

**XXVI.—A collection of montane Mammals
and Birds from Mulu in Sarawak.** By
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Mulu is a sandstone mountain 7300 feet high in about Long. 115 E and Lat. 4 N., forming a watershed between the Tutoh, a large tributary of the Baram River and the Malinau with the Malinau Paku, themselves tributary to the Tutoh River. Further continuation of the Mulu range towards the North-East separates the waters of the upper Tutoh again from those of the Madalam and Madihit which flow into the Limbang River, but Mulu is the highest point on the range and shares with Murud (7200' and further East in the same Longitude) and Tibang (7300' and further South in the same Latitude) the distinction of being the highest mountains in Sarawak.

The foot of the mountain can be reached from the Government Station at Baram in about three or four days and presents no difficulties. Follows a very arduous day's climb through old jungle onto the crest of the Mulu ridge between 3 & 4000', where the jungle is replaced by the characteristic moss forest of these heights: a less arduous day's walk along the top of the narrow ridge and the summit is reached, beyond which there is an almost sheer drop to below 3000' onto a narrow ridge joining Mulu to the next peak and separating the valley of the Tutoh and Malinau, to the East and West respectively. To the Eastward lies Batu Lawi, the Magoh and Tama Abo mountains with Mt. Murud, to the South-East and Southward, Kalulong, Batu Song and the Delit range. On the Western side of Mulu are the limestone hills Api and Melarat, the last some 4000 feet high joined to the Mulu range by a long ridge composed of sandstone and about 3000 feet high, covered in the usual moss forest, the junction of this ridge with the sparsely clad limestone cliffs being very clear. To the Northward are many high mountains, indistinguishable save for Kinabalu visible in the early morning.

Shackleton in 1932 was the first European to ascend Mulu and it has been climbed several times since. In August 1934 I made a short visit and in June 1935 spent a longer time, one's stay being limited by transport matters in relaying food and stores.

Bornean mountains have a different fauna above about 3000' to that found below and as far as this montane fauna is concerned, Mulu is an "island," being connected by highland only to Melarat and not beyond. The mountain proved of considerable zoological interest for the following six species of montane birds, being known elsewhere in Borneo only from Kinabalu, a mountain some 13450 feet high, to the Northward:

Rhinomyias gularis	Cettia montana*
Seicercus trivirgatus*	Zosterops atricapilla
Brachypteryx montana	Erythrura hyperythra

The first collections from Kinabalu were made by Whitehead in 1887 and 1888, about 60 new species being described; Shelford, Hose, Moulton, Mjoberg and others have since found many of these on Sarawak mountains, and the collection on Mulu represents a penultimate stage in the process of discovery, Kinabalu now being left with but four peculiar species and six subspecies.

Widely known as this montane fauna now is, it is doubtless even more widely dispersed, for I found some wild and nomad Punans could name the birds in my collection, professing to meet them in several places when crossing the watersheds between the valleys.

No peculiar species or races are named from Mulu but some features are worth noting about the others. Certain Mammals and Birds common at 6 & 7000' are less common but present at 4 & 5000'.

Tupaia montana	Cettia montana
Dendrobiaestes hyperythra	Chlorocharis emiliae
Stoparola indigo	Dendrocitta occipitalis
Brachypteryx montana	Dicaeum sanguinolentum

* Dr. Mjoberg mentions these two birds from Murud or Dulit (Sar. Mus. Report, 1915-23, p. 37) but we have no specimens.

The reverse was commoner, most species being confined to, or more rarely occurring above, 4 & 5000 feet. Though the higher altitudes from 6--7000 feet offer apparently better collecting facilities, they have but little advantage over the medium slopes which are more accessible to transport and better suited to the health of collectors and coolies.

The occurrence of such species as *Stoparola*, *Brachypteryx*, *Cettia* and *Erythrura* at 4 & 5000' is the more remarkable as they are not known from mountains, such as Dulit, whose summits lie between these limits, these species having wandered from higher regions as their comparative abundance there would confirm. Similarly some species common on Mulu at 4 & 5000' were rare or absent on Dulit:

Dendrogale melanura	Napothera brevicaudata
Cyanops armillaris	Brachypteryx montana
Arborophila brunneopectus	Tesia whiteheadi

Conversely many common montane and submontane Dulit species were not taken on Mulu in the ordinary course of collecting:

Pyrotrogon oreskios	Culicapa ceylonensis
Cyanops porti	Erpornis brunneescens
Ixos connectens	Arachnothera everetti
Melonocichla lugubris	Arachnothera juliae
Aethostoma pyrrhogenys	

Only forty-three montane species have been recorded from Mulu, about fifty-five from Murud and Dulit and about eighty from Kinabalu; further collecting would add more to Mulu and as neither this mountain nor Murud are so thoroughly explored as Dulit, than which they are also so much higher, it is probable their fauna extends to some point between that of Dulit and Kinabalu.

