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Mydaus marchei.

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Mydaus marchei Huet, 1887

Palawan Stink Badger

Mydaus marchei Huet, 1887:149. Type locality "L'île Palaouan," = Philippine Islands, Palawan (vide Lawrence 1939).
Mydaus schadenbergii Jentink, 1895:46. Type locality "Calamianes-Islands," = Calamian Islands.
Suillotaxus marchei: Lawrence, 1939:65. Name combination.

CONTEXT AND CONTENT. Order Carnivora, family Mephitidae (Dragoo and Honeycutt 1997). The species is monotypic.

DIAGNOSIS. *Mydaus marchei* (Fig. 1) can be distinguished from *M. javanensis*, the only other species in the genus, by its smaller size (length of body, 320–460 mm; body mass, 2.5 kg), smaller ears, shorter tail (15–45 mm), and larger teeth (Lawrence 1939; Long and Killingley 1983). *M. marchei* also has brown to black upperparts and brown underparts, whereas *M. javanensis* has blackish fur in both regions of the body (Grimwood 1976; Hwang and Larivière 2003; Jentink 1895). *M. marchei* has a scattering of white or silvery hairs on the back and sometimes on the head, whereas *M. javanensis* may have a complete or partial narrow white stripe down the back onto the tail and a white crown (Davis 1961; Long and Killingley 1983). Fur of *M. marchei* is longer and softer than that of *M. javanensis* (Jentink 1895).

GENERAL CHARACTERS. *Mydaus marchei* has a pointed face, a slightly elongated and mobile snout, short and stout limbs, plantigrade feet, strong recurved claws on front feet, and well-developed anal scent glands (Grimwood 1976; Kruuk 2000). Ears and eyes are small. Earflap is vestigial and nearly buried in flesh of head (Grimwood 1976). Fur on nape stands erect. Tail is "square-cut" and protrudes from a prominent naked and pale anal region (Grimwood 1976). External measurements (in mm) of 1 subadult male are: total length, 336; length of tail, 25; length of hind foot, 59 (Long and Killingley 1983). Width of forefoot of 1 individual (sex unknown) was 32 mm (Kruuk 2000). Body mass (in g) of 2 specimens (sex unknown) was 843.5 and 909.1 (Long and Killingley 1983). One specimen from Palawan weighed 2,490 g (Grimwood 1976).

Skull (Fig. 2) has a recurved coronoid process, an elongate rostrum, and large infraorbital canal (Long and Killingley 1983). M1 is large and P4 has a well-developed hypocone (Long and Killingley 1983). Skull measurements (in mm) for 1 male from Busuanga Island are: greatest length of skull, 70.9; length of palate, 44.9; zygomatic breadth, 35.2; interorbital breadth, 17.7; length of maxillary toothrow, 21.8 (Long and Killingley 1983). Lower jaw measures 46 mm (Jentink 1895).

DISTRIBUTION. *Mydaus marchei* is found on Busuanga, Calauit, and Palawan Islands in the Philippines (Heaney et al. 1998; Fig. 3). *M. marchei* may occur on other islands within the Palawan faunal region. No fossils are known.

FORM AND FUNCTION. *Mydaus marchei* has a rostrally compressed brain. Olfactory bulbs are large, neocortex is not expanded, and rhinal fissure is high, suggesting an emphasis on olfaction and lack of specialization for visual perception (Radinsky 1973). Palawan stink badgers have 2 inguinal and 4 pectoral mammae (Long and Killingley 1983). Dental formula is i 3/3, c 1/1, p 3/4, m 1/1, total 34 (Lawrence 1939).

ECOLOGY. Litter size is 2 or 3, and young are probably reared in burrows (Long and Killingley 1983). *M. marchei* occupies grassland-shrub, natural damp grassland, open damp soil along streams, rice paddies, and 2nd-growth forest (Hoogstraal et al. 1951; Kruuk 2000; Long and Killingley 1983; Rabor 1986). *M. marchei* forages extensively in rice paddies and other damp open areas, preferring rice paddies close to shrub areas to those surrounded by other rice fields (Kruuk 2000). *M. marchei* makes extensive use of shrub for shelter (Kruuk 2000). Palawan stink badgers frequent roads and paths while foraging and often leave distinctive tracks with trailing scent; thus anal glands may be used for purposes other than defense (Grimwood 1976).

