

# Southward extension of known range of Owston's Civet *Chrotogale owstoni* in Vietnam

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## Abstract

Owston's Civet *Chrotogale owstoni* was recently recorded twice in Chu Yang Sin National Park, Dak Lak province, Vietnam: in 2002 (dead animal recovered from a poacher's snare-line) and 2009 (field sighting). These are about 200 km south of the previously known range in the country, and the species has not been recorded at all in Cambodia, the only other country in which it might occur that far south. Chu Yang Sin National Park offers protection to one of the largest contiguous tracts of forest in Vietnam's Tay Nguyen highlands, and contains many other wildlife species of high global conservation importance, yet faces a battery of threats to habitats and fauna.

**Keywords:** Chu Yang Sin National Park, Da Lat plateau, Tay Nguyen highlands, threats

## Vùng phân bố của loài Cầy vằn *Chrotogale owstoni* ở Việt Nam mở rộng về phía nam

ĐẶNG Ngọc Càn và LÊ Trọng Trãi

## Tóm tắt

Hai lần ghi nhận gần đây cho loài Cầy vằn *Chrotogale owstoni* ở Vườn Quốc gia Chu Yang Sin, tỉnh Đắk Lắk, Việt Nam: năm 2002 (một mẫu Cầy vằn chết đã tìm thấy trong bẫy của thợ săn) và năm 2009 (quan sát thấy loài này trong khi điều tra thực địa). Đây là điểm ghi nhận có khoảng cách 200 km về phía nam so với điểm ghi nhận trước đó ở Việt Nam, và loài này chưa từng được ghi nhận ở Cấm Pu Chia, chỉ có thể ở quốc gia khác xa về phía nam. Vườn Quốc gia Chu Yang Sin đang bảo vệ một diện tích rừng liên tục lớn nhất ở Tây Nguyên, Việt Nam, và nhiều loài động vật hoang dã có tầm quan trọng bảo tồn toàn cầu, thế nhưng khu hệ động vật và nơi ở của chúng vẫn còn đối mặt với nhiều đe dọa.

**Từ khóa:** Cao Nguyên Đà Lạt, những đe dọa, Tây Nguyên, Vườn quốc gia Chu Yang Sin

Owston's Civet *Chrotogale owstoni* is a little-known species restricted to Vietnam, adjacent eastern Lao PDR, and a small part of adjacent China (Schreiber *et al.* 1989). It is categorised on *The IUCN Red List of Threatened Species* as globally threatened: Vulnerable, reflecting the heavy use of non-selective traps across its range, particularly snares, coupled with the great conversion, degradation and fragmentation of forest in Vietnam in recent decades (IUCN 2009). It is the only species of its genus (Veron & Heard 2000), arguably elevating its conservation significance over that of similarly threatened species but which have close relatives that remain common.

Named by Thomas (1912), few Owston's Civet specimens were collected in the early part of the twentieth century and Thomas's (1927) excitement on describing the first adult with skull (and only the third specimen then known) to arrive in Europe, collected on 8 January 1926 (Pocock 1933), is still obvious when reading his account seven decades later. Delacour (1940), one of the most active collectors in Indochina during the 1920s–1930s, considered Owston's Civet to be very rare, although Bourret (1944: 11), the only competent mammalogist to live in Vietnam in the first half of the twentieth century, described the species as (in translation) “apparently the most common civet in the region between Fan Si Pan and the Black River”. Unfortunately, Bourret (1944) did not detail the basis for his statement, which has been largely overlooked by modern authors; it is corroborated by a camera-trapping survey in the montane area around Fan Si Pan (Van Ban and Mu Cang Chai), which photographed Owston's Civet more commonly than any other carnivore (Swan & O'Reilly 2004a, 2004b). Overall,

however, Schreiber *et al.* (1989) traced only about 40 records of Owston's Civet and considered it one of the highest global conservation priorities among small carnivores.

The southernmost Vietnamese record in Schreiber *et al.* (1989) was from Cuc Phong National Park (about 20°19'N), with the southernmost world record from Xiangkhouang in Lao PDR (Thomas 1927; 19°20'N). This was extended south to Gia Lai province at 14°20'N by Rozhnov *et al.* (1992), which was the southernmost locality given for the species in Kuznetsov (2006). Robertson's (2007) exhaustive review of Vietnamese small carnivore records found no proof of Owston's Civet south of Gia Lai, but there was an unconfirmed indication from Bu Gia Map Nature Reserve (Nguyen *et al.* 1997; 12°09'N) and on the basis of habitat he predicted it might occur into the far south of Vietnam.

