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## Preliminary report on yellow long-tailed macaques (*Macaca fascicularis*) at Kosumpee Forest Park, Thailand

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**Abstract** We conducted a census on long-tailed macaques (*Macaca fascicularis*) at Kosumpee Forest Park, Thailand, and found 15 individuals of yellow pelage color out of a total of 287 individuals. There were three troops, designated A, B and C, but the yellow macaques were found only in B and C troops. The frequency of yellow macaques was 5.2% in the total population and 4.2 and 9.9% in B and C troops, respectively. These frequencies are much higher than those in rhesus macaques (*M. mulatta*) reared at Cayo Santiago (0.52%). They are, however, lower than those of 10 years ago.

**Keywords** Long-tailed macaque · Yellow pelage color · Kosumpee Forest Park · Thailand

### Introduction

The long-tailed macaque (*Macaca fascicularis*) has a wide geographical distribution, ranging from the continental Southeast Asia eastward to the Sunda Islands, Timor and the Philippines, except Sulawesi Island (Fooden 1995). It is widely distributed in Thailand from the lower north and northeastern (Petchabun and

Maharakham Provinces; ca. 16°N) to the southernmost parts (Yala Province; ca. 6°N). In association with its wide geographical distribution, this macaque species shows high variation in its genetic properties (Tosi et al. 2003; Malaivijitnond et al. 2004) and in morphology (Fooden 1997; Hamada et al. 2004). One of the particular variations in morphology, which is important for classification, is pelage color. Although Fooden (1995) compared pelage color of long-tailed macaques with the saturation and erythrism indices, yellow pelage is not considered to be a variant explicable by those indices.

Yellow long-tailed macaques at the Kosumpee Forest Park, Maharakham province, northeastern Thailand, have been observed for more than 10 years. Aggimarangsee (1992) first described them and their habitat. Kawamoto et al. (1994) reported the frequency of golden macaques. Up to now, however, yellow pelage color of Kosumpee long-tailed macaques has not been studied in detail to elucidate the factors responsible for the pelage color variation and provide information on the phylogeography of long-tailed macaques. In the present study, we describe the number and frequency of yellow macaques in the Kosumpee population and the quantitative results of pelage color analysis of yellow and ordinary long-tailed macaques.

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### Methods

#### Study area and history of the troop

Our research was conducted in Kosumpee Forest Park, Maharakham Province, northeastern Thailand, in an area of approximately 0.2 km<sup>2</sup>, located next to the Chi River (Fig. 1). The main office of the park lies at 16°15'N and 103°04'E as determined by GPS. According to staff at the park, the Kosumpee macaque population has been isolated from other conspecific populations by extensive agricultural areas and human settlements since at least 1976, when the park was established. The exact history of the population, however, is not on record.