



EARLY MIOCENE BIRDS OF SKYŘICE, CZECH REPUBLIC

Jiří Mlíkovský

Institute of Geology and Paleontology, Charles University, Albertov 6, 128 43 Praha 2, Czech Republic

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A b s t r a c t: The early Miocene locality Skyřice yielded remains of 3 species from 3 different families of birds, incl. Podicipedidae, Anatidae and Phasianidae. The record of *Podiceps* is the oldest for the family Podicipedidae in the Old World so far.

■ Aves, Miocene, Czech Republic.

INTRODUCTION

Early Miocene lacustrine deposits at Skyřice near Most in NW Bohemia were discovered during coal mining activities in 1902 (Schlosser et Hibsich 1902, Hibsich 1910). In addition to ostracodes and freshwater molluscs (Schlosser et Hibsich 1902), the locality yielded a limited amount of vertebrate remains, including those of fishes (Laube 1903), amphibians (Laube 1903), reptiles (Schlosser et Hibsich 1902, Laube 1910), and large mammals (Schlosser et Hibsich 1902, Schlosser 1910).

The birds from Skyřice were originally mentioned by Laube (1910). They are limited to four bone fragments, all of which were identified as those of *Anas blanchardi* MILNE-EDWARDS by Laube (1910). A restudy of three surviving bones showed that three different families of birds are represented here (see below).

The age of the locality has never been identified in terms of MN-zones (sensu Mein 1990), because no micromammals were found. However, all relevant fossiliferous deposits in the vicinity of Most are MN-3 in age (Fejfar et Kvaček 1993), so that the same age can be assumed for the Skyřice locality as well.

The remains of birds from Skyřice are currently deposited in the author's collection in Praha (MP). The stratigraphy of the Neogene follows Mein (1990).

SYSTEMATIC LIST

Order Podicipediformes FÜRBRINGER, 1888

Family Podicipedidae BONAPARTE, 1831

Genus *Podiceps* LATHAM, 1787

Podiceps walteri (ŠVEC, 1982)

Miobaptus walteri ŠVEC, 1982: 246, fig. 1, pl. 2: fig. 2.

Podiceps walteri (ŠVEC): Mlíkovský this paper (new combination)

Material: distal part of left tibiotarsus; MP, uncatalogued. Figured by Laube 1910, pl. 58, fig. 4a-d.

Measurements: distal width = 5.3 mm, distal depth = 5.0 mm

Comments: This species was originally described from the early Miocene (MN 4) of Dolnice (Švec 1982, 1984) in the genus *Miobaptus* ŠVEC, 1982. Subsequent research showed that it is inseparable from the modern genus *Podiceps* LATHAM, 1787 (Olson 1995, Mlíkovský unpub. results).

The record of *Podiceps walteri* from Skyřice is the oldest for the family in the Old World. The only older record is *Podiceps oligocaenus* SHUFELDT, 1915 from the Oligocene (?) of Willow Creek in

Oregon (Shufeldt 1915, Wetmore 1937, Olson 1985). The latter locality was later believed to be early Miocene in age (Brodkorb 1963), but Becker (1987) did not include it in his list of the Neogene localities of North America, apparently assigning it again to the Oligocene. In Europe, the next oldest records are the undetermined Podicipedidae from the middle Miocene (MN 7) of Steinheim in Germany (Heizmann et Hesse 1995), *Podiceps sociata* (NAVÁS, 1922) from the late Miocene (MN 9-10) of Libros in Spain (Olson 1995), and similarly aged *Podiceps miocaenicus* KESSLER, 1984 from Chişinău in Moldova (Kessler 1984), and *Podiceps* sp. from Sokolov in Ukraine (Vojinstvens'kyj 1967).

Order Anseriformes LINNAEUS, 1758
Family Anatidae LEACH, 1820
Genus *Mionetta* LIVEZEY et MARTIN, 1988

Mionetta natator (MILNE-EDWARDS, 1867)

Anas natator MILNE-EDWARDS, 1867: 148, pl. 25: figs. 14-18, 21-22.

Querquedula natator (MILNE-EDWARDS): Brodkorb 1964: 223 (new combination)

Dendrochen natator (MILNE-EDWARDS): Cheneval 1983: 93 (new combination)

Mionetta natator (MILNE-EDWARDS): Livezey et Martin 1988: 208 (new combination)

Material: carpometacarpus dex.; MP, uncatalogued. Figured by Laube 1910, pl. 58, fig. 3.

Measurements: greatest length = 36.6 mm.

Comments: This species is known also from the early Miocene (MN 2) of Saint-Gérard-le-Puy in France (Milne-Edwards 1867, Cheneval 1983, 1984a), and the early Miocene (MN 4) of Dolnice in the Czech Republic (Mlíkovský, unpub. results).

Order Galliformes LINNAEUS, 1758
Family Phasianidae HORSFIELD, 1821
Genus *Palaeortyx* MILNE-EDWARDS, 1869
Palaeortyx longipes MILNE-EDWARDS, 1869

Palaeortyx longipes MILNE-EDWARDS, 1869: 245.

Material: shaft of right humerus; MP, uncatalogued. Figured by Laube 1910, pl. 58, fig. 1a-b.

Measurements: width and depth of the midshaft = 6.3 × 5.4 mm.

Remarks: Previous early Miocene record of this species was limited to Saint-Gérard-le-Puy (MN 2a) in France (see Mlíkovský 2000), Wintershof-West (MN 3) in Germany (Ballmann 1969), and Dolnice (MN 4) in the Czech Republic (Mlíkovský, unpub. results).

DISCUSSION

Skyřice is one of the west Bohemian localities (Mlíkovský 1992, 1996a, 1998), which yielded a typical Orleanian avifauna (Mlíkovský 1996b).

The record of *Miobaptus walteri* is important from the biochronological point of view, because it represents the oldest record of the family Podicipedidae in the Old World. So far, the oldest record came from MN-zone 4b (Švec 1982, 1984, Mlíkovský 1996b).

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RANĚ MIOCÉNNÍ PTÁCI ZE SKYŘIC, ČESKÁ REPUBLIKA

Na raně miocénní lokalitě Skyřice u Mostu byly nalezeny kosterní zbytky tři druhů ptáků ze tří čeledí: Podicipedidae, Anatidae a Phasianidae. Nález potápky druhu *Podiceps walteri* je nejstarším dokladem čeledi Podicipedidae ve Starém Světě.