

A Contribution to the Zoology of Mangalum Island, North-west Borneo

INTRODUCTION

By C. BODEN KLOSS

The islet of Mangalum lies near the twenty-five fathom contour-line surrounding Borneo and about thirty miles west-north-west from Jesselton. Nearly circular in shape and about a mile and a half in diameter its surface is very flat and it rises but a few feet above high-water-level except in the centre where there are a few hillocks, thirty to forty feet high, surrounded by swamp in which grow Sago-palms. Numerous little streams of brown, but drinkable water reach the sea from the central swamp: most of them occur in the southern parts of the island.

Except for a little grass-land above some of the beaches Mangalum is covered with forest in which a few clearings on the west coast have been made by recent settlers from Borneo and elsewhere by a prospecting company which sank shafts for oil. It is surrounded by coral: the reef is narrowest on the south and south-east where a close approach is afforded, but is about a mile wide on the northern shore.

The best landing place in the South-west monsoon is above the south-east point: in the winter monsoon the south shore is most easily accessible.

The vertebrate fauna is poor, it does not include even a squirrel: but from a study of its Dragon-flies Dr. Laidlaw thinks that Mangalum once formed part of Borneo. Soundings in the vicinity are few, but it may certainly once have extended to the Saracen Bank, ten miles to the westward, though in Malaysian seas it is unusual for an island of the size it would then have been to be entirely without hills. At present it gives the impression of being gradually eaten away by the sea, for fallen trees are lying across its sand beaches with their heads in the water.

The presence in the forest of a large ship's anchor at a spot 220 yards due north of the south-west point of the island is curious. It suggests fairly recent elevation in the locality.

Whatever the past history of Mangalum may have been it is now an interesting spot for intensive investigation. It is a pleasant little island and though its tree-tops are only visible from a small vessel from a distance of ten miles it is easily reached from Jesselton.

MAMMALS

By C. BODEN KLOSS.

Pteropus hypomelanus tomesi Peters.

A single example of this Fruit-bat was observed feeding in the forest about ten o'clock one morning. Flying foxes of this species are much more solitary and diurnal in habit than those of *P. vampyrus*.

There is a specimen in the British Museum from "Mergalum" Island which was obtained by A. H. Everett in April, 1892.

The race is recorded from small islands round the coast of Borneo from Sarawak to Sibutu and also from Lamboyan, off south Palawan. The type locality is Labuan.

Rattus rattus mangalumis subsp. nov.

A white-bellied forest, or field rat, only differing from *R. r. jalorensis* (Bonh.) of the Malay Peninsula, Sumatra, and Sarawak in having smaller audital bullae.

$$\frac{2 - 2}{3 - 3} = 10.$$

Specimens examined:—Four adult males and one adult female: three subadult males and three subadult females. Numbers, R. M. 3602—3612.

Type:—Adult male (skin and skull) collected on Mangalum Island, N. W. Borneo on 11th July, 1928 by C. Boden Kloss. No. R. M. 3608.

Such examples of *Rattus rattus* as I have seen from the parts of Borneo most adjacent to Mangalum Id., are not *R. r. jalorensis*, but have grey underparts.

In 1918 Robinson and Kloss came to the conclusion that the forest *Rattus rattus* of the Malay Peninsula, Sarawak, south Borneo and Sumatra were inseparable and therefore then and subsequently recorded all as *R. r. neglectus* (Jentink), a name that antedates *jalorensis*. But recently Dr. K. W. Danmerman² made a careful examination of the type of *Mus neglectus* and has found it to be a house-rat not separable from *Mus diardi* Jentink, which has page priority. The name *jalorensis* must therefore come into use once more.

Bonhote's *griseiventer*, however, must give way to *diardi* as in 1921¹ I found that the grey, or rusty-bellied, house rat of Malaysia could not be separated into geographical races. This rat also occurs further east in Sumbawa, Sumba and Batjan Islands. With it have gone eastwards two other house-frequenting rodents:—*Rattus concolor* and *Mus musculus*.

¹ Journ. Fed. Malay States Mus., VIII, Pt. 2, p. 54.
² Treubia, X, 1928, p. 307.
³ Treubia II, p. 120.

Measurements of *Rattus rattus mangalumis* in millimetres.

No.	Sex.	Head and Body		Tail	Hind foot, s.n.	Ear	SKULL				
		Greatest length	Condylabular length				Diastema	Upper Molar row: alveoli	Length of palatal foramina	Zygomatic breadth	
3602	♂ ad.	178	185	36	19	42	36.8	11.2	7.0	7.7	20
3603	♂ ad.	181	198	35	...	41.3	36.1	12.2	6.6	8.0	20
3604	♂ ad.	179	...	36	20	42.2	37.1	11.9	7	7.8	20.2
3608*	♂ ad.	180	170 imp.	36	19	42.4	37.3	11.9	7	7.7	21.5
3611	♀ ad.	173	190	33	19	...	37.2	12.0	6.9	7.8	21

*Type

BIRDS

For details see Kloss, Bull. Raffles Mus., 4, 1930, pp. 118—121.

The species obtained were *Megapodius cumingi* Dillwyn, *Ducula pickeringi* (Cassin.), *Myristicivora bicolor* (Scop.), *Treron vernans griseicapilla* Schleg., *Cuncuma leucogaster* (Gm.), *Leptocoma jugularis inornata* (Less.) and *Anthreptes malaccensis bornensis* Riley. C. B. K.

REPTILES and AMPHIBIANS

Several occur, but none were obtained.

The tracks and laying-places of the green turtle, *Chelonia mydas*, were common on the beaches and the few Malays who have recently settled on Mangalum frequently perambulated the shores at night in search of the shell-turtle, *Eretmochelys imbricata*.

Of Lizards *Varanus salvator* was not uncommon and a Scink (*Mabuia* sp.) and a small Gecko were seen.

No snakes were met with.

On wet nights the notes of a tree frog (*Philautus*?) were heard in the forest. C. B. K.

MOLLUSCS

The only land-molluscs met with were a few small snails resting on the leaves of a shrub. They have been determined by Dr. F. F. Laidlaw as *Leptopoma lowi* Ph. C. B. K.