

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

ຂໍ້ມູນຂອງ ພາລັງແຂວນ້ອຍ (Small-toothed Ferret Badger *Melogale moschata*) ໃນການສຳຫຼວດພາກສະໜາມໃນ ຂອບເຂດພາກກາງຂອງປະເທດລາວ ແລະ ຂໍ້ມູນໃໝ່ລັດຂອງ ບັນດາພາລັງ (Ferret Badger) ສາຍພັນອື່ນໆໃນປະເທດ ລາວ.

ບົດສະຫຼຸບຫຍໍ້

ພາລັງແຂວນ້ອຍ (Small-toothed Ferret Badger *Melogale moschata*) ໄດ້ຖືກພົບເຫັນມັນເປັນຄັ້ງທຳອິດໃນຂອບເຂດພາກໃຕ້ ຂອງປ່າສະຫງວນແຫ່ງຊາດມາກາຍ-ນ້ຳເທີນ ໃນເດືອນ ມີນາ ປີ 2009. ການພົບເຫັນຄັ້ງນີ້ ໄດ້ເຮັດໃຫ້ເຮົາຮູ້ວ່າ ສັດສາຍພັນນີ້ ໄດ້ອາໄສຢູ່ໃນຂອບເຂດທີ່ກວ້າງອອກໄປຕື່ມອີກປະມານ 280 ກິໂລແມັດ ແລະ ອີງເປັນ ນຶ່ງໃນຂໍ້ມູນທີ່ໄດ້ຖືກເກັບກຳຈາກພາກ ໃຕ້ສຸດຂອງໂລກ. ອີງຕາມຂໍ້ມູນດັ່ງກ່າວນີ້ ແລະ ຂໍ້ມູນຂອງພາລັງແຂວໃຫຍ່ (Large-toothed Ferret Badger *Melogale personata*) ທີ່ໄດ້ພົບຢູ່ໃນຂອບເຂດປະມານ 100 ກິໂລແມັດໄປທາງທິດຕາເວັນຕົກຂອງປ່າສະຫງວນແຫ່ງຊາດມາກາຍ-ນ້ຳ ເທີນມັນກໍ່ໝາຍຄວາມວ່າ ສັດສອງຊະນິດນີ້ອາດອາໄສຢູ່ປະປົນກັນຢ່າງໜ້ອຍຢູ່ໃນເສັ້ນຂະໜານດຽວກັນ. ອີງຕາມຂໍ້ ມູນການສຳຫຼວດລັດສຸດທີ່ໄດ້ຈາກພາກສະ ໜາມ ແລະ ການພົບເຫັນຈາກການຄ້າຂາຍສັດປ່າ (ພາລັງທີ່ບໍ່ທັນຮູ້ຈັກສາຍພັນ) ຊຶ່ງຢ່າງໜ້ອຍມາຈາກແປດພື້ນທີ່. ພວກເຮົາມີຄວາມຫຍຸ້ງຍາກໃນການຈຳແນກສາຍພັນຂອງພາລັງດັ່ງກ່າວນີ້ ຊຶ່ງໝາຍຄວາມ ວ່າການກະຈາຍຢູ່ຂອງສັດສອງຊະນິດນີ້ (ພາລັງແຂວນ້ອຍ ແລະ ພາລັງແຂວໃຫຍ່) ຕາມບັນດາພື້ນທີ່ດັ່ງກ່າວນັ້ນ ແມ່ນຍັງ ບໍ່ທັນໄດ້ຖືກຮັບຮູ້ຢ່າງສົມບູນ.

ຄຳສັບທີ່ສຳຄັນ: ການກະຈາຍຢູ່, ພາລັງແຂວໃຫຍ່, *Melogale personata*, ປ່າສະຫງວນແຫ່ງຊາດມາກາຍ-ນ້ຳເທີນ, ການຂະຫຍາຍຂອບເຂດ, ແລ້ວ.

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 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 pm⁴ is mildly concave, not convex; (2) pm², while larger than pm¹, is not disproportionately so; and (3) the muzzle widens markedly aback of the posterior root of pm⁴. 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) covered the results of two blocks of such survey, in 2006–2007. In one block comprising 200 km² 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 km² 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, WGR and the Nam Theun 2 Watershed Management Protection

