

AVIAN DIVERSITY OF THE KELABIT HIGHLANDS

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ABSTRACT

The avian diversity of the Kelabit Highlands and the surrounding slopes was investigated by 100km of visual survey and by mist-netting with 20 nets. Habitats investigated included padi-fields, kerangas and sub-montane forests. A total of 102 species representing 29 families were identified. A total of 103 birds of 27 species were mist-netted.

INTRODUCTION

Birds form an integral part of the life of the Kelabit people. Several of their months are named after the times of arrival of migrant species. For example, the first month of the Kelabit year (August-September), when the rice is due for planting, is named Sensulit after the coming of the Yellow Wagtails, while Neropa is the month when Brown Shrikes arrive from north-eastern Asia (October- November).

Little ornithological research had been carried out in the Kelabit Highlands until the middle of this century. In 1936 E. Banks, curator of Sarawak Museum, surveyed the montane species, and in the 1950s and 1960s Tom Harrisson, a later curator, spent much time with the Kelabits and made many observations of birds in the area. These observations are recorded in "The birds of Borneo" by B.E. Smythies, first published in 1960. Since then there has been a paucity of information on the birds of the area. This survey seeks to update knowledge of the avian diversity.

The Bario Highlands are the upper catchment of the Baram river. The broad Kelabit Plateau is over 1,100 metres above sea level, and surrounding slopes rise to peaks as high as 2,422 metres (Gunung Murud). Rice is grown on all suitable land on the plateau. Kerangas forest and secondary forest exist on the plateau where land is unsuited to growing padi. These give way to sub-montane forest on the slopes, and montane forest as the peak are ascended.

METHODOLOGY

Initial were to survey both montane and sub-montane areas however external factors precluded carrying out the montane survey, and field work was confined to the plateau and surrounding slopes. Foot surveys were carried out over 100 kilometres during the reconnaissance phase and the expedition proper covering the Kelabit Plateau, averaging 1,100 metres altitude, and surrounding slopes up to 1,400 metres. Mist netting stations were set up at an altitude of 1,100

metres at the salt lick near Pa' Umur, covering kerangas and secondary forest: and later in sub-montane forest at the old water-supply dam at an altitude of 1,250 metres. Nets employed were of 31mm mesh, 12m long and 2m high. Twenty nets were used in each location and trapping was carried out most mornings and evenings for nine days.

RESULTS

Table 1 is a list of the species observed, their numbers, and the habitats in which they were found to occur. Migrant or resident status is also indicated. Appendix II shows the numbers of each species mist-netted and banded, and the habitats in which they were captured. A total of 102 species representing 29 families were identified. 103 birds of 27 species were mist-netted.

Table 1: Birds of the Kelabit Plateau 1995

Family and Species	12-15 Feb	8-19 Apr	Migrant	Habitat
PICIDAE				
<i>Dinopium rafflesii</i> Olive-Backed Woodpecker		1		KF
MEGALAIMIDAE				
<i>Megalaima chrysopogon</i> Gold-Whiskered Barbet	1			F
<i>Megalaima rafflesii</i> Red-Crowned Barbet	C	2		LKF
<i>Megalaima mystacophanos</i> Red-Throated Barbet		2		LF
<i>Megalaima australis</i> Blue-Eared Barbet	1			F
BUCEROTIDAE				
<i>Aceros comatus</i> White-Crowned Hornbill	2			LF
ALCEDINIDAE				
<i>Alcedo euryzona</i> Blue-Banded Kingfisher		1		F
HALCYONIDAE				
<i>Pelargopsis capensis</i> Stork-Billed Kingfisher		2		PO
<i>Todirhamphus chloris</i> Collared Kingfisher		1		LP
CUCULIDAE				
<i>Cuculus micropterus</i> Indian Cuckoo	1			FO
<i>Cacomantis sonneratii</i> Banded Bay Cuckoo	1			FO
<i>Phaenicophaeus sumatranus</i> Chestnut-Bellied Malkoha	1			F
CENTROPODIDAE				
<i>Centropus bengalensis</i> Lesser Coucal	1	1		O
APODIDAE				
<i>Collocalia maxima</i> Black-Nest Swiftlet	3	4		O
<i>Collocalia esculenta</i> Glossy Swiftlet	2			O
<i>Hirundapus caudacutus</i> White-Throated Needletail		2	X	O
<i>Apus pacificus</i> Fork-Tailed Swift	1		1	O
HEMIPROCNIIDAE				
<i>Hemiprocne longipennis</i> Grey-Rumped Treeswift	1			F
STRIGIDAE				
<i>Otus</i> sp. Scops-Owl sp		1		F
<i>Ninox scutulata</i> Brown Hawk-Owl	1			FO

