

A SURVEY OF STUMP-TAILED MACAQUES (*MACACA ARCTOIDES*) IN THAILAND

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ABSTRACT

A survey of stump-tailed macaques was conducted during July 1984–July 1986 in northwest, west and southern Thailand. Twenty-one of 31 localities visited are reported to still have stump-tailed macaques. Most reports are from the mountainous areas, and from the South. A semi-tame colony of about 30 individuals was found in a temple sanctuary at Khao Tao Mo, Petchaburi Province, where the animals can be easily observed and studied.

I N T R O D U C T I O N

Thailand has 13 species of primates: 3 species of gibbons, 4 species of langurs, 5 species of macaques and the slow loris. The five species of macaques are:

1. long-tailed macaque (*Macaca fascicularis*)
2. rhesus macaque (*Macaca mulatta*)
3. pig-tailed macaque (*Macaca nemestrina*)
4. Assamese macaque (*Macaca assamensis*)
5. stump-tailed macaque (*Macaca arctoides*)

M. assamensis and *M. arctoides* populations appear to be threatened over most of their natural habitats not only in Thailand but also throughout Southeast Asia (EUDEY, 1986). The stump-tailed macaque ranges throughout Southeast Asia, ranging into northern and eastern Burma (U TUN YIN, 1967) Vietnam, Laos and Kampuchea south into northern Peninsular Malaysia (FOODEN, 1976, 1980, 1982; FOODEN et al., 1985; MEDWAY, 1978). The species used to be to common in Thailand in all areas of the forest (LEKAGUL & MCNEELY, 1977). After World War II, the demand for laboratory animals, especially monkeys, was very high. Sales of macaques from Thailand to laboratories in America and Europe brought the hunter as much as \$6 per animal (EAIMKRASIN, 1986). This demand for experimental animals, combined with deforestation and hunting, has caused populations of stumptails to decline. Exports of stumptails amounted to 2398 animals per year during 1964 – 1975, but primate exports from Thailand became prohibited by law in April 1976 (EUDEY, 1978).

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Two subspecies of stump-tailed macaques occur in Thailand (LEKAGUL & MCNEELY, 1977). *Macaca arctoides arctoides* is found in the mountains along the Cambodian border. The coat is annulated red and black to brownish red. *Macaca arctoides melanota* is more common in most of the forest in the north, west and south. The coat is unannulated, brownish or blackish on the upperparts or sometimes reddish.

In both subspecies, the coat becomes darker with age. The skin of the face is reddish brown, as are the ischial callosities, which can turn to pale or bright depending on the emotion. Old males develop a beard. These macaques have short tails, which are not longer than the length of the hind feet. Individuals of this species usually sit on their tails.

Stump-tailed macaques mainly move and forage on the ground but sometimes can be seen feeding in the trees (FOODEN, 1976, 1982). All members of the group sometimes sleep together in the same tree, which is usually tall with many branches, or over-hanging a cliff (FOODEN et al., 1985). They are aggressive macaques. Loud fighting can often be heard when the group is moving or foraging, even in the night tree, but sometimes they are incredibly quiet (personal observation).

No detailed studies have been made on the natural behavior and ecology of stumptails apart from a few incidental observations by FOODEN (1971, 1976,) and some observations by EUDEY (1980) in Huai Kha Khaeng Wildlife Sanctuary. There are few published distributional records for Thailand, and virtually no recent information exists on its conservation status in Thailand.

METHODS

The time and budget available did not permit detailed local estimates of population densities of stumptails. Instead, I carried out only a distributional survey in areas known or suspected to harbor stump-tailed macaques, and attempted to obtain a rough idea of relative abundance. The lack of trails in the forest, and the low density and secretive behavior of stump-tailed macaques made survey of these animals difficult. Because of the large number of sites to be visited, I could not spend many days working at any one place. Instead, I asked local hunters whether stump-tailed macaques were present in the area near their villages. Photographs of captive animals were shown. If stumptails were reported, then a guide was hired and I searched the sites indicated by the hunters. Even in some of these areas, I had too little time to find the macaques myself.

