



Investigating white-cheeked gibbons (*Nomascus siki* / *N. leucogenys*) distribution in Nakai-Nam Theun National Protected Area, Laos

A final report to the Gibbon Conservation Alliance

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Dec. 2018 1



Project background



Gibbons (Family Hylobatidae) are frequently referred to as the most threatened primate Family globally. Gibbons of the genus *Nomascus*, containing seven species, are the most threatened of the four Hylobatidae genera with four classified as Critically Endangered, three as Endangered and one yet to be assessed on the IUCN Red List of Threatened Species. This genus occurs in the Indo-Burma Biodiversity Hotspot, specifically restricted to east of the Mekong River in Cambodia, Laos, Vietnam and southern China.

White-cheeked gibbons (*Nomascus* spp.) have a restricted global range. They are endemic to Laos and Vietnam (*N. leucogenys* is believed to be ecologically extinct from China; Fan et al., 2013). In Vietnam, white-cheeked gibbons have already faced local extirpation at several sites due to primate-targeted hunting and habitat loss and the remaining populations are declining at a dramatic rate (Blair et al., 2011; Rawson et al., 2011). The same is expected to occur in the future in Laos if no conservation action is taken rapidly.

Other more accessible forested parts of Laos have already been depleted of their core populations compared to the early 1990s (MAF, 2012; Duckworth, 2008; Rawson et al., 2011; Duckworth, *in litt.*). The demand from Vietnam and China specifically for gibbon bones used in traditional medicine (Nooren & Claridge, 2001), means that as these species' populations are decreasing in Vietnam at an alarming rate, with the threat on Lao populations (especially at the Vietnam border) increasing. Gibbons have been regularly traded in Laos (Davidson et al., 1997; Nooren & Claridge, 2001).

Given their current conservation status, it is crucial to take appropriate actions to protect these species, with site prioritization. However, there are still large gaps in our knowledge regarding the distribution range limits of *Nomascus* species, and notably for *N. leucogenys* and *N. siki*. It is currently speculated that the Nam Kading-Nam Theun (river) represents the major geographical barrier between the two species. This would suggest that both species occur in Nakai-Nam Theun National Protected Area where our project is based (Van Ngoc Think et al., 2010). But this theory lacks hard evidence and requires confirmation with additional acoustic samples of gibbon songs across the area.

Gibbon calls are taxonomically distinctive between species and when analyzed can identify the taxonomic status of a species (Van Ngoc Think et al., 2011). This project aimed to collect gibbon acoustic samples across Nakai-Nam Theun National Protected Area and analyzed the vocalizations in collaboration with Dr. Michal Hradec from the Czech University of Life Sciences (Department of Animal Science and Ethology) to determine the taxonomic status and distribution of gibbon species in Nakai-Nam Theun. This will have considerable importance to re-evaluate the global conservation status and distribution of both species and for species management plan.



Project achievements, limits and challenges

- **Overview**

The initial project planned to collect vocalization recordings across several sites in Khammouan and Bolikhamxay Provinces in collaboration with several other institutions with on-going projects in these areas. However, because of time constraints and administrative limitation to obtain required permissions on time, we decided to re-focus our project to solely work in Nakai-Nam Theun National Protected Area where our project is based.

We therefore planned to visit as many sites as possible across the protected area to provide a good understanding in variations in gibbon vocalizations in the area. The logistics and manpower in our organization (indeed, our association is implementing multiple projects at the same time with limited team) meant that we encountered delayed to visit all the sites to record the vocalizations. However, over the past 2 years we were able to collect recording from 8 sites (Figure 1).

- **Visit of Dr. Michal Hradec in May 2018**

We are collaborating with Dr. Michal Hradec from the Czech Republic University of Life Sciences in Prague to provide us the technical assistance in the analysis of the vocalization samples. In May 2018, he came to our site for a visit and field work to record vocalizations. Unfortunately, he became ill after a few days in the field and we had to cancel the trip and organize his return. No recordings were taken that time.

- **Equipment issues**

In 2017, we tested the equipment purchase (with co-funding) for the project (Fostex FR-2LE Field recorder with external mono microphone Sennheiser and Rycotte wind shield) in the field and set up all options according to the needs and designed a dataform. One field staff was trained to independently use the equipment and collect the data.

Unfortunately, our microphone Sennheiser stopped working in end-2017 and was not repairable. Because of the difficulty logistically to get equipment shipped to Laos we had to wait summer of 2018 to purchase a new microphone (Rode NTG3 Microphone canon) which we are using to record the rest of our samples.

