

THE MAMMALS OF THE RUSH WATKINS ZOOLOGICAL EXPEDITION TO SIAM

By

Colin Campbell Sanborn

Curator of Mammals Chicago Natural History Museum, Chicago, Illinois

The Chicago Natural History Museum's Rush Watkins Zoological Expedition to Siam had as its main objective securing a habitat group of the Malay Tapir. Hunting these animals occupied most of the time in the field so only token collections of other mammals could be secured. About 200 specimens were collected representing 27 forms and others were seen but not collected. While this is a very small collection it does include an undescribed bat and some new locality records.

The Expedition spent four weeks during June and July 1949 in Kam Pang Pet Province at the Gairdner's Farm Wang Pratart, and on the upper Klong Klung, stopping three days in Pak Nam Pho on the way in. Three weeks work was carried on in August in Setul Province in the south but aside from bats few small mammals were collected.

The generous help and hospitality of Messers. Ken and Jim Gairdner at Wang Pratart; the invaluable assistance with many details in Bangkok on the part of Mr. Guy C. Madoc of the British Embassy and Mr. Charles Letts of Henry Waugh and Company; the aid and experience of Mr. Man Lilabhan of Nakorn Sritamarat; and the interest and co-operation of all Government Officials everywhere made the Expedition a success. We are also indebted to many others who helped with advice and guidance and made possible our work in a country where we were unfamiliar with the customs and the language.

The specimens of the genera *Rattus* and *Bandicota* were specifically identified by Dr. George H.H. Tate of the American Museum of Natural History to whom we wish to express our thanks for help with this difficult group.

ANNOTATED LIST

Megaderma spasma minus Andersen

Megaderma spasma minus Andersen, 1918, Ann. Mag. Nat. Hist., (9), 2, p. 383; Shamel, 1942, Journ. Mamm., 23, p. 318—Raheng.

Megaderma spasma Dobson, 1828 (pt.), Proc. Zool. Soc. London, p. 879—French Indo-China (Laos); Miller, 1898, Proc. Acad. Nat. Sci., Philadelphia, p. 320—Trang; Flower, 1900 (pt.), Proc. Zool. Soc. London, pp. 3-4 (records, dist.); Bonhote, 1901, Proc. Zool. Soc. London, p. 53—Sokotai or Sukhothai, N. Siam.

Type.—in British Museum, No. 78.6.17.42, from Camboja. Skin and skull, no sex. Presented by M. Pierre.

In the forest across the river from Wang Pratart Farm two ancient pagodas were found that were inhabited by colonies of this bat and eighteen were collected.

The forearms range from 55.5 to 59.5 mm. A series of seventeen specimens of *Eoctenes spasmae* (Waterhouse) Fam. Polycetidae, were taken on the bats.

Cynopterus brachyotis angulatus Miller

Cynopterus brachyotis angulatus Miller, 1898, Proc. Acad. Sci., Philadelphia, vol. 50, p. 315; Robinson and Kloss, 1915, Journ. Fed. Malay Sts. Mus., vol. 5, p. 115; Andersen and Kloss, *ibid.*, p. 220.

Type.—In U.S. National Museum, No. 83569, adult male. Collected at Trang, Peninsular Siam, 1896, by Dr. W.L. Abbott.

The bat was very common at Kwan Don, Setul Province. Some were found roosting under palm leaves, one was in a light open cave, and many were brought to us by the villagers during August. Of these 33 adults were preserved in alcohol.

The forearms range from 61.0 to 72.4 mm.; the ears from 16.5-22.0 mm. Of the five skulls cleaned but one, the smallest, has a rostrum that measures one fourth the total length of the skull and that measures 18 mm. This specimen might be considered *Cynopterus brachyotis angulatus* Miller but the others, judged by the length of the ears and the proportions of the skull are *C. sphinx*. They agree with descriptions and measurements of specimens listed by Robinson and Kloss (supra cit.) from Bandon. They have the long ears of *angulatus* but the long rostrum of *sphinx*. They have been here referred to *angulatus* for the time being.

