

## ON SOME MAMMALS FROM THE KARIMATA ISLANDS AND DUTCH WEST BORNEO

by

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I am indebted to Dr. K. W. DAMMERMAN of the Zoological Museum, Buitenzorg, Java, for the privilege of examining two small collections of mammals made in 1931 by Mr. L. COOMANS DE RUITER and the Zoological Museum, in the low country at and near Pontianak on the west coast of Borneo, and in the Karimata Islands lying off the west coast of the island.

The collection from Pontianak made in March and April contains no novelties, or even rare species, but in view of the preliminary studies made by Mr. C. BODEN KLOSS and myself in the exact distribution of mammals in Borneo <sup>1)</sup>, I was very glad to have the opportunity of examining the collection for it provides answers to several hitherto open questions concerning the distribution of some subspecies of mammals. Other collectors of mammals have, of course, worked in the well-known neighbourhood of Pontianak. The most recent collection seems to be that made by Dr. W. L. ABBOTT in 1905 and reported on by MARCUS WARD LYON <sup>2)</sup>.

The small collection from the Karimata Islands by no means includes examples of all the species known from the islands and with the exception of extending the range of the common longtailed macaque to Pelapis and Seroetoe adds nothing to our knowledge of the distribution of species within the island group. The acquisition, however, of the fresh specimens does provide an opportunity of reviewing some of the peculiar forms of Karimata mammals hitherto only known from the collections made by Dr. W. L. ABBOTT in 1904, 1907, and 1908. These were studied and reported on by MILLER <sup>3)</sup> and LYON <sup>4)</sup>.

The present collection contains material from the following islands.—

*Panebangan* (Penebangan, Panembangan) is only ten miles from Poeloe Maja which may be considered as forming part of the mainland of Borneo as it is only insulated by the Maja River (19th-20th, 28th March).

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<sup>1)</sup> *vide* "On a collection of Mammals from the Lowlands and Islands of North Borneo", by F. N. CHASEN and C. BODEN KLOSS, Bull. Raffles Museum, 6, 1931, pp. 1-82.

<sup>2)</sup> "Mammals collected in Western Borneo by Dr. W. L. Abbott", by MARCUS WARD LYON, Jr., Proc. U. S. Nat. Mus., XXXIII, 1907, pp. 547-572.

<sup>3)</sup> "Mammals collected by Dr. W. L. Abbott in the Karimata Islands, Dutch East Indies", by GERRIT S. MILLER, Jr., Proc. U. S. Nat. Mus., XXXI, 1906, pp. 55-66.

<sup>4)</sup> "Mammals collected by Dr. W. L. Abbott on Borneo and some of the small adjacent islands", by MARCUS WARD LYON, Jr., *op. cit.*, 40, 1911, pp. 53-146.

*Pelapis* (Pelapi) is one of the islands of a small group south-west of Panebangan (20-21st March).

*Karimata Besar* (Karimata Island; Carimata) about thirty miles from the nearest point of the mainland (Poeloe Maja). This is much the largest island of the group: it measures approximately eleven by seven miles (23rd-26th March).

*Seroetoe* (Serutu) is a few miles south-west of Karimata Besar (24-25th March).

Panebangan is within the five fathom line: the ten fathom line embraces the Pelapis Islands. Between the latter and Karimata Island a depth of twenty-five fathoms is recorded. It is noteworthy that in the narrow strait, about four miles across, between Karimata and Seroetoe there is a depth of twenty-three fathoms.

### ***Pygathrix rubicunda ignita* (DOLLMAN).**

*Presbytis ignitus* DOLLMAN, Ann. Mag. Nat. Hist. (8) 4, 1909, p. 204 ("Mount Mulu, Baram, Sarawak").

Simpang, West Borneo, 1 ♀.

On locality this specimen could be expected to be referable to *P. r. rubida* LYON<sup>5)</sup> described from Batoe Joerong, South-western Borneo, but its skull does not show the peculiarities assigned to that subspecies. In general colour the skin is exactly like others in a similar condition from Sarawak and North Borneo, but the hands and feet are merely sprinkled with black, therein, as could be expected, resembling *ignita* from the former territory.

In the Raffles Museum there is an adult of *P. r. carimatae* MILLER, collected on Karimata Island by Dr. W. L. ABBOTT in 1908. Although in good coat it is pale and very bright, the hands and feet are sprinkled with black hairs but the tail is unsullied. In colour this skin cannot be exactly matched from a good series of the species from Sarawak and North Borneo.

### ***Macaca irus* subsp.**

Seroetoe, 1 ♂; Pelapis, 1 ♀ juv.