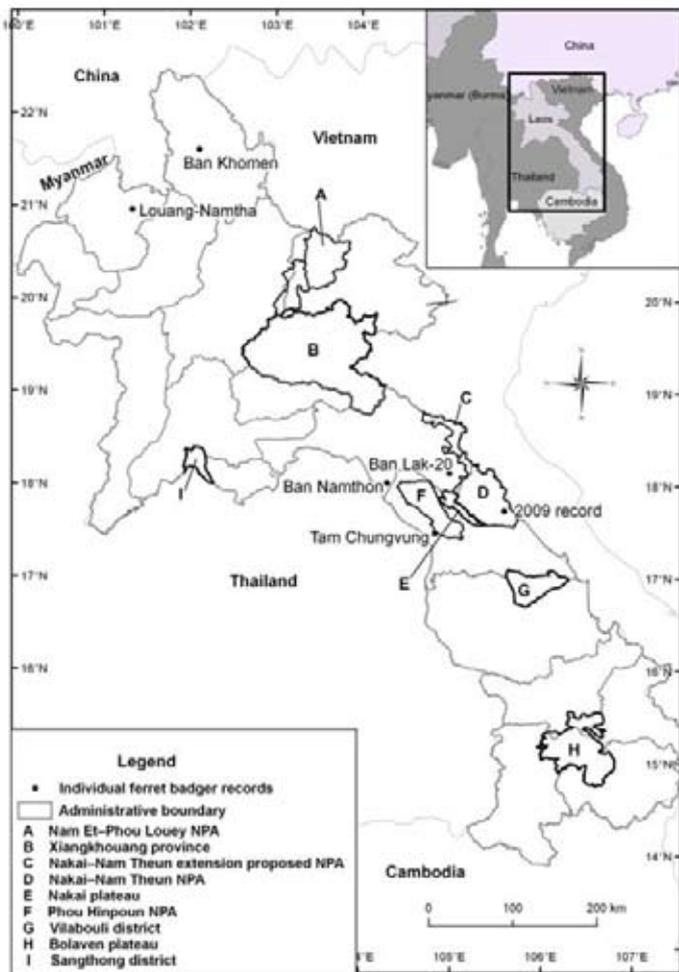


Fig. 1. Ferret badger *Melogale* records from Lao, and other localities mentioned in the text.

Authority, own data). 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 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.



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

Acknowledgements

I thank the Nam Theun 2 Watershed Management and Protection Authority (WMPA), particularly its directors at the time of these surveys, Mr Sangthong Southamakhoth followed by Mr Thong Eth Phayvanh, for their support. Rob Timmins, Will Duckworth, Alexei Abramov and Barney Long gave invaluable assistance in identifying the skull and in reviewing the genus's status in Laos, and Darrin Lunde provided information on the Legendre specimens. Akchousanh Rasphone kindly verified the locality altitudes, and prepared the map and Lao translation.

References

- Dersu and Associates 2008. *C880: wildlife program phase 1. Baseline inventory. Wildlife and habitat studies of the Nakai plateau*. Dersu and Associates for Nam Theun 2 Power Company, Vientiane, Lao PDR.
- Duckworth, J. W. 1997. Small carnivores in Laos: a status review with notes on ecology, behaviour and conservation. *Small Carnivore Conservation* 16: 1–21.
- Duckworth, J. W. 1998. A survey of large mammals in the central Annamite mountains of Laos. *Zeitschrift für Säugetierkunde* 63: 239–250.
- Duckworth, J. W., Salter, R. E. & Khounboline, K. (compilers) 1999. *Wildlife in Lao PDR: 1999 status report*. IUCN–The World Conservation Union / Wildlife Conservation Society / Centre for Protected Areas and Watershed Management, Vientiane, Lao PDR.
- Fuchs, J., Cibois, A., Duckworth, J. W., Eve, R., Robichaud, W. G., Tizard, T. & Van Gansberghe, D. 2007. Birds of Phongsaly province and the Nam Ou river, Laos. *Forktail* 23: 22–86.
- Johnson, A. & Johnston, J. 2007. *Biodiversity monitoring and enforcement project in the Nam Theun 2 watershed. Final report VI.1. November 2007*. Wildlife Conservation Society, Vientiane, Lao PDR.
- Johnson, A., Vongkhamheng, C. & Saithongdam, T. 2009. The diversity, status and conservation of small carnivores in a montane tropical forest in northern Laos. *Oryx* 43: 626–633.
- Legendre, S. J. 1936. *Land of the white parasol and the million elephants: a journey through the jungles of Indochina*. Dodd, Mead & Co., New York, U.S.A.
- Long, B. & Minh Hoang 2006. Recent records of and notes on the conservation of small carnivores in Quang Nam province, central Vietnam. *Small Carnivore Conservation* 34&35: 39–46.
- Osgood, W. H. 1932. Mammals of the Kelley–Roosevelts and Delacour Asiatic Expeditions. *Field Museum of Natural History Zoological Series* 18(10): 193–339.
- Pocock, R. I. 1941. *The fauna of British India, including Ceylon and Burma. Mammalia*, 2nd ed. vol. 2. Taylor and Francis, London, U.K.
- Robinson, M. F. & Webber, M. 1998. *Small mammal survey. Khammouane Limestone National Biodiversity Conservation Area, Lao PDR*. WWF Thailand Project Office, Bangkok, Thailand.
- Schank, C., Pollard, E. H. B., Sechrest, W., Timmins, R. J., Holden, J. & Walston, J. 2009. First confirmed records of Large-toothed Ferret Badger *Melogale personata* in Cambodia, with notes on country records of *Melogale*. *Small Carnivore Conservation* 40: 11–15.
- Thomas, O. 1927. The Delacour exploration of French Indo-china–Mammals. *Proceedings of the Zoological Society of London* '1927': 41–58.
- [WCS] Wildlife Conservation Society in press. *A conservation reconnaissance survey of north-east Vilabouli district, Savannakhet province, Lao PDR*. Wildlife Conservation Society Lao Program, Vientiane, Lao PDR.

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