Rhinolophus acuminatus acuminatus Peters

Rhinolophus acuminatus Peters, 1871, Monatsber. Akad. Wiss. Berlin, p. 308; Dobson, 1878, Proc. Zool. Soc. London, p. 878—Laos, Siam; Shamel, 1942, Journ. Mamm., vol. 23, p. 319—Singora.

Type.—In the Berlin Museum.

At a forest settlement a few miles from the Klong Klung, an oil gatherer guided us to a hollow fallen tree which harbored a colony of this bat and two males were collected. Not since Dobson's record (supra cit.) has it been recorded from northern Siam. There are five specimens in the British Museum from Patani, and in the U.S. National Museum one from Trang and seven from Singora, all three localities in Peninsular Siam.

Hipposideros armiger debilis Andersen

Hipposideros armiger debilis Anderson, 1906. Ann. Mag. Nat. Hist., (7), 17, p. 37; Robinson and Kloss, 1923, Journ. Fed. Malay Sts. Mus., 11, p. 59—Hill Caves, Nakon Sritamarat; Chasen, 1936, Bull. Raffles Mus., No. 12, p. 133—Khao Ram, Nakon Sritamarat, meas; Shamel, 1942, Journ. Mamm., 23 p. 321—Me Klang Waterfall, Doi Angka, N. Siam.

Type.—In British Museum. Adult male. Port Wellesley, Malay Peninsula.

A series of 15 males was taken in a cave on a rubber plantation near Kwan Don, Setul Province, August 1949. The forearms measure 90.3-98.3 mm. and the tibias 40.5-44.2 mm. *Hipposideros diadema vicarius* Andersen, has been taken in the Peninsula in Patani and may be distinguished from *debilis* by the shorter tibia 36-38 mm.

The ectoparasite *Cyclopodia ferrarii* Pondoni, was found on this bat.

Scotophilus solutatus watkinsi subsp. nov.

Type.—No. 66025 Chicago Natural History Museum, from Pak Nam Pho, Nakon Sawan Province, Central Siam. Skin and skull. Adult female. Collected 10 June 1949, by Frank C. Wonder. Original number 1573.

Diagnosis.—Like *Scotophilus solutatus* Sody of Java but with longer forearm and longer skull and tooth row.

Color.—Upper parts Dresden Brown (Ridgway 1912). Under parts Tawny Olive, lighter on throat and chin.

Skull.—A typical *scotophilus* skull between *temminckii* and *kuhlii* in size. About the same width as *solutatus* but longer with much longer tooth row.

Specimens examined.—Type and 16 topotypes; 3 adult males (alc.); 4 adult females (3 alc.); 10 subadults (alc.).

Remarks.—*Scotophilus castaneus solutatus* was described by Sody (1936, p. 49) as larger than *temminckii*, the description consisting of measurement only. The measurements given for *solutatus* and *temminckii* from Buitenzorg are approximately the same! However, Shamel (1942, p. 326) has published other measurements showing that a large and a small species of *Scotophilus* live together in Java. He also has considered *castaneus* a subspecies of *temminckii* with which we fully agree,

The occurrence of a small *Scotophilus*, *S. temminckii gairdneri* Kloss (1917-A, p. 284) and this large race *Scotophilus solutatus watkinsi* in the same locality, Pak Nam Pho, in Siam is a parallel to *S. temminckii* and *S. solutatus* occurring together at Depok, Java as recorded by Shamel.

As Pak Nam Pho is the type locality of *S. t. gairdneri* Kloss it was assumed that this series represented that subspecies. A careful examination however, showed them to be much larger. Only the type of *gairdneri* is known and Mr. R.W. Hayman of the British Museum (Natural History) has kindly examined this type and confirmed that it is fully adult and the measurements are as published in the original description.

Gyldenstolpe (1916, p. 17) records one *Scotophilus kuhli* from Meh Kee N.W. Siam, near boundary to Karenni, with a forearm of 59.5 mm., total skull length of 20.5 and a tooth row of 7.1. Kloss (1917-B, p. 301) has recorded one *Scotophilus belangeri* from Bangkok with a forearm of 58.0 mm. From the measurements it is believed that the two specimens may belong to *S. s. watkinsi*.