ELLIOT described a macaque from Karimata Island as *Pithecus carimatae*<sup>6)</sup> summarizing its characters as follows. "This is a very large Macaque with a very long tail, and of a general grayish brown colour. It does not closely resemble any known species." This description is certainly not applicable to the Seroetoe adult listed above which in size, colour and general conformation of skull can be matched by other examples of the species from Sumatra, the Malay Peninsula and Borneo. It is a rather dull animal, comparatively grey on the limbs, well blackened on the tail and with the black line on the forehead relatively conspicuous.

The skull measures. — basal length, 77.9; zygomatic width, 76.3; maxillary tooth-row (alveoli), 36.3 mm.

<sup>5)</sup> Proc. U. S. Nat. Mus., 40, 1911, p. 139.

<sup>6)</sup> Proc. U. S. Nat. Mus., 38, 1910, p. 346.

***Felis bengalensis undata* DESMAREST.**

Pematang Toedjoeh, Pontianak, 1 ♀ kitten.

***Arctogalidia trivirgata stigmatica* (TEMME).**

Peniti, Pontianak, 1 ♀.

Skull. — condylo-basal length, 96; zygomatic width, 57.9; maxillary tooth-row (alveoli), 35.5 mm.

The condylo-basal length of the skull of a large male from Sarawak is 107 mm; of a female, 103 mm. A few Sarawak specimens have the dorsal stripes scarcely distinguishable, therein differing strongly from the boldly marked *A. t. major* MILLER, occurring in the Malay States, which is also much larger, male skulls in the Raffles Museum running up to 113 mm in condylo-basal length and 73.5 mm in zygomatic width.

***Tragulus kanchil carimatae* MILLER.**

*Tragulus carimatae* MILLER, Proc. U. S. Nat. Mus., XXXI, 1906, p. 55 ("Karimata Island").

Panembangan, 1 ♀ juv.

Although very young this specimen shows the racial character of a very dark back which is darker than in any example of *T. kanchil* examined from the mainland of Borneo. To this subspecies LYON has already referred adult mouse-deer from Panembangan.

***Tragulus kanchil hosei* BONHOTE.**

*Tragulus kanchil Hosei* BONHOTE, Ann. Mag. Nat. Hist. (7) XI 1903, p. 293 (Baram River, Sarawak).

*Tragulus hosei*, LYON, Proc. U. S. Nat. Mus., 40, 1907, p. 549 (West Borneo).

*Tragulus kanchil longipes*, LYON, op. cit., 40, 1911, p. 66 (West, South-west and South-east Borneo).

Pematang Toedjoeh, Pontianak, 1 ♂.

The nape stripe is well defined. The hind-foot including the hoof, measures about 137 mm. Although there is only one skin of this species in the collection from Pontianak it is especially interesting in view of the fact that LYON, whose material of *hosei* was inadequate at the time, referred specimens from the Kapoeas and Simpang Rivers in Western Borneo to *T. k. longipes* of Eastern Sumatra whereas I cannot separate the Pontianak example from topotypes of *hosei* from Sarawak, including one from the actual type locality.

***Ratufa affinis cothurnata* LYON.**

*Ratufa cothurnata* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 93 ("foot of Mount Palung, near Sukadana, Western Borneo").

Peniti, Pontianak, 3 ♂, 3 ♀; Pematang Toedjoeh, Pontianak, 1 ♂.

This is a most instructive series: it is from localities close enough to the type locality of *cothurnata* to be regarded as fairly representing that form. The range of the subspecies extends to Samarahan in South Sarawak whence a series of skins presents about the same range of variation as does that from Pontianak: also individuals from the two districts can be matched.

**Ratufa affinis griseicollis** LYON.

*Ratufa griseicollis* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 94 ("Panebangan Island").

Panebangan, 1 ♀.

This is a remarkably distinct form of *Ratufa affinis* and although in general appearance it is nearest to *cothurnata* of the opposite Bornean mainland it differs from any Bornean skin before me in its general richness of colour, especially in the rufous of the flanks and in the deep reddish buff of the under parts. It is especially distinctive on account of the cream-coloured sides of the head and neck: on the former region it is finely sprinkled with black.

Skull. — greatest length, 61.1; condylo-basilar length, 55; zygomatic breadth, 40.5; upper molar row (alveoli), 12.6 mm.

**Sciurus prevosti carimatae** MILLER.

*Sciurus carimatae* MILLER, Proc. U. S. Nat. Mus., 31, 1906, p. 57 ("Karimata Island").

Karimata, 4 ♂, 2 ♀.

**Sciurus prevosti armalis** LYON.

*Sciurus armalis* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 82 ("Pulo Panebangan").  
Panebangan, 4 ♂, 3 ♀.