Owston's Civet has never been recorded in Cambodia (E. Pollard *in litt.* 2010), although two stuffed mounts were seen at the small specimen collection of the Phnom Tamao Zoo (Phnom Penh) in the late 1990s, which were felt unlikely to have originated from outside Cambodia (C. M. Poole verbally 2000). It might be expected in the country's easternmost forests. Long & Minh (2006) pointed out that records from south and central Vietnam remain few. The species is held in the Da Lat Museum, which lies south of the documented Vietnamese range (Pham *et al.* 1996). No labels were attached, and some specimens of other species in this museum were confiscated from wildlife trade (Pham Trong Anh verbally 2010), and thus the Owston's Civets cannot be assumed to have come from nearby areas.

The most recent checklist of Vietnamese mammals, Dang *et*

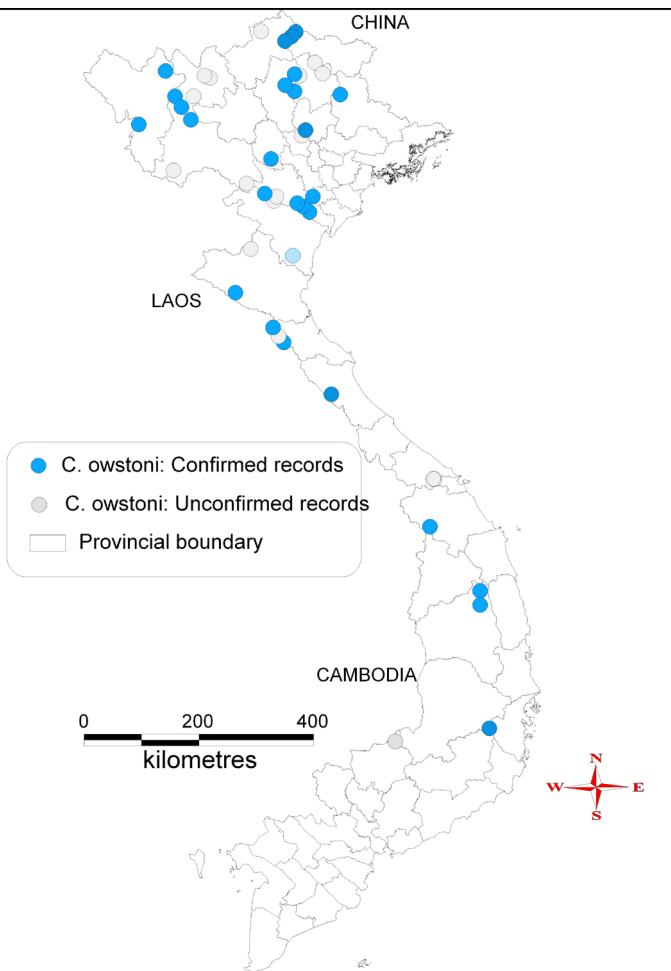


Fig. 1. Recorded localities of Owston's Civet *Chrotogale owstoni* in Vietnam. After Robertson (2007) and Dang et al. (2008). The southernmost confirmed record point is for Chu Yang Sin National Park.

al. (2008), listed Owston's Civet for Chu Yang Sin National Park (NP), about 200 km further south of the previous southernmost Owston's Civet record (Fig. 1), and this note provides the basis for this listing. During 2006–2009, several wildlife surveys were undertaken at Chu Yang Sin NP (Dang et al. 2007, 2009, BirdLife International 2010). The surveys generated two records of Owston's Civet, consistent with Robertson's (2007) habitat-based prediction of its occurrence this far south. A mounted specimen in the NP museum collection (Fig. 2) was reported to be made from a dead civet in snare collected during a forest patrol at 12°25'12"N, 108°20'58"E (about 900 m altitude) in 2002 (Tong Ngoc Chung verbally 2002). A single Owston's Civet was observed at 12°21'16"N, 108°23'31"E (1,380 m) at 04h48 on 16 March 2009 by spotlight (Maglite, 3 D-cell) by DNC and Nguyen Van Quyet on their way to a gibbon listening point. The animal was 8–10 m from the observers and was watched, unobscured, for about 30 seconds up a tree 3 m above ground; it then ran off across the ground.

The surveys of Chu Yang Sin NP covered vegetation, large and small mammals, birds, herpetofauna, fish and butterflies, and revealed the outstanding global significance of park's wildlife, as well as the battery of threats facing it (BirdLife International 2010). For such an ecologically complex area, these surveys could only scratch the surface, and it is not possible to determine how common the civet is in the national park.



Fig. 2. Owston's Civet *Chrotogale owstoni* recovered from a snare in Chu Yang Sin National Park. Photo: Dang Ngoc Can.

