

**BIRDS, MAMMALS, AMPHIBIANS and REPTILES
seen in Sarawak and Sabah, Borneo March 19 – April 6 2018**

Stefan Lithner



Bristlehead

Photo Stefan © Lithner

This trip was arranged as a bird trip by BirdtourASIA

<http://www.birdtourasia.com/borneo2018.html> .

The Sarawak part was conducted by Mr Yeo Siew Teck (Yeo) and the Sabah part was conducted by Mr Wilbur Goh (Wilbur).

Participants were Pamela Hodgson (Pamela), David Graham (David), Stefan Lithner (Stefan), William Schweber (Bill), Neil Davis (Neil) and Lisa Holtzapfel (Lisa).

A full report with Itinerary and birds in detail is available on

<http://birdtourasia.com/pdf%20Reports/Birdtour%20Asia%20Borneo%202018.pdf>

Itinerary in short: Kota Kinabalu – Klias Forest Reserve (peat swamp close to the Border between Sarawak and Sabah) - Oriole Camp Site (Sarawak) - Kelabit Highlands - Klias Forest Reserve (second time)– Kota Kinabalu – Tambunan - (Crocker Range Park) - Kinabalu National Park (including: Timphon Gate – Pouring Hot Springs) - Sepilok – Gomantong Caves – Kinabatangan River – Danum Valley – Kota Kinabalu.

BIRDS

This checklist follows BirdtourASIA's checklist.

Wandering Whistling Duck

Great Argus

Red-breasted Partridge

Chestnut-necklaced Partridge

Crimson-headed Partridge

Bornean (Crested) Fireback

Bulwer's Pheasant

Dendrocygna arcuata

Argusianus argus

Arborophila hyperythrae

Tropicoperdix charltonii graydoni

Haematortyx sanguiniceps

Lophura ignita nobilis

Lophura bulweri (heard)



Pink-necked Pigeon

Photo Stefan © Lithner



Plume-toed Swiftlet

Photo Stefan © Lithner

Spotted Dove

Little Cuckoo Dove

Asian Emerald Dove

Zebra Dove

Pink-necked Green Pigeon

Thick-billed Pigeon

Jambu Fruit Dove

Stigmatopelia chinensis

Macropygia ruficeps nana

Chalcophaps indica indica

Geopelia striata

Treron vernans

Treron curvirostra

Ptilinopus jambu

Green Imperial Pigeon
Mountain Imperial Pigeon
Bock's Hawk Cuckoo

Ducula aenea
Ducula badia
Hierococcyx (sparverioides) bocki



Violet Cuckoo

Photo Stefan © Lithner



Bornean Leafbird

Photo Stefan © Lithner

Moustached Hawk Cuckoo
Malaysian Hawk Cuckoo
Sunda Cuckoo
Indian Cuckoo
Banded Bay Cuckoo
Plaintive Cuckoo
Little Bronze Cuckoo
Violet Cuckoo
Asian Drongo Cuckoo
Raffles's Malkoha
Black-bellied Malkoha
Red-billed Malkoha
Chestnut-breasted Malkoha
Bornean Ground Cuckoo
Greater Coucal
Grey-rumped Treeswift
Whiskered Treeswift
Plume-toed Swiftlet
Bornean Swiftlet
Mossy-nest Swiftlet
Black-nest Swiftlet
Edible-nest Swiftlet
Silver-rumped Spinetail
Brown-backed Needletail
Asian Palm Swift
Large Frogmouth
Dulit Frogmouth
Bornean Frogmouth
Blyth's Frogmouth
Large-tailed Nightjar
Malaysian Eared Nightjar
White-breasted Waterhen
Black-backed Swamphen

Hierococcyx vagans
Hierococcyx fugax
Cuculus lepidus
Cuculus micropterus
Cacomantis sonneratii (heard)
Cacomantis merulinus
Chrysococcyx minutillus aheneus
Chrysococcyx xanthorhynchus
Surniculus lugubris brachyurus
Rhinortha chlorophaea
Phaenicophaeus diardi
Zanclostomus javanicus
Phaenicophaeus curvirostris
Carpococcyx radiatus
Centropus sinensis bubutus
Hemiprocne longipennis harterti
Hemiprocne comata comata
Collocalia affinis cyanoptila
Collocalia dodgei
Aerodramus salangana natunae
Aerodramus maximus lowi
Aerodramus fuciphagus vestita
Rhaphidura leucopygialis
Hirundapus giganteus
Cypsiurus balasiensis
Batrachostomus auritus
Batrachostomus harterti
Batrachostomus mixtus
Batrachostomus affinis affinis
Caprimulgus macrurus salvadorii
Eurostopodus temminckii
Amaurornis phoenicurus
Porphyrio indicus