Both this and the preceding subspecies have been described in detail in the original descriptions. *S. p. carimatae* much more closely resembles certain forms from the Malay States, Sumatra, the Riau Archipelago, and Banka Island than any form from the mainland of Borneo. In colour it is very like *S. p. wrayi* of the Malay Peninsula, and *S. p. carimonensis* of Karimon Island, but it is paler on the red areas, and the sides of the head are greyer than in the former, and less blackened than in the latter race. *S. p. armalis* is readily separable from *carimatae* on account of its greyish, not buff, shoulder patches but the feet of *armalis* are not invariably lighter.

Skull measurements of *Sciurus prevosti* subsp.

Name	Sex	Locality	Greatest ength	Condylo- basilar length	Zygomatic breadth	Length of a nasal	Maxillary tooth-row (alveoli)
<i>S. p. carimatae</i>	♂	Karimata	53.2	—	32	17.2	10.2
"	♂	"	54.5	46	—	16.2	10.2
"	♀	"	54.5	47.2	33.7	15.7	10.4
<i>S. p. armalis</i>	♂	Panebangan	53.1	—	31.8	15.3	9.8
"	♂	"	52.5	44.3	32	15.2	9.6
"	♀	"	51.8	43.7	31	15.3	10.6
<i>C. p. borneoensis</i>	♀	Near Pontianak	57.8	50.3	35.6	17.3	11
"	♀	"	56.5	50.3	34	17.6	10.7
"	♀	"	56.7	49.3	36.2	17.6	10.7

**Sciurus prevosti borneoensis** (MÜLLER and SCHLEGEL).

Peniti (near the coast a few miles north of Pontianak and between that place and Mampawah), 1 ♂, 3 ♀; Pematang Toedjoeh, (an estate in the neighbourhood of Soengai Kakap, south-west of Pontianak), 2 ♀.

In Central West Borneo *Sciurus prevosti* is even more variable than usual and at least three races are found near Pontianak. With the black-tailed *sang-gaus* we are not concerned: it occurs south of the Kapoeas River. Immediately north of the Kapoeas two other forms are found. In the low, marshy country near the mouth is the very distinct *palustris* with blackish shoulders and under parts. Further inland, Dr. W. L. ABBOTT collected *borneoensis* at Sanggau and Tajan on the north bank, and also at Tandjoeng Poetoes, and above that place, on the Landak River. The present specimens extend the range of *borneoensis* to the coast and restrict that of *palustris*.

The skins from Peniti have the sides of the head and neck reddish or grizzled, but in those from Pematang Toedjoeh these parts are blackish. These latter specimens agree with the plate of *borneoensis* <sup>1)</sup>, and judging by the description published by LYON <sup>2)</sup>, also with the types, but the feet are blackish and not red. Variation within the subspecies has been discussed in detail by LYON. All the skins before me have a broad grizzled band along the flanks between the black back and the white lateral stripe, and although this band is often noticeable in *C. p. kuchingensis* it is much less marked: in series the two forms are quite distinct <sup>3)</sup>.

**Sciurus notatus serutus** MILLER.

*Sciurus serutus* MILLER, Proc. U. S. Nat. Mus., 31, 1906, p. 58 ("Pulo Serutu").  
Seroetoe, 1 ♂.

A pale form, not to be confused with the much more richly coloured *dulitensis* of Sarawak, but nearer to the paler *dilutus* also of the Bornean mainland from which, however, it can be distinguished by its greyer, less brown upper parts and, in the great majority of cases, by the less conspicuous black lateral stripe.

Skull. — greatest length, 49.4; condylo-basilar length, 41.3; palatilar length, 20.5; diastema, 10.8; zygomatic breadth, 28.1; interorbital constriction, 16.6; maxillary tooth-row (alveoli), 8.7 mm.

**Sciurus notatus dulitensis** BONHOTE.

Pontianak (Pematang Toedjoeh, Peniti, Batoe Ampat), 3 ♂, 1 ♀.

Relatively deeply coloured on the under parts. Three skulls measure. — greatest length, 50.8, 47.8 (c), 48; zygomatic breadth, 30.3, 30.5, 28.8; maxillary tooth-row (alveoli), 9.5, 9.4, 8.8 mm.

**Sciurus tenuis parvus** MILLER.

Peniti, Pontianak, 1 ♀ juv.

<sup>1)</sup> Ned. Tijdschr. voor de Dierkunde (Amsterdam), I, 1838, pl. I, fig. 3.

<sup>2)</sup> Proc. U. S. Nat. Mus., 33, 1907, p. 552.

<sup>3)</sup> c.f. E. BANKS, Proc. Zool. Soc., 1931, p. 1336.

**Nannosciurus exilis exilis** (S. MÜLLER).

Peniti, Pontianak, 1 ♂.

**Rattus rattus** form **argentiventer**. ROB. and KLOSS.

Pematang Toedjoeh, Pontianak, 1 ♀ imm.

A young animal but already showing the grey under parts, three pairs of pectoral mammae, large teeth, long palatal foramina and swollen bullae characteristic of this form.

