

Birds of Bario and the Kelabit Highlands

An initiative under ITTO Project PD451/07 Rev.1(F)
Transboundary Biodiversity Conservation:
The Pulong Tau National Park, Sarawak, Malaysia

Slim Sreedharan

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FOREWORD

he International Tropical Timber Organization's long association with Sarawak can be traced way back in 1989 when an independent ITTO mission was sent to the state to assess the sustainable utilization and conservation of its tropical forests and their genetic resources as well as the maintenance of the ecological balance. In 1992, ITTO financed a conservation project entitled "Development of Lanjak Entimau Wildlife Sanctuary as a Totally Protected Area".

The Pulong Tau National Park project in the northern highlands of Sarawak is another important biodiversity conservation project that ITTO is currently supporting. Many scientific studies and community development activities to assist the local communities have been implemented under the project. This guide book on the birds of Bario and the Kelabit Highland is the result of one of the studies.

I understand that the northern highlands are popular among tourists because of the natural and beautiful landscapes of the area, coupled with the cool climate and the friendly and hospitable Kelabit, Lun Bawang and Penan people who live there. The Pulong Tau National Park represents the core of the highlands' diversity and will become another valuable tourism asset once it is properly developed. This book can help promote the national park and raise awareness especially among the younger generations of Sarawak on the importance of protecting the state's biological resources.

The Lanjak Entimau Wildlife Sanctuary has a unique transboundary perspective of being linked to a similar biodiversity conservation area project implemented in Indonesia with ITTO support to form the Lanjak Entimau-Betung Kerihun Transboundary Biodiversity Conservation in 1994, the first to be established in the humid tropics. Similar cross-border cooperation, also supported by ITTO and involving the Pulong Tau National Park and

the Kayan Mentarang National Park in East Kalimantan, Indonesia, has been in place since 2005, placing Sarawak at the forefront of the unique development.

I applaud the Forest Department Sarawak as the Executing Agency of the ITTO-supported project, and the ITTO project office in Kuching for their effort in producing this informative and useful book. I would like to thank the consulting and research teams of the ITTO project, the photographers, the sponsors, and many others that have contributed in one way or another to the successful publication of this book. Finally, I would like to extend ITTO appreciation to the donor countries, namely the Governments of Switzerland, Japan, USA, Norway and Republic of Korea for their generous financial contributions to the conservation and sustainable use of biodiversity in Sarawak.

EMMANUEL ZE MEKA

Executive Director

International Tropical Timber Organization (ITTO),

Yokohama, Japan

FOREWORD

arawak is endowed with a wealth of biological richness that makes it one of the most important biodiversity hotspots in the humid tropics. The northern highlands of Sarawak that encompass Mount Murud in the Pulong Tau National Park are where a significant portion of Sarawak's highland biodiversity is found. At 2424 metres above sea level, Mount Murud is Sarawak's highest mountain. Scientific studies in and around the Pulong Tau National Park have been conducted by Forest Department through the International Tropical Timber Organization (ITTO) project, UNIMAS and others.

Birds are always a favourite subject of study, and bird watching is becoming an increasingly popular hobby among Sarawakians. Out of a total of 535 species listed in the state, nearly 60% or 315 species are found in the Pulong Tau and Kelabit Highland areas, which is most impressive indeed. Furthermore, 30 of the 33 species endemic to Sarawak are found in the montane forest zones on Mount Murud. This makes the villages of Bario and Ba' Kelalan and the national park a haven for bird lovers. Visitors will be able to see many of the common birds that are described in this book.

In order to ensure adequate protection of the state's biological richness, our government has established a total of 22 national parks, 4 wildlife sanctuaries and 5 nature reserves. This totally protected areas network will be extended to include many other forested areas that possess high conservation value.

This book is produced under the project entitled 'Transboundary Biodiversity Conservation: The Pulong Tau National Park, Phase II' which is co-funded by ITTO and the Malaysian government. It is hoped that the book will help to attract more visitors to Bario, Ba' Kelalan and Pulong Tau National Park. Apart from nature, the highland area has long been famous for its cool and

pleasant climate, and the rich cultures and hospitality of the Kelabit and Lun Bawang people who also produce the famous 'Bario' rice.

I commend Dr. Paul Chai, project leader of the Pulong Tau National Park project, for his initiative in producing this very useful book. I would like to thank Mr Slim Sreedharan for writing it; and Mr. Paul Huang, Dato' Dr. Amar-Singh, Mr Ch'ien Lee, Mr. David Bennet and Mr Slim Sreedharan for allowing their photographs to be used.

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Deputy Permanent Secretary,
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Introduction

After over twenty-five years of fieldwork in Sarawak, I am fully aware that whatever little I may have accomplished in that time would have been much harder, probably even impossible, had it not been for the truly generous and open-hearted people of Sarawak.

Curiously enough, Sarawakians frequently express the view that Bario is a very special sort of place, even by their standards.

For an ornithologist, the Kelabit Highlands is all of that, and in more ways than one. The area is amazingly rich in bird life. The lovely setting and scenery, the wonderfully hospitable and helpful Kelabit people, and the cool air-conditioned forests are all additional extras, like icing on a cake.

Such species richness stems largely from altitudinal and habitat variations within the Highlands. The plains around Bario lie about 1100m above sea level, the outlying hills rising to 1800m, Mount Murud being 600m higher.

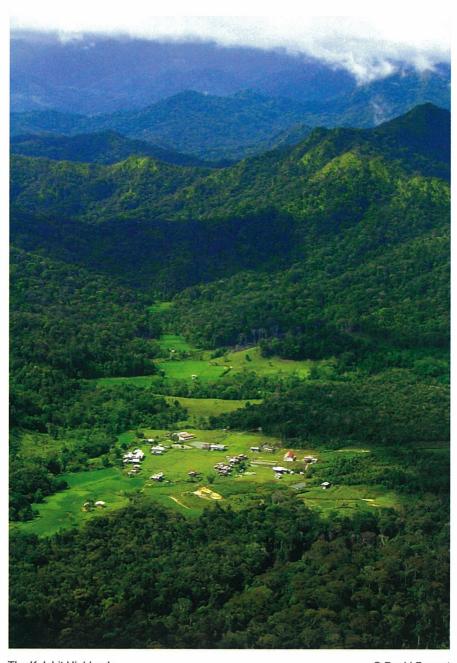
The western slopes of Mount Murud, though, are a lot lower, the southern parts of Pulong Tau National Park lying below 600m in places. It houses a variety of habitat types, from stunted kerangas pole forests to lowland and montane dipterocarp forests, as well as higher montane mossy forests.

This has resulted in the presence of both the upper end of lowland species and true sub-montane species, as well as the higher montane specialists. Habitat variations extend the list further with niche specialists from rice fields and orchards to tall grass and scrub vegetation found around the longhouses and settlements.

The ornithological history of the Kelabit Highlands and the Pulong Tau area is now better known than that of any other part of Sarawak.

From 1946 until the late 1960's, Tom Harrisson, a former Curator of the Sarawak Museum, based himself in the Kelabit Highlands and conducted extensive surveys in the region.

Though there is very little published data for areas around Pa' Lungan, Ba' Kelalan or Mount Murud, both he, and his large band of tribal assistants, systematically quartered the areas south of Pa' Ramudu west to the Tama Abu range, and collected a large number of specimens.



The Kelabit Highlands

© David Bennet

Of the 620 birds listed for the island of Borneo, 535 birds have been found in Sarawak. 315 of these, inclusive of historical data, are to be found in the Pulong Tau National Park and Kelabit Highlands areas.

A series of long-term surveys were conducted by the author between 1993 and 2006, much of it being at or above 800 m above sea level, apart from a brief session in the lowland forests around Long Sabai. During this time, a total of 233 birds were recorded for the area.

Of 33 endemic birds that occur in Sarawak, 30 are found in sub-montane, montane or higher montane forests. 27 of these have been found in this area, along with five birds listed in the Red Data Book as being Vulnerable and 40 birds listed in the Lower Risk/Near Threatened category.

The species descriptions given in this book have, for the most part, been taken from live birds in the hand.

The nomenclature of Bornean birds has been subjected to change over the past several years, and this trend continues to be the order of the day. Many birds have been renamed, and re-renamed, shuffled back and forth from generic group to generic group, with several authors having a variety of different or conflicting opinions.

Until the dust settles, the nomenclature in this book follows the slightly old but regularly updated *An Annotated Checklist of the Birds of the Oriental Region* (Inskipp, Lindsey & Duckworth 1996), the only comprehensive checklist currently specific to this region.

It has been quite a difficult task, deciding which of the 233 species should be listed in this book, but the main thrust has been to depict species that most bird watchers could commonly expect to encounter during a visit to the Kelabit area. To an extent, I freely admit, some birds were excluded, and others included, due to the availability, or otherwise, of good quality photographs to illustrate the book.



Rufous Piculet Sasia abnormis

© slim sreedharan

Rufous Piculet Sasia abnormis

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 3½" (9.0 to 9.5 cm). Sexes differ slightly. Face chestnut. Crown, mantle and back yellowish-green, rump reddish-brown, short tail and uppertail coverts black. Forehead yellow in males, chestnut in females. Chin, throat and lower parts dark yellowish-chestnut. Wing and wing coverts edged yellowish-green. <u>Immatures</u>: Dull olive-green, greener on mantle, greyer below. <u>Soft parts</u>: Iris red. Facial skin mauve (dark purplish in females). Bill black above, yellow below. Tarsus orange-yellow, claws and soles yellow. It has only three toes, two facing forward, one facing back.

Habitat & Behaviour: Fairly common in the lower and middle storeys of primary and secondary forests up to 1300 m, in dense bamboo stands, dead or decaying trees and jungle undergrowth around clearings. In the Kelabit area, it is common in sandy kerangas and old secondary forest. An active restless bird, often a member of bird waves, it is usually found, singly or in pairs, clinging to bamboo or chipping away dead wood from rotten tree stumps in search of food, often quickly moving around smaller trunks and branches. Also sits cross-wise on branches like a passerine, flicking its wings regularly. When alert, it lowers the front end and moves its body jerkily from side to side.

<u>Food</u>: Eats spiders, small beetles, beetle grubs, soft insects, ants and ant larvae in tree-trunks.

<u>Voice & Calls</u>: Its alarm call is a loud *ki-ki-ki*, usually three to four notes, also an extended series of *ki* notes, getting faster towards the end, and a soft ticking sound. During the mating season, the male often makes a series of drumming notes by tapping on bamboo stems or rattan palms.

Breeding: Both parents help excavate a tiny nest hole, often located as little as three feet above ground level, in a bamboo stem, a dead tree trunk or a small branch. The clutch size is usually two to three eggs. Young birds are fed on larvae. Breeding has been recorded at Pa' Ramudu (February), and Camp Five (April, May and June).

Local Distribution: Found at Pa' Ramudu, Camp Five, Long Sabai and Bario.



Maroon Woodpecker Blythipicus rubiginosus

© slim sreedharan

Maroon Woodpecker Blythipicus rubiginosus

<u>Status & Range</u>: Resident. Found in S Myanmar, peninsular Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 8 to 9" (20 to 23 cm). Sexes differ. <u>Males</u>: Head and face buffy-brown, bright red behind the head and on nape. Forehead and ear coverts brown. Back and uppertail coverts very dark reddish-maroon. Tail black, the central two pairs stiff. Wing coverts edged reddish-maroon on outer webs. Underparts entirely dark purplish-brown, browner on chin and throat. <u>Females</u>: No red on head and nape. <u>Immatures</u>: Like females but duller red above, top of head browner, flight feathers and wing coverts more distinctly barred, underparts paler, flanks and belly faintly barred. <u>Soft parts</u>: Iris bright red. Bill bright yellow with greenish-yellow at base of both mandibles. Tarsus, toes and soles black.

<u>Habitat & Behaviour</u>: Fairly common to 1100 m in the Kelabit area. Found singly or in pairs, sometimes in small family parties, usually in the middle storey of primary and old secondary forests and ridge forests. It comes lower along the edges of jungle clearings and in bamboo thickets, keeping mainly to fallen timber and rotting tree trunks in the undergrowth of little streams in small valleys.

Food: Eats soft grubs and beetle larvae taken from dead wood.

<u>Voice & Calls</u>: Generally a noisy bird, giving a loud and high-pitched *ki-ki-ki-ki-ki-kih* and a softer *pip-pip-pip* when in flight. Heard making a soft high-pitched *tik-tik-tik-tik, tik-tik-tik* as it flew from tree to tree, also a very soft and constant *ki-ki-ki*, the bird kept flapping its wings, both of these possibly being alarm or distress calls. Two omen calls for Ibans include a sharp *chikick*, *chikick* note and a high-pitched *chai-chai-chai-chai*, a typical woodpecker call.

<u>Breeding</u>: Little is known about its nesting habits. One was excavating a nest hole about thirty-five feet up a small tree at Camp Five in April, and breeding birds were seen in January, February and May.

<u>Local Distribution</u>: Found at Pa' Ramudu, Camp Five, Long Sabai and Bario.



Gold-whiskered Barbet Megalaima chrysopogon

© slim sreedharan

Gold-whiskered Barbet Megalaima chrysopogon

Status & Range: Resident. Found in Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 10" (26 cm). Sexes similar. Forehead and hind-crown red, crown red spotted with blue, malar patch and fore-crown bright yellow. Eyebrows and ear-coverts dark blackish-brown. Back bright leaf-green, wings darker and edged bright leaf-green. Tail bright leaf-green, with some greenish-blue at basal end. Chin and throat greyish-yellow edged with blue. Rest of underparts pale leaf-green, under-surface of tail dark greenish-blue. Underwing coverts greyish, with green at bend of wing. lmmatures: Duller green. Soft parts: Iris reddish-brown. Bill black, bluishgrey at base of lower mandible. Tarsus and feet greyish-green, soles yellowish. It has four toes, two toes directed forwards, the other two backwards, enabling them to cling onto vertical tree trunks.

Habitat & Behaviour: Found singly or in pairs in lowland primary and submontane forest to 1500 m in the Kelabit area. Often found alongside Redthroated Barbet *M. mystacophanos* in the middle and upper canopy of tall jungle or in scrub forest with dead trees. Usually solitary. It hops along branches fairly quickly, nearly always finding a perch out of sight behind some leaves or thick stem, then cocking and craning its head about to peer through the leaves. Once settled on a perch, it can sit very still for long periods, moving its head about in very slow movements. Frequently heard calling from high up a tree, its exact location impossible to detect as its green plumage affords it perfect camouflage. They are more easily seen on fruiting trees as they hop about on the branches as they feed.

<u>Food</u>: Eats mostly fruit and berries, but has been known to take insects as well as small vertebrates and birds.

<u>Voice & Calls</u>: Its call is a series of throaty double-notes, *tutuk*, *tutuk*, *tutuk*, *tutuk*, repeated a dozen or more times, with increasing tempo and rising pitch. Also a long single-note trill, drawn out over 20 to 30 seconds, repeatedly. It stops calling very abruptly when disturbed or alarmed.

<u>Breeding</u>: It usually excavates a nest hole in a dead tree. Breeding has been recorded at Camp Five between April and May.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Arur Buluh Betung, Camp Five, Pa' Gelawat and Bario.



Red-throated Barbet Megalaima mystacophanos

Other names: Gaudy Barbet.

<u>Status & Range</u>: Resident. Found in Myanmar, peninsular Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 7½ to 8½" (19 to 22 cm). Sexes differ. <u>Males</u>: Forehead orange-yellow, crown crimson with black eyebrow below and a small red spot on lores. Upperparts green. Small yellow patch at base of lower mandible, blue on sides of face and below eye, and small crimson spot on either side of neck. Crimson chin and upper throat, blue on lower throat, breast and underparts green. <u>Females</u>: Forehead blue, crown and lores red. Chin and throat dull bluish-green, blue on sides of face and below eye. <u>Immatures</u>: Like females but duller. Juveniles are green all over. <u>Soft parts</u>: Iris dark brown. Bill black. Tarsus olive or olive-green in males, bluish in females. It has four toes, two toes directed forwards, the other two backwards, enabling them to cling onto vertical tree trunks.

<u>Habitat & Behaviour</u>: Found singly in lowland primary and sub-montane forests up to 1400 m. More common and widespread up to 800 m in the middle and upper storeys of disturbed forest, forest edges in the foothills, alongside Gold-whiskered Barbet *M. chrysopogon*. It is more often heard than seen since, like other barbets, it is almost impossible to locate even when calling, since it sits motionless for long periods on a perch, usually out of sight behind foliage.

Food: Eats fruit and insects.

<u>Voice & Calls</u>: It has a wide range of call notes, the commonest note in the Kelabit area being a loud *took*, *took-took*, also a *took-took* followed by a long series of single *took* notes.

Breeding: It usually nests in a hole in a dead tree. Breeding birds have been found in March and April at Camp Five and Pa' Ramudu.

<u>Local Distribution</u>: Found at Pa' Ramudu, Pa' Da'lih, Camp Five, Long Sabai and Bario.



Rhinoceros Hornbill Buceros rhinoceros

© Paul Huang@www.naturestops.com

Rhinoceros Hornbill Buceros rhinoceros

Status & Range: Resident. Found in Thailand, West Malaysia, Sumatra, Java and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Sexes differ. Size 42 to 48" (106 to 120 cm), females slightly smaller. Head, wings, back and breast black. Belly and thighs white, often stained yellow. Easily recognised by entirely black wings and white tail with a broad black sub-terminal band. Its large casque, reddish behind and yellowish in front, is curled upwards at the front. <u>Soft parts:</u> Iris red and bare orbital skin black in males, with a narrow black line along the base of its casque. Iris white and bare orbital skin yellowish-white in females, without black line on the casque. Bill yellowish with red at base of upper bill. Tarsus and feet greenish-grey, claws horn.

<u>Habitat & Behaviour</u>: Common in lowland and sub-montane forests to 1100 m but has been recorded to 2350 m on Gunung Murud. Usually found in pairs, occasionally in flocks, but not easily seen in the forest since they keep to the upper canopy of tall trees. Their loud whooshing wing beats can often be heard as they fly overhead. Small groups of them can be seen feeding on fruiting fig trees alongside other hornbills. The bird is now seen more regularly in the Kelabit area than it was in the Sixties.

<u>Food</u>: Eats fruit for the most part but they have been known to take small birds, lizards and frogs as well as insects and birds' eggs.

<u>Voice & Calls</u>: Its deep, loud roaring call sounds like *enggang*, hence its Iban name. It is heard duetting, the female call slightly higher in pitch.

Breeding: They usually nest about forty to fifty feet up in large holes or cracks in old trees. Breeding pairs spend some time prospecting potential nest sites as part of a courtship ritual. Once selected, the female enters the cavity and the opening is plastered over with mud, leaving a narrow slit through which it is fed by its partner. The female remains sealed within the nesting chamber for about fifty days while incubating, emerging only after the eggs hatch. The young birds remain in the nest for a further 30 days or so, and are fed by both parents. Sometimes, communal feeding takes place, with non-breeding birds taking part in feeding the nestlings.

<u>Local Distribution</u>: Recorded at Camp Five, Pa' Gelawat, Arur Buluh Betung, Lepo' Bunga, Bario, as well as at Rock Garden, Church Camp and Ridge Camp on Gunung Murud.



Bushy-crested Hornbill Anorrhinus galeritus

© Ch'ien C. Lee

Bushv-crested Hornbill Anorrhinus galeritus

<u>Status & Range</u>: Resident. Found from S. Myanmar down to Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 27 to 30" (68 to 76 cm). Sexes alike, the female slightly smaller than the male. No white in plumage at all. Head, neck and upperparts brownish-black with a dull green gloss. Long drooping crest, its feathers broad and soft. Underparts dull dark brown, greyer on the abdomen and undertail coverts. Basal two-thirds of tail greyish-brown, with a broad terminal black bar. <u>Immatures</u>: Browner above, edged with rufous on the crown and crest. Wing coverts edged with buff, breast buffy-brown, belly dirty white. Tail browner, dull black at the tip. Soft parts vary greatly in immature birds. <u>Soft parts</u>: Iris red in males, black in females, blue in immature birds. Bare skin around eye and on throat blue. Males have a small black casque, the bill being black, tipped with horn. Females have a white casque, bill whitish to ivory. Tarsus and feet greenish-black.

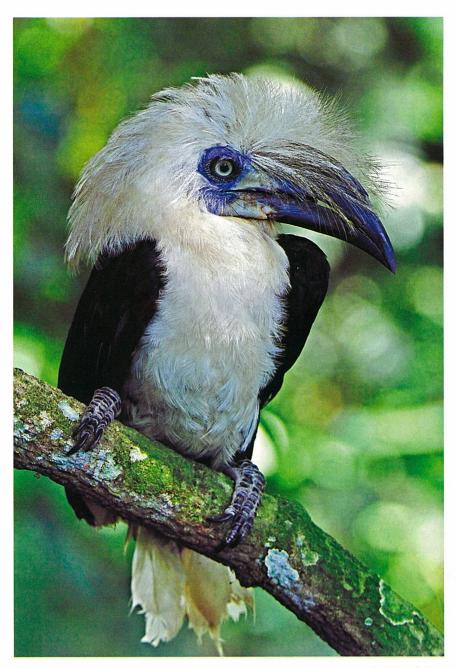
<u>Habitat & Behaviour</u>: The most abundant hornbill but very shy, keeping to the upper and middle canopy of primary, old secondary and sub-montane forests to 1800 m. Sometimes solitary, keeps to the tops of tall trees, and is more usually seen flying over tall jungle and along ridge forests in noisy flocks of 5 to 15 birds, drawing attention to themselves with their highpitched chattering. Its flight is not as powerful as that of other hornbills but is much quieter. Up until the Sixties, it was the only hornbill to be found in the Kelabit area.

Food: Fruit, berries, cicadas, insects and small reptiles.

<u>Voice & Calls</u>: High yelping two or three *kiu-kiu-kiu* notes, often becoming cacophonous chorus as several birds start calling at the same time.

Breeding: Nests in holes about 45 feet up in dead and living trees, the female entering and being sealed into the nest cavity, the opening plastered over with mud, leaving only a narrow slit through which the female can be fed. Several members of the flock, including immature birds, help to feed the imprisoned female and young for nearly 11 weeks, the nestlings taking about 30 days or so to leave the nest.

<u>Local Distribution</u>: Recorded at Pa Di'it, Pa' Da'lih, Arur Buluh Betung, Arur Tumuh and Bario.



White-crowned Hornbill Berenicornis comatus

© Ch'ien C. Lee

White-crowned Hornbill Berenicornis comatus

Other names: White-crested Hornbill.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 33 to 36" (84 to 91 cm). Sexes differ. <u>Males</u>: Head and bushy crest white, often with a creamy tinge. Feathers of the back and mantle with darker edges, producing a somewhat scaly effect. Wings tipped white, tail entirely white. Throat, neck, breast and upper abdomen white. Rest of plumage glossy black glossed with green. <u>Females</u>: Like males but throat, neck and underparts black, the crest with black at base of feathers, many feathers being greyish with black shafts. <u>Immatures</u>: Crest like that of female but shorter, with broad dark bases to feathers. Sides of neck and underparts sooty-brown, the feathers tipped with white. Back and rump dark brown. Greater coverts tipped white. Tail blackish, broadly tipped white. <u>Soft parts</u>: Iris orange-yellow, dull greenish-yellow in immature birds. Facial skin and the base of the lower mandible deep dull blue, paler blue younger birds. Bill greyish-black, yellowish with black blotches both mandibles in young birds. Tarsus, feet and claws black.

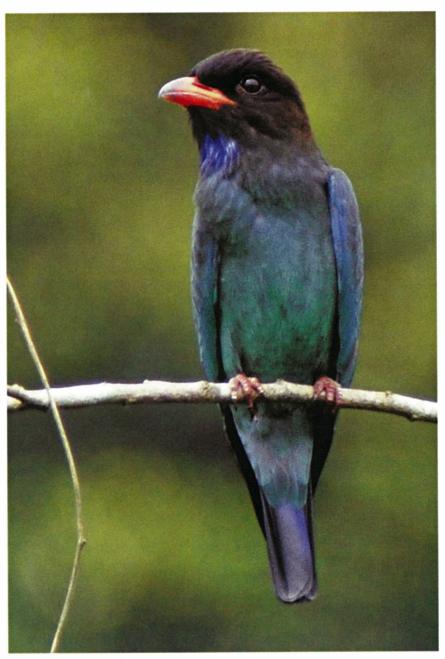
Habitat & Behaviour: A rarely seen bird. Found singly, in pairs or small groups, in the middle and lower canopy of old primary and sub-montane forests to 1700 m. Usually seen on fruiting trees along jungle-clad hills and valleys. A noisy bird but very seldom seen at close range, more often the loud whooshing sounds of their wing beats is heard as they fly noisily overhead. Perches on much lower trees than other hornbills.

<u>Food</u>: Eats fruit, especially figs, insects, snakes, lizards and small birds. Seen taking swiftlets on the wing.

<u>Voice & Calls</u>: A series of three-note calls, like that of a pigeon, *ku-kuk-coo*, the middle note louder, the last set in the series tapering off at low volume. It is often preceded by a single *ku* note and a two-note *ku-ku*..

Breeding: Like other hornbills, it nests in holes in trees, the female being sealed into the nest cavity, leaving a narrow slit through which the female can be fed while incubating its eggs.

<u>Local Distribution</u>: Recorded at Pa' Gelawat, Arur Buluh Betung, Lepo' Bunga and Pa' Lungan.



Dollarbird Eurystomus orientalis

© Amar-Singh HSS

Dollarbird Eurystomus orientalis

Other names: Broad-billed Roller, Red-billed Roller,

<u>Status & Range</u>: Resident. Found in India, China, Japan, SE Asia and Australia. Two other races are winter visitors to the Kelabit area.

<u>Description</u>: Size 11 to 12" (28 to 30 cm). Sexes alike. Head, nape and face dark blackish-brown. Mantle, back and uppertail coverts dark bluish-green, rump browner. Tail black, washed with blue. Wing feathers black, with pale blue patches in the centre of the inner webs, tertials greenish, brighter on wing coverts. Chin blackish-brown, throat bright blue, rest of underparts greenish-blue, greyer on breast and abdomen. <u>Immatures</u>: Generally duller, the blue on throat duller, and almost absent in very young birds. <u>Soft parts</u>: Iris dark brown. Bill broad and heavy, bright orange-red, hooked and blackish at tip. Legs and feet small, bright orange-red. Bill blackish and feet much duller in immature birds

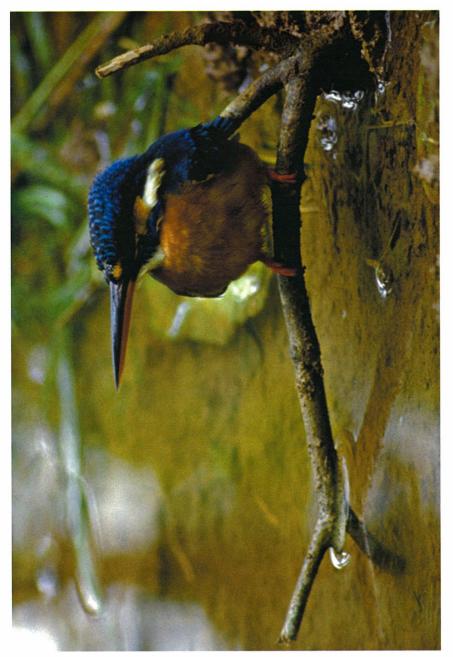
Habitat & Behaviour: Found mostly in open country or clearings at the edge of primary, old secondary and sub-montane forests to 1200 m. More common in the Kelabit area from November to January, probably due to an influx of winter visitors, most of them in immature plumage. Fond of perching on fully exposed branches of dead trees to swoop and dive after insects, usually returning to the same perch. In flight, a large white patch is seen on the wing. It tends to be quite sluggish during the height of day, becoming more active late in the afternoon, especially at termite swarms. It is often mobbed by other birds when it encroaches on their territories.

<u>Food</u>: Eats locusts, grasshoppers, mantids, moths, cicadas, small lizards, termites and beetles.

Voice & Calls: An occasional a kick kick in flight, and a harsh croak.

<u>Breeding</u>: Nests in natural cavities 10 to 15 m up a tree, sometimes using old nests of other birds. When breeding, it flies very fast in wide circles by the nest site, both sexes being very aggressive in repelling other species from the vicinity. Lays three to five glossy white eggs.

Local Distribution: Recorded at Pa' Ramudu, Ba Kelalan and Bario.



Common Kingfisher Alcedo atthis

<u>Other names</u>: Kingfisher, River Kingfisher, European Kingfisher, Eurasian Kingfisher.

<u>Status & Range</u>: A winter visitor in small numbers. Breeds in Africa, Europe and Asia to New Guinea and the Solomons, winters in Borneo.

Description: Size 5½ to 6" (14 to 15 cm). Sexes similar. Head greenish-blue, barred blackish-brown, malar stripe greenish-blue. Lores and ear coverts rufous. Cheeks greenish-blue with a white patch on each side of the neck. Mantle and back greenish-blue, with brighter pale blue on lower back, rump and uppertail coverts. Wing coverts and scapulars greenish-blue, speckled pale sky blue. Tail greenish-blue. Chin and throat white. Breast and flanks rufous, belly, vent and undertail coverts paler rufous. Female: Slightly duller. Immatures: Like females, lores, ear coverts and underparts whitish, white of chin and breast clearer, with a dusky band across the breast. Soft parts: Iris black. Bill black, the base of lower mandible sometimes dull reddish. Females may have lower mandible entirely red. Tarsus and soles orange-red, claws black.

Habitat & Behaviour: Common in lowland and sub-montane areas up to at least 1100 m, never far from water, by the banks of rivers, freshwater streams, padi fields and fish ponds, also along the seashore, in mangrove swamps and small islands but rarely along inland forest streams. Often found on a favourite perch, a rock or small overhanging branch, its head cocked downwards watching for fish, then plunging into the water to catch its prey. A shy solitary bird that flies off with a shrill call when observed, its flight very fast, keeping low, close to the water surface.

<u>Food</u>: Feeds mainly on small fish, tadpoles, crustacea and aquatic insects, as well as on ants and worms. It dives into the water, often completely submerging itself, catching its prey by grasping it between the mandibles, before flying off to a nearby perch to eat its catch. It has a habit of using a particular hunting perch to which it constantly returns. It has also been seen hovering, to catch dragonflies.

Voice & Calls: Its note is a high-pitched peep-peep, usually in flight.

Breeding: It does not breed in Borneo.

Local Distribution: Found at Pa' Ramudu, Long Sabai and Bario.



Blue-eared Kingfisher Alcedo meninting

Other names: Malaysian Kingfisher, Deep Blue Kingfisher.