Measurements.—Type (2 topotypes in parenthesis). Total length 140 mm.; tail 55.0; hind foot 12.0; ear 16.0. Skull: greatest length 22.2 mm. (22.8-); condylo-basal length 19.3 (20.0-); palatal length 7.6 (7.6-7.6); width of rostrum between antiorbital foramina 7.6 (7.7-7.8); interorbital width 5.6 (5.4-5.6); zygomatic width 15.4 (14.9-); mastoid width 13.7 (13.4-13.5); width of brain case 10.3 (10.0-10.2); upper tooth row 7.6 (7.5-7.5); width across canines 7.2 (7.1-7.3); width across last molars 9.5 (9.7-9.9); lower tooth row 8.7 (8.6-8.7).

External measurements of six topotypes in alcohol.—Tail 53.5-61.5 mm.; tibia 22.0-24.5 mm.; forearm 55.5-60.5 mm. The forearms of nine subadult individuals measure 51.5-59.9 mm. Females average slightly larger than males.

Pipistrellus imbricatus Horsfield

Vesperugo imbricatus Horsfield, 1824—Res—Java.

Pipistrellus imbricatus Thomas, 1898, Trans. Zool. Soc. London, vol. 14, p. 375.

Type locality.—Java.

An adult female was taken flying about the rest house in Setul town on 15 August 1949. It constitutes the first record for the bat from Siam. Beside Java it has been recorded from Sumatra, Celebes, Philippines, and Japan.

The only other records for this genus in Siam are two for *Pipistrellus coromandra* Gray, one from Nan, North Siam and from Biserat and Jalor, Peninsular Siam (Gyldenstolpe, 1919, p. 137).

Tupaia glis belangeri Wagner

Tupaia du Pegou, Isadore Geoffroy, 1835, in Belanger, Zool. Vog. aux Indes Orientales, pp. 103-107, pl. 4.

C1 [*adobates*] *belangeri* Wagner, 1841, Schreber's Saugth. Suppl., vol. 2, p. 42.

Tupaia belangeri Anderson, 1879, Zool. Res. West. Yunnan, p. 126, pl. 7, figs. 6-7; Kloss, 1916, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 9.

Tupaia glis belangeri Kloss, 1918, Journ. Nat. Hist. Soc. Siam, vol. 3, p. 53; idem, p. 355; Chasen and Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., pp. 76-77; Chasen, 1935, idem, vol. 10, p. 56.

Type.—Possibly in Paris Museum. *Type locality*, Siriam,* near Rangoon, Burma.

This tree shrew was plentiful in the evergreen forest on the Klong Klung where five were taken the last of June. It was not so plentiful at Wang Pratart. At both places it was taken in traps baited with prunes.

*Siriam is 5 m., S. of Rangoon.

Tupaia glis wilkinsoni Robinson and Kloss

Tupaia ferruginia wilkinsoni Robinson and Kloss, 1911,
Journ. Fed. Malay. Sts. Mus., vol. 4, p. 173.

Tupaia lacernata wilkinsoni Lyon, 1913, Proc. U.S. Nat. Mus.,
vol. 45, p. 52.

Tupaia glis wilkinsoni Robinson and Kloss, 1915, Journ. Fed.
Malay Sts. Mus., vol. 5, p. 113; Kloss, 1916, Journ. Nat.
Hist. Soc. Siam, vol. 2, p. 8.

Type. — When described was in the Selangor Museum, No.
1,138/10, adult male. Collected at Ko-khan, Trang, Siam, on 12
Jan. 1910.

One young male was taken in a trap baited with dried prunes
at Kwan Don, Setul.

Hylobates lar entelloides Geoffroy

Hylobates entelloides Geoffroy, 1842, C. R. Acad. Sci. Paris, vol.
15, p. 717.

Hylobates lar entelloides Kloss, 1929, Proc. Zool. Soc. London,
p. 117; Chasen and Kloss, 1930, Journ. Siam. Soc., Nat. Hist.
Suppl., vol. 8, p. 63.

The gibbon was very plentiful in the evergreen forest on the
Klong Klung. In the area worked by wood-oil* gatherers they
were shy and hard to approach but in parts not visited often by
men were found to be quite tame and curious. Their calls are
heard, especially in the early morning and evening, but also at
times throughout the day. None were collected by the expedition.

