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Poecilogale albinucha.

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Poecilogale Thomas, 1883

Zorilla Gray, 1864:69. Type species *Z. albinucha*.
Poecilogale Thomas, 1883:370. Renaming of *Z. albinucha* Gray.

CONTEXT AND CONTENT. Order Carnivora, family Mustelidae, subfamily Mustelinae. The genus *Poecilogale* is monotypic.

Poecilogale albinucha (Gray, 1864)

Striped Weasel

Zorilla albinucha Gray, 1864:69. Type locality "it was without any habitat." Emended by Coetzee (1977) as "Cape Colony," Zambia.
Zorilla flavistriata Bocage, 1865:402. Type locality "Duque de Bragança district, northern Angola."
Zorilla africana Peters, 1865:400. Type locality "Golungo Alto, Angola."
Poecilogale albinucha Thomas, 1883:370. First use of current name combination.

CONTEXT AND CONTENT. Generic context as above. Although 4–6 subspecies have been proposed (Coetzee 1977; Ellerman et al. 1953; Meester et al. 1986; Roberts 1951), most are probably invalid (Coetzee 1977) or insufficiently known to judge validity (Skinner and Smithers 1990). Currently, none is recognized (Kingdon 1997).

DIAGNOSIS. The striped weasel (Fig. 1) and the dwarf mongoose (*Helogale parvula*) are the smallest carnivores of Africa (Rowe-Rowe 1990). *P. albinucha* is smaller and more slender than the zorilla (*Ictonyx striatus*). The striped weasel has an elongated body with short legs, whereas that of the zorilla is more stocky (Nowak 1999). The 2 species differ in the pattern of stripes, length of fur on body (<15 cm in *P. albinucha*), smaller size of skull of *P. albinucha* (<56 mm in the greatest length), and presence of only 1 lower molar in *P. albinucha* as compared with 2 in *I. striatus* (Skinner and Smithers 1990).

GENERAL CHARACTERS. The striped weasel is small (<500 g) and elongated. Legs are short, and feet have sharp, curved claws (Smithers 1966). Pinnae are short; ear bullae are elongated, flattish, and taper to narrow points (Skinner and Smithers 1990). Pelage is mostly black; pate is white. A dorsal white patch divides into 2 lines that divide again into 4 well-defined white, off-white, or yellow stripes (Ansell 1960). Breadth of dorsal white stripes varies: in Botswana breadth may reach 15 mm; elsewhere, it is ca. 7 mm (Skinner and Smithers 1990). Sides of body and limbs are black. Tail is long, bushy, and entirely white (Dorst and Dandelot 1970). Underfur is black and sparse (Estes 1991). Tail hair is ca. 30 mm in length (Skinner and Smithers 1990). Other hair is ca. 10 mm in length on body and ca. 5 mm in length on limbs (Skinner and Smithers 1990).

Average body measurements (in mm, range in parentheses) of 6 males and 3 females, respectively, from KwaZulu-Natal (Pringle 1977), are: length of head and body, 301 (270–320), 257 (240–280); length of tail, 176 (138–200), 150 (140–158). Average measurements of males and females, respectively, from KwaZulu-Natal (Rowe-Rowe 1978a), are (range, *n*): length of head and body, 313 (299–330, 7), 298 (275–320, 3); length of tail, 181 (163–200, 6), 169 (162–180, 3); length of hind foot, 39 (36–42, 5), 32 (31–32, 3); length of ear, 14 (11–19, 4), 17 (13–20, 3). In Cape Province (Stuart 1981) the same measurements taken for 3 males and 2 females, respectively, were (range): 314 (306–327), 315 (280–350); 176 (171–180), 148 (145–150); 39 (37–41), 34 (31–36); 21 (20–22), 19 (18–19). The same measurements of male and female striped weasels, respectively, from South Africa were (Roberts 1951) (range, *n*): 275 (270–280, 2), 276 (240–300, 4); 153 (150–155, 2), 181 (158–215, 4); 35 (32–38, 4), 35 (35–36, 2); 16 (14–18, 3), 16 (13–19, 2). One female from Botswana had a total length of 439 mm, length of tail of 185 mm, length of hind foot of 32 mm, and length of ear of 18 mm (Smithers 1971). Animals from western Uganda may be slightly larger than their eastern or southern counterparts (Kingdon 1977).

