



Veterinary Support for Sumatran Tigers **Report Mar/Apr 2013**

Introduction:

As populations of some of the world's most endangered species continue to decline due to habitat loss and poaching, the risks of disease and population fragmentation become ever more significant. Tigers and other rare large cats have certainly become vulnerable to these dangers in recent years, and veterinary support has never been as important as it is today. The current total population of wild Sumatran tigers is probably below 500 individuals.

Purpose of trip March/April 2013:

- WVI's veterinary director Dr John Lewis was invited by the Zoological Society of London (ZSL) to provide expertise and training for field staff of the Dangku Tiger Conservation Partnership in their first tiger trapping & radiocollaring attempt in the Dangku Reserve, South Sumatera, on the island of Sumatra.
- The trip to Dangku provided an ideal opportunity to investigate which infectious diseases may be significant and facilitate disease surveillance activities for wild Sumatran tiger populations across the island.



Sumatran tiger – source WWF

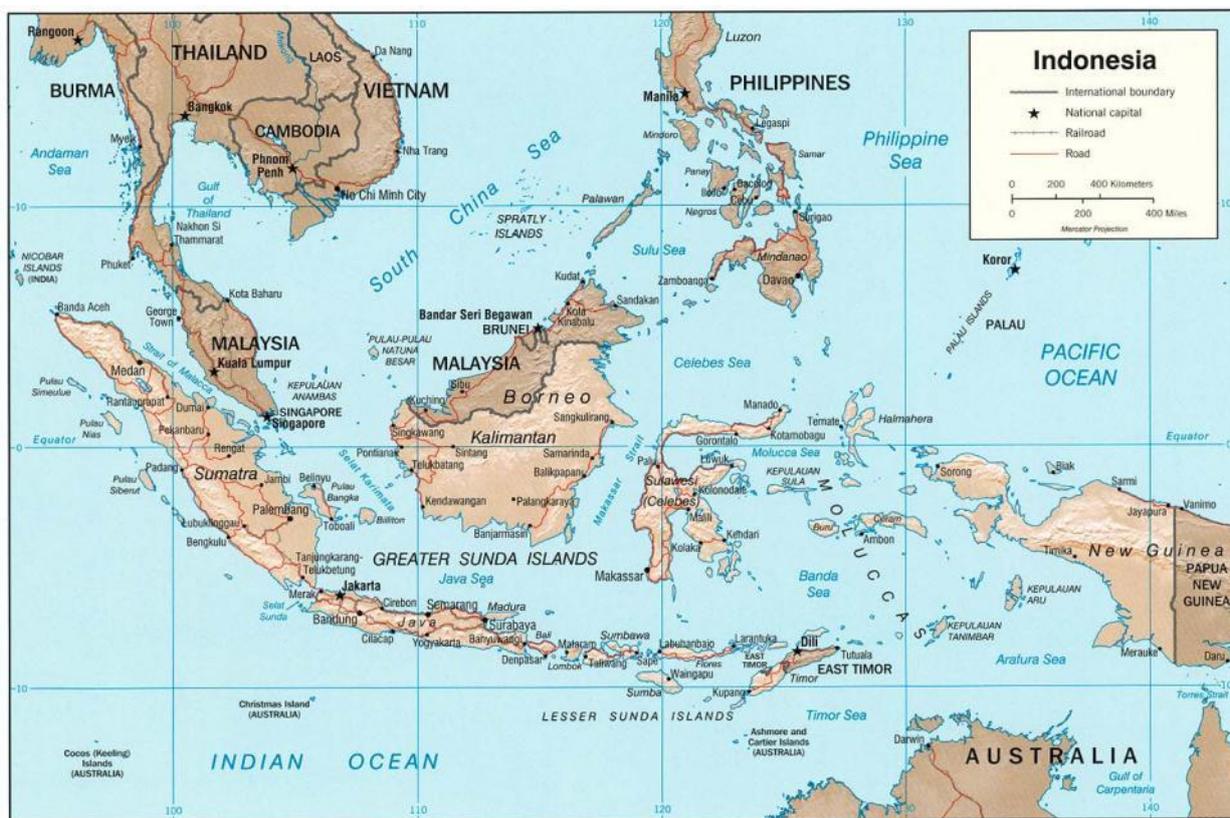
Itinerary:

John Lewis arrived in Jakarta (Java) on 11th March 2013, being met and hosted by staff from ZSL-Indonesia. The next few days were spent in meetings with the director and vets at Taman Safari Indonesia, the Indonesian Institute of Sciences (LIPI), and the President of the Indonesian Veterinary Medical Association.

