

Kommentare / Comments

Tertiary barn owls of Europe

Mlíkovský (1998) has recently described a previously unknown species of extinct barn owl; at the same time he made a revision of the fossil Tytoninae and changed the systematic position of a large number of fossil taxa. I have described, in a revision of the Strigiformes from the Eocene and Oligocene of Phosphorites du Quercy, two new species of the genus *Necrobyas*, *N. medius* and *N. minimus* (Mourer-Chauviré, 1987). Mlíkovský placed these two species in the genus *Prosybris* from the Lower Miocene of France and Austria. After having carefully examined the type of *Prosybris antiqua* (Muséum national d'Histoire naturelle de Paris, Av. 2837), the only species of this genus, I think that the species *Necrobyas minimus* can indeed be attributed to the genus *Prosybris*, and synonymized with *Prosybris antiqua*, but that the species *Necrobyas medius* displays the morphological characteristics of the genus *Necrobyas* and differs from *Prosybris*.

The genus *Prosybris* differs from the genus *Necrobyas* at first sight by its more slender tarsometatarsus. This characteristic is difficult to evaluate on the holotype of *N. medius*, which is a distal part of tarsometatarsus, and it is true that, by the ratio between the distal width and the width of the shaft in the middle, *N. medius* (2.29) falls between the different species of *Necrobyas* (1.70–2.20), and *Prosybris antiqua* (2.36). However, in distal view, the shape of the trochleae is different in these two genera. In *Prosybris* the external trochlea is prolonged posteriorly by a wing which is tightly incurved in the direction of the median axis of the bone, whereas in *Necrobyas*, the wing of the trochlea is only slightly incurved medially. In the case of *Necrobyas medius*, the external trochlea is

imperfectly preserved and a very small part of the end of the wing is missing, but the general shape of this trochlea corresponds to the genus *Necrobyas* and differs from *Prosybris*. Therefore I maintain this species in the genus *Necrobyas*.

Mlíkovský (1998: 250) points out that I have designated the tarsometatarsus QU 15695 as the lectotype of the species *Necrobyas harpax* Milne-Edwards, and that this action was not justified. There was indeed an error in my designation because this tarsometatarsus is complete whereas, when Milne-Edwards wrote his description, he only had at his disposal one incomplete tarsometatarsus. He wrote about this specimen (1892: 62): "I cannot indicate the disposition of the internal calcaneal ridge because it is broken near its base (my translation)". Mlíkovský proposed that another specimen, QU 15742, should be deemed to be the holotype of *Necrobyas harpax*. Yet this specimen cannot be the holotype for the same reason, because it also presents a well preserved internal calcaneal ridge. On the other hand the specimen QU 15696 corresponds to the description and measurements given by Milne-Edwards, and I designate it here as the holotype.

The species *Strix ignota*, from the Lower Miocene of Sansan, which was transferred later to the genus *Tyto*, has been attributed by all subsequent authors to Milne-Edwards, 1871, p. 499. Mlíkovský writes (1998: 255): "However no such name appears on that page, nor elsewhere in Milne-Edwards' treatise, which caused much confusion". It is true that this name does not appear on page 499, but it does appear on page 580 of the same work. So the species *Tyto ignota* (Milne-Edwards), described as *Strix* sp. by Milne-Edwards on pages 499–500, figured on plate 192, fig. 1–1a and 2–2a, and named *Strix ignota* on page 580, is perfectly valid, in opposition to the opinion of

Mlíkovský (1998: 255) who writes that it, “never did exist”.

References

- Milne-Edwards, A. (1867–71): Recherches anatomiques et paléontologiques pour servir à l’histoire des oiseaux fossiles de la France. 2 vol., 474 and 627p., and atlas, 200 pl. Paris.
- Milne-Edwards, A. (1892): Sur les oiseaux fossiles des dépôts éocènes de phosphate de chaux du Sud de la France. C. R. 2e Congr. ornith. intern., Budapest, vol. 2: 60–80.
- Mlíkovský, J. (1998): A new barn owl (Aves: Strigidae) from the early Miocene of Germany, with comments on the fossil history of the Tytoninae. *Journal für Ornithologie*, 139: 247–261.
- Mourer-Chauviré, C. (1987): Les Strigiformes (Aves) des Phosphorites du Quercy (France): systématique, biostratigraphie et paléobiogéographie. In: Mourer-Chauviré, C. (ed.): L’évolution des oiseaux d’après le témoignage des fossiles. *Docum. Lab. Géol. Lyon*, 99: 89–135.

Cécile Mourer-Chauviré

Centre de Paléontologie stratigraphique et Paléoécologie, Université Claude Bernard – Lyon 1, 27–43 boulevard du 11 Novembre, 69622 Villeurbanne Cedex, France. E-mail: mourer@cismsun.univ-lyon1.fr

Reply from Jiří Mlíkovský

In her comment on my review of tytonine owls (Mlíkovský 1998), Mourer-Chauviré accepted most of my conclusions, but contested three points.

