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A Gibbon Pelt *(Hylobates lar entelloides)* from Khao Yai National Park, Saraburi Province, Thailand

No gibbon specimens had ever been collected from Khao Yai National Park, the only place in the central region where they still exist, until I recently found a somewhat tattered light phase pelt of *Hylobates lar* discarded at a poachers' camp. This skin has confirmed that the white-handed gibbons in the park are similar to *H. l. entelloides* of western and southern Thailand.

The pelt was discovered on February 12, 1983, at a poachers' camp at least a month old at about 1,000 m elevation on Khao Inthani in the northwest corner of the park, Muak Lek District, Saraburi. The site is on Royal Thai Survey Dept. 1:50,000 sheet 5237IV, 100-m grid coordinates QS403001; 101° 14'E, 14° 28'N. It is deposited in the Thai National Reference Collection, No. TNRC 54-6704.

Two short-haired, dull greyish-buff specimens of *Hylobates lar* have apparently been collected from the area immediately north of Khao Yai Park (GROVES, 1972; MARSHALL & SUGARDJITO, in press) : one from, "Sikin" (Probably Sikhiu District), Nakhon Ratchasima Province, in the U.S. National Museum, Washington, D.C., No. 241423, and the other from "Nakawn", probably from the same province, in the American Museum of Natural History, New York, No. 31593. The "Nakawn" label was misread by Groves as "Nakawu", and its coordinates were given as "18.18 N, 19.31 E", which is near Lampang, northern Thailand. As specimens from Lampang all have long hair (J. T. Marshall, personal communication), the Nakawn specimen is more likely to have come from Nakhon Ratchasima or perhaps Nakhon Nayok, two provinces which contain parts of Khao Yai National Park. GROVES (1968, 1972) listed these specimens under the subspecies *H. l. carpenteri,* the northernmost subspecies of *H. lar,* which was proposed by him in 1968. Although GROVES (1968) noted that the Sikhiu specimen was "a somewhat divergent specimen", he nevertheless provided maps which show *H. l. carpenteri* as occurring in north-central Thailand south into Nakhon Ratchasima Province, where it touched the range of *H. pileatus* in Khao Yai Park (GROVES, 1970, 1972). This would have been logical because the gibbons in east-central Thailand must be more closely connected with those of the north than with those of western Thailand across the alluvial plain and broad river. Nevertheless, this range extension was rather tenuous because no other specimens are known from south of Loei Province in the east-central mountain ranges (although lar gibbons still exist there now). Subsequently, on the basis of recent field observations, GROVES (1984) commented that the *H. lar* in Khao Yai Park were "likely to be *entelloides.*"

Dr. Joe T. Marshall has compared a small piece cut from the pelt with all *H. lar* specimens in the U.S. National Museum and found it to match several *H. l. entelloides* skins from western Thailand. The piece perfectly matched the somewhat dirty-buff Sikhiu specimen, but was quite unlike the lighter, creamy or whitish-buff, longer haired specimens from northern Thailand considered to be *carpenteri.* Dr.

Colin P. Groves kindly examined the pelt in Bangkok and also found it to be more typical of the shorter haired, darker buff *entelloides* of western Thailand than of *carpenteri.*

In addition, Robert Dobias, who was with me when the pelt was discovered, subsequently saw a similarly coloured gibbon decaying at a poachers' camp in the northern part of the park farther to the east. This putrid specimen was not collected.

The evidence now available does not strongly support recognition of the subspecies *H. l. carpenteri.* MARSHALL & SUGARDJITO (in press), in accordance with FOODEN (1969), regard all lar gibbons north of the Mudah River in Malaysia and west of the Thepha River in southern Thailand as *Hylobates lar entelloides* (I. GEOFFROY, 1842). Northern Thai gibbons are more appropriately regarded as merely clinal variants of *entelloides.* Two arguments can be offered in support of this view:

(1) *H. l. carpenteri* is defined by GROVES (1968, 1970) as having a paler light phase, of light grey or creamy colouration, and a darker dark phase than those of *entelloides.* Hairs in *carpenteri* were found to have lighter basal portions and to be longer than those of *entelloides.* FOODEN (1971), however, found that 27 additional specimens he collected in western Thailand in the range of *entelloides* and on its border with *carpenteri* did not support a clear distinction between *carpenteri* and redefined *entelloides.* This issue cannot be resolved by collecting more skins.

GROVES (1970) in addition found that within each continental subspecies of *H. lar (carpenteri, entelloides* and *lar)* the frequency of the dark colour phase increased northward, but that the trends reversed at putative subspecies boundaries. It is, however, illogical to consider clinal trends as reversing at these boundaries, as this would require barriers to gene flow. On the contrary, no barriers to gene flow have been found (except as caused by recent deforestation) between Groves' subspecies, and intergradation is said to occur.

In a reanalysis of colour phase frequencies in *H. lar,* MARSHALL & SUGARDJITO (in press) find that dark and pale phases occur throughout the range of continental populations in varying frequency, and that the frequency of the dark phase increases erratically northward. Examined *in toto,* no clear rationale can be seen for dividing *H. lar* into subspecies north of the range of *H. agilis* in northern peninsular Malaysia and Yala and Naratiwat Provinces in southern Thailand (MARSHALL, 1981).

(2) The recognition of *H. l. carpenteri* would create a discontinuity in the range of *H. l. entelloides,* if Khao Yai gibbons are considered to be of this form. It is unlikely that *entelloides* has crossed the plain and rivers of central Thailand to reach the Dong Rek Range where Khao Yai is. We must conclude that the resemblance of Khao Yai gibbons to other *entelloides* is based on parallel adaptation to similar forest and climatic types, and that Thai *H. lar* populations underwent their most recent genetic changes following dispersal throughout Thailand (except in the east, where they do not occur). Recognition of *H. l. carpenteri* would destroy the integrity of *H. l. entelloides.*

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Warren Y. Brockelman
Department of Biology
Faculty of Science
Mahidol University
Rama VI Road
Bangkok 10400, Thailand