

An orange-coloured Collared Mongoose *Herpestes semitorquatus* from Aceh, Sumatra, Indonesia

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Abstract

Two camera-trap photographs from central Aceh in July 2012 confirm Collared Mongoose *Herpestes semitorquatus* occurrence in the north of Sumatra, Indonesia, and comprise the first undoubted record of the species on Sumatra since 1917. They fit with the few previous Sumatran records in being of an orange-red animal, and with the three previous Sumatran records (one provisional) with accurate altitude information in being from the lowlands. More records from the island are necessary to determine Collared Mongoose's conservation status there.

Keywords: camera-trap, colour variant, extension of known range, lowland forest, rediscovery

Garangan Ekor Panjang *Herpestes semitorquatus* oranye berwarna merah dari Aceh, Sumatra, Indonesia

Abstrak

Dua foto hasil kamera-trap dari bagian tengah Aceh pada bulan Juli 2012 memberikan konfirmasi keberadaan spesies Garangan Ekor Panjang *Herpestes semitorquatus* di Sumatra, Indonesia sebagai catatan valid pertama sejak catatan terakhir pada tahun 1917. Catatan yang disertai foto ini sesuai dengan beberapa laporan sebelumnya mengenai keberadaan satwa berwarna merah-oranye ini. Bersama dengan tiga catatan sebelumnya (satu catatan sementara) memberikan informasi akurat keberadaannya di dataran rendah. Data-data tambahan lain dari pulau Sumatera diperlukan untuk menentukan status konservasinya di pulau ini.

Introduction

Three species of mongoose *Herpestes* are known from the Indonesian island of Sumatra, but much remains to be clarified about the distribution, abundance and natural history of each species there: Short-tailed Mongoose *H. brachyurus*, Collared Mongoose *H. semitorquatus* and Small Asian Mongoose *H. javanicus*. This paper aims to clarify the status of *H. semitorquatus* on Sumatra.

The three species are usually readily distinguishable in the hand, but under field conditions (including many camera-trap photographs) records frequently have to be left as unidentified mongooses. This difficulty of field identification contributes directly to the poor understanding of each species's status on the island. *Herpestes brachyurus* and *H. semitorquatus* are larger than *H. javanicus*, with head-and-body lengths (HB) of up to 0.45 m. The two differ in the length of the tail which is less than 55% of HB in *H. brachyurus* and over 60% of HB in *H. semitorquatus*, by the pale neck-stripe invariably shown by *H. semitorquatus* but never by the other species, and by the warmer brown overall colour of *H. semitorquatus* compared with the blackish-brown coloration with orange speckling in *H. brachyurus* (Payne *et al.* 1985). *Herpestes javanicus* is a small mongoose of HB about 0.25–0.41 m, a tail of 60–80% of HB, and varying in colour but never showing a light stripe on the neck (Corbet & Hill 1992).

Of these three species on Sumatra, *H. brachyurus* has its status best documented, with van Strien (1996) and Jennings & Veron (2011) tracing records widely across the island. There seem to be only two historical locality records of *H. semitorquatus*. Two animals (including the holotype of *H. s. uniformis*)

were collected from Ayer Taman in Ophir District in West Sumatra adjacent to Gunung Paseman on 4 May 1917 (Robinson & Kloss 1919). Jentink (1894) documented one specimen from Soekadana, South Sumatra, which he had originally assumed to be from Soekadana in west Borneo, but re-allocated to Sumatra because the collector was based there. It is indeed unlikely that a collector sending specimens from a place of the same name as his base but on another island would not have made this explicit at the time, supporting Jentink's (1894) alteration. There may be only one Sumatran record, and that provisional, of *H. semitorquatus* since 1917: one camera-trapped in the Harapan Rainforest, Jambi province, east Sumatra, in 2010 (Ross *et al.* 2012).

Herpestes javanicus is also known from few records on Sumatra. Sody (1949) described five specimens from northern Sumatra as the new subspecies *H. j. tjerapai*. Frechkopf (1931) provided a brief description of a small mongoose from Aceh, which conforms to *H. javanicus* in size, and as which he identified it. Jennings & Veron (2011) traced in total nine *H. javanicus* specimens from Sumatra and mapped four localities on the island, all in the northernmost fifth; they speculated that the species might not be native there. Sody (1949: 164) wrote that "probably the occurrence of this animal in Sumatra is restricted to Atjeh [Aceh], where, most certainly, it is not uncommon". Hagen (1890) reported *H. javanicus* to be very common in Aceh, specifically mentioning, however, that it was not known from Deli (Medan) or anywhere else south of Aceh. Its current status in Sumatra is highly unclear.

