

Atelocynus microtis. By Annalisa Berta

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Atelocynus Cabrera, 1940

Atelocynus Cabrera, 1940:14. Type species *Canis microtis* by original designation.

CONTEXT AND CONTENT. Order Carnivora, Family Canidae. The genus *Atelocynus* includes one living species (Fig. 1).

Atelocynus microtis (Sclater, 1882)

Small-eared Dog

Canis microtis Sclater, 1882:631, pl. 47. Type locality "The Amazonas," restricted to the south bank of the Rio Amazonas, Para, Brazil by Hershkovitz (1958).

CONTEXT AND CONTENT. Context noted above. *Atelocynus microtis* is monotypic.

DIAGNOSIS. Because the genus is monotypic the following diagnostic characters apply to genus and species: body hair short, dark, sleek, grizzled (Fig. 1); ears short, rounded; skull fox-like (Fig. 2); nasals short, not extending beyond maxillary-frontal suture; forehead slightly convex owing to presence of a small frontal sinus that does not penetrate the postorbital process; presphenoid very narrow with little development of lateral wings; bulla large and well inflated.

The dental formula is $i\ 3/3, c\ 1/1, p\ 4/4, m\ 2/3$, total 42. I3 is short and not caniniform; upper canines long; upper molars narrow for their lengths; angular process of mandible has pterygoid fossa greatly expanded (Type D of Gaspard, 1964: fig. 24); masticatory region deeply excavated (Fig. 2).

GENERAL CHARACTERS. *Atelocynus* is larger than most species of the South American fox, *Pseudalopex*, and has a large head, relatively short slender limbs, and a long, bushy tail (Fig. 1). Pelage is brown or blackish that shades inconspicuously into a dull reddish-brown on the underside. A narrow black collar is discernible, and a dark-colored band extends along the top of the back and tail. The only light-colored area is a patch of whitish or buff hairs around the pubic region and on the underside of the tail at its base (Cabrera and Yepes, 1960; Clutton-Brock et al., 1976; Hershkovitz, 1961; Nowak and Paradiso, 1983).

The following means (extremes and sample size in parentheses) are measurements of adults (in mm) assembled by Hershkovitz (1961): length of head and body, 807 (720 to 1,000; $n = 9$); length of tail, 305 (260 to 350; $n = 8$); length of hindfoot, 138 (125 to 150, $n = 4$); length of ear, 45 (34 to 52; $n = 6$). Tooth and cranial



FIG. 1. Adult male *Atelocynus microtis*. Photo courtesy of M. W. Fox.

measurements (in mm) of a sample ($n = 5$) of adult males from Peru are: condylobasal length, 146.9 (127.5 to 156.7); greatest length of skull, 165.4 (161.2 to 171.9); breadth of braincase, 51.2 (49.0 to 54.3); least interorbital breadth, 32.3 (28.0 to 34.3); postorbital constriction, 24.2 (22.8 to 26.2); zygomatic width, 88.9 (81.0 to 94.3); length of maxillary tooththrow, 66.9 (64.6 to 70.0); palatal length, 80.4 (78.3 to 86.4); mandible length, 118.0 (114.0 to 122.7); length of mandibular tooththrow, 73.3 (59.3 to 80.0).

DISTRIBUTION. Small-eared dogs inhabit tropical forests of northern South America from sea level to 1,000 m. Their range

