

## **Transboundary Expedition on Thai-Malaysia Border Reveals Elephant and Sumatran Rhinoceros Populations Threatened by Poaching**

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In Thailand the earliest steps towards wildlife conservation were taken during the 13th century when King Ramkhamhaeng established Royal Dong Tan Park. Wildlife Parks were also maintained around temples and other religious sites. The Royal Forest Department was established by King Rama V in 1896 but it wasn't until 1962 that the first national park was declared for Thailand. Despite this early commitment to conservation, Thailand lost 50% of its forest cover in the 30 years between 1962 and 1991 to logging and agricultural expansion. Now a good portion of the remaining forests lies along the borders with neighbor countries where remnant transboundary habitats provide potential refuges for large mammals (WIKRAMANAYAKE ET AL., 1998). Although not yet formalized in policy, a new and positive trend is to consider protected areas as part of forest complexes which should be managed as units rather than separate political entities for wildlife conservation (KHONGSANIT, 1999; T. Prayurasiddhi, personal communication).

In 1995, Wildlife Conservation Society scientist Dr Alan Rabinowitz organized a meeting in Thailand at which government representatives from Thailand and its neighbor countries discussed the future for wildlife in the region (RABINOWITZ, 1995). At this meeting, it was agreed that transboundary forests provide important refuges for wildlife and should be preserved by international conservation agreements. Very large mammals (DUCKWORTH & HEDGES, 1998) like tigers, rhinos and elephants are low density species which range over wide-areas and require large areas to maintain viable populations. They don't have visas to pass through their habitats across country borders. If very large mammals can be conserved in these transboundary forests then they may serve as umbrellas for the conservation of other elements of biodiversity and the habitats in which they live (MILLER ET AL., 1999).

From 25<sup>th</sup> March–2<sup>nd</sup> April 1998, at the invitation of Thailand's Royal Forest Department (RFD), Peninsular Malaysia's Department of Wildlife and National Parks (DWNP) sent a survey team on a biological expedition of remote border rainforests along the Thai-Malaysia border in Betong District, Yala Province, Thailand. The objective was to bring researchers and government wildlife staff from the two countries together to document the flora and fauna in the Balahala forest, a 1,100 square kilometre expanse of forest that lies adjacent to Malaysia's Belum Forest Reserve, and to assess the threats to wildlife and their habitats in the area. The survey was supported by the Wildlife Conservation

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Society–Thailand Programme (WCS–TP) with a funding contribution from the Thailand Biodiversity Research and Training Programme (BRT).

This was only the third time that Thai and Malaysian teams had participated in biological surveys since meetings on transboundary conservation initiatives were discussed in 1995 (RABINOWITZ, 1995). Previous transnational collaborations involved rhino surveys in Belum Forest Reserve, Malaysia and Phu Khieo Wildlife Sanctuary, Thailand. It was the first time biologists had explored the Balahala forest which is recognized as an important watershed and potential refuge for transboundary wildlife (ROUND, 1996).

A team of 32 biologists, support staff from the WCS–TP, and security personnel participated in the 7–day survey. Teams led by expert Thai and Malaysian government staff, collaborated to gather information on wildlife and plant distributions ranging in elevation from 300 to 1,500 m. A bird team led by Ms Siriporn Thongaree mistnetted and banded migrant passerines. A second team led by Dr Chavalit Niyomdham collected plant specimens. Finally a third team led by Mr Suwat Kaewsirisuk and Mr Abdul Kadir surveyed mammals along a 30–km transect ranging between lowland forests and high peaks.

Significant findings during the survey included range extensions for several tree species, and the finding of 1–2-year old signs of Sumatran rhino at wallows above 1,000 m. This is the first time that rhinos have been confirmed for Thailand forests along the Thai–Malaysia border, and the only recent evidence that the species is still extant in Thailand. Camera-trapping over a month-long period following the expedition revealed a diversity of mammal fauna which utilize transborder forest habitats above 1,000 m a.s.l., including tiger, clouded leopard, golden cat, tapir, elephant, sambar, muntjac and wild boar. Camera-trapping extended the previous known range of an individual male tiger recorded during a survey a month prior to this survey in the Khlong Hala valley, 1,000 m in elevational difference to the north of the study area. Preliminary surveys for birds in the upper reaches of the Khlong Kawa, in Khlong Hala, and in adjacent Halabala Wildlife Sanctuary in 1997, revealed 89 bird species (ROUND, 1998). Three of these were new records for Thailand; Fire-tufted barbet (*Psilopogon pyrolophus*), Black-browed barbet (*Megalaima oorti*) and Mountain fulvetta (*Alcippe peracensis*), and range extensions for a further 10 bird species were documented. That the latter 13 species were recorded during a rapid 10-day survey suggests that additional anomalies of bird distributions could be made via more intensive, longer-term surveys.

Information obtained from local hunters and collectors of aloewood (*Aquilaria malaccensis* or, in Thai language, “mayhom”) in 1997 and 1998 suggests that rhinos and elephants are verging on local extinction in this transboundary forest due to rampant hunting on both sides of the border. In 1997, rhino horn was traded in local markets for US\$8,000 per 100 g, while elephant ivory went for US\$480 per kg. Penises from transboundary elephants were sold for the restaurant trade in Sungai Kolok at US\$100 per kg. Tigers have somewhat of a reprieve from poachers since they are difficult to hunt, gain a poacher only US\$1,200 for an entire carcass, and are considered too bulky to carry out of the forest. Consequently, they are mostly ignored by poachers who concentrate on the higher value rhino and elephant trophies. Trophies of horn and ivory are traded at markets in Betong, Sungai Kolok, and Kelantan, ultimately destined for markets elsewhere in Asia.

Hunters estimate the rhino population on the Thailand side of the border at 3 individuals,

clearly a non-sustainable population in the absence of reproductive contributions from adjacent Malaysian rhino populations. This grave situation was further reinforced with the finding of animal trails which have been turned into highways by poaching teams who traverse the forests on both sides of the border. On some remote upland trails at the border large trees have been turned into billboards by these poachers, with carvings in one or two languages announcing their dates of arrival and departure. These poachers, some of whom also collect aloewood for the trade in fragrant oils with Japan and the Middle East, use codes to identify themselves, their trophy acquisitions, and directions of travel to other poaching teams. Future efforts to manage the Balahala-Belum forest complex as a transboundary reserve for wildlife must address the primary issue of concern; that of organized poaching of very large mammals and the sale of trophies in markets on both sides of the Thai-Malaysia border.

The transboundary survey would not have happened without the foresight and interest of Mr. Jasmi Abdul, Director of Conservation and Wildlife Research, DWNP, and Dr. Viroj Pimmanrajnagool, Director of Wildlife Research Division, RFD. Technical results of this survey and surveys for tigers conducted by the Royal Forest Department and Wildlife Conservation Society at Balahala are being prepared for publication in local and regional journals.

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