Anderson (1875) described a new species of mongoose, *H. rafflesii*, from Sumatra, which Corbet & Hill (1992), van

Strien (2001) and Wozencraft (2005) all ascribed to *H. javanicus*. However, Wells (1989: 90) wrote that “pelage colour differs from all other mongooses seen in this study [of, primarily, peninsular Malaysian mongooses] and skull condition is that of a young juvenile. However, long, coarse body hair and conspicuously down-curved rather than level dorsal profile of the cranium remove it from the *auropunctatus-javanicus* complex. Chasen (1940) probably correctly guessed it to be *H. semitorquatus*”. In fact, Chasen’s (1940: 140) view seems to have been more than a guess: “according to an old note of mine there is an old skin of an immature example of this form from Sumatra in the British Museum labelled as the type of ‘*H. rafflesii* (sic)’, but I cannot make out that the name was ever published”. Anderson (1875: 282) characterised the specimen as “uniformly rich ferruginous, paler on the head and feet. The hairs with no trace of annulation, and in this respect differing from all other Asiatic mongooses [sic]... it is a small animal... a little larger than a ferret [*Mustela furo*], and has a tail as long as its body”. All these characters, save overall size (which might be smaller than fully grown, reflecting its immaturity) fit *H. semitorquatus*. Notably, Robinson & Kloss (1919) diagnosed the new race of *H. semitorquatus* that they named from Sumatra, *H. s. uniformis*, because it “differs from the typical form from Borneo in having the whole upper surface uniform with no trace of speckling caused by annulation of the hairs, except on the crown”. Thus, it seems distinctly possible that the unique type of *H. rafflesii* represents another Sumatran specimen of *H. semitorquatus*, although without having examined the specimen, which is apparently in the Natural History Museum, U.K. (BMNH 1855.12.24.225; Wells 1989), directly, it is not possible to say.

Recent camera-trap records from the islands of Borneo and Sumatra show mongooses exhibiting variably rich reddish-orange pelage; the extremes are startlingly different from the warm-brown colour of *H. semitorquatus* generally found on Borneo (Ross *et al.* 2012). These animals differ from *H. brachyurus* and resemble *H. semitorquatus* in both pelage pattern (pale neck-stripe) and structure (specifically, tail length proportionate to HB). In Sabah, northern Borneo, this morph is rare, comprising only about 5% of *H. semitorquatus* records (Ross *et al.* 2012). Ross *et al.* (2012) presented only one camera-trap record of an orange-coloured mongoose from Sumatra, from Harapan Rainforest. This animal was also probably *H. semitorquatus*, based on structure and pelage colour, but viewing angle prevented determination of whether it had a pale neck-stripe. This individual, and the three historical Sumatran specimens of *H. semitorquatus* described above and confirmed to be this species, are all orange-red in colour (Ross *et al.* 2012). Perhaps the only historical source to discuss orange coloration in Sundaic mongooses, Schwarz (1947), is difficult to interpret because he considered *H. semitorquatus* conspecific with *H. brachyurus*. He seems to have seen no *H. semitorquatus* specimens from Sumatra, and in speaking of “the great rarity of the red mutant”, mentioned explicitly only one “red phase” animal (from the Sungai [= River] Kapuas, in West Kalimantan, Borneo; National Museum of Natural History specimen 142340; p. 80). This is presumably similar in tone to the bright orange animals discussed by Ross *et al.* (2012), although when this

specimen was originally adverted, Lyon (1907) made no reference to its overall colour.

Record

During a brief training workshop for local rangers in protected forest near Jantho Wildlife Reserve, central Aceh, three camera-traps were set for a five-day period, 3–7 July 2012, along a small river in primary forest at about 280 m altitude (as recorded by a GPS Garmin 60Csx receiver), at 5°19'38.4"N, 95°35'26.0"E (datum of WGS84; Fig. 1). Single images that show an orange-coloured mongoose were made at each of 16h11 on 5 July and 17h45 on 7 July (Fig. 2). It is unknown whether the same individual appears in both pictures. They clearly show the chief feature diagnostic of *H. semitorquatus* among mongooses of the Greater Sundas, the pale neck-stripe. Moreover, the tail looks too long for *H. brachyurus* (although its tip is not visible in the picture) and neither *H. brachyurus* nor *H. javanicus* is known to occur, anywhere in its range, in this bright orange pelage. Indeed, Sody (1949: 164) specifically noted that in *H. j. tjerapai* of Aceh “there is no trace of red or brown in the fur”; we do not know whether this is representative for all Sumatran specimens of the species.

