

# The First Record of *Dasypus* (Xenarthra: Cingulata: Dasipodidae) in the Late Pleistocene of México

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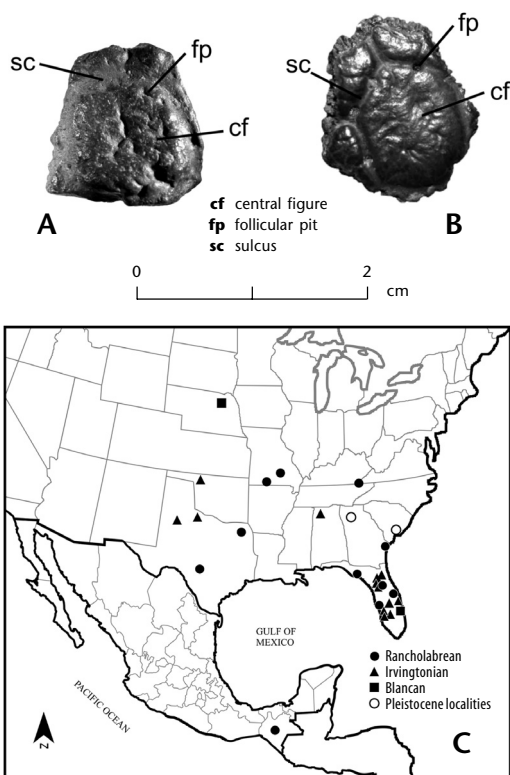
The genus *Dasypus* includes seven living species, *Dasypus novemcinctus*, *D. hybridus*, *D. kappleri*, *D. pilosus*, *D. sabanicola*, *D. septemcinctus*, *D. yepesi* (Wilson and Reeder 2005), and one extinct species, *Dasypus bellus*, from the Blancan, Irvingtonian, and Rancholabrean of North America (McDonald and Naples 2008).

*Dasypus bellus* is known from numerous Pleistocene sites in the eastern U.S. (Schubert and Graham 2000), but in México there are no previous records of it until now (McDonald 2002). Here *Dasypus* cf. *D. bellus* is reported for first time from the late Pleistocene of México, based on an incomplete buckler osteoderm (catalog number IHNFG-0521, Museo de Paleontología of Chiapas) recovered from La Simpatía locality, at 16° 09' 05" N and 93° 18' 55" W, municipality of Villa Corzo, in the southern state of Chiapas (Figure 1A). This specimen was found in association with *Bison* sp., *Mammuthus columbi* and *Equus conversidens* remains, which permits a Rancholabrean biochronological age assignment (Carbot-Chanona and Vázquez-Bautista 2006).

The preservation of IHNFG-0521 is poor, yet we can still observe that it has an isometric shape with one central figure and small peripheral figures. Their measurements are 11.81 mm maximum wide and 12.35 maximum length, and it is twice the size of the buckler osteoderms of the extant *Dasypus novemcinctus* (3.5–8 mm wide and 4–9 mm length), but similar in size and shape to extinct *D. bellus* from the U.S. (Klippel and Parmalee 1984). The central figure is slightly convex, semicircular in shape, large in proportion to the size of the osteoderm, and has an external surface sculptured by grooves and pits. The central figure is surrounded by a sulcus and separates the peripheral figures, and only one follicular pit is observed.

The shape of IHNFG-0521 resembles that of *Glyptotherium* shields, but shields in *Glyptotherium* are much larger, the central figure is concave, and the number of the peripheral figures is higher. Other contemporary cingulates are *Holmesina* and *Pampatherium*, but in these genera the dermal scutes are semisquare and much larger, with the center flat and without peripheral figures. The identification of the material of Chiapas was based on the large size compared with *D. novemcinctus* and morphology of buckler osteoderm. However, the fossil material is too poor to make a trustworthy determination and its preliminary determination is more like *Dasypus* cf. *D. bellus*.

The presence of this taxon in Chiapas documents the first record of *Dasypus*



**Figure 1.** A, IHNF0521, buckler osteoderm of *Dasyfus* cf. *D. bellus* from La Simpatía, Chiapas, Mexico; B, AMNH 23546, buckler osteoderm of *Dasyfus bellus* from U.S. (taken from Rincón et al. 2008); C, map showing the occurrences of *Dasyfus bellus* in North America.

for the late Pleistocene of México, as well as its southernmost range of distribution within North America (Figure 1C).

*Dasyfus bellus* has been compared ecologically with *D. novemcinctus*. Currently, *D. novemcinctus* can be found throughout México in grasslands, scrublands, and deciduous forests of predominantly dry climate (Ceballos and Oliva 2005), so it is possible what *D. bellus* lived in similar habitats during the late Pleistocene in Chiapas. However, further studies are needed in the locality to clarify the dominant paleoenvironment in central Chiapas during the Rancholabrean.

## References Cited

- Carbot-Chanona, G., and D. Vázquez-Bautista 2006 Presencia de *Bison* en Chiapas, México. Memoria del X Congreso Nacional de Paleontología y Libroto Guía Excursión a Tepexi de Rodríguez, Puebla. Universidad Nacional Autónoma de México, Instituto de Geología, Publicación Especial 5:96.
- Ceballos, G., and G. Oliva 2005 *Los Mamíferos Silvestres de México*. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, Fondo de Cultura Económica, México.
- Klippel W. E., and P. W. Parmalee 1984 Armadillos in North American Late Pleistocene Con-

texts, In *Contributions in Quaternary Vertebrate Paleontology: A Volume in Memorial to John E. Guilday*, edited by H. H. Genoways, M. R. Dawson, pp. 149–60. Carnegie Museum of Natural History, Special Publication 8.

McDonald, H. G. 2002 Fossil Xenarthra of México: A Review, In *Avances en los Estudios Paleomastozoológicos*, edited by M. Montellano Ballesteros, J. Arroyo Cabrales, pp. 227–248. Serie Arqueológica, Instituto Nacional de Antropología e Historia.

McDonald, H. G., and V. L. Naples 2008 Xenarthra, In *Evolution of Tertiary Mammals of North America, Vol. 2: Small Mammals, Xenarthrans, and Marine Mammals*, edited by C. M. Janis, G. F. Gunnell, and M. D. Uhen, pp. 147–60. Cambridge University Press, Cambridge.

Rincón, A. D., R. S. White, and H. G. McDonald 2008 Late Pleistocene Cingulates (Mammalia: Xenarthra) from Mene de Inciarte Tar Pits, Sierra de Perijá, Western Venezuela. *Journal of Vertebrate Paleontology* 28(1):197–207.

Schubert, B. W., and R. W. Graham 2000 Terminal Pleistocene Armadillo (*Dasybus*) Remains from the Ozark Plateau, Missouri, USA. *PaleoBios* 20(1):1–6.

Wilson, D. E., and D. M. Reeder 2005 *Mammal Species of the World. A Taxonomic and Geographic Reference*. Johns Hopkins University Press, Baltimore.