<u>Status & Range</u>: Resident. Found in India, Nepal and Myanmar south to Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 5½ to 6" (14 to 15 cm). Sexes similar. Forehead, crown, nape, ear coverts and upper face deep blue with a white patch on each side of its neck. Lower face and lores rufous. Back glistening pale blue grading to royal blue on uppertail coverts. Wings, tail, scapulars and wing coverts black, narrowly edged with dark blue. Chin and throat pale buffywhite, the remaining underparts and undertail coverts deep orange-rufous. <u>Soft parts</u>: Iris dark reddish-brown. Bill black, fleshy at base, lower mandible dull reddish at base. Tarsus and feet bright coral red.

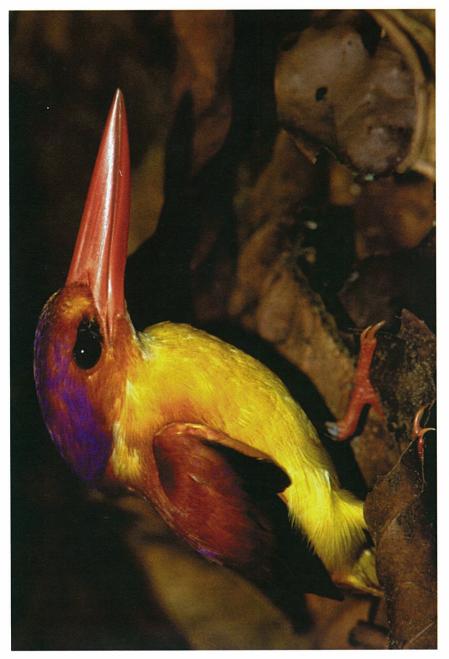
Habitat & Behaviour: A rather sedentary and shy forest bird, widely distributed in small numbers in the understorey of primary, sub-montane and secondary forests from the lowlands up to 1100 m. More commonly found along well-shaded jungle pools and streams, less so along open water. It can sometimes be found in forest well away from water. It is usually seen singly, perched motionlessly, on a low overhanging branch near water, bobbing its head up and down, occasionally flicking its tail. It dives almost vertically downwards to catch its prey, often completely submerging itself, before flying off to a nearby perch to eat its catch. It is rare to get a good view of it in the forest, except as a bright blue flash when it flies very fast from perch to perch.

<u>Food</u>: Its diet consist almost entirely of small fish.

Voice & Calls: A short high-pitched squeak, usually in flight.

Breeding: Its nest is a tunnel, 2 to 3½ feet deep, excavated horizontally into steep banks of roads or small streams. Usually nests in March or April, laying three to four white eggs.

<u>Local Distribution</u>: Found at Arur Tumuh, Arur Buluh Betung and Bario.



Oriental Dwarf Kingfisher Ceyx erithacus

Other names: Rufous-backed Kingfisher, Forest Kingfisher, Malay Forest Kingfisher.

<u>Status & Range</u>: Resident. Found in India and China to the Philippines, West Malaysia, Sumatra, Java and Borneo. Its taxonomy is very confusing. Some authors treat the sub-forms, *rufidorsus* and *motleyi*, as conspecific while others see them as two separate species, with *erithacus* as a migrant form. In Sarawak, several intermediate plumage variations exist, suggesting hybridisation.

<u>Description</u>: Size 5 to 5½" (13 to 14.5 cm). Sexes alike. Crown, mantle and tail rufous strongly tinged with shades of purplish-mauve, more so on rump and uppertail coverts. Chin creamy white, underparts bright yellow. *C. e. rufidorsus*: Forehead dark rufous, with no blue spot. Creamy white patch behind ear and neck but not meeting at back. Wing black with pale buff to rufous inner edges, lesser and greater coverts rufous edged mauve, primary coverts black edged rufous. *C. e. motleyi*: a much darker bird. Dark blue or black spot at base of upper bill, blue spots on sides of nape. Wings black, wing coverts edged bright navy blue. <u>Soft Parts</u>: Iris dark brown. Bill deep reddish-orange. Tarsus deep reddish-orange.

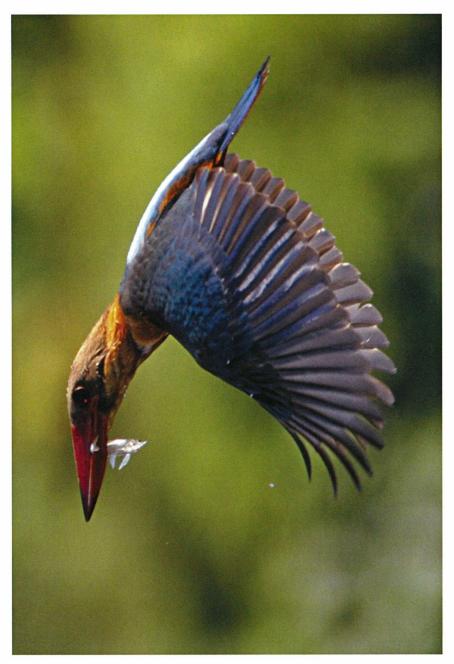
Habitat & Behaviour: Found singly, occasionally in pairs, in lowland, submontane and disturbed forests to 1100 m. Perches on low branches over water or at the edges of clearings, flicking its wings, sometimes cocking its tail upwards, regularly bobbing its head up and down as though having a bout of hiccups. A seldom seen bird, except as a flash of yellow, giving a high-pitched squeaking whistle as it speeds away. One, about forty feet up a tree, dived to the ground and made off with its prey, all in a single movement. Another kept diving repeatedly to catch fish in small pond. Also seen using a hunting perch from which to hunt insects, diving down to a shallow puddle where it apparently took tadpoles.

<u>Food</u>: Eats small locustids, insects, spiders, forest geckos and small fish.

Voice & Calls: A high-pitched whistle.

Breeding: Nests in tunnels excavated into steep banks of small streams.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Arur Tumuh, Camp Five, Arur Buluh Betung and Bario.



26

Stork-billed Kingfisher Halcyon capensis

Other names: Brown-headed Kingfisher.

<u>Status & Range</u>: Resident. Found in India, Hong Kong, the Philippines, Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 13 to 14" (33 to 35 cm). Sexes alike. Head light yellowish- to orange-brown, brighter on the nape. Crown, face and ear coverts greyish-brown, darker on lores. Wings, back and tail blue, with vivid pale cobalt blue centrally from the lower back to rump and uppertail coverts. Entire underparts light yellowish- to orange-brown. <u>Immatures</u>: Breast and wing coverts tipped with brownish-grey, red on bill and feet duller. <u>Soft parts</u>: Iris brown, orbital ring reddish-orange. Heavy powerful bill, deep red, blackish at tip. Legs and feet bright red.

<u>Habitat & Behaviour</u>: Resident and common, along coastlines, tidal or mangroves creeks, cultivated areas, padi fields and swamps, to 1200 m. Also along streams and rivers far inland into the heavily forested foothills but does not enter the forest itself, keeping instead to the edges of rivers and riverside clearings. A shy and solitary bird, not usually seen near human habitation, often seen perched close to water, on overhanging or bare trees, even on telephone and electric cables. Sits on dead branches, dives into the water with a huge splash, then returns to its perch with its catch. It flies quickly away at the first sign of danger, in swift straight flight, keeping low over the water.

<u>Food</u>: Its food consists of fish, frogs, crabs, lizards, mice, grasshoppers, beetles, insects and small birds, also eggs taken from nests of other birds.

<u>Breeding</u>: Nests in tunnels, as little as six to eight inches deep, excavated into river bank, sometimes in termite mounds, the entrance being about 4" in diameter and leading to an egg-chamber about 12" wide. It lays two to five white eggs.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Lungan and Bario.



Black-capped Kingfisher Halcyon pileata

Other names: None.

<u>Status & Range</u>: Winter visitor to Borneo between September to April. Breeds in India, China and Korea, winters south to Indochina, West Malaysia, the Greater Sundas and the Philippines.

<u>Description</u>: Size 11" (28 cm). Sexes alike. Head and face deep sooty black, white on chin and throat extending behind nape to form a broad collar. Mantle and scapulars deep royal blue, back and rump iridescent royal blue marked with black. Tail deep royal blue with black shaft streaks. The primaries black, the inner ones white at base, and deep royal blue on outer webs. Lesser, greater and median coverts black. Breast and belly white, marked pale rufous, flanks, lower belly and undertail coverts rufous. lmmatures: Dull black on head and face, duller blue on mantle, with black streaks on sides of throat, and breast feathers narrowly edged with black. Soft Parts: Iris dark brown. Bill dark red, darker at base. Tarsus reddishorange.

Habitat & Behaviour: More commonly found in coastal mudflats and open swamps in the lowlands but also goes into the interior by following large river courses up into sub-montane levels at 1200 m. Seen singly, usually by or close to water, with a habit of using the same perches regularly, on branches along river banks or overlooking padi fields. When disturbed by an approaching boat, it flies on ahead to a perch up the river, its prominent white wing patches very noticeable in flight. It is frequently seen hovering over water or suddenly diving down after prey, then returning to the same perch with its catch.

<u>Food</u>: Eats small crabs, beetles, grasshoppers, crickets, bees and wasps, frogs, lizards and, occasionally, fish.

Voice & Calls: Gives a shrill and loud cackling call when disturbed.

Breeding: Does not breed in our area.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Camp Five and Bario.



30

Rufous-collared Kingfisher Actenoides concretus

Other names: Chestnut-collared Kingfisher.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 8½ to 9½" (22 to 24 cm). Sexes differ slightly. <u>Males</u>: Head and crown greenish, grading to bright bluish-green on nape. Black eye-stripe encircling the nape to form collar, with a chestnut second collar below it. Broad cobalt-blue moustachial stripe. Upper back black, mixed with dark navy blue, lower back and rump bright royal blue. Wing feathers edged dark blue and tipped greenish-blue. Underparts dark rufous, paler on chin. Tail feathers edged dark navy blue. <u>Females</u>: Upper back black mixed with green, primaries, wing coverts and scapulars edged dull green and spotted yellowish, undertail coverts and lower belly pale buffy-rufous, paler than in male. <u>Immatures</u>: Like females but duller. <u>Soft parts</u>: Iris brown, eye-ring yellow. Upper mandible black, edged yellow along cutting edge and tip, lower mandible yellow. Tarsus and feet greenish-yellow.

<u>Habitat & Behaviour</u>: Found singly or in pairs in lowland or sub-montane jungle to an altitude of 1500 m, keeping to the lower canopy, often some distance away from water, on a low branch or on fallen tree, even on the ground. A shy and unobtrusive bird, it perches in deep cover for a long time, without making any call, moving only the head, very slowly scanning from side to side.

<u>Food</u>: Eats fish, large insects like cicadas, longicorn beetles, wood-lice, ants, small lizards and snakes and cockchafers, taking most of its food from the ground.

<u>Voice & Calls</u>: Its alarm note, when disturbed or alarmed, is a loud and harsh *kek-kek-kek-kek*, sometimes just one *kek* note, at others a series of 3 to 7 notes.

Breeding: Its nest is a burrow, about 24 inches deep, tunneled into the banks of a jungle stream or valley, or in holes in rotting timber, quite often independent of water. Usually lays two white eggs. Nests have been in the Kelabit area in October and December.

Local Distribution: Found at Pa' Ramudu, Pa' Da'lih, Camp Five and Bario.



32

Red-bearded Bee-eater Nyctyornis amictus

Other names: Red-breasted Bee-eater.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 11 to 12" (28 to 30 cm). Sexes similar. Upperparts bright green, darker on sides of face. Forehead and lores deep lilac, with pale blue around base of upper mandible and a dark blue orbital ring. Wing and wing coverts green. Tail green, with buffy-yellow on basal two-thirds of inner webs, the outer third being black. Chin and throat bright reddish-orange, breast orange-red. Belly, vent and flanks paler green, underside of tail yellow with yellow shafts and broad black tips. <u>Females</u>: Forehead red, the lilac on crown less extensive, no bright blue orbital ring. <u>Immatures</u>: Head, throat and breast green, breast darker green. Belly and undertail coverts yellowish-buff. <u>Soft parts</u>: Iris orange. Bill black, whitish at base of lower mandible. Tarsus and feet greenish-grey.

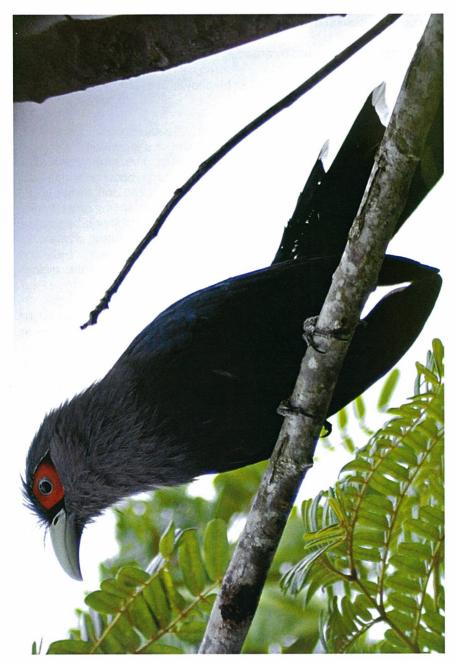
<u>Habitat & Behaviour</u>: Found singly or in pairs, rarely in parties, in the upper and middle canopies of lowland, sub-montane and hill forests up to 1200 m but more numerous at lower elevations. Perches inconspicuously ten to sixty feet up on tall trees, sometimes in full sunlight, more usually on fairly concealed perches. Sits still for extended periods, slightly hunched up with the head drawn in on the shoulders, fanning and flicking its tail now and again. Makes clumsy swooping sallies after insects, its flight somewhat laboured. It is also seen clambering about in dense foliage.

<u>Food</u>: Feeds largely on wasps, hornets, bees, caterpillars, cockroaches, cicadas, beetles, scarabs, locustids, crickets, termites, butterflies and large ants. After capturing its prey, it frequently returns to the same perch.

<u>Voice & Calls</u>: It has a wide range of harsh throaty notes. A raucous *ka-ka-ka* is uttered at irregular intervals. Occasionally a single *kwa* note, or a series of six to seven *kwa* notes on a descending scale.

Breeding: It excavates a burrow, five to six feet deep, along the banks of small stream. Lays one to three white and almost round eggs. Breeding in the Kelabit area has been recorded in May and November.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih and Camp Five.



Chestnut-bellied Malkoha Phaenicophaeus sumatranus

Other names: Rufous-bellied Malcoha.

<u>Status & Range</u>: Resident. Found in S Myanmar to Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 15 to 16" (38 to 40 cm). Sexes alike. Head, nape and breast dark grey, paler on chin and throat. Lores black. Upperparts dark metallic green with steel blue reflections, more pronounced on wings and tail. Tail narrowly tipped white. Centre of belly dark chestnut, brighter on vent and undertail coverts. Thighs dark greyish-black. <u>Immatures</u>: Like adult, the wing coverts tipped rusty-brown. <u>Soft parts</u>: Iris pale blue, bare skin around eye reddish-orange. Bill pale sea-green. Tarsus dark grey.

Habitat & Behaviour: A secretive bird, often found skulking in the middle and upper storeys of primary and old secondary forests, mangroves and secondary scrub to 1300 m. Almost always in pairs, in dense undergrowth to the tops of smaller trees, at times hopping from branch to branch or flying sixty or more feet overhead between the tops of tall trees. Once at the top, it sometimes perches in the open for a while, in full view. When surprised, it promptly dives into a hiding place under cover of the canopy foliage or makes a gliding flight to a nearby tree. It is often mistaken for a squirrel, as it works its way through the vegetation, disappearing from sight frequently only to reappear some distance away or higher up the tree.

<u>Food</u>: Eats small fruits, berries and seeds, a wide range of insects, beetle grubs, ants and ant larvae, large hairy caterpillars, small frogs and lizards.

Voice & Calls: Generally silent, with an occasional tok-tok or chi-chi call.

Breeding: The nest is a small platform of dead twigs, built between the forks of branches some 5 to 20 feet up in trees. The egg chamber, neatly lined with green leaves, is a shallow depression, so small for the size of the bird that it sits in the nest with its tail cocked high. Two chalky white eggs are laid. Nesting has been recorded between October to December in the Kelabit area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Camp Five and Bario.



Chestnut-breasted Malkoha Phaenicophaeus curvirostris

Chestnut-breasted Malkoha Phaenicophaeus curvirostris

Other names: None.

<u>Status & Range</u>: Resident. Found in Myanmar, peninsular Thailand and West Malaysia to Sumatra, Java, Borneo, Bali and the Philippines.

<u>Description</u>: Size 17 to 19" (43 to 48 cm). Sexes differ slightly. Forehead, Crown, lower face, nape and chin brownish-grey. Lower back, wings and basal two-thirds of tail dark metallic blue-green, distal third of tail dark chestnut, the shaft feathers whitish. Throat, breast, abdomen, vent and under-surface of tail deep chestnut. Thighs dark grey. Iris pale blue, bare skin around eye deep red. <u>Females</u>: Like males. <u>Immatures</u>: Colours much duller, facial skin and lower mandible pale red. <u>Soft parts</u>: Iris pale blue, bare skin around eye deep red in males, iris orange-yellow, facial skin around eye lighter red in females. Bill apple green, basal half of lower mandible dark red in males, lighter red in females. Tarsus greyish-green.

Habitat & Behaviour: Common resident in primary, old secondary and submontane forests, around forest clearings or dense vegetation at the edges of riverside clearings, to 1100 m. A silent stealthy bird, sitting absolutely motionless in the canopy of trees for long periods, being seen only when it moves. It sits leaning forward on its perch, the body and tail held in the horizontal position, its wings slightly drooping, only its head moving from side to side and, frequently, flicking or cocking the tail. Walks slowly along branches, sometimes hopping, with wings half-opened for balance, rather like a Crow Pheasant (*Centropus* spp.). The flight is short and laboured, a couple of wing flaps, then a glide, with the tail fanned open, usually very briefly, from one tree to another, alternately opening and closing its wing.

<u>Food</u>: Eats beetles, stick insects, grasshoppers, ants, nestlings, locustids, caterpillars, mantids, small crabs and lizards.

<u>Voice & Calls</u>: It has a guttural and low grating call, *kee-choo*, *kit-kyeer*, the last phrase very drawn out, also a deep and reeling snoring sound.

<u>Breeding</u>: The nest is a platform of twigs built 5 to 20 feet up a tree. Lays two white eggs. Both sexes incubate and care for the nestlings. Nesting has been recorded between October and November in the Kelabit area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Camp Five and Bario.



Mountain Scops Owl Otus spilocephalus

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Mountain Scops Owl Otus spilocephalus

Other names: Bornean Scops-owl, Spotted Scops Owl.

<u>Status & Range</u>: Resident. Found in Pakistan, India, China and Myanmar to Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 7 to 8" (18 to 20 cm). Sexes similar. Uniformly reddishto yellow-brown, finely speckled all over with black and buff. Eyebrows pale buff, a narrow black line separating it from the eye. Ear tufts small and ill-defined. Underparts paler, mottled with black and buff. <u>Immatures</u>: Upperparts mottled with pale brown and grey with darker shaft streaks. Forehead paler, supercilium prominent and greyer. Wings dark brown with large buffy-white spots on scapulars. Underparts greyish-brown, mottled with dark brown. Underwing coverts grey. Bill blackish, paler and greyer at ridge of upper mandible. <u>Soft parts</u>: Iris yellowish-orange. Bill small, pale yellowish-horn, paler along ridge of upper mandible, gape pale yellow. Feet small, feathered to base of toes, tarsus pale greyish-black, claws darker.

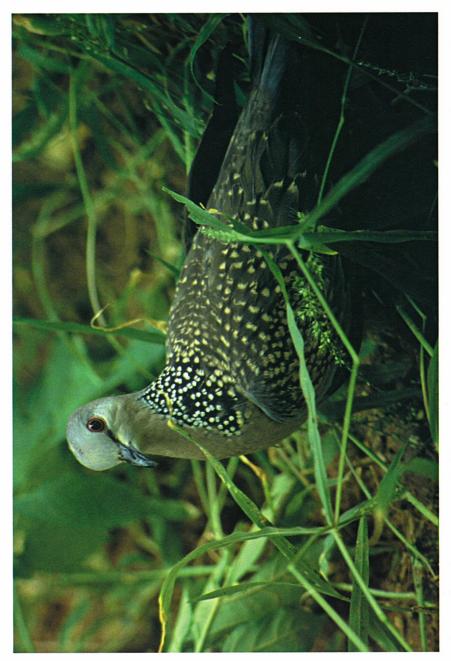
<u>Habitat & Behaviour</u>: Found mostly in sub-montane forests from 900 m to at least 1500 m on Mount Murud. It keeps close to the ground, perching on aerial roots. A nocturnal bird, rarely seen during the day, becoming easily confused by light. Its presence is often detected by calls coming from the forests around longhouses. It commonly responds to an imitation or a recording of its call.

<u>Food</u>: Feeds on large insects such as cicadas, moths and large beetles, probably also small rodents and reptiles.

<u>Voice & Calls</u>: In the Kelabit Highlands, the call is an almost metallic soft and high-pitched *hoot-hoot*, with about 3 to 7 seconds between each call. Birds are often heard replying to others calling from an adjoining territory.

Breeding: Its breeding biology remains unknown. A nest was found at Bario in March, a hole about 40 feet up a tree, within the compound of the junior school. Of the two chicks from the nest, one died, the other being hand-raised for about 4 weeks, before it was released.

Local Distribution: Found at Pa' Da'lih and Bario.



Spotted Dove Streptopelia chinensis

Other names: Tigrine Dove, Spotted-necked Dove.

<u>Status & Range</u>: Resident. Found in India, Bangladesh, China, Myanmar, Thailand and West Malaysia to Sumatra, Java, Borneo, Sulawesi, Bali and the Philippines. Introduced to California, Hawaii and Australia.

<u>Description</u>: Size 10 to 11" (26 to 28 cm). Sexes alike. Head and face vinous-pink, grey around eyes, on lores, forehead and base of lower bill. White feathers of collar with broad black tips. Upper back, scapulars, lesser and median coverts brown with dark shaft streaks. Lower back and rump ashy-brown with black markings. Tail feathers broadly tipped white. Chin white tinged pinkish. Throat, breast and flanks vinous-pink, grading to creamy buff on lower belly. <u>Immatures</u>: Duller and browner above, the spots around neck much less distinct. <u>Soft parts</u>: Iris orange or pinkish yellow; orbits dirty white. Bill dark, blackish horn. Feet dull lake.

Habitat & Behaviour: Resident in open country surrounded by bushes, padi fields and in towns to 1600 m. Usually found in pairs, sometimes in flocks of six or more birds, walking along roads and paths, searching for food. When disturbed, they fly vertically upwards for a short distance, with loud clap of their wings, usually flying up into a nearby tree but may settle on the ground again a short distance away. When taking off or landing, its tail is fanned wide, clearly showing the white tips to the tail feathers. Its display flight consists of a flight straight up into the air, then a glide downwards with wings and tail stiffly spread. A favourite cage bird.

<u>Food</u>: Its diet consists largely of grain, grass and other seeds, also some insects.

<u>Voice & Calls</u>: Its call is a soft musical cooing note, *cuck-cuck-crooo-cruck*, generally repeated 3 or 4 times.

Breeding: The nest is made of fine twigs, coarse grasses as well as a few roots and weed stems, interlaced to form a fragile and almost transparent platform about 15 cm across, often located 3 to 20 feet up a small shrub, tree or bamboo clump near open ground. Two white glossy eggs are laid. Nesting has been recorded at Pa' Ramudu from October to November.

Local Distribution: Found at Pa' Ramudu, Pa' Da'lih, Ba Kelalan and Bario.



Emerald Dove Chalcophaps indica

© slim sreedharan

Emerald Dove Chalcophaps indica

Other names: Green-winged Pigeon, Green-winged Ground Dove.

<u>Status & Range</u>: Resident. Found from India, east to Australia and the West Pacific islands, mainland SE Asia, Philippines and the Sundas.

<u>Description</u>: Size 8 to 9" (21 to 23 cm). Sexes differ. Crown bluish-grey, forehead and eye-stripe greyish-white. Mantle vinous, lower back browner with bronzy metallic emerald green with two greyish-white bands across it. Rump greyish-black, wing and wing coverts edged emerald, lesser coverts edged white. Bend of wing white. Tail brownish-black. Chin, throat and breast reddish-vinous, belly and flanks vinous. <u>Females</u>: Crown and nape greenish-brown, forehead pinkish-brown, eye-stripe faint. Bands across lower back dark ashy-grey. <u>Immatures</u>: No blue on forehead, eye-stripe missing and white on shoulder faint. <u>Soft parts</u>: Iris dark brown. Bill reddish-orange, purplish at base of bill. Tarsus purplish-pink, pink at rear.

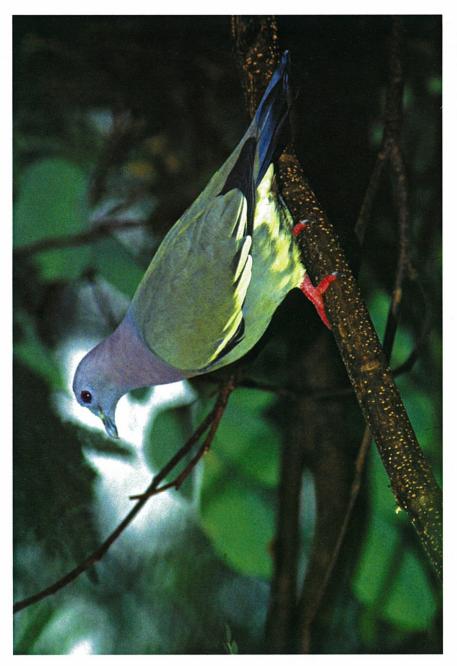
Habitat & Behaviour: Resident and mainly terrestrial in its habits, living in old primary and secondary forests, bamboo thickets, coconut plantations, in mangroves and grassy clearings to 1500 m. Common and widespread in the Kelabit area. Found singly or in pairs, occasionally in small parties, mostly under cover, feeding amidst the ground litter or drinking water from pools. A quiet and shy ground-feeding bird, it is usually seen very briefly as a flash of green as it flies from cover to cover not far above the ground. Its flight is silent, very fast and direct but, when flushed, it does not travel far. At night, it roosts in trees at some height from the ground.

<u>Food</u>: Feeds mainly on grain, seeds and fruit but also takes insects.

<u>Voice and Calls</u>: The call is a very prolonged deep and low single *oo-oo*, repeated at intervals.

Breeding: The nest is a flimsy saucer-shaped structure of roots, grass and small twigs placed six to ten feet up in dense bamboo or small trees, like that of other doves but more compact and better concealed. It lays two glossy pale creamy white or buff coloured eggs. Incubation takes about twelve days. Nesting has been recorded at Arur Tumuh in May.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Camp Five, Arur Tumuh, Arur Buluh Betung and Bario.



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Pink-necked Green Pigeon Treron vernans

Other names: Pink-necked Pigeon.

<u>Status & Range</u>: Resident. Found from S Myanmar to Thailand, West Malaysia, Sumatra, Borneo, Java and the Philippines.

<u>Description</u>: Size 8 to 9½" (22 to 24 cm). Sexes differ. <u>Males</u>: Crown, forehead and lores pale bluish-grey, rest of face and nape vinous-pink. Body, scapulars and tertials dark greyish-green, uppertail coverts tinged with yellowish-rufous. Tail dark bluish-grey with black terminal band. Primaries, secondaries and primary coverts black. Chin and throat pale bluish-grey, upper breast vinous-pink with broad orange band across lower breast. Upper belly leaf-green, flanks greenish-yellow. Undertail coverts dark cinnamon. <u>Females</u>: Head green, with no grey, orange or lilac. Underparts dull green. <u>Immatures</u>: Similar to females, wing coverts edged with buff. <u>Soft parts</u>: Iris purplish-red. Bill pale bluish-grey at tips, yellowish-green at base. Tarsus and feet purplish-pink.

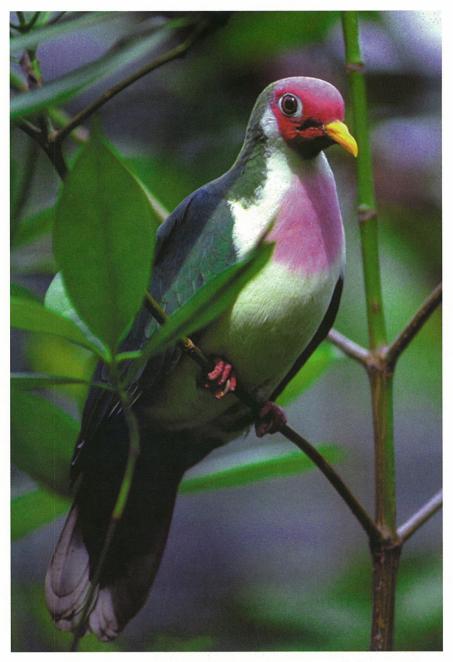
<u>Habitat & Behaviour</u>: The commonest green pigeon, found singly or in small groups in primary, secondary and sub-montane forests to 1100 m. Very common in scrub vegetation and at the edges of clearings, large flocks being seen on fruiting trees, especially figs, but rarely seen on the ground They tend to be quarrelsome when feeding together, with a lot of squabbling taking place in the tree tops. Conspicuously perches high on the exposed tops of tall trees to sun itself early in the morning. Small flocks of up to thirty or more birds have regular feeding areas where they congregate in the evening, before flying off to roost in tall trees. Its flight is very fast and direct.

<u>Food</u>: They eat soft fruit, largely figs, and berries of all kinds, especially the sticky fruit of the Strait Rhododendron.

<u>Voice & Calls</u>: A cooing double whistle, *ooo-ooo, cheweoo-cheweoo-cheweoo*, the 2nd note much longer.

Breeding: The nest is a fragile platform of loose sticks placed as little as 3 to 5 feet above the ground, mostly in low shrubs, small trees or hedges to bamboo clumps and coconut palms. One or two white eggs are laid. Both sexes incubate.

Local Distribution: Recorded at Pa' Ramudu, Pa' Lungan and Bario.



Jambu Fruit Dove Ptilinopus jambu

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Jambu Fruit Dove Ptilinopus jambu

Other names: Jambu Fruit Pigeon, Pink-headed Fruit Dove.

<u>Status & Range</u>: Resident. Found in peninsular Thailand, West Malaysia, Sumatra, Java and Borneo. Listed in Red Data Book: Lower Risk Category.