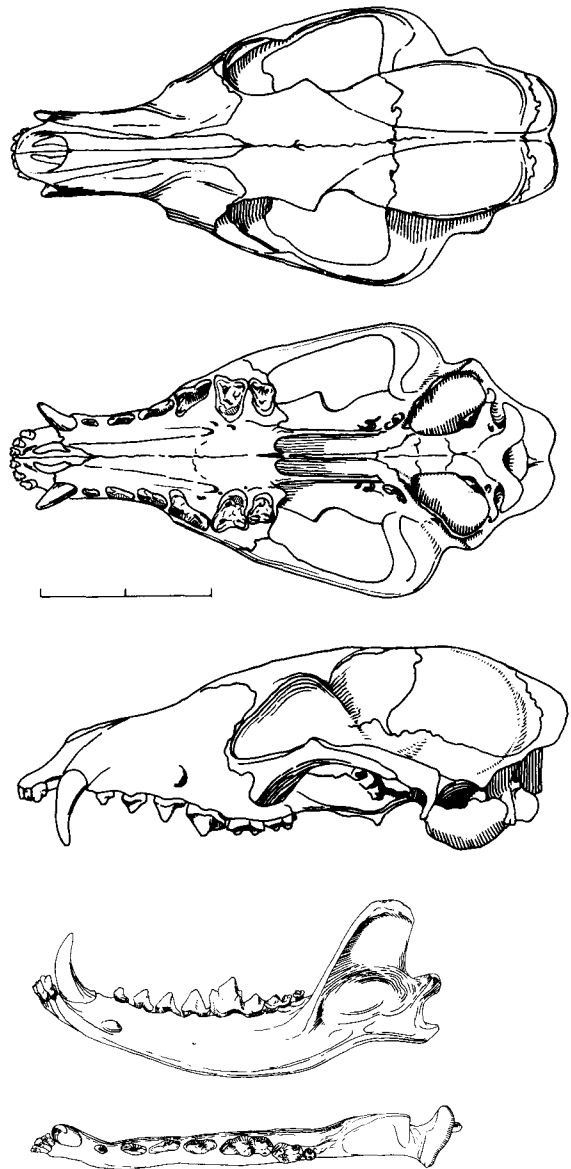


FIG. 2. Dorsal, ventral, and lateral views of the cranium, and lateral and occlusal views of the mandible of *Atelocynus microtis* (UCMVZ 157978, male from La Poza, Rio Santiago, Depto Amazonas, Peru). Scale is 5 cm. Drawn by Victoria Jeffries.

encompasses the Amazon basin in Brazil, Peru, Ecuador, and Colombia; the upper Rio Orinoco basin in Colombia and Venezuela; and the upper Rio Paraná basin in Matto Grosso, Brazil (Fig. 3).

FORM AND FUNCTION. Observations at the Brookfield Zoo, Chicago, indicate that molting in this animal is completed in about 3 weeks and that the new pelage is short, stiff, and unctuous (Hershkovitz, 1961).

The ears are proportionally shorter than in most other species of wild dogs. The limbs are shortened, although not as short as those of the bush dog, *Speothos*. *A. microtis* is similar to *Cerdocyon*, *Speothos*, and *Chrysocyon* in having a short, uncoiled caecum; this contrasts with the long, coiled caecum typical of other canids.

The male at the Brookfield Zoo secreted a strong musky odor from its anal glands. According to Hershkovitz (1961), the odor was emitted or intensified when the animal sensed the approach of people or heard a sudden sound. The odor from the anal glands of the female was barely noticeable. A feature common to both sexes of those at the Brookfield Zoo was the bright reflection of their eyes in dim light from a particularly visible tapetum lucidum.

ONTOGENY AND REPRODUCTION. There is no published information on ontogeny and reproduction in this species.

ECOLOGY. The sleek, thick coat of the small-eared dog suggests that it is often in water or inhabits areas with heavy rainfall. Its short limbs likely facilitate movement in dense forests. These interpretations of the habitat of *A. microtis* are supported by its distribution; all specimens have been collected within tropical rainforests.

In captivity in Bogota, Colombia, a male ate raw meat, shoots of Kikuyo grass (*Pennisetum clandestinum*), and common foods that people eat (Hershkovitz, 1961).

BEHAVIOR. Nothing is known of the behavior of *Atelocynus microtis* in the wild. Observations of this species in captivity are those of Antonius (1933) based on a specimen at the Schönbrunner Tiergarten, Germany, and Hernandez (in litt.) and Hershkovitz (1961) based on a pair reared at the Brookfield Zoo, Chicago. According to Hernandez, a male taken to Chicago was shy during the early part of captivity in Bogota but became tame with time. When it was angry or frightened it growled, bared its teeth, and attempted to bite. The Schönbrunner animal also manifested hostility by growling or snarling (Antonius, 1933). During competition for food, some snapping in both sexes was observed but no biting or fighting (Hershkovitz, 1961). The female at the Brookfield Zoo was hostile from the time she was received through the observation period (1958 to 1960); when under direct observation, she growled.

According to Hershkovitz (1961) the male asserted dominance in most activities although the female was nearly one-third larger. In typical posture, the animal stands with head lowered, forelegs spread apart, hindlegs with heels turned inward, feet pointed outward, tail curved back against outer side of hindleg with tail tip curled upward. The tip of the tail is particularly sensitive and, when the animal is excited, the hairs are erected. This behavior, according to Antonius (1933:251), justifies the name "flag-tailed wild dog" applied to *Atelocynus* by natives of the Rio Tapajoz region in Brazil.

Observations at the Schönbrunner Tiergarten and Brookfield Zoo show that the small-eared dog moved gracefully and lightly, uncharacteristic of other members of the family.

GENETICS. The small-eared dog has a diploid number of 76 chromosomes and a fundamental number of 78. The karyotype includes 36 pairs of acro- or subacrocentric autosomes and one pair of large submetacentric chromosomes that supposedly are the X-chromosomes. Such would be in keeping with other canids, but this is not yet demonstrated because the only individual studied was a female (Wurster and Benirschke, 1968).

REMARKS. In Langguth's (1969) classification, *Atelocynus* was given subgeneric rank in the genus *Cerdocyon* that also included the subgenera *Speothos* and *Cerdocyon*. In a later classification, Langguth (1975) elevated *Atelocynus* to generic rank recognizing *A. microtis* as the only species in the genus. A numerical classification of the family by Clutton-Brock et al. (1976) included *A. microtis* in the genus *Dusicyon*. Van Gelder (1977) recognized *Atelocynus* as a subgenus of *Canis*. Systematic reassessment of South American canids (Berta, 1984; Tedford and Taylor, in litt.)