**Rattus surifer serutus** (MILLER).

*Mus serutus* MILLER, Proc. U. S. Nat. Mus., 31, 1906, p. 59 ("Pulo Serutu, Karimata Islands").

Seroetoe, 1 ♀.

Only one specimen, ex alcohol, and with the skull broken and the teeth unworn. The base of the dorsal fur and spines is grey and this rat is clearly only a dark, dull, subspecies of *Rattus surifer*. No series of *R. surifer* from the Kapoeas River basin seems ever to have been critically examined and this district may also be inhabited by a comparatively dull subspecies for LYON has remarked that specimens of the "rajah group" from south-eastern Borneo average brighter in colour than do those from the western part of the island. LYON's *rajah* group, however, perhaps includes individuals of two species, *R. rajah* and *R. surifer*.

**Rattus rattus lamucotanus** (LYON).

*Epimys neglectus lamucotanus* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 100 ("Pulo Lamucotan, off west coast of Borneo").

Panembangan, 1 ♂.

This single, sub-adult and not full-grown specimen which externally is exactly like specimens of *R. r. jalorensis* of a similar age from the mainland of Borneo is, of course, useless for critical examination, but LYON has already referred rats from Panembangan to *R. r. lamucotanus*.

**Rattus rattus** subsp.

*Mus neglectus* MILLER, Proc. U. S. Nat. Mus., 31, 1906, p. 59 (Serutu and Karimata).

Seroetoe, 1 ♀.

Another single specimen of a rat with the teeth but little worn. The common field-rat is widely spread in the Karimata and adjacent small islands, forms of it being found on the tiny Poeloe Joeanta only a few miles from the coast, off Soekadana; Panembangan; Pelapis; Karimata and Seroetoe. From these islands LYON has recognised three forms, but our knowledge of these remains very incomplete. Rats from the inshore island of Joeanta LYON considers indistinguishable from the mainland form. On Panembangan, within the five fathom line, the rats are characterised by a slightly larger maxillary tooth-row. On Pelapis within the ten fathom line, is a form yet more differentiated for in addition to a large tooth-row it has large feet. The subspecies from Karimata and Se-

roetoe appears to remain undescribed although MILLER lists seven skins obtained by ABBOTT in 1904.

***Tupaia gracilis edarata* LYON.**

*Tupaia inflata* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 122 (Karimata).

*Tupaia gracilis edarata* LYON, op. cit., 45, 1913, p. 118 ("Karimata Island").

Karimata, 1 ♂.

As this subspecies was hitherto only known from the type, a young adult female with an imperfect skull, it is especially unfortunate that the skull of the present specimen is also broken and that no material of *T. g. inflata* of Banka and Billiton is available for comparison. In colour the skin is rather darker on the upper parts than in specimens of *T. gracilis* from Sarawak and British North Borneo. Owing to the condition of the skull no observations on the bullae, which in this subspecies and in *T. g. inflata* are supposed to be relatively larger than in typical *gracilis*, are possible. Compared with eleven skulls of typical *gracilis* the single skull from Karimata can be distinguished by its smaller cheek-teeth, a feature particularly noticeable in the case of *pm*<sup>3</sup>.

Hind-foot (in the flesh, s.u.), 36 mm. Skull. — condylo-basal length, between 35 and 36 mm, maxillary tooth-row, 13 mm.

***Galeopterus variegatus abbotti* LYON.**

*Galeopterus abbotti* LYON, Proc. U. S. Nat. Mus., 40, 1911, p. 126 ("Pulo Panebangan, off west coast of Borneo").

Panebangan, 1 ♂, 1 ♀.

Like all races of this very variable species, *abbotti* is difficult to define and judging from the above pair seems to rest on a thin colour character for I can discover no peculiarities in the skull and teeth.

The maximum condylo-basal length of the two known female skulls is 62.8 mm, but the material is insufficient to demonstrate that the race is smaller than other subspecies of *Galeopterus* found on small islands in Malaysia.

Skulls (female given first). — greatest length, 66.4, 63.8; condylo-basal length, 62.8, 59.6; zygomatic width, 41.4, 41.7; upper tooth-row, 30.7, 29.5 mm.

The two skins are normal in colour, the female in grey and the male in "brown" pelage, the colour difference between the sexes being strongly marked, a character distinguishing *abbotti* from *gracilis* of Serasan, South Natoena Islands in which form the sexes are almost alike. With its slightly brownish shoulders the female of *abbotti* listed above is, in colour, absolutely inseparable from some examples of *G. v. terutaus* from Terutau Island in the Straits of Malacca.

The Panebangan male is nearest to that of *perhentianus* being rather darker on the muzzle and crown than any male of *aoris* or *terutaus* but its fore-feet are less blackened than in *perhentianus* and from males of all three races the single male of *abbotti* differs in its browner, less grey, hind neck.