The local rangers who took part in this camera-trapping workshop were unfamiliar with this animal, identifying it as a ‘musang’ (civet) and not ‘bambun’ (mongoose). There is, however, often confusion between the various long-bodied small carnivores in Sumatra, and ‘musang’ is a common generic term.

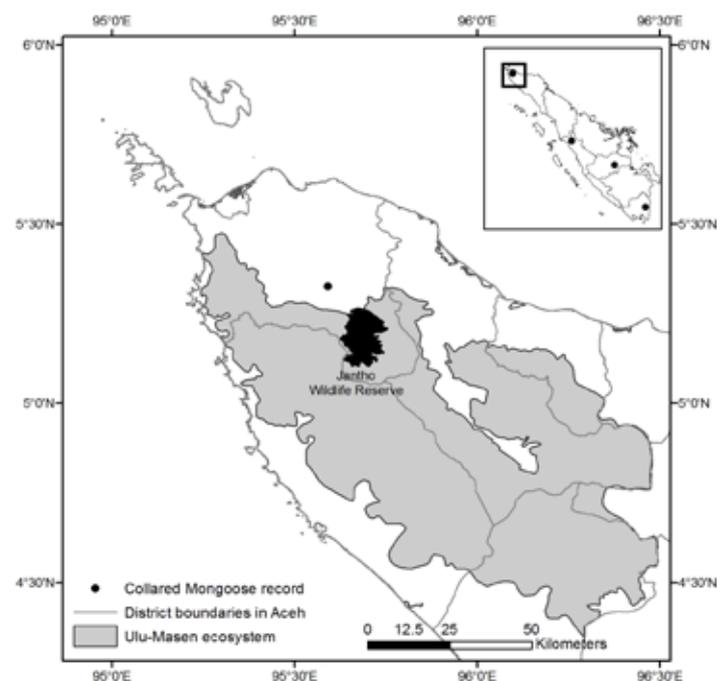


Fig. 1. Location of Jantho Wildlife Reserve, Aceh province, and the four records of Collared Mongoose *Herpestes semitorquatus* (one provisionally identified) from Sumatra, Indonesia.

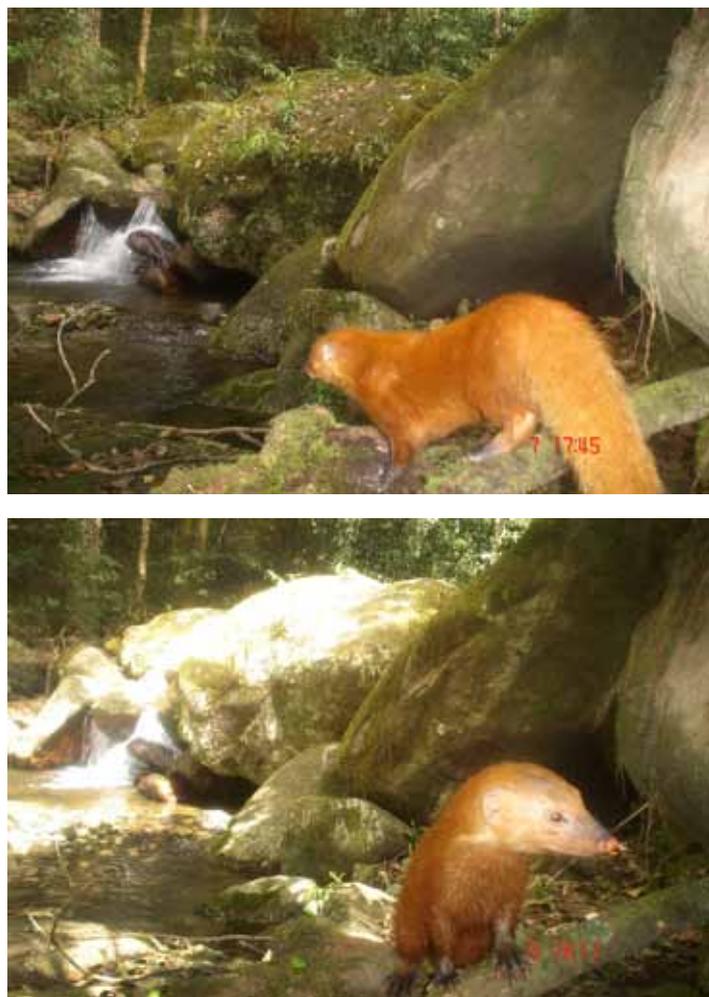


Fig. 2. The two images of the orange-coloured Collared Mongoose *Herpestes semitorquatus* from near the Jantho Wildlife Reserve, central Aceh province, Sumatra, Indonesia, in July 2012.