<i>Eurostopodus temminckii</i> Malaysian Eared Nightjar	2	1		LFO
COLUMBIDAE				
<i>Treron curvirostra</i> Thick-Billed Green-Pigeon	50	50		F
<i>Macropygia emiliana</i> Ruddy Cuckoo-Dove		1		F
<i>Streptopelia chinensis</i> Spotted Dove	10	C		PO
<i>Chalcophaps indica</i> Emerald Dove		3		F
RALLIDAE				
<i>Amaurornis phoenicurus</i> White-Breasted Waterhen	4	15		LPO
<i>Gallicrex cinerea</i> Watercock		1	X	LP
<i>Gallinula chloropus</i> Common Moorhen		9		LP
SCOLOPACIDAE				
<i>Tringa glareola</i> Wood Sandpiper	10	52	X	LP
<i>Tringa hypoleucos</i> Common Sandpiper	1		X	LP
<i>Gallinago stenura</i> Pintail Snipe	1	19	X	LP
ACCIPITRIDAE				
<i>Haliastur indus</i> Brahminy Kite	1			LPO
<i>Spilornis cheela</i> Crested Serpent-Eagle	1	2		FO
<i>Accipiter virgatus</i> Besra		2		KF
<i>Ictinaetus malayensis</i> Black Eagle	1			F
ARDEIDAE				
<i>Ardea purpurea</i> Purple Heron				
<i>Mesophoyx intermedia</i> Intermediate Egret	1		X	LP
<i>Ixobrychus eurythmus</i> Yellow Bittern	1		X	LP
<i>Ixobrychus cinnamomeus</i> Cinammon Bittern	3	13		P
PITTIDAE				
<i>Pitta guajana</i> Banded Pitta		2		F
IRENIDAE				
<i>Irena puella</i> Asian Fairly-Bluebird	1			F
<i>Chloropsis cochinchinensis</i> Blue-Winged Leafbird	8			F
LANIDAE				
<i>Lanius cristatus</i> Brown Shrike		2	X	O
CORVIDAE				
<i>Cissa chinensis</i> Green Magpie		1		FO
<i>Dendrocitta cinerascens</i> Bornean Treepie	1	3		KFO
<i>Pericrocotus solaris</i> Grey-Chinned Minivet	1			F
<i>Dicrurus leucophaeus</i> Ashy Drongo	6	3		KFO
<i>Dicrurus aeneus</i> Bronzed Drongo	4	2		F
<i>Dicrurus hottentotus</i> Hair-Crested Drongo	4	2		OF
<i>Dicrurus paradiseus</i> Greater Racket-Tailed Drongo		1		LF
<i>Rhipidura albicollis</i> White-Throated Fantail		1		F
<i>Rhipidura javanica</i> Pied Fantail	1	4		PO
<i>Philentoma velatum</i> Maroon-Breasted Philentoma	6			F
<i>Tersiphone paradisi</i> Asian Paradise-Flycatcher		1		F
MUSCICAPIDAE				
<i>Muscicapa dauurica</i> Asian Brown Flycatcher	1		X	FO
<i>Ficedula dumetoria</i> Rufous-Chested Flycatcher		4		FK
<i>Culicicapa ceylonensis</i> Grey-Headed Canary Flycatcher	1			F
<i>Copsychus saularis</i> Oriental Magpie-Robin	1	4		O
<i>Enicrurus leschenaulti</i> White-Crowned Forktail		1		F
SITTIDAE				

<i>Sitta frontalis</i> Velvet-Fronted Nuthatch	1			P
HIRUNDINIDAE				
<i>Hirundo rustica</i> Barn Swallow	20		X	OP
<i>Hirundo tahitica</i> Pacific Swallow	2	6		
PYCNONOTIDAE				
Straw-Headed Bulbul	1	3		LFO

DISCUSSION

Of the species observed, 19 were migrants, some of which were already returning to their breeding grounds in April. 26 species, which are normally considered to be lowland inhabitants were found at 1,100 metres and above in the Highlands. This anomaly can not be readily explained, as few of the species have been found at this altitude elsewhere in Sarawak. It is clear that such a relatively large and flat area as the plateau affords, offers lowland species a suitable habitat. Most sub-montane land elsewhere in SaraWak is forested, and/or steeply sloped. Of the 26 species observed above their normal elevation, 10 were migrants.

Of particular interest were species to be found in the sub-montane kerangas forest, as it is a habitat rarely found elsewhere in the world. This type of habitat results from poor soils, too poor for the Kelabits to grow rice, and is characterized by low pole-like trees, rhododendrons, pitcher-plants and orchids. Avian density in the kerangas is sparse due to the paucity of food there, but a surprising 23 species were recorded in this habitat.

Woodpeckers were poorly represented, only one species, the Olive-backed, *Dinopium rafflesii*, being observed. Barbets were common: four lowland/sub-montane species were recorded. Only one species of hornbill, the White-crowned, *Aceros comatus*, was seen, a pair flying over a forested ridge at 1,400m. Kingfishers were sparse, and it was remarkable to record the coastal Collared Kingfisher, *Todirhamphus chloris*, in this habitat.