Males average ca. 35–50% larger than females in body mass (Rowe-Rowe 1972a). In KwaZulu-Natal the average body mass of 7 males and 6 females were (range): 339 g (283–380) and 251 g (230–290), respectively (Rowe-Rowe 1978b). Body mass of striped weasels from Cape Province (Stuart 1981) was 357 g for males (n = 3, range 327–379) and 215 g for females (n = 2, range 210–220). One female from Botswana weighed 227 g (Smithers 1971).

Skull is elongated with sharp carnassials and long canines (Fig. 2). Braincase is ovoid and tapers forward. Orbits are small, and rostrum is short and broad. Hamular process of pterygoid is greatly extended posteriorly and fuses anteriorly with ventral surface of auditory bullae (Bryant et al. 1993). Zygomatic arches are weak. Condyle of lower jaw is very broad and fits tightly in glenoid fossa of skull, allowing very little side-to-side action of jaw. Average skull measurements (in mm) with parenthetical range and sample size for female striped weasels from South Africa (Roberts 1951) are: greatest length of skull, 51.3 (50.0–52.5, 2); zygomatic breadth, 23.6 (23.2–27.9, 3); mastoid width, 24.8 (24.3–25.3, 2); least interorbital constriction, 12.0 (10.5–12.8, 4); intertemporal constriction, 9.6 (9.1–10.8, 4); length of mandible, 28.1 (25.0–30.3, 3).

DISTRIBUTION. *Poecilogale albinucha* is widely distributed in sub-Saharan Africa (Fig. 3). Striped weasels occur from South Africa northwards to Mozambique, northeastern Zimbabwe, Angola, Malawi, Zambia, Zaire, eastern Angola and Botswana, Rwanda, Burundi, Tanzania, southwest Uganda, and Kenya (Rowe-Rowe 1972a). *P. albinucha* occurs up to 2,200 m in altitude (Kingdon 1997), although it usually occurs <1,500 m (Rowe-Rowe 1972a).

FOSSIL RECORD. Remains of *Prepoecilogale* occur in the Late Pleistocene deposits of Ahl al Oughlam, Morocco (Geraads 1997).

FORM AND FUNCTION. The striped weasel is a specialized rodent catcher. An elongate body form allows striped weasels access to rodent burrows (Smithers 1966). Claws are sharp and used for digging burrows or accessing prey (Kingdon 1997).

FIG. 1. Adult female *Poecilogale albinucha* picking up her 4-week-old young. Photograph by David T. Rowe-Rowe.

FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of *Poecilogale albinucha* (male, American Museum of Natural History #180890). Greatest length of cranium is 60.62 mm.

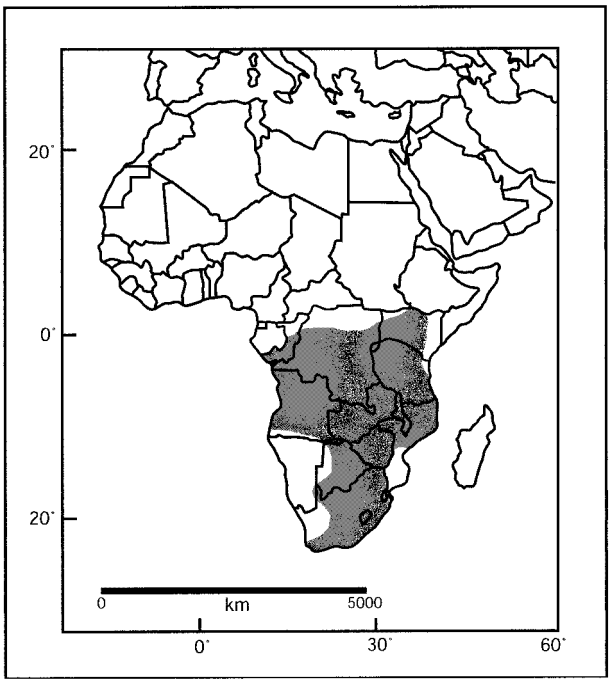

FIG. 3. Distribution of *Poecilogale albinucha* in Africa, modified from Crawford-Cabral (1989), Rowe-Rowe (1992), and Skinner and Smithers (1990).

Striped weasels have gut lengths 1.75–2.0 times their head and body lengths (Rowe-Rowe 1978b). Food passage is ca. 165 min (Rowe-Rowe 1978b).

