ECOLOGY OF THE BLACK-CRESTED GIBBON (*Hylobates concolor*) IN THE AILAO MT. RESERVE, YUNNAN, CHINA

CHEN NAN

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE
(ENVIRONMENTAL BIOLOGY)

IN

FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY
1995

Thesis Title Ecology of the black-crested gibbon (*Hylobates concolor*) in the Ailao Mt. Reserve, Yunnan, China

Name CHEN Nan

Degree Master of Science (Environmental Biology)

Thesis Supervisory Committee

Warren Y. Brockelman, Ph.D.

Sompoad Srikosamatara, Ph.D.

Visut Baimai, Ph.D.

Date of Graduation May 15 B.E. 2538 (1995)

ABSTRACT

A field ecological and behavioral study of the wild black-crested gibbon (*Hylobates concolor*) was carried out in the Ailao Mt. Reserve, Yunnan Province, People's Republic of China from April 1991 to June 1993. The research was focused on the feeding behavior, ranging behavior and activity patterns of the black-crested gibbon, as well as its habitat characteristics in terms of climatic conditions, forest structure and phenology.

The temperate habitat of *Hylobates concolor* was found highly distinctive when compared with the habitats of tropical gibbon species. In winter the temperature frequently dropped below 0°C and snowing happened occasionally. Trees in the habitat forest were small. Canopy was low but continuos, without an emergent layer. Plant species diversity was low; and *Ficus*, an important food source for all other gibbon species, was not found. Ripe fruits were completely unavailable for most time of the year.

Scan sampling with instantaneous recording method was used to conduct behavioral observation. One group was studied intensively. A total of 946 behavioral observations was made on this group. The black-crested gibbon was active for 8 h 29 minutes per day. The prominent behaviors were resting, traveling and feeding. If the group did call on a day, it mostly called only once per day. Adults spent more time for grooming than immature ones, while immature individuals played more than adults. The group was cohesive and group members had coordinated behaviors. The group had a large home range of 87 ha. The black-crested gibbon spent more time to feed on leaves than other gibbon species while much less time on fruits.