Description: Size 10" (25 cm). Sexes differ. Lower face and forehead deep pinkish-red, paler on crown, grading to deep leaf green on rear of head and nape. Back, rump, tail and wing coverts deep leaf green edged with dull greenish-vellow, more so on uppertail coverts. Flight feathers black thinly edged with pale vellow at tips. Chin dark chocolate, the white on throat extending to rear of face. Breast pale rosy pink, lower breast and belly creamy yellow, vent creamy white, thighs pale greyish-green. Undertail coverts chocolate, under-surface of tail dark grey with broad grevish-white tips. Females: Upperparts dull green, forehead and chin dull purplish-red, with some grey on crown and lower face. grevish-green, grever on lower throat, rest of underparts grevish-white. Undertail coverts pale cinnamon. Immatures: Like female but face and crown green, grevish-green on centre of throat and breast, base of bill dark. Soft parts: Iris reddish-vellow, skin round eve bluish-white. Bill vellowish-orange. Tarsus dark red.

<u>Habitat & Behaviour</u>: Common resident with patchy distribution in primary and old secondary forests to 1300 m. Usually seen alone or in pairs, it is a shy, rarely seen bird that remains within cover of thick foliage, making it almost impossible to find them. When discovered, it takes off in swift and powerful flight, its wings flapping noisily. It is sometimes seen feeding on the ground.

<u>Food</u>: Eats berries. Seen eating fruit fallen to the ground or knocked down by monkeys or hornbills.

<u>Voice & Calls</u>: Silent bird, the call is a low soft *coo*.

Breeding: The nest is a flimsy platform of twigs placed 3 to 5m above ground in the fork of a branch. It lays one white egg, and both sexes help incubate and care for the nestling. It breeds in the Kelabit area between November to February.

Local Distribution: Recorded at Camp Five and Bario.



White-breasted Waterhen Amaurornis phoenicurus

Other names: White-breasted Swamphen.

<u>Status & Range</u>: Resident. Found in Pakistan, India and China, mainland SE Asia, the Philippines and the Greater Sundas.

<u>Description</u>: Size 10 to 11" (25 to 28 cm). Sexes alike. Crown, nape and back dark slaty-grey, browner on rump and uppertail coverts. Forehead and face white, slaty-black on sides of throat, breast and flanks. Wings black. Chin, throat, breast and upper belly white, lower belly, vent, thighs, flanks and undertail coverts chestnut. <u>Females</u>: Like male but slightly smaller. <u>Immatures</u>: Head and upperparts browner, chestnut on flanks and undertail coverts paler. <u>Soft parts</u>: Iris reddish-brown. Bill yellowishgreen, with orange-red frontal shield. Tarsus yellow-green.

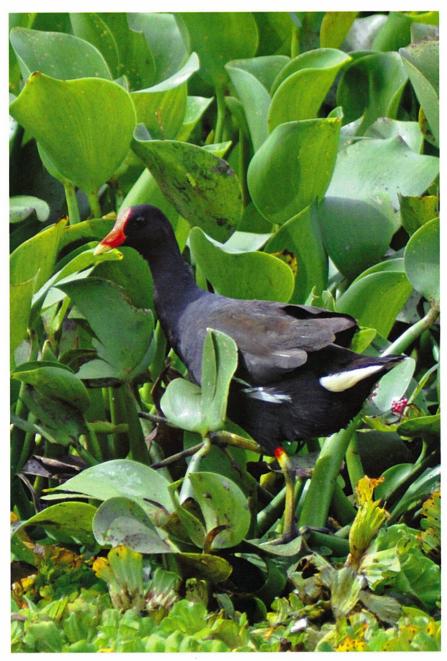
Habitat & Behaviour: Found singly or in small groups, skulking in thick vegetation along the edges of rivers, mangroves, swamps, reed beds, waterlogged drains, padi fields or in short grass verges by the roadside and in gardens, up to 1800 m. It starts feeding at dawn and continues late into the evening, often forming loose groups with moorhens, diving quickly into cover when alarmed. Walks slowly and sedately, its feet lifted high off the ground, the short tail cocked very often. When disturbed, it runs very quickly with its tail uplifted, or takes off with a weak fluttering flight, its yellow legs trailing behind, to seek shelter in tall grass a short distance away. Less often, it flies up into a tree and perches clumsily on a low branch

<u>Food</u>: It feeds on grasshoppers, worms, snails, cockroaches, small fish, insects, padi and grass seeds.

<u>Voice & Calls</u>: The call consists of grunts, croaks and chuckles followed by a loud *kru-ak*, *kru-ak*, *kru-ak-a-wak-wak*.

Breeding: The nest is a shallow cup-shaped pad of reeds and twigs with a thin lining of dry grass, placed amidst clumps of tall reeds and grasses up to ten feet above the ground. It lays three to five eggs, pale buff thickly speckled with reddish-brown and pale grey. Both sexes incubate and take care of the young. Breeds in the Kelabit area in February.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Ba Kelalan and Bario.



Common Moorhen Gallinula chloropus

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Common Moorhen Gallinula chloropus

Other names: Moorhen, Gallinule.

<u>Status & Range</u>: Found almost worldwide. One race is resident in the Kelabit area. Another northern race winters in Borneo.

<u>Description</u>: Size 10 to 12" (26 to 29 cm). Sexes alike. Bright red frontal shield. Head and neck blackish-grey, back dark olive-brown. Wings and tail dark brown. Chin and throat dark greyish-brown, belly slaty-grey. Vent black, undertail coverts white. Flanks greyish-brown with broad white central streak. <u>Immatures</u>: Crown and face brownish-grey, nape greyer. Upperparts olive-brown, tail dark brown, wing dark brown, wing coverts olive-brown. Chin, throat and breast brownish-grey, mottled with white. Belly grey, flanks olive-grey, with broad white streaks. Frontal shield not fully developed. <u>Soft parts</u>: Iris wine red. Bill orange-red, tipped greenish-yellow. Upper tarsus orange-red, rest of tarsus and toes yellowish-green, soles yellowish-green.

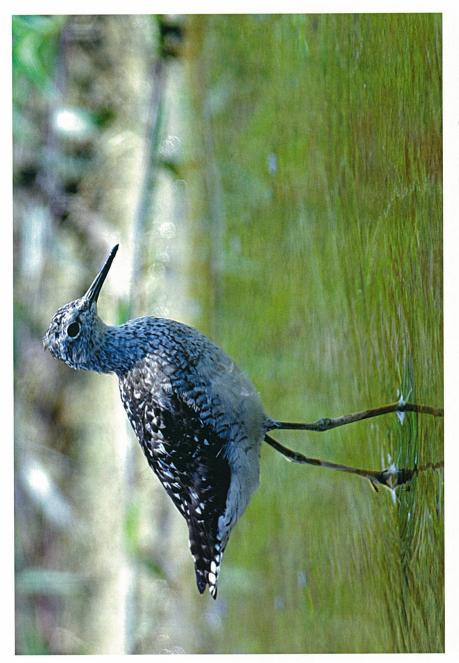
Habitat & Behaviour: Common in freshwater ponds, canals, lakes, open swamps, padi fields and flooded areas. Constantly flicks its tail and jerks its head rhythmically as it walks with slow deliberate steps, along bunds and pathways, sometimes clambering about on small bushes. It can swim very well, sitting high in the water, often diving to safety and staying under water for long periods when under threat. When flushed, it patters along the water surface to get airborne in weak fluttery flight, its legs dangling below. Very common at Bario, often with as many as 20 birds seen at a time, swimming and feeding in the padi fields.

Food: Mainly vegetable matter, aquatic plants, insect larvae and beetles.

<u>Voice & Calls</u>: Often noisy, with short explosive *kik kik* notes repeated several times, and a harsh *kurk*.

Breeding: Adult birds are very aggressive and territorial when breeding. The nest is made mainly of twigs, lined with leaves, about 15 to 30 cm above the waterline. It lays up to six eggs, creamy white, marked with red and brown. Incubation takes 18 to 21 days. Young birds, covered with fine black down, are able to swim soon after hatching. Immature birds have been seen at Bario between July and August.

Local Distribution: Recorded at Pa' Ukat and Bario.



Wood Sandpiper Tringa glareola

Other names: Spotted Sandpiper.

Status & Range: A common passage migrant and winter visitor. Breeds in Europe through to N China, wintering south in Africa, India and S China south to SE Asia, New Guinea and Australia.

<u>Description</u>: Size 8 to 9" (20 to 21 cm). Sexes alike. Dark crown, with a distinct whitish supercilium. Face, lower back, uppertail coverts and rump white, upper back greyish-brown, conspicuously spotted with buffy-white. Tail white, barred with dark brown. Underparts white, dusky on breast, flanks barred with brown. In flight, it can be recognised by its lack of a white wing bar, its pale underwing coverts, conspicuous square white rump and barred tail. <u>Soft parts</u>: Iris brown. Bill black. Feet yellowish to olive-green.

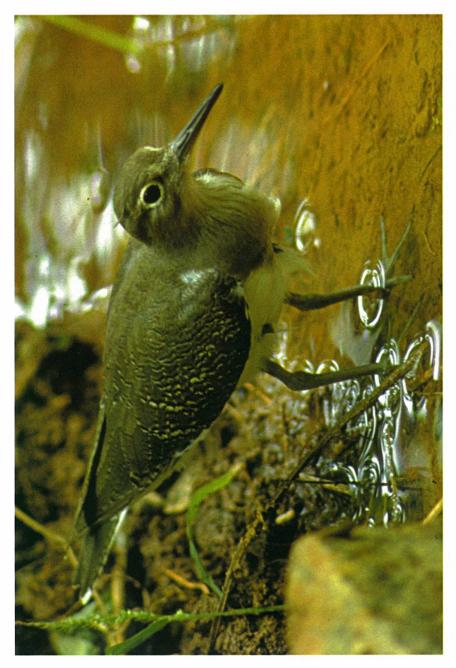
Habitat & Behaviour: It mostly frequents the wet borders of grazing fields, brackish pools and fish and prawn ponds, marshes, mudflats, flooded vegetation, freshwater swamps and wet padi fields to 1100 m. Found in coastal as well as in inland areas but not along the shore itself except during migration. One of the commonest waders and quite gregarious. It is regularly seen in the Kelabit area between August and April, the earliest arrival date being 12th August. Occurs singly and as part of mixed noisy flocks of up to 20 birds along with other waders, feeding in small pools or fallow land alongside moorhens and waterhens. When feeding, it often wades up to its belly in water, probing into the mud for food, its head and neck completely submerged. A rather shy bird, rising when disturbed with shrill cries, its feet prominently trailing behind.

<u>Food</u>: Eats small fish, tiny molluscs, crustaceans, worms, insects and some vegetable matter.

<u>Voice & Calls</u>: A sharp repeated *chip, chip, chip* by individual birds on the ground, or a shrill *pee-pee-pee* jointly by several birds in flight.

Breeding: Does not breed in our area.

Local Distribution: Found at Pa' Ramudu, Pa' Da'lih, Ba Kelalan and Bario.



Common Sandpiper Actitis hypoleucos

Other names: Eurasian Sandpiper.

<u>Status & Range</u>: A regular and common winter visitor. Found from Europe across N Asia to Japan, wintering in Europe, Africa and Middle East south to SE Asia and Australia.

<u>Description</u>: Size 8" (20 cm). Sexes similar. Upperparts glossy brownish-bronze without any white except for prominent white wing bar. Underparts white, sides of breast brownish-grey, often with fine brownish streaks on throat. Broad white wing bar, more conspicuous in flight, and white outer tail feathers with dark bars. Identified in flight by white wing bar, lack of white rump, and white barred outer tail feathers. <u>Soft parts</u>: Iris dark brown. Bill greenish-black, paler at base of lower mandible. Tarsus greyish-green, yellower at knees.

Habitat & Behaviour: The most frequently seen wader, on coastal mudflats or sand banks just above the waterline, mangroves, on beaches, by open water, on floating logs in rivers, along streams and river banks, padi fields, even in peatswamp forest, all the way into the hills and the upper reaches of small streams to 1500 m. It is more numerous between August and April but a few immature birds may stay over and can be seen throughout the year. Usually solitary or in pairs, rarely in small groups, seen running along the water's edge, hunting for food, constantly bobbing its head and tail up and down, especially when alarmed. In flight, it skims low over the water with a few rapid shallow wing-beats followed by a short glide. Often seen in the Kelabit area, feeding at small pools on fallow land, along the bunds of rice fields, by river's edge, or bathing in roadside pools.

<u>Food</u>: Takes small invertebrates as well as some vegetable matter but worms, snails and small crustaceans form the bulk of its diet. Seen taking insects on the wing though these are mainly taken on the ground.

<u>Voice & Calls</u>: Generally a quiet bird but a shrill piping call, *twee-dee-dee-dee,* is uttered when it is disturbed or, sometimes, when on the wing.

Breeding: It does not breed in our area.

<u>Local Distribution</u>: Found at Pa' Ramudu, Pa' Da'lih, Camp Five, Bario and Ba Kelalan.



Crested Serpent Eagle Spilornis cheela

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Crested Serpent Eagle Spilornis cheela

Other names: Serpent Eagle.

<u>Status & Range</u>: Resident. Found in India, China and mainland SE Asia to Borneo, Sumatra, Java and the Philippines. The Mountain Serpent Eagle *Spilornis kinabaluensis*, a much darker bird with a black throat, can also be found in the Kelabit area.

<u>Description</u>: Size 20 to 22" (51 to 56 cm). Sexes alike. Upperparts dark brown. Crest black, broadly tipped whitish-buff. Ear coverts grey, face blue-grey, lores similar. Wings feathers black, with a broad central band of brownish-white on both outer webs, and a black terminal band tipped with white. Tail blackish with greyish-brown sub-terminal band and broad white terminal band. Throat grey, underparts pale reddish-brown, white spots on breast, speckled white on belly, flanks and vent. <u>Immatures</u>: Paler above, head and crest feathers edged white, chin and throat white, wing coverts tipped buffy-white. <u>Soft Parts</u>: Iris, cere and orbital skin yellow. Bill yellow at base, the outer half bluish-grey, darker at tip. Feet dull greenish-yellow, claws black.

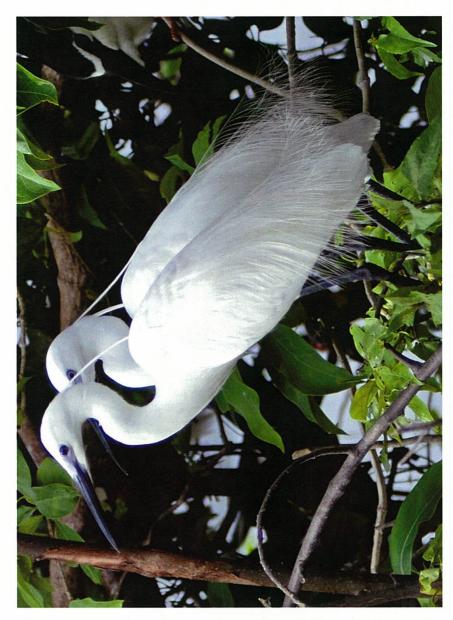
Habitat & Behaviour: Fairly common over open country, along river beds and mountain ridges, and lowland and hill forests to at least 1500 m. Seen singly or in pairs, sometimes in small groups, circling with spread wings over low forested ridges and small valleys, or perched on exposed branches of tall trees in the jungle, persistently calling. Perches for very long periods high above open or riverine country, patiently awaiting prey, then diving almost vertically downwards for the catch. Frequently gets mobbed by smaller birds in flight as well as when perched.

<u>Food</u>: Eats lizards, snakes, small mammals, frogs, millipedes, scorpions, locusts and small birds including domestic fowl.

<u>Voice & Calls</u>: The usual call appears to be a shrill and high-pitched *keeeaah*, *kuh*, *kuh*. Also a loud, shrill *kee-kee-kee*.

<u>Breeding</u>: Its nest, usually in the fork of a tall tree, is a large platform of large sticks, topped with smaller twigs and lined with very fine twigs. Lays one or two eggs, dull chalky white blotched with reddish brown. Breeding has been recorded at Bario in February.

Local Distribution: Found throughout the Kelabit area.



Little Egret Egretta garzetta

Other names: Snowy Egret.

<u>Status & Range</u>: Breeds in Africa, Madagascar and Europe to Asia, New Guinea and Australia. A common winter visitor found from late August to early May.

<u>Description</u>: Size 22 to 24" (56 to 60 cm). Sexes similar. Entirely white with black bill and tarsus. In breeding dress, which it develops while still in Borneo, it has two long feathers from the nape forming the crest, with a number of long plumes at the back and at the base of the neck. In winter, the plumes of the nape and back are absent, though a few may still be seen in front at the base of the neck. <u>Immatures</u>: Crest and plumes on nape or neck absent, facial skin dull greyish. <u>Soft parts</u>: Iris yellow, facial skin pale greenish-yellow (turns greenish-blue in breeding dress). Bill thin and black, paler and yellower at base of lower mandible. Tarsus black, toes and soles greenish-yellow.

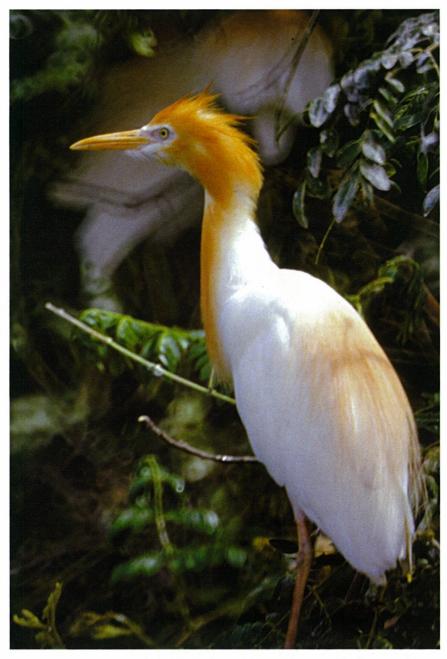
Habitat & Behaviour: Frequents padi fields, prawn ponds, lakes, marshes and streams along the coast to 1100 m. In winter quarters, it is found singly or in pairs but, mostly, as part of small mixed flocks alongside the Cattle Egret *Bubulcus ibis*, keeping to the open, on muddy riverbanks, fallow ground and padi fields around human settlements. A shy bird, it is wary and gets nervous when closely approached, taking to flight, often accompanied by the entire flock, as one gets near. Tends to feed on its own, apart from others in the flock, standing motionless, often wading or stalking in shallow water with slow graceful movements, half-running or half-flying after its prey. Its flight is slow and laboured, with the head retracted and feet extended. It regularly makes roosting flights at dusk to favourite sites on tall trees or about thirty feet up on clumps of giant bamboo adjacent to the padi fields, making the return flight to its feeding grounds early in the morning.

Food: Water insects, fish, frogs and crustaceans.

Voice & Calls: Generally silent.

Breeding: Not recorded from Borneo.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Ba Kelalan and Bario.



Cattle Egret Bubulcus ibis

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Cattle Egret Bubulcus ibis

<u>Status & Range</u>: Common non-breeding visitor. Found almost all over the world.

<u>Description</u>: Size 19 to 20" (48 to 50 cm). Sexes alike, females slightly smaller. Entirely white in winter dress, adult birds sometimes retaining a small patch of orange-buff on the crown. In breeding dress, the head, neck and throat is pinkish-buff, with long bright orange ornamental plumes developing on the crown, breast and back, the rest of the body remaining white. <u>Immatures</u>: Young birds lack the orange on the crown and have dark green legs. <u>Soft parts</u>: Iris golden yellow, orbital skin greenish-yellow. Bill yellow to greenish-yellow. Tarsus and feet black with greenish-yellow soles. In breeding dress, the bill and feet take on a pink tinge.

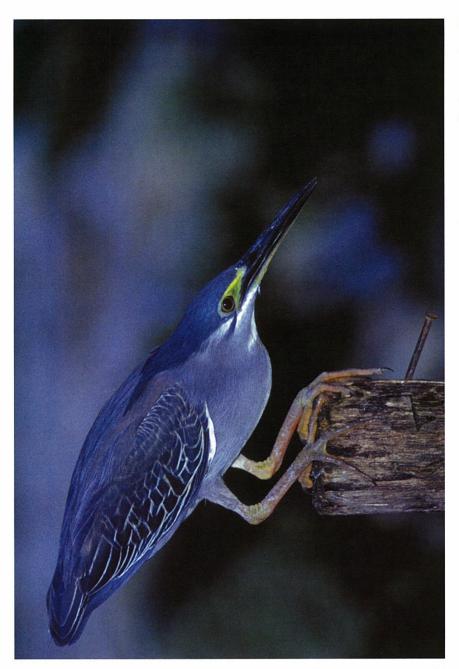
Habitat & Behaviour: A sociable bird, small loose groups of them often found feeding in villages and towns, open pastures, marshy areas, padi fields and grazing grounds, but rarely on coastal mudflats or saltwater swamps. They mainly feed on dry ground and sometimes perch on trees. Nearly always seen alongside cattle or buffalo feeding at pasture or working in rice fields. They scamper around under the cattle, picking up insects disturbed by the movement of the animals, running after the prey with wings slightly open. Frequently perches on the backs of the animals, picking off ticks and other parasites. They roost collectively at night, in the company of other egrets and herons, on tall trees or bamboo stands at the edges of cultivation. More usually seen between September and March, most of the birds being young birds in white winter dress, some of them having some buff on the head. By March, before they migrate, the birds acquire breeding plumage.

<u>Food</u>: Feeds on insects and ticks obtained from the cattle. Also takes earthworms, beetles, flies and other insects, also fish, tadpoles, small crustaceans, frogs, leeches, small vertebrates and, to a lesser degree, reptiles.

Voice & Calls: Normally silent.

<u>Breeding</u>: Its nest is a loose platform of sticks, built in trees, often in large colonies alongside other egrets. It is not known to breed in our area.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Ba Kelalan and Bario.



Little Heron Butorides striatus

Other names: Striated Heron, Little Mangrove Heron, Little Green Heron.

<u>Status & Range</u>: Has a worldwide distribution. One race is resident in Sarawak, two others being non-breeding winter visitors.

<u>Description</u>: Size 16 to 18" (40 to 45 cm). Sexes almost alike. Forehead, crown and crest black with greenish gloss. Head and neck dark ashygrey. Lower face greyish-brown streaked with white. Elongated narrow glossy green feathers on lower back and scapulars. Wings and tail greenish, wing coverts edged buffy-white. Chin and centre of throat and neck white, sides of breast, belly and flanks ashy-grey. <u>Females</u>: Slightly duller, the breast washed with light reddish-yellow, wing coverts edged with deeper buff. <u>Immatures</u>: Upperparts browner, without the elongated scapulars. Crown and crest streaked with buff, wing coverts tipped white. Underparts heavily streaked with dark brown and grey. <u>Soft parts</u>: Iris yellow, orbital skin greenish-yellow. Bill black, greenish-yellow on lower mandible. Tarsus greyish-olive in front, greenish-yellow at rear.

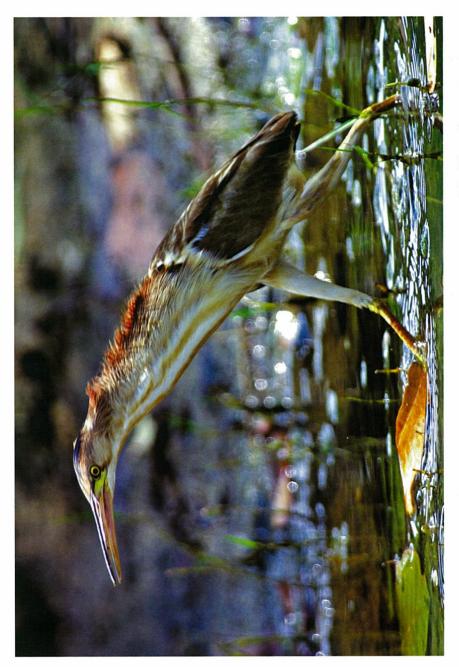
Habitat & Behaviour: Seen singly or in pairs, in large swamps, on banks of rivers, in padi fields and tall grass, cultivated areas around villages and longhouses to 1400 m, perched on low branches of bushes and trees overhanging water. A very shy and cautious bird, seldom noticed except when it dives hastily into cover or flies off when observed or flushed. It raises its crest when landing after a flight, and wags its short tail up and down when alert. Moves in short hops in between rocks. Hunts with stealthy deliberate movements, walking slowly along the rocks by the tidal edge, remaining absolutely motionless in between movements.

Food: Feeds on fish, crustaceans, prawns, frogs, crickets and insects.

<u>Voice & Calls</u>: Usually silent. When alarmed into flight, it utters a harsh *kyek-kyek* or *kyow-kyow*, and also a kingfisher-like *kee-kee-kee-kee*.

Breeding: The nest is a small platform of small dry twigs, with no lining, situated eight to twenty feet above ground, often over or near water. It lays three to six very pale bluish-green eggs. Incubation, by both sexes, takes about twenty days. There is no record of it breeding in the Kelabit area.

Local Distribution: Found at Pa' Ramudu, Pa' Da'lih, Camp Five and Bario.



Yellow Bittern Ixobrychus sinensis

Other names: Chinese Least Bittern, Chinese Little Bittern.

<u>Status & Range</u>: Winter visitor regularly seen between October to March. Found in India, China, Japan, SE Asia, New Guinea and Micronesia.

<u>Description</u>: Size 15" (38 cm). Sexes differ. Crown and nape black marked with buff, face and sides of head vinous-red. Flight feathers and tail black. Back, tertials and scapulars vinous-brown marked pale buffy-yellow, lower back pale grey marked vinous-brown. Underparts white streaked golden-buff from chin to middle abdomen, undertail and underwing coverts white. <u>Females</u>: Like males but heavily streaked above and below. <u>Immatures</u>: Like females but heavily streaked above with buff, heavily streaked below with reddish-brown. <u>Soft Parts</u>: Iris golden-yellow, facial skin bluish-yellow. Tarsus dull greenish-yellow, brighter and yellower on rear, soles yellowish-buff. Bill pale yellowish-horn, greenish-yellow at base of lower mandible, dark brownish-black on ridge of upper mandible.

Habitat & Behaviour: Found in swamps, reed beds, tall grass, padi fields and riverside scrub, to 1100 m, most sightings being of immature birds. Secretive and silent bird, seen singly, rarely in twos and threes, skulking in thick reed beds, seldom showing itself except when flushed or when flying from cover to cover. Largely crepuscular and nocturnal, it is more active early in the mornings or late in the evenings, during the day only on dull or overcast days. Clambers up onto waterside stems, or stands hunched by the water's edge, wagging its tail sideways and downwards, erecting the crown feathers every now and again, then lunges out suddenly with the bill at a likely meal. Freezes when surprised, thrusting its thin bill and neck vertically upwards, showing only its streaked underside to blend into its surroundings. Flies with slow flaps of the wing, the head and neck tucked in, the legs trailing behind. Much less common than the Cinnamon Bittern *Ixobrychus cinnamomeus*.

Food: Feeds on frogs, fish, molluscs and insects.

Voice & Calls: A very silent bird.

Breeding: There is no evidence to confirm breeding in the Kelabit area.

Local Distribution: Found at Pa' Ramudu, Ba Kelalan and Bario.



Dusky Broadbill Corydon sumatranus

Other names: None.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 9" (23 cm). Sexes alike. Upperparts dark blackish-brown. Tuft of buffy-orange feathers on back. Broad white bars at base of wing feathers, more visible when in flight. White sub-terminal band on tail. Throat and upper breast buffy-orange, remaining underparts dark blackish-brown. <u>Immatures</u>: Duller blackish-brown above than adults, the underparts uniformly dark brown, with a trace of pale markings on chin and throat, buffy-orange patch on back missing. <u>Soft parts</u>: Iris dark brown, bare skin around eye pink. Bill pale horny-pink, large and strongly hooked, edges of mandibles curved. Tarsus grevish-brown.

<u>Habitat & Behaviour</u>: Locally common in lowland and sub-montane forests, usually in the middle and upper storeys to 1200 m. Though single birds are sometimes seen, they more often occur in noisy parties of five to ten birds, perching conspicuously on top of tall trees, sometimes working through dense vegetation and the lower canopy like malkohas.

Food: Eats lizards, grasshoppers, ants, beetles, locustids and soft insects.

<u>Voice & Calls</u>: The call is a loud and shrill *kee-wi, kee-wi, kee-wi, also* a *ki-ki-wi, ki-ki-wi, the* alarm note a more piercing and harsh squawking version of the same notes.

Breeding: Its nest is a very large and bulky structure, loosely made of dead creepers, palm leaves, fine roots and twigs, placed at the end of a small tree branch or bamboo but more often at the end of a rattan vine. Placed about twenty to forty feet above ground level, over water or by a clearing, it has an entrance to one side nearer the bottom, and a long tapering tail dangling from the bottom, making it look like a mass of tangled vegetation. The exterior is decorated with ferns and epiphytes. They have been found breeding at Camp Five in March, with as many as ten birds taking part in nest building process.

<u>Local Distribution</u>: Recorded at Arur Tumuh, Camp Five and Arur Buluh Betung.



Black-and-red Broadbill Cymbirhynchus macrorhynchos

Other names: Black and Red Broadbill.

<u>Status & Range</u>: Resident. Found from Myanmar down to Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 8½" (22 cm). Sexes alike. Head, face, mantle and back glossy black. Rump and uppertail coverts deep red. Wing black, its white scapulars greatly elongated. Tail graduated. Black on chin extending to lower face, deep red band on upper breast extending to nape behind ear coverts. Remaining underparts red, undertail coverts paler. <u>Immatures</u>: Throat, breast and belly yellowish-buff, upperparts dull black, wing coverts tipped white. <u>Soft parts</u>: Iris deep green. Upper bill and cutting edge of lower mandible bright pale blue, rest of lower mandible bright yellow. Tarsus blue.

Habitat & Behaviour: Seen singly, in pairs, or in small parties, in the middle and lower storeys of primary, secondary and sub-montane forests to 1100 m, usually never far from rivers and streams shaded by jungle. It also frequents open clearings and fruiting orchards. A shy and secretive bird, it is not easy to locate despite its bright colours, always moving its position to get behind leaves or branches at the slightest suspicion that it is being observed. It tends to sit very still, moving only its head, sideways or up and down, in slow studied movements but hops rapidly along branches and from branch to branch. Its flight very fast, direct and agile, its long white scapulars catching the eye at once, making it easy to recognise. It often roosts in small parties, tightly huddled together on a branch.

<u>Food</u>: Seen eating fruit, a large hairy caterpillar, and hawking for insects. It also takes moths, grasshoppers, beetles, crickets, berries, small fish and crustaceans.

<u>Voice & Calls</u>: The commonest call is a high *kyeoor, kek-kek-kek*, the last notes harsher and quickly repeated, seven to twelve times.

Breeding: The nest, an untidy mass of leaves, roots and fibres, suspended from a small branch or bamboo stem by a river bank, usually overhangs water a river or stream and looks like a mass of debris left by a flood. Nests were found between March and April.

Local Distribution: Recorded at Pa' Ramudu, Camp Five and Bario.



