

New Insights in the Distribution of White-Cheeked Gibbons *Nomascus siki* and *N. leucogenys* in Central Lao PDR



www.conservationlaos.com

Camille N. Z. Coudrat · Hradec M. · Vostrá-Vydrová H. 2024

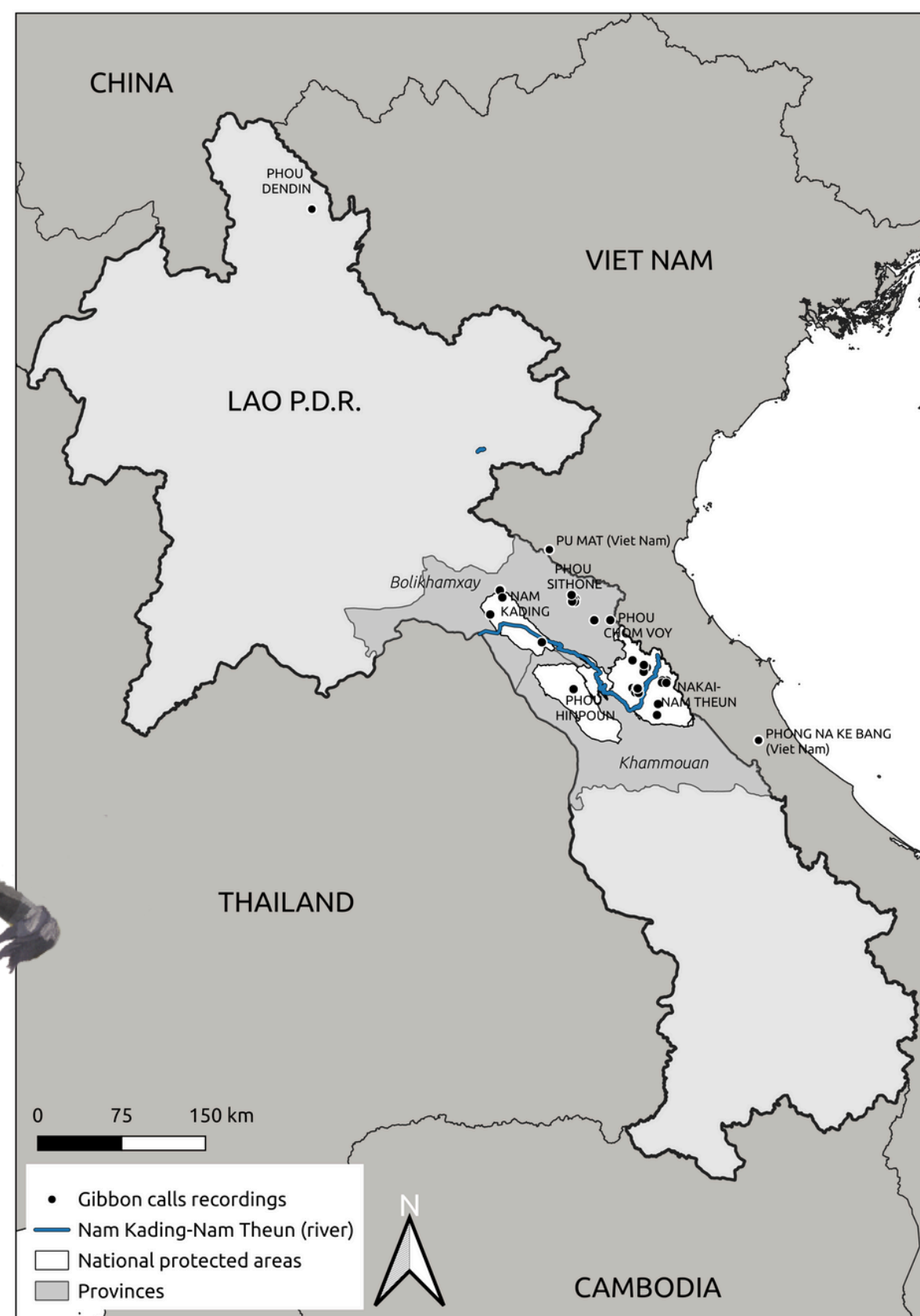


INTRODUCTION

- Gibbons of the genus *Nomascus* are the **most threatened** of the four Hylobatidae genera
- The **Northern White-cheeked Gibbon *Nomascus leucogenys*** and the **Southern White-cheeked Gibbon *Nomascus siki*** have a restricted global range: they are **endemic to Lao PDR and Viet Nam**
- In central Lao PDR, the **distribution range limit between *N. leucogenys* and *N. siki* still needs to be determined**, preventing appropriate conservation planning
- It has been **speculated** that the **Nam Theun-Nam Kading river** represents the **geographical barrier** between the two species, but this **needs more investigation**
- Gibbon songs** are **taxonomically distinct** between species and, when analyzed, can identify the taxonomic status of a species

METHODOLOGY

- Aim:** investigate the **distribution of *N. leucogenys* and *N. siki*** in central Lao PDR, across two provinces: Bolikhamxay and Khammouan
- We collected **gibbon song recordings**:
 - In-situ** gibbon gibbon recording: **90 *Nomascus* gibbon songs** included in this analysis
 - Ex-situ** gibbon recording: **24 song recordings of *Nomascus leucogenys* and 8 *N. siki*** from **12 European zoological facilities**
- We extracted **significantly different acoustic parameters** for males (n=10) and females (n=12) from songs recorded in captivity, used as **training data** for a **species classification analysis** of vocal recordings of **unknown species from the wild**



Locations where the 90 *Nomascus* gibbon songs included in this analysis, obtained from the wild, were recorded from seven sites in central Lao PDR and Viet Nam.