- **Next steps**

This project will continue over 2019 in order to allow us to visit more sites. Notably south of the river Theun, which is thought to be the geographic barrier between the two white-cheeked gibbon species. We expect to have all the vocalizations needed by end of 2019 to start analysis. We will then prepare a publication for a peer-reviewed journal to present our results.



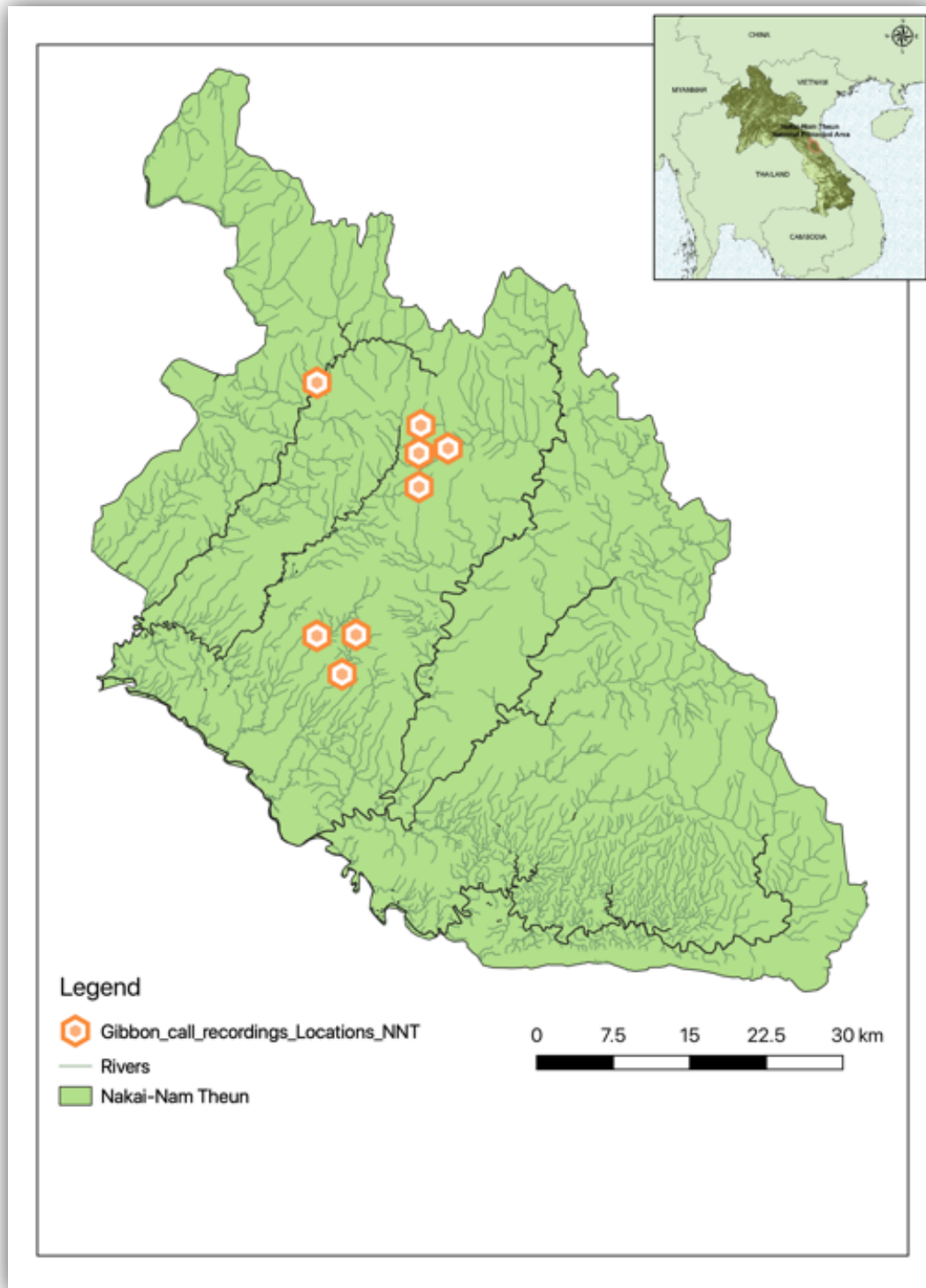


Figure 1 : locations of sites where gibbon vocalizations were recorded in 2017-2018



Financial report

Overview:

The totality of the funds (2200 USD) received from the Gibbon Conservation Alliance were used over the past two years (Table 1):

- *Travel: 403 USD*
- *Local people payments: 757 USD*
- *Food & Accommodation: 322 USD*
- *Equipment and consumables: 725 USD*

Variance in initial budget plan and actual expenditures are presented in Table 2.

