



## A NEW PAINTED SNIPE (AVES: ROSTRATULIDAE) FROM THE EARLY MIOCENE OF THE CZECH REPUBLIC

Jiří Mlíkovský

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

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**Abstract.** A new species of painted snipe, *Rostratula pulia*, is described from the early Miocene of the Czech Republic. It is the oldest representative of the family.

■ birds, Rostratulidae, Miocene, Czech Republic

The painted snipes (family Rostratulidae) are a peculiar group of charadriiform birds that inhabit tropical wetlands all over the world (Johnsgard 1981, Hayman et al. 1986). The fossil record of this family is extremely scarce, being limited to *Rostratula minor* Olson et Eller, 1989 from the early Pliocene of South Africa so far.

In the present paper I will describe a new species of painted snipe from the early Miocene deposits of Dolnice in western Bohemia. The stratigraphical system follows Mein (1990). Mein's Mammal Neogene zones are abbreviated as MN. The classification of the Charadriiformes follows Strauch (1976).

All skeletons of modern birds were examined in the United States National Museum (USNM) in Washington, D.C. The following skeletons of Recent painted snipes were available for comparison:

*Rostratula benghalensis*: 3 M and 6 F from Philippines (USNM 291554, 559818, 613012, and USNM 291555, 613013, 613014, 613016, 613017, 613018, respectively), 2 M from Thailand (USNM 343038, 343516), and 1 M and 2 F from Zimbabwe (USNM 431639, and USNM 430784, 431639, respectively);

*Rostratula semicollaris*: 1 M from Argentina (USNM 227770), and 1 F and an unsexed specimen from Brazil (USNM 612032, and USNM 612031, respectively).

Order Charadriiformes Huxley, 1867

Family Rostratulidae Ridgway, 1919

Genus *Rostratula* Vieillot, 1816

*Rostratula pulia* n. sp.

**Holotype:** Distal part of right tarsometatarsus. Deposited in the Institute of Geology and Paleontology, Charles University, Praha, DP FNŠP 4819. Figured by Švec (1983, pl. 2, fig. a-c). Collected by Oldřich Fejfar.

**Material:** Holotype only.

**Age and locality:** Early Miocene (MN 4b) of Dolnice, Cheb County, West Bohemia, Czech Republic (Fejfar et Roček 1988, Fejfar 1990, Mlíkovský 1992, 1996a, Fejfar et Kvaček 1993).

**Diagnosis:** A typical *Rostratula*, smaller than all previously known species of the genus. See the next section for details.

**Comparison:** Švec (1983) described the holotypical tarsometatarsus of *Rostratula pulia* as a paratype

of his new rail species *Microrallus fejfari*. However, the bone differs from the same element of the Rallidae and agrees with that of the Rostratulidae in having: (1) distal foramen much larger, (2) outer extensor groove deep and long, (3) trochlea for digit II positioned more proximally, and (4) distance between distal foramen and the external intertrochlear notch larger.

The family Rostratulidae consists of a single genus, *Rostratula* (see Strauch 1976, Olson et Eller 1989), although Wetmore et Peters (1923) proposed to separate the South American species (*R. semicollaris*) at the generic level as *Nycticryptes*, and this arrangement is still accepted in some publications (e.g. Hayman et al. 1986). The fossil tarsometatarsus agrees in general morphology with the same element of the modern genus *Rostratula*, and I have not found anything that would justify its separation at the generic level. To the contrary, the fossil tarsometatarsus combines characters of *Rostratula benghalensis* (Linnaeus, 1758) and *Rostratula semicollaris* (Vieillot, 1816) in details. The fossil tarsometatarsus differs from the same element of *R. benghalensis*, and agrees with that of *R. semicollaris* in having: (1) the outer trochlea for digit II deeply notched (the notch is shallow in *R. benghalensis*), and (2) a small protuberance at the foot of the trochlea for digit II (the protuberance is absent in *R. benghalensis*). On the other hand, the holotypical tarsometatarsus of *R. pulia* differs from *R. semicollaris*, and agrees with *R. benghalensis* in having: (1) distal foramen larger, (2) plantar surface of the distal end more open (broad), and (3) metatarsal facet circular and distinctly bordered (this facet is elongated and indistinct in *R. semicollaris*).

Measurements: See Table 1.

**Tab. 1. Measurements [in mm] of the tarsometatarsus of *Rostratula* species. The estimated value is marked with an asterisk (\*).**

Species	Length			Proximal width			Distal width		
	mean	range	n	mean	range	n	mean	range	n
<i>R. pulia</i> <sup>1</sup>	—	—	—	—	—	—	3.6	—	1
<i>R. semicollaris</i> <sup>1</sup>	38.4	38.0 – 38.8	3	4.8	4.7 – 4.8	3	3.8	3.7 – 4.0	3
<i>R. minor</i> <sup>2</sup>	40*	—	1	—	—	—	5.0	4.9 – 5.1	2
<i>R. benghalensis</i> <sup>1</sup>	45.5	42.0 – 48.7	11	6.2	5.7 – 6.7	12	5.2	4.7 – 5.7	14

<sup>1</sup>Mlíkovský this paper, <sup>2</sup>Olson et Eller (1989).

**Etymology:** Latinized from Greek poulia, evening-star. Selected in allusion to the crepuscular habits of the painted snipes, and their remarkable courtship and threat displays (Muller 1975, Hayman et al. 1986), that make these birds avian stars of the evening tropical wetlands. The specific name is a noun in apposition, being feminine in gender.

**Remarks:** The holotypical humerus of *Microrallus fejfari* Švec, 1983 (DP FNSP 4818) indeed belongs to a rail (Mlíkovský, unpub. results). The taxonomic identity of this species will be discussed elsewhere.

## DISCUSSION

The fossil record of the Rostratulidae is very limited. First species, supposed to represent a fossil painted snipe, was *Rhynchaetes messelensis*, described by Wittich (1899) from the middle Eocene of Messel in Germany. However, Peters (1983) showed that this species is an ibis (family Threskiornithidae). Thus, the only fossil species of painted snipe known so far was *Rostratula minor* described by Olson et Eller (1989) from the early Pliocene of Langebaanweg in South Africa. *Rostratula pulia* from the early Miocene of Dolnice in the Czech Republic is thus the oldest record of the family, extending its known time range by ca. 12 My. At the same time, it is the only record of the family in the Tertiary of Europe (see Mlíkovský 1996b).

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