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## *Cabassous chacoensis* (Cingulata: Dasypodidae)

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**Abstract:** *Cabassous chacoensis* (Chacoan naked-tailed armadillo) is a little-studied, primarily fossorial armadillo endemic to xeric parts of the Gran Chaco in western Paraguay and northern Argentina. *C. chacoensis* is listed as “Near Threatened” by the International Union for Conservation of Nature and Natural Resources.

**Key words:** anteater, armadillo, Edentata, edentate, South America, Xenarthra

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### *Cabassous chacoensis* Wetzel, 1980 Chacoan Naked-tailed Armadillo

*Xenurus gymnurus*: Lahille, 1899:204. Not *Tatus gymnurus* Olfers, 1818.

*Cabassous loricatus*: Yepes, 1935:441. Part, not *Cabassous loricatus* (J. A. Wagner, 1855).

*Cabassous loricatus*: Cabrera, 1957 [1958]:219. Part, not *Cabassous loricatus* (J. A. Wagner, 1855).

*Cabassous loricatus*: Moeller, 1968:420. Part, not *Cabassous loricatus* (J. A. Wagner, 1855).

*Cabassous chacoensis* Wetzel, 1980:335. Type locality “Paraguay, Depto. Presidente Hayes, 5–7 km W Estancia Juan de Zalazar.”

**CONTEXT AND CONTENT.** Order Cingulata, family Dasypodidae, subfamily Tolypeutinae, tribe Priodontini. Synonymy modified from Gardner (2005) and Wetzel et al. (2007). *C. chacoensis* is monotypic (Wetzel et al. 2007).

**NOMENCLATORIAL NOTES.** The generic name, *Cabassous*, is a latinized form (latinized by McMurtrie [1831]) of a French term used by Cuvier and Buffon, originally from a native name, *capacou* (Galibi, the native language of people from French Guiana), and referring to an armadillo (Palmer 1899; Gotch 1979) or possibly a corruption of the Guarani word *caaigouazou* (Braun and Mares 1995). The species name, *chacoensis*, refers to the Gran Chaco, the region in South America where the animal is endemic. Other common names are *cabasú chaqueño*, *cabasú chico*, Chaco-Nacktschwanz-Gürteltier, *tatú-ai*, and *tatú-ai menor* (Superina and Aguiar 2006; Abba and Superina 2010); and *cabasu* and *tatú de rabo molle* (Yepes 1935).

### DIAGNOSIS

*Cabassous chacoensis* (Fig. 1) is smaller than *C. centralis* (northern naked-tail armadillo), *C. tatouay* (greater naked-tail armadillo), and *C. unicinctus* (southern naked-tail armadillo [mean length of head and body, 303 mm versus 324–458 mm for other *Cabassous*—Wetzel 1980]). *C. chacoensis* has smaller pinnae (mean length of ear 14.5 mm versus 27.0–41.7 mm for other *Cabassous*) with a fleshy expansion on the anterior margin of the pinna that the other species lack (Wetzel 1980). Cranium (Fig. 2) is distinct from other *Cabassous* in that the toothrow and ramus are curved on both dorsoventral and mediolateral axes (Wetzel 1980). In addition, all but the most anterior and posterior teeth are constricted anteroposteriorly rather than transversely as in other species of the genus (Wetzel 1980).



**Fig. 1.**—An adult male *Cabassous chacoensis* from the central region of the Chaco, near Filadelfia, Paraguay. Used with permission of the photographer, Jakob Unger.

