

Bornean Wild Cat & Clouded Leopard Project Update August 2008

Project Overview

Bornean tropical forest contains a guild of five felid species: clouded leopard, bay cat, flat-headed cat, marbled cat and leopard cat. One is endangered, three threatened, and their presumed primary habitat is rapidly being lost and/or altered in the region. The behavioural ecology of none is well-known, and the impact of forest destruction and management on each of these species is obscure. This project, based at Danum Valley, an area of protected primary lowland Dipterocarp rainforest within a 9730 km² timber concession - The Ulu Segama-Malua Forest Reserve and Tabin Wildlife Reserve (TWR), a predominantly logged lowland Dipterocarp forest surrounded by oil palm plantations, both located in Sabah, Malaysian Borneo will provide base-line data regarding the behaviour and ecology of the five species of Bornean wild cat and their responses to selective logging, upon which informed conservation and management decisions can be based.

Additional aims are to provide conservation research training to host country scientists and students, by means of mammal field-research courses and the intensive training of a postgraduate from the Institute for Tropical Biology and Conservation (ITBC) at the University of Malaysia, Sabah. We will increase awareness of the Bornean wild cats in Sabah by producing and disseminating wild cat-specific environmental education materials. Questionnaire surveys will be conducted throughout the communities surrounding the Tabin Wildlife Reserve, to assess the potential level of hunting/trade of the wild cats and their prey and to assess local people's knowledge, beliefs, attitudes and perceptions about conservation. Project findings will be used to provide recommendations for a Bornean wild cat conservation action plan, and presented at a Bornean wild cat conservation workshop at the end of the project.

To view photos from the project please visit:

<http://www.globalcanopy.org/main.php?m=5&sm=28&ssm=106>

Project update:

(i) Camera trapping:

Phase 1 of camera trapping in the primary forest of the Danum Valley Conservation area revealed the presence of the apparently extremely rare Bornean bay cat, the first confirmed record of this species in this protected area, and the fourth ever photograph of this felid in the wild. No other felids were photo captured during this 6 month operation.

Phase 2 involved camera trapping along abandoned logging roads and trails within an area of good quality selectively logged forest –the Ulu Segama Forest Reserve. Felid photo captures included bay cat, marbled cat, leopard cat and clouded leopard, although the capture rates of the bay and marbled cats proved to be too low to conduct any quantitative density analysis. Photo capture rates of Bornean clouded leopards, however, proved to be sufficiently high to enable the implementation of a density estimation utilising a capture-mark-recapture framework. This has provided the first scientifically robust density estimate for clouded leopards on Borneo and indeed the first for this species.

During Phase 3 we have returned to the primary forest to re-attempt to conduct a density estimate survey of the clouded leopard. With a greater number of camera traps, thanks in part to the International Trust for Nature Conservation, we have been able to survey at a significantly higher camera density and over a wider area than Phase 1. To date we have collected a further 3 photo capture events of the bay cat and a further 3 of the marbled cat, which is helping us to build a picture of these felid's activity and habitat use. We photo-captured 3 individual clouded leopards in this area, on several occasions; however, the photo-capture rate is again too low to perform a capture-recapture analysis.

In the forthcoming stages of camera trapping we plan to move the cameras to an area of heavily logged forest, in which the logging operation has only recently ceased (Dec '07). This area is much more representative of Borneo's remaining logged forest, and will provide an excellent area in which to conduct a clouded leopard density estimate. Later phases will entail camera trapping within the Ulu Segama forest (as in Phase 2) at a much higher camera density, which will enable us to conduct a density estimate of the leopard cat and other small individually identifiable mammalian carnivores. Density estimates for these species will also be obtained using molecular scatology techniques, which will enable us to investigate the relative efficacy of these two techniques.

(ii) Live trapping and radio tracking.

Live trapping has now begun in earnest and on 31st January 2008 we successfully trapped and radio collared a female sub-adult Sundaland (Bornean) clouded leopard; this is the first time this species has been radio collared. VHF radio-tracking has proved to be difficult but possible in this heavily forested and rugged terrain. After several months of tracking the female clouded leopard home range had exceeded 20 km² (100% MCP), although the increase in range size following sequential locations has not reached an asymptote, suggesting that the actual home range is larger. The female began to move in a northerly direction until the signal was lost. To date we have been unable to locate this female and we are now preparing to conduct an aerial search using a helicopter.

In the last 2 months we have also been successful in capturing and tagging 6 leopard cats (4 males, 2 females), and we are successfully collecting excellent data on four of these individuals. Two individuals are proving to be difficult to locate, but these have only been collared for a few weeks.

The live trapping operation has now closed, and it is envisaged that we will reopen the traps in September '08.