Poecilogale albinucha has 2 well-developed perineal glands that secrete a strong-smelling oily fluid. Musk is used for defense, and is expelled when the animal is threatened (Shortridge 1934).

Gape is wide, and teeth are sharp (Kingdon 1997). Dental formula is i 3/3, c 1/1, p 2/2, m 1/1, total 28 (Skinner and Smithers 1990). The m2 is absent in *Poecilogale* (Bryant et al. 1993).

Females typically have 4 mammae (2 inguinal, 2 abdominal). Occasionally, an extra pair of inguinal mammae is present (Rowe-Rowe 1972a).

ONTOGENY AND REPRODUCTION. Mating occurs in spring or summer. Females have 1 litter per year; but if the litter is lost early, females may have a 2nd litter. Gestation lasts 30 days; *P. albinucha* does not exhibit delayed implantation (Rowe-Rowe 1978c, 1990). Young are born in a burrow. Litter size is typically 2, occasionally 3 (Rowe-Rowe 1978c).

Altricial neonates are hairless and weigh only 4 g at birth. Eyes open after 7 weeks, and young are fully mobile and weaned after 11 weeks. Canines erupt at 35 days. Animals start killing prey at 13 weeks of age and are full-grown after 20 weeks (Rowe-Rowe 1978c, 1990). Sexual maturity of both males and females is reached at 8 months (Rowe-Rowe 1978c).

ECOLOGY. The striped weasel occurs mostly in moist (>600 mm of rain yearly) habitats in South Africa (Rowe-Rowe 1972a, 1990). Individuals most often inhabit the savannahs and open country (Dorst and Dandelot 1970) and are associated with termitaries (Kingdon 1997). In KwaZulu-Natal, questionnaire surveys revealed that 75% of the observations ($n = 36$) of striped weasels occurred in grasslands, 19% in young pine plantations, and 6% in cultivated land (Rowe-Rowe 1978a).

The striped weasel is a specialist feeder on small mammals, and it eats almost exclusively rodents up to its own size (Rowe-Rowe 1978b). Although striped weasels may eat reptiles, insects, and eggs (Dorst and Dandelot 1970; Shortridge 1934), captive striped weasels, when presented with small mammals, snakes, eggs, and insects, attacked and ate only small mammals (Rowe-Rowe 1978b). Of the 12 stomachs obtained in KwaZulu-Natal, 6 were empty, and the remaining 6 contained the small mammals *Mastomys natalensis, Rhabdomys pumilio,* and *Mus minutoides* (Rowe-Rowe 1978a). Avian and mammalian prey comprise 8.3% of dry residue of food in feces (Rowe-Rowe 1978b).

The striped weasel coexists with the zorilla over most of its distribution; but *Poecilogale* is a rodent specialist, whereas *I. striatus* is more of a generalist. Nonetheless, the striped weasel is rarer where their ranges overlap (Kingdon 1977). Competition with mongooses (*Herpestes*) may be minimized by the nocturnal habits of *Poecilogale* and the diurnal habits of *Herpestes* (Kingdon 1977).

Domestic dogs (Rowe-Rowe 1990) and owls (Kingdon 1997) kill striped weasels. The only endoparasite known is a tapeworm *Taenia brachyacantha* (Round 1968). In captivity, longevity is 5–6 years (Rowe-Rowe 1992; Smithers 1971). Some captive animals die of tuberculosis of the spleen (Ansell 1960).

Striped weasels are in great demand locally by humans as they are 1 of the most frequently used animals for traditional medicine (Cunningham and Zondi 1991). Zulu people believe that wearing the skin or a portion thereof brings good luck (Rowe-Rowe 1990). Seeing a live striped weasel or inhaling the smoke from a burning skin or other parts of the animal is also believed to bring luck and protection. In certain areas of KwaZulu-Natal, parts of striped wea-

sels are used as love charms. Occasionally, rural inhabitants may hang the skins of striped weasels above their doorway to keep out rodents (Rowe-Rowe 1990).

BEHAVIOR. *Poecilogale albinucha* is mostly solitary, but pairs or small family groups may occur. Of the 36 observations in KwaZulu-Natal, 23 were single animals, 6 were pairs, 2 were groups of 3, and 5 were groups of 4. Three of the foursomes consisted of 2 adults and 2 young, whereas the other groups of 3 or 4 consisted of a single adult with young (Rowe-Rowe 1978a).