Bornean Frogmouth

Photo Stefan © Lithner

Common Moorhen
Common Greenshank
Wood Sandpiper
Common Sandpiper

Gallinula chloropus
Tringa nebularia
Tringa glareola
Actitis hypoleucos



Large Frogmouth

Photo Stefan © Lithner



Blyth's Frogmouth

Photo Stefan © Lithner



Storm's Stork

Photo Stefan © Lithner



Great-billed Heron

Photo Stefan © Lithner

Oriental Darter
Storm's Stork
Lesser Adjutant
Great-billed Heron

Anhinga melanogaster
Ciconia stormi
Leptoptilos javanicus
Ardea sumatrana



Jerdon's Baza with lizard

Photo Stefan © Lithner

Purple Heron
Eastern Great Egret

Ardea purpurea
Ardea modestus



Bat Hawk

Photo Stefan © Lithner



Crested Serpent Eagle

Photo Stefan © Lithner

Intermediate Egret
Little Egret
Eastern Cattle Egret
Striated Heron
Cinnamon Bittern
Jerdon's Baza
Sunda Honeybuzzard
Bat Hawk
Crested Goshawk
Black Eagle
Rufous-bellied Eagle
Changeable Hawk Eagle

Ardea intermedia intermedia
Egretta garzetta
Ardea coromandus
Butorides striata
Ixobrychus cinnamomeus
Aviceda jerdoni
Pernis ptilorhynchus torquatus
Macheiramphus alcinus alcinus
Lophospiza trivirgata
Ictinaetus malayensis
Lophotriorchis kienerii
Nisaetus limnaeetus



Crested Hawk Eagle

Photo Stefan © Lithner



Wallace's Hawk Eagle

Photo Stefan © Lithner

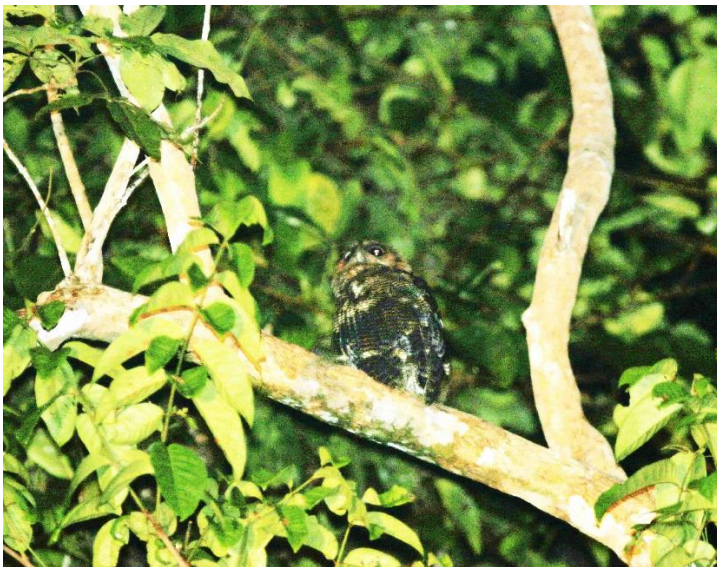
Blyth's Hawk Eagle
Wallace's Hawk Eagle
Barred Eagle Owl
Buffy Fish Owl
Brown Wood Owl
Brown Boobook
(Sunda) Collared Owlet

Nisaetus alboniger
Nisaetus nanus
Bubo sumatranus
Bubo ketupu
Strix leptogrammica vaga
Ninox scutulata borneensis (heard)
Glaucidium brodiei borneense (heard)



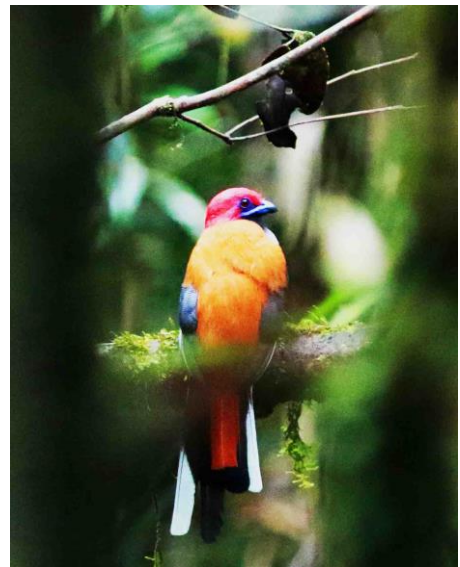
Mountain Serpent Eagle

Photo Stefan © Lithner



Brown Wood Owl

Photo Stefan © Lithner



Whitehead's Trogon

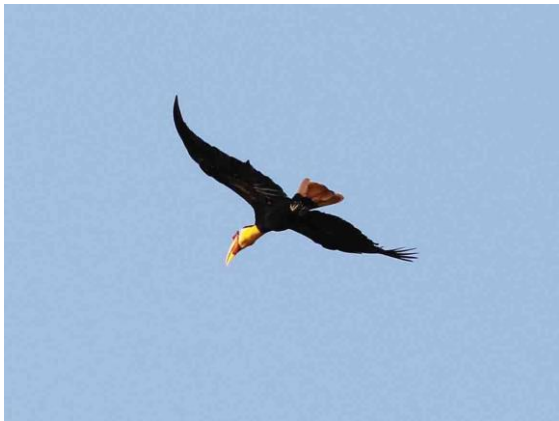
Photo Stefan © Lithner

Red-naped Trogon
Diard's Trogon
Whitehead's Trogon
Scarlet-rumped Trogon
Orange-breasted Trogon

Harpactes kasumba impavidus
Harpactes diