

# Early Miocene pratincoles (Aves: Glareolidae) from Dolnice, Czech Republic

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**Abstract.** Two species of pratincoles were recorded from the early Miocene of Dolnice in western Czech Republic, incl. *Mioglareola dolnicensis* (Švec, 1980) and *M. gregaria* Ballmann, 1979. They represent the oldest record of the Glareolidae in the Old World. The remaining Tertiary record of the family Glareolidae is limited to the early Miocene of Nebraska and the middle Miocene of Germany. *Larus dolnicensis* Švec, 1980 was transferred from the Laridae to the Glareolidae.

**Taxonomy, paleontology, Aves, Glareolidae, *Larus dolnicensis*, Miocene**

## INTRODUCTION

The pratincoles and coursers (family Glareolidae) are a peculiar group of charadriiform birds, that inhabit subtropical and tropical wetlands of the Old World (Johnsgard 1981, Hayman et al. 1986). The fossil record of this family is extremely scarce, being limited to the early Miocene of Nebraska (Olson & Steadman 1979) and the middle Miocene of Germany (Ballmann 1979) so far.

In the present paper, bone remains of pratincoles from the early Miocene deposits of Dolnice in western Bohemia are described. The Dolnice locality consists of lake sediments, belonging to the MN-zone 4b (sensu Mein 1990). It lays in the Cheb County, western Bohemia, Czech Republic. For details on the locality see Fejfar & Roček (1988), Fejfar (1990), Mlíkovský (1992, 1996a), and Fejfar & Kvaček (1993). The material is deposited in the collections of Oldřich Fejfar in Praha, and in the Department of Paleontology of the Charles University in Praha (DP FNŠP). The classification of the Charadriiformes follows Strauch (1976).

The skeletons of modern birds were examined in the United States National Museum in Washington, D. C., in the Paleontological Institute of the Russian Academy of Sciences in Moskva, and in the author's collection in Praha.

Order Charadriiformes Huxley, 1867

Family Glareolidae Brehm, 1831

Genus *Mioglareola* Ballmann, 1979

***Mioglareola gregaria* Ballmann, 1979**

*Mioglareola gregaria* Ballmann, 1979: 68, text-fig. 3, pl. 1, fig. 3–5.

**MATERIAL.** Cranial fragment of left coracoid, distal part of left carpometacarpus; in coll. O. Fejfar (Praha), uncatalogued.

**MEASUREMENTS.** Coracoid: distance between the foramen nervi supracoracoidei and proximal end of processus acroracoideus = 7.4 mm; carpometacarpus: distal width = 3.7 mm.

REMARKS. These two elements agree both in morphology and in size with *Mioglareola gregaria* from the middle Miocene (MN 6) of Steinberg in Germany (see Ballmann 1979 for relevant data). This is the earliest record for the species.

***Mioglareola dolnicensis* (Švec, 1980) comb. n.**

*Larus dolnicensis* Švec 1980: 380, pl. 1, fig. 2 (partim), 3.

MATERIAL. Distal part of left humerus (holotype); DP FNSP 7344.

MEASUREMENTS. Distal width = 8.5 mm. See Švec (1980: 380) for further measurements.

REMARKS. Švec (1980) described this species as a gull, although he compared it, inexplicably, only with *Scolopax* Linnaeus, 1758 and *Gallinago* Brisson, 1760 in the diagnosis. Olson (1985: 182) pointed out that the holotype humerus fragment appears to lack the deep fossa musculi brachialis characteristic of *Larus*. My reexamination of the holotype confirmed Olson's suspicion. In fact, the specimen does not resemble larid humeri at all and is clearly referable to the Glareolidae. In particular, it differs from the humeri of the Laridae and agrees with those of the Glareolidae in having: (1) distal end relatively broad, (2) fossa musculi brachialis less deep, and (3) processus supracoracoideus dorsalis less inclined palmarly.

Within this family, it the holotypical humerus of *Larus dolnicensis* agrees with the same elements of *Mioglareola* and differs from that of other glareolids in having: (1) processus supracondylaris dorsalis relatively large, (2) fossa musculi brachialis shallow, and (3) scar for attachment of ligamentum collaterale ventrale on the tuberculum supracondylare ventrale extended proximally. *Mioglareola dolnicensis* was larger than *M. gregaria*, described from the middle Miocene (MN 6) of Nördlinger Ries in Germany (Ballmann 1979) and known from Dolnice as well (see above). Distal width of its humeri is ca. 6.0–6.5 mm (Ballmann 1979), which corresponds with the value for the largest modern pratincole, *Glareola pratincola* (Linnaeus, 1766), while the same value is 8.5 mm in *Mioglareola dolnicensis*. In fact, *M. dolnicensis* was the largest pratincole ever known. Although I was not able to detect any morphological differences between the humeri of *M. gregaria* and *Mioglareola dolnicensis*, the size difference is sufficient to maintain the separate specific status for the Dolnice pratincole.

FOSSIL RECORD OF THE GLAREOLIDAE

Three species, tentatively included in the Glareolidae, were described from the early Eocene deposits of England, incl. *Precursor parvus* Harrison & Walker, 1977, *P. magnus* Harrison & Walker, 1977, and *P. litorinum* Harrison & Walker, 1977. Until restudied, these species cannot be accepted as an evidence for the existence of the family in the British Eocene (see Steadman 1981, cf. also Mlíkovský 1996b,c).

The family Glareolidae is currently limited to the Old World (Johnsgard 1981, Hayman et al. 1986). In spite of that, the oldest reliable record of the family comes from North America, where *Paractiornis perpusillus* Wetmore, 1930 is known from the early Miocene (MN 3) of Carnegie Hill in Nebraska (Olson & Steadman 1979).

In the Old World, the record is limited to the early and middle Miocene. An extinct genus, *Mioglareola*, was recorded from the early Miocene (MN 4b) of Dolnice in the Czech Republic (this paper), and from the middle Miocene (MN 6) of Steinberg in Germany (Ballmann 1979). Two species were recorded in Dolnice, incl. *Mioglareola gregaria*, and *M. dolnicensis* (Švec, 1980), while only

the former species was found in Steinberg. The record is furnished with *Glareola neogena* Ballmann, 1979 from Steinberg and Goldberg (MN 6) in Germany. The latter species is the oldest record of the modern genus *Glareola*.

In addition, a damaged fragment of a coracoid from the late Miocene (MN 13) of Polgárdi in Hungary was tentatively referred to as ‘?*Cursorius* sp.’ by Jánossy (1991). The specimen was neither figured, nor described, and the author himself commented that ‘the fragment enables no further conclusions’ (Jánossy 1991: 25). Accordingly, I am not willing to accept this as an evidence for the existence of the Glareolidae, or even of the genus *Cursorius* Latham, 1790 in the late Miocene of Hungary.

Summarizing this scanty evidence, it is clear that the Glareolidae inhabited both New and Old World in the early Miocene, although the date of their disappearance from the New World remains unknown, the only record being dated to MN 3. The reliable Old World record is limited to the zones MN 4–6 of Central Europe (see also Mlíkovský 1996c).

#### A c k n o w l e d g e m e n t s

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