

SHORT COMMUNICATION

Confirmation of the continued occurrence of Binturong *Arctictis binturong* in China

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Abstract.

A Binturong *Arctictis binturong* and two Common Palm Civets *Paradoxurus hermaphroditus* were photographed in the possession of local hunters in south-western Yunnan province, China, along the China-Myanmar border, in August 2014. This is the first confirmed record of Binturong for many years within its Chinese range.

Keywords: *Arctictis binturong*, distribution, conservation status, southwest China.

Binturong *Arctictis binturong* is the largest member of the civet family (Viverridae) and is classified as Vulnerable on the IUCN Red List of Threatened Species (IUCN 2014). It occurs from North-east India and Bangladesh, east through mainland South-east Asia to Borneo, Java and Sumatra (Corbet & Hill 1992), with a small range in southern China (Wang 2003) (Fig. 1; this includes several parts of China where the species' occurrence is predicted based on suitable habitat and/or climate (Widmann *et al.* 2008)). Lau *et al.* (2010), in an analysis of extensive multi-method surveys, speculated that the species might now be extinct in south China (Guangxi, Guangdong, Hainan, Hong Kong and Macau), whence only one confirmed record, from Dayaoshan in central Guangxi in 1926 (Wang 1998), and two uncertain interview records in Hainan province far from its known range (Lau *et al.* 2010), are available; there have been no published records from anywhere across its range in China for 22 years. This suggests that the 2008 map presented in Fig. 1 might be highly optimistic. This note presents a record from Yunnan province, along the Myanmar border, in August 2014, confirming the persistence of Binturong in the wild in China.

On 15 August 2014, a dead adult male Binturong (15-20 kg) was photographed in the flesh at Rui Li (23°56'N, 97°33'E), Yunnan province, China (Figure 1) along with two Common Palm Civets *Paradoxurus hermaphroditus* (Figure 2). The animal was

photographed 2.5 km from the Myanmar border, the habitat on both sides of the border being similar. The animals were being carried out of the forest by local hunters for bushmeat. It is highly unlikely that the animals were taken from the Myanmar side as this would involve crossing a boundary river with firearms; conversations with one of the hunters confirmed that the animals were indeed taken from the Chinese side of the border.

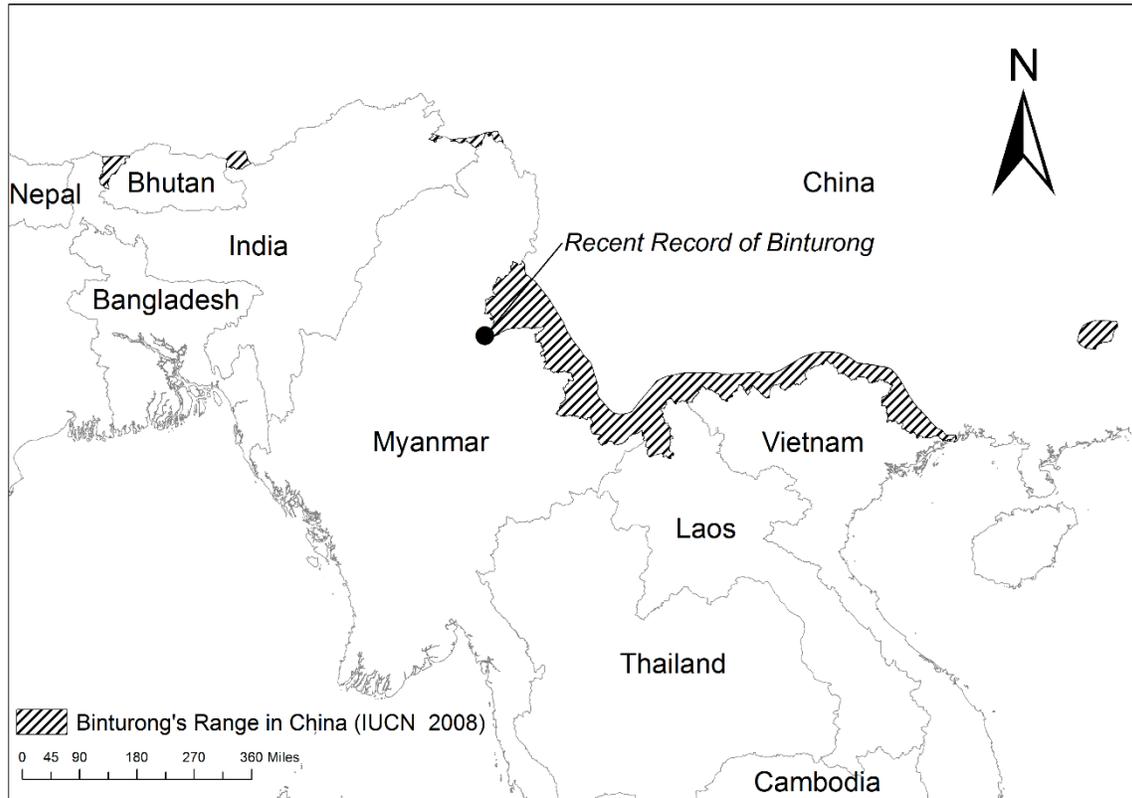


Figure 1. The confirmed record (black dot) and a partly predictive representation of the distribution range (shaded area) of Binturong *Arctictis binturong* in China (Widmann *et al.* 2008)