Mydaus marchei consumes small freshwater crabs and various insects, including mole crickets (*Grillotalpa*) and small beetles (Kruuk 2000). It is sometimes associated with the short-clawed otter (*Amblonyx cinereus*) because both species forage on crabs in similar habitat (Kruuk 2000). Common palm civets (*Paradoxurus hermaphroditus*), leopard cats (*Prionailurus bengalensis*), and Malayan civets (*Viverra tangalunga*) may kill stink badgers (Grimwood 1976). *M. marchei* may harbor the nematode *Blattophila* (Long and Killingley 1983).

BEHAVIOR. *Mydaus marchei* has been described as nocturnal (Kruuk 2000), and as active both day and night (Grimwood 1976). Walk is ponderous, but an alarmed Palawan stink badger maintained a steady trot for 91 m (Grimwood 1976). *M. marchei* walks with left and right feet quite far apart, with hind feet falling into steps of front feet (Kruuk 2000).

When foraging, *M. marchei* meanders slowly, grubbing on the surface or in the top layer of soil with its piglike snout, occasionally using its long claws to scratch up small prey (Kruuk 2000). Tracks of a foraging stink badger were ca. 2 km long and connected an estimated 150 sites where the animal had dug small pits (1–6 cm deep) to catch invertebrates (Kruuk 2000). Stink badgers will dig in cultivated areas (Kruuk 2000). One animal was observed digging a den, in <5 min, in a dam (bund) between rice paddies (Kruuk 2000).

Mydaus marchei is not particularly aggressive (Grimwood 1976; Kruuk 2000). When confronted, it draws back its lips in a snarl and shows its heavy teeth, but appears reluctant to bite (Grimwood 1976). When approached, *M. marchei* foot stomps by raising each front foot ca. 5 cm off the ground and bringing each down with an audible sound (Grimwood 1976). *M. marchei* also responded to human presence by freezing and then wandering off to continue foraging (Kruuk 2000). One individual feigned death when 1st touched and allowed itself to be carried until finally squirting

FIG. 1. Photograph of a female *Mydaus marchei* near Aborlan, Palawan Island. Used with permission of the photographer H. Kruuk.

