FIRST BAT (MAMMALIA: CHIROPTERA) REPORTED FROM THE OLIGOCENE OF NORTH DAKOTA

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Category
Taxon: Mammals
Taxon Subcategory: Eutheria – Chiroptera
Geological Era: Cenozoic - Paleogene
Topic: Diversity

The reported vertebrate fauna of the Brule Formation within North Dakota is largely based on preliminary faunal lists presented without detailed discussion. An effort is underway to refine our knowledge of that fauna, including a thorough review of the microvertebrates collected in the Little Badlands area (Stark County, North Dakota) and held within the North Dakota State Fossil Collection (NDGS). We report a right maxilla fragment with P4-M3 (NDGS 1691) collected from the Fitterer Ranch locality. The labial edges of M1 and M2 are damaged, but the size (tooth row length 5.11 mm) and overall morphology (M1-2 lack a hypocone; M3 with reduced parastyle,and mesostyle, no metacone, metastyle, or metacristae; P4 non-molariform, unicuspate and triangular) of this new specimen compares favorably with *Chadronycteris rabenae*, which was previously known only from a left maxilla fragment with P4-M3 collected from the Raben Ranch local fauna of northwestern Nebraska (Chadron Formation). Taxa found in association with NDGS 1691 include *Eumys elegans*, *Leptomeryx* cf. *evansi*, *Paradjidaumo trilophus,* and *Palaeolagus haydeni*, indicating that these specimens are referable to the middle to late Orellan "age" (Or2-Or4). *Oligomyotis casementi* is the only bat taxon definitely reported from the Oligocene of North America; however, the type and only known specimen consists of the distal portion of a humerus that cannot be compared to any known material of *Chadronycteris*. This new occurrence not only extends the geographic and biostratigraphic range of *Chadronycteris*, but fills an important gap in our current understanding of early chiropteran evolution.