

Records of Siberian Weasel *Mustela sibirica* and Yellow-bellied Weasel *M. kathiah* from Makalu–Barun National Park, Nepal

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Abstract

Two species from family Mustelidae rarely recorded in Nepal, Siberian Weasel *Mustela sibirica* and Yellow-bellied Weasel *M. kathiah*, were recorded for the first time in the Makalu–Barun National Park in eastern Nepal during a field survey in 2009–2010. This is probably the first photograph or video record of each species in the country.

Keywords: camera-trapping, Data Deficient, Least Concern, rhododendron

मकालु-बरुण राष्ट्रिय निकुन्ज, नेपालबाट साइबेरियाली मल्सांप्रो (*Mustela sibirica*) र पितोदर मल्सांप्रोको (*Mustela kathiah*) रेकर्ड

सारांश

नेपालमा बिरलै भेटिने मुस्टेलिडे (Mustelidae) परिवारका दुई मल्सांप्रो प्रजातिहरू, साइबेरियाली मल्सांप्रो (*Mustela sibirica*) र पितोदर मल्सांप्रो (*Mustela kathiah*), मकालु-बरुण राष्ट्रिय निकुन्जभित्र २००९-२०१० तिर गरिएको अध्ययनको क्रममा पहिलो चोटी भेटिएका छन्। यी भिडिओहरू सम्भवतः नेपालमै यिनको पहिलो रेकर्ड हो।

Introduction

Mustela is the largest genus in the family Mustelidae, treated by different authors as containing 14–17 species (Corbet 1978, Corbet & Hill 1980, 1992, Abramov 2000, Macdonald 2001, Wozencraft 2005). Five species, namely Stoat ('Ermine' in North America) *M. erminea*, Siberian Weasel *M. sibirica*, Yellow-bellied Weasel *M. kathiah*, Mountain Weasel *M. altaica* and Stripe-backed Weasel *M. strigidorsa* have been recorded from Nepal (Baral & Shah 2008), although Abramov *et al.* (2008) considered that there were no acceptable records of Stripe-backed Weasel from the country. This paper discusses the first records of Siberian Weasel and Yellow-bellied Weasel from the Makalu–Barun National Park in eastern Nepal. Both species are poorly known in the country (Jnawali *et al.* 2011). Among the carnivores in Nepal, weasels are the most neglected as far as scientific studies are concerned. There have been no studies exclusively targeted to weasels in the country, a situation typical in South and South-east Asia.

Survey area and methods

Makalu–Barun NP covers 1,500 km², with 830 km² of buffer zone where about 40,000 subsistence agriculturalists reside under the remit of 12 Village Development Committees (VDCs; Zomer *et al.* 2001). Average annual precipitation is 4,000 mm. This protected area exhibits a high diversity of vegetation types: tropical Sal *Shorea robusta* forest below 1,000 m altitude; subtropical *Schima–Castanopsis* forests between 1,000 and 2,000 m; temperate broadleaf forests between 2,000 and 3,000 m; subalpine conifer forest with stands of Himalayan Birch *Betula utilis* and *Rhododendron* between 3,000 and 4,000 m; and alpine pastures above 4,000 m with juniper *Juniperus*, aromatic herbs and dwarf rhododendron *Rhododendron* (Zomer *et al.* 2001).

Camera-trapping was the primary method during a field survey in 2009–2010, with sign surveys also conducted. Twenty-one body-heat sensor camera-traps were placed on trails. Northern Clouded Leopard *Neofelis nebulosa* was the main target species, so camera-traps were mounted on trees at a height of 30–60 cm (Ghimirey *et al.* 2012). The units were operated for the full 24 hour cycle except for those cameras (two units) used in movie mode (for only 20 days in total): these ran in daylight only, because there was no light back-up for the night. Lures or baits were not used during most of the survey, but dried meat was used for a week at one site where apparent Yellow-throated Marten *Martes flavigula* faeces were recorded. Locations are given to the datum of WGS84.

Observations

Siberian Weasel and Yellow-bellied Weasel were camera-trapped once each, in 1,184 trap-nights (Fig. 1). Both records were made with the two cameras in movie mode, during daylight, with no precise time recorded.