Macaca nemestrina leonina Blyth

Macacus leoninus Blyth, 1863, Cat. Mamm. Mus. As. Soc., p. 7.

Macacus andamensis Kloss, Journ. Nat. Hist. Soc. Siam, vol.
2, p. 2.

*Yang (*Dipterocarpus* sp.) resin.

Macaca nemestrina indochinensis Kloss, 1919, Journ. Nat. Hist. Soc. Siam. vol. 3, p. 343.

Macaca nemestrina leonina Pocock, 1939, Fauna British India, vol. 1, p. 59.

Type. — From North Arakan, Upper Burma.

One adult male was collected by a Siamese hunter on the upper Klong Klung. This macaque has been recorded by Kloss from Pak Jong and Lat Bua Kao in eastern Siam and Klong Minao, southeast Siam.

Presbytis phayrei crepusculus Elliot

Presbytis crepuscula Elliot, 1909, Ann. Mag. Nat. Hist., ser. 8 vol. 4, p. 271.

Pithecus pyrrhus crepusculus, Pocock, 1928, Journ. Bombay Nat. Hist. Soc., vol. 32, p. 672; Osgood, 1932, Field Mus. Nat. Hist., Zool. Ser., vol. 28, p. 202.

Trachypithecus phayeri crepusculus Pocock, 1934, Proc. Zool. Soc. London, p. 949.

Type — In British Museum, No. 85. S. I. 11, from Mount Mulai-yit, Tenasserim.

Hunters brought in two adult males to our Klong Klung camp on July 1 and 2. Both are in silvery gray pelage and much different from a specimen collected in the same area by Arthur S. Vernay on Feb. 27 (year?) and described by Pocock as with a "buffy sheen over the neck and shoulders." Pocock (1934 supra cit.) has placed both *wroughtoni* Elliot from Phechabun, Central Siam and *argentatus* Kloss from Lat Bua Kao, west of Korat, E. Siam in the synonymy of *crepusculus*. In a series from French Indo-China, one specimen is an exact match for the Klong Klung specimens but the others are darker.

Manis Javanica Desmarest

Manis javanica Desmarest, 1822, Encyclop. Meth. (Mamm.),
vol. 2, p. 377; Kloss, 1919, Journ. Nat. Hist. Soc. Siam,
vol. 3, p. 65 – Rajburi, Meklong River.

Type locality. – Java.

Just as we were packing to leave Pak Nam Pho two specimens were offered for sale but could not be accepted. No other specimens were ever met with.

Petaurista petaurista melanotus Gray

Pteromys melanotus Gray, 1837, Charlsw. Mag. Nat. Hist.,
vol. 1, p. 588.

Petaurista nitida melanotus Thomas, 1908, Ann. Mag. Nat.
Hist., ser. 8, vol. 1, p. 250.

Petaurista petaurista melanotus Gyldenstolpe, 1919, Journ.
Nat. Hist. Soc. Siam, vol. 3, p. 150.

Type. – In British Museum, No. 116a. Young.

A subadult female in the flesh was presented to us by Judge Wongse Veerapongsa of Setul who shot it near Kwan Don, Setul Province.

This specimen is regarded as *melanotus* rather than *circur* Robinson and Kloss, from Bandon as it lacks the black tips to the hairs on the back, one of the main characters of *circur*. The skull of *circur* was described as having longer postorbital processes than *melanotus*. In this specimen they measure 35.5 mm., in a specimen of *circur* (Kloss, 1916, p. 14) 35.3 mm.

Measurements. – Total length 885 mm., tail 480; hind foot (w.u.) 83. Skull: greatest length 68.4 mm.; condylo-basal length 63.9; palatal length 35.0; interorbital breadth 14.5; tip to tip of postorbital processes 35.5; zygomatic width 47.4; mastoid width 38.0; width of brain case 31.5; length of nasals 20.4; greatest breadth of nasals 12.5; upper tooth row 15.3; diastema 14.5;

Ratufa melanopepla peninsulae Miller

Ratufa melanopepla peninsulae Miller, 1913, Smith. Misc. Coll., vol. 61, no. 19, p. 25.

Type. — In U.S. National Museum, No. 83478, adult male. Collected at Lay Song Hong, Trang, Peninsular Siam, on 23 September 1896, by Dr. W.L. Abbott.