RESULTS

Thirty-one localities were visited (Table 1, Fig. 1). The distribution of these sites is as follows: 1 in the north, 6 in the northwest, 4 in the central region, and 20 in the south. A total of 183 days was spent in the field. Of the 31 localities, only 21 were

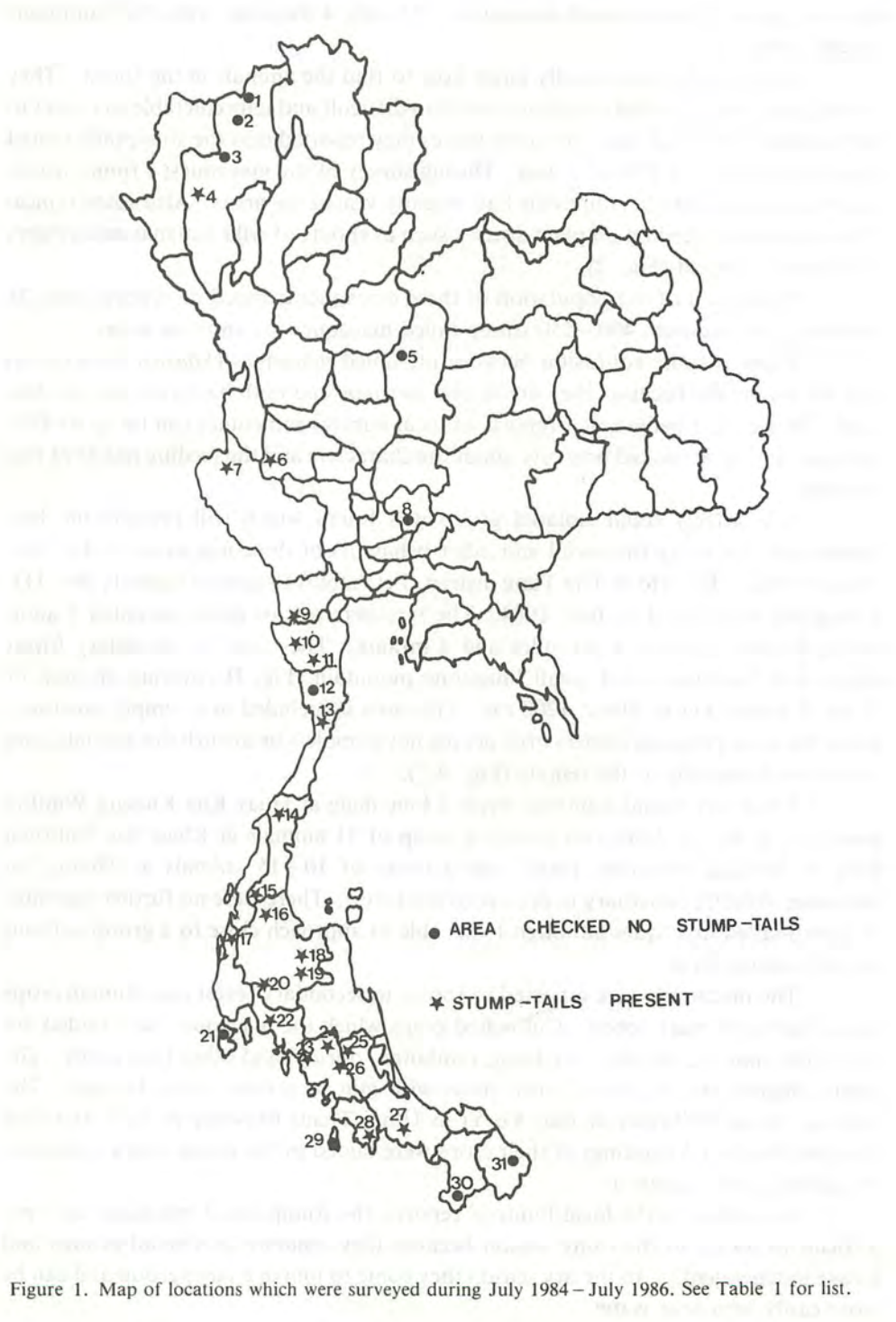


Figure 1. Map of locations which were surveyed during July 1984 – July 1986. See Table 1 for list.

reported to have stump-tailed macaques. At only 4 localities were the stumptails actually seen.