Table 1: Breakdown of expenses of funds received from GCA

Date	Item	quantity	unit	unit cost	sub-total	currency	Total cost (US \$)	Exchange rate
TRAVEL							\$ 403	
3-May-18	Travel VTE - Nakai				1750000	Lao Kip	\$ 210	1 8,318.60
5-Mar-18	Public boat Nakai - Makfuang	3	ticket	50000	150000	Lao Kip	\$ 18	1 8,322.55
5-Mar-18	Boat Makfuang to Korbong				200000	Lao Kip	\$ 24	1 8,322.55
6-Mar-18	Boat Korbong to Vangchang				350000	Lao Kip	\$ 42	1 8,322.55
6-Mar-18	Gasoline for boat				150000	Lao Kip	\$ 18	1 8,322.55
10-Mar-18	Boat Korbong to Makfuang				200000	Lao Kip	\$ 24	1 8,322.55
6-Mar-18	Tractor				150000	Lao Kip	\$ 18	1 8,322.55
12-Nov-18	Boat Thalang to Nahao				300000	Lao Kip	\$ 36	1 8,322.55
12-Nov-18	Motorbike Nahao to Navang				100000	Lao Kip	\$ 12	1 8,322.55
LOCAL PEOPLE PAYMENTS							\$ 757	
10-Mar-18	villager assistant Kieng	8	day	100000	800000	Lao Kip	\$ 96	1 8,322.55
10-Mar-18	villager assistant Xang	8	day	100000	800000	Lao Kip	\$ 96	1 8,322.55
5-Mar-18	villager assistant Yoth	2	day	100000	200000	Lao Kip	\$ 24	1 8,322.55
9-Mar-18	3 villagers Porters	5	day	300000	1500000	Lao Kip	\$ 180	1 8,322.55
12-Nov-18	3 village guides and porters	10	day	300000	3000000	Lao Kip	\$ 360	1 8,322.55
FOOD AND ACCOMMODATION							\$ 322	
4-May-18	Guesthouse Vientiane for Dr. Michal Hradec	4	night	150000	600000	Lao Kip	\$ 72	1 8,318.60
5-Mar-18	Lunch in Nakai				100000	Lao Kip	\$ 12	1 8,322.55
5-Mar-18	Food for trip				856000	Lao Kip	\$ 103	1 8,322.55
5-Mar-18	Food at Sern Sep				275000	Lao Kip	\$ 33	1 8,322.55
6-Mar-18	Food Ban Vangchang				350000	Lao Kip	\$ 42	1 8,322.55
6-Mar-18	Food for team				200000	Lao Kip	\$ 24	1 8,322.55
12-Nov-18	Food for team				300000	Lao Kip	\$ 36	1 8,322.55
EQUIPMENT AND CONSUMMABLES							\$ 725	
7-Mar-18	Leech socks				175000	Lao Kip	\$ 21	1 8,322.55



5-Mar-18	Medicine				225000	Lao Kip	\$ 27	1	8,322.55	
5-Mar-18	Batteries (for GPS and recorder)	5	pair	50000	250000	Lao Kip	\$ 30	1	8,322.55	
28-Aug-18	Rode NTG3 Microphone canon **	1	micro phon e	555.91	555.91	EUROS	\$ 647	1	0.859831	
TOTAL SPENT							\$ 2,206			
Received							\$ 2200			
Balance							\$ 0			

** Receipt of Rode NTG3 Microphone attached in annex.

Table 2: Variance in budget plan and actual expenditures.

CATEGORY	INITIAL BUDGET PLAN	ACTUAL EXPANSES	BALANCE	JUSTIFICATION
Travel	740 \$	403 \$	337 \$	We were able to save money on travel by going into site as part of other projects
Local people payments	414 \$	757 \$	-343 \$	In the past two years the per diem rate set by the Government of Laos has increased from 70,000 kip/day to 100,000 kip/day which increased our expanses in this category
Food and accommodation	617 \$	322 \$	295 \$	We were able to save money on travel by going into site as part of other projects
Equipment and Consumables	513 \$	725 \$	-212 \$	Because of the failure of our first microphone, we had to purchase a new one which was not initially planned
TOTAL	2284 \$ Received: 2200 \$	2200 \$	0 \$	



Selection of photographs



On our way to a field site (photo taken with a drone)



On our way to a field site (photo taken with a drone)





On our way to a field site (photo taken with a drone)