Green Broadbill Calyptomena viridis

Other names: Lesser Green Broadbill

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 6 to 6½" (15 to 16 cm). Sexes differ slightly. Upperparts deep glossy green, a small concealed yellow spot in front of eyes, a small black spot in front of eyes and a large black spot on each side of the neck and a short frontal crest covering the base of upper bill. Wing coverts jet black tipped broadly with green, forming alternate black and green wing bars. Under-surface of short tail bluish. <u>Females</u>: Dull green, without the black markings. <u>Immatures</u>: Like females. <u>Soft parts</u>: Iris black. Upper mandible black with pale yellow edges and tip, lower mandible greyishgreen. Short tarsus and toes greenish-grey.

<u>Habitat & Behaviour</u>: Common in old secondary, primary and sub-montane jungle up to 1100 m. Found in small parties of six to seven birds that keep themselves well concealed in thicket and dense foliage, making it difficult to find them. A rather sluggish bird, often sitting low on its perch but, when active and alert, hops swiftly from branch to branch.

Food: Eats fruit.

<u>Voice & Calls</u>: Its alarm call is a mellow hooting *too-it too-it*, accompanied by a quick ducking of its head. The male song is a series of soft fluty *choi* notes.

Breeding: Its gourd-shaped nest, made of dead leaves closely interwoven with coarse fibres, is suspended from a branch, usually but not necessarily overhanging water. Larger at the bottom, narrower above, a narrow band at the top loops around the branch, securing it in place. The entrance lies to one side nearer the top, the lower end tapering off into an untidy tail that resembles flotsam caught on the branch. Two eggs are laid, light creamy white in colour. Breeding has been recorded in May.

<u>Local Distribution</u>: Recorded at Pa' Da'lih, Arur Tumuh, Camp Five and Bario.



Golden-bellied Gerygone Sulphurea

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Golden-bellied Gerygone Gerygone sulphurea

Other names: Flyeater, Yellow-breasted Wren-Warbler, Golden-bellied Flyeater.

<u>Status & Range</u>: Resident. Found from the Philippines down to Thailand, West Malaysia and the Greater and Lesser Sundas.

<u>Description</u>: Size 3½" (9 cm). Sexes alike. Upperparts greyish-brown, with an indistinct white line from above eyes to lores. Wings dark brown, edged greyish-brown. Tail feathers dark greyish-brown with pale whitish sub-terminal spots. Chin and throat bright yellow, paler on breast and belly, mixed with white on flanks and vent. <u>Immatures</u>: Upperparts pale ashy-brown, with an indistinct white eye-ring. Chin and throat pale yellow, paler on sides of breast and belly, almost white on flanks and vent. <u>Soft parts</u>: Iris dark brown. Bill and tarsus black.

<u>Habitat & Behaviour</u>: Found in primary and sub-montane forests, also in open wooded areas, mangroves, bamboo clumps and gardens to 1100 m. A common member of bird waves, it is frequently seen, singly or in small groups, in the company of flowerpeckers and sunbirds, usually high in the upper canopy of trees at the edges of clearings, coming lower in gardens and orchards.. An extremely active and restless bird, it is always on the move, flicking and flapping its wings and tail, constantly moving its body from side to side, bobbing up and down on its perch or flitting from branch to branch in quick darting movements.

Food: An insectivore.

<u>Voice & Calls</u>: Sings from open exposed perches, the song a high-pitched but soft whistle of several notes, the bird making many lively movements of its head, flicking its wings and tail as it calls.

Breeding: The nest is a small pouch, often with a long tail extending under it, made of plant fibres, lichens and downy material, suspended about 30 feet up a tree at the end of a small branch. The exterior is decorated with moss, spider's webs and vegetable down, the side entrance, near the top, is protected by a small roof. A nest was found at Bario in April.

Local Distribution: Recorded at Lepo' Bunga, Camp Five and Bario.



Asian Fairy Bluebird Irena puella

Other names: Asian Fairy-bluebird, Fairy Bluebird.

<u>Status & Range</u>: Resident. Found from India and China to the Philippines, down to Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 8 to 9" (21 to 23 cm). Sexes differ. <u>Males</u>: Centre of crown with broad band of shiny pale blue. Rest of head, forehead and face jet black. Upperparts shiny pale blue, uppertail coverts greatly elongated, reaching tip of tail. Wings and tail black, scapulars and lesser coverts shiny pale blue. Underparts jet black, undertail coverts shiny pale blue and greatly elongated to tip of tail. <u>Females</u>: Upperparts dark verditer blue, brighter on rump and uppertail coverts. Wings, wing coverts and tail black, edged dark blue. Underparts verditer blue, brighter on undertail coverts. <u>Immatures</u>: Like the female but duller. <u>Soft Parts</u>: Iris orangered. Bill black. Tarsus black.

<u>Habitat & Behaviour</u>: Fairly common, but local, keeping to the lower and middle canopies of primary, old secondary and sub-montane forests along the banks of large rivers to about 1200 m. Seen singly, occasionally in pairs, but small parties of 7 to 8 birds are seen on fruiting trees. A lively bird, always on the move, hopping from branch to branch. It keeps to the trees, takes fruit from low bushes but rarely comes to the ground except when it comes to small streams and rivers to drink or bathe. Hawks for insects, perching high on trees or low vines along the edges of clearings, staying there for long periods, then swooping down in a fluttering flight to snap up an insect. Its flight is fairly powerful, direct and undulating.

<u>Food</u>: Eats mostly wild figs, berries and flower nectar, also insects and termites. Found on fruiting trees in large numbers with hornbills, green pigeons, barbets and other fruit-eating birds.

<u>Voice & Calls</u>: Its call is a sharp mellow *vit-veet-vi-vi-vit-vit*, sometimes just *veet*.

Breeding: Its nest is a open saucer-shaped cup of moss, twigs and fibres placed some 5 to 40 feet up in a fork of a small tree or sapling, the egg chamber being lined with finer roots and fibres. It lays two greenish-white eggs. Both sexes help incubate the eggs, which takes about 13 days.

Local Distribution: Pa' Da'lih, Pa' Gelawat and Camp Five.



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Greater Green Leafbird Chloropsis sonnerati

Other names: Greater Leafbird.

<u>Status & Range</u>: Resident. Found in Myanmar down to Thailand, West Malaysia, Borneo, Sumatra and Java.

<u>Description</u>: Size 8" (20 cm). Sexes differ. Upperparts and tail almost entirely green. Lower face, chin and throat deep glossy black. Narrow dark blue malar stripe. Wing and wing coverts edged green on outer webs. Small bluish-green patch on shoulder. Underparts green, slightly paler and yellower than on mantle. <u>Females</u>: Like male with chin, throat and upper breast yellow, and a yellow eye-ring. Blue malar stripe very faint. <u>Immatures</u>: Like female, underparts washed with yellow, blue malar stripe duller or missing. <u>Soft Parts</u>: Iris brown. Bill black. Tarsus greyishgreen.

Habitat & Behaviour: Found singly or in twos and threes in the middle and upper canopy of sub-montane forests and along the edges of clearings to 1100 m. A common member of bird waves foraging in tall jungle, usually in the company of small babblers, minivets and other leafbirds. A very active bird, hardly still for an instant, yet practically invisible except for its constant movement, feeding high up on flowering trees, working its way downwards, in a series of short fast hops along branches and short hovering flights between leaves or, sometimes, moving to the branch below with a half-falling half-hovering movement, wagging its tail up and down, examining flowering and fruiting bracts, peering under and between leaves for insects.

<u>Food</u>: Eats fruit and insects. Large insect are beaten to death on a branch before being swallowed, large or hard-shelled fruit crushed to pulp with the bill to soften them.

<u>Voice & Calls</u>: The call is a loud and explosive *vit-vit*, or just *vit*, sometimes ending with a *veyink*.

Breeding: Its nest and eggs remain undescribed from Borneo. Breeding activity was noted at Camp Five in May.

<u>Local Distribution</u>: Recorded at Arur Tumuh, Camp Five and Bario.



Blue-winged Leafbird Chloropsis cochinchinensis

Other names: Green Leafbird, Gold-mantled Chloropsis.

<u>Status & Range</u>: Resident. Found in India, Myanmar down to Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 6½ to 7" (9.0 to 9.5 cm). Sexes differ. Crown, head and neck greenish-yellow, brighter on forehead, blue malar stripe sometimes indistinct. Lower face and throat black, edged greenish-yellow. Mantle, back and uppertail coverts bright green. Flight feathers blackish, broadly edged blue, with large blue patch on the shoulder. Tail blue. <u>Females</u>: No black on chin and throat, upperparts bright yellowish-green, yellower on head, wings and tail greenish blue, the malar stripe pale blue. <u>Immatures</u>: Like females. <u>Soft parts</u>: Iris dark brown. Bill black. Tarsus bluish-grey.

Habitat & Behaviour: Seen singly, in pairs or small twittering group of four to five birds, often along with other leafbirds, as part of a bird wave. Found in lowland, sub-montane and montane forests to 1400 m, keeping to the more open parts, sometimes in gardens and around longhouses close to old jungle clearings. Feeds high up in dense creepers on tall trees, also in the lower canopy and undergrowth, almost invisible against the foliage as it flits from treetop to treetop. An energetic and acrobatic bird, hanging almost upside-down and clinging to flowers to reach the nectar, moving in short hops or taking short fluttering flights to nearby branches. Very fond of fruiting fig trees, aggressively chasing away other birds that come close to it. It is not usually seen coming to the ground.

<u>Food</u>: Takes nectar from a variety of flowers, and especially fond of figs, and soft berries of the parasitic *Loranthus* family. Also eats caterpillars, grasshoppers, insects and termites.

Voice & Calls: A thin whistling chi or chiwiwit.

Breeding: Recorded at Bario in November.

<u>Local Distribution</u>: Recorded at Pa' Gelawat, Arur Buluh Betung, Pa' Di'it, Arur Tumuh and Bario.



Tiger Shrike Lanius tigrinus

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Tiger Shrike Lanius tigrinus

Other names: Thick-billed Shrike.

Status & Range: A passage migrant and winter visitor from late September to April. Breeds in W Europe, China and Japan, winters south to SE Asia. Most birds seen here are young birds. A few moult into breeding dress and can be seen in March or April, before they start their return migration.

<u>Description</u>: Size 6½" (16.5 cm). Sexes similar. <u>Males</u>: Forehead black, extending like a broad mask through and behind the eyes. Crown and nape grey. Upperparts and wings rich rufous, finely barred black. Lower face and underparts buffy-white, faintly barred on flanks. <u>Females</u>: Like males, with less black on lores, a narrower black mask and crescentic bars on flanks. <u>Immatures</u>: Upperparts dull reddish-brown with narrow crescentic black bars. Chin, throat and centre of breast pale buff, the feathers on sides of breast and flanks edged brownish-black, sometimes having a whitish eye-ring. Centre of belly and vent pale creamy-buff. <u>Soft Parts</u>: Iris dark brown to black. Bill bluish-grey, darker at tip. Tarsus bluish, soles buff.

<u>Habitat & Behaviour</u>: Found in lowland and sub-montane forests, along the edges of forest clearings to 1100 m. When alert, it bobs its head and front up and down, also flicks its wings and tail, sometimes fanning the tail or wagging it up and down. Seen taking a shower after a morning rain by ducking in and through the wet leaves of a tree. It regularly polices its territory, hawking for prey from exposed perches but, more usually, skulks on hidden perches along the edges of clearings.

<u>Food</u>: Eats crickets, beetles, beetle grubs, ants, ant larvae, grasshoppers, butterflies, winged termites, mantids, dragonflies, moths, also small lizards and birds. It usually takes large prey to a perch before tearing apart and eating it.

Voice & Calls: Usually a harsh scolding chatter.

Breeding: It does not breed in our area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Arur Tumuh, Camp Five and Bario.



Crested Jay Platylophus galericulatus

© slim sreedharan

Crested Jay Platylophus galericulatus

Other names: Crested Malay Jay.

Status & Range: Resident. Found in West Malaysia, Sumatra, Java and Borneo. Listed in Red Data Book: Lower Risk Category.

<u>Description</u>: Size 10" (25 cm). Sexes similar. Forehead, crown and nape dark brownish-buff, darker below eyes and on ear coverts, a small white spot above each eye. Crest, about 7 cm long, tipped black. Broad white collar, edged black, on either side of neck, broken at the nape. Mantle and back reddish-brown. Wing and wing coverts black, edged reddish-brown, tail black. Chin, throat and breast reddish-brown, darker on belly, undertail coverts dark brownish-black. <u>Immatures</u>: Crest brownish-black with whitish shaft streaks. Breast faintly barred dark brown and white, tipped whitish. Iris olive-brown, bill dull green at base of both mandibles. <u>Soft parts</u>: Iris dark brown. Bill black. Tarsus bluish-grey, soles yellow.

Habitat & Behaviour: Found singly, in pairs, sometimes in small groups, in old secondary and sub-montane forests. A common member of large bird waves, lurking deep in dense scrub along the edges of forest clearings, in clumps of bamboo or feeding in the middle and lower storeys, feeding down to almost ground level. It appears to prefer perching sideways onto vertical branches rather than horizontal ones, moving up and down the branch, or changing its point of view, in a series of short hops, cocking its head to one side to peer down at things below it. The body is first held vertically against the branch, then cross-wise, the crest bobbing and swaying with each movement.

<u>Food</u>: Eats large beetles, locustids, insects, grasshoppers, cockroaches, cicadas, wasps, millipedes.

<u>Voice & Calls</u>: It has a very loud and high-pitched alarm call, *ki-ki*, *ki-ki*, *ki-ki*, *ki-kih*. One bird makes the call, peering through gaps in the foliage, its body held horizontally, wagging its tail up and down two or three times and bobbing its head up and down, the head jerking with each note. The call is repeated, softly and in a lower key, by others in the group.

Breeding: Recorded between April and May in the Kelabit area.

<u>Local Distribution</u>: Recorded at Pa' Berang, Pa' Ramudu, Camp Five, Arur Tumuh and Bario.



Common Green Magpie Cissa chinensis

Other names: Hunting Cissa.

<u>Status & Range</u>: Resident. Found in India, China, Myanmar to Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 13" (33 cm). Sexes similar. Fore-crown bright yellow, crown leaf-green streaked with yellow, its long feathers overhanging the nape, face yellowish-green, with a broad black band from base of bill to encircle the head. Mantle and back green. Tail long, dirty leaf-green with a black sub-terminal band, tipped pale leaf-green. Wings reddish-brown, the inner feathers tipped pale leaf-green with black sub-terminal bands. Chin and throat pale yellowish-green. Breast and belly pale leaf-green, with darker green on vent and flanks. <u>Immatures</u>: Crown and forehead pale bluish-green, the mask brownish-black. Chin and throat pale bluish-green. <u>Soft parts</u>: Iris dark red, eye-ring dark red; tarsus and feet coral pink; bill coral pink.

Habitat & Behaviour: More often heard than seen, it is occurs singly or in small parties in the middle storey of montane and sub-montane forests to 1200 m. A regular member of bird waves, in the company of malkohas and laughingthrushes. Its call is a wide range of high-pitched and musical whistles, as well as harsh squawks, the bird leaning forward, waggling its rear end from side to side as it calls.

<u>Food</u>: Feeds on bees, also insects, beetles, dragonflies, locustids, lizards, seeds and fruit, small frogs and toads. Seen taking a bat, and raiding a nest to take young birds.

<u>Voice & Calls</u>: Its alarm call is a repeated *chu-chu-chu-twink*, the first three notes very harsh, the last high-pitched. Occasionally, only the first three notes are heard. Also heard calling, *wheee*, *chu-chu-chu-wheee*, the first and last notes being high-pitched piercing whistles.

<u>Breeding</u>: Recorded at Pa' Ramudu in February. Its nest, placed in dense undergrowth or bamboo in clearings or at the edge of clearing, is placed five to twenty above ground. One, twenty feet up in a node of bamboo, was large, slightly untidy and made of fine fibres.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Camp Five, Arur Tumuh and Bario.



Bornean Treepie Dendrocitta cinerascens

Other names: Malaysian Treepie.

Status & Range: Resident. An endemic species, found only in Borneo.

<u>Description</u>: Size 16 to 17" (40 to 43 cm). Sexes similar. Forehead, lores and ear-coverts rufous-brown, fore-crown and supercilium black, crown silvery-grey. Mantle grey washed with brown, rump and lower back pale grey. Tail ashy-grey with broad black tips, graduated and about 11" (28 cm) long. Wings black with a conspicuous white patch. Chin and throat rufous-brown, breast and belly pale chestnut, undertail coverts chestnut. Immatures: Darker and duller on face and underparts. Soft parts: Iris reddish-brown. Bill black. Tarsus black.

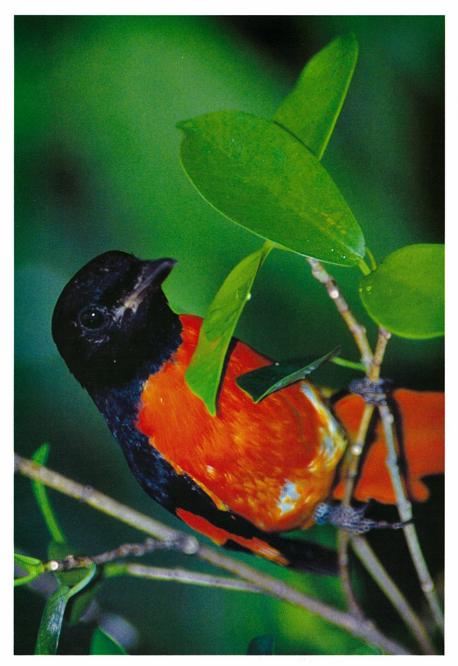
Habitat & Behaviour: Fairly common in montane and sub-montane forests, in the jungle as well as in secondary scrub along the edges of clearings and sandy kerangas forest in the Kelabit area, to 2400 m. A clumsy slow-moving bird, it is often seen as part of a bird wave. Mostly arboreal, they come to ground in search of food, keeping up a noisy conversation, of harsh metallic notes and melodious whistles, with others in the group. Its loud call is a familiar feature in the Kelabit Highlands, the bird usually seen perching upright high on the topmost point of tall trees, the tail held vertically downwards, calling with outstretched neck, the body taking a more horizontal position, its head bobbing up and forward with each note, as though hiccupping. Once seen waiting for a squirrel to break open a green cone, before chasing it away and eating the seed itself.

<u>Food</u>: Eats seeds, berries, cockroaches, beetles, grasshoppers, moths, caterpillars, small lizards and other insects, also eggs and nestlings.

<u>Voice & Calls</u>: It has a harsh call, *kaark*, *ku-yink*, sometimes only *ku-yink* but more often, only the crow-like *kaark* sound is heard. It duets noisily, making a wide assortment of sounds, mostly variations of *kaark* and *ku-yink*. Another call, also used as an alarm call, is a high-pitched cawing *kaark*, uttered three or four times, very loud and harsh.

<u>Breeding</u>: Its nest is a shallow cup of fine twigs, roots and woody stems, placed three to thirty feet up in tangled vegetation. It breeds in the Kelabit area between January and April.

Local Distribution: Found throughout the Kelabit area to 2400 m.



Scarlet Minivet Pericrocotus flammeus

Other names: Flame Minivet.

<u>Status & Range</u>: Resident. Found in India, China and the Philippines, to Myanmar, Thailand, West Malaysia, Sumatra, Java, Bali and Borneo.

<u>Description</u>: Size 7" (18 cm). Sexes differ. Head, mantle and back glossy blue-black. Rump and uppertail coverts scarlet. Tail feathers black at base, central pair completely black, the outer ones largely scarlet. Primaries black, the outer seven broadly edged scarlet, the secondaries having scarlet spots on the tips of the outer webs. Chin and throat glossy blue-black, remaining underparts scarlet, paler at vent. <u>Females</u>: Forecrown and stripe over the eye greenish-yellow. A dark stripe through the eye. Rest of head, mantle and back bluish-grey. Rump and uppertail coverts greenish-yellow. Wings and tail as in males, with red replaced by yellow. Whole underparts bright yellow. <u>Immatures</u>: Like females. <u>Soft parts</u>: Iris dark brown. Bill and feet black.

Habitat & Behaviour: Locally common in lowland primary, secondary and sub-montane forests, or at the edges of clearings, to 1800 m. Found in pairs or in small groups, usually as a members of a bird wave, flying high above the canopy or foraging in the middle and upper storeys of heavy jungle. A very bold bird, frequently perching openly on exposed twigs around clearings, or high up on tall trees, feeding on insects, moving along branches in a series of short hops or hovering to pick insects off nearby leaves. One was seen beating an insect to death on a branch before swallowing it.

Food: Eats insects, crickets, locustids, berries and caterpillars.

Voice & Calls: A high-pitched sigit, sigit, sigit.

Breeding: Found nesting in July. Usually builds its nest thirty to sixty feet up a tree in the fork of a branch. One was found built on the side of a rock deep in the forest, made of soft green moss, thickly padded with fibres.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Arur Tumuh, Lepo' Bunga and Bario.



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White-throated Fantail Rhipidura albicollis

Other names: White-throated Fantail Flycatcher.

<u>Status & Range</u>: Resident. Found in Pakistan, India, Myanmar, Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 6½" (17 cm). Sexes alike. Crown, lores, face and ear coverts deep black, with a narrow white eye-stripe. Remaining upperparts slaty-grey, washed brownish. Tail feathers dark grey, all except central pair broadly tipped with white. Chin black, throat and sides of neck white. Breast, belly, vent and undertail coverts dark slaty-grey. Wing and wing coverts dull brownish-black. <u>Immatures</u>: Rump, uppertail and wing coverts narrowly tipped rufous-brown, upperparts dull black, underparts dull black, edged with brown on breast and flanks. <u>Soft parts</u>: Iris dark brown. Bill black, pinkish at base of lower mandible. Tarsus dark blackish-brown.

Habitat & Behaviour: Common in sub-montane and higher montane forests, and at the edges of forest clearings, to 2300 m, also coming into scrub vegetation around gardens and cultivated areas. Seen in pairs or small parties, usually as a member of bird waves, foraging in the middle and lower canopy, frequently coming to ground. It rarely sits still, the head constantly cocked sideways, upwards and downwards, looking for its prey, flicking its wings and fanning its tail frequently as it flits energetically about in bushes and small trees, turning from side to side with jerky movements. Like most flycatchers, it habitually finds a high perch from which it darts out suddenly to catch an insect before returning to its perch again.

Food: Eats small insects.

<u>Voice & Calls</u>: Its song consists of four high-pitched and almost inaudible notes, *chip, chip-chip-cheep*, the middle notes short, the last one longer and on an upward scale.

<u>Breeding</u>: One nest was a pocket on side of steep mossy bank, made of coarse dark moss with an inner layer of pale fine grasses. Breeds in the Kelabit area between October and December.

<u>Local Distribution</u>: Recorded at Pa' Di'it, Arur Buluh Betung, Lepo' Bunga and Rock Garden on the Murud trail.



Pied Fantail Rhipidura javanica

© Amar-Singh HSS

Pied Fantail Rhipidura javanica

Other names: Malaysian Fantail, Pied Fantail Flycatcher.

<u>Status & Range</u>: Resident. Found in S Myanmar, Thailand, West Malaysia, Sumatra and Borneo to Java, Bali and the Philippines

<u>Description</u>: Size 7" (17 cm). Sexes alike. Head and face black, with a short white concealed eye-stripe. Upperparts sooty black, tinged rusty-brown on back and scapulars and uppertail coverts. Tail black, broadly tipped white on outer feathers, the central pair with only a faint white tip. Wings dull black, the greater coverts thinly edged buffy-rufous. Point of chin black, rest of chin, throat and sides of head white. Broad greyish-black breast band. Belly white, washed with grey, undertail coverts and flanks white washed with pale buffy-brown. <u>Immatures</u>: Paler, rump and uppertail coverts rusty-brown, wing coverts edged rusty, breast band smaller, the feathers tipped white. <u>Soft Parts</u>: Iris dark brown. Bill black. Tarsus black, soles buffy.

Habitat & Behaviour: Found in gardens, orchards, grazing grounds near padi fields and secondary scrub around villages and cultivated areas, but not usually in tall jungle, up to 1200 m. Seen singly or in pairs in lower storey vegetation and scrub vegetation, often on the ground. A sprightly member of bird waves, also tame and inquisitive, flitting energetically from branch to branch, turning from side to side with jerky movements, flicking its broad wings, cocking and fanning open its long broad tail, frequently making aerial sorties after flying insects. Fond on bathing, and often seen around small shallow streams and pools.

Food: Eats mainly small insects caught on the wing. Often seen feeding on the ground

<u>Voice & Calls</u>: Has a four-syllabled squeaking cry, a pleasant chuckling note and a short trilling song.

Breeding: The nest, a small and well-built cup made of fine fibres and neatly covered with cobwebs, often with fibres trailing off at the bottom, is built among broken fronds in nipah marsh, in loops of creepers or the forks of small horizontal branches about two to five feet above ground. Lays two eggs. Breeds in Bario between December and February.

Local Distribution: Recorded at Pa' Ramudu, Pa' Lungan and Bario.



Spotted Fantail Rhipidura perlata

Other names: Spotted Fantail, Pearlated Flycatcher.

<u>Status & Range</u>: Resident. Found in Thailand, West Malaysia, Sumatra, Borneo and Java.

<u>Description</u>: Size 6 to 7" (16 to 18 cm). Sexes alike. Upperparts black, darker on head and rump. Narrow white stripe from above and behind eye to top of bill. Outer three pairs of tail feathers tipped white, broader on outermost feather. Chin, throat and breast dull black, spotted with white, finely on chin and throat, more heavily on the breast. Belly, vent and undertail coverts white suffused with grey. <u>Immatures</u>: Browner, with rufous tinge to flight feathers, feathers of chin and throat with narrow white streaks. <u>Soft parts</u>: Iris dark brown. Bill black, inside mouth black. Tarsus black, soles dull yellow.

Habitat & Behaviour: Common in old secondary, primary and sub-montane forests, or at the edges of forest clearings, to 1200 m, also in gardens and cultivated areas. It rarely sits still, the head constantly cocked sideways, upwards and downwards, looking for its prey, flicking its wings and fanning its tail frequently. Flits energetically from branch to branch, turning from side to side with jerky movements, suddenly darting out to catch an insect. A sprightly member of large mixed flocks, foraging in the middle and lower canopies, rarely coming to the ground.

Food: Eats small insects and small spiders.

<u>Voice & Calls</u>: Often plays the sentinel for bird waves, a loud ringing *chier-chew-chew* that alerts the other birds of imminent danger.

Breeding: The nest is a small cup, so small that the sitting bird overflows the nest. Made of fine fibres and neatly covered with cobwebs, it is built on loops of creepers or the forks of small horizontal branches as little as two to five feet above ground. The birds are very aggressive near its nest, flying at and buzzing predators, even humans, that approach the nest, bobbing and swaying on nearby branches in between sallies, cocking and fanning its tail, and making alarm calls. Lays one or two eggs. Breeds at Bario between June and August.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Lungan, Arur Tumuh, Camp Five and Bario.



Ashy Drongo Dicrurus leucophaeus

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Ashy Drongo Dicrurus leucophaeus

Other Names: Grey Drongo.

<u>Status & Range</u>: Resident. Found in India, China, Myanmar and the Philippines to Thailand, West Malaysia, Sumatra, Java, Bali and Borneo.

<u>Description</u>: Size 9½" (24 cm). Sexes alike. Crown, back, deeply forked tail, flight feathers and wing coverts grey with blue gloss. Lores boldly marked with white, with small tuft of black at base of upper bill. Face and ear-coverts pale grey. Chin, throat, flanks and vent pale grey, breast and belly bluish-grey. Undertail coverts pale grey with whitish tips. <u>Immatures</u>: Duller, white lores indistinct, underparts warmer grey. <u>Soft parts</u>: Iris red. Bill black, notched and hooked at tip. Tarsus black.

Habitat & Behaviour: Common in sub-montane and montane forests, and on the edges of clearings to 1600 m, often perched on exposed branches on top of bare trees, or stumps and garden posts around longhouses. It sits alert and motionless for a long time on a perch, piking upwards in a steep climb to catch an insect, then diving almost vertically downwards, levelling off in a long swooping glide to return to the same perch, then quickly hopping on the spot to face the way it came. It also comes down to the ground, sitting on the ground, waiting and watching, then pouncing on its prey. It hawks late into the evening until just before nightfall, and bathes in small stream by clearings.

<u>Food</u>: Eats wasps, dragonflies, beetles, ants, grasshoppers, bees, small birds and locustids.

<u>Voice & Calls</u>: A shrill mewing *kieew* and a high-pitched mewing call, *vit-veeah* or *vi-vi-veeah*, occasionally just *vit*. Also a harsh loud chattering complaint when a hawk is sighted.

Breeding: The nest is a compact well-made little cup, placed about twenty feet up a tree in a clearing, slung between two small forks almost at the tip of a branch, the nest exterior decorated with lichensand moss. Breeds between February and April. Both sexes incubate eggs, and vigorously defend the area against other birds, even buzzing humans near its nest.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Arur Tumuh, Lepo' Bunga and Bario.



Spangled Drongo Dicrurus hottentottus

© slim sreedharan

Spangled Drongo Dicrurus hottentottus

Other names: Hair-crested Drongo.

<u>Status & Range</u>: Resident. Found in India, Myanmar and China down to the Philippines, Thailand, West Malaysia, Borneo, Sumatra, Java and Bali.

<u>Description</u>: Size 10" (26 cm). Sexes alike. Head, face and back deep blue-black with metallic blue-green gloss, and fine hairs on its forehead. Wings, wing coverts, tail and uppertail coverts black with metallic blue-green gloss. Underparts black, pectoral band glossy metallic blue-black. <u>Immatures</u>: Similar, with iris dark brown. <u>Soft parts</u>: Iris reddish-brown. Tarsus black. Bill black.

Habitat & Behaviour: Fairly common in open lower montane forests, especially in and around the edges of clearings to 1500 m. Found singly or in pairs, sometimes in small group, often perching high up on bare branches of dead trees, usually under the cover of the jungle or along the edges of clearings, rarely in the clearing itself. Seen perching vertically against a tree trunk, tearing out bits of bark to get at some insects, and drinking from pool of water collected in a large leaf. A bold aggressive bird, it holds a fairly large territory and vigorously defends it, more so when breeding. It chases away other drongos, and once perched within ten feet of a Serpent Eagle to protest its presence but was completely ignored. It fans open its tail when alert.

<u>Food</u>: Eats large hornets, ants, wasps, cockchafers, locustids, crickets, cicadas, beetles, lizards.

<u>Voice & Calls</u>: A loud nasal *tik veeyouk*, its head and bill raised up and forward, the wings flickering and the tail cocked up and fanned or wagged up and down with each call. Other notes include a high-pitched *tik-tik-tick* and a sharp whistle, *wheet*, *wheet*.