The local hunters usually know how to find the animals in the forest. They reported that stump-tailed macaques were too difficult and unpredictable to expect to see in a short period of time. In some places they reported that the stumptails visited those areas only 1 or 2 times a year. During survey of the macaques, I found tracks which indicated that the stumptails had recently visited the areas. Also some typical characteristics of feeding on plant species such as shoots of wild bananas and gingers could be recognized (Fig. 2).

Estimation of the population of these macaques is based on reports from 21 localities. A minimum 400–550 stump-tailed macaques live in those areas.

There is some confusion between pig-tailed macaques (*Macaca nemestrina*) and the stumptails because they are similar in shape and both have red skin on their faces. However, I believe that reports of local hunters sometimes can be up to 95% accurate, if they are asked properly about the characters and the feeding habits of this macaque.

A relatively small isolated group was found which will provide the best opportunity for study the social and other behaviors of these macaques in the wild. This is at Khao Tao Mo in Tha Yang district, Petchaburi Province (Table 1, No. 11). This group was found in June 1984. The members of this group included 7 adult males, 5 adult females, 6 juveniles and 4 infants. They lived in secondary forest mixed with bamboos on a small limestone mountain (Fig. 3) covering an area of about 2 square km or about 1200 rai. This area is included in a temple sanctuary where the local religious leaders urge people not to molest or disturb the animals, and feed them frequently at the temple (Fig. 4,5).

The other actual sightings were: a lone male at Huay Kha Khaeng Wildlife Sanctuary in mixed deciduous forest, a troop of 31 animals at Khao Sok National Park in lowland evergreen forest and a troop of 10–15 animals at Thung Yai Naresuan Wildlife Sanctuary in dry evergreen forest. There were no further sightings of stump-tailed macaques although I was able to approach close to a group without actually seeing them.

The macaques were reported to forage in secondary forest near human crops more than in primary forest. Cultivated crops which the macaques have raided are rice, corn, tapioca, banana, soy bean, rambutan, durian, and other fruit crops. The local villagers have to patrol their crops with gun to prevent crop damage. The Hmong people (hilltribe) at Ban Yu Yi in Uthai Thani Province in west Thailand reported that 3 of 5 plantings of their crops were raided by the stump-tailed macaques (A. EUDEY, pers. comm.).

According to the local hunters' reports, the stump-tailed macaques are very difficult to locate in the rainy season because they separate into small groups and forage independently. In the dry season they come to join in a large group and can be more easily seen near water.

Table 1. Presence or absence of stump-tailed macaques at localities checked during the survey.

Area	Region	Province	Days surveyed	Forest type	Presence	Comment
1. Doi Pha Hom Pok	Northwest	Chiang Mai	5	EV, HEV		
2. Doi Chiang Dao NP	"	"	4	EV, HEV		
3. Doi Suthep-Doi Pui NP	"	"	6	EV, HEV		
4. Doi Inthanon NP	"	"	6	HEV	X	Reported 20
5. Nam Nao NP	North	Petchabun	4	EV		
6. Huai Kha Khaeng WS	Northwest	Uthaitхани	7	MD	X	Seen 1, 20 – 30
7. Thung Yai WS	"	Kanchanaburi	15	MD, EV	X	Reported 20, seen 10 +
8. Sam Lan NP	Central	Saraburi	1	SEV		
9. Ban Tha Safao	"	Petchaburi	6	MD, EV	X	Reported 20
10. Kaeng Kra Chan NP	"	"	7	MD	X	Reported 15
11. Khao Tao Mo	"	"	8	MD	X	Seen 22
12. Huai Sat Yai	South	Prachuap	3	MD	X	Reported 20 – 25
13. Hup Jang	"	"	8	MD	X	4 Dead monkeys*, reported 15 – 20
14. Khlong Mala WS	"	Chumphon	16	EV	X	Heard, Reported 20
15. Khlong Nakha WS	"	Ranong	3	EV	X	Reported 25 – 30, seen in cage
16. Ban Kun Tu Lee	"	Surat Thani	2	MD	X	Reported 25 – 30
17. Khlong Seang WS	"	Phang Nga	1	EV	X	Seen by friend 30
18. Khao Tha Phet NH	"	Surat Thani	3	SMD		
19. Ban Ply Num	"	"	2	EV	X	Reported 20 – 25
20. Khao Sok NP	"	"	3	MD	X	Reported - seen 31
21. Khao Prathaew WS	South	Phuket	3	SEV		
22. Khao Phanom Bencha NP	"	Krabi	13	EV	X	Reported 25 – 30
23. Khao Phra Bang Kram NH	"	"	12	EV	X	Reported 30
24. Khao Nam Pry NH	"	Trang	3	EV	X	Reported of 20 – 30
25. Khao Banthat WS	"	"	3	EV	X	Reported 20 – 30
26. Khao Pu NP	"	Patthalung	3	EV	X	Heard, reported 20 – 30
27. Ton Nga Chang WS	"	Songkhla	10	SEV	X	Heard, reported 60

