу МЛИКОВСКИ

(Резюме)

Съобщавам се находките на два вида птици от пещера No. 4 в Карлуковския карстов район, събрани от чешки геолози в периода 1976-1979 г.: *Pyrrhocorax graculus* и *Turdus* sp. Това е трето съобщение за жълтоклюната хайдушка гарга от късния плейстоцен в България.