A pair of White-throated Needletails, *Hirundapus caudacutus*, were seen over Bario in April on passage, probably from Australasia to north Asia. They are rarely found in Borneo. A sole Forktailed Swift, *Apus pacificus*, was recorded in February. The Malaysian Eared Nightjar, *Eurostopodus temminckii*, called at dusk and dawn on most days.

Up to fifty Thick-billed Pigeons, *Treron*, were to be found around the salt-lick near Pa' Umor. An ingeniously constructed trap is in place over the lick to catch the pigeons as they come for salt. A single Ruddy Cuckoo-Dove, *Macropygia emiliana*, was seen at the forest edge fringing the Plateau.

A migratory Watercock, *Gallicrex cinerea*, was found in a padi-field near Pa' Ukat. Prior to this expedition it was not known whether the Common Moorhen, *Gallinula chloropus*, rare in Sarawak, was a resident. The sighting of nine of this species in the padi-fields around Bario, including two females with families, proves that it is a breeding resident. Amongst the waders, Wood Sandpipers, *Tringa glareola*, and Pintail Snipe, *Gallinago stenura*, were common in the padi-fields, and a single Common Sandpiper, *Tringa hypoleucos*, was observed in February.

Accipiters included the Brahminy Kite, *Haliastur indus*, remarkable at this elevation, over the padi-fields; Crested Serpent Eagle, *Spilornis cheela*, and Black Eagle, *Ictinaetus malayensis*, over forested areas; and the Besra, *Accipiter virgatus*, in the kerangas.

Amongst the Ardeids, the rare Purple Heron, *Ardea purpurea*, was observed at the end of Bario airfield: it has been recorded in Sarawak only twice previously. Migrant Intermediate Egret, *Mesophoyx intermedia*, Yellow Bittern, *Ixobrychus sinensis*, and the rare Schrenck's Bittern, *Ixobrychus eurythmus*, were recorded in the padi-fields, as was the commoner resident Cinamon Bittern, *Ixobrychus cinnamomeus*.

Foremost of the passerines, a Banded Pitta, *Pitta guajana*, was mist-netted in sub-montane forest. An Asian Fairy-Bluebird, *Irena puella*, was recorded in February but it is not common. Leafbirds are represented by the Blue-winged, *Chloropsis cochinchinensis*.

A Green Magpie, *Cissa chinensis*, was observed at the forest edge, while Bornean Treepies, *Dendrocitta cinerascens*, were more common, and seen mainly in the kerangas. Four species of drongo were observed: Ashy, *Dicrurus leucophaeus*, Bronzed, *D. aeneus*, Hair-crested, *P. hottentotus*, and Greater Raquet-tailed, *D. paradiseus*. The Maroon-breasted Philentoma, *Philentoma velatum*, was common in the sub-montane forest, where a white morph male Asian Paradise-Flycatcher, *Tersiphone paradisi*, was also seen.

Rufous-chested Flycatchers, *Ficedula dumctoria*, appear quite common as four were mist-netted in sub-montane forest and kerangas. A Grey-headed Canary-Flycatcher, *Culicicapa ceylonensis* was observed in sub-montane forest at 1,200m, where also a White-crowned Forktail, *Enicurus leschenaulti*, was netted. A solitary Velvet-fronted Nuthatch, *Sitta frontalis*, was in the same area. Sub-mofltane species of bulbul present included Black-crested, *pycnonotus melanictents*, Ashy, *Hemixos flavala*, and Ochraceous, *Alophoixus ochraceus*, the latter being very common. Everett's White-eye, *Zosterops everetti*, was observed in the sub-montane forest.

Migratory warblers included the Arctic Warbler, *Phylloscopus borealis*, in April in the sub-montane forest, and the rare in Sarawak, Great Reed-Warbler, *Acrocephalus arundinaceus*, in the wetlands near Bario. Eight species of babbler were recorded, including three normally confined to the lowlands: White-chested, *Trichastoma rostratum*, Scaly-crowned, *Malacopteron cinereum*, and White-necked, *Stachyris leucotis*. Sub-montane babblers found included Temminck's, *Pellorneum pyrrhogenys*, and Grey-throated, *Stachyris nigriceps*.

Both White-bellied, *Yuhina zantholeuca*, and Chestnut-crested, *Yuhina everetti*, Yuhinas were found in the sub-montane forest, the latter also in kerangas.

Flowerpeckers and sunbirds were well represented. It was interesting to discover both the lowland Crimson Sunbird, *Aethopyga siparaja*, and the sub-montane Scarlet Sunbird, *Aethopyga mystacalis*, at this altitude.

The Eurasian Tree-Sparrow, *Passer montanus*, had heavily colonized the longhouse areas, and it and the Black-headed, *Lonchura malacca*, and Dusky, *L. fuscans*, Munias were a constant pest in the padi-fields. White-bellied Munias, *L. leucogastra*, confined themselves to the forest. Yellow

Wagtails, *Motacilla flava*, were in the padi-fields, while the Grey Wagtail, *Motacilla cinerea*, was at more elevated wetland. Two Richard's Pipits, *Anthus richardi*, were always present on the airfield.

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