A series of eight specimens was taken on the Klong Klung and at Wang Pratart Farm between 30 June and 7 July, the start of the rainy season. The upper parts of three of these are glossy black, three have the lower half of the back brownish, one shows a patch of old brown hairs at the base of the tail and one is entirely brown. The yellow on the fore limbs ranges in some from a point above the posterior edge of the foot pad to well down between the toes in others.

A series taken during April and May in the Raheng area was considered by Chasen and Kloss (1930, p. 69) as *Ratufa bicolor phaeopepla* Miller although it was suggested that this subspecies really represented the dry season phase of a black backed squirrel.

The present series is smaller than measurements given for *phaeopepla*, and has more yellow on the fore limbs than credited to that race. The series has been compared with topotypes of *peninsulae* and *leucogenys* and is referred to *peninsulae*.

Measurements. — Total length 731-850 mm.; tail 440-505; hind foot (with claws) 82-95. Skull (5 adults); greatest length 70.8-74.8; condylobasal length 64.3-68.4; interorbital width 27.0-30.0; zygomatic width 43.4-45.1; length of nasals 24.1-25.7; length of auditory bulla 16.0-16.5; diastema 14.5-15.9; upper molar series 14.6-15.6

Callosciurus caniceps caniceps Gray

Sciurus caniceps Gray, 1842, Ann. Mag. Nat. Hist., vol. 10, p. 263; Kloss, 1916, Journ. Nat. Hist. Soc. Siam, vol. 2, pp. 19-83; idem, 1919, vol. 3, p. 362.

Sciurus epomophorus fluminalis Wroughton and Robinson,
1911, Journ. Fed. Malay Sts. Mus., vol. 4, p. 233 - Meping
Rapids, North Siam.

Type. - From North Tenasserim.

This was a common squirrel on the Klong Klung and was also found but in fewer numbers at Wang Pratart Farm. A series of ten taken between 20 June and 9 July vary from one with the whole neck and back brownish red to others almost pure dark grey but with some trace of brown. All but one have a well marked black tip to the tail.

***Callosciurus bocourtii sinistralis* Wroughton**

Sciurus bocourtii sinistralis Wroughton, 1908, Ann. Mag. Nat.
Hist., ser. 8, vol. 2, p. 399.

Sciurus bocourtii dextralis Wroughton, 1908, Ann. Mag. Nat.
Hist., ser. 8, vol. 2, p. 400.

Sciurus ferrugineus sinistralis Kloss, 1930, Journ. Siam Soc.,
Nat. Hist. Suppl., vol. 8, p. 71.

Type. - In British Museum, No. 3.8.5.8, adult male. Collected below Pichit, Me Nam River, Central Siam, on 8 June 1903 by T.H. Lyle.

This squirrel was very common at Wang Pratart Farm but was not found in the jungle at Klong Klung. An interesting series of sixteen, six males and 10 females, were taken between 6 and 13 July. They vary in color from dark silver gray to blackish and no two specimens are exactly alike.

***Collosciurus (Tamiops) maclellandi kongensis* Bonhote**

Sciurus maclellandi kongensis Bonhote, 1901, Proc. Zool. Soc.
London, vol. 1, p. 55.

Tamiops barbei kongensis Kloss, 1916, Journ. Nat. Hist. Soc.
Siam, vol. 2, p. 84 - Muang Pre, N. Siam; idem, p. 310 - Lakon
Lampang.

Tamio ps maclellandi kongensis Kloss, 1919, Journ. Nat. Hist. Soc. Siam, vol. 3, p. 60—Lakon Lampang, Ban Phong Tham, and Ban Me Yen, N. Siam; Chasen and Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., val. 8, p. 72—Raheng, Me Taqua and Ta Chang Tai, N. Siam; Chasen, 1935, idem, vol. 10, p. 53—Doi Angka, and Doi Sutep, N. Siam.

Type. — In British Museum, No. 0.10.7.18, immature female. Collected at Raheng, 17 February 1900 by T.H. Lyle.

A series of thirteen, three from Klong Klung and ten from Wang Pratart are in two seasonal color phases. The Klong Klung specimens are brighter, the outer stripes being yellow orange while the Wang Pratart series is duller with no trace of bright color.