On the 16th March Dr Lewis flew to Palembang on Sumatra, spending the remainder of the day checking capture and anaesthetic equipment at the local ZSL-Indonesia office. Two more days were spent meeting with Indonesian vets who deal with conflict tigers in and around villages on Sumatra, and meeting the trapping team composed of staff from ZSL and The South Sumatra Wildlife and Conservation office (BKSDA). Following introduction to the head of the South Sumatra BKSDA, a morning was spent at Palembang Zoo with the team going over how their cage trap might be deployed to catch tigers and agreeing the various protocols necessary to ensure tiger and staff safety.

Equipment and staff travelled to the trapping site camp in the northwest Dangku Reserve on the 19th March, the trap was put in place and opened the following day. Trapping was prematurely ended on 31st March following the unforeseen need for all BKSDA staff to respond to an emerging situation with illegal settlers in northeast Dangku.

John returned to Bogor over the next couple of days, and as it was not possible to change return flights to the UK, a few unexpected extra days were spent in Bogor in further discussions with ZSL-Indonesia, Panthera and other organisations involved with tiger conservation in Indonesia.



Indonesia

Tiger trapping and radio-collaring in the Dangku Reserve, South Sumatera :

Detailed background information on the Dangku Tiger Conservation Partnership (DTCP) can be seen at <http://www.zsl.org/conservation/regions/asia/indonesia/dangku-tiger-conservation-partnership,1431,AR.html>

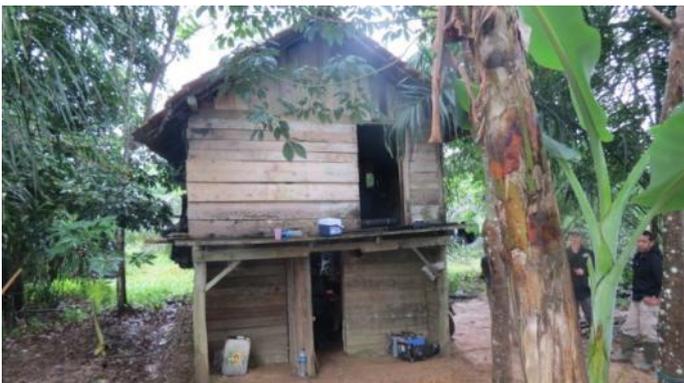
With the exception of larger populations in the Leuser ecosystem and Kerinci, most conservation areas occupied by tigers on Sumatra are relatively small, inadequately protected and surrounded by a landscape dominated by agriculture (largely palm oil plantations), forestry (especially rubber plantations), oil and gas concessions and human settlements. These areas individually are too small to support viable tiger populations and many conservationists believe that the future of tigers on Sumatra will depend on increased protection of core habitats such as Kerinci and maintaining connectivity between the small conservation areas. The Dangku Reserve is one such area. Although a degree of forest connectivity still remains between Dangku and other small conservation areas, it is constantly under threat from further habitat degradation. Working with companies that hold the concessions to develop these important corridors, the DTCP aims to encourage industrial practices that limit the impact on tigers and maintain small area connectivity where at all possible.

“Intelligent placement of new concessions can be the difference between further deforestation and utilising degraded, low value land. Leaving corridors of untouched habitat across plantations could make the difference between isolation and survival for tiger population fragments.”

Radiocollaring of tigers was proposed by ZSL-Indonesia to study the way in which tigers would use a 40km corridor through an industrial landscape which could connect them with another small population in Harapan (see www.harapanrainforest.org), and possibly other small areas occupied by tigers.

Authority for trapping and radiocollaring tigers in Dangku rests with the BKSDA, and therefore capture operations were a joint effort between the BKSDA and ZSL-Indonesia with veterinary technical input and training from WVI.

A simple camp consisting of a two storey wooden shack and an area under canvas provided the base for trapping operations in northwest Dangku Reserve by the 15 person team commencing 20-Mar-13. The base was situated 3kms north of the reserve.



The wooden shack



Camp cook

Only one box-trap was available to the team. This was baited with goat and fitted with a trap transmitter so that closure of the trap (indicating a catch) could be monitored at regular intervals from base camp. The trap was also checked in person by two team members every 24hrs. Unfortunately, despite the presence of tigers in the immediate area of the trap being confirmed as recently as the 28th February 2013, no tigers had been caught by the time trapping had to be stopped prematurely on 31-Mar-13. The early end to the trapping effort was a result of all BKSDA staff being redeployed to Palembang following clearance of illegal settlers in northeast Dangku Reserve and concerns over local demonstrations that followed.

