

An observation of Malay Weasel *Mustela nudipes* in Gunung Mulu National Park (Sarawak, Malaysia) with a comment on discriminating this species from sympatric orange mongooses *Herpestes*

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Abstract

Malay Weasel *Mustela nudipes*, restricted to Sundaic Southeast Asia, is currently not considered globally threatened. Little is known about its abundance, ecology and behaviour, and it is typically recorded rather infrequently across its range. A 20-second observation from Gunung Mulu National Park, Sarawak, on the island of Borneo is here used to speculate on the species's behaviour. Physical and behavioural characteristics to differentiate Malay Weasel from sympatric orange-coloured mongooses *Herpestes*, particularly involving suboptimal field observations or camera-trap photographs, are suggested.

Keywords: behaviour, diagnostic criteria, field identification, locomotion, morphology, Mustelidae

Satu pemerhatian terhadap Pulasan Tanah *Mustela nudipes* di Taman Negara Gunung Mulu (Sarawak, Malaysia) dengan ulasan mengenai diskriminasi spesies ini dari cerpelai oren *Herpestes* yang simpatrik

Abstrak

Pulasan Tanah *Mustela nudipes*, terhad di Sunda Asia Tenggara, tidak dianggap terancam. Terdapat sedikit maklumat yang diketahui tentang bilangan (abundance), ekologi dan tingkah laku, dan ia biasanya tidak direkodkan dengan kerap dikawasan taburannya. Satu pemerhatian selama 20 saat di Taman Negara Gunung Mulu, Sarawak di pulau Borneo digunakan untuk memberikan tanggapan mengenai tingkah laku spesies ini. Ciri-ciri fizikal dan tingkah laku untuk membezakan Pulasan Tanah daripada cerpelai oren *Herpestes* yang simpatrik, terutamanya yang melibatkan pemerhatian bidang suboptimal atau gambar kamera-perangkap adalah disyorkan.

Malay Weasel *Mustela nudipes* is restricted to Sundaic Southeast Asia. Duckworth *et al.* (2006) collated records of the species and found no site where it was commonly seen. They noted only one camera-trap record, despite many studies in areas known to host the species. Ross *et al.* (2012) documented orange mongooses *Herpestes* within Malay Weasel's geographical range, finding that these confuse at least some observers. Observations of Malay Weasel that detail the basis for identification as that species are now therefore valuable. Some previous observations may have been in error, but for sight records without photographs, there is now no way of determining which ones are reliable.

We observed a Malay Weasel less than an hour before sunset (sunset = 18h12) on 30 May 2010 in the dipterocarp rainforest undergrowth of Gunung Mulu National Park (Sarawak, Malaysia, Borneo). This observation occurred at about 130 m elevation, within 1½ km of the bridge crossing the Melinau River near Camp 5 (which is at 4°11'53"N, 114°55'55"E) on the northeast side of Melinau Gorge and south-facing slope of Mount Api in the general vicinity of M. Meredith's reported 1988 observation (in Duckworth *et al.* 2006). The sighting lasted roughly 20 seconds, during which time the animal's thick tail with flamboyant yellow-white tip was observed held high, contrasting with its orange-brown body. After breaking cover within 10 m of us, the animal moved away from us to one side of the trail in a zig-zag pattern amidst the extensive, open shrub layer, which appeared

to consist in part of tree seedlings establishing post-disturbance. The animal continued in this manner with its tail held up until disappearing from view.

Despite the recent evidence that Malay Weasel and sympatric orange-coloured mongooses *Herpestes* can be confused, and our lack of awareness about such mongooses' existence at the time of this observation, we are confident that this animal was indeed a Malay Weasel, for several reasons. The animal's initial close proximity to us allowed a clear albeit fleeting lateral view of it, its thick tail arching high in rooster-like fashion. Conversely, Bornean mongooses have markedly narrower tails, which taper gradually from the base to the tip (in contrast to the animal we observed) and that often trail lower than their posterior (AJG pers. obs.; Ross *et al.* 2012: Figs 1–5). Second, although the animal moved away from us, the forest gap allowed for a largely unobstructed view of its movements and the yellow-white tip of its tail, which contrasted sharply in the fading light. Sundaic mongooses have not been reported with starkly dichromatic tails (they generally appear more or less uniform with the animal's body colour, if not slightly paler); however, future records may reveal exceptions. Third, the animal's movements were decidedly weasel-like in their characteristic 'stop-start' bounding, a trait apparently unique to *Mustela* among mustelids (Taylor 1989, Schutz & Guralnick 2007), and which we have never observed, nor are aware of others observing, in Asian mongooses.

The orange-brown fur of Malay Weasel, contrasting with

a bright yellow or pale tip to the tail, may represent warning coloration (Banks 1980), or, when accentuated by quick changes in direction, attempts to confuse possible predators. We are unsure if the 'zigzagging' we witnessed was hunting or escape behaviour. As with the 'stop-start' motion, we are not aware of 'zigzagging' having been recorded among Asian mongooses, but it is known in weasels. Zuberogitia *et al.* (2006) observed American Minks *M. vison* moving through dense cover in Spain "carefully within bramble [*Rubus*] thickets in either a straight line or zigzagging, with the nose held close to the ground" (p. 310) and described a "zigzag" pattern used by these Minks when hunting along a river bank. Additionally, AJG has witnessed a Long-tailed Weasel *M. frenata* moving similarly in U.S.A. while actively foraging in a Utah Prairie-dog *Cynomys parvidens* town.

The reliability of field characters potentially distinguishing Malay Weasel from orange mongooses needs confirmation across age and sex classes, states of moult and behaviour, and range and habitats occupied. Because typical past sighting records of Malay Weasel are now open to question (people cannot explicitly exclude during identification the forms that they do not know exist), future records or revalidations of former ones containing apparently diagnostic characters (physical, vocal or behavioural) observed warrant publication, as for other species long-considered difficult to identify, or for any species outside its accepted range (e.g. Giordano *et al.* 2011). With increased understanding of which characters are diagnostic, these records can be subsequently reviewed. As the world's fauna is further studied, other novel challenges in small carnivore field-identification will doubtless emerge. Sighting records preceding such understanding will always remain challenging to assess retrospectively, so objective evidence (photographs, sound-recordings and specimens) is preferred whenever possible. But, unless camera-trapping techniques can be adapted to detect Malay Weasels effectively, sight-records may be more important in clarifying the distribution and habitat use of this species than for many other small carnivores. As in our case, these records are often incidental to formal surveys, so Malay Weasel runs the risk of remaining underreported.

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