

PRELIMINARY CAMERA-TRAP OTTER SURVEY  
IN NAKAI-NAM THEUN NATIONAL PROTECTED AREA  
NOV-DEC 2015



Final Report

January 2016

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## Introduction

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Little is known about the status of otter species in Southeast Asia. In Lao PDR, two IUCN-listed Vulnerable species, *Aonyx cinereus* and *Lutrogale perspicillata* occur, and *Lutra lutra* may also still occur, only historically recorded. Otters are declining across their range due to precipitous loss of habitat, illegal trade, and decreasing prey base. Information is urgently needed on their distribution, habitat use and local threats. This project aims to collect new data on the distribution and taxonomic status of otter species in Nakai-Nam Theun National Protected Area (NNT NPA) in Lao PDR, in order to adopt long-term effective, on-the-ground conservation strategies for the species occurring in this area.

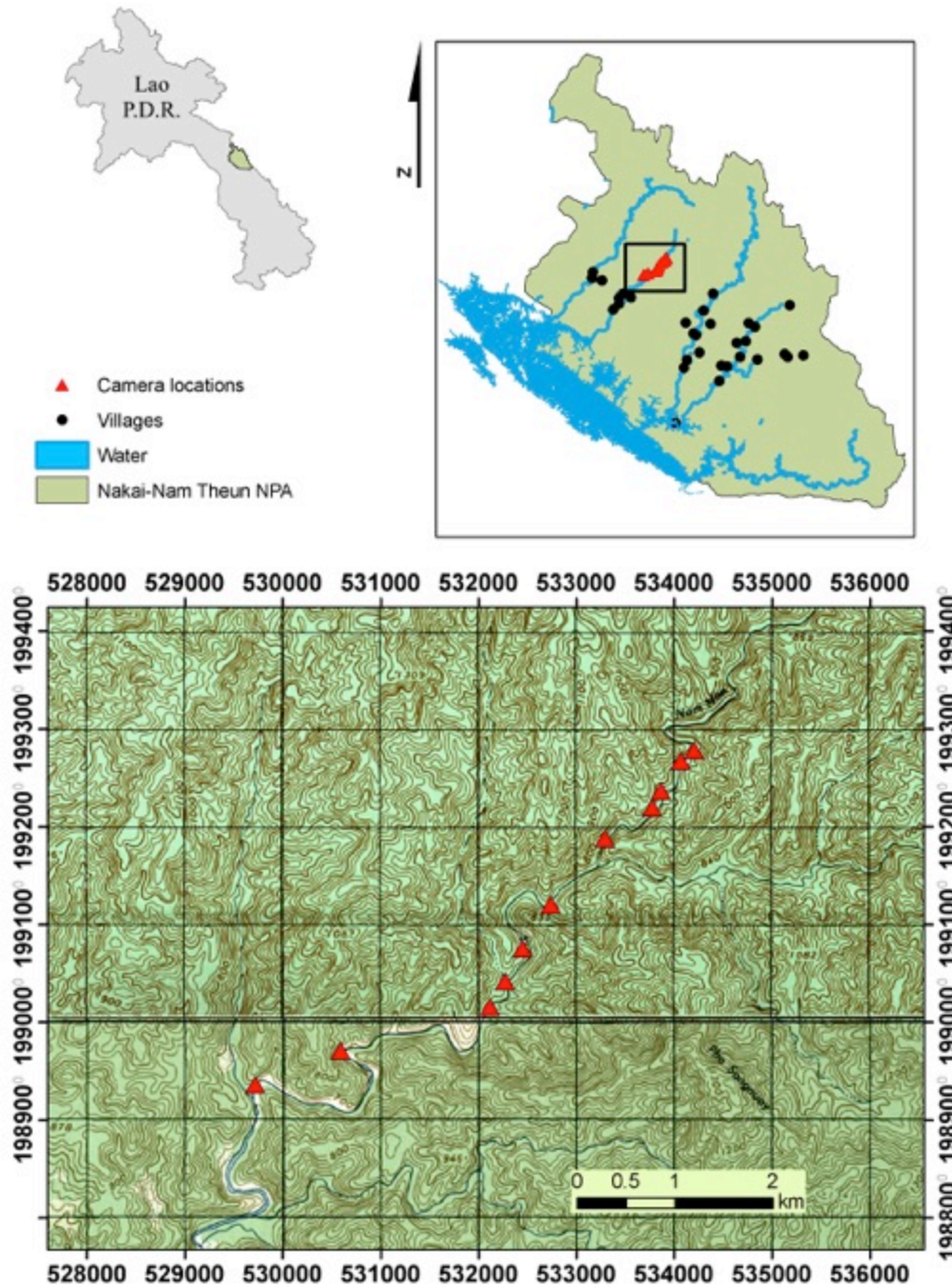
## Methods

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Between November to December 2015, we placed 11 infrared motion automatic cameras (10 Moultrie M-1100i each with 32 GB memory card and one Reconyx with a 16 GB memory card), active in the field for 43 to 46 days, along one of the main rivers in Nakai-Nam Theun National Protected Area (NNT NPA), the Nam (=river) Mon (Figure 1), where local villagers regularly report the presence of otters. The location of each camera was based on (i) observation of signs (e.g. footprints; spraints), and/or (ii) habitat characteristics and features suitable to possible passage of otters, and/or (iii) report of otter sightings from locals.

Cameras were positioned about 20-30 centimetres above ground, as much as possible facing N/S directions to avoid facing sunlight (though this was not systematically possible at all camera-stations), directly of trees whenever possible or otherwise placing poles, and without the use of any lure.

Most spraints observed were photographed and footprints observed near camera-trap station were reproduced using transparent plastic sheets placed over the footprints and contours drawn with permanent marker (*cf.* Progress Report#1).



**Figure 1:** Location of Nakai-Nam Theun National Protected Area and of the survey site: the Nam (=river) Mon, where 11 camera-traps were set in November 2015.

Informal interview with the survey team occurred one night during the survey period with a set of questions, allowing open answers by respondents:

- (1) Do you see otters often?
- (2) How many species/types of otters there are in the area? Describe.
- (3) Are these species found in the same habitat?
- (4) Do otter populations increase or decrease in the area?
- (5) Do they have value in the trade/do people sell them?

- (6) Do villagers hunt it?
- (7) If hunted, what technique is usually used?
- (8) Do people like eating the meat of otters?
- (9) Are otters source of conflict with villagers? What conflict?

### **Preliminary Results**

The 11 cameras were active in the field for a total survey effort of 486 camera-trap nights (CTN) (Table 1). Of the 11 cameras, four (4) recorded otters. Ten (10) notionally ‘independent’ pictures of otters were recorded (independent pictures are defined here as consecutive photographs of individuals/social units of the same species taken more than 30 minutes apart [except when the same individual/social unit could be identified and was photographed consecutively for over 30 minutes] and non-consecutive photos of individuals/ social units of the same species; following O’Brien et al., 2003). All species were identified as the Asian Small-clawed otter *Aonyx cinereus* with confirmation from otter specialist Nicole Duplaix of the IUCN/SSC Otter Specialist Group (Table 2).

**Table 1:** Location and survey effort of the 11 cameras set in the field for the otter survey in Nov-Dec 2015 in Nakai-Nam Theun National Protected Area.

<b>Cam/ Card ID</b>	<b>Model</b>	<b>Date (Set up)</b>	<b>Date (retrieval)</b>	<b>Survey effort (CTN)</b>	<b>Longitude</b>	<b>Latitude</b>	<b>Elevation (m a.s.l.)</b>
1	Moultrie	02/11/15	17/12/15	45	105.299456	18.002383	680
2	Moultrie	04/11/15	17/12/15	43	105.316022	18.022332	723
3	Moultrie	02/11/15	16/12/15	44	105.276792	17.995222	632
4	Moultrie	03/11/15	17/12/15	44	105.302639	18.007792	678
5	Moultrie	04/11/15	17/12/15	43	105.319213	18.026096	738
6	Moultrie	02/11/15	18/12/15	46	105.285062	17.998337	729
7	Moultrie	03/11/15	17/12/15	44	105.310629	18.01793	770
8	Moultrie	04/11/15	17/12/15	43	105.317935	18.025076	764
9	Moultrie	02/11/15	17/12/15	45	105.300962	18.004749	718
10	Moultrie	03/11/15	18/12/15	45	105.305366	18.011846	773
11	Reconyx	03/11/15	17/12/15	44	105.315169	18.02076	741

**Table 2:** Summary results of otter photographed during the survey in Nov-Dec 2015 in Nakai-Nam Theun National Protected Area.