Striped weasels are mostly nocturnal, but activity may occur during the day (Rowe-Rowe 1978a). Gait is distinctive and snake-like. Striped weasels walk with the nose close to the ground and their body arched or extended. Stops are frequent, and animals may stand on their hind legs to look around (Kingdon 1997). When walking slowly, the body is carried low above the ground. When running, the back is hunched, and the animal moves with a bobbing motion. Tail is carried horizontally (Smithers 1971). Although reported to climb trees (Kingdon 1977), the striped weasel is a poor climber in captivity (Smithers 1971).

Poecilogale albinucha hunts by scent with vision being used only in the last 50 cm (Rowe-Rowe 1972b). After a prey is sighted, the striped weasel stops and then lunges at the prey. Short chases may occur; in captivity, all prey were killed within 7 min (Rowe-Rowe 1978b). *P. albinucha* enters the burrows of the prey when hunting (Dorst and Dandelot 1970).

Prey are seized by the back of the neck. Striped weasels do not shake the prey when attempting to kill (Rowe-Rowe 1978b); instead, they roll around and vigorously kick at the back of their victim, possibly dislocating the neck and immobilizing the prey. Prey may be cached for future consumption. Although most killing bites are directed at the back of the head and the neck, females may use throat bites when killing large prey. In captivity, striped weasels were unsuccessful in killing rats (*Rattus*) that were >108%, the mass of the striped weasel (Rowe-Rowe 1978b).

The minimum daily food requirements for striped weasels are 13% of its mass; but when consuming young chickens, maintenance of body mass is achieved by consuming ca. 25% of its mass (Rowe-Rowe 1978c). One striped weasel can consume 3–4 mice in a night, but surplus killing may occur (Rowe-Rowe 1972b). Small mammals <180 g are eaten head first and are usually entirely consumed (Rowe-Rowe 1978c). Occasionally, the stomach and its contents are not eaten. Head, tail, legs, and dorsal skin of large rodents typically are not eaten (Kingdon 1977).

In captivity, striped weasels eat only warm-blooded vertebrates (Rowe-Rowe 1978b). Most mammals are consumed, including shrews. Captive striped weasels killed birds (*Passer domesticus* and *Streptopelia capicola*) rapidly and easily. Birds were killed by a bite on the head without the use of forefeet to hold the bird during the killing bite. Birds were always eaten head first (Rowe-Rowe 1978b). Striped weasels in captivity did not break eggs and did not consume the contents from broken eggs (Rowe-Rowe 1978b).

In captivity, all prey were carried back and consumed at the nest box. Small prey were picked up by the back skin and lifted from the ground, whereas large prey were dragged while moving backwards (Rowe-Rowe 1978b).

Forefeet are not used to hold pieces of meat being chewed, and paws are not used for washing (grooming) but are used for scratching (Alexander and Ewer 1959). Grooming is extensive prior to sleeping (Alexander and Ewer 1959). Captive striped weasels clean their face by rubbing against cage wires, but never by using their forefeet (Rowe-Rowe 1972b). Play in captive animals may include digging or romping with other animals (Alexander and Ewer 1959). Females carry their young by the nape (Kingdon 1997).

Poecilogale albinucha is a powerful digger. Forefeet excavate the ground, and dirt is pushed backwards by kicking with the hind legs. Larger objects are pushed out of the burrows using the nose (Smithers 1971). Pairs may team up for digging burrows (Rowe-Rowe 1972b). Striped weasels burrow proficiently and excavate their own dens. Occasionally, hollow logs and rock crevices may be used as resting sites.

Defecation occurs in regular places. In captivity, defecation and urination occurred in a corner of the cage or sleeping box. Tail is raised completely vertical during defecation (Alexander and Ewer 1959). Feces may be used for scent marking (Estes 1991). Captive animals often defecate against a vertical wall and plaster their dung on the wall. In the wild, the base of trees or termitaries is often used as defecation posts. The striped weasel backs up, raises its tail, and defecates against the surface (Kingdon 1977). Tail is erected when new scents are encountered (Ansell 1960).

Striped weasels are secretive and often occupy dense habitats, and are thus unlikely to be encountered by humans (Shortridge 1934). This often limits their detection, even in areas where they are common. When surprised in the wild, striped weasels may escape by running into a hole and possibly by climbing trees (Kingdon 1977). When escape is not possible, the tail is raised and fluffed, and the animals emit a half-growl, half-shriek. Fake charges may also occur (Rowe-Rowe 1972b; Smithers 1966). If warnings fail, musk can be emitted up to 1 m (Alexander and Ewer 1959; Kingdon 1977).