Table 1 (continued).

Area	Region	Province	Days surveyed	Forest type	Presence	Comments
28. Thaleban NP	"	Satun	9	EV	X	Reported 20–30 and 4 in cages
29. Tarutao NP	"	"	4	EV		
30. Bang Rang	"	Yala	6	SEV		
31. Pa Phru NH	"	Narathiwat	7	FSF		

NP = National park

WS = Wildlife Sanctuary

NH = Non-hunting area

HEV = Hill Evergreen Forest

EV = Evergreen Forest

MD = Mixed Deciduous Forest

SEV = Secondary of Evergreen Forest

SMD = Secondary of Mixed Deciduous Forest

* = Killed by hunter



Figure 2. The pith of *Ashama macrocheilos* (Zingiberaceae) was eaten by stump-tailed macaques.

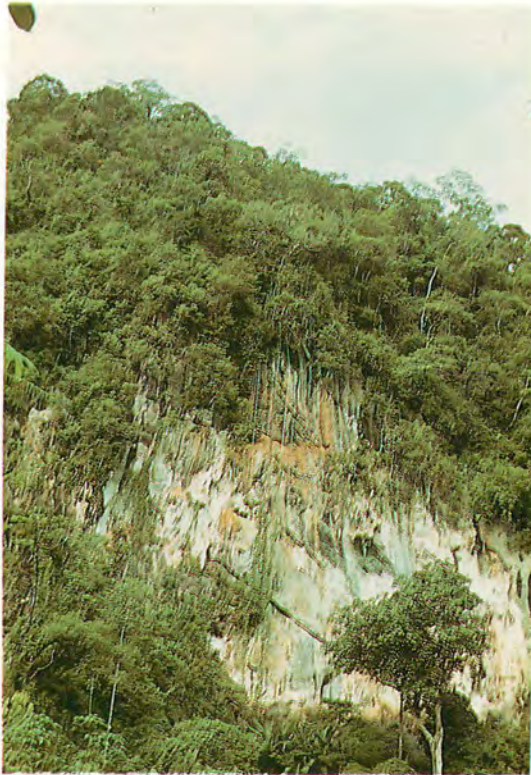


Figure 3. The habitat and the sleeping tree over a cliff used by stumptails at Khao Tao Mo, Petchaburi.



Figure 4. Two subadult stump-tails. Note very short tail.



Figure 5. A group of stump-tailed macaques foraging on the ground.

DISCUSSION

The distribution of the stump-tailed macaque in Thailand is somewhat better known now, but population sizes are still poorly known. The species is found only in the forests of mountain areas, especially in the limestone crags of low to moderate elevation in northwest, west and southern Thailand (Fig. 2). Fourteen of 21 localities in which stumptails have been seen or reported are in the protected areas. Thung Yai Naresuan Wildlife Sanctuary and Kaeng Krachan National Park are the most important protected areas for conserving the stumptails because they have very large areas and have different types of forest. The stump-tailed macaques seem to be most common in the South where Khlong Saeng and Ton Nga Chang Wildlife Sanctuaries are probably the most important conservation areas for the species. More detailed surveys are needed to obtain better information on population numbers and ranging habits.

Many questions about stumptails need to be answered such as how large a ranging area do they use? What are their seasonal ranging patterns? How do they live in the forest? What is their daily activity pattern? What foods do they require? It is difficult to study really wild stumptails in the forest. However, Khao Tao Mo provides a good opportunity to study some behaviors and ecological aspects of this macaque.

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