Cam # with otter recorda	Longitude	Latitude	Elevation	Notionally independent pictures	Date taken	Time taken (24hrs)	Species ID
2	105.316022	18.022332	723	1	09/11/15	08:57	<i>Aonyx cinereus</i>
3	105.276792	17.995222	632	1	11/12/15	05:32	<i>Aonyx cinereus</i>
5	105.319213	18.026096	738	1	08/12/15	13:47	<i>Aonyx cinereus</i>
8	105.317935	18.025076	764	7	16/11/15	-	<i>Aonyx cinereus</i>
					18/11/15	-	<i>Aonyx cinereus</i>
					18/11/15	-	<i>Aonyx cinereus</i>
					20/11/15	-	<i>Aonyx cinereus</i>
					28/11/15	-	<i>Aonyx cinereus</i>
					06/12/15	-	<i>Aonyx cinereus</i>
					17/12/15	-	<i>Aonyx cinereus</i>

4

10

Note: time of record is given for the first 'independent picture when a series were taken. Times of Cam#8 failed so are not reported.

Villagers reported that :

*(1) Do you see otters often?*

They always see otters when coming along the Nam Mon, especially in the evenings. They are seen more further away from the villages. Otters are also close to the village but they are not seen often.

*(2) How many species/types of otters there are in the area? Describe.*

Two species:

- one with feet like dogs, small and dark, mostly seen in groups of 3 to five individuals
- one with feet like duck, large, mostly seen in pairs

Sprints of the two species look the same, but thought that small species eat more fish and large species eat more crabs.

*(3) Are these species found in the same habitat?*

The large species uses more large rivers and the small species more in smaller streams but they can however be found in the same habitat as well.

*(4) Do otter populations increase or decrease in the area?*

Otter population are increasing a lot. Many otters in the area.

*(5) Do they have value in the trade/do people sell them?*

Their price in the trade has decreased a lot. Before, an otter skin (for the large species only – the small species was not sold/ordered) could be sold 500,000 LAK (~US \$ 60), but now no one orders, so hunting has decreased. People who used to order were either Vietnamese or Lao people coming from Lak Sao. However, there are still Vietnamese who come along the upper Nam Theun and Nam On (not in Nam Mon and Nam Xot) to hunt for otters.

*(6) Do villagers hunt it?*

No. Villagers don't hunt it (now that no one orders it), because it is too difficult to hunt and they don't have the material.

*(7) If hunted, what technique is usually used?*

They are best hunted using a series of large hooks placed along a line perpendicular to a large river, along rapids, at narrow spots, placed just above the water.

*(8) Do people like eating the meat of otters?*

No, the meat is not very good, it has a bad smell ('*khao*').

*(9) Are otters source of conflict with villagers? What conflict?*

Otters break fishnets very often.

## **Next Steps**

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Only one species of otter was photographed during this survey. Based on previous records of otter signs (Timmins & Evans 1996) and villager reports, two species occur in the area. Further survey targeting different habitats should be conducted to confirm the presence of (at least) a second larger species (still not identified to species with certainty).

The relative high number of pictures recorded during this short survey and reports from villagers suggest the population of *Aonyx cinereus* in Nakai-Nam Theun is healthy.

We intend to conduct additional interviews in more villages in order to better assess threats currently faced by otters in Nakai-Nam Theun. This will help us with developing a local conservation action plan for this area. In addition, we need to develop a systematic method to assess current population abundance and monitor them over time.

## **Acknowledgements**

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We are grateful for the support of Phoenix Zoo and the Otter Specialist Group for this project. The Otter Specialist Group is also providing technical support. Thank you to the Watershed Management Protection Authority for providing permission to conduct the survey. Villagers from Ban Navang provided welcome assistance for field work and anecdotal information on otters and kindly took part in our informal interview.

## **References**

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O'Brien TG, Kinnaird MF & Wibisono HT (2003) Crouching tigers, hidden prey: Sumatran tiger and prey populations in a tropical forest landscape. *Animal Conservation*, 6: 131–139.

Timmins RJ & Evans TD (1996) Wildlife and Habitat Survey of the Nakai-Nam Theun National Biodiversity Conservation Area. Wildlife Conservation Society, 59 pp.

**Plate 1:** Selection of camera-trap photos recorded during the survey in Nakai-Nam Theun NPA in Nov-Dec 2015. (Note: time and year of CAM#8 is incorrect) © Project Anoulak.



