

# A field record of Small-toothed Ferret Badger *Melogale moschata* in Central Laos, and other recent records of ferret badgers from the country

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## Abstract

A Small-toothed Ferret Badger *Melogale moschata* found in March 2009, in a snare in southern Nakai–Nam Theun National Protected Area, extends the species's known Lao range southeast by about 280 km, is one of its most southerly records in the world, and together with a recent record of Large-toothed Ferret Badger *Melogale personata* from about 100 km to the west, means that the two ferret badger species in Laos may overlap in at least latitudinal distribution. Recent field and trade records of unidentified ferret badgers come from at least eight areas but identification difficulties mean the respective Lao distributions of the two species remain imperfectly known.

**Keywords:** distribution, Large-toothed Ferret Badger, *Melogale personata*, Nakai–Nam Theun NPA, range extension, snare

The meagre historical collection record of mammals in Laos contains two series of Small-toothed Ferret Badger *Melogale moschata* records: J. Delacour and colleagues collected eight specimens in Xiangkhouang province in 1925–1926 (Thomas 1927), and the Kelley–Roosevelts' Expedition collected five around Phongsali in 1929 (Osgood 1932), which came probably from about 5 km south-east of Phongsali town, from around Ban Khomen (Fuchs *et al.* 2007). Duckworth (1997) traced no subsequent Lao records of the species and (*in litt.* 2009) still knows of none.

Ferret badgers or their parts have been seen recently in local wild-meat markets or in the forest at various Lao locations (Fig. 1), including at least Louang-Namtha market, Louang-Namtha province; Nam Et–Phou Louey National Protected Area (NPA); Sangthong district, Vientiane province; a menagerie in Ban Lak-20 (= Ban Lak Xao), Bolikhamxai province; Nakai–Nam Theun NPA; the Nakai plateau, Khammouan province; Vilabouli district, Savannakhet province (Duckworth *et al.* 1999, Johnson & Johnston 2007, Dersu & Associates 2008, Johnson *et al.* 2009, WCS *in press*); and Ban Namthon, Bolikhamxai province (*pers. obs.*). However, the difficulty of distinguishing Small-toothed Ferret Badger from Large-toothed Ferret Badger *M. personata* without access to the skull (Schank *et al.* 2009) means these records must remain unidentified to species.

On 14 March 2009, a combined team of wildlife surveyors, patrol rangers and village guides, fielded by the Government of Lao PDR's Nam Theun 2 Watershed Management and Protection Authority, encountered and destroyed a line of wire snares in the southern end of Nakai–Nam Theun NPA, Nakai district, Khammouan province, central Laos. In one snare was the carcass of

a decomposed ferret badger, at 17°45'20"N, 105°37'05"E (Magellan GPSMAP 60CSX GPS, WGS84 India-Thailand datum); this location is at 980 m asl, according to 1985–1987 1:100,000 topographic maps of the *RDP Lao Service Geographique d'Etat*. The skull was collected (Fig. 2), but has not yet been deposited with a collection. It was determined to be that of *M. moschata* by comparison with skull line drawings in Pocock (1941). Salient features of identification include (1) the outer edge of pm<sup>4</sup> is mildly concave, not convex; (2) pm<sup>2</sup>, while larger than pm<sup>1</sup>, is not disproportionately so; and (3) the muzzle widens markedly aback of the posterior root of pm<sup>4</sup>. In *M. personata* the jaw widens anterior to this tooth, so as to accommodate its massive size,. The photographs were shown to A. Abramov, B. Long, R. J. Timmins and J. W. Duckworth who concurred with the identification.

The animal was found in a remote, mountainous area of little-degraded, closed-canopy broadleaf evergreen forest (interspersed with occasional conifers, e.g. *Keteleeria*), with a fairly open understorey. This is the first known record of the species in Laos since the mid 20th century, and the first ever record from the country with precise locality and elevation. It is substantially the southernmost record of the species in Laos (about 280 km south-east of the former Xiangkhouang town). It is by far the most southern world record of the species except from Vietnam, where Vu Ngoc Thanh (in Long & Minh Hoang 2006) collected an individual (also found in a hunters' trap-line) from Maccoih commune, Dong Giang district, Quang Nam province, at 15°47'56"N.