Striped weasels are easy to tame (Alexander and Ewer 1959; Shortridge 1934; Smithers 1966). Adult males and females can live together in captivity, but males constantly fight, often killing one another (Rowe-Rowe 1972, 1978b, 1996). During fights between males, the animals fluff their tails, emit short and sharp aggression calls, bound on stiff legs, and perform charges that stop just before their opponent (Rowe-Rowe 1996). If this does not deter the opponent, then both males adopt positions parallel and laterally to each other. Tail is bent in front of the opponent's face, and a male may bump his opponent's face with his hips. Usually, this triggers a fight that involves biting, vigorous shaking, and emission of warning calls. If one of the opponents wants to retreat, a drawn-out release call is emitted, usually accompanied by secretion from the anal glands. Encounters terminating at this stage usually last ca. 45 s (Rowe-Rowe 1996). If no submission occurs, then biting is directed at the cheeks or lower jaws. Animals reaching this stage rapidly roll over laterally, but no sound is emitted. Fights reaching these levels are very intense and may last >30 s (Rowe-Rowe 1996).

Females tolerate males only when sexually receptive (Rowe-Rowe 1978a). Copulation lasts 60–80 min (Rowe-Rowe 1978a), and a minimum of 3 copulations may occur in a 24-h period (Rowe-Rowe 1978c). Females rear their young without the assistance of males (Rowe-Rowe 1996).

Striped weasels drink by lapping (Rowe-Rowe 1978c). In very hot weather, captive striped weasels may dip their heads and neck in water after drinking (Rowe-Rowe 1978c). Animals curl up with tail over face when sleeping (Smithers 1971).

Adult striped weasels produce 6 calls: 3 threat calls, 2 defense calls, and 1 greeting call (Channing and Rowe-Rowe 1977). Threat calls include a warning, an aggression, and a transition warning–aggression call. The warning call is the most common sound emitted by *P. albinucha* and is produced during intra- or interspecific encounters by both sexes. Aggression calls precede the actual fighting, and the transition call is used only occasionally.

Defense calls include submission and release calls. Submission calls may be emitted before fighting if one male recognizes the dominance of the other male. Nonreceptive females courted by males may also use this call. The release call is emitted by animals losing fights and by both sexes in the wild when held in a trap or cornered. Release calls are usually accompanied by secretion of musk from the anal glands (Channing and Rowe-Rowe 1977).

Males emit a greeting call toward females, usually prior to mating. The young of both sexes may also emit this call to their mother (Channing and Rowe-Rowe 1977).

In captivity, young striped weasels emit 3 calls: neonate distress (emitted when separated from the mother from birth until 4 weeks of age), contact (made by blind young when the mother enters the nest box), and juvenile distress (used from 2 to 4 weeks after opening of eyes) calls (Channing and Rowe-Rowe 1977).

CONSERVATION STATUS. The striped weasel is uncommon, but not endangered, in South Africa. It is listed in the South African Red Data Book as rare but is not listed by the International Union for the Conservation of Nature (Rowe-Rowe 1990). Because of low densities and association with grassland habitats that are increasingly altered by humans (i.e., agriculture, intensive grazing), conservation of the striped weasel may become a problem (Rowe-Rowe 1990). In South Africa the striped weasel is protected throughout the former Cape Province, but it is only protected inside nature reserves in KwaZulu-Natal, former Transvaal, and Free State (Rowe-Rowe 1990). The genetics of *P. albinucha* are not known.

REMARKS. Other vernacular names for the striped weasel include African weasel, African striped weasel, white-naped wea-

sel, snake mongoose, snake polecat, snake muishond, striped weasel, slangmuishond (Afrikaans), iNyengelezi (Zulu), Kappen-Iltis (German), belette rayée (French), and belette africaine (French). Other local names are given in Kingdon (1977).

The etymological origin of *Poecilogale* is the Greek *Poecilo* meaning "many-colored" and the Greek *gale* meaning "weasel, or cat" (Borror 1960). The specific name *albinucha* is from the Latin *albi* meaning "white" and from the middle Latin *nucha* meaning "nape" (Borror 1960).

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