Male
Northern White-cheeked Gibbon
Nomascus leucogenys

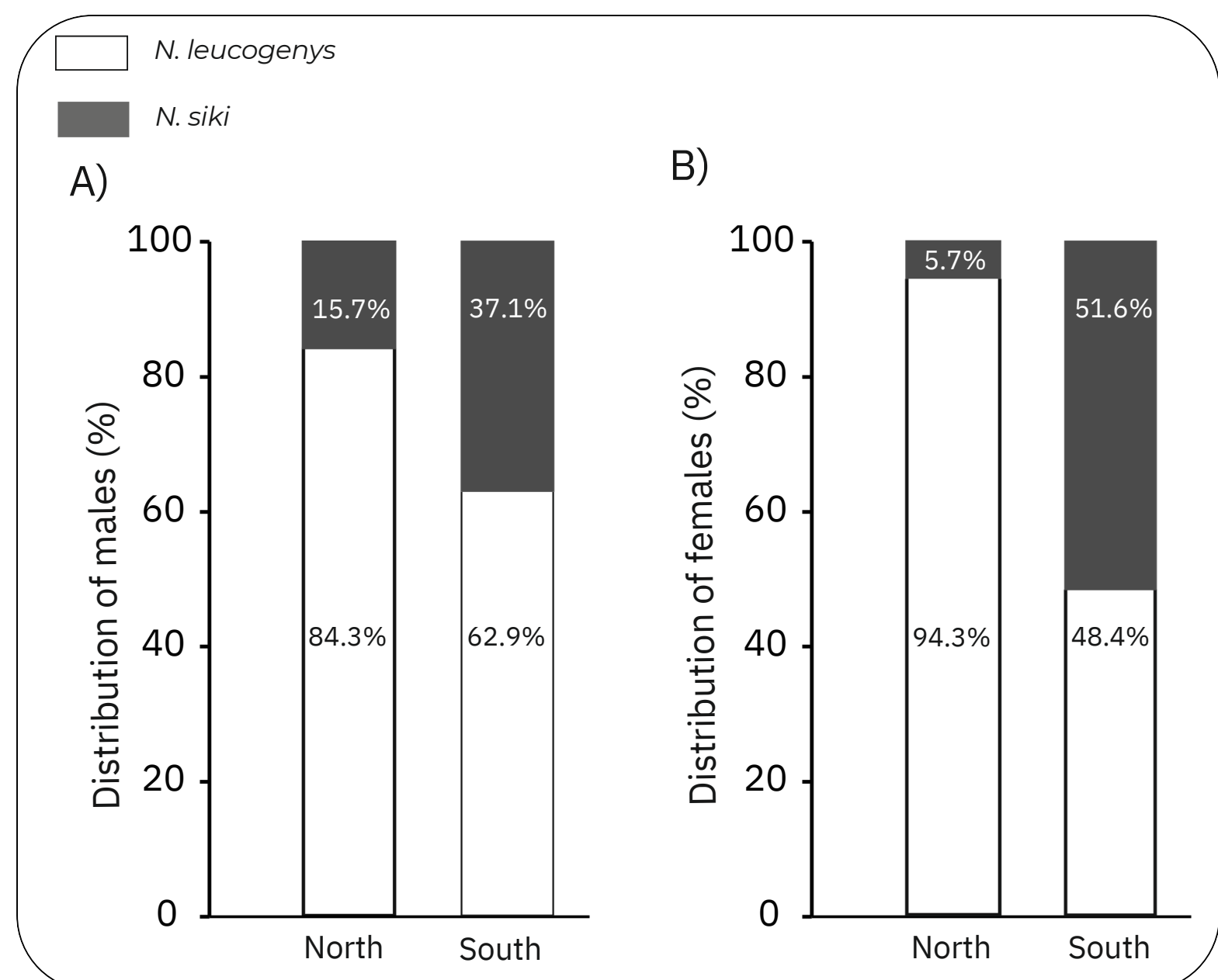


Male
Southern White-cheeked Gibbon
Nomascus siki



MAIN FINDINGS & CONCLUSIONS

- vocalizations were assigned to both species on both sides of the Nam Theun-Nam Kading.:
 - Male calls:**
 - North of river:** 84% *N. leucogenys* and 16% *N. siki*
 - South of river:** 63% *N. leucogenys* and 37% *N. siki*
 - Female calls:**
 - North of river:** 94% *N. leucogenys* and 6% *N. siki*
 - South of river:** 48% *N. leucogenys* and 52% *N. siki*
- We propose **two hypotheses**:
 - The vocalization characteristics between the two species in the region where the geographical distribution of both species meet (along the Nam Theun-Nam Kading in central Lao PDR) do not allow a clear distinction between the two species
 - The Nam Theun-Nam Kading River does not represent a clear geographic barrier between the two species.



Vocalizations classification results showing the distribution of the male calls (A) and female calls (B) of *N. siki* and *N. leucogenys* to the north and south of the Nam Theun-Nam Kading river in central Laos and Vietnam