Discussion

The biological significance of the rarity of *H. semitorquatus* records from Sumatra is difficult to assess, given the limited recent publication of survey information using methods likely to generate records (i.e., records other than those traced here may exist), and the caution required in identifying field records of mongooses in Sumatra to species. Extensive camera-trapping in Kerinci Seblat National Park, in west Sumatra's Barisan Mountains and not far (about 400 km) from the two specimens reported by Robinson & Kloss (1919), recorded no mongooses at all (Holden 2006). Given that in Kerinci Seblat NP camera-traps were sometimes positioned to capture small carnivores (and recorded them many times), and that similar camera-trapping programmes in Cambodia regularly capture Crab-eating Mongoose *H. urva* (Holden & Neang 2009), a fairly similar-sized species, it seems likely that *H. semitorquatus* is either rare in or absent from the surveyed parts of Kerinci Seblat NP. The fauna of Sumatra remains remarkably poorly known, and *H. semitorquatus* is just one of a number of species for which its basic conservation status on the island remains highly unclear (e.g., among species endemic to the island, Sumatran Mountain

Muntjac *Muntiacus montanus*, Hoogerwerf's Pheasant *Lophura (inornata) hoogerwerfi*, Sumatran Ground Cuckoo *Carpococcyx viridis*, Schneider's Pitta *Pitta schneideri*, Rück's Blue Flycatcher *Cyornis ruckii*, Sumatran Cochoa *Cochoa beccarii* and Black-and-white Laughingthrush *Garrulax bicolor*; Hurrell 1989, BirdLife International 2001, Zetra *et al.* 2002, Sözer *et al.* 2006, Brickle 2007, Shepherd 2007, Timmins *et al.* 2008), even to the extent of uncertainty whether some quite distinctive species occur on the island at all (e.g.: Great Slaty Woodpecker *Mulleripicus pulverulentus* and Fishing Cat *Prionailurus viverrinus*; Duckworth *et al.* 2009, Lammertink *et al.* 2009).

All Sumatran *H. semitorquatus* records with altitude information are from the lowlands: the two specimens of Robinson & Kloss (1919) were from 300 m altitude, the Harapan photograph from 70 m and the Jantho WR records at 280 m. Higher elevations characterise Kerinci Seblat NP, and might explain the lack of photographs of *H. semitorquatus* from there. Too little of the camera-trapping reported in Holden (2006) took place below 300 m to comment on the species's status in the lowlands. By contrast, both *H. semitorquatus* and *H. brachyurus* in Borneo live up to well over 1,000 m (Payne *et al.* 1985), with specific locality records of *H. semitorquatus* from Bario, Sarawak, at 3,700 feet (about 1,200 m; Davis 1958), and from Gunung (= Mt) Dulit at 4,000 feet (about 1,350 m; Hose 1893). Whether there is a real difference in altitudinal use between Sumatra and Borneo, or whether the few Sumatran records all by chance are in the lowlands, is not yet clear.

As well as being apparently the first certain record of *H. semitorquatus* on Sumatra since 1917, the present Jantho record, roughly 1,000 km from the Harapan Rainforest, is a considerable extension of the known range based on the *H. semitorquatus* records here assembled. Together with the three previous localities (taking the Harapan record as valid), it suggests that the species occurs at least locally throughout the island.

So far, all five *H. semitorquatus* specimens and photo-records from Sumatra are orange individuals (see above), suggesting a prevalence of this form very different from that in Sabah. However, with so few records of the species from Sumatra to date, further records are needed to confirm the ratio of orange to brown animals on the island (if the latter indeed occur at all).

Further records of *H. semitorquatus* with precise altitude from Sumatra will increase understanding of its altitudinal distribution there: if it is restricted to lowland forest, it may be highly threatened on the island, because these altitudes are being particularly rapidly deforested (Jepson *et al.* 2001, Gaveau *et al.* 2009, 2012). It would also be useful to determine conclusively the identity of *H. rafflesii*, and in the process reassess various other museum specimens of *Herpestes* from Sumatra to check that they have been assigned to the correct species.

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