This is the first record of Binturong within the Chinese range for more than two decades, the last skin specimen being collected in 1992 in Yunnan province. Lau *et al.* (2010) traced no record from Guangxi province, where it certainly used to occur (Wang 1998), or from Hainan, where it has been recorded only provisionally. Occurrence in various parts of Yunnan (e.g. Yingjiang. Mengla. Menghai) is evinced from eight coat specimens collected in this area before 1992 and kept in the Kunming Institute of Zoology (Wang 2003). The lack of camera-trap records from the province's far south (Zhang *et al.* 2014) suggests the species might indeed be rare in China. However, interviews with one of the hunters reveal the lack of awareness regarding the higher conservation threat status of Binturong both in China and internationally, compared with other species of Viverridae still widespread in China.

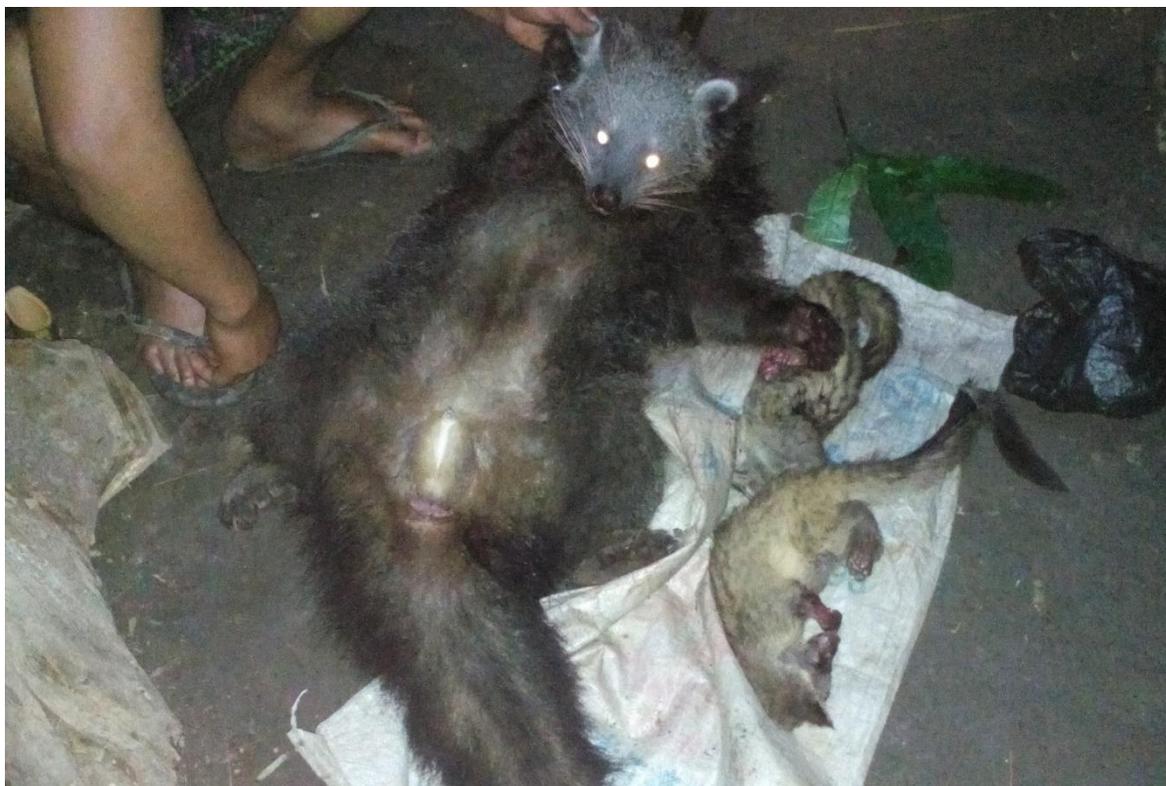


Figure 2. A Binturong *Arctictis binturong* and two Common Palm Civets *Paradoxurus hermaphroditus* photographed in the possession of local hunters in Aug. 2014, at Rui Li, Yunnan province, China

Binturong may now be rare in much of the north-eastern part of its global range. Willcox *et al.* (2014: Table SOM3), in a review of camera-trapping studies across Vietnam, traced records from only two of 11 surveys. Gray *et al.* (2014), collated results from three of the largest camera-trap surveys in Lao PDR, which, over 33,000 camera-trap-nights, produced only one record of Binturong. Eleven of twenty-one survey areas confirmed to hold the species across Thailand: six areas via camera-traps and another five by other methods such as direct sighting, live-trapping and confiscation of hunted remains (Chutipong *et al.* 2014). Than Zaw *et al.* (2008) camera-trapped the species in six of 18 survey areas across Myanmar. Although comparable collations are not available from Cambodia and countries to the south, in at least Borneo, the species seems to be encountered far more frequently (Semiadi. *et al.* 2016). There are no collations of recent locality records from India or Bangladesh, although the species certainly persists in this region (e.g. Murali *et al.* 2013).

