

Relationships of the Eocene bird “*Numenius*” *gypсорum* Gervais

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Résumé. — La structure du cerveau de *Montirallus* (nov. gen.) *gypсорum*, attribué par GERVAIS à *Numenius*, indique des affinités avec les Rallidae.

Abstract. — Brain structure of *Montirallus* (nov. gen.) *gypсорum* (Gervais) indicates clear relationships with Rallidae.

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In 1844, GERVAIS described an Eocene avian fossil as *Numenius gypсорum*, but the systematic position of this bird remained uncertain. The original decision of GERVAIS (1844, 1848-1852) was followed by the most of recent workers on avian paleontology (cf. BRUNET, 1970). Only BRODKORB (1967) transferred “*Numenius*” *gypсорum* to another scolopacid genus, *Limosa*, with the remark “Generic position very doubtful”. For most authors, “*Numenius*” *gypсорum* is a scolopacid bird of uncertain generic position.

SYNONYMS

Numenius gypсорum Gervais, 1844 : 293.

Tantalus fossilis Giebel, 1847 : 28.

Tantalatos fossilis ; REICHENBACH, 1852, tab. 14 (nomen nudum).

Limosa gypсорum ; BRODKORB, 1967 : 185.

MATERIAL : Holotype : femur and impressions of two skeletons, n^o 7992 in Muséum national d'Histoire naturelle, Paris. Hypodigm : sternum, n^o 7920 in the same Museum. (Both after BRUNET, 1970 : 25.)

HORIZON AND LOCALITY : Upper Eocene deposits, gypse de Montmartre ; Montmartre, Paris, France.

BRAIN STRUCTURE

DECHASEAUX (1970) described and well figured the surface of the brain of “*Numenius*” *gypсорum* after a skull impression of this species. According to this picture the brain of “*Numenius*” *gypсорum* belongs to the A-type of the telencephalon sensu STINGELIN (1958) (i.e. brain with the dorsal front formation tendency, “dorsale Frontbildungstendenz”), and to its subtype (1) with shranked base (“gestauchte Basis”).

My own investigations (MLÍKOVSKÝ, 1977) have shown that the Scolopacidae and allied charadriiform families have brains of the B-type sensu STINGELIN (1958). Because A-

and B-type are not morphological types in the typological sense but tendencies of the telencephalon evolution, it means that “*Numenius*” *gypсорum* cannot be a charadriiform bird.

GIEBEL (1847) and some other zoologists considered “*Numenius*” *gypсорum* as a threskiornithid. Because the Threskiornithidae have, like the Scolopacidae, brains of the B-type (MLÍKOVSKÝ, 1977), it must be assumed that “*Numenius*” *gypсорum* is not a member of the family Threskiornithidae.

FAMILIAR RELATIONSHIPS

The tendency of brain evolution and general structure of the skull indicate that “*Numenius*” *gypсорum* is to be most probably placed in the Rallidae. In the following features, “*Numenius*” *gypсорum* differs from the Scolopacidae and agrees with the Rallidae : 1) type of brain evolution ; 2) position of optic lobes relatively to the telencephalon ; 3) eyes (judging from the orbits) relatively small. A reexamination of the type would certainly bring a few more features supporting this view.

GENERIC RELATIONSHIPS

It is very difficult to determine the generic relationships of “*Numenius*” *gypсорum* within the Rallidae in spite of the excellent review of this family published recently by CRACRAFT (1973), because rallid genera are mostly based on bones which are not known in “*Numenius*” *gypсорum*. It seems, therefore, that “*Numenius*” *gypсорum* cannot be (at least at the present time) referred to any currently known rallid genus (judging from the diagnoses given by CRACRAFT, 1973), which leads to create a new genus for “*Numenius*” *gypсорum* : *Montirallus* gen. nov.

MONTIRALLUS gen. nov.

TYPE SPECIES : *Numenius gypсорum* Gervais, 1844.

INCLUDED SPECIES : type species only.

DISTRIBUTION : Upper Eocene of Montmartre, France.

DIAGNOSIS : same as for the only included species ; see GERVAIS, 1844, LAMBRECHT, 1933, BRUNET, 1970.

REMARKS : In the name *Montirallus*, Monti- indicates that the genus originates from Montmartre, France.

ECOLOGY

The relatively small eyes indicate that *Montirallus gypсорum* relied mostly on tactile stimuli for hunting and that it lived in some biotop with very little range of vision, such as reed-beds or thickets.

As indicated by the long and slender, but apparently solid bill, which was about 10 cm long (cf. GERVAIS, 1848), it fed probably upon big insects, worms and other invertebrates, and occasionally upon small vertebrate too. The food was probably collected on the ground.

In all these characteristics *Montirallus gypсорum* agrees with the typical rallids such as *Rallus*, to which it was probably very similar in general (morphological and ecological) habits.

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