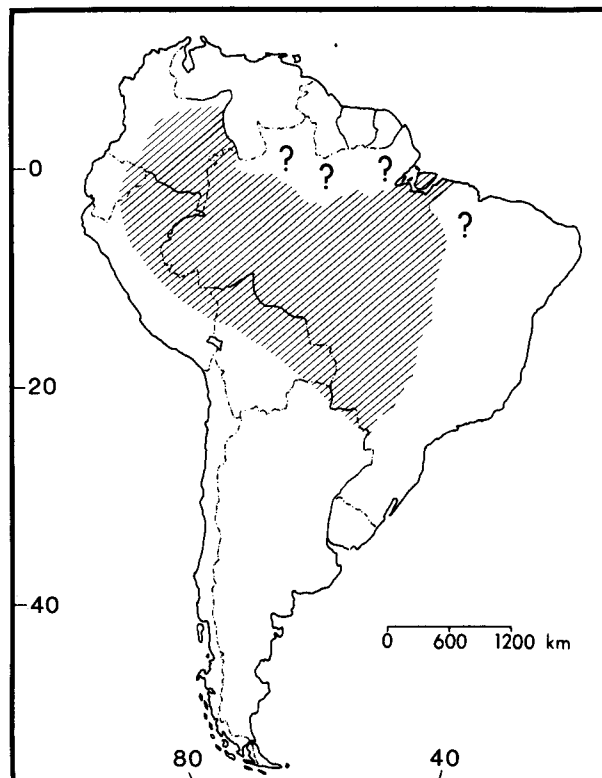


FIG. 3. Map of South America showing the distribution of *Atelocynus microtis* (slightly modified from Hershkovitz, 1961:518).

supports the generic recognition of *Atelocynus*, and suggests that it is distinct from both *Dusicyon* and *Canis* and is related most closely to *Speothos*. The International Union for the Conservation of Nature and Natural Resources considers *Atelocynus* as insufficiently known, but its survival is suspected of being imperiled (Thornback and Jenkins, 1982). It is protected by law in Brazil and Peru, and it is on the Brazilian list of endangered species.

The generic name *Atelocynus* is formed from the Greek words *ateles*, meaning imperfect, and *cyon*, meaning dog. The specific name *microtis* is formed from the Greek word *mikros*, meaning small, and *ot*, meaning ear. Other vernaculars include small-eared zorro, zorro negro, and zorro de Oreja corta.

LITERATURE CITED

- ANTONIUS, O. 1933. Einige Schönbrunner Neuerwerbungen der Jahre 1932-1933. Zool. Gart., Leipzig, (N.F.), 6:244-258.
- BERTA, A. 1984. The Pleistocene bush dog *Speothos pacivorus* (Canidae) from the Lagoa Santa Caves, Brazil. J. Mamm., 65: 549-559.
- CABRERA, A. 1940. Notas sobre carnívoros sudamericanos. Notas Mus. La Plata, Zool., 5(29):1-22.
- CABRERA, A., AND J. YEPES. 1960. Mamíferos Sud Americanos. Second ed. Ediar, Buenos Aires, 1:1-187.
- CLUTTON-BROCK, J., G. B. CORBET, AND M. HILLS. 1976. A review of the family Canidae, with a classification by numerical methods. Bull. British Mus. Nat. Hist., 29:120-199.
- GASPARD, M. 1964. La région de l'angle mandibulaire chez les Canidae. Mammalia, 28:249-329.
- HERSHKOVITZ, P. 1958. A synopsis of the wild dogs of Colombia. Nov. Colombianas, Mus. Hist. Nat. Univ. del Cauca, 1957, 3:157-161.
- . 1961. On the South American small-eared zorro *Atelocynus microtis* Sclater (Canidae). Fieldiana-Zool., Field Mus. Nat. Hist., 39:505-523.
- LANGGUTH, A. 1969. Die südamerikanischen Canidae unter besonderer Berücksichtigung des Mähnenwolfes *Chrysocyon brachyurus* Illiger. Z. Wiss. Zool., 179:1-88.
- . 1975. Ecology and evolution in the South American

- canids. Pp. 192-206, in *The wild canids* (M. W. Fox, ed.) Van Nostrand Reinhold Co., New York, 508 pp.
- NOWAK, R. M., AND J. L. PARADISO (EDS). 1983. *Walker's mammals of the World*. Fourth ed. The Johns Hopkins Univ. Press, Baltimore, 2:569-1362.
- SCLATER, P. L. 1882. Reports on the additions to the society's menagerie in June, July, August, September, and October. *Proc. Zool. Soc. London*, 1882: 630-631.
- THORNBACK, J., AND M. JENKINS. 1982. The IUCN mammal red data book. Part 1: Threatened mammalian taxa of the Americas and the Australasian zoogeographic region (excluding Cetacea). *Internatl. Union Cons. Nature*, Gland, Switzerland, 516 pp.
- VAN GELDER, R. G. 1978. A review of canid classification. *Amer. Mus. Novitates*, 2646:1-10.
- WURSTER, D. H., AND K. BENIRSCHKE. 1968. Comparative cytogenetic studies in the order Carnivora. *Chromosoma*, 24: 336-382.
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