Although disappointing, John Lewis was able to gain sufficient insight into the area, the experience and abilities of the team, the available equipment, location of tiger signs etc, to be able to provide ZSL-Indonesia with detailed suggestions for improvements that should increase the chances of catching tigers for radiocollaring in the future. The technique of box-trapping, rightly favoured by the BKSDA for catching conflict tigers near villages, is not a very effective or adaptable method for trapping tigers for research purposes. It is now hoped that following the failure of the box trapping attempt in Dangku, the BKSDA can be persuaded to approve the use of Aldrich snares for future attempts. *(Aldrich snares have been successfully used to catch wild tigers for research in a number of countries; can be deployed in areas where box-traps cannot; and are considerably cheaper per unit. However, their use is not currently approved by BKSDA and therefore were not an option for this trip.)*

At the end of the trapping period, Dr Erni Suyanti of BKSDA was supplied with anaesthetic agents, including Zoletil (courtesy of Virbac, UK), and a few other consumables to assist her with wildlife work in Benkulu province.

Habitat corridors between small tiger conservation areas certainly have the potential to connect small otherwise isolated populations of tiger to others making viable metapopulations. However, they can also pose disease risks to tigers as they pass through – especially where human settlements in the corridor zones are accompanied by dogs which can be a source of potentially fatal viral infections for tigers. Tigers are often attracted to dogs as easy prey, and virtually all rural human settlements in Sumatra have dog populations. Discussions were held with ZSL-Indonesia highlighting the need to conduct disease risk assessments for any corridors linking Dangku to other area of tiger habitat.



**Male tiger caught on camera trap in the vicinity of the trap site in January 2013
Courtesy of BKSDA & ZSL-Indonesia**

The trapping site



Setting up the box-trap



Installing the trap transmitter



The box-trap in position



The Team!

Disease surveillance:

During informal discussions with several wildlife vets and biologists from different parts of Sumatra it became apparent that a number of tigers in recent years have been observed behaving strangely – apparently healthy animals losing their fear of people and straying into villages. These symptoms in wild tiger are worryingly consistent with infection with Canine Distemper Virus (CDV), which can be fatal in large cats. Furthermore, such behaviour makes tigers far more vulnerable to poachers. No relevant veterinary testing has yet been conducted in Sumatra, so the observations are certainly not diagnostic, and other causes cannot be excluded. However, strong parallels can be drawn with the recent (since 2000) behaviour of tigers in the Russian Far East in which infection with CDV in similar cases has been firmly established.

This is potentially very disturbing news. Very little is known about the impact of disease on wild tigers, and even less about how to protect them from significant disease risks. The first step in doing so is to establish a disease surveillance programme to determine which diseases might be present. In discussions with the senior vets at Taman Safari Indonesia, Bengkulu Province BKSDA, and the President of the Indonesian Veterinary Medical Association, Dr Wiwiek, considerable enthusiasm was expressed for initiating such a programme.

As a result, WVI offered to convene a meeting in early September 2013 of those Indonesian vets who deal with wild Sumatran tiger issues to agree proposals and protocols to start disease surveillance across the island.

The meeting will be hosted by Taman Safari Indonesia and vets representing all provinces will be invited. In cooperation with Dr Erni Suyanti of Bengkulu BKSDA, John Lewis has already drafted a detailed agenda and proposed surveillance framework for discussion in September. It is intended that this will be an initiative of the Indonesian wildlife vets, with support from their professional body, the Indonesian Veterinary Medical Association, with guidance and technical support from WVI.

If the meeting in September is successful, a major step forward in protecting tigers from existing and emerging diseases will have been achieved. Moreover, the disease surveillance programme for Sumatran tigers could become a model for veterinary activities in other tiger range states – a very exciting development indeed!

Concluding remarks:

This was an exceptionally productive and potentially important trip. Initiating a comprehensive disease surveillance programme could be the first step towards a veterinary preventive medicine programme for wild Sumatran tigers. This is ambitious, but certainly feasible if the enthusiasm of the Indonesian wildlife veterinary community is maintained, and sufficient funds secured.

In addition, despite the mild disappointment of not being able to radio-collar a tiger this time, considerable progress was made towards identifying appropriate techniques for any future attempts to do so in Dangku and other small tiger areas in South Sumatera - and perhaps elsewhere.

Our sponsors

None of our activities are possible without our generous supporters. We are enormously grateful to the following organisations for supporting our work in Sumatra:

Chessington Zoo
Etihad Airways
Friends of Paradise Wildlife Park
Global Biofuels Trading Inc (GBTI)*
Virbac UK
Wildlife Heritage Foundation
Zoological Society of London
Virbac UK

* This trip was organised at relatively short notice, and it would not have been possible without the large contribution made by **Global Biofuels Trading Inc**, a company with which one of our trustees, Tom Ogilvie-Graham, has a close association and is currently a director. The engagement of companies such as GBTI with Wildlife Vets International demonstrates an encouraging commitment to conservation by the private sector and we very much hope to work with them again in the future.



Sumatran tiger at Wildlife Heritage Foundation. Credit Frank Reid