



Fauna & Flora International Indochina Programme

Survey for crested gibbons (genus *Nomascus*) in Bach Ma National Park, Viet Nam April 2001

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Introduction

A brief survey for crested gibbons, genus *Nomascus*, was carried out in Bach Ma National Park between 5th & 11th April 2001 (7 days).

The most recent published surveys of crested gibbons (*Nomascus* sp.) in Bach Ma National Park date back to 1990/1 (Eames & Robson, 1993; Robson et al., 1991). Although survey work has been conducted by the park staff since then, the results are not yet in print.

Gibbon populations throughout Vietnam are threatened by hunting and habitat loss, and unfortunately National Parks are no exception. Therefore, long-term monitoring of the gibbons in Bach Ma is vital to ensure conservation measures are adequate.

Materials and Methods

The survey itinerary is shown in Table 1. The members of the survey team are listed below:

Dr. Thomas Geissmann, Institute of Zoology, Hannover, Germany;

Lucy Tallents, Gibbon Conservation Project Officer, Fauna & Flora International (FFI) Indochina;

La Quang Trung, biologist, FFI Indochina;

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Table 1. Survey itinerary

Date	Activity
4 th April 2001	Arrive at Bach Ma National Park
5 th April	Survey along the road to the summit (kilometre 9 & 10)
6 th & 7 th April	Survey along the Pheasant trail
7 th April	Move to summit campsite
8 th & 9 th April	Survey along the road (kilometre 13 & 14)
9 th April	Move to campsite in the forest
10 th & 11 th April	Survey along trail from kilometre 14
11 th April	Move back to summit campsite
12 th April	Survey along the road (kilometre 14) Depart to Hue

The auditory survey technique was employed to assess the gibbon population size (see Brockelmann & Ali, 1987, for details). The survey team split into two pairs, stationed roughly 500m apart, in order to accurately locate the calling groups by mapping the angle and estimated distance to groups from two known locations.

Surveys began at 05:00 and ended at 11:00, in order to be in position during the peak singing time of the gibbons. The location of observation posts was determined by a combination of knowledge of the position of groups from previous surveys, and terrain; ideally listening posts were located on a ridge from which several valleys could be surveyed at once.

Most observation posts were located on the road from the park Head Quarters to Bach Ma summit. Two nights at the end of the survey were spent camping in the forest on the ridge trail leading down from kilometre 14, and two mornings near the beginning were spent on the Pheasant Trail.

The following information was recorded:

- Time of arrival at and departure from the observation post;
- Time of dawn as judged from when the observer could see the green of leaves;
- Local time of sunrise (i.e. the time at which the sun was visible over the horizon);
- Gibbon calls:
 - Start and end time of calling bout,
 - Number of males and great calling individuals,
 - Compass bearing and estimated distance to group,
 - Visual information on group location when the terrain was visible from the observation post.

Calling bouts were recorded on a two sets of tape recorders for future analysis of song characteristics:

- (1) Sony WM-D6C tape-recorder equipped with a JVC MZ-707 directional microphone;
- (2) Sony TC-D5M tape-recorder equipped with a Sennheiser ME80 (+K3U) directional microphone.

Results

Eight different groups were heard, two of which were solitary males. All other groups contained one adult male, and one to three great call singing individuals. The great call singers of each group presumably include one adult female and immature group members of either sex. For group locations and detailed composition, see table 2.

In seven days, a total of 17 song bouts were heard by two observer teams. All song bouts started roughly between 05:00 and 09:00 a.m., with the peak start time occurring between 05:30 and 06:00 a.m.

All groups roughly appear to occur at altitudes between 400 and 800 m, although the park area covers altitudes from 40-1450 m a.s.l., and suitable forest appeared to occur at altitudes higher than 800 m.

Table 2. Group composition and location

Group number	Adult males	Adult females	Additional great-calling individuals	Minimum group size	Number of observations (days)
1	1	0	0	1	1 (1)
2	1	1	1?	2	2 (2)
3	1	1	2	4	3 (2)
4	1	1	1+	3	11 (5)
5	1	1	1	3	1 (1)
6	1	0	0	1	2 (1)
7	1	?	?	1	1 (1)
8	1	1	1	3	1 (1)
Total (minimum)	8	5	5	18	

Discussion

Crested gibbons (genus *Nomascus*) are known to occur at higher altitudes. *Nomascus concolor* for instance, is known to occur at elevations of 1900-2900 m a.s.l. in Yunnan Province, China (Bleisch & Chen, 1991; Bleisch & Jiang, 2000). Other crested gibbons like *N. sp. cf. nasutus*, *N. leucogenys* and *N. gabriellae* have all been reported to occur at altitudes of well above 1000m (see review in Geissmann *et al.*, 2000), although they seem to prefer lower forest if available. Our findings appear to confirm that gibbons in Bach Ma prefer lower altitude forest.

The low number of song bouts heard indicates that gibbons in Bach Ma occur at lower densities than at other *Nomascus* localities such as Che Tao, where as many as ten groups can be found in a single valley (approximate forested area: 6 km²) (Tallents *et al.*, 2000).

Robson *et al.* (1991) recorded gibbons calling from nine locations in Bach Ma National Park. The northern-most two groups were not detected during our survey, and probably have disappeared. A more recent survey in 2000 by the park Forest Protection Department only found evidence of five groups in the park (Van Ngoc Think, personal communication).

Considering that we only surveyed less than a quarter of the park's forest, there may well be more gibbons surviving in Bach Ma than the eight groups recorded by us, even if forest above 900 m is discounted.

As detailed in Geissmann *et al.* (2000), Bach Ma National Park exists in a transition zone between the Southern white-cheeked crested gibbon *N. leucogenys siki* to the north, and the Yellow-cheeked crested gibbon *N. gabriellae* to the south. The species affiliation of Bach Ma's gibbon population is still uncertain. The male songs heard during this survey contained elements of both *N. leucogenys* and *N. gabriellae* calls, and further work is required to clarify the taxonomy of crested gibbons in this area.

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