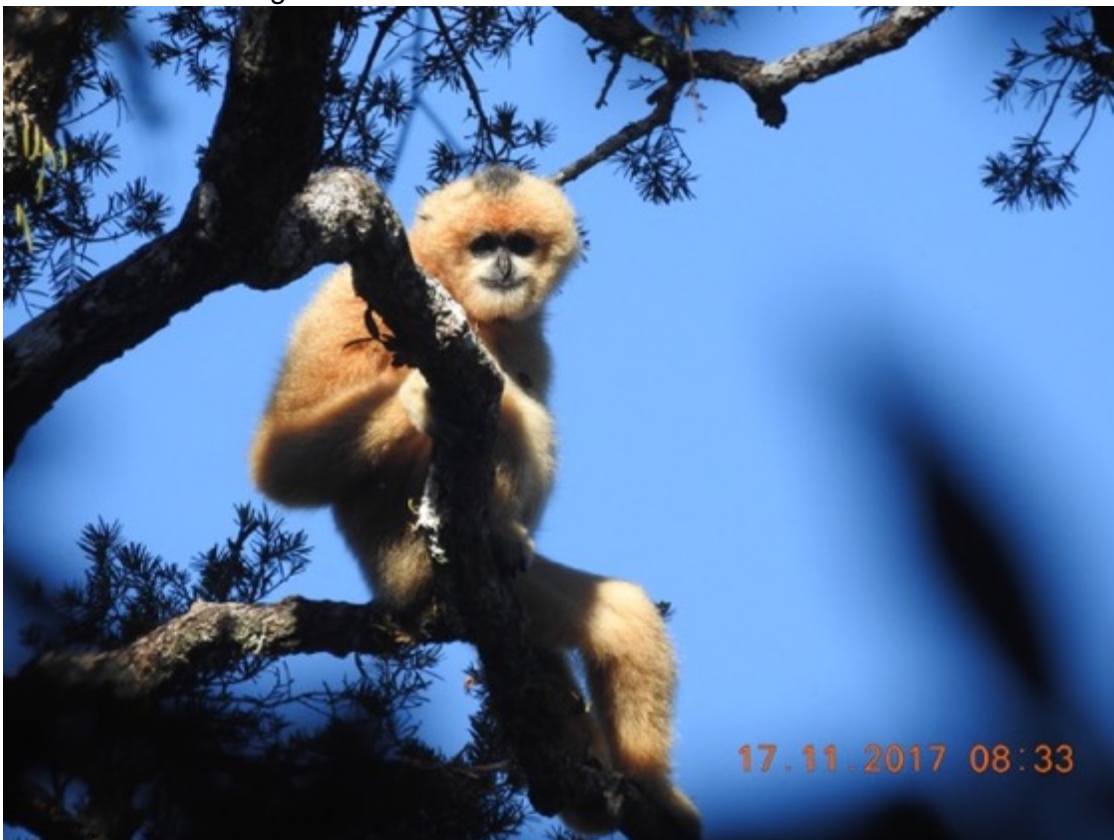


Female with young white-cheeked gibbons



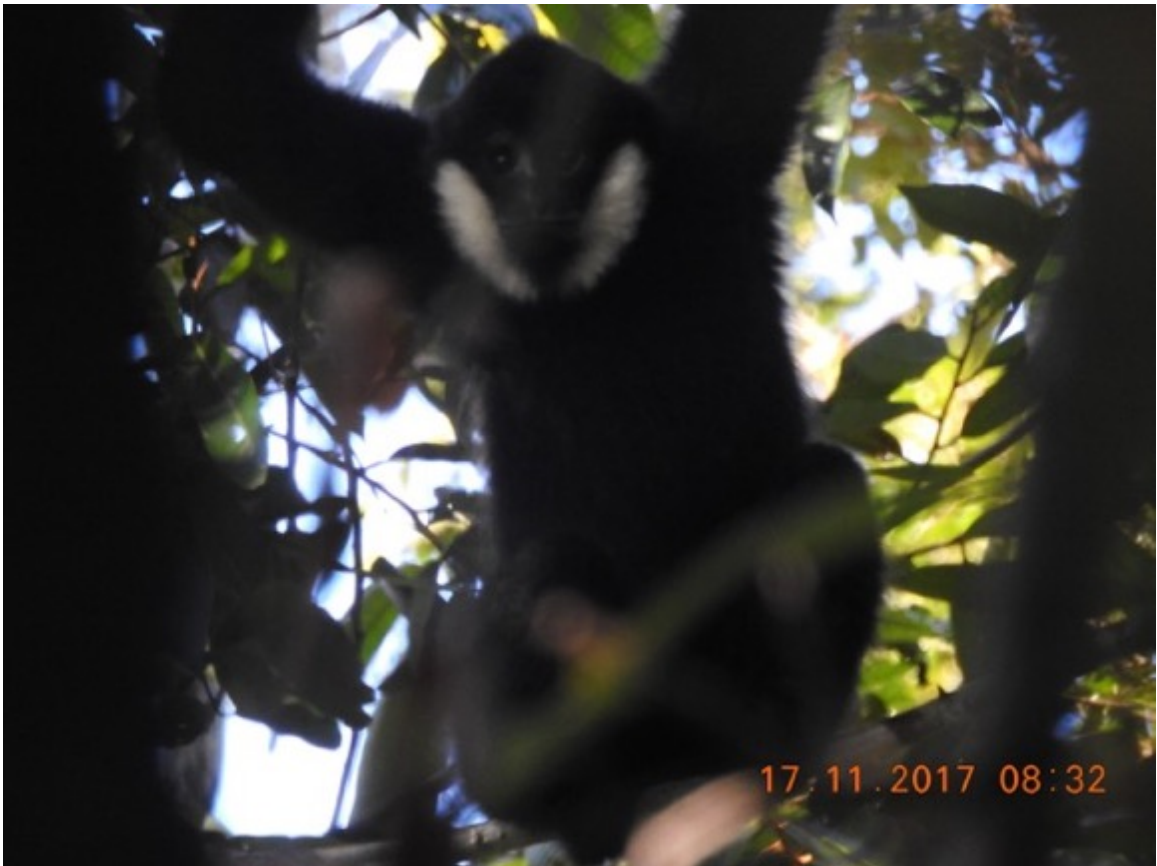


Male white-cheeked gibbon



Female white-cheeked gibbon





Male white-cheeked gibbon



Female white-cheeked gibbon





Female white-cheeked gibbon



Annex: Receipt of equipment purchase



LOCATION VENTE D'EQUIPEMENT AUDIOVISUEL PROFESSIONNEL AGREE
 SONY Panasonic JVC Canon Petrol Sennheiser Audio-technica RODE Vinten Satchler Avid Apple

VIDEO PLUS
 12 Villa des Fleurs
 92415 COURBEVOIE CEDEX

Tél : 01 40 10 38 40 - Fax : 01 40 10 38 41

Facture FI009318

Date	N° Client	Référence
28/08/18	000529	ORD000000019319

COUDRAT CAMILLE
 68 AVENUE MARECHAL MAUNOURY
 41000 BLOIS
 FRANCE
 N° intracommunautaire client

Votre commercial
 Gaelle BAROUKH
 TEL : 01 40 10 38 12 FAX :
 Email : Gaelle.Baroukh@videoplusfrance.com

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Exemplaire provisoire

Référence	Désignation	N° Série	Qté	Px unitaire	Montant € HT
NTG3	Rode NTG3 Microphone canon electrostatique Eco participation HT :		1	449,090	449,09 0,08
	NS : 0034149				
CHRONOPOST	LIVRAISON PAR CHRONOPOST N°XU063322276FR		1	9,500	9,50
