

PYGMY SHORT-TAILED OPOSSUM

Monodelphis kunsi Pine, 1975



FIGURE 1 - Adult, Bolivia (Louise Emmons).

TAXONOMY: Class Mammalia; Subclass Theria; Infraclass Metatheria; Magnorder Ameridelphia; Order Didelphimorphia; Family Didelphidae; Subfamily Marmosinae; Tribe Monodelphini (Myers et al 2006). Twenty-nine species are recognised in this genus, three are present in Paraguay. The scientific name *Monodelphis* is derived from the Greek meaning "single womb" in reference to the lack of a pouch. The species name *kunsi* is in honour of Dr Merle L. Kuns who obtained the type specimen.

The species is monotypic. However what is currently understood as "*Monodelphis kunsi*" may in fact be a cryptic species complex given the wide range and diverse habitats in which the "species" has been found, its rarity being apparently inconsistent with a habitat generalist. A similar pattern of distribution is exhibited by three similar species of *Thylamys* (*velutinus*, *macrurus* and *venustus*). There is notable variation in

the specimens, but currently so few specimens are available that it is not possible to make any firm conclusions (de la Sancha et al 2007). Synonyms adapted from Anderson (1982) and Gardner (2007).

Monodelphis kunsii, Pine 1975 W bank of Rio Itonamas, 4km N of Magdalena, Departamento Beni, Bolivia.

ENGLISH COMMON NAMES: Pygmy Short-tailed Opossum

SPANISH COMMON NAMES: Colicorto pigmeo (Emmons 1999).

GUARANÍ COMMON NAMES: No known names.

DESCRIPTION: Small, compact and shrew-like. Pelage very short, appearing dorsally uniform warm brown with a slight reddish hue sometimes slightly stronger on the head, and especially so on the chicks and at the base of the ears. Closer inspection reveals the hairs to be greyish basally, and ochraceous medially and tipped blackish. Longer guard hairs are completely black, making up about 5% of the dorsal hairs, decreasing laterally and being absent on the venter. The ventral hairs are cream-coloured or ochraceous with variable white patches. A throat gland is present, partly hidden by fur. Pelage about 3mm long on dorsum, decreasing to 2mm on venter. Tail short, about 50% of head and body length, dark dorsally and buffy ventrally with a naked tip. Ears short and rounded. Limbs short and stout. Hind foot with a conspicuous basal web between digits 3 and 4 and a less obvious web between digits 2 and 3. Five large palmar pads and six plantar pads. Hindfeet also with a number of small blackish pads. Small pads on the forefeet are unpigmented. There are mystacial, genal, supraorbital and interramal facial vibrissae. Scrotum black.

CRANIAL CHARACTERISTICS: Skull lacks a sagittal crest. Rostrum short and no postorbital thickening or processes.

DENTAL CHARACTERISTICS: I5/4 C1/1 P 3/3 M 4/4 = 50. Lacks enlarged canines. (Anderson 1982).

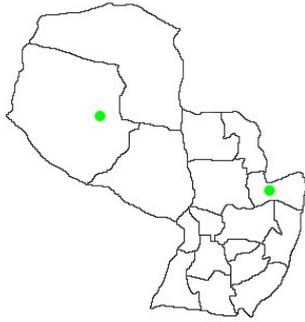
GENETIC CHARACTERISTICS: 2n=18, FN=30. X-chromosome submetacentric, Y-chromosome acrocentric. (Carvalho et al 2002).

TRACKS AND SIGNS: Hind foot with a conspicuous basal web between digits 3 and 4 and a less obvious web between digits 2 and 3. Five large palmar pads and six plantar pads. (Anderson 1982).

EXTERNAL MEASUREMENTS: Much the smallest of the Paraguayan Short-tailed Opossums. **TL:** 11.87cm (10.3-14.7cm); **TA:** 4.04cm (3.6-4.5cm); **FT:** 1.17cm (1.1-1.4cm); **EA:** 1.11cm (1-1.4cm); **WT:** 11.9g (7.5-30g). One specimen in the Colección Boliviana de Fauna, La Paz weighed 30g, the maximum weight record for any of the other known specimens was just 16g. Leaving this large specimen out of the calculations gives a mean for the sample of 10.56g (de la Sancha et al 2007). Mares et al (1989) give the following measurements for 2 adult males from central Brazil: **TL:** 11.3-11.4cm; **TA:** 3.6-3.8cm; **FT:** 1-1.4cm; **EA:** 1-1.1cm; **WT:** 8.5-14g.