A Siberian Weasel was camera-trapped on 15 November 2009 inside Makalu–Barun NP at 27°48'20.58"N, 87°15'51.72"E at a recorded altitude of 3,183 m. The movie was taken in subalpine grassland with scattered rhododendron

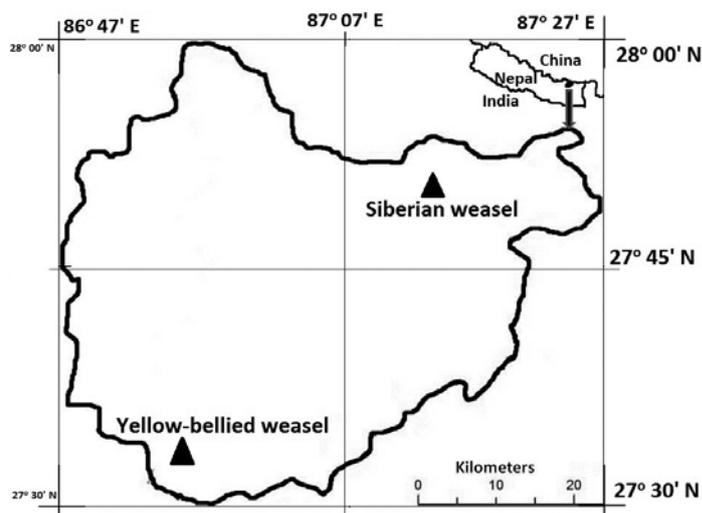


Fig. 1. Makalu–Barun National Park, Nepal, with camera-trap locations of Siberian Weasel *Mustela sibirica* and Yellow-bellied Weasel *M. kathiah*.

trees (locally called 'kurlingo'; a white-flowered species). We also recorded a Yellow-throated Marten pair at the same log where the weasel was captured. Pocock (1941) said that Siberian Weasel occurs only above 3,000 m in Nepal, in accord with this record. The area is within the Saldim valley, a strict nature reserve. The area is undisturbed during most of the year, but some herders keep their cattle and sheep there in summer and monsoon. Hunting and trapping, to which weasels may be vulnerable, are frequent at these times. The video allows no stills of printable quality, but was shared with several people, including A. V. Abramov, who concurred with identification as Siberian Weasel. The animal shows a small black tip to the tail. Although this species's tail is often said to lack a dark tip, A. V. Abramov (*in litt.* 2012) confirmed that such a tip (smaller than on *M. erminea*) is common in the populations in South Asia and China. The video also shows the species's characteristic tail-shape: bushy, thinning to the end.

A Yellow-bellied Weasel was camera-trapped on 9 June 2010, at 27°27'23.04"N, 86°59'54.72"E at a recorded elevation of 2,457 m, in the Sisuwa river valley southwest of the park, in the buffer zone. The habitat is dominated by oaks *Quercus*. During summer and monsoon seasons, the area is disturbed by herders and their livestock; trapping and hunting of the local wildlife is then rampant. People from the nearest villages, Tenchhong and Hoyongla, also frequently visit the area to fetch *Himalayacalamus* (a thin bamboo locally known as *malingay nigalo*) for their household requirements, which affects the habitat of these weasels. This video also gave no printable stills, but the identification was validated by others including Kashmira Kakati and A. V. Abramov.

Discussion

Jnawali *et al.* (2011) assessed Siberian Weasel as nationally Least Concern under *Red List* criteria. However, there are so few data for status assessment of this species in the country that it should arguably be considered Data Deficient. Yellow-bellied Weasel's national status is assessed as Data Deficient (Jnawali *et al.* 2011). These may be the first video or photograph of either species taken in Nepal. Effects of potential threats in Nepal to these species are unknown.

Both these species of weasel are categorised as Least Concern globally by *The IUCN Red List of Threatened Species* (IUCN 2011). There is growing evidence that the tropical Asian weasels are not well surveyed by camera-traps (e.g. Duckworth *et al.* 2006, Abramov *et al.* 2008, Supparatvikorn *et al.* in press), so these species may be more common in Nepal than is suggested by the rarity in camera-trap results. Conservation awareness at local levels in Nepal regarding weasels is extremely low. Most local people do not even know that such species exist in the area. This, coupled with the lack of scientific studies of the species, are serious problems for conservation of weasels in Nepal. The smaller carnivore species like weasels that are rarely recorded by typical survey methods, perhaps because of their small build and skulking behaviour, should be high priority for specific scientific investigation.

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