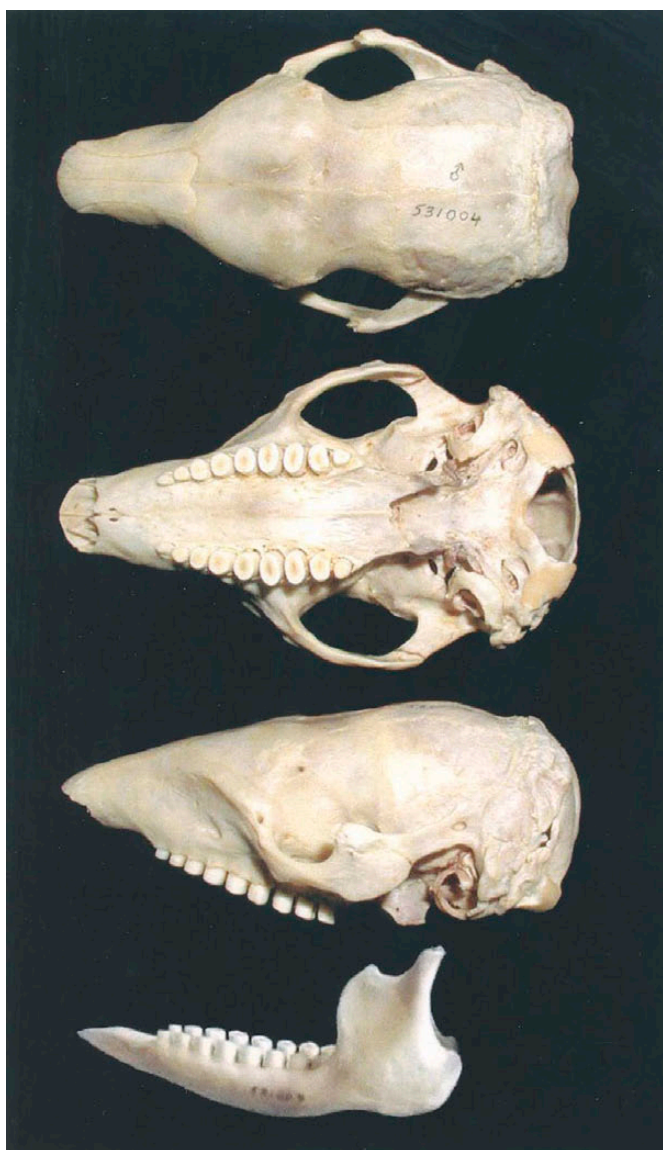


Fig. 2.—Dorsal, ventral, and lateral views of skull and lateral view of mandible of an adult male *Cabassous chacoensis* (United States National Museum [USNM] 531004) from Filadelfia, Boquerón, Paraguay. Greatest length of skull is 67.6 mm.

### GENERAL CHARACTERS

Measurements (mm) for an adult male, an adult female, and 2 *Cabassous chacoensis* of unknown sex were: total length, 733, 420, —, —; length of head and body, 398, 325, 300, 306; length of tail, 335, 95, 90, 96; length of hind foot, 55, —, 61, 61; length of ear, 40, —, 14, 15 (Wetzel 1980; Ceresoli et al. 2003; Agüero et al. 2005). Mass of an adult female was 1,200 g (Agüero et al. 2005).

Cranial measurements (mm) taken by the author for an adult male *C. chacoensis* in the United States National Museum (USNM 531004) were: skull: greatest length, 67.62; width across zygoma at postorbital process, 40.07; length of

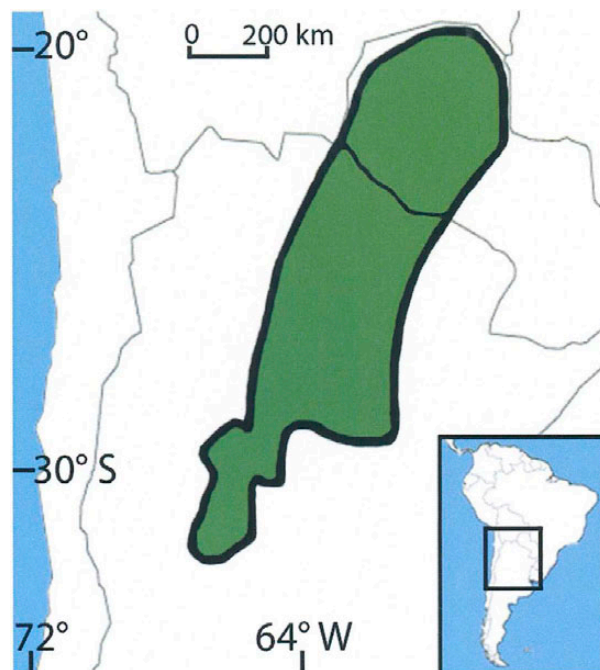


Fig. 3.—Geographic distribution of *Cabassous chacoensis* (Wetzel et al. 2007; Abba et al. 2012; Tamburini and Briguera 2012). *C. chacoensis* is monotypic.