Breeding: Nesting has been recorded in the Kelabit area between March and June. One nest, as much as sixty feet up a tall tree, slung between two forks at the end of a thin branch, was very flimsy, thinly made of roots and twigs, fine fibres being used to attach the nest to the branch. When the bird was not sitting, the eggs can be seen through it.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Pa' Gelawat, Arur Buluh Betung, Arur Tumuh, Camp Five and Bario.



Asian Paradise-flycatcher Terpsiphone paradisi

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Asian Paradise-flycatcher Terpsiphone paradisi

Other Names: Paradise Flycatcher.

<u>Status & Range</u>: Resident. Found from the USSR east to China and Korea, south to mainland SE Asia and the Sunda Islands.

<u>Description</u>: Size 10" (25 cm). Sexes differ. Head, face, chin and throat black with blue-green reflections, its erectile crest overhanging on nape. Back and tail white, with black shaft streaks. Wings black edged with white, wing coverts white with dark central streaks. Breast and undertail coverts white with grey shaft streaks. Central tail feathers elongated by 9" (23 cm) or more. <u>Females</u>: Smaller. Head, face and nape blackish-grey, with some gloss on crown. Upperparts rufous with black shaft streaks. Chin, throat and upper breast ashy grey, belly white, washed with rufous and grey, undertail coverts rufous-buff. Tail feathers not elongated <u>Immatures</u>: Like females but much duller. <u>Soft parts</u>: Iris dark brown. Orbital skin wattled, cobalt blue. Bill blue, darker at tip. Tarsus slaty-blue.

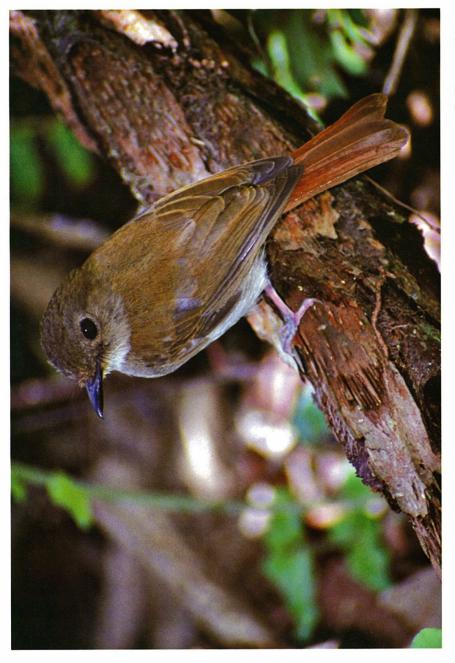
Habitat & Behaviour: Seen singly, and fairly common, in sub-montane forests and around the edges of clearings to 1200 m. More often heard than seen and difficult to detect when perched. In flight, the male's long white tail streaming in waves behind it is unmistakeable. Flies very fast, and hawks for food from a perch to which it returns after each sally, often flicking its wings and cocking up its tail when perched. It is sometimes seen feeding on the ground.

Food: Eats small insects and bees.

<u>Voice & Calls</u>: A loud and high-pitched musical call of six to twelve rapid notes, *whi-whi-whi-whi-whi-whi* and its harsh alarm call, a loud *wauk*.

Breeding: The nest, a deep cup attached at base to a fork 8 to 10 feet up on a branch of a small tree, is built of bark, fine roots and moss, decorated externally with green moss, down and cobwebs. The inner cup is lined with the fine fibres and roots. During courtship, the male makes short dancing displays before its mate. Both sexes share nest building and incubation duties. It lays two to three eggs and the young leave the nest about 14 days after hatching.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Arur Buluh Betung, Camp Five and Bario.



Rufous-tailed Jungle Flycatcher Rhinomyias ruficauda

Other names: Grev-breasted Jungle Flycatcher.

Status & Range: Resident. Found in the Philippines and Borneo.

Description: Size 5½" (14 cm). Sexes alike. Crown dark olive-brown, ear coverts, face and lores paler and slightly greyer. Rictal bristles very distinct. Very indistinct pale supercilium. Mantle and back brownish-olive. tail and uppertail coverts bright chestnut. Wing and wing coverts brown, edged reddish-brown. Chin and throat creamy white. Incomplete very pale grey breast band, darker greyish-olive on sides of body and flanks. Lower breast and belly creamy-white, under-surface of tail reddish-brown. Immatures: Juvenile birds have a spotted look, similar to that of many young thrushes and flycatchers. The feathers of the crown, upperparts and underparts are edged with black, giving it a scalloped look. Older birds, before moulting into adult plumage, often show residual traces of this juvenile plumage. Soft Parts: Iris dark brown. Bill black. Tarsus greyish-pink, bluish in front and on the joints.

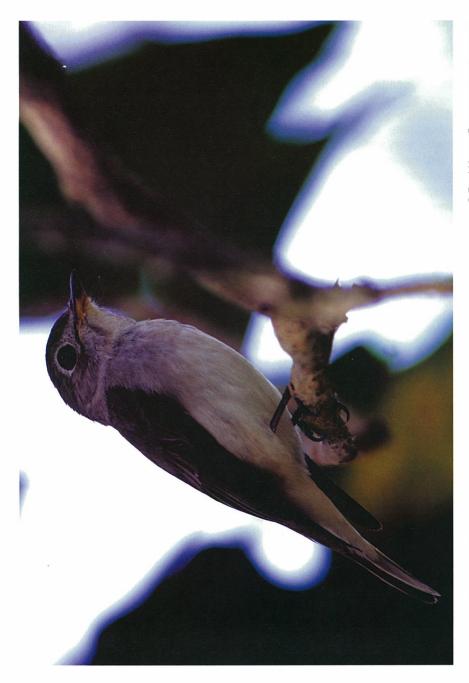
Habitat & Behaviour: Found in sub-montane and montane forests, also at the edges of forest clearings to 1400 m. A very shy and rarely seen bird. It perches quietly on the lower branches of tall trees or on logs close to the ground, sitting almost motionless, moving just its head about as it looks for prey. It regularly flicks its wings and tail when on the alert. Often seen bathing or drinking at small trickling rivulets.

Food: Eats insects and spiders.

<u>Voice & Calls</u>: Generally a silent bird. It has a very high-pitched trilling call, an explosive series of churring sounds, and a scolding *chsk*.

Breeding: Found breeding at Arur Tumuh (May), Pa' Di'it (October) and at Arur Buluh Betung (June). Its nesting habits not known.

<u>Local Distribution</u>: Recorded at Pa' Di'it, Arur Tumuh, Camp Five and Bario.



Asian Brown Flycatcher Muscicapa dauurica

Other names: Brown Flycatcher.

<u>Status & Range</u>: Breeds in Siberia east to China and Japan, wintering in SE Asia and the Philippines. A passage migrant and winter visitor found in Sarawak between late September to April.

<u>Description</u>: Size 5" (13 cm). Sexes alike. Large eyes, distinct creamywhite eye-ring, lores whitish. Upperparts greyish-brown, wings and tail darker, the wing coverts and secondaries edged pale ashy-brown. Throat white, with pale grey breast band, the remaining underparts whitish. Tail square, with no white on it. <u>Immatures</u>: Generally browner, with greater coverts broadly edged and tipped pale buff, forming distinct wing-bar. <u>Soft parts</u>: Iris dark brown. Bill black, orange at base of lower mandible, and completely triangular when seen from below. Tarsus brownish-black.

Habitat & Behaviour: Found in the middle and upper storeys of primary and sub-montane forests, as well as in secondary jungle at the edges of clearings, streams, cultivated areas, and in gardens, to 1300 m. A solitary bird with an upright posture, it has a weak and fluttering flight. It perches on high vantage points, about sixty feet above ground, on broken or dead branches, keeping under or close to cover. Sits perched for long periods on a bare perch, flicking its wings, now and again making aerial sallies after insects. It returns to the same perch each time, and regularly shivers its tail when settling onto its perch again. It is a common member of large mixed flocks that actively forage in the upper canopy, often in the company of other flycatchers.

<u>Food</u>: Feeds largely on insects, beetles, ladybirds and flies, either caught on the wing or gleaned from browsing through foliage.

<u>Voice & Calls</u>: A weak trilling sub-song and three or four *chiks* uttered in rapid succession, but generally silent.

Breeding: It does not breed in Sarawak.

Local Distribution: Recorded at Pa' Ramudu, Arur Tumuh and Bario.



Blue-and-white Flycatcher Cyanoptila cyanomelana

© slim sreedharan

Blue-and-white Flycatcher Cyanoptila cyanomelana

Other names: Japanese Blue Flycatcher.

<u>Status & Range</u>: Breeds in Russia, China, Japan and Korea, winters down to Thailand, West Malaysia, the Greater Sundas, Hong Kong and the Philippines. A passage migrant and winter visitor found in Sarawak between late September to April.

<u>Description:</u> Size 6" (16 cm). Sexes differ. <u>Males:</u> Crown bright glistening blue, darker on nape. Lores, face and cheeks deep black, partly glossy. Back deep navy blue, uppertail coverts brighter blue. Basal half of all tail feathers, except central pair, white. Scapulars bright blue, wing feathers edged blue. Chin, throat and breast deep black, partly glossy, sharply defined from white abdomen and vent. <u>Females:</u> Upperparts olive-brown, wing coverts edged olive-brown. Indistinct buffy eye-ring, lores and forehead tinged rusty, tail reddish-brown, darker at tip. Chin, throat and breast buffy-brown, with a bright buff central patch from down to the throat. Belly and undertail coverts greyish-white. <u>Immatures:</u> Like females. Some young males have a little blue on mantle, rump, wings and tail. <u>Soft Parts:</u> Iris dark brown. Bill black above, blackish-brown below, paler at base of lower mandible. Tarsus black, soles pale buff.

Habitat & Behaviour: Found in primary, sub-montane and secondary scrub forests, to 1500 m, and in mangrove swamps, coastal scrub and clearings during passage. Seen singly, perched on exposed dead leafless branches or high up in the canopy of tall trees. They have also been found feeding on small bushes and trees, even close to ground level, in open pasture at Pa' Ramudu. A common member of bird waves, it sits very still for long periods of time, moving only the head as it searches for prey, making occasional sallies after prey, then returning to the same perch. Flicks its wings and tail when alert or alarmed, cocking the tail now and again.

Food: Eats insects, beetles, bees and, frequently, fruit and berries.

Voice & Calls: Usually silent in winter grounds.

Breeding: Does not breed in our area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Camp Five, Arur Tumuh and Bario.



Grey-headed Canary Flycatcher Culicicapa ceylonensis

Other Names: Grey-headed Flycatcher.

<u>Status & Range</u>: Resident. Found in Pakistan, India, S China, Myanmar, Thailand, West Malaysia, Sumatra, Borneo, Java and Bali.

<u>Description</u>: Size 4½" (11 to 12 cm). Sexes alike. Head and face dark greyish-black. Upperparts dark yellowish-green, yellower on uppertail coverts and rump. Narrow pale greyish eye-ring. Chin, throat and breast dark bluish-grey. Wings and tail blackish edged greenish-yellow. Lower breast and belly deep sulphur-yellow, undertail coverts brighter, flanks washed with olive. <u>Immatures</u>: Slightly duller and paler, with greenish wash on chin, throat and breast. <u>Soft parts</u>: Iris dark brown. Bill black above, fleshy at base of lower mandible. Tarsus pinkish-horn.

Habitat & Behaviour: Found singly, keeping to middle and lower stories of primary lowland, sub-montane and mossy forests to 1700 m, foraging from forty feet downwards. Seen in twos or threes, as active members of bird waves in deep jungle or forest clearings, occasionally in open country and orchards. A bold bird, actively flitting about from branch to branch as it hawks for insects, acrobatically turning this way and that on its perch, cocking and fanning its tail, making agile energetic dashes after insects, then swooping back to the same perch with an airy flight, all the while uttering a low twittering note. Except when hunting for insects, mainly on the wing, it tends to keep to the shelter of foliage.

Food: Eats tiny winged insects, beetles and small wasps.

<u>Voice & Calls</u>: It has a thin musical five-note whistle, *wi-wi-whi-whi-wi*, the first and third notes on an upward scale, the bird sitting upright, head up, and shivering its tail. Its alarm call is a series of high-pitched *peeps*.

Breeding: The nest is integrated into moss-covered trees or rocks, from near ground level to 40 feet. The nest, usually a simple half-cup of moss and lichen, is made of material identical to its surrounds, making it almost invisible. One nest, found in a dangling piece of moss, was a pocket in the moss itself. It lays two to three to four glossy white eggs.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Di'it, and Arur Tumuh.



Siberian Blue Robin Luscinia cyane

Other names: None.

<u>Status & Range</u>: Breeds in Siberia, China, Korea and Japan, winter visitor to SE Asia. Found in Sarawak between late August to April or early May.

<u>Description</u>: Size 5½" (14 cm). Sexes differ. <u>Males</u>: Upperparts deep blue, brighter on crown and rump. Black around eye, lores and chin. Wing coverts dark blue, wings edged pale greyish-blue. Tail black, edged slaty-blue. Underparts, vent and undertail coverts white, grading to slaty-blue on sides of breast, greyer on flanks, dark slaty-blue on thighs. <u>Females</u>: Upperparts olive-brown with slaty wash and light scaling on head. Rump, tail and uppertail coverts tinged dark blue. Buffy eye-ring, no white on tail. Chin pale buff, darker on throat, breast buffish mottled with grey-brown, belly pale buff, flanks mottled olive-brown, vent pure white. <u>Immatures</u>: Young females like adult females, young males with dull blue on back, brighter on uppertail coverts, its wing coverts tinged bluish and edged with buff. <u>Soft Parts</u>: Iris dark brown. Bill brownish-black above, pale pinkish-buff at base of lower mandible. Tarsus pale pinkish-horn.

Habitat & Behaviour: Found singly in swampy sub-montane forests, dense vegetation in damp valleys and montane mossy forest to 1500 m. A very secretive bird, rarely seen, but probably more common than records would suggest. Feeds on or near ground level, usually perching under cover of small shrubs and overhanging leaves, fallen logs and branches, making short sallies after insects or hovering to reach berries near small streams. Almost entirely terrestrial in its habitat, is never seen on high trees and, only occasionally, on bushes. An active and restless bird, it hops very quickly for two or three paces, then stops, wagging its tail up and down, the head held low, the body more or less horizontal.

<u>Food</u>: Eats grasshoppers, small insects and berries.

<u>Voice & Calls</u>: Generally silent, giving an occasional soft *wheet* and a sharp *tick*, *tick* as it flies away when disturbed.

Breeding: Does not breed in our area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa Di'it Pa', Arur Tumuh, Pa' Berang and Bario.



Oriental Magpie Robin Copsychus saularis

Other names: Dyal, Magpie Robin.

<u>Status & Range</u>: Common resident. Found in India, China and the Philippines, south to West Malaysia, Singapore and the Greater Sundas.

<u>Description</u>: Size 8 to 9" (20 to 22 cm). Sexes differ. <u>Males</u>: Upperparts glossy black, with a large white patch on wings. Throat and breast glossy black, abdomen and vent white. Tail black, with white on the outer tail feathers. <u>Females</u>: Similar, with dark dull grey on the throat and breast. <u>Immatures</u>: Like females but greyer. Juvenile birds have upperparts dull brownish-black, chin, throat and breast buffy-white marked with blackish, giving spotted appearance. <u>Soft parts</u>: Iris dark brown. Bill black, inside mouth black in adults, yellowish in immatures. Tarsus black, soles buff.

<u>Habitat & Behaviour</u>: Found singly or in pairs, in secondary scrub around cultivated areas, grassy areas and gardens around longhouses to 1200 m. Generally not found in the forests but ventures into dense undergrowth at the edges of clearings. Always fans and cocks its tail, flicking its wings at the same time. Quite tame and approachable but fiercely territorial, ready to chase away others of its species. A popular caged song bird.

<u>Food</u>: Mainly insectivorous, also takes spiders and worms. Very active at termite swarms, hawking after winged insects erupting from a nest.

<u>Voice & Calls</u>: Sings from fully exposed perches at dawn and just before sunset, sometimes even when in flight, a short and sweet melodic whistle interspersed with occasional harsh churrs. Keeps in contact with its mate using a drawn-out high-pitched *eeee-up*, its wings drooping low, the tail cocking up with each call. It has a wide range of other musical calls.

Breeding: Builds a loose shallow cup of roots, grasses, feathers and fine fibres, with little or no lining, usually under the eaves of houses and sheds, hidden in a thick bush or a hollow in a rotting tree stump. Lays three to four eggs, green or pale blue and heavily blotched with reddish-brown. Often several singing males can be heard, each proclaiming and fiercely defending its breeding territory. Breeds at Bario in June, at Pa' Ramudu in February.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Lungan, Pa' Ukat, Ba Kelalan and Bario.



White-rumped Shama Copsychus malabaricus

© slim sreedharan

White-rumped Shama Copsychus malabaricus

Other names: Shama.

<u>Status & Range</u>: Resident. Found from India and China south to Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 8 to 10" (21 to 26 cm) including long tail. Sexes similar. Head, back, chin, throat and upper breast black with bluish gloss. Rump and uppertail coverts white. Wing black with blue gloss. Long graduated black tail, with white outer feathers. Lower breast, abdomen and vent deep chestnut. <u>Females</u>: Smaller, less glossy and with a shorter tail. <u>Immatures</u>: First-year birds often have some residual juvenile plumage, the lesser and greater coverts edged dark rufous-brown. Chin, throat and old secondaries tinged with brownish. <u>Soft Parts</u>: Iris dark brown. Bill black. Tarsus pinkish-horn, soles pinkish-buff.

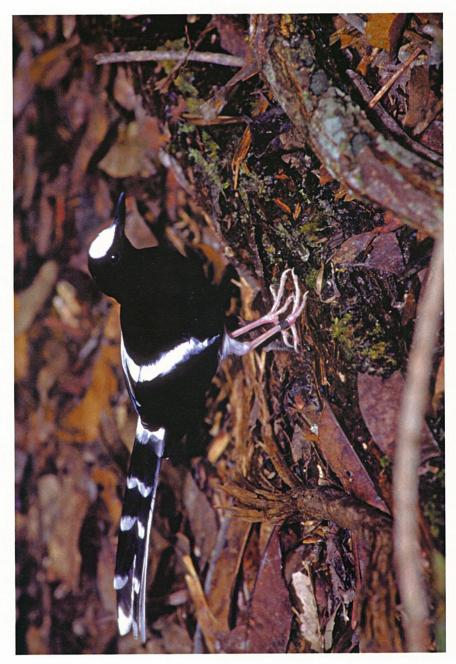
Habitat & Behaviour: Encountered singly, usually in forests, particularly in dense vegetation in primary and secondary forests, up to 1200 m. Also near houses at the edges of clearings but rarely in the open. Instead, it makes hurried forays into the open, chasing after insects, then retreating to safety behind and underneath buildings, or in a nearby patch of dense vegetation. It commonly advertises its presence loudly with a full-throated song, and is easily provoked by anyone whistling in its territory, the bird answering loudly as it comes closer to investigate the intruder. It is very thrush-like, as it walks and hops about when feeding on the ground, the flight being short and rapid, the bird flicking and cocking its tail as it lands.

Food: Eats ants, worms, insects, grasshoppers and centipedes.

<u>Voice & Calls</u>: Probably one of the finest songsters in the world, its wide repertoire and the depth of its rich voice being a source of great delight every morning and late in the afternoons. Sadly, this makes it a favourite cage-bird and, as a result, is under threat. It also has a harsh magpie-like chatter, and a soft sub-song that can be heard at night.

Breeding: Nests in a hole four to ten feet up a tree, or in bamboo clumps, the nest made of twigs, fibres, rootlets and dead leaves. Lays two to three pale greenish eggs. Breeds at Pa' Ramudu and Camp Five in May.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Arur Tumuh, Camp Five and Bario.



White-crowned Forktail Enicurus leschenaulti

Other names: None.

<u>Status & Range</u>: Resident. Found from India, China, Myanmar, Thailand and West Malaysia to Sumatra, Borneo, Java and Bali.

<u>Description</u>: Size 8½ to 9½" (22 to 24 cm). Sexes alike. Head, face and upper back black. Forehead and fore-crown white, the feathers forward-curling to form a tuft. Lower back, rump and uppertail coverts white. Wings black, the greater coverts broadly edged white, forming a wing bar. Chin, throat and breast black. Belly and undertail coverts white. Outer tail feathers largely white, the rest tipped with white. <u>Immatures</u>: Face and head browner, chin, throat and breast blackish-brown, greater coverts tipped dirty-buff. <u>Soft Parts</u>: Iris dark brown. Bill black. Tarsus pale pink, feet fleshy-white.

<u>Habitat & Behaviour</u>: Found in clear-running well-shaded forest streams in primary and sub-montane forests to 1400 m. Often seen walking along at the water's edges, perched on rocks or along paths close to water. When disturbed, it flies ahead a fast dipping flight for a short distance, repeating the process a few times until, at the edge of its territory, it veers off into the forest and returns to the starting point. Seen singly or in pairs, sometimes perched on low branches, walking sedately over stones or running quickly after insects.

<u>Food</u>: Eats insects, black beetles, water crickets and caterpillars, much of it caught in or near the stream.

<u>Voice & Calls</u>: A loud clear double-whistle, *hewtee*, *hewtee*, *hewtee*, when in flight.

Breeding: Nests near or a short distance away from the banks of streams, between boulders or niches in steep banks overhung with vegetation. It makes a loosely-made nest of moss and dead leaves, lined with fibres and leaf skeletons. Both partners share duties in nest building, incubation and care of young. Usually lays two white eggs. Breeding has been recorded at Camp Five (May), Arur Buluh Betung (June) and Bario (March).

<u>Local Distribution</u>: Recorded at Pa Di'it, Arur Tumuh, Arur Buluh Betung, Camp Five and Bario.



Velvet-fronted Nuthatch Sitta frontalis

Other names: None.

<u>Status & Range</u>: Resident. Found in India, Myanmar, Thailand and West Malaysia to Sumatra, Borneo and the Philippines.

<u>Description</u>: Size 4½ (12 cm). Sexes differ. Upperparts dark navy blue, paler on crown and nape. Forehead and lores deep velvety black, narrow black stripe from above eye to nape, face vinous-blue, ear coverts darker. Wing and wing coverts black, edged dark blue. Tail black, edged blue and tipped bluish-grey, uppertail coverts dark blue. Chin whitish, more buffy on throat. Breast, belly and flanks vinous, streaked bluish-purple. <u>Females</u>: Like males, without the black stripe above the eyes. <u>Immatures</u>: Chin and throat duller, undertail coverts tinged rufous, black on forehead and lores reduced and not as pure black as in adults, iris brown. <u>Soft Parts</u>: Iris greenish-yellow, bare orbital skin reddish-orange. Bill red. Tarsus red.

Habitat & Behaviour: Found singly or in pairs, occasionally in small groups of five or six, in primary, secondary and sub-montane forests to 2300 m. A confident bird that allows close approach, it is a common member of bird waves, usually in the company of sunbirds, tailorbirds and ioras, feeding in the middle and lower storeys at the edges of forest clearings but not deep in the jungle. It is very agile, moving jerkily up or down tree trunks, even walking upside down or sideways, searching crevices and cracks in the bark for insects and their larvae, pillaging spiders' webs, even hammering away at the bark like a woodpecker. It makes short sallies after insects and regularly takes flying termites.

<u>Food</u>: Eats small insects, insect larvae, white grubs and ants.

<u>Voice & Calls</u>: Makes a soft and high-pitched *chi-chi-chi-chi-chi-chit* when in flight.

<u>Breeding</u>: It nests in small holes in a branch or tree trunk, often old nests deserted by barbets or woodpeckers, located two to twenty metres above ground. The nesting chamber is lined with moss and feathers.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Arur Buluh Betung, Church Camp, Lepo' Bunga, Arur Tumuh, Camp Five and Bario.



Barn Swallow Hirundo rustica

Other names: Swallow, Common Swallow, European Swallow, Eurasian Swallow.

<u>Status & Range</u>: Found nearly worldwide, its wintering range extends over most of S and SE Asia. Common in Sarawak between July and March, the earliest date being 8th July.

<u>Description</u>: Size 5½" (14 cm) excluding outer tail feathers that can extend a further 5" in older birds. Sexes similar. Head, back and rump glossy metallic blue. Tail deeply forked, the feathers black with a bluish gloss, all but the central pair with large round white spots, larger and broader on the outermost pair. Forehead, chin and throat deep chestnut. An incomplete black pectoral band, broken in the centre. Rest of underparts white, tinged rufous. <u>Females</u>: Duller above, whiter below, outer tail feathers shorter. <u>Immatures</u>: Upperparts less glossy and tinged brown; breast band dark brown; outer tail feathers not elongated; chestnut on forehead and throat much paler. Soft parts: Iris dark brown. Bill and tarsus black.

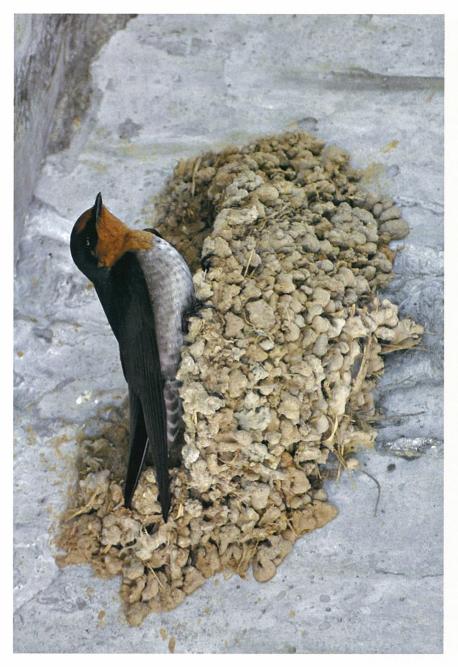
Habitat & Behaviour: Commonly seen flying overhead in open country to 1100 m. In coastal areas and islands, newly arrived birds are often seen perched on fishing stakes, tree stumps or beachside debris, seldom on the ground. They also perch on telephone and electric wires along roadsides. Very gregarious during winter. In small towns, they roost communally in their thousands usually in mixed flocks, arriving just before sunset, filling the town with their twittering calls, hawking and circling overhead, jostling and quarrelling as they hover for roosting space on telephone and electric cables. Its flight is very graceful, effortlessly twisting and turning as it flies low over ground and water, picking up insects over the water, sometimes off vegetation and off the ground. To drink, they skim low over the surface to scoop up water with open bills. They rarely settle on the ground except when collecting mud to build their nests with.

Food: Feeds mostly on midges, gnats and other insects taken on the wing.

Voice & Calls: Usually a twittering tswit, tswit, tswit when on the wing.

Breeding: Does not breed in Sarawak.

<u>Local Distribution</u>: Found throughout the Kelabit area in winter.



Pacific Swallow Hirundo tahitica

Other names: Hill Swallow.

<u>Status & Range</u>: Resident. Found from India east to New Guinea, Fiji and Tonga, south to Thailand, West Malaysia and the Sundas.

<u>Description</u>: Size 5½" (14 cm). Sexes alike. Upperparts, wing, rump and tail glossy blue-black. Small reddish-brown patch on forehead, extending in a narrow V-shaped line above each eye. Chin, throat and upper breast reddish-brown, merging with greyer breast band. Belly ashy-brown, more olive on flanks and undertail coverts. Tail short, slightly forked, with dirty-white spot on each feather near its tip. <u>Immatures</u>: Upperparts dull black tinged brown with little or no gloss. Reddish-brown patch on forehead paler and ill-defined, chin and throat pale rusty, flanks and belly faintly barred. Soft parts: Iris dark brown. Bill black. Tarsus brownish-black.

Habitat & Behaviour: Very agile bird, able to fly extremely fast, avoiding obstacles in its path by changing direction at the very last instant. Often hawks over water, skimming the surface to take a drink or hovering to pick up insects. Small parties of them frequently huddle together on telephone wires or the bare branches of dead trees, and large communal roosts, in the company of Barn Swallows *Hirundo tahitica*, are a common sight in many small towns, the birds spaced out at regular intervals on telephone and electric cables. It prefers the coastal areas but also occurs in open country, in towns, padi fields and forest clearings up to 1200 m. The birds come to the ground by roadside puddles to collect mud which they use to line their nests with

<u>Food</u>: Feeds on insects caught on the wing.

<u>Voice & Calls</u>: Utters a soft twitter in flight. A louder note, made by birds attacking intruders at its nest, has been recorded.

Breeding: Nests throughout the year, building a shallow half-cup of mud pellets and straw. Attached in fully exposed locations against the walls of office buildings or under the eaves and verandahs of houses, the nest is lined with grasses, straw and feathers. Fledglings are fed in mid-air, both the young bird and its parent hovering briefly to transfer the food.

<u>Local Distribution</u>: Found at Pa' Ramudu, Pa' Da'lih, Camp Five, Long Sabai and Bario.



Straw-headed Bulbul Pycnonotus zeylanicus

Other names: Yellow-crowned Bulbul.

<u>Status & Range</u>: Resident. Found in West Malaysia, Singapore, Sumatra and Borneo. Listed in Red Data Book: Vulnerable Category.

<u>Description</u>: Size 11" (28 cm). Sexes similar. Upperparts olive-brown, with narrow white shaft streaks, rump olive-green. Short erectile feathers of fore-crown, crown and sides of head deep straw yellow, browner on the nape. A black line through eyes and a broad black malar stripe. Wings and tail edged with olive-green. Throat white, breast greyish-brown mottled with white, belly whitish, flanks brownish with faint streaks, undertail coverts buffy-yellow. <u>Immatures</u>: Crown feathers dirty brown, the pale shaft streaks on the back not very clear, greater coverts brownish with pale tips, not olive-green. <u>Soft parts</u>: Iris red. Bill and tarsus black.

Habitat & Behaviour: A shy and inconspicuous bird, it is more often heard than seen, along the edges of rivers, streams, marshes, reed beds or swamps in primary and secondary forests, to 1200 m, even close to plantations and cultivated areas adjoining rivers. Once very common in the lowlands, but due to habitat destruction, and its popularity as a cage bird, it is less often heard or seen. A sedentary bird, found in pairs or small family parties of five to six birds, usually never far from water, keeping to the bushes and smaller trees, rarely coming to the ground. When excited, it erects the short feathers on its fore-crown. Its loud, melodious and varied song, echoing along a forested riverbank very early at dawn and in the evening, like the call of the gibbon, is one of the most memorable features of any jungle experience in Sarawak.

<u>Food</u>: Primarily frugivorous, feeding mainly on fruit and berries, but also eats small seeds, riverine snails, beetles, carpenter bees and caddis flies.

 $\underline{\text{Voice \& Calls}}\textsc{:}$ A rich, clear and melodious warble, which makes it a much favoured cage bird.