SIMILAR SPECIES: Much the smallest of the Paraguayan Short-tailed Opossums, distinctly shrew-like with a bicoloured pelage of warm brownish dorsum and contrasting creamy-white ventrum. *Monodelphis sorex* is much larger and distinctly reddish in colouration, particularly on the head, rump and sides. On average this species is almost half the size of *Monodelphis domestica*, with shorter fur and proportionately shorter ears - that species also being distinctly greyish in colouration. Cranially it has a much smaller skull than other species, lacking enlarged canines and characteristically without a sagittal crest, the latter character present in all other Paraguayan *Monodelphis*.

DISTRIBUTION: This is a poorly known species but apparently has a wide distribution in Bolivia, northern Argentina, Brazil and Paraguay. Until recently it was known only from a handful of specimens. The type locality in Bolivia is on the west bank of the Rio Itonamas, 4km N of Magdalena, Provincia Itenez, Departamento Beni at a height of 200m, not far from the Brazilian border. The second specimen was captured close to the Argentinian border in southern Bolivia at the Rio Lipo in Departamento Tarija at 1500m. The species has since been found to be quite wide-ranging through southern, eastern and western Bolivia (Vargas et al 2003). It is known from a single specimen in Argentina, collected in the northern part of Provincia Salta in Departamento General José de San Martín in May 2005 (Jayat & Miotti 2005). In Brazil there are records from the States of Goiás, Minas Gerais and Capital Federal. Three specimens are known from Paraguay, two from Aguara Ñu in the Mbaracayú Forest Reserve in Departamento Canindeyú and one from Cruce los Pioneros, Departamento Presidente Hayes in the Central Chaco, and it may be expected to occur in the intermediate area (de la Sancha et al 2007).



HABITAT: Despite the small number of known specimens it has been recorded in five different biomes. Brazilian specimens were taken in dense cerrado (Mares et al 1989). In Bolivia it has been collected in cerrado-like savanna in Beni, lowland tropical evergreen forest (Bolivian Amazonian forest) in the west of the country and dry forest at medium altitude in the south of the country. In Argentina the species is known from Yungas in the Andean Foothills (Jayat & Miotti 2005). In Paraguay at Aguara Nua the two specimens were trapped in cerrado dotted with dwarf palms, tall grass, scattered bushes and termite mounds. Despite extensive trapping in the Atlantic Forest in this area the species had never previously been recorded there. The habitat at Cruce los Pioneros is low chaco woodland, though the area is extensively anthropomorphic. Occurrence in a woodland type habitat in the Chaco would seem at odds with its apparent avoidance of forested areas in eastern Paraguay. The species has been captured in both pristine and disturbed habitats.

ALIMENTATION: *Foraging Behaviour and Diet* Dentition suggests this species is likely insectivorous like other members of the genus, but no specific information is available for this rarely-recorded species. It would seem to fill a similar niche to the Old World shrews of the family Soricidae. (Anderson 1982).

Diet in Captivity The specimen captured in Argentina was caught in a Sherman trap baited with oats (Jayat & Miotti 2005).

REPRODUCTIVE BIOLOGY: No information. ***Seasonality*** A subadult female captured in Bolivia on 1 August was without embryos and was not lactating (Vargas et al 2003). Two adult males collected 20km south of Brasilia, Brazil in March and August had scrotal testes. Testes length for the male collected in August was 6mm (Mares et al 1989).

GENERAL BEHAVIOUR: *Activity Levels* Specimens caught in Argentina and Paraguay were all captured in Sherman live traps located on the ground (Jayat & Miotti 2005, de la Sancha 2007) and some in Bolivia in pitfall traps (Vargas et al 2003) suggesting that they are terrestrial in behaviour.

Grooming Behaviour A male collected 20km south of Brasilia in Brazil was moulting on the nose, behind the eyes and on the mid-dorsum. (Mares et al 1989).

VOCALISATIONS: No information.

HUMAN IMPACT: No information. The species is unlikely to have any impact on human populations and its rarity means that it likely exists in many areas without being noticed.

CONSERVATION STATUS: Globally considered to be Least Concern by the IUCN, having previously been considered Endangered (1996-2007) due to the very few known specimens. See <http://www.iucnredlist.org/search/details.php/13696/all> for the latest assessment of the species. The species is now known to be more widespread than previously thought, with catholic habitat tastes and apparently occurring in a number of protected areas. The species occurs in both pristine and disturbed habitats and has likely been overlooked over much of its range. Currently known from three, widely-separated specimens in Paraguay its range likely includes much of the area in between and is possibly fairly extensive, though the species occurs at naturally low densities throughout its wide geographic range. It is probably best considered Data Deficient at national level.

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