Menetes berdmorei consularis Thomas

Menetes berdmorei consularis Thomas, 1914 Journ. Bombay Nat. Hist. Soc., vol. 23, p. 24; Kloss, 1916, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 85 (Muang Pre, N. Siam); idem, vol. 3, p. 374, (Raheng, N. Siam); Chasen and Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., vol. 8, p. 73; Chasen, 1935 idem, vol. 10, p. 53 (Doi Angka and Doi Sutep, N. Siam).

Type. — In British Museum No. 2.6.6.6, immature female. Collected at Nan, North Siam on 6 October 1901 by T.H. Lyle.

One male was trapped on the Klong Klung and seven others (2 males, 2 juvenile males, 3 females) trapped or shot at Wang Pratart Farm between 26 June and 15 July. Because of the many ants, dried prunes were used as bait, and one of these ground squirrels was caught within fifteen minutes of setting the trap.

Rattus concolor concolor Blyth

Mus concolor Blyth, 1859, Journ. Asiatic Soc. Bengal, vol. 28, p. 295.

This rat, originally described from Shwagyin, Burma is found throughout Siam. One male was collected in the Gairdner's house at Farm Wang Pratart.

Rattus rattus thai Kloss

Rattus rattus thai Kloss, 1917, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 286; Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., vol. 8, p. 23.

Type. — Collected at Raheng, Central Siam, 23 January 1917 by K.G. Gairdner. Kloss No. 2615/CBK.

The type appears to be lost. It was not sent to the British Museum nor reported missing at that time (Gibson-Hill, 1949).

In July two males were collected at Farm Wang Pratart that closely agree with measurements of those given for the type.

Rattus surifer surifer Miller

Mus surifer Miller, 1900, Proc. Biol. Soc. Washington, vol. 13, p. 148, pl. V, figs. 4, 4a, and 4b.

Epimys surifer surifer Kloss, 1916, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 26—Pen. Siam.

Rattus surifer surifer Kloss, 1917, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 314—Pen. and S.W. Siam.

Type. — In U.S. National Museum, No. 86,746. Adult male. Collected at Trang, Lower Siam, 14 January 1899, by Dr. W.L. Abbott.

At Kwan Don, Setul Province, Peninsular Siam, one subadult female was taken in heavy growth near rice field.

Rattus surifer siarma Kloss

Rattus rajah siarma Kloss, 1918, Journ. Nat. Hist. Soc. Siam, vol. 3, p. 75.

Rattus surifer siarma Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., vol. 8, p. 73—Raheng district.

Type. — Collected at Sikawtur (Sikortur) 40 miles N.W. of Raheng, Siam, 13 March 1917 by K.G. Gairdner. Adult male, No. 2632/CBK; original number 399.

It is not known what has become of the type which does not appear to have been sent to the British Museum (Gibson-Hill, 1949).

Two rats taken on the Klong Klung and two at Farm Wang Pratart are referable this subspecies described from near Raheng.

***Bandicota savilei curtata* Thomas**

Bandicota savilei curtata Thomas, 1929, Ann. Mag. Nat. Hist., Ser. 10, vol. 3, p. 205; Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., vol 8, p. 75 (Raheng).

Type. — In British Museum, No. 28.5.3.2. Collected at Raheng, Siam, on 16 April 1924 by C.B. Kloss and K.G. Gairdner. Original number 20.

One example, a subadult male, was collected at Farm Wang Pratart on 15 July.

***Cannomys badius minor* Gray**

Rhizomys minor Gray, 1842, Ann. Nat. Hist., Ser. 1, vol. 10, p. 266.

Cannomys minor Thomas, 1916, Ann. Mag. Nat. Hist., Ser. 8, vol. 16, p. 57; Kloss, 1919, Journ. Nat. Hist. Soc. Siam, vol. 3, pp. 383-387.

Cannomys badius minor Chasen and Kloss, 1930, Journ. Siam Soc., Nat. Hist. Suppl., vol. 8, p. 75.

Type. — From S. Siam.