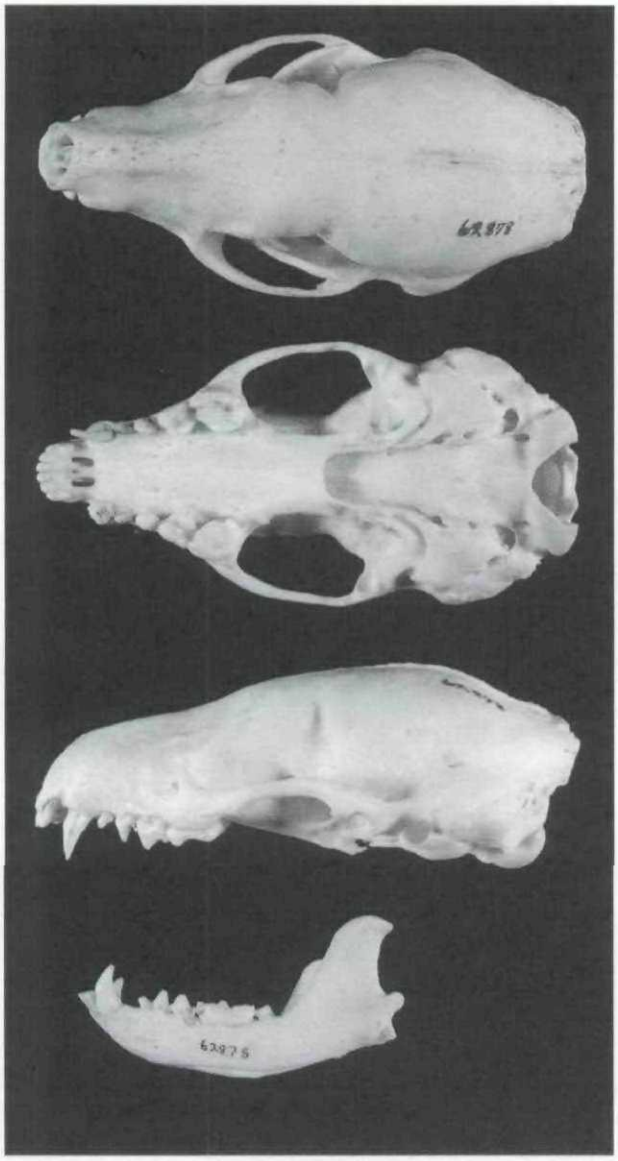

FIG. 2. Dorsal, ventral, and lateral views of cranium and lateral view of mandible of an adult female *Mydaus marchei* (Field Museum of Natural History 62878) from Palawan Island, Philippines. Greatest length of cranium is 81.7 mm.

a jet of yellowish fluid from its anal glands (Grimwood 1976). Anal scent is pungent, but not offensive, smelling faintly of almonds and stink ants (Grimwood 1976).

CONSERVATION STATUS. *Mydaus marchei* is geographically restricted and moderately common at the local level (Heaney et al. 1998; Kruuk 2000). The International Union for the Conservation of Nature and Natural Resources listed the species as vulnerable in 2002 based on an assessment made in 1996, although this status was questioned (Kruuk 2000).

REMARKS. *Mydaus marchei* was traditionally placed in the Mustelidae (Wozencraft 1993) based on morphological and fossil evidence (Long 1978, 1981; Petter 1971; Pocock 1921). Other authors placed stink badgers close to skunks (Bryant et al. 1993; Radinksy 1973; Schmidt-Kittler 1981). Genetic analyses suggest that stink badgers should be placed in the family Mephitidae, along with skunks of the genera *Conepatus*, *Mephitis*, and *Spilogale* (Dragoo and Honeycutt 1997). *Suillotaxus* was proposed as a separate genus for *M. marchei* (Lawrence 1939) and is now considered a subgenus (Long 1978, 1981).

Mydaus is from the Greek *myda* meaning wet, damp, or moldy, and the Greek *us* meaning substance (Borror 1960); this

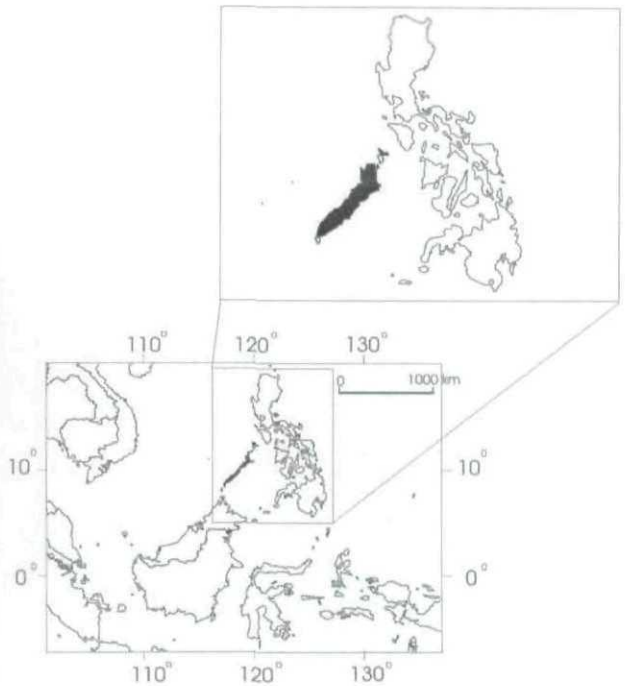

FIG. 3. Geographic distribution of *Mydaus marchei* in the Philippine Islands.

likely refers to the smell of stink badgers. The specific name *marchei* refers to M. Marche, who 1st mentioned the species. The indigenous common name for *M. marchei* is pantot (Kruuk 2000).

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