Chu Yang Sin, rising to 2,442 m, is one of the highest mountains in southern Vietnam. The park covers 589 km<sup>2</sup> and includes land from below 600 m to the summit. It is the largest protected area on the Da Lat Plateau, and together with adjacent forests such as those of Bi Doup Nui Ba National Park, includes an unbroken transition of forest from lowland evergreen to montane forest and offers protection to the largest remaining block of contiguous forest in Vietnam's Tay Nguyen highlands. The rich animal communities retain numerous hunting-sensitive species (BirdLife International 2010). BirdLife International (2010: 28) concluded that "high levels of hunting and relatively low encounter rates within the forests indicate that populations of most larger species of mammals are likely to be depressed and spread thinly across the forests of the Park". The park also faces severe threats of forest conversion and fragmentation (BirdLife International 2010), which, if they continue, will reduce the resilience of quarry species to any given level of hunting. Currently, the population of Owston's Civet in the park, along with other hunting-sensitive globally significant mammals such as Black-shanked Douc *Pygathrix nigripes*, Yellow-cheeked Crested Gibbon *Nomascus gabriellae*, Sun Bear *Helarctos malayanus* and Large-antlered Muntjac *Muntiacus vuquangensis*, cannot be regarded as secure.

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### References

- BirdLife International 2010. *The biodiversity of Chu Yang Sin National Park, Dak Lak Province, Vietnam*. BirdLife International in Indochina, Hanoi, Vietnam.
- Bourret, R. 1944. Mammifères récemment entrés dans les collections du Laboratoire de Zoologie de l'École Supérieure des Sciences. *Notes et Travaux de l'École Supérieure des Sciences* 3: 1–17.
- Dang N. C., Ha V. T., Le M. H., Nguyen T. S., Nguyen H. D., Monastyrskii, A., Do A. T. & Nguyen D. T. 2007. *First biodiversity report for Chu Yang Sin National Park, Dak Lak province, Vietnam*. BirdLife International in Indochina, Hanoi, Vietnam.
- Dang N. C., Endo, H., Nguyen T. S., Oshida, T., Le X. C., Dang H. P., Lunde, D. P., Kawada, S.-I., Sasaki, M. & Hayashida, A. 2008. [Checklist of wild mammal species of Vietnam]. Shoukadoh, Kami-

- gyo, Kyoto, Japan. (In Vietnamese.)
- Dang N. C., Tran Q. T. & Tong N. C. 2009. *Mammal survey of selected sites in Chu Yang Sin National Park*. BirdLife International–Vietnam Programme, Hanoi, Vietnam.
- Delacour, J. 1940. Liste provisoire des mammifères de l’Indochine française. *Mammalia* 4: 20–29, 46–58.
- IUCN 2009. *2009 IUCN Red List of Threatened Species*. <www.iucn-redlist.org>. Downloaded on 30 November 2009.
- Kuznetsov G. V. 2006. [*Mammals of Vietnam*]. KMK Scientific Press, Moscow, Russia. (In Russian.)
- Long, B. & Minh H. 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.
- Nguyen V. S., Pham T. A., Truong V. L. & Le X. H. 1997. *The fauna (mammals, birds, reptiles, amphibians and insects) of Bu Gia Map Nature Reserve*. Institute of Ecological and Biological Resources, Hanoi, Vietnam.
- Pham T. A., Nguyen D. K. & Nguyen T. T. L. 1996. Checklist of mammal collection of Da Lat Biological Subinstitute. *Tap Chi Sinh Hoc [Journal of Biology, Hanoi]* 18 (1): 16–22. [In Vietnamese with English title and summary.]
- Pocock, R. I. 1933. The rarer genera of oriental Viverridae. *Proceedings of the Zoological Society of London* '1933': 969–1035.
- Robertson, S. I. 2007. *The status and conservation of small carnivores in Vietnam*. PhD thesis, University of East Anglia, Norwich, U.K.
- Rozhnov, V. V., Kuznetsov, G. V. & Pham T. A. 1992. New distributional information on Owston’s Palm Civet. *Small Carnivore Conservation* 6: 7.
- Schreiber, A., Wirth, R., Riffel, M. & Van Rompaey, H. 1989. *Weasels, civets, mongooses, and their relatives: an action plan for the conservation of mustelids and viverrids*. IUCN, Gland, Switzerland.
- Swan, S. R. & O’Reilly, S. M. G. (eds) 2004a. *Van Ban: a priority site for conservation in the Hoang Lien mountains. Community-based conservation in the Hoang Lien mountains: Technical Report N° 1*. Fauna & Flora International Vietnam Programme, Hanoi, Vietnam.
- Swan, S. R. & O’Reilly, S. M. G. (eds) 2004b. *Mu Cang Chai Species/Habitat Conservation Area. Community-based conservation in the Hoang Lien Mountains: Technical Report N° 2*. Fauna & Flora International Vietnam Programme, Hanoi, Vietnam.
- Thomas, O. 1912. Two new genera and a new species of viverrine Carnivora. *Proceedings of the Zoological Society of London* '1912': 498–503.
- Thomas, O. 1927. The Delacour exploration of French Indochina – mammals. *Proceedings of the Zoological Society of London* '1927': 41–58.
- Veron, G. & Heard, S. 2000. Molecular systematics of the Asiatic Viverridae (Carnivora) inferred from mitochondrial cytochrome b sequence analysis. *Journal of Zoological Systematics and Evolutionary Research* 38: 209–217.

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