Necrobyas medius: I transferred *Necrobyas medius* Mourer-Chauviré, 1987 from the genus *Necrobyas* to *Prosybris* because its holotypical tarsometatarsus differs from *Necrobyas* and conforms with the same element of *Prosybris* in having “its shaft more slender, and its external trochlea more flaring and more distant from distal end of the medial trochlea” (Mlíkovský 1998: 252). Mourer-Chauviré proposed to return *medius* to the genus *Necrobyas*, stating (1) that slenderness of the tarsometatarsus of *medius* is intermediate between the same element

of *Necrobyas* spp. and proper *Prosybris*, represented by *P. antiqua* (incl. *Necrobyas minimus*), and (2) that *medius* conforms with *Necrobyas* and differs from *Prosybris* in the shape of the posteromedial wing of the external trochlea of the tarsometatarsus. Closer examination reveals that neither of the latter two statements is correct. Mourer-Chauviré observed that the ratio between the distal width of tarsometatarsus and the width of its shaft in the middle is 1.70–2.20 in *Necrobyas*, 2.36 in *Prosybris antiqua*, and 2.29 in *medius*. These data are misleading, however, because they neglect allometrical changes in the slenderness of the bone. A closer look shows that the robustness of the tarsometatarsus of *Necrobyas* owls tends to be the smaller the bone (measured by the distal width). *Prosybris* was much smaller than *Necrobyas* and, accordingly, *medius* ought to have much more robust tarsometatarsi if belonging to the latter genus. The holotypical (and only available) tarsometatarsus of *medius* differs markedly from the same element of *Necrobyas*, and corresponds with both tarsometatarsi previously attributed to *Prosybris* (*contra* Mourer-Chauviré).

The second argument by Mourer-Chauviré’s addresses the shape of the posteromedial wing of the tarsometatarsus. The end of this wing is missing from the holotypical tarsometatarsus of *medius*, so that Mourer-Chauviré’s argument is purely hypothetical. Her belief that only, “a very small part of the end of the wing is missing” cannot be supported (see pl. 3, fig. 17 in Mourer-Chauviré 1987). Summarizing this discussion, it can be concluded that the tarsometatarsus of *Prosybris* differs from the same element of *Necrobyas* in having: (1) a more slender shaft, (2) a lateral wing of external trochlea projecting more laterally, (3) external trochlea shorter than the medial trochlea, and (4) the internal wing of external trochlea projecting more posteromedially. (The former three characters are from Mlíkovský 1998, while the last was contributed by Mourer-Chauviré 1999). The holotypical tarsometatarsus of *medius* corresponds with the same ele-

ment of *Prosybris* and differs from that of *Necrobyas* in the first three of these characters, while the last character remains unknown for the species. Consequently, I confirm here the transferral of *medius* from *Necrobyas* to *Prosybris*, as proposed by myself in the discussed paper (Mlíkovský 1998).

Necrobyas harpax: I tried to identify the holotype of this species by its dimensions alone (as published by Mourer-Chauviré 1987). Mourer-Chauviré (1999) presented evidence that the specimen deemed by myself to be the holotype differs from it in an important morphological detail (presence of the internal calcaneal ridge), and that another tarsometatarsus (QU 15 696) fits both the description and dimensions given by Milne-Edwards (1892) and should be considered the holotype of *Necrobyas harpax*. Although the latter specimen diverges in size and shape slightly more from the data given by Milne-Edwards (1892) that selected by myself, I find her arguments convincing. Hence, both Mourer-Chauviré's (1987) selection of the tarsometatarsus QU 15 695 as the „lectotype“ of the species, and my (Mlíkovský 1998) identification of the tarsometatarsus QU 15 742 as the holotype of *harpax* should be set aside as invalid.

Strix ignota: I congratulate Cecile Mourer-Chauviré for digging out the original source of the name *Strix ignota*, which had remained hidden for more than 125 years. She suggested that the name, as published by Milne-Edwards (1871: 580) is valid, and refers to the description of *Strix* sp. as previously (the book appeared in sheets) given by Milne-Edwards (1871: 499–500, pl. 192, fig. 1, 1a, 2, 2a). Before the name can be accepted as valid, it must be clearly demonstrated that it is referable to the description mentioned above. Such a reference was not shown by Mourer-Chauviré (1999). I have currently no access to the appropriate part of Milne-Edwards' (1869–1871) treatise, but I remember that it contains faunal lists for geological epochs and/or localities. However, considering that other names given by Milne-Edwards (1869–1871) to the Tertiary

birds in this part of his book are nomina nuda (see Brodkorb 1978: 222), I suspect that this will be also the fate of *Strix ignota*, mentioned by Milne-Edwards (1891: 580).

References

- Brodkorb, P. (1978): Catalogue of fossil birds: Part 5 (Passeriformes). Bull. Florida State Mus. (Biol. Sci.) 23: 139–228.
- Milne-Edwards, A. (1869–1871): Milne-Edwards, A. (1867–71): Recherches anatomiques et paléontologiques pour servir à l'histoire des oiseaux fossiles de la France. vol 2, Paris.
- Milne-Edwards, A. (1892): Sur les oiseaux fossiles des dépôts éocènes de phosphate de chaux du Sud de la France. C. R. 2e Congr. ornith. intern., Budapest, vol. 2: 60–80.
- Mlíkovský, J. (1998): A new barn owl (Aves: Strigidae) from the early Miocene of Germany, with comments on the fossil history of the Tytoninae. J. Ornithol. 139: 247–261.
- Mourer-Chauviré, C. (1987): Les Strigiformes (Aves) des Phosphorites du Quercy (France): systématique, biostratigraphie et paléobiogéographie. In: Mourer-Chauviré, C. (ed.): L'évolution des oiseaux d'après le témoignage des fossiles. Docum. Lab. Géol. Lyon 99: 89–135.
- Mourer-Chauviré, C. (1999): [Comments on the paper by Mlíkovský (1998)]. J. Ornithol. 140: ##-##.

Jiří Mlíkovský

Institute of Geology and Paleontology, Charles University, Albertov 6, CZ-128 43 Praha 10, Czech Republic; E-mail: mlik@post.cz