



Desmodus draculae

Desmodus draculae is an extinct species of vampire bat that inhabited Central and South America during the Pleistocene, and possibly the early Holocene. It was 30% larger than its living relative the common vampire bat (*Desmodus rotundus*). Fossils and unmineralized subfossils have been found in Argentina, Mexico,^{[1][2]} Ecuador, Brazil, Venezuela, Belize, and Bolivia.^{[3][4]}

Most records of *D. draculae* are from the late Pleistocene, but some are from the Holocene. A *Desmodus* canine tooth discovered in Buenos Aires Province, Argentina came from sediments dated at 300 years BP (ca. 1650 A.D.); this fossil was tentatively assigned to *D. draculae*.^[5]

Taxonomy and etymology

The first *Desmodus draculae* fossil was located in Cueva del Guácharo in Venezuela in 1965 by Omar J. Linares, which he noted in 1968 as a possible Pleistocene species of *Desmodus*.^[a] A formal and accepted description of the species was published in 1988, designating the collection by Linares, a skull and post-cranial material, as the type specimen.^[6]

The authors assigned the specific epithet *draculae*, noting "the largest known chiropteran vampire commemorates Count Dracula, the greatest human vampire of folklore", and placed the novel species with the genus *Desmodus*.^[6] *Desmodus draculae* has been occasionally called the **giant vampire bat** in reference to its greater relative size.^[5]

Description

It is the largest-known vampire bat to have ever lived. The length of its skull is 31.2 mm (1.23 in), and its humerus length was approximately 51 mm (2.0 in), as compared to the extant common vampire bat at 32.4–42.4 mm (1.28–1.67 in). Its skull was long and narrow, and its face had an upturned snout.^[6]

Based on its skull dimensions, it may have had a wingspan of approximately 50 cm (20 in) and a body mass of 60 g (2.1 oz). The proportions are equivalent to a smaller megabat or larger microbat of modern chiropteran fauna.^[7]

Desmodus draculae

Temporal range: Pleistocene
(Uquian-Lujanian)-Holocene

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Scientific classification

Domain:	<u>Eukaryota</u>
Kingdom:	<u>Animalia</u>
Phylum:	<u>Chordata</u>
Class:	<u>Mammalia</u>
Order:	<u>Chiroptera</u>
Family:	<u>Phyllostomidae</u>
Genus:	<u><i>Desmodus</i></u>
Species:	†<i>D. draculae</i>

Binomial name

†*Desmodus draculae*

Morgan *et al.* 1988

Its braincase was 14.5–14.8 mm (0.57–0.58 in) wide and 13.4–14.8 mm (0.53–0.58 in) high.^[8]

Biology

Some researchers believe that *D. draculae* would have preyed on megafauna,^[9] while others believe that they would have preyed on Caviomorpha.^[10] Other potential prey items that would have been available to *D. draculae* include plains viscacha, deer, and camelids.^[5]

Range and habitat

Fossils of *D. draculae* have been found in Mexico, Belize, Venezuela, Brazil, and Argentina, in six caves total.^[4] The discovery of a vampire bat fossil in Argentina also represents the southernmost point that they have been recorded by 600 km (370 mi), possibly indicating that this region was at least 2 °C (3.6 °F) warmer during this time.^[5] Though there are no fossils to corroborate this, it is believed that its range might have included Ecuador, French Guiana, and Guyana.^[3] The species was likely widely distributed throughout South America.^[9]

Extinction

The species is regarded as geologically extinct, as only bones of it have been documented and it has not been reported in surveys. However, its extinction is assumed to be geologically recent, as some of its remains discovered were not yet fossilized. The date and reason for its extinction are currently unknown.^[3] One hypothesis for its extinction states that it was highly specialized on megafaunal mammals as prey, which became extinct in the Quaternary extinction event, and *D. draculae* was unable to switch to smaller prey. Anecdotal reports of "large bats attacking cattle and horses" in Brazil are likely first-hand exaggerations of bat species whose behaviour is recorded as interacting with these animals.^{[9][11]}

In culture

It has been speculated that *D. draculae* was part of the inspiration for the Mayan bat-god Camazotz. *D. draculae* could have also inspired legends of the Mura people, an indigenous people in Brazil, about the Caoera—a blood-eating bat the size of a vulture.^[12]

Notes and references

- a. Una forma de *Desmodus* posiblemente del Pleistocene ... mayor que todas las conocidas ... una nueva especie." — Linares 1968:138–139.
1. Grady, Frederick; Arroyo-Cabrales, Joaguin; Garton, E. (2002). "The northernmost occurrence of the Pleistocene vampire bat *Desmodus stocki* Jones (Chiroptera: Phyllostomatidae: Desmodontinae) in eastern North America". *Smithsonian Contributions to Paleobiology* (93).
2. Arroyo-Cabrales, Joaguin; Alvarez, Ticul (2003). "A preliminary report of the late Quaternary mammal fauna from Loltún Cave, Yucatán, México". *Ice Age Cave Faunas of North America*: 262–272.
3. Turvey, S. (2008). "*Desmodus draculae* (Giant Vampire Bat)" (<https://doi.org/10.2305%2FIUCN.UK.2008.RLTS.T136451A4293610.en>). *IUCN Red List of Threatened Species*.