

STUDY REPORTS

4. Title: Conservation of gibbons in natural forests

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Although other studies in this program have shown that gibbons can be bred in a laboratory setting and maintained in a semi-natural island facility it will probably remain true that future sources of gibbons for science will depend most heavily on those obtained from natural forests.

With the destruction of forests which is sometimes concomitant to development of field-crop agriculture, the natural habitat of gibbons is reduced and one must therefore expect a reduction in gibbon populations. Furthermore, in some areas of Thailand, gibbons are hunted vigorously. Since the age to sexual maturity in gibbons is 7 years and since a group ordinarily has a baby only once every two years, any concentrated hunting of gibbons can quickly diminish the population of an area.

Despite these factors, there still are many areas of Thailand where gibbons are plentiful, and it is primarily in these places where conservation programs would be practical.

This study included a survey of the distribution of gibbons in Thailand; an estimate of spacing of groups in forests and an analysis of the potential of isolated forest patches as sites for a gibbon conservation program.

Distribution During the past two years, investigators of the SEATO Medical Research Laboratory have heard or seen gibbons in the forests of the following provinces of Thailand: Mae Hongson; Prachuab; Ranong; Trang; Yala; Trat; and Nakornrajasima. It is likely that gibbons may also be found in Chiangrai and Chantaburi provinces and that they live in the forested mountainous region which runs most of the western border of Thailand. Information regarding the presence of gibbons in the central mountains and in the northeast region is contradictory.

There are two forms of gibbons in Thailand, Hylobates lar and H. pileatus. (A third, H. leucogenys, may also occur but this is not yet clear). Gibbons west of the central plain, in the northwest and also in the south are H. lar. H. pileatus lives in the southeastern provinces. Both H. lar and H. pileatus may also be found in Nakornrajasima and groups of both species are found living in Khao Yai National Park. Females of the two species have distinctly different calls, and it is therefore a relatively simple matter to detect their presence. Most groups near the asphalt highway in the park are H. lar. However, H. pileatus has also been heard in four locations, quite widely distributed. There is at least one group of H. pileatus at the Sakae-rat Experimental Station, 60 km. south of Nakornrajasima.

A survey of the 10,000 sq. km. area between Chumpon and Takluah in the South indicated that there are gibbons throughout the mountains, even along the main highway. It is estimated that roughly 30,000 gibbons live there.

Hunting gibbons is practiced in most areas we have visited. One object of the hunting is to obtain young animals for the pet market, and it is the adult female with a baby which is most frequently shot. The

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baby is sold, and the female is often eaten since she is already dead. In many areas, gibbons are not shot primarily for food, but in some locations, especially in the far North and in outlying districts elsewhere, in places where there are few market facilities, they apparently are a food source. On the other hand, it should be noted that in certain regions (e.g., among the Yang people near Mae Sarieng), it is considered bad luck to kill gibbons. Regional differences in hunting pressure are thus significant and probably depend mainly upon food supply and on attitudes about gibbons.

Group spacing During the report period, two small areas were surveyed to evaluate gibbon group concentration. One of these areas was in ever-green rain forest 19–21 km. north of Ranong in an area comprising approximately 3 sq. km. (somewhat above two of which were forested). The other area was at Khao Yai National Park and measured 2 sq. km. The method used was to locate gibbon groups from their morning calls which are audible for at least 500 m.

At Ranong, there were 4 groups in the area east of the main highway and one group each in two areas of forest west of the road. At Khao Yai Park, observations were made in September, 1967 and January, 1968 and five groups were heard on each occasion. In January, four groups were located in areas in which gibbon calls had been heard in September.

The above observations indicate that at both Ranong and Khao Yai Park the average concentration of gibbons was on the order of 100 areas per group. This estimate confirms those made in previous studies of gibbon home range size.

Isolated forest patches When land is cleared for agriculture in Thailand, patches of forest with water in them are often left uncut. Sometimes groups of gibbons may be found in these forests because there apparently is enough food and water to maintain life and because feral gibbons do not cross the fields which surround them. At least one hunter in Thailand prefers to capture gibbons in these restricted forests because the animals can be more easily located and followed than they would be in extended forests. For the same general reasons, such areas might be appropriate as reserve areas.

During the report period, two isolated forests, one in Ranong and one at Khao Yai National Park, were studied. Both contained a year-round water supply. The one 20 k. north of Ranong was 14 acres in size and contained at least three large gibbons and a baby. That at Khao Yai Park (11 acres) had a pair of gibbons with a baby.

Thus although average gibbon concentration is close to 100 acres, gibbons can live and reproduce in much smaller areas. This principle became the basis of a plan for reserve areas for gibbon husbandry. It was suggested that pairs of gibbons might be introduced into empty forest patches in which there is a year-round supply of water. These patches would be in areas protected from hunting in regions where other gibbons are found. They would be checked on a routine basis to ascertain that the animals are doing well, and when infants are produced, they could be harvested.

To determine whether such a plan might be feasible, a pair of adult gibbons, carrying collar radio transmitters were placed in a 300 m. x 40 m. strip of forest at Khao Yai National Park. One animal was a feral adolescent female and the other a tame adult male. Both animals survived in the patch for one month following introduction, but a month later the tame male was found dead and the feral female had moved to a patch of forest 100 m. away. Another pair will soon be introduced into a larger separate forest patch in the same park.