ASSUR.PORTI	ASSURANCE TRANSPORT		1	4,587	4,59
	REGLEMENT PAR CB INTERNET 004968 DE 555.90€				

Eco-participation HT :	0,08		
Code	Base	Taux	Taxe
1	463,26	20%	92,65

Total € HT	TVA	NET A PAYER
463,26	92,65	555,91 €

Conditions de règlement : CC@ - Carte de crédit internet

Pénalités de retard : Deux fois le taux d'intérêt légal en vigueur et 50 € de dossier de recouvrement.

La vente est soumise aux conditions générales de ventes figurant au dos acceptées sans réserves par l'acheteur.
 La responsabilité du vendeur est exclue quant aux conséquences des dysfonctionnements dans les ventes de matériel informatique et de haute technologie.

VENTE AVEC CLAUSE DE RESERVE DE PROPRIETE, Jusqu'à complet paiement du prix (Loi N° 80-335 du 12 Mai 1980, voir au dos)

En cas de litige, le Tribunal de Commerce de Bobigny est compétent.

RIB : VIDEO PLUS 30003 03420 00020108635 06 Société Générale Paris 16^{ème}
IBAN : FR76 30003 03420 0002010863506 SWIFT : SOGEFRPP

Coupon à joindre au règlement

N° CLIENT DATE
 000529 28/08/18
 FI009318 555,91

VIDEO PLUS

N° Siret : 32087677400060 N° intracommunautaire : FR06320876774 N.A.F. : 4743Z

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