SHORT COMMUNICATION

The rediscovery of Large-spotted Civet *Viverra megaspila* in China

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http://www.smallcarnivoreconservation.org
ISSN 1019-5041

Abstract.

The Large-spotted Civet *Viverra megaspila* is a rare small carnivore species distributed in mainland South-east Asia and southern China. The last definite field record in China was in 1983, when three individuals were recorded in Xishuangbanna prefecture, Yunnan province. Between 2012 and 2016, the authors analyzed images from 30,000 camera-trap-nights from 138 camera-trap stations. In 2015, a single Large-spotted Civet was captured in a 3 km^2 forest patch in Xishuangbanna. A Large-spotted Civet was recorded at an elevation of 560 metres above sea level (m asl) on 16 August 2015, in an area of forest bordered by rubber plantations and close to a human settlement. The threats to Large Spotted Civets are habitat loss and hunting. More information will be collected in this location to ensure the conservation of this species.

Keywords: *Viverra megaspila*, rediscover, China, Xishuangbanna.

The Large-spotted Civet *Viverra megaspila* is found in South-east Asia and southern China. It is listed as Endangered according to *The IUCN Red List of Threatened Species* (Timmins *et al*. 2016). In the last two decades, it has been recorded by direct sightings or camera-trapping in Cambodia, Vietnam, Lao PDR, Thailand, Myanmar and Malaysia (Duckworth 1994, Roberton 2007, Than Zaw *et al*. 2008, Chutipong *et al*. 2014, Gray *et al*. 2014, Hamirul *et al*. 2015). In China, the species has been recorded in southern Yunnan and southwest Guangxi (Lau *et al*. 2010), and this represents the northern limits of the species' known range (Corbet & Hill 1992, Timmins *et al*. 2016). Three individuals were recorded in Mengla and Jinghong, Xishuangbanna, Yunnan province in 1983 (Xu *et al*. 1987), and eight pelts were collected by hunters from Yunnan and Gaungxi provinces between the 1970s to 1998 (Wang 1998). It is considered to be very rare in China (e.g. Lau *et al*. 2010).

Xishuangbanna is a prefecture of Yunnan province, China (21°08′–22°36′N and 99°56′–101°50′E). The elevation ranges from 475–2,430 m asl, and it is on the northern edge of the tropical zone (Li *et al*. 2009). In 2012 a monitoring programme for ground-dwelling mammals and birds in Xishuangbanna was established. Camera-traps were set on trees, 0.5–2.0 m from the ground, depending on the topography and shrub height. No baits or artificial lures were used. In total, 138 camera-trap stations were set from approximately 500–2,000 m asl, covering around 200 km² of forested habitat. The total survey effort was in excess of 30,000 camera-trap-nights.

A single Large-spotted Civet was camera-trapped three times in quick succession on 16 August 2015 (Figure 1) in a 3 km^2 patch of forest that bordered rubber plantations. This

record is around 5 km away from the nearest large forest patch (i.e. one of more than 100 km^2). Although only part of the animal is visible in the camera-trap photograph, it can be identified by the incomplete white bands on the tail (see Duckworth 1994).

Figure 1. Large-spotted Civet photographed in Xishuangbanna, China on 16 August 2015.

The camera-trap station was set at 560 m and in tropical seasonal evergreen forest with *Parashorea chinensis* as the dominant species, close to a human settlement, and 15 m away from a stream. Considering the hunting pressure is very high in Xishuangbanna (Sreekar *et al*. 2015) and the area of the forest is small, we have kept the specific coordinates of the record confidential. The same camera-trap station also recorded multiple Leopard Cats *Prionailurus bengalensis* (20 capture events, including at least three individuals). Masked Palm Civet *Paguma larvata*, Small Indian Civet *Viverricula indica*, Red Junglefowl *Gallus gallus*, Emerald Dove *Chalcophaps indica* and rats (Muridae) were recorded in the same patch of forest at different stations, indicating that the camera-traps were set at the correct height to record small carnivore species, and therefore that the single Large-spotted Civet record from this patch of lowland forest, is likely to indicate genuine scarcity.

Most records of Large-spotted Civet come from below 300 m, but some are from as high as 780 m in places with gentle terrain (Chutipong *et al*. 2014, Timmins *et al*. 2016).

The habitats it which the species has been recorded varies from evergreen forest, semi-evergreen forest and deciduous dipterocarp forest to oil palm plantations (Than Zaw *et al*. 2008, Chutipong *et al*. 2014, Gray *et al*. 2014, Hamirul *et al*. 2015). This record from 560 m in Xishuangbanna is consistent with the species preferring low-elevation habitat, as in the rest of its range. A decrease in its number in Yunnan is implied by the lack of any other recent records. Such a decline may be due to the extensive conversion of lowland forest into rubber plantation in Xishuangbanna (Li *et al*. 2009), as well as hunting. We will collaborate with local government and scientists to ensure good conservation of this species. We also hope more detailed research work can be done on the ecology of this species.

Acknowledgements

We are grateful to Dr. Limin Feng of Beijing Normal University, Bosco P. L. Chan of Kadoorie Farm & Botanic Garden and J. W. Duckworth for their help with species identification and manuscript improvement.

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