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Altai Weasel *Mustela altaica* (Photo: Marc Foggin)

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Brief notes on the Altai Weasel *Mustela altaica* on the Tibetan plateau

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The Altai Weasel *Mustela altaica* has a fairly wide world range, occurring in India (across the Himalayas from Kashmir to Sikkim), Nepal, Bhutan, west and north China, east Kazakhstan, Kyrgyzstan, Tajikistan, Mongolia, and small parts of Russia (south and south-east Siberia, Primorski Krai), with possible extension to northern Korea (Allen 1938, Wangchuk *et al.* 2004, Wozencraft 2005). It is one of many *Mustela* species that occurs in China. Rather little information is internationally available on the current conservation status of the species, it making typically nothing more than incidental mention in papers on other subjects (e.g., Harris & Loggers 2004). It is under consideration for international red-listing as 'Near Threatened' because it is believed to be in decline (Global Mammal Assessment *in litt.* 2006). Hence, this note provides information on field sightings made incidentally in the species's range while JH was bird-watching and while MF was studying ungulates.

During 1995–2006, we found the weasel several dozen times during frequent visits to eastern and southern Qinghai province, China (Fig. 1). By contrast, we saw the related Steppe Polecat *M. eversmannii* only three or four times. Altai Weasel was seen in at least ten sites in eastern Qinghai by JH, all along the main road from Wenquan to Xiewu, along the road from Huashixia to Banma, in the South Koko Nor Range (i.e., the mountains directly south of Qinghai Lake), and at Datong. In southern Qinghai, MF found it several times in Zhiduo county: in Suojia district in 1998, 2004, and 2005 (twice at Muqu and once at Yaqu), and received a report from Zhahe township in 2006 (Fiona Worthy pers. comm.). A weasel seen running across the highway between Xining city and the airport in 2006 also seemed to be this species. Animals were seen from moving vehicles, from horseback, when on foot and when stopped for short road-side respites. Apart from the Xining observation, which was at 2,300 m, observation sites were spread across the altitudinal range of 3,000–4,700 m. All sightings were during the day-

light hours, but for logistical reasons sightings were less likely to be made by night (elsewhere, the weasel has been reported as mainly nocturnal and crepuscular, but sometimes active also in day time; Heptner *et al.* 1967). The most common habitat where Altai Weasel was observed was, at least in Zhiduo county, alpine meadow comprised primarily of *Kobresia* sedges and a variety of other grassland species.

The frequency of incidental encounters suggests that, at least in this part of its range, Altai Weasel is probably still fairly common. However, looking at the landscape, several factors may place the weasel at risk. In most places the natural vegetation cover has been partially to seriously overgrazed by domestic bovids (yak and yak/cow hybrids) and sheep: only a few areas remain with little or no human/livestock impact on the grassland vegetation. The impact of overgrazing also appears to be increasing due to a demonstrated warming of the Tibetan plateau in recent years (Miehe 1988, 1996, Cyranoski 2005, Perkins 2007). Habitat change is sufficiently widespread and severe, that it is undoubtedly driving weasel population declines through reduction in prey.

Altai Weasel preys heavily on pikas *Ochotona* (probably mostly Plateau Pika *O. curzoniae* in the area of sightings) and all sites where the weasel was observed also held pikas. This pika reaches relatively high densities across much of the Tibetan plateau and has been found to be the primary prey of most of the predators of land vertebrates in the Tibetan plateau ecosystem (Smith & Foggin 1999). However, being perceived by policy-makers and local administrators as an agent of habitat degradation and a competitor for forage of domestic stock, the pika has long been the focus of widespread control efforts, often by poisoning, which have resulted in their elimination from large areas of the Tibetan plateau (Smith *et al.* 1990, Smith & Foggin 1999). While it remains locally abundant in some areas (see Harris & Loggers 2004; also authors' personal observations), even



Altai weasel photographed on the Tibetan plateau.

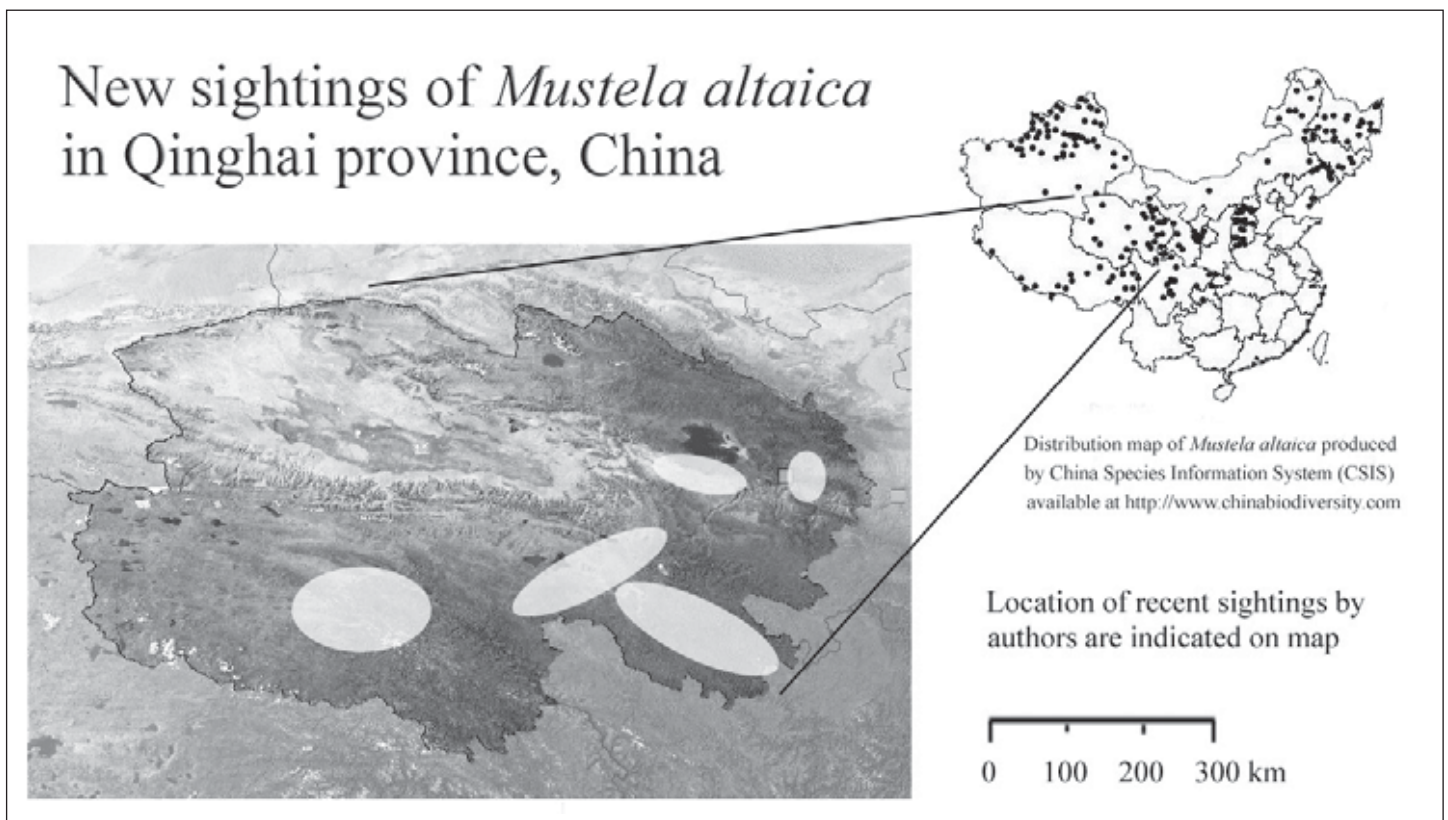


Fig. 1. Map of the study area.

those populations are now under renewed threat of eradication due to on-going campaigns to remove pikas from the ecosystem, both outside and inside nationally-designated protected areas. Although the weasel also eats a variety of other small mammals and birds (Pocock 1941), it is certain that pika populations at natural levels would allow much higher numbers of weasels to persist than in areas where pikas are eradicated, and the precise effects of heavy reductions in pika numbers on weasels remain unknown. As agents of habitat shaping, severe pika declines might affect weasel populations not just through their reduced value as direct prey, but also through indirect effects of habitat change on other potential prey. By analogy, following a crash in European Rabbit *Oryctolagus cuniculus* populations in Britain, the ecological effect on many species, and the ways in which those changes acted, were profound, complex and in some cases unpredicted (Sumption & Flowerdew 1985).

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