At Wang Pratart Farm seven specimens, 2 males (1 skeleton), 4 females and 1 juvenile female were collected between 7-15 July. One adult female in fresh pelage is reddish brown above. The other specimens are in worn pelage, the brown tips worn off, so the slaty gray bases to the hairs are more prominent. The series agrees with numerous measurements given by Kloss and by Chasen and Kloss.

Felis tigris Linnaeus

Felis pardus Linnaeus

No tigers nor leopards were seen but tracks of tigers were found on numerous occasions on the trip into and on the Klong Klung. Tigers were more plentiful in Setul and were seen twice during the day by rice planters.

Leopard tracks were found near camp in Setul but the animal appeared to be less plentiful than the tiger. Two caged black leopards taken locally, were seen at Had Yai in the south.

Lutra sumatrana Gray

Barangia sumatrana Gray, 1865, Proc. Zool. Soc. London, p. 183.

Type. -- In British Museum No. 84.6.3.4. from Sumatra.

A live adult male of this rare otter was brought to our camp near Kwan Don, Setul on 10 August 1949.

The range of this otter according to Pocock (1941, p. 288) is Sumatra, Borneo, Cochin China, Annam, and the Malay Peninsula; Gyldenstolpe (1919, p. 145) states that it has been taken a few times in Peninsular Siam, but gives no references.

The skull measures: total length 105.1 mm.; condylo-basal length 104.9; zygomatic width 63.4; postorbital width 10.4; interorbital width 16.0; mastoid width 56.3; upper tooth row $c-m^1$ 33.9; length of premolar four 11.7.

Paradoxurus hermaphroditus laotum Gyldenstolpe

Paradoxurus hermaphroditus laotum Gyldenstolpe, 1916, Kungl. Sv. Vet. Akademiens Handlingar, Band 57, No. 2, p. 26, pl. 4, figs. 2 and 4 (skull).

Type. -- In the Naturhistoriska Riksmuseet, Stockholm, Sweden. Adult male. Collected 15 August 1914, at Chieng Hai, Northwestern Siam by Count Nils Gyldenstolpe.

An adult female and three young were shot on the Klong Klung and a subadult male was taken at Wang Pratart in July. The female and young were found in trees near our camp and seemed to have been attracted by the lights. The male was found hunting in dry rice fields.

The skull of the female is about the size of the measurements given for the type.

Arctictis binturong binturong Raffles

Viverra (?) binturong Raffles, 1822, Trans. Linn. Soc., vol. 13, p. 253.

Arctictis gairdneri Thomas, 1916, Ann. Mag. Nat. Hist., ser. 8, vol. 17, p. 270—Sai Yoke, W. Siam.

Arctictis binturong binturong Kloss, 1917, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 293—Pen. Siam; Kloss, 1919, idem, vol. 3, p. 53, N.W. of Raheng.

Type.—From Malacca.

A live adult taken in Setul Province was seen at Setul in possession of Judge Wonge Veerapongse.

Elephas maximus Linn.

Tracks and signs of wild elephants were plentiful on the upper Klong Klung. While at a jungle settlement elephants raided the fields of sweet corn belonging to the settlers.

Tapirus indicus Desmarest

Tapirus indicus Desmarest, 1822, Encyclop. Meth. (Mamm.), vol. 2, p. 410.

Type locality.—Malay Peninsula.

One of the objectives of the Expedition was to collect a habitat group of Malay Tapir so much time was spent looking for it. Some tracks were seen and individuals were reported in the area during the stay on the Klong Klung. Our hunters saw one and an oil

gatherer reported a female and young. A report from a nearby settlement said three had been killed in the Klong the year before. There were no experienced hunters in the area familiar with habits of tapir however.

In Setul Province two males were collected; a female was shot in Setul but spoiled before word could reach us; and a male was caught in a pit near Kwan Don. A female and young were in the area and another female and young seen near Setul, In all some ten individuals were located in the south. Before our arrival in Bangkok at least one had been taken near Hua Hin.

Sus jubatus Miller

Sus jubatus Miller, 1906, Proc. U.S. Nat. Mus., vol. 30, p. 745, pls. LV, LVI, LVIII, LIX.

Type.—In U.S. National Museum, No. 83518, adult male. Collected at Trang, Peninsular Siam, in 1896 by Dr. W.L. Abbott.