<u>Breeding</u>: Breeds regularly in the Kelabit area, its nests made of grasses and weeds placed 5 to 15 feet above ground.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Umor, Pa' Lungan, Camp Five and Long Sabai.



Black-headed Bulbul Pycnonotus atriceps

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Black-headed Bulbul Pycnonotus atriceps

Other names: None.

Status & Range: Resident. Found in India, China and the Philippines to Myanmar, Thailand, West Malaysia and the Greater Sundas.

<u>Description</u>: Size 6" (15 cm). Sexes alike. Head and throat glossy black. Upperparts olive-yellow, greener on mantle, brighter on rump and uppertail coverts. Tail olive-yellow with a broad sub-terminal black band, tipped with bright yellow. Wing blackish-brown, outer webs of secondaries edged with olive-yellow. Underparts olive-yellow, brighter on belly and undertail coverts. <u>Immatures</u>: Like adults but duller, head and throat mottled with dull brown, mantle, back and underparts washed with olive, pale yellow on tail and belly. <u>Soft parts</u>: Iris pale blue. Bill black. Tarsus brownish-black.

Habitat & Behaviour: Widespread in primary, secondary and sub-montane forests to 1200 m. Seen singly or in pairs on top of tall trees, feeding in the lower and middle canopy of trees along the edges of forest clearings, also in dense undergrowth, hopping from branch to branch, eating berries. Flocks of twenty or more of them often congregate to feed on berries and figs on fruiting trees, A restless bird, constantly on the move, sometimes seen making aerial sorties after insects from vantage points high up on tree tops, fanning its tail on returning to its perch.

Food: Eats seeds, berries, fruit, flying ants and insects.

<u>Voice & Calls</u>: Its call is a single high-pitched *chip* note, sometimes repeated six or more times.

Breeding: It nests six to twenty feet up in saplings and bushes, making a bulky but flimsy nest of stems, twigs, dried leaves and grass, the compact inner cup being neatly lined with fine grasses and fibres. It lays two to three pale pinkish eggs. There are no nesting records for this bird from the Kelabit area.

Local Distribution: Found at Arur Tumuh and Bario.



Black-crested Bulbul Pycnonotus melanicterus

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Black-crested Bulbul Pycnonotus melanicterus

Other names: Yellow Bulbul.

<u>Status & Range</u>: Montane Resident. Found in India, China and Myanmar down to Thailand, West Malaysia and the Greater Sunda Islands.

<u>Description</u>: Size 6½" (16 cm). Sexes alike. Upperparts yellowish-olive, brighter on uppertail coverts, head and face dull black, long crest feathers browner. Wings and wing coverts edged olive-yellow. Tail blackish-brown, edged bright olive-green. Chin bright yellow, remaining underparts bright yellowish-olive, more olive on flanks. Undertail coverts bright yellowish-olive. <u>Immatures</u>: Head dull black, upperparts greener, underparts pale yellow, iris grey. <u>Soft parts</u>: Iris dark brown. Bill black. Tarsus black.

<u>Habitat & Behaviour</u>: Found in dense undergrowth of primary, secondary and sub-montane forests, along the edges of forest clearings and valleys around jungle streams between 600 to 1500 m. A very lively bird, seen alone, in pairs or in small parties of four to five birds, often as part of a bird wave, foraging in the middle and lower canopy down to ground level. Perches on fruiting branches, constantly raising its crest up and down, probing delicately at the fruit to extract the seeds, sometimes hovering with a light fluttering flight to pluck fruit, regularly repelling other bulbul species feeding nearby.

Food: Eats berries, fruit, grasshopper, insects, takes termites on the wing.

<u>Voice & Calls</u>: Calls persistently from high up a tree, *Did-you do-it* or *Did-di-you do-it* with an occasional *di-di-do-it* flourish at the end. It also has a very musical churring note and a long trilling call. When alarmed, they keep up a constant musical *pi-pi-pit*, *pi-pi-pit*, *pi-pi-pit* from exposed perches. Young birds make a mellow warbling *whi-ti-tik-tik*, *whi-ti-ti-tik-tik* to attract the attention of its parents.

Breeding: Breeds in the Kelabit area from October to February. They may be communal when nesting. Four birds in adult plumage hovered around a fledgling that had fallen out of a nest, one feeding the young bird with a grasshopper, the others taking turns to stay near the young bird until it was enticed into a dense thicket.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Gelawat, Pa' Da'lih, Pa' Di'it, Arur Tumuh, Camp Five and Bario.



Ochraceous Bulbul Alophoixus ochraceus

Other names: Brown White-throated Bulbul.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 8½ to 9" (21.5 to 23.5 cm). Sexes alike. Crown dark olive-brown, crest with long thin feathers and darker. Lores and face grey, back olive-green, darker on rump. Uppertail coverts dark reddish-brown, tail darker. Wing and primary coverts edged with olive-brown (looks dark reddish-brown in old faded wing). Chin and throat white, breast, belly and vent greyish-olive, undertail coverts dark chestnut. <u>Immatures</u>: Face, lores and cheeks brown. Iris pale olive-brown. Bill greyish-green. <u>Soft parts</u>: Iris bright red. Upper mandible black, paler along edges and tip, lower mandible bluish-grey. Tarsus pinkish-horn.

Habitat & Behaviour: Common in sub-montane and montane forests to 1600 m. Seen on their own, in small parties or in the company of other bulbuls, high up in the trees, down to the lower and middle canopy though it is equally at home in understorey vegetation. It tends to keep under cover of deep jungle or in dense undergrowth along the edges of forest clearings, rarely showing itself on open perches or exposed tree tops. It lowers its crest when alert or alarmed, regularly flicks its wings and has a dipping flight, sometimes being seen hovering to pluck fruit off branches, coming to the ground occasionally when pursuing insects.

Food: Feeds mainly on berries, hornet larvae and insects.

<u>Voice & Calls</u>: Sings loudly from behind cover, its chin and throat feathers fully puffed out, a ringing musical whistle, *kiew, kiew, kew-kew-ku-weet*, the first two long notes in the same pitch, the last note sharply rising. The alarm note is a harsh grating, *kew, kew, ku-ku-ku-ku-ku-ku-....*, the last note repeatedly for a long while.

Breeding: Its nesting habits are not known. The nesting seasons varies in the Kelabit area, between March and May in some areas, from September to February in others.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Gelawat, Pa' Da'lih, Pa' Di'it, Arur Buluh Betung, Arur Tumuh, Camp Five and Bario.



Hairy-backed Bulbul Tricholestes criniger

Other names: None.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 5½ to 6" (14 to 16 cm). Sexes alike. Crown dark olivebrown, crest partly erectile, with fine black hair-like feathers on nape. Lores and cheeks yellow, eye-ring yellowish-white, ear coverts darker and greener. Mantle and back olive-green, brighter and yellower on rump, the feathers very fluffy. Tail reddish-brown, the outer three pairs of feathers tipped with pale yellow. Chin white, pectoral band olive-green, belly, vent and underwing coverts yellow. Undertail coverts bright yellow. Image: Image: Image

Habitat & Behaviour: Fairly common in the lower to middle storeys of primary and secondary forests to 1000 m. An alert and active bird, forever on the move, usually seen singly, in pairs, or in small parties of three to four birds. A regular member of large bird waves, in the company of flycatchers and babblers, foraging down to ground level and undergrowth. Quite a bold bird, openly perching, high up on tall trees, on exposed branches at the edges of clearings, hovering to reach fruit on the tips of branches or hawking for insects frequently. When excited or alarmed, it erects its crest, flicks its wings and tail.

Food: Eats insects, soft berries and fruit, beetles and small locustids.

<u>Voice & Calls</u>: The call is a treble *tititik-tee-titoh-titoh*, with emphasis on the upward second phrase *tee*, the alarm note a harsh *chreek-chreek*. It also has a high scolding chatter and an unusually high-pitched and forlorn-sounding call, *eeee-up*.

Breeding: Nesting habits not recorded from Sarawak. Breeding birds were caught at Camp Five between March and May.

Local Distribution: Recorded at Pa' Ramudu and Camp Five.



Ashy Bulbul Hemixos flavala

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Ashy Bulbul Hemixos flavala

Other names: Olive White-throated Bulbul.

<u>Status & Range</u>: Resident. Found in India, China and Myanmar down to Thailand, West Malaysia, Borneo and Sumatra.

<u>Description</u>: Size 8" (20 cm). Sexes alike. Crown dark greyish-brown, the long pointed feathers tipped paler buff, face and lores darker and browner. Scapulars and back dark greyish-brown, greener on rump. Wing and wing coverts edged dark yellowish-green. Tail dark yellowish-green. Chin and throat pure white, breast ashy-brown, belly and flanks white, vent sulphur yellow, thighs ashy-brown. <u>Immatures</u>: Browner above than adults. <u>Soft parts</u>: Iris olive-brown. Bill and tarsus black.

Habitat & Behaviour: Found in the undergrowth or lower and middle canopies of primary, old secondary, sub-montane and moist kerangas forests and valleys around jungle streams up to 1600 m, less common at lower altitudes. Mostly arboreal, seen singly, in pairs when breeding but, more usually, in parties of three to five birds, hopping along branches or making aerial sallies after insects. Prefers to keep under cover, rarely sings or shows itself on open perches or on the tops of trees. A common member of bird waves, most often as part of the vanguard, announcing the arrival of the other birds with their calls. Its flight is undulating, the wings closing as it dips. Seen drinking water from a pool collected in large leaf. Its white chin and throat, constantly puffed out in display and almost like a beard, is clearly visible in the field.

<u>Food</u>: Eats seeds, fruit, berries, flower nectar, cicadas, crickets and other insects. Seen eating termites coming down a tree trunk, both by perching on the trunk as well as by hovering to pick at them.

<u>Voice & Calls</u>: A high-pitched and almost parrot-like *kee-yik* or *kee-kik*, also a nasal *kee* and a soft *wheep*, *wheep*, *wheep*.

<u>Breeding</u>: No information is currently available about its nesting habits but breeding birds and fledglings have been seen in the Kelabit area between March and June.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Arur Buluh Betung, Pa' Gelawat, Arur Tumuh and Bario.



Yellow-bellied Prinia Prinia flaviventris

Other names: Yellow-bellied Wren-warbler.

<u>Status & Range</u>: Resident. Found in Pakistan, India, China and Thailand to West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 5½" (14 cm). Sexes alike. Head, face and nape grey with narrow buff eye stripe and incomplete eye-ring, crest erectile when excited. Lores grey. Mantle and back olive-green, tail browner with white tips to outer feathers. Primary coverts black, greater coverts edged olive-green. Chin and throat creamy white, breast band pale buff. Belly creamy white, buffy-yellow on flanks, underwing areas, vent and undertail coverts. <u>Immatures</u>: Head and mantle uniform pale olive, lores and underparts yellowish, tail with broader white tips. <u>Soft parts</u>: Iris golden-yellow. Bill black, whitish along cutting edges, yellowish at tip. Tarsus fleshy-pink.

<u>Habitat & Behaviour</u>: Very common throughout Borneo, in open grassland or scrub vegetation, rice fields and grazing grounds to 1100 m. A sprightly and restless bird, hopping and climbing about through tall grasses and low shrubbery, not readily taking to flight. When flushed, it flits over the grass tops for a short distance with a weak top-heavy flight before tumbling back into cover once again. Openly perches on fully exposed twigs to warm up in the morning or to sing but, generally, more often heard than seen.

Food: Eats caterpillars, spiders, small locustids, ants and other insects.

<u>Voice & Calls</u>: A loud and persistent *tree-chi-yik* or *chee-chi-yik*, the first syllable on higher scale.

Breeding: The nests are loosely-built oval structure with an entrance on one side, nearer the top, and made of fine grasses and vegetable down, strengthened with cobwebs and lined with finer grass. The egg chamber is lined with much finer fibres. Well-concealed at the edges of rice fields, tall grass, reed beds or fixed to upright twigs of small bushes, it is placed about two to six feet above ground. Lays 2 to 4 glossy bright reddish eggs. Both sexes share nest-building and incubation duties. Nesting has been at Bario between December and March.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh and Bario



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Rufous-tailed Tailorbird Orthotomus sericeus

Other names: Red-tailed Tailorbird, Red-headed Tailorbird, Rufous-crowned Tailorbird.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand, West Malaysia, Sumatra, Borneo and the Philippines.

<u>Description</u>: Size 5" (12 cm). Sexes alike. Crown, forehead and upper face bright chestnut, lower face creamy white. Nape, back and wings ashy grey. Tail bright chestnut, basal one-third dark grey. Underparts creamy white, greyer on throat and breast. Flanks, vent and undertail coverts creamy buff, thighs and under-surface of tail rufous. <u>Immatures</u>: Head brown tinged rufous, tail blackish-brown. <u>Soft Parts</u>: Iris yellowish-brown. Upper mandible black, lower mandible pink. Tarsus pinkish.

<u>Habitat & Behaviour</u>: Commonly found, singly or in pairs, in lowland and sub-montane forests, at the edges of clearings and in dense undergrowth around gardens and cultivated areas to 1200 m. A noisy and active little bird, fond of exploring flowering shrubs and lantana bushes, its loud call proclaiming its presence. It is constantly on the move in its search for food, fairly racing through the shrubbery, dipping the front of its body now and again, always flicking its wings and tail, catching insects near it with a sudden lunge, the tail often flicked up energetically, almost at right-angles to the body, making the bird look in imminent danger of losing its balance.

Food: Eats tiny insects and grubs.

<u>Voice & Calls</u>: Has a loud high-pitched *chuckee-chip* call, sometimes with first and last syllables being very short, and the second syllable elongated, *chu-keeeeee-chip*, also a sharp *wi-choo*, *whi-choo*, *wi-choo*, *whi-choo*, wee repeated four to ten times, ending with the single note.

Breeding: Its nest, placed low in scrub jungle, is made by bending back a single leaf along its length, piercing holes along the edges with its bill, and sewing them together with plant fibres or cobwebs to form a long hollow tube. Sometimes two or more smaller leaves are used. The egg chamber is lined with fine grasses and moss. It lays three bluish or pink eggs. At Bario, it breeds between January and February.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Camp Five and Bario.



Ashy Tailorbird Orthotomus ruficeps

Other names: Red-headed Tailorbird.

<u>Status & Range</u>: Resident. Found in S Myanmar, Thailand, West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 5" (12 cm). Sexes similar. Fore-crown, face and chin reddish-brown, grading to olive-brown on crown, nape and uppertail coverts. Wings and wing coverts edged olive-brown, tail browner with black sub-terminal bands and pale white tips. Back and rump ashy-grey. Breast, upper abdomen and flanks pale grey, lower belly and undertail coverts white washed with grey. <u>Females</u>: Paler grey on breast and belly. <u>Immatures</u>: Sometimes seen with reddish-brown showing on fore-crown and face. Chin very pale buff. Iris olive-green. <u>Soft Parts</u>: Iris yellowish-brown. Bill pale horn above, pinkish below. Tarsus pinkish-brown, soles pale buff.

Habitat & Behaviour: Found singly or in pairs in old secondary forests and sub-montane forests, in dense vegetation along trails and streams, scrub country along roads and clearings, or on the edges of clearings to 1100 m. Regularly seen in flowering bushes though not usually in gardens, its loud call proclaiming its presence. An active bird, it moves mouse-like through dense vegetation and bracken fern, nervously flicks the tail up and down all the time, usually holding it cocked up, almost at right angles to its back. The flight is weak, low over the ground and for short distances only.

<u>Food</u>: Seen hopping on the ground to take ants and making short fluttering sallies after flying insects. Also eats caterpillars, beetles and flies.

<u>Voice & Calls</u>: Has a loud and high-pitched call, *tree-tsyip* repeated four or five times, sometimes followed by a long trill, also a plaintive *choee-choee* one to ten times.

<u>Breeding</u>: Builds a nest in low shrubs with large hanging leaves, folding back large and sewing the edges together with cobwebs or plant fibres drawn through holes pierced in the leaf edges with its bill, forming a small pouch lined with fine grass. Breeds in Bario between December and February.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh and Bario.



Arctic Warbler Phylloscopus borealis

Other names: Arctic Willow Warbler, Arctic Leaf Warbler.

<u>Status & Range</u>: Breeds in Western Europe east to Siberia and Mongolia, and a common passage migrant and winter visitor. It is found in Sarawak between late August to April or early May.

Description: Size 4½" (12 cm). Sexes alike. Uniform olive-green on head, tail and upperparts, darker on crown and brighter on rump. Conspicuous long yellowish-white supercilium, extending from the base of the nape to almost the hind-crown, and a dark olive eye-stripe. Usually has a narrow creamy-yellow wing bar, formed by the tips of greater coverts, sometimes missing in abraded plumage. Rarely, it has a second wing bar, formed by yellowish tips to the median coverts, much more likely to be seen in fresh plumage. Tail dark brown, with white on the inner webs of outer feathers. Underparts dull creamy white, with some grey on sides of the breast and flanks. Immatures: Brighter, more olive-green on crown and mantle than adults at least until December. Soft parts: Iris dark brown. Bill dark brown above, base of lower mandible orange-yellow, mouth orange. Tarsus and feet pale brown.

<u>Habitat & Behaviour</u>: Found in old lowland and sub-montane forests, also in secondary scrub at the edges of clearings, to 1200 m. A restless and very acrobatic little bird, hunting for insects on twigs and leaves, often fluttering for a few seconds. A regular member of large mixed flocks that actively forage along the edges of forests or in the company of flycatchers. Often seen at ground level in low bushes or trees in gardens and orchards but equally at home high in the upper canopy.

<u>Food</u>: Eats caterpillars, ants, beetles, small locustids, insects and insect eggs, very small flies and midges, caught on the wing or picked off from leaves and twigs.

<u>Voice & Calls</u>: Not often heard calling but an occasional short double chirp may be heard from March onwards before the return migration begins.

Breeding: Does not breed in our area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Lungan, Arur Tumuh and Bario.



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Yellow-breasted Warbler Seicercus montis

Other Names: Yellow-breasted Flycatcher-Warbler.

<u>Status & Range</u>: Resident. Found in the Philippines, West Malaysia, Sumatra and Borneo.

<u>Description</u>: Size 4" (10 cm). Sexes alike. Crown and forehead chestnut, with two broad blackish bands from forehead to nape, distinct white eyering. Lower face rufous-yellow, paler on lores, browner on ear coverts. Back yellowish-green with broad yellow band across rump. Wings and tail blackish, edged with yellowish-green, greater and median coverts broadly tipped yellow, forming two prominent wing bars. Underparts bright yellow, greyer on breast. <u>Immatures</u>: Crown dull rufous, stripes on head dull blackish-brown, upperparts olive-green, wings and tail greyer, underparts pale yellow. <u>Soft parts</u>: Iris dark brown. Upper mandible blackish, lower mandible orange. Tarsus pinkish-horn.

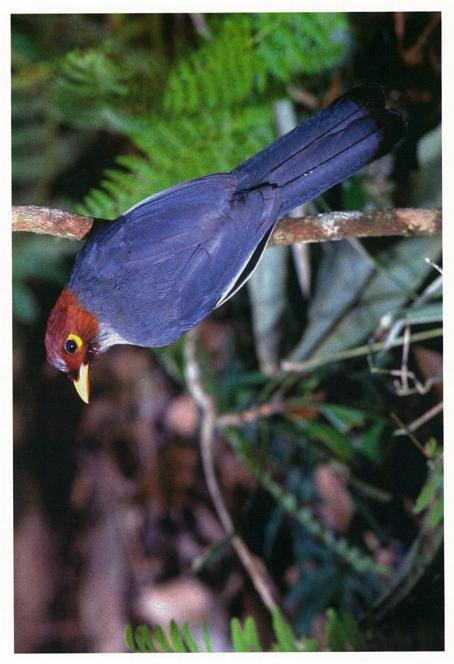
Habitat & Behaviour: A higher montane bird, rarely found below 1400 m. Seen singly, in pairs or in small flocks, usually in the company of other warblers and small flycatchers as part of a large bird wave. Searches for food among the leaves and branches of small trees and bushes in mossy forests, from the upper and middle storey down into bamboo stands and thickets, moving quickly through dense growths of epiphytic ferns and orchids, actively feeding, sometimes hovering to pick insects off the tips of branches or from under leaves. Once seen holding a small caterpillar in its bill, then beating it to death against the branch before eating it. It has a habit of flicking and shivering its wings frequently.

Food: Small insects and caterpillars.

<u>Voice & Calls</u>: Has a repetitive five-note call, *ti-ti-tik-ti-tik*, made every four to five seconds, and a high-pitched alarm note, *chee-chee* or *kee-kee-kee*.

Breeding: Recorded at Lepo' Bunga in July, at Pa' Di'it in October. A nest was found in a small crevice on a vertical moss-covered bank and hidden behind an overhang of dense vegetation. The small dome-shaped nest, lodged against the bank, appeared to be made entirely of fine dark fibres and moss brought by both partners, one of them later staying inside the nest while the other brought fresh nesting material.

Local Distribution: Recorded at Pa' Di'it and Lepo' Bunga.



Chestnut-capped Laughingthrush Garrulax mitratus

<u>Other names</u>: Chestnut-capped Laughing Thrush, Chestnut-capped Laughing-Thrush.

<u>Status & Range</u>: Resident. Found in West Malaysia, Sumatra and Borneo.

<u>Description:</u> Size 9" (23 cm). Sexes alike. Head, face and nape chestnut, darker on crown and forehead. Fore-crown streaked pale grey. Patch of bare yellow skin behind and below eye. Back and uppertail coverts slatygrey. Outer webs of outer eight primaries broadly edged white, forming wing patch. Wing coverts slaty-grey. Tail slaty-grey, broadly tipped black. Chin chestnut, throat and upper breast greyish-buff, belly greyer, undertail coverts deep chestnut. <u>Immatures:</u> Like adults, but browner, the colours generally duller. <u>Soft Parts:</u> Iris dark reddish-brown. Bill orange, yellower at tip. Tarsus orange-yellow.

Habitat & Behaviour: Found singly, in pairs or small groups of four and five birds in sub-montane kerangas scrub forests, or on the edges of clearings to 1600 m. A frequent member of bird waves, frequently as part of a sub-wave, in the company of malkohas and magpies. A noisy and active bird, easily mistaken for a squirrel as it creeps about mouse-like a few feet above the ground or feeds on the jungle floor, keeping to dense cover and hopping rapidly from branch to branch, flicking its wings regularly. It is equally happy high up on the tops of tall trees. Practically drops off a branch before starting its long low gliding flight across an open space to the next perch.

<u>Food</u>: Feeds on seeds, fruit, grasshoppers, insects, ants, small snails, earwigs, cockroaches, crickets, moths, flying ants and caterpillars.

<u>Voice & Calls</u>: It has an assortment of loud and musical whistling notes, including several bursts of four or five rapid *wheeyou* notes, each burst separated by a series of shorter single *weeyou* notes.

<u>Breeding</u>: Recorded for Bario between October to January, the nest being a shallow well-made cup of roots, ferns, dead leaves and fibres, about ten to thirty feet above ground level.

Local Distribution: Recorded at Pa' Ramudu, Pa' Di'it and Arur Tumuh.



Temminck's Babbler Pellorneum pyrrogenys

Status & Range: Resident. Found in Borneo and Java.

Other names: Temminck's Jungle Babbler.

Description: Size 5½" (14 cm). Sexes alike. Crown dark greyish-black. Forehead, lores and ear coverts paler and browner, with pale shaft streaks on the feathers giving it a mottled look. Back and mantle reddish-brown, tinged red on basal half of tail and on edges of flight feathers. Chin and throat white. Rufous breast band. Lower breast and belly white along the middle, rufous on sides, thighs, flanks, vent and underwing. Immatures: Head browner, streaks on the forehead and lores less distinct, white on underparts dirtier and suffused with rufous. Iris pale olive brown, the gape being fleshy- yellow and retained for a month or more. Soft Parts: Iris reddish-brown Bill blackish-brown. Tarsus pinkish-brown, claws pink, soles dull yellow..

Habitat & Behaviour: A rarely seen bird, common in the undergrowth of montane and sub-montane forests up to 1200 m. A frequent member of bird waves, foraging from ground level to fifty feet up in trees, working its way through the undergrowth in series of short hurried hops, flicking its wings and fanning the tail often, moving its body from side to side, also hovering to catch insects. Usually found skulking in dense vegetation of kerangas swamp forests or at the edge of clearings, feeding on the ground or working their way through creepers and bracken fern. It moves along the ground in long bounding hops, wagging its rear end from side to side. It has a fast and direct flight.

Food: Eats large insects, grubs, small locustids and ants.

<u>Voice & Calls</u>: The alarm call is a sharp *whit*, occasionally *whit-whit*. The call is a nasal *wit-wheeow*, *wit-wheeow*, the second syllable on the upward scale and very rounded, sometimes just the *wheeow* on its own.

<u>Breeding</u>: It nests under shrubs or between buttress and aerial roots. The eggs are blue or dull green in colour. Breeds in Bario between October to February.

<u>Local Distribution</u>: Recorded at Pa' Gelawat, Arur Buluh Betung and Arur Tumuh.



Black-capped Babbler Pellorneum capistratum

Other names: Black-capped Jungle Babbler.

<u>Status & Range</u>: Resident. Found in Myanmar, Thailand and West Malaysia to Sumatra, Java and Borneo.

<u>Description:</u> Size 6" (15 cm). Sexes alike. Crown, forehead and nape jet black. Long white stripe from base of bill to back of head. Face and lores slaty-grey. Mantle, uppertail coverts and tail dark reddish-brown. Chin and throat white. Bright rufous on breast and upper belly, grading to dark olive-brown on lower belly, flanks and undertail coverts. <u>Soft Parts:</u> Iris reddish-brown. Bill black above, lower mandible bluish-grey. Tarsus dark pinkish-brown.

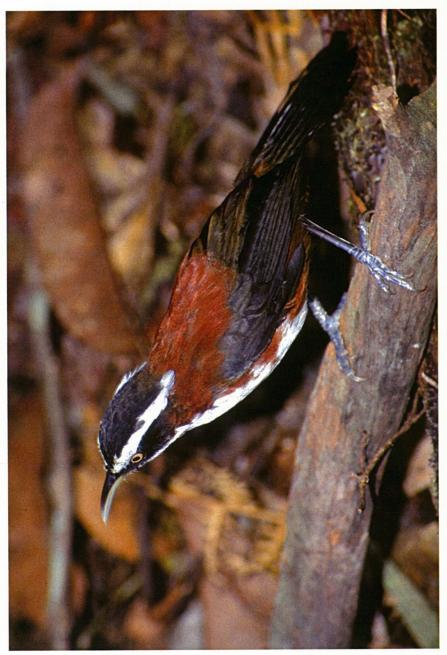
Habitat & Behaviour: A largely terrestrial bird, seen singly or in pairs, in primary and old secondary forests, in dense sub-montane kerangas swamp or tall ginger and bracken fern along the edges of clearings, to 1400 m. A quiet mouse-like bird, always skulking in the undergrowth, occasionally hopping about on low branches, often flicking and fanning its tail, always keeping under cover, sometimes in the company of other babblers. Flies low over the ground but, more usually, scurries about on the jungle floor, running very fast, moving in short hops or walking for short distances, flicking its tail almost at every step. When alarmed or alert, it crouches with the front of its body lowered or bobs its front end up and down while flicking both wings and tail. It only reluctantly takes to flight when startled, coming back to ground again a short distance away. Perches on rotting logs on the jungle floor, and has a habit of frequently wiping its bill on the logs.

Food: Eats ants, caterpillars, grasshoppers, termites and spiders.

<u>Voice & Calls</u>: Usually a double-note *chee kee*, the second syllable on a downwards scale, sometimes only the first note, used repeatedly.

Breeding: Nesting habits not recorded from Sarawak but young birds were seen in May.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Arur Tumuh, Camp Five and Arur Buluh Betung.



Chestnut-backed Scimitar Babbler Pomatorhinus montanus

Other names: Yellow-billed Scimitar-Babbler.

<u>Status & Range</u>: Resident. Found in Thailand, West Malaysia, Borneo, Sumatra, Java and Bali.

<u>Description</u>: Size 7½" (19 cm). Sexes alike. Crown, forehead, nape and sides of head dark blackish-brown, face black. Long white supercilium from sides of nape to base of upper bill. Mantle and back bright chestnut, uppertail coverts darker and suffused with olive. Tail fan-shaped, blackish-brown, edged with olive. Wings and primary coverts dark brown edged greyish-olive, lesser and greater coverts edged brown. Chin and throat white, breast band deep chestnut, broken in middle with white. Sides of body, underwing areas and flanks dark chestnut. Belly white, suffused with black and grey. Vent grey, undertail coverts with long loose pale chestnut feathers. <u>Soft Parts</u>: Iris pale buffy-yellow, outer ring greyer. Bill long and curved, black above, tipped grey, lower mandible grey. Tarsus blackish-horn.

Habitat & Behaviour: Found in primary, old secondary, sub-montane and dense kerangas swamp forests forests to 1700 m. Seen singly or in small parties, foraging in under-storey vegetation, feeding silently from ground level up to forty feet, moving between distant branches in a series of long bounding hops and flutters, sometimes hanging upside down and jabbing its curved bill woodpecker-fashion to prise insects or grubs from crevices and cracks in rattan and tree trunks, then working its way back again in short downwards stages, checking roots, branches and vines en route.

<u>Food</u>: Eats insects, grubs, beetles, crickets, earwigs, caterpillars, ginger seeds, flower pods and berries.

<u>Voice & Calls</u>: Its alarm note is a throaty *churr-chi-chi-chi, chi-chi*, the call a mellow *bu-bu-buit*.

Breeding: The nest, located at or near ground level, is a large ball-like structure, of coarse grass and old leaves, lined with finer leaves or grass stems. It lays two or three glossy white eggs. Breeds in the Kelabit area between October to February.

Local Distribution: Recorded at Pa' Ramudu, Arur Tumuh and Camp Five.



Grey-throated Babbler Stachyris nigriceps

Other names: Grey-throated Tree Babbler.

<u>Status & Range</u>: Resident. Found in India, S China, Myanmar, Thailand, West Malaysia, Borneo and Sumatra.

<u>Description</u>: Size 5' (13 cm). Sexes alike. Head dark greyish-black, with several indistinct brownish-grey streaks on forehead, lores darker. Broad black stripe above eye. Back dark olive-brown, greener on rump. Wing, wing coverts and tail edged dark olive-green. Short white malar stripe. Chin and throat dark grey. Breast and flanks rich buffy-olive, greyer on belly and vent. <u>Immatures</u>: Smaller. Crown and nape browner, streaks on forehead indistinct. Soft parts: Iris red. Bill black. Tarsus grevish-green.