As a largely arboreal animal, Binturong might be less detected by camera-traps than are ground-dwelling species of comparable local abundance; this is evidently the case for the highly arboreal Small-toothed Palm Civet *Arctogalidia trivirgata* (Willcox *et al.* 2012). However, Small-toothed Palm Civet is an agile user of small, canopy branches and is adept at jumping between gaps (Duckworth & Nettelbeck, 2008); the heavy Binturong lacks this

agility and so, for moving through the forest, may often need to descend to the ground (see Chutipong *et al.* 2014). Thus, it may be reasonable to assume that the rarity of recent records from China and northern South-east Asia reflects a genuine rarity of the species. The most probable cause of this is hunting: recent records from Vietnam and Lao PDR, where hunting is almost ubiquitously high, are extremely rare, whereas the species can still be detected, albeit not frequently, in Thailand and Myanmar, where hunting levels are not as high (Chutipong *et al.* 2014).

Binturong persists in China, though it may not be common. Conservation actions, chiefly protection from hunting, should be prioritized in the management plans of the areas in which it is likely to occur. Any recent records from within the Chinese range also warrant publication to clarify the species' current status in the country.

Acknowledgements

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References

- Chutipong W. *et al.* [23 authors] 2014. Current distribution and conservation status of small carnivores in Thailand: a baseline review. *Small Carnivore Conservation* 51: 96–136.
- Corbet GB & Hill JE. 1992. *The mammals of the Indomalayan region*. Natural History Museum Publications and Oxford University Press, Oxford, U.K.
- Duckworth JW & Nettelbeck AR. 2008. Observations of Small-toothed Palm Civets *Arctogalidia trivirgata* in Khao Yai National Park, Thailand, with notes on feeding technique. *Natural History Bulletin of the Siam Society* 55: 187–192.
- Gray TNE, Thongsamouth K & Tilker A. 2014. Recent camera-trap records of Owston's Civet *Chrotogale owstoni* and other small carnivores from Xe Sap National Protected Area, southern Lao PDR. *Small Carnivore Conservation* 51: 29–33.
- IUCN. 2014. *IUCN Red List of Threatened Species*. Version 2014.2. <www.iucnredlist.org>. Downloaded on 1 October 2014.
- Lau MWN, Fellowes JR & Chan BPL. 2010. Carnivores (Mammalia: Carnivora) in South China: a status review with notes on the commercial trade. *Mammal Review* 42: 247–292.
- Murali KC, Kumar A, Ray PC & Sarma K. 2013. Feeding observations of a Binturong *Arctictis binturong* group in Namdapha National Park, Arunachal Pradesh, India. *Small Carnivore Conservation* 49: 28–30.
- Semiadi G *et al.* [23 authors] 2016. Predicted distribution of the Binturong *Arctictis binturong* (Mammalia: Carnivora: Viverridae) on Borneo. *Raffles Bulletin of Zoology Supplement* 33: 96–102.
- Than Zaw, Saw Htun, Saw Htoo Tha Po, Myint Maung, Lynam, AJ, Kyaw Thinn Latt & Duckworth JW. 2008. Status and distribution of small carnivores in Myanmar. *Small Carnivore Conservation* 38: 2–28.
- Wang S. 1998. *China Red Data Book of Endangered Animals – Mammalia*. Science Press, Beijing, China.
- Wang YX. 2003. *A complete checklist of mammal species and subspecies in China: a taxonomic and geographic reference*. China Forestry Publishing House, Beijing, China.
- Widmann P, De Leon J & Duckworth JW. 2008. *Arctictis binturong*. The IUCN Red List of Threatened Species 2008: e.T41690A10516645. Downloaded on 14 April 2016.

- Willcox DHA, Tran QP, Vu L, Tran VB & Hoang MD. 2012. Small-toothed Palm Civet *Arctogalidia trivirgata* records from human-influenced habitats in Vietnam. *Small Carnivore Conservation* 47: 46–53.
- Willcox DHA, Tran QP, Hoang MD & Nguyen TTA. 2014. The decline of non-*Panthera* cat species in Vietnam. *Cat News* Special Issue 8: 53–61.
- Zhang M, Cao L, Quan R, Xiao Z, Yang X, Zhang W, Wang X & Deng X. 2014. Camera trap survey of animals in Xishuangbanna Forest Dynamics Plot, Yunnan. *Biodiversity Science* 22: 830–832.