upper tooththrow, 25.25; posterior margin of last molar to tip of premaxilla, 40.78; mandible: greatest length, 51.71; width from angle to coronoid, 20.97; length of lower tooththrow, 23.06; posterior margin of last molar to tip of mandible, 34.81. Mean (with parenthetical range and *n*) cranial measurements (mm) for *C. chacoensis* of unknown sex were: condylonasal length, 69.8 (68.5–71.0, 4); rostral length, 30.7 (29.5–31.5, 5); palatal length, 41.0 (39.9–42.0, 4); palatal width, 10.3 (8.9–11.0, 5); anterior rostral width, 11.1 (10.2–12.4, 5); interlacrimar width, 29.1 (27.9–29.8, 5); interorbital width, 21.1 (20.1–22.1, 5); zygomatic width, 40.1 (37.1–43.1, 5); mastoidal width, 33.3 (31.7–35.9, 5); height of cranium, 29.9 (28.3–31.3, 4); length of maxillary tooththrow, 25.2 (24.6–25.9, 5); length of mandibular tooththrow, 23.7 (22.7–24.7, 5—Wetzel 1980).

### DISTRIBUTION

*Cabassous chacoensis* occurs (Fig. 3) in the Gran Chaco of western Paraguay and northern Argentina (Wetzel et al. 2007; Abba et al. 2012; Tamburini and Briguera 2012) and may occur in southeastern Bolivia (Noss et al. 2010; Wallace and Porcel 2010) and adjacent Mato Grosso do Sul, Brazil (Wetzel 1980; Wetzel et al. 2007) although the specimen (Mastozoología del Museo Argentino de Ciencias Naturales “Bernadino Rivadavia” [MACN] 4.388) from Mato Grosso do Sul, Brazil, is probably *C. unicinctus* (Abba and Vizcaino 2008). No fossils are known.

## FORM AND FUNCTION

*Cabassous chacoensis* has no incisors or canines and 8 or 9 upper and 8 lower uniform cheek teeth (1 specimen at the United States National Museum—Yepes 1935; Wetzel 1985). Limb measurements (mm) for 1 *C. chacoensis* were: humeral length, 46.7; proximal humeral length, 32.2; ulnar length, 48.4; olecranon length, 22.5; functional femoral length, 46.3; proximal femoral length, 26.5; leg length, 38.3; midleg width, 19.9 (Vizcaino and Milne 2002). On the forelimb the olecranon length is 87% of the functional length of ulna (Milne et al. 2009).

Oviducts are coiled, filiform, and measure 15 mm from the infundibulum to the uterine wall (Cetica et al. 2005). The uterus has a well-developed body and 2 small lateral horns, and measures 35 mm at its widest part and 45 mm in length (Cetica et al. 2005). The uterine endometrium is lined by simple cubic or columnar mucous epithelial cells with tubular glands (Cetica et al. 2005). In the lower portion of the genital tract, the cervix “leads to a tubular structure where the columnar epithelium changes abruptly to transitional epithelium . . . , forming a urogenital sinus rather than a true vagina” (Cetica et al. 2005:60). This urogenital sinus is 18 mm in length (Cetica et al. 2005). The vulva is 10 mm in length (Cetica et al. 2005).

A pear-shaped, hemochorial placenta is present (Adamoli et al. 2001). The maternal face of the placenta is homogeneously villosus except where the umbilical cord inserts (Adamoli et al. 2001).

## ECOLOGY

*Cabassous chacoensis* has a higher probability of occurrence in the arid Chaco and lower probability of occurrence in the humid Chaco (Abba et al. 2012). Habitat is primarily open thorn forest or thorn scrub with porous nonclay soil (Meritt 2008). *C. chacoensis* feeds primarily on terrestrial ants and termites (Wetzel et al. 2007).

*Cabassous chacoensis* is nocturnal and fossorial (Meritt 2008). A grunting call has been heard (Wetzel 1982). Sightings are rare, but most often prior to thunderstorms (Smith 2012). Litter size for *C. chacoensis* is 1 (Adamoli et al. 2001; Meritt 2008).

## CONSERVATION

*Cabassous chacoensis* is listed as “Near Threatened” by the International Union for Conservation of Nature and Natural Resources (Abba and Superina 2010; Superina and Abba 2010; Smith 2012). Major threats are anthropocentric, such as habitat degradation from agriculture as well as hunting and predation by dogs and local people (Abba and Superina 2010; Superina and Abba 2010). It is recorded

from the following Argentinian parks: Parque Nacional Copo, Río Pilcomayo, Formosa, and Talampaya (Abba and Superina 2010). A 30% reduction in population size is estimated from 2002 to 2012 (Smith 2012).

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