Habitat & Behaviour: Seen close to ground level in dense undergrowth of primary, sub-montane and tall kerangas forests to 1800 m. A quiet, furtive and rarely seen bird, found in pairs or small parties of 5 to 10 birds, always skulking in the undergrowth, tall ginger, bracken fern or in dense stands of creepers at the edges of clearings. Often a very agile, restless and active member of bird waves bird, regularly flicking its tail and flapping its wings, perching on low branches with its upper body dipped, looking this way and that, hopping up on the spot to face the opposite direction, clambering up along vertical tree trunks, looking under or turning over dead leaf litter in search of food and making fluttering chases after insects. Flies fast and low, hugging the ground, adeptly avoiding obstacles in its path. A mouse-like bird, it feeds under cover of secondary scrub but can be seen up to about twenty feet above ground level in the forest, making soft chipping sounds as contact calls.

Food: Eats insects, including locustids, beetles, moths and berries.

<u>Voice & Calls</u>: The call is a thin piping call, *peep-peep-peep-pi-pi-pit*, also a high-pitched *chi-chi*, *chi-chi*, *chi-chi-chee*.

Breeding: Its nest is a large untidy ball of grasses and leaves, concealed in rattan or palm plants, slightly above the ground. It lays 2 to 3 glossy white eggs. Breeds in the Kelabit area between March and June.

Local Distribution: Recorded at Pa' Ramudu, Pa' Di'it, Arur Tumuh, Long Sabai Bario, Pa' Gelawat, Arur Buluh Betung and Lepo' Bunga.



Brown Fulvetta Alcippe brunneicauda

Other Names: Brown Fulvetta, Malay Nun Babbler.

<u>Status & Range</u>: Resident. Found in Thailand, West Malaysia, Sumatra and Borneo. Listed in Red Data Book: Lower Risk Category.

Description: Size 5½" (13 to 14 cm). Sexes alike. Upperparts dark olivebrown, brighter and redder on uppertail coverts and rump. Crown dark greyish-brown, face, lores and base of nape paler. Uppertail coverts and tail dark rusty-brown. Flight feathers edged reddish-brown, wing coverts olive-brown. Chin, throat and breast greyish-white, greyer on sides of breast and flanks, belly greyish-white, vent and undertail coverts greyish-brown. Immatures: Rather nondescript, its crown grey, face browner, iris pale grey. Soft Parts: Iris olive-brown. Bill black, lower mandible pinkish at base, paler at tip. Tarsus pinkish-blue.

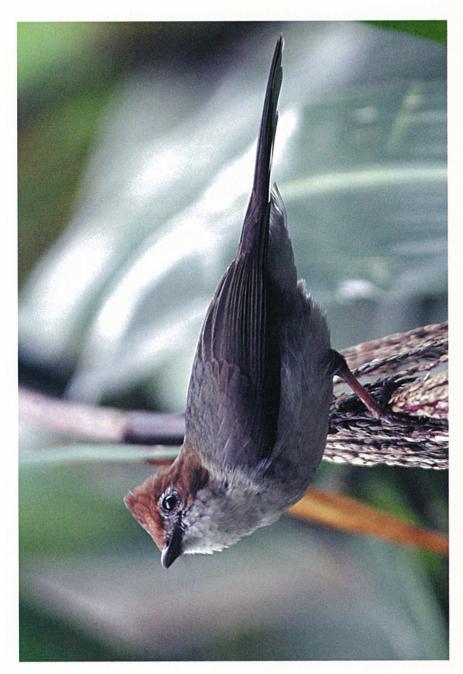
Habitat & Behaviour: Found in the lower and middle canopies of primary, sub-montane and ridge forests, also around forest clearings, to 1200 m. An alert, restless bird and fairly common, small parties of them, between ten to twenty birds, often forming the mainstay of bird waves, sometimes foraging in vines and creepers from the canopy down almost to ground level. A very acrobatic and tit-like bird, clings to vines and creepers, often hanging upside down and flitting from twig to twig, loudly calling from all quarters as they keep in touch with one another with a musical five-note whistle. One caught a two-inch long green caterpillar, held it down with one foot to kill it, then fed it to a young bird that came begging by. Also seen eating white ants coming down a tree trunk, both by perching on the tree trunk as well as hovering to pick at them.

<u>Food</u>: Eats caterpillars, beetles, insects and white ants. It was seen taking a 4 cm long green grasshopper, and feeding berries to young birds.

<u>Voice & Calls</u>: A musical five-note whistle, whee-tiu, whee, the first, third and fifth on the upward scale, the others on the downward.

<u>Breeding</u>: Has been recorded for every month except July to September in various parts of the Kelabit Highlands.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Gelawat, Arur Buluh Betung, Camp Five, Arur Tumuh and Bario.



Chestnut-crested Yuhina Yuhina everetti

Other Names: Chestnut-headed Siva, Chestnut-headed Minla.

Status & Range: Resident. Endemic to Borneo.

<u>Description</u>: Size 5" (13 cm). Sexes alike. Head, face and ear coverts chestnut, with elongated feathers on crown forming an erectile crest. Lores and narrow orbital ring greyish-white. Back dark greyish-olive, browner on rump. Wings and wing coverts brownish-olive, with paler edges. Tail brownish-black, the outer three pairs broadly tipped white. Chin and throat pale creamy white. Belly, flanks and undertail coverts greyish-white, browner on sides and flanks. <u>Immatures</u>: Crest less obvious. <u>Soft Parts</u>: Iris reddish-brown. Bill blackish-brown. Tarsus pinkish-brown.

<u>Habitat & Behaviour</u>: A perky bird, found in sub-montane and montane forests to 1600 m, usually in noisy chattering parties of six to ten birds, sometimes as many as twenty, flying as a group, feeding in undergrowth of forests, small trees and bushes. A common and lively member of bird waves, foraging from forty feet downwards, crest raised and throat puffed out, actively tugging at berries. A very acrobatic bird, moving in a series of short mincing hops, changing direction every other hop, or making short fluttering flights, flicking and fanning open its tail to show its white outer tail feathers, bending its front end low, cocking its head this way and that, peering into any nook and cranny that may offer food. Large groups of 15 to 30 birds are often seen on roosting flights.

Food: Eats seeds, berries, fruit.

Voice & Calls: Constantly utters a harsh note.

Breeding: The nest, located three feet up on a small bank along the jungle trail, is a compact and well-made cup, about three inches wide and three inches deep, constructed of fine fibres and placed on a base of coarse leaf debris. Broken leaf debris is loosely placed over the cup, to form a rough dome with two or three very large leaves placed over the entire structure to form a tunnel-like entrance facing the jungle trail. Breeds in the Kelabit area between September and November.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Camp Five, Pa' Di'it, Lepo' Bunga and Bario.



White-bellied Yuhina Yuhina zantholeuca

Other Names: White-bellied Crested Babbler, White-bellied Erpornis.

<u>Status & Range</u>: Resident. Found in the Himalayas, China and Hong Kong, down to Thailand, West Malaysia, Sumatra and Borneo.

<u>Description:</u> Size 4½" (11 cm). Sexes alike. Crest well-defined and erectile, dark olive-green with blackish shaft streaks. Lores greyish-white, face and ear coverts pale ashy-brown. Mantle and back yellowish olive-green, brighter on uppertail coverts, tail edged olive-green. Outer webs of flight feathers and wing coverts uniformly edged yellowish-green. Chin and throat white, breast band and flanks pale ashy-white. <u>Immature birds</u>: Like adults but duller, the upperparts having a brownish cast. <u>Soft Parts</u>: Iris dark brown. Bill pinkish, lower mandible pinkish-horn. Tarsus pink.

Habitat & Behaviour: A sub-montane bird, found singly, in pairs and, quite frequently, in small flocks, usually in primary and montane mossy forest, to 1600 m, sometimes being found at lower levels. Often a member of large bird waves, foraging from forty feet downwards, in the lower canopy or at the edges of clearings, as part of a sub-wave, in the company of leafbirds, warblers, flowerpeckers and babblers. A perky and active bird, always in motion, with tit-like behaviour, clinging upside-down to twigs and leaves, moving rapidly through the undergrowth and tall bushes. Sometimes sits sideways on along a branch, hopping on the spot to face the other way, often wiping its bill on the branch. Seen drinking water dripping off leaves. It raises its crest frequently, forming a triangular point over its crown but seldom to its full extent.

<u>Food</u>: Eats berries, insects, grasshoppers, insects and their larvae, small caterpillars, flower nectar, some seeds and vegetable matter.

<u>Voice & Calls</u>: Generally silent. Has a high nasal contact call, *meep* or *meep-meep* two or three times.

<u>Breeding</u>: Recorded in the Kelabit area between February and March. Its nesting habits are not known from Sarawak.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Arur Tumuh, Camp Five and Bario.



Yellow-rumped Flowerpecker Prionochilus xanthopygius

Other names: Bornean Flowerpecker.

Status & Range: Resident. Endemic to Borneo and the N Natuna Islands.

Description: Size 3½" (9 cm). Sexes differ. Bright scarlet stripe on crown. Upperparts dark slaty-blue, Rump bright yellow, wings and wing coverts black edged dark slaty-blue. Chin and throat bright yellow, greyer on belly, undertail coverts pale yellow. Vivid orange-red breast patch. White on the bend of wing, clearly visible in the field. Females: Slightly smaller. Head dark olive-grey, faint orange-red coronal stripe. Back olive-green, rump yellower, uppertail coverts bright yellow. Breast patch small, orange-red. Chin and throat pale yellow. Rest of underparts dull olive-yellow with darker streaks, greyer on flanks. Immatures: Like females. Coronal stripe absent or faint yellow. Breast patch absent or pale orange. Soft Parts: Iris reddish-brown. Bill black. Tarsus dark blue.

Habitat & Behaviour: Found singly, in pairs or small groups, often as part of a bird wave, in primary and sub-montane forests, along streams and rivers in the foothills, scrub jungle at the edges of clearings and tall kerangas to 1200 m. An alert active bird, constantly flicking its wings and tail or wiping its bill on a branch, it feeds from the upper canopy down to almost ground level. Its flight is very fast and direct but it also hovers to catch insects under leaves. Seen eating a very large berry, hovering to pluck it, then, on a nearby perch, systematically reducing it to a size small enough for swallowing.

Food: Eats fruit, flowers, pollen, nectar, tiny beetles and spiders.

Voice & Calls: Its alarm call is chier-chik.

<u>Breeding</u>: Recorded for the Kelabit area between February and April. The nest, suspended from the end of a slender branch, is pear-shaped, made of downy material and decorated with lichens, moss and roots. The inner chamber, made of grass, fine roots and fibres, is lined with down. The bird is pugnacious in defence of its breeding territory. Young birds are fed on fruit pulp and larvae.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Gelawat, Arur Buluh Betung, Arur Tumuh, Camp Five and Bario.



Orange-bellied Flowerpecker Dicaeum trigonostigma

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Orange-bellied Flowerpecker Dicaeum trigonostigma

Other names: Orange-breasted Flowerpecker.

<u>Status & Range</u>: Resident. Found in India and Myanmar to Thailand, West Malaysia, Sumatra, Java, Bali, Borneo and the Philippines.

<u>Description</u>: Size 3 to 3½" (7.8 to 8.5 cm). Sexes differ. <u>Males</u>: Head, nape and face dark slaty-blue. Back bright reddish-orange, yellower on rump. Wing, wing coverts and tail edged dark slaty-blue. Chin, throat and upper breast slaty-blue, lower breast and belly bright orange-red, grading to paler orange on flanks and vent. <u>Females</u>: Head and face dark olive-green, back yellowish-olive, dull orange on rump. Wing coverts edged olive-green. Chin, throat and upper breast olive-grey, with a diffused patch of orange-yellow on lower breast. Belly and vent brighter, more yellowish, undertail coverts orange-yellow. <u>Immatures</u>: Upperparts olive, wings and tail edged with olive, underparts pale olive-yellow. <u>Soft Parts</u>: Iris dark-brown. Bill black, base of lower mandible pinkish. Tarsus black.

Habitat & Behaviour: The commonest flowerpecker, found in the lowlands up to 1200 m in the interior. An upper canopy bird, found singly or in pairs, regularly joining bird waves foraging in old forests, disturbed scrub at the edges of clearings, in stunted sandy kerangas vegetation, even gardens. Seen down to ground level, flicking wings and tail furiously, flitting about on flowering trees, often upside down, feeding on *Loranthus* berries. A restless and energetic bird, it has a fast and direct flight. A pugnacious bird, engaging in aerial combat with other flowerpeckers at canopy level, even those of other species, once perching within ten feet of a Serpent Eagle protesting its presence, only to be totally disregarded by the eagle.

<u>Food</u>: Feeds on small insects, nectar, flowers and berries, especially those of *Loranthus* family.

Voice & Calls: Call a high tick-tick-tzeet.

Breeding: Its nest, made of down, fine roots and fibres, is suspended from the end of a slender branch, often placed just a few feet above the ground. The nesting seasons varies in the Kelabit area, between March and May in some areas, from September to November in others.

<u>Local Distribution</u>: Recorded at Camp Five, Pa' Ramudu, Pa' Da'lih, Arur Tumuh and Bario.



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Ruby-cheeked Sunbird Anthreptes singalensis

Other names: Rubycheek.

<u>Status & Range</u>: Resident. Found in India, Myanmar and Thailand, down to West Malaysia, Sumatra, Java and Borneo.

<u>Description</u>: Size 4" (10 cm). Sexes differ. Upperparts, uppertail coverts and rump metallic green. Metallic purple at base of neck, and metallic maroon on ear coverts. Tail, wings and wing coverts black, edged with metallic green. Chin, throat and breast rufous. Belly and undertail coverts bright greenish-yellow. <u>Females</u>: Smaller. Upperparts dull greyish-olive, greyer on nape, paler on lores. Uppertail coverts and rump yellower, tail edged yellowish-green. Underparts as in male. <u>Immatures</u>: Like female, throat yellower. <u>Soft parts</u>: Iris red. Bill black. Tarsus yellowish-olive.

Habitat & Behaviour: Locally common, in open lowland, old secondary and sub-montane forests, usually in overhanging vegetation along the edges of forest clearings, sometimes in small bushes and gardens, to 1100 m. Seen singly, in pairs, even in small groups of five to ten birds, as part of a bird wave, in the company of tailorbirds, flycatchers and warblers, foraging in the upper and middle storeys, down to almost ground level. Often seen high on trees and flowering climbers, probing at flowers for nectar, feeding on insects trapped in cobwebs, eating berries or searching for insects.

<u>Food</u>: Eats caterpillars, sandflies, winged insects, ants, pollen, small fruit and nectar.

<u>Voice & Calls</u>: A shrill chirp when in flight or a sharp little *pit-wit* or *whizz-whizz*

Breeding: Breeds in the Kelabit area between March and April. One nest, at Camp Five, fifteen feet up a thin bamboo, was very cleverly suspended to the underside of the terminal node so that the last cluster of four or five pairs of leaves formed an effective canopy over the nest. Both partners helped build the long purse-like structure, with a porch over the entrance, made of very fine fibres, moss and cobwebs. Two eggs were laid, dark pinkish-brown, almost entirely spotted over with dark brownish-purple.

Local Distribution: Recorded at Arur Tumuh, Camp Five and Bario.



Olive-backed Sunbird Nectarinia jugularis

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Olive-backed Sunbird Nectarinia jugularis

<u>Status & Range</u>: Resident. Found from China, Myanmar and Thailand to West Malaysia, Sumatra, Java, Bali, the Philippines, New Guinea, Australia and the Solomon Islands

Other Names: Yellow-breasted Sunbird, Yellow-bellied Sunbird.

<u>Description</u>: Size 4" (10 cm). Sexes differ. Forehead metallic blue-green. Crown and nape dark yellowish-olive, greener on ear coverts. Upperparts olive-green, brighter and yellower on rump. Wing coverts brownish-black, edged and tipped olive-green. Outer tail feathers black, broadly tipped white. Chin, throat and breast metallic blue-green. Bright orange pectoral tufts, remaining underparts bright yellow. <u>Females</u>: Like male without the metallic colours. Head and crown dark yellowish-olive, chin and throat paler. <u>Immatures</u>: Like females. <u>Soft parts</u>: Iris, bill and tarsus black.

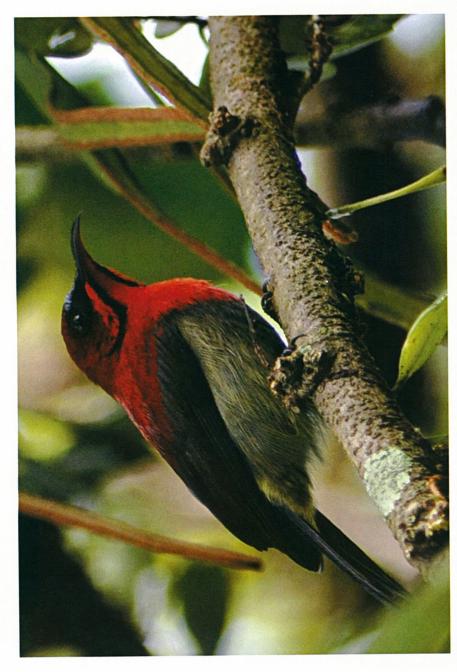
Habitat & Behaviour: The commonest sunbird in the lowlands, it is found in coastal and secondary scrub, mangroves, cultivated areas, gardens and open country to 1100 m. Previously not known in Bario but now seen in gardens or orchards around the longhouses, keeping to bushes and trees at the edges of clearings, rarely in the forest. An active and restless bird, regularly perching on exposed branches with its head and body canted downwards, diving almost vertically downwards to start feeding at flowers, or hovering to take insects. Male birds aggressively defend their territory. A sociable bird and quite tame, often feeding and nesting in gardens and around human habitation.

<u>Food</u>: Eats locustids, ants, insects and flower nectar. Seen ransacking a spider's web, eating both the insects trapped in it as well as the spiders.

<u>Voice & Calls</u>: A male bird gave a high-pitched and thin *kee-kee, kee, kih*, during a territorial dispute, the other male responding in like manner. In its courtship display, the male uses a high-pitched *cheep-cheep* or *cheep-cheep-chew*, not unlike that of a very young chicken.

<u>Breeding</u>: Its elongated pear-shaped nest, built entirely by the female, is suspended at the end of a small branch, two to thirty feet above ground, often on flowering shrubs in and around gardens. Nesting has not been confirmed for Bario.

Local Distribution: Recorded at Bario.



Crimson Sunbird Aethopyga siparaja

Other Names: Yellow-backed Sunbird.

<u>Status & Range</u>: Resident. Found in India, China and the Philippines south to the Greater Sundas.

<u>Description</u>: Size 4 to 4½" (10.5 to 11.0 cm). Sexes differ. <u>Males</u>: Head, face and back scarlet, with a metallic purple patch on fore-crown. Black on lores and face. Rump orange-yellow, uppertail coverts metallic purple. Tail black, edged with metallic purple, the central pair elongated, about an inch longer than the rest of the tail. Chin, throat and breast bright crimson with narrow metallic purple moustachial stripes. Belly and flanks greyish-brown. <u>Females</u>: Smaller than males. Upperparts greenish-olive, darker on crown, with faint reddish-orange markings on back. Bright olive-yellow uppertail coverts, faintly marked with deep orange. Chin yellowish, throat and upper breast pale olive-green, belly and vent greyer. White tips to outermost three pairs of tail feathers. <u>Immatures</u>: Like the female at first, but with shorter straighter bills. <u>Soft Parts</u>: Iris dark brown. Bill decurved, long, slender and black, yellowish at base of lower mandible. Tarsus dark horn, soles orange.

<u>Habitat & Behaviour</u>: Found singly or in pairs in lowland jungle, submontane forests, at the edges of clearings, in gardens and kerangas scrub at Bario, to 1200 m. A pugnacious member of bird waves, always on the move, energetically flitting from branch to branch from forty feet down. Its flight swift and direct. Frequently seen hovering in front of flowers, feeding on nectar from a wide variety of flowers, both gardens flowers as well as those of parasitic plants, with a particular liking for bright red flowers.

<u>Food</u>: Feeds on nectar, often piercing rhododendron and other flowers at the base of the corolla to get at the nectar. Also eats insects and spiders.

<u>Voice & Calls</u>: Call a high-pitched sharp *chit-chwee* in flight, and a loud *tseep-tseep*, sounding rather like a pair of scissors opening and closing.

Breeding: The nest is a long pocket made dead grass, fine roots, mosses and cobwebs, placed on bushes under overhanging banks. One was 18" above ground level, attached to a bush in scrubby pasture. Lays two or three eggs. Recorded in November at Bario.

Local Distribution: Recorded at Pa' Ramudu, Pa' Da'lih and Bario.



Temminck's Sunbird Aethopyga temminckii

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Temminck's Sunbird Aethopyga temminckii

Other names: Scarlet Sunbird.

Status & Range: Resident. Found in Thailand, West Malaysia, Sumatra and Borneo.

Description: Size 4½" (11.0 cm). Males: Upperparts scarlet, lower back and rump bright yellow. Narrow metallic bluish-purple band on either side of head joining up on rear crown and nape. Tail black edged with scarlet, central pair elongated and scarlet, uppertail coverts metallic purple. Wing coverts edged with scarlet. Chin, throat and breast scarlet, malar stripes metallic bluish-purple. Belly and flanks pale grey, vent yellow. Females: Smaller than males. Head and nape grey, back and rump olive-green. Wings brown washed with reddish and olive. Tail thinly edged scarlet on outer webs and tipped pale greyish-white. Underparts grey washed with pale olive-yellow. Immatures: Like females. Soft parts: Iris dark brown. Bill black. Tarsus and toes brownish-horn, soles yellow.

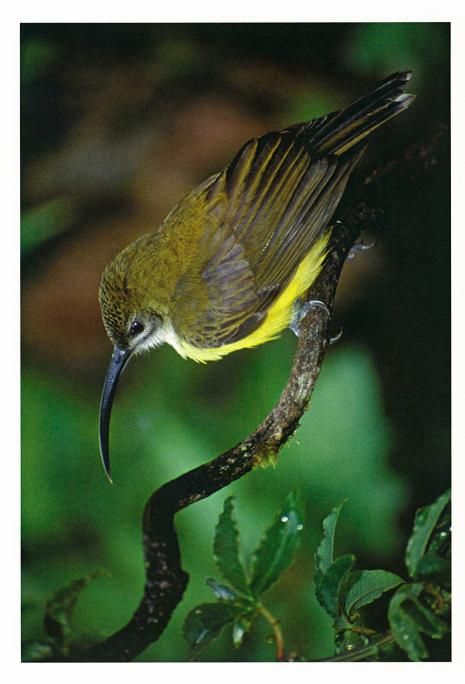
<u>Habitat & Behaviour</u>: Has a very local and erratic distribution. Found on the lower slopes of mountains, in sub-montane and upper montane mossy forest to 1900 m. Fairly common in the kerangas scrub at Bario alongside Crimson Sunbird *A. siparaja*. A very perky, active bird with a dipping flight, foraging from almost ground level to the very top of tall trees as a member of bird wave, feeding on the flowers of parasitic plants. Its flight is swift and direct. It hovers to pick insects off twigs, or in front of a spider's webs to rob it of trapped insects, craning its head forward to reach others.

<u>Food</u>: Feeds on nectar from the flowers of many parasitic plants, and those from the convolvulus, hibiscus and rhododendron families, often piercing flowers at the base of the corolla to get at the nectar. Insects appear to be less commonly taken.

Voice & Calls: Call a soft tweet-tweet.

Breeding: Nest building seen at Bario in November.

Local Distribution: Recorded at Pa' Da'lih, Pa' Di'it and Bario.



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Little Spiderhunter Arachnothera longirostra

Other names: None.

<u>Status & Range</u>: Resident. Found in India, China, Myanmar and Thailand down to West Malaysia, Sumatra, Java, Borneo and the Philippines.

<u>Description</u>: Size 5 to 6" (13.5 to 16 cm). Sexes differ slightly. Upperparts bright olive-green, finely streaked on forehead. White stripes above and below eye, dark moustachial stripe. Wing coverts edged olive-green, tail blackish, edged olive-green on outer webs and tipped greyish-white, more distinctly on outer three pairs. Chin and throat pale yellow, breast greyish-white, more olive on breast band. Belly and vent bright yellow. Orange pectoral tufts. <u>Females</u>: Smaller, without pectoral tufts. <u>Immatures</u>: Like female, with very little yellow on underparts, crown and throat greyer. <u>Soft parts</u>: Iris dark brown. Bill black above, bluish below. Tarsus bluish-horn.

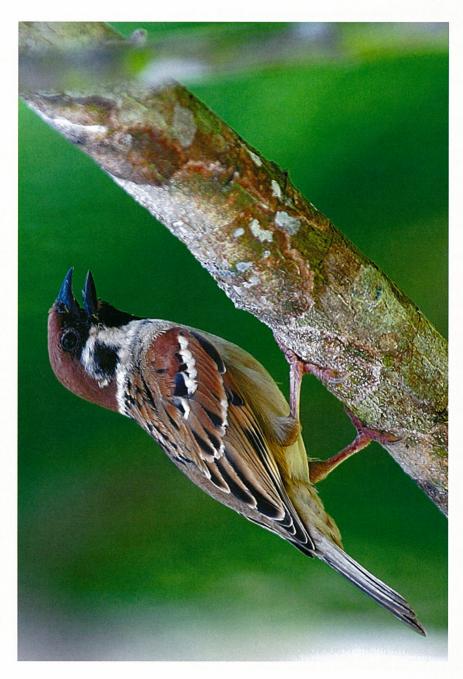
Habitat & Behaviour: A common and ubiquitous bird, found singly or in pairs in all vegetation types, from old lowland, kerangas and secondary forests or in dense scrub vegetation up to 1500 m, getting less common in sub-montane and mossy forests. Moves in a series of short hops along branches, flicking its wings and tail or wiping its bill on branches, hanging upside down from the stems and fruiting bracts of wild banana and ginger plants, piercing the base of flowers to suck nectar from florets. Its flight is very rapid and direct, and it hovers in front of flowers or to take insects. A wary bird, sits sideways onto flowers, craning its neck forward to probe inside the flowers for nectar, stopping after every flower to furtively look about for possible danger, before returning to its feeding. Seen feeding very close to ground level, and drinking water dripping down a vine.

Food: Eats insects, locustids, nectar from the flowers of many trees.

<u>Voice & Calls</u>: A sharp *zipp* is usually heard as it zips past along jungle trails, and a long burst of soft *kek-kek* notes when alarmed.

<u>Breeding</u>: Recorded between March and May. The nest is a long tubular pocket attached underneath a large leaf, often that of a wild banana, the leaf itself forming the roof of the nest. The nest, of dead leaves, moss, coarse grasses and fibres, is stitched onto the leaf with cobwebs.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Di'it, Arur Tumuh, Camp Five, Arur Buluh Betung, Lepo' Bunga and Bario.



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Eurasian Tree Sparrow Passer montanus

Other names: Tree Sparrow.

<u>Status & Range</u>: Found almost worldwide, and introduced into countries where it did not naturally occur. An introduced species.

Description: Size 5½" (14 cm). Sexes alike. Crown pale chocolate-brown, nape white, forming a collar. Ear coverts and cheeks buffy-white, with a black spot behind ear coverts. Greater and lesser wing coverts tipped white, forming two wing-bars. Upperparts rufous, streaked with black. Back and uppertail coverts yellowish-brown. Chin and throat black, forming a bib, breast and flanks greyish-brown, belly paler. Immatures: Head and back brown, wing bars less distinct, black on throat and chest much reduced. Soft parts: Iris dark brown. Bill black. Tarsus and feet fleshy-brown.

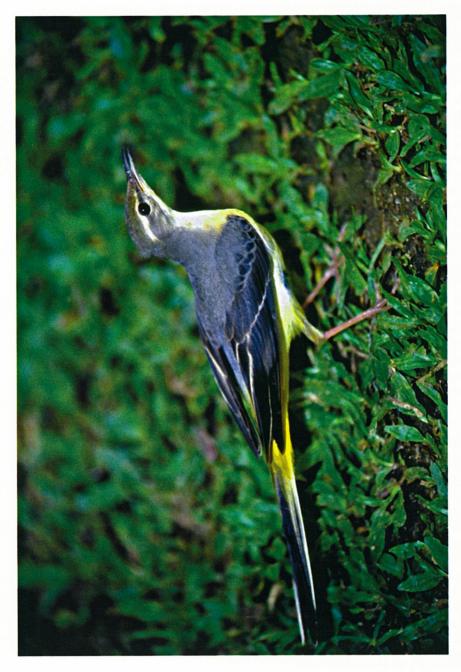
Habitat & Behaviour: The bird is believed to have first reached Borneo on a ship from Hong Kong in 1964, and another ship from Singapore in 1965. Since then, the bird has established itself in Borneo and is now common throughout Sarawak, around human habitation, in cities, towns, villages and longhouses deep in the interior, to 1100 m. Seen singly or in pairs during the breeding season, but more often found in small flocks or noisy communal roosts under the eaves of buildings. A daring bird, hops about perkily on the ground, scavenging for food inside houses or at the edges of clearings around cultivation. Feeds on ripening rice grain alongside flocks of munias, undeterred even by heavy rain.

<u>Food</u>: Feeds on grain and grass seeds, also makes short sallies after insects. Boldly comes into longhouses to eat kitchen scraps and crumbs on the floor or by the fireplace. Feeds near padi fields, but more plentiful around the adjoining rice granaries.

Voice & Calls: Call notes mainly chirps and various chattering notes.

Breeding: Breeds throughout the year. Its nest is an untidy mass of dried grasses and straw, usually under the eaves of buildings or any convenient nook or ledge, even inside houses. It lays four to six whitish eggs. Both parents help in nest building and care of young.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Ba Kelalan and Bario.



Grey Wagtail Motacilla cinerea

Other Names: None.

<u>Status & Range</u>: Breeds in the Palaearctic region, winters in Africa, S and SE Asia to New Guinea. A passage migrant and winter visitor in Sarawak.

<u>Description</u>: Size 7" (18 cm). Sexes alike in winter. Upperparts grey, with long narrow white eye-stripe. Rump greenish-yellow, brighter on uppertail coverts, and narrow white wing bar. Underparts pale yellow, brighter on undertail coverts, throat buffish. <u>Immatures</u>: Like adults, rump, breast and uppertail coverts duller and tinged with buff. <u>Soft Parts</u>: Iris dark brown. Bill blackish, paler at base of lower mandible. Tarsus dark pinkish-horn. The birds can be seen in breeding dress from late February before starting their return migration. <u>Males</u>: Crown slaty-grey. Face grey, long white eye- and malar stripes. Mantle and back greenish-olive, yellower on rump. Chin and throat black, remaining underparts bright yellow. <u>Females</u>: Like males, but crown greyish-olive. Eye-stripe yellowish, whiter above the eye, malar stripe merged with the white chin and throat.