Pigs were very plentiful in Setul where they are not hunted for food, but none were collected. On the Klong Klung two sub-adult males were collected 26 June by Mr. Watkins.

Tragulus kanchil williamsoni Kloss

Tragulus kanchil williamsoni Kloss, 1916, Journ. Nat. Hist. Soc. Siam, vol. 2, p. 88.

Mr. Kenneth Gairdner reported that mouse deer, probably this race, were found in the jungle across the Me Ping river from Wang Pratart Farm.

Cervus (Rucervus) eldii siamensis Lydekker

Panolia platyceros Gray, 1843, List Mamm. Brit. Mus., p. 181 (preoccupied by *Cervus platyceros* 1798, = *Dama dama*).

Cervus eldii siamensis Lydekker, 1915, Cat. Ung. Brit. Mus., p. 104; Kloss, 1919, Journ. Nat. Hist. Soc. Siam, vol. 3, p. 393, pl. 8, (meas. antlers).

Type.—In British Museum, No. 675h, single antler. Siam.

A small herd of "lamang" was found at Wang Pratart Farm but in July the vegetation had become too dense for successful hunting. One of the farm employees shot a young buck and an old buck was secured from a nearby village. The animal, shot 14 July, had but very recently dropped its antlers. Mr. Jim Gairdner presented three fine sets of antlers all taken at Wang Pratart.

These antlers measure: Length on outside curve (not including brow tine) 31, 31 3/4, 36 1/2 inches; length of brow tine 11, 12 3/4, 14 3/8; circumference of burr 5 3/4, 6 7/8, 8; greatest spread 32 1/4, 32 1/2, 35 1/2; inner distance between points 22 1/4, 27 3/8, 27 3/4; number of points R 12 L 10; R 11 L 15; R 8 L 10.

***Muntiacus muntjak peninsulae* Lydekker**

Muntiacus muntjak peninsulae Lydekker, 1915, Cat. Ung. Mamm. Brit. Mus., p. 18.

Type.—In British Museum. From Pulu Pangkor, off Malay Peninsula.

A frontlet with antlers, taken in Setul Province was presented by Judge Wongse Veeraponse of Setul and probably belongs to this race.

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NOTE

Mr. Sanborn's contribution and place name references cover a wide range in Latitude. Also, recent maps exhibit a tendency to name provincial administrative centres after the Province e.g. Raheng is shown as Tak and Paknampho as Nakon Sawan.

The following are the geographic positions of places referred to in this paper, and alternative names or spellings.

Wang Pratart, Kampengphet prov.,	E. Long.	99° 35'	N. Lat.	16° 25'
Klong Klung, " " "		99° 15'	"	16° 20'
Raheng, Rahang, Tak	" "	99° 10'	"	16° 50'
Paknampho, Nakon Sawan	" N. Lat.	15° 40'		

and in peninsular Siam :-

Setul, Satul	E. Long.	100°;	N. Lat. 6°. 35'
Trong, Trang	N. Lat.	7°. 30'	
Hua Hin	N. Lat.	12°. 35'	(reference under Tapirus indicus)

Apparently the tapir is found in greater numbers in the South of Peninsular Thailand due in part to a congenial humid climate on the West coast and also to the Malay Moslems belief that the tapir is related to the pig. In conversation, Mr. Sanborn stated that he had considerable difficulty in obtaining help to handle and skin tapir.

Further north, in Petchaburi Siamese hunters would not knowingly shoot tapir believing that these odd looking animals were made by the Creator from remnants of clay adhering to his hands :- hence the Thai name "psom-sett" which means "the mixing is finished".

K. G. Gairdner.

NOTE

Mr. Sanborn's classification and nomenclature of the tapir is based on the following facts. Also, recent maps exhibit a tendency to name provincial administrative centres after the province, e.g. the town is known as Tak and Taknang as Nakhon Sawan. The following are the geographic positions of those referred to in this paper and alternative names or spellings.

Wang Prachin	Geographical name	16° 30' N. Lat.	101° 15' E. Long.
Khai Kiang	"	16° 30' "	101° 15' "
Khai Kiang	"	16° 30' "	101° 15' "
Pattani	"	6° 35' N. Lat.	100° E. Long.