

ISSN 1027-2992

CAT

N° 58 | SPRING 2013

news



SPECIES SURVIVAL COMMISSION



CAT SPECIALIST GROUP



CATnews is the newsletter of the Cat Specialist Group, a component of the Species Survival Commission SSC of the International Union for Conservation of Nature (IUCN). It is published twice a year, and is available to members and the Friends of the Cat Group.

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Original contributions and short notes about wild cats are welcome

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Guidelines for authors are available at www.catsg.org/catnews

CATnews is produced with financial assistance from Friends of the Cat Group.

Design: barbara surber, werk'sdesign gmbh
Layout: Christine Breitenmoser
Print: Stämpfli Publikationen AG, Bern, Switzerland

ISSN 1027-2992 © IUCN/SSC Cat Specialist Group

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Cover Photo: First photographic evidence of a Pallas's cat in Bhutan. The animal was captured in Jigme Dorji National Park on 17.11.2012
Photo: Jigme Dorji National Park

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High elevation record of a leopard cat in the Kangchenjunga Conservation Area, Nepal

During a camera trapping survey in Khambachen valley of Kangchenjunga Conservation Area KCA from 24 April to 26 May 2012 we camera trapped one leopard cat *Prionailurus bengalensis* at an altitude of 4,474 meter. This is probably the highest altitudinal record for the species in its range. Additionally, one melanistic leopard *Panthera pardus* was captured at an altitude of 4,300 m, which is probably as well the highest documented record in the country. Yet at this stage, no obvious reason can explain these unusual high records for both species, thus more surveys are recommended for this region.

The leopard cat is the most frequently recorded small cat across Asia. It is distributed from 200-3,000 m asl (Baral & Shah 2008) in the Nepalese Himalaya. However, Ghimirey & Ghimire (2010) recorded the species at an altitude of 3,245 m asl in Makalu-Barun National Park of Nepal, which was the highest documented record for the species at that time. Compared to big cats (lion, tiger etc.), little conclusive information is available on the population status, distribution and ecology of the leopard cat in many part of its range. Because of their cryptic nature leopard cats are difficult to monitor directly or indirectly, made even more difficult by inaccessible terrains regarding costs, time, and logistic

complexity (Jackson et al. 2005). Recent advances in wildlife monitoring techniques, such as camera-trap surveys (Jackson et al. 2006, Ghimirey & Ghimire 2010, Janecka et al. 2011), offer possibilities for more reliable and rigorous studies on the status, distribution, ecology and behavior of wild mammal species. However, camera traps yield extremely low capture rates and therefore high standard errors (McCarthy et al. 2008) in the alpine region making it difficult to employ them effectively. In this case we attempted a pilot camera-trap survey to monitor the high altitude distribution of wild mammals in the alpine zone of Kangchenjunga Conservation Area of the Nepal Himalaya.

Methods

From 24 April to 26 May 2012, we deployed seven paired sets of camera traps (Reconyx™ HC 500) 1.5-2 km apart (Fig. 1) distributed across the 65 km² in the Khambachen valley of KCA. In order to fix the camera locations we followed protocol developed by Jackson et al. (2005). We divided the area into three sampling cells (16 to 30 km² survey cell) and identified at least two camera stations in each cell. Camera traps were positioned between 4,200 m to 5,000 m altitude along wild mammal travel routes (Thapa 2007) especially livestock trails, ridgelines, cliff bases, valley edges and passes. Because of the limited number of suitable sites in the valley we did not relocate the traps during the survey. Camera traps were checked every 10 days to ensure that they were functional. The camera traps were set for a total of 30 days resulting in a sampling effort of 420 trap nights from all three sampling blocks combined.

Results and discussion

The total of 420 trap nights yielded 5,464 images. Out of these 65% were falsely triggered images. Domestic yak (53%) and blue sheep (22%) were commonly captured during the entire period, followed by humans and birds (each 7%), snow leopard (5%) and red fox (4%).

The leopard cat was captured at an altitude of 4,474 m (27.72101°N/87.96296°E), which is the highest documented record for the species in the country and probably in its entire range (Fig. 1, Fig. 2). Additionally, one melanistic leopard was captured at an altitude of 4,300 m (27.74076°N/87.97142°E), definitely the highest record in the country (Fig. 1, Fig. 3). Up to now the record for Nepal was a leopard carcass recorded at 4,000 m (Baral & Shah 2008).

The results from this first camera trap survey in the region indicate the importance of the role of camera trapping in providing species distribution data that might not be collected by other more traditional data collection methods like signs and occupancy surveys.

Acknowledgements

We would like to thank the Department of National Parks and Wildlife Conservation for granting permission and WWF UK for their financial support to carry out this study. We would also thank Mr. Y. Ghimirey for confirming the species

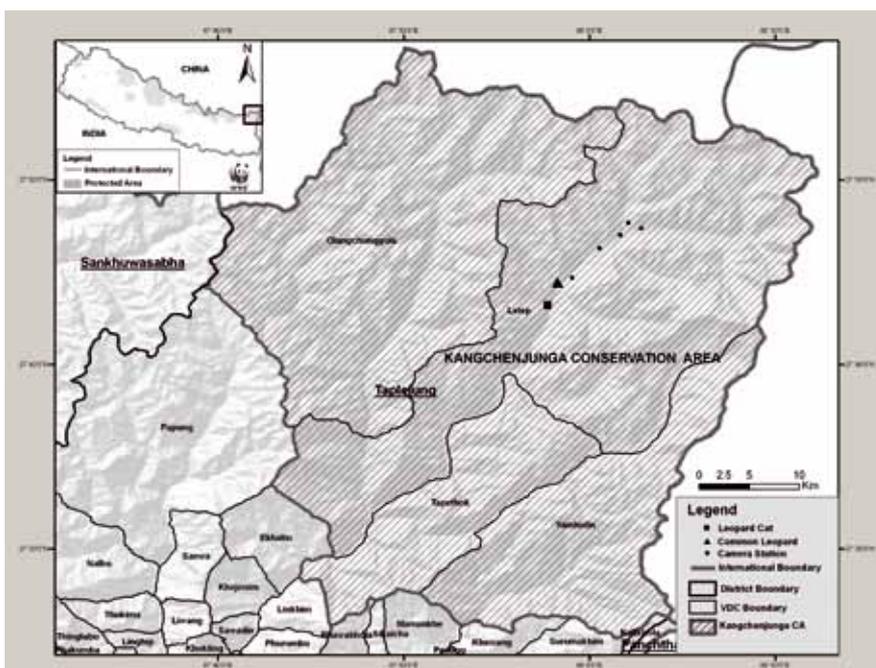


Fig. 1. Location of KCA in Nepal and of camera traps where leopard cat and melanistic common leopard were captured in the KCA.

and Ms. M. Shrestha for preparing the map. Also special thank goes to Snow Leopard Conservation Committee of Ghunsa and Kangchenjunga Conservation Area Management Council.

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Fig. 2. Leopard cat captured in the KCA at an altitude of 4,474 m on 24 April 2012.



Fig. 3. Melanistic leopard at an altitude of 4,300 m in the KCA on 16 May 2012.

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