Habitat & Behaviour: Usually found singly or in pairs near running water, in open country, cultivated areas, forest clearings, mountain streams, along roads and shady jungle tracks, to 1500 m. Frequently runs after, or makes short flights, to catch insects, constantly wagging its tail up and down when landing or during pauses. Its flight is undulating. When disturbed, it flies off and lands fifty or so feet ahead, repeating the process a few times until, finally, it flies back to the starting point to land behind the intruder.

<u>Food</u>: Feeds on insects, worms, butterflies, dragonflies and tiny molluscs, much of its food taken in shallow water at the edges of streams.

Voice & Calls: Its call note is a sharp chisik, chisik uttered in flight.

Breeding: It does not breed in our area.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Arur Tumuh, Pa Di'it, Pa' Lungan, Camp Five and Bario.



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Dusky Munia Lonchura fuscans

Other names: Dusky Mannikin.

Status & Range: Resident, and endemic to Borneo.

<u>Description</u>: Size 4 to 4½" (Size 10 to 11 cm). Sexes alike. Forehead and lores uniformly blackish-brown. Upperparts brownish-black, edged darker. Underparts brownish-black, edged dark blackish-brown. Chin and throat blackish-brown. Underwing coverts buff. <u>Immatures</u>: Breast edged darker brown, giving it a scalloped look. <u>Soft parts</u>: Iris black. Upper mandible black, lower mandible pale blue. Tarsus dark blue-black.

Habitat & Behaviour: Abundant in padi fields, open grassy country, forest clearings, scrub vegetation or along small rivers and rural settlements, to 1200 m. A shy mouse-like bird, seen on lawns and clearings in small active flocks, as small as five to ten birds, as many as thirty, moving from one feeding spot to another with nervous flicks of the wing, keeping in touch with high-pitched peeps. Feeds in collusion with other munias on ripening padi, driving farmers to distraction when all noises and gadgets used to stop them from feeding fail, the birds merely wheeling and circling overhead, usually breaking up into smaller flocks of the same species, before diving back into a part of the field farthest away from the farmer. Generally considered to be a pest by tribal farmers. Also seen feeding undeterred by heavy rain. It does not enter houses or longhouses like the Tree Sparrow *Passer montanus*. Roosts communally in old nests or in palm trees and overhanging vegetation.

Food: Eats padi, reed seeds, soft green seeds.

Voice & Calls: Call notes a shrill pee, pee, and a quick teck teck in flight.

Breeding: Nests almost all year round, their choice of nesting sites ranging from holes in banks and tree trunks to low bushes and palms, from as low as three to six feet above ground level to between 25 to 50 feet up on fruit trees. The nest is a loosely woven and untidy ball of grass, with a side entrance. Lays three pure white eggs.

<u>Local Distribution</u>: Recorded at Pa' Ramudu, Pa' Da'lih, Pa' Ukat, Pa' Lungan, Arur Tumuh, Ba Kelalan, Long Sabai and Bario.



Black-headed Munia I onchura malacca

Other names: Chestnut Mannikin, Chestnut Munia.

<u>Status & Range</u>: Resident. Found in India and China down to Thailand, West Malaysia, Sumatra, Borneo, Sulawesi and the Philippines.

<u>Description</u>: Size 4" (10 cm). Sexes alike. Head and neck dark brownish-black. Mantle and back reddish-brown. Uppertail coverts bright chestnut with yellowish-orange at tip. Chin, throat and breast dark brownish-black, vent, undertail coverts and centre of belly black. <u>Immatures</u>: Light brown above, buffy below, crown darker. Chin and throat buffish, blotched with black and chestnut. Breast and belly buffy-brown. Vent, undertail coverts and centre of belly dark brown tinged with buff and showing chestnut in places. <u>Soft parts</u>: Iris dark brown. Bill pale blue. Tarsus blue.

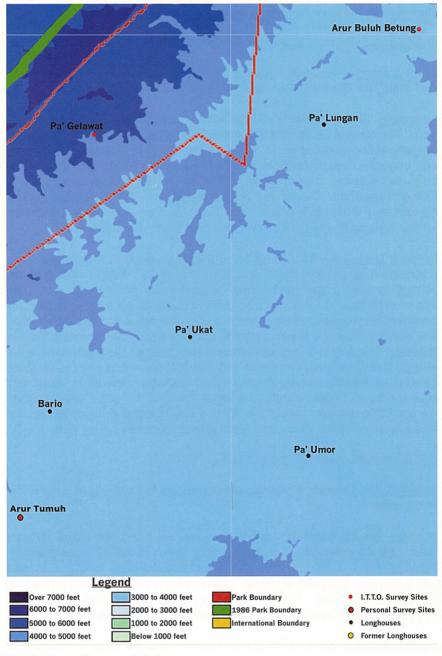
Habitat & Behaviour: The commonest munia in much of the Kelabit area, so abundant as to be a major pest to padi farmers. Found in padi fields, swampy ground, open grasslands, around rural settlements and near cultivation to 1100 m. A social bird, always in flocks, up to a hundred birds or more, sometimes in pairs, often feeding with other munias on ripening padi, moving from one feeding spot to another with much nervous flicks of the wings, keeping in touch with high-pitched peeps. Very acrobatic when feeding, clambering up and down the thin leaves of rice plant with some agility, often feeding upside down. When disturbed, the birds wheel and circle overhead, breaking up into smaller flocks of the same species, then dive back into another part of the field. Flies in loose globular formations like a swarm of bees. Also seen feeding undeterred by heavy rain.

Food: Eats padi, reed and grass seeds.

<u>Voice & Calls</u>: Their shrill piping calls sound like the tinkling of cowbells in the distance.

Breeding: Breeds between April to October but has been noted all year round. Nests colonially, the nests being untidy balls of loosely woven coarse grasses or leaves with a side entrance, always built low in padi fields, bushes, creepers or in tall grass, and located about ten feet up down to ground level. The nests are not always anchored firmly, many being blown down by strong winds. Usually lays four to six white eggs.

Local Distribution: Seen at Pa' Da'lih, Pa' Ramudu, Pa' Ukat and Bario.



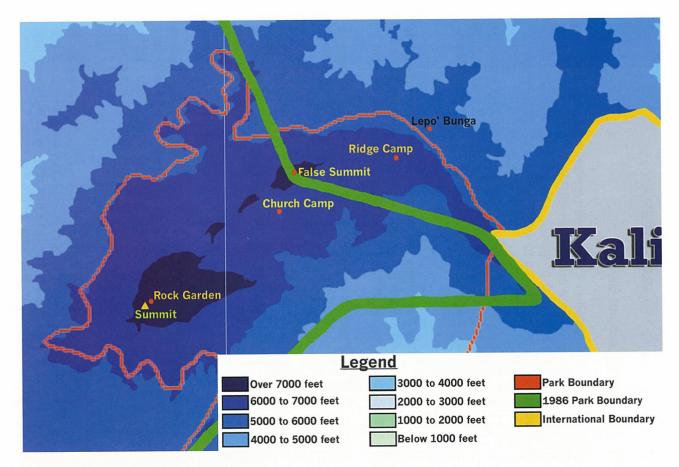
Map 1: Survey sites around Bario

GAZETTEER

1. Survey sites around Bario

Surveys were conducted in the Kelabit Highlands at locations lying within or along the original boundaries of Pulong Tau National Park as defined in an early 1988 proposal. Distances to these locations are given in terms of time taken to walk there along jungle trails.

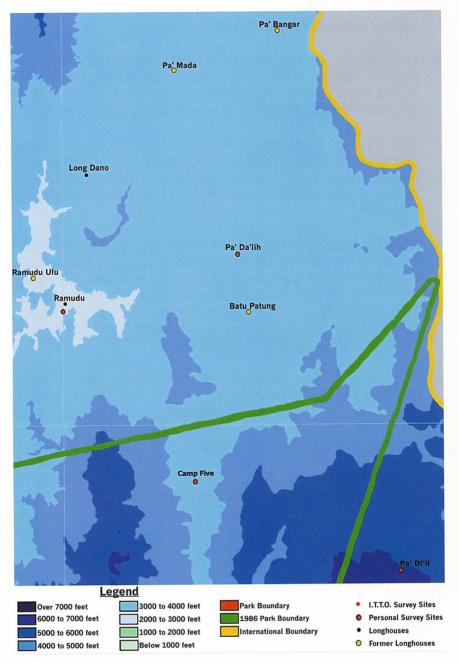
- a. <u>Bario</u>: a mixture of disturbed sub-montane MDF and kerangas forest with scrub vegetation, orchards and rice fields around the old airport, Bario longhouse, and along trails to Kampong Bharu, Pa' Ukat and Pa' Umor.
- b. <u>Arur Tumuh</u>: one hour away on foot from Bario, with undisturbed sub-montane ridge forests, several small streams, some marshy terrain, stands of pole forest and patches of scrub vegetation.
- c. <u>Pa' Berang</u>: a site about one hour away from Pa' Berang, a Penan village on the Pa' Ramudu trail, with prime sub-montane MDF, large trees and little under-storey vegetation. It has, since then, been subject to intensive logging operations.
- d. Long Sabai: a Penan village north of Long Lellang on the banks of Sungei Sabai by the western slopes of the Tama Abu range, near the southern tip of Pulong Tau N. P. (not shown on map), with riverine lowland MDF surrounded by cultivation.
- e. <u>Pa' Gelawat</u>: five hours along an old jungle trail from Pa' Ukat to Batu Lawi, an area of closed-canopy montane forest with very low vertical and horizontal visibility, very few large trees, dense under-storey vegetation full of gingers, rattans, wild *pantu* palms and lots of small emergents.
- f. Arur Buluh Betung: three hours from Pa' Lungan, an area of old open temuda forest lying between an unending series of low and tall ridge lines, with very little level ground in between, and three small streams running down to the flat areas.



Map 2: Survey sites on Mount Murud

2. Survey sites on Mount Murud

- a. <u>Lepo' Bunga</u>: a small hut about two-hours by four-wheel drive from Ba' Kelalan, a transit point at the foot of the summit trail to Mount Murud, with open montane forest on the way up to the mountain, logged and highly degraded along the access road.
- b. Ridge Camp: a two-hour climb from Lepo' Bunga to a ridge covered with higher montane and dwarf mossy forest, badly degraded and heavily overlaid by dense thickets of climbing bamboo, with evidence of sustained tree-felling activity lying all around it.
- c. Church Camp: two hours from Ridge Camp, a large clearing tightly packed with an assortment of buildings, all raised on stilts with plankwalks interconnecting the various buildings. An area full of badly degraded higher montane and dwarf mossy forest. Very little of its original vegetative cover has survived within a 500 m radius of the buildings, the clearings being covered with dense overgrowths of climbing bamboo.
- d. <u>Rock Garden</u>: four hours from Church Camp through higher montane heath and dwarf vegetation, with taller trees along the ridge tops, strewn with large weathered sandstone formations. All around it are short twisted trees, with lots of ground orchids and nepenthes species in between.
- e. <u>Summit</u>: half an hour from Rock Garden along a winding trail through higher montane heath and dwarf vegetation with a large variety of pitcher plants, epiphytic and ground orchids. The summit, just a small clearing dominated by three or four large sandstone rocks, offers a good view of Batu Lawi and the surrounding areas.



Map 3: Survey sites south of Bario

3. Survey sites south of Bario

- a. <u>Pa' Ramudu</u>: nine hours from Bario, with rice fields, open meadows and clearings, surrounded by disturbed sub-montane MDF. There were two survey sites: one on a ridge behind Pa' Ramudu, the other, to monitor birds found migrating northwards along the banks of the Kelapang River, located in clearings adjacent to the river.
- b. <u>Camp Five</u>: four hours from Pa' Ramudu, with ridge forest along the boundary between sub-montane and lowland MDF, along the banks of the Kelapang River, short of its confluence with the Da'pur River. This area has, since then, been subject to intensive logging operations.
- c. <u>Pa' Da'lih</u>: about ten hours from Bario, an area of scrub vegetation and rice fields surrounded by riverine and sub-montane MDF along the banks of the Kelapang River.
- d. <u>Pa' Di'it</u>: about ten hours uphill from Pa' Da'lih, a cliff-faced massif full of stunted montane mossy forest, with some scrub vegetation and tall grasses close to the waterfall.

4. GPS readings and altitudes

Survey site	<u>Latitude</u>	Longitude	<u>Altituo</u>	<u>le</u>
Long Sabai	3° 28' 24" N	115° 14' 31" E	716m	2350 feet
Camp Five	3° 29' 04" N	115° 28' 44" E	883m	2900 feet
Pa' Ramudu	3° 33' 09" N	115° 29' 40" E	914m	3000 feet
Pa' Da'lih	3° 34' 00" N	115° 33' 15" E	971m	3186 feet
Bario	3° 44' 27" N	115° 27' 59" E	1066m	3500 feet
Arur Tumuh	3° 42' 58" N	115° 27' 13" E	1097m	3600 feet
Pa' Berang	3° 38' 30" N	115° 27' 25" E	1097m	3600 feet
Arur Buluh Betung	3° 50' 07" N	115° 32' 54" E	1100m	3700 feet
Pa' Di'it	3° 29' 00" N	115° 36' 00" E	1362m	4469 feet
Pa' Gelawat *	3° 48' 17" N	115° 28' 36" E	1455m	4476 feet
Lepo' Bunga	3° 56' 33" N	115° 32' 40" E	1740m	5710 feet
Ridge Camp	3° 56' 10" N	115° 32' 20" E	2074m	6804 feet
Church Camp	3° 55' 33" N	115° 30' 52" E	2102m	6896 feet
Rock Garden	3° 54' 23" N	115° 29' 20" E	2347m	7701 feet
Murud Summit	3° 54' 18" N	115° 29' 18" E	2432m	7980 feet

^{* (}altitude and co-ordinates approximate)

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Finally, my thanks to Kim Lee, writer and photographer, a good companion and the staunchest of friends, who cheerfully accompanied me on several surveys into some of the most rugged and remotest parts of Sarawak.

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APPENDIX I

Birds recorded in Bario and the Kelabit Highlands: 1993 to 2009

Order GALLIFORMES Family PHASIANIDAE

Dulit Partridge Rhizothera dulitensis
Black Partridge Melanoperdix nigra
Blue-breasted Quail Coturnix chinensis
Red-breasted Partridge Arborophila hyperythra
Crested Partridge Rollulus rouloul
Crested Fireback Lophura ignita
Bulwer's Pheasant Lophura bulweri
Great Argus Argusianus argus

Order PICIFORMES Family PICIDAE

Rufous Piculet Sasia abnormis
Grey-capped Pygmy Woodpecker Dendrocopos canicapillus
Rufous Woodpecker Celeus brachyurus
White-bellied Woodpecker Dryocopus javensis
Banded Woodpecker Picus miniaceus
Crimson-winged Woodpecker Picus puniceus
Checker-throated Woodpecker Picus mentalis
Maroon Woodpecker Blythipicus rubiginosus

Family MEGALAIMIDAE

Gold-whiskered Barbet Megalaima chrysopogon Red-throated Barbet Megalaima mystacophanos Mountain Barbet Megalaima monticola Golden-naped Barbet Megalaima pulcherrima Blue-eared Barbet Megalaima australis Brown Barbet Calorhamphus fuliginosus

Order BUCEROTIFORMES Family BUCEROTIDAE

Black Hornbill Anthracoceros malayanus Rhinoceros Hornbill Buceros rhinoceros Helmeted Hornbill Buceros vigil Bushy-crested Hornbill Anorrhinus galeritus White-crowned Hornbill Aceros comatus Wreathed Hornbill Aceros undulatus

Order TROGONIFORMES Family TROGONIDAE

Scarlet-rumped Trogon Harpactes duvaucelii Orange-breasted Trogon Harpactes oreskios

Order CORACIIFORMES Family CORACIIDAE

Dollarbird Eurvstomus orientalis

Family ALCEDINIDAE

Common Kingfisher Alcedo atthis Blue-eared Kingfisher Alcedo meninting Blue-banded Kingfisher Alcedo euryzona Oriental Dwarf Kingfisher Ceyx erithacus

Family HALCYONIDAE

Banded Kingfisher Lacedo pulchella Stork-billed Kingfisher Halcyon capensis Black-capped Kingfisher Halcyon pileata Rufous-collared Kingfisher Actenoides concretus

Family MEROPIDAE

Red-bearded Bee-eater Nyctyornis amictus

Order CUCULIFORMES Family CUCULIDAE

Chestnut-winged Cuckoo Clamator coromandus
Hodgson's Hawk Cuckoo Hierococcyx fugax
Indian Cuckoo Cuculus micropterus
Oriental Cuckoo Cuculus saturatus
Drongo Cuckoo Surniculus lugubris
Chestnut-bellied Malkoha Phaenicophaeus sumatranus
Chestnut-breasted Malkoha Phaenicophaeus curvirostris

Family CENTROPODIDAE

Greater Coucal Centropus sinensis Lesser Coucal Centropus bengalensis

Order APODIFORMES Family APODIDAE

Glossy Swiftlet *Collocalia esculenta* Edible-nest Swiftlet *Collocalia fuciphaga* Brown-backed Needletail *Hirundapus giganteus*

Order STRIGIFORMES Family STRIGIDAE

Mountain Scops Owl *Otus spilocephalus*Collared Scops Owl *Otus bakkamoena*Barred Eagle Owl *Bubo sumatranus*Collared Owlet *Glaucidium brodiei*

Family EUROSTOPODIDAE

Malaysian Eared Nightiar Eurostopodus temminckii

Order COLUMBIFORMES Family COLUMBIDAE

Rock Pigeon Columba livia
Spotted Dove Streptopelia chinensis
Brown Cuckoo Dove Macropygia amboinensis
Little Cuckoo Dove Macropygia ruficeps
Emerald Dove Chalcophaps indica
Pink-necked Green Pigeon Treron vernans
Jambu Fruit Dove Ptilinopus jambu
Mountain Imperial Pigeon Ducula badia

Order GRUIFORMES Family RALLIDAE

White-breasted Waterhen Amaurornis phoenicurus Common Moorhen Gallinula chloropus

Order CICONIIFORMES Family SCOLOPACIDAE

Common Redshank *Tringa totanus* Wood Sandpiper *Tringa glareola* Common Sandpiper *Actitis hypoleucos*

Family CHARADRIIDAE

Pacific Golden Plover Pluvialis fulva

Family GLAREOLIDAE

Oriental Pratincole Glareola maldivarum

Family LARIDAE

White-winged Tern Chlidonias leucopterus

Family ACCIPITRIDAE

Oriental Honey Buzzard Pernis ptilorhynchus Brahminy Kite Haliastur indus

Lesser Fish Eagle Ichthyophaga humilis Crested Serpent Eagle Spilornis cheela Mountain Serpent Eagle Spilornis kinabaluensis Besra Accipiter virgatus Grey-faced Buzzard Butastur indicus Black Eagle Ictinaetus malayensis

Family ANHINGIDAE

Darter Anhinga melanogaster

Family ARDEIDAE

Little Egret Egretta garzetta
Grey Heron Ardea cinerea
Great Egret Casmerodius albus
Intermediate Egret Mesophoyx intermedia
Cattle Egret Bubulcus ibis
Little Heron Butorides striatus
Yellow Bittern Ixobrychus sinensis
Cinnamon Bittern Ixobrychus cinnamomeus
Black Bittern Dupetor flavicollis

Order PASSERIFORMES Family PITTIDAE

. Banded Pitta *Pitta guajana* Blue-banded Pitta *Pitta arquata*

Family EURYLAIMIDAE

Dusky Broadbill Corydon sumatranus
Black-and-red Broadbill Cymbirhynchus macrorhynchos
Black-and-yellow Broadbill Eurylaimus ochromalus
Green Broadbill Calyptomena viridis
Hose's Broadbill Calyptomena hosii
Whitehead's Broadbill Calyptomena whiteheadi

Family PARDALOTIDAE

Golden-bellied Gerygone Gerygone sulphurea

Family IRENIDAE

Asian Fairy Bluebird *Irena puella*Greater Green Leafbird *Chloropsis sonnerati*Lesser Green Leafbird *Chloropsis cyanopogon*Blue-winged Leafbird *Chloropsis cochinchinensis*

Family LANIIDAE

Tiger Shrike *Lanius tigrinus*Brown Shrike *Lanius cristatus*

Family CORVIDAE

Rail-babbler Eupetes macrocerus Bornean Whistler Pachycephala hypoxantha Crested Jav Platvlophus galericulatus Common Green Magpie Cissa chinensis Bornean Treepie Dendrocitta cinerascens Slender-billed Crow Corvus enca White-breasted Woodswallow Artamus leucorynchus Black Oriole Oriolus hosii Black-and-crimson Oriole Oriolus cruentus Sunda Cuckooshrike Coracina larvata Scarlet Minivet Pericrocotus flammeus Bar-winged Flycatcher-shrike Hemipus picatus White-throated Fantail Rhipidura albicollis Pied Fantail Rhipidura iavanica Spotted Fantail Rhipidura perlata Ashv Drongo Dicrurus leucophaeus Bronzed Drongo Dicrurus aeneus Spangled Drongo Dicrurus hottentottus Black-naped Monarch Hypothymis azurea Asian Paradise-flycatcher Terpsiphone paradisi Rufous-winged Philentoma Philentoma pyrhopterum Large Woodshrike Tephrodornis gularis

Family MUSCICAPIDAE

Sunda Whistling Thrush Myiophoneus glaucinus
Chestnut-capped Thrush Zoothera interpres
Everett's Thrush Zoothera everetti
Eyebrowed Thrush Turdus obscurus
Grey-chested Jungle Flycatcher Rhinomyias umbratilis
Rufous-tailed Jungle Flycatcher Rhinomyias ruficauda
Eyebrowed Jungle Flycatcher Rhinomyias gularis
Dark-sided Flycatcher Muscicapa sibirica
Asian Brown Flycatcher Muscicapa dauurica
Narcissus Flycatcher Ficedula narcissina
Mugimaki Flycatcher Ficedula mugimaki
Snowy-browed Flycatcher Ficedula hyperythra
Rufous-chested Flycatcher Ficedula dumetoria
Little Pied Flycatcher Ficedula westermanni
Blue-and-white Flycatcher Cyanoptila cyanomelana

White-tailed Flycatcher Cyornis concretus
Hill Blue Flycatcher Cyornis banyumas
Bornean Blue Flycatcher Cyornis superbus
Grey-headed Canary Flycatcher Culicicapa ceylonensis
Siberian Blue Robin Luscinia cyane
Oriental Magpie Robin Copsychus saularis
White-rumped Shama Copsychus malabaricus
Chestnut-naped Forktail Enicurus ruficapillus
White-crowned Forktail Enicurus leschenaulti

Family STURNIDAE

Chestnut-cheeked Starling Sturnus philippensis

Family SITTIDAE

Velvet-fronted Nuthatch Sitta frontalis

Family HIRUNDINIDAE

Barn Swallow *Hirundo rustica*Pacific Swallow *Hirundo tahitica*Striated Swallow *Hirundo striolata*

Family PYCNONOTIDAE

Straw-headed Bulbul Pycnonotus zeylanicus
Black-and-white Bulbul Pycnonotus melanoleucos
Black-headed Bulbul Pycnonotus atriceps
Black-crested Bulbul Pycnonotus melanicterus
Puff-backed Bulbul Pycnonotus eutilotus
Flavescent Bulbul Pycnonotus flavescens
Yellow-vented Bulbul Pycnonotus goiavier
Cream-vented Bulbul Pycnonotus simplex
Spectacled Bulbul Pycnonotus erythropthalmos
Ochraceous Bulbul Alophoixus ochraceus
Grey-cheeked Bulbul Alophoixus bres
Yellow-bellied Bulbul Alophoixus phaeocephalus
Hairy-backed Bulbul Tricholestes criniger
Buff-vented Bulbul Iole olivacea
Ashy Bulbul Hemixos flavala

Family CISTICOLIDAE

Yellow-bellied Prinia Prinia flaviventris

Family ZOSTEROPIDAE

Mountain Black-eye Chlorocharis emiliae

Family SYLVIIDAE

Bornean Stubtail Urosphena whiteheadi Sunda Bush Warbler Cettia vulcania Oriental Reed Warbler Acrocephalus orientalis Mountain Tailorbird Orthotomus cuculatus Rufous-tailed Tailorbird Orthotomus sericeus Ashy Tailorbird Orthotomus ruficeps Arctic Warbler Phylloscopus borealis Yellow-breasted Warbler Seicercus montis Yellow-bellied Warbler Abroscopus superciliaris Sunda Laughingthrush Garrulax palliatus Chestnut-capped Laughingthrush Garrulax mitratus Ferruginous Babbler Trichastoma bicolor Horsfield's Babbler Malacocincla sepiarium Short-tailed Babbler Malacocincla malaccensis Temminck's Babbler Pellorneum pyrrogenys Black-capped Babbler Pellorneum capistratum Moustached Babbler Malacopteron magnirostre Scaly-crowned Babbler Malacopteron cinereum Grev-breasted Babbler Malacopteron alboqulare Chestnut-backed Scimitar Babbler Pomatorhinus montanus Black-throated Wren Babbler Napothera atriqularis Mountain Wren Babbler Napothera crassa Evehrowed Wren Babbler Napothera epilepidota Rufous-fronted Babbler Stachyris rufifrons Grev-throated Babbler Stachvris nigriceps Grey-headed Babbler Stachyris poliocephala White-necked Babbler Stachvris leucotis Chestnut-winged Babbler Stachyris erythroptera Striped Tit Babbler Macronous gularis White-throated Shrike Babbler Pteruthius flaviscapis Brown Fulvetta Alcippe brunneicauda Chestnut-crested Yuhina Yuhina everetti White-bellied Yuhina Yuhina zantholeuca

Family NECTARINIDAE

Yellow-breasted Flowerpecker *Prionochilus maculatus*Yellow-rumped Flowerpecker *Prionochilus xanthopygius*Orange-bellied Flowerpecker *Dicaeum trigonostigma*Plain Flowerpecker *Dicaeum concolor*Black-sided Flowerpecker *Dicaeum monticolum*Plain Sunbird *Anthreptes simplex*Ruby-cheeked Sunbird *Anthreptes singalensis*

Olive-backed Sunbird Nectarinia jugularis
Purple-throated Sunbird Nectarinia sperata
Crimson Sunbird Aethopyga siparaja
Temminck's Sunbird Aethopyga temminckii
Little Spiderhunter Arachnothera longirostra
Long-billed Spiderhunter Arachnothera robusta
Spectacled Spiderhunter Arachnothera flavigaster
Grey-breasted Spiderhunter Arachnothera modesta
Bornean Spiderhunter Arachnothera igliae

Family PASSERIDAE

Eurasian Tree Sparrow Passer montanus White Wagtail Motacilla alba Yellow Wagtail Motacilla flava Grey Wagtail Motacilla cinerea Richard's Pipit Anthus richardi Pin-tailed Parrotfinch Erythrura prasina Dusky Munia Lonchura fuscans White-bellied Munia Lonchura leucogastra Black-headed Munia Lonchura malacca

APPENDIX II

Endemic species in Sarawak

The following birds, endemic to Borneo, have been recorded in Sarawak.

- 1. Dulit Partridge Rhizothera dulitensis
- 2. Red-breasted Partridge Arborophila hyperythra
- 3. Crimson-headed Partridge Haematortyx sanguiniceps
- 4. Bulwer's Pheasant Lophura bulweri
- 5. Mountain Barbet Megalaima monticola
- 6. Golden-naped Barbet Megalaima pulcherrima
- 7. Bornean Barbet Megalaima eximia
- 8. Whitehead's Trogon Harpactes whiteheadi
- 9. Bornean Ground Cuckoo Carpococcyx radiatus
- 10. Dulit Frogmouth Batrachostomus harterti
- 11. Mountain Serpent Eagle Spilornis kinabaluensis
- 12. Blue-headed Pitta Pitta baudii
- 13. Blue-banded Pitta Pitta arguata
- 14. Hose's Broadbill Calyptomena hosii
- 15. Whitehead's Broadbill Calyptomena whiteheadi
- 16. Bornean Whistler Pachycephala hypoxantha
- 17. Bornean Treepie Dendrocitta cinerascens
- 18. Bornean Bristlehead Pityriasis gymnocephala
- 19. Black Oriole Oriolus hosii
- 20. Everett's Thrush Zoothera everetti
- 21. Fruithunter Chlamydochaera jefferyi
- 22. Bornean Blue Flycatcher Cyornis superbus
- 23. Pygmy White-eye Oculocincta squamifrons
- 24. Mountain Black-eye Chlorocharis emiliae
- 25. Bornean Stubtail *Urosphena whiteheadi*
- 26. Bornean Wren Babbler Ptilocichla leucogrammica
- 27. Black-throated Wren Babbler Napothera atrigularis
- 28. Mountain Wren Babbler Napothera crassa
- 29. Chestnut-crested Yuhina Yuhina everetti
- 30. Yellow-rumped Flowerpecker Prionochilus xanthopygius
- 31. Black-sided Flowerpecker Dicaeum monticolum
- 32. Whitehead's Spiderhunter Arachnothera juliae
- 33. Dusky Munia Lonchura fuscans

APPENDIX III

Endangered bird species

The following birds, currently found in Sarawak, are listed as being under threat of extinction in *Threatened birds of Asia: the BirdLife International Red Data Book* (BirdLife International 2001).

Threat Category: Critically Endangered

- 1. Silvery Pigeon Columba argentina
- 2. Chinese Crested-tern Sterna bernsteini
- 3. Christmas Island Frigatebird Fregata andrewsi

Threat Category: Endangered

- 1. Greenshank Tringa guttifer
- 2. Storm's Stork Ciconia stormi

Threat Category: Vulnerable

- 1. Black Partridge Melanoperdix nigra
- 2. Crestless Fireback Lophura erythrophthalma
- 3. Bulwer's Pheasant Lophura bulweri
- 4. Blue-banded Kingfisher Alcedo euryzona
- 5. Short-toed Coucal Centropus rectunguis
- 6. Sunda Nightjar Caprimulgus concretus
- 7. Large Green-pigeon Treron capellei
- 8. Grey Imperial-pigeon Ducula pickeringii
- 9. Mountain Serpent-eagle Spilornis kinabaluensis
- 10. Wallace's Hawk-eagle Spizaetus nanus
- 11. Chinese Egret Egretta eulophotes
- 12. Lesser Adjutant Leptoptilos javanicus
- 13. Blue-headed Pitta Pitta baudii
- 14. Fairy Pitta Pitta nympha
- 15. Large-billed Blue-flycatcher Cyornis caerulatus
- 16. Straw-headed Bulbul Pycnonotus zeylanicus
- 17. Hook-billed Bulbul Setornis criniger
- 18. Java Sparrow Padda oryzivora
- 19. Bornean Wren-babbler Ptilocichla leucogrammica