MAMMALS.

RHINOCEROS SUMATRANUS Rafines.

1894. Jentink Notes from Leyden Museum, Vol. 16, pp. 231-233.

These have decreased on Mulu as everywhere else owing to hunting for the sake of horn. On my first visit I saw fresh tracks between 6 & 7000', the animal having crossed the path

while we were on the summit: it had jumped from one side of the narrow path to the other, leaving no footmark amongst ours in the middle and tunnelled a passage for itself down the mountain side through the thick moss covered bushes.

SUS BARBATUS BARBATUS.

Very common on my first visit, the summit being crossed in all directions by runs and tracks. On my second visit they were scarce, but a sow was obtained with seven embryos shortly due to appear: all had the longitudinal light flank stripes characteristic of the young of this species.

MUNTJACUS MUNTJAK RUBIDUS LYON.

1931. Chasen and Kloss, Bulletin Raffles Museum 6, p. 18.

Common up to 2000 feet and rarer above. My coolies stated they once found and ate (!) a dead goat floating down the Malinau; a Malay capped it by meeting another goat near the summit, his gun—like my speech—failing on this, not the first, occasion when the Barking Deer has done duty for a goat.

CERVUS UNICOLOR BROOKEI Hose.

1931. Chasen and Kloss, Bulletin Raffles Museum 6, p. 18.

The limestone hills near Mulu's foot are pierced by numerous caves, large and small, some the haunt of the Deer who enter at night for various purposes and can only be too easily shot as they emerge at dawn.

On my first visit, Deer tracks were numerous on the summit.

SCIURUS PREVOSTII BALUENSIS Bonhote.

1901. Bonhote Ann. Mag. Nat. Hist., Vol. 7, p. 174.

Male 4--5000' Hind Foot 54 mm.

Female 4--5000' 51; 50 mm.

A pair were normal and the third specimen smaller and immature: such specimens of this race have been taken elsewhere, notably on Dulit, but of several hundred *prevostii* I have only once seen an obviously immature specimen of the

other races. *Baluensis* is a peculiar montane subspecies: we have examples from Dulit, Mulu, Murud and near Batu Lawi, in which area the lowland form is the paler *griseicauda*; Kinabalu *baluensis*, if distinguishable, is still very much like it but the lowland form there is *pluto*, very dark and black and different from either *baluensis* or *griseicauda*, so that at present we are faced with a single montane representative for two very different lowland races in different areas.

SCIURUS TENUIS JENJINKI THOMAS.

1887. Thomas, A. M. N. H., Vol. 20, p. 129.

1928. Chasen & Kloss, Journ. Malayan Br. Roy. As. Soc., Vol. VI, Pt. 2, p. 42.

Males 4--7000' Hind Foot 31; 31 mm.

Females 4--7000' 30; 29 mm.

Common at medium heights and a very active squirrel, as much at home among the moss as in old jungle, being confined to high up in the trees.

NANNOSCIURUS WHITEHEADI THOMAS.

1887. Thomas, A. M. N. H., Vol. 20, p. 127.

Males 1--7000' Hind Foot 22; 23 mm.

Female 4--7000' 21 mm.

A rather variable little squirrel both in colour and length of ear tufts. Though common enough I never happened to see one.

DRENGMYS EVERETTI THOMAS.

1890. Thomas, A. M. N. H., Vol. 8, p. 171.

Male 4--5000' Hind Foot 35 mm.

Not apparently noted near the summit but not uncommon on the midslopes. One I know frequented our camp and of an evening used to streak back and forwards across the ground between two tree stumps, all to the intense delight of the coolies who declined to catch it. It is of course a ground species and was not at all rare, feeding on fallen fruits and making off to hide under old horizontal tree trunks.