

Chiroptera from Thung Yai Naresuan and Huai Kha Khaeng Wildlife Sanctuaries

Thung Yai Naresuan and Huai Kha Khaeng are two adjacent wildlife sanctuaries situated on the Thai/Myanmar (Burmese) border in western Thailand. They cover a combined area of some 6222 km² which, together with the surrounding forest, represents one of the largest areas of dry tropical forest in the region.

A total of 55 species of chiroptera are known to occur in the two sanctuaries (PHUMPAKAPUN & KUTINTARA, 1983; PHUMPAKAPUN ET AL., 1985; MCBEE ET AL., 1986; YENBUTRA & FELTEN, 1987; NAKHASATHIEN & STEWART-COX, 1990; ROBINSON ET AL., 1995). In the most recent study of bats within the sanctuaries, ROBINSON ET AL. (1995) recorded a combined total of 41 species, 33 in Thung Yai Naresuan and 28 in Huai Kha Khaeng. Sixteen of these were new to the sanctuaries.

This note records the distribution of eight species of bats, *Rhinolophus trifolius* Temminck, 1834; *R. shameli* Tate, 1943; *R. pusillus* Temminck, 1834; *R. stheno* Andersen, 1905; *Hipposideros cineraceus* Blyth, 1853; *Tylonycteris pachypus* (TEMMINCK, 1840); *Pipistrellus tenuis* (TEMMINCK, 1840); and *Kerivoula hardwickii* (HORSFIELD, 1824), from Thung Yai Naresuan and Huai Kha Khaeng (Table 1). The specimens, cranial and mandible fragments recovered from caves, were collected between 19 May 1993 and 28 October 1993, during the study by ROBINSON ET AL. (1995). Measurements of the specimens, which are now stored in the British Museum of Natural History (BM (NH) 96.440–450), can be seen in Table 2.

All eight species are within their known range (CORBET & HILL, 1992; ROBINSON ET AL., 1995), although *R. trifolius* and *R. shameli* were previously unknown from either of the sanctuaries, and *P. tenuis* had not previously been recorded from Thung Yai. The remaining five species, *R. pusillus*, *R. stheno*, *H. cineraceus*, *T. pachypus* and *K. hardwickii*, provide new information on the distribution of the species within the sanctuaries.

With the addition of two new species of bats, there is now a combined total of 58 known species in Thung Yai Naresuan and Huai Kha Khaeng Wildlife Sanctuaries. The two sanctuaries represent possibly the most important area for bat conservation in Thailand, containing at least 55% of all known species of Thai chiroptera.

Table 1. Chiroptera species found at six sites in Thung Yai Naresuan and Huai Kha Khaeng Wildlife Sanctuaries (each + represents a single specimen). Thung Yai Naresuan: 1. The Thung Caves; 2. Ban Jagae Limestone Outcrop; 3. Tham Mong Kw; 4. Lum Khao Ngu Limestone Outcrop; 5. Cave 2km SE of Ban Hua Sia. Huai Kha Khaeng: 6. Tham Khi Nok. Details of site location and habitat can be found in ROBINSON ET AL. (1995).

Species	Study area					
	1	2	3	4	5	6
<i>Rhinolophus trifolius</i>	+	+				
<i>Rhinolophus shameli</i>			+			
<i>Rhinolophus pusillus</i>						+
<i>Rhinolophus steno</i>					+	
<i>Hipposideros cineraceus</i>						+*
<i>Tylonycteris pachypus</i>						+
<i>Pipistrellus tenuis</i>		+*				+
<i>Kerivoula hardwickii</i>				+		

* The identification *P. tenuis* at Ban Jagae Limestone Outcrop, and *H. cineraceus* is speculative, having been identified without reference to a comparative collection.



Figure 1. *Rhinolophus shameli*.



Figure 2. *Kerivoula hardwickii*.

Table 2. Selected measurements of specimens collected from Thung Yai Naresuan and Huai Kha Khaeng Wildlife Sanctuary (measurements are from a single specimen except where indicated in parentheses).

	<i>R. trifoliatu</i> (2)	<i>R. shameli</i> (2)	<i>R. pusillus</i>	<i>R. stheno</i>	<i>H. cineraceus</i>	<i>T. pachypus</i>	<i>P. tenuis</i>	<i>K. hardwickii</i>
Greatest skull length		20.0						
Condylocanine length	20.1	16.4	15.2					
Least interorbital width	2.3, 2.1	2.2	2.3					
Zygomatic width	10.7, 11.4	9.3						
Width of braincase	9.0, 9.2	8.3	6.1					
Mastoid width	10.5	9.6	8.3					
c - c	5.3, 5.7	5.0	4.3	4.8				
c - m ³	8.8	6.9	6.8	7.0		4.4		4.8 (alveoli)
m ³ - m ³	8.0, 8.2	7.2	6.2	6.8				
c - m ₃	9.5	7.5	7.5		5.0		4.7	
Length of complete mandible from condyles		12.1						
Length of ramus from condyles	15.3, 15.6	12.5						

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