It is impossible to speculate on the species's abundance in Nakai–Nam Theun NPA, but camera-trapping in 2006–2008 provided some information about the genus. Johnson & Johnston (2007)

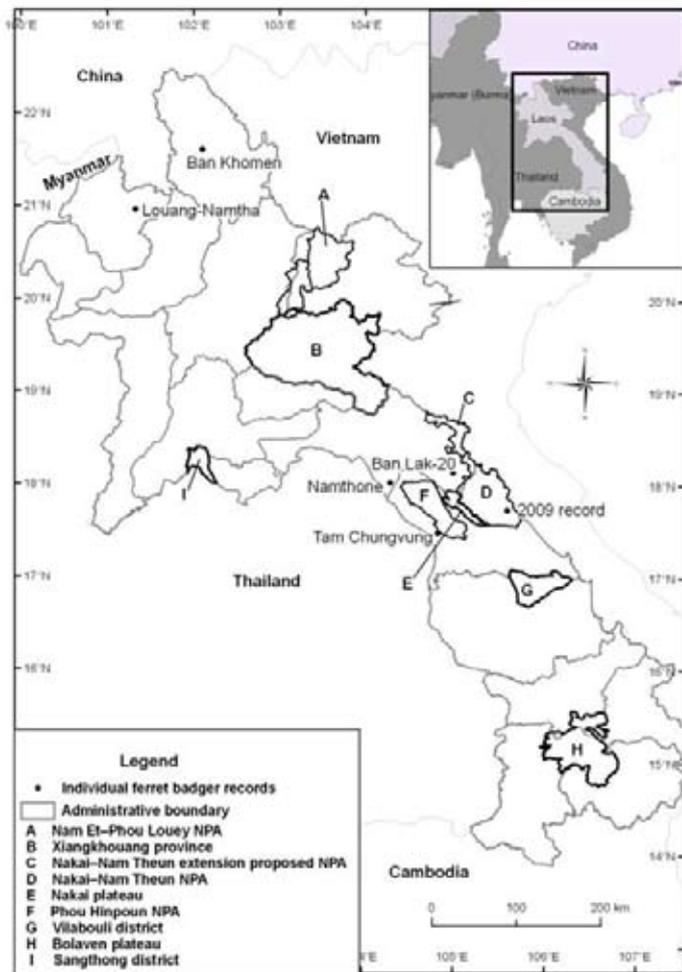


Fig. 1. Ferret badger *Melogale* records from Lao, and other localities mentioned in the text.

covered the results of two blocks of such survey, in 2006–2007. In one block comprising 200 km<sup>2</sup> of Khamkeut district in the north-west of the protected area over an elevation range of 550–1,950 m, there were about 50 photographs of ferret badgers from 4,334 camera-trap-days, whereas 3,356 camera-trap-days in a block of 200 km<sup>2</sup> over 550–1,000 m in the Nam On sector in the south-east of the protected area yielded about a dozen photographs. A cluster of additional camera-trap records over several days, from one camera and probably of the same animal, came in March 2008 from the base of non-calcerous cliff amid extensive forest on the Phou Vang massif, at 17°48'35"N, 105°33'40"E (1,220 m asl). By contrast, intensive spotlighting in 1996 in one part of the same protected area (above Ban Navang; outside these recent camera-trapping areas) comprising little-encroached evergreen forest over 700–1,300 m failed to detect the genus at all (Duckworth 1998). Given the many other species seen then, this negative result suggests that in this general area of Laos the genus is either difficult to detect by conventional spotlighting or is only patchily distributed within the hill forests.

In 1998, a skull of Large-toothed Ferret Badger *M. personata* was found in Phou Hin Poun NPA (formerly called Khammouan Limestone National Biodiversity Conservation Area), about 100 km almost due west of the present specimen, but in radically different habitat: a cave (Tam Chungvung; 17°30'40"N, 104°50'15"E) amid karst, at about 200 m (Robinson & Webber 1998; M. Robinson *in litt.* 2010) and thus at significantly lower

elevation than the Nakai–Nam Theun NPA record. Previous Lao records of *M. personata* came only from about 400 km to the south, on the Bolaven plateau, where Delacour and colleagues collected five in winter 1931–1932 (Osgood 1932), and the Legendre Indochina Expedition collected 11 further specimens during 29 January–12 February 1932 (D. P. Lunde *in litt.* to J. W. Duckworth



Fig. 2. Skull of Small-toothed Ferret Badger *Melogale moschata* from Nakai–Nam Theun NPA, Central Laos; three views of the same skull.

2007). These latter lack precise locality and most or all probably came via purchase from local people (Legendre 1936).

Prior to these records, then, all records of *Melogale* identifiable to species in the north of Laos were *M. moschata*, while all from the south, and both those from Cambodia, the next country south (Schank *et al.* 2009) are *M. personata*. These records indicate that both species occur in central Laos. There remain too few records to speculate responsibly on the true respective distributions of each species. Therefore, further records validated to species by examination of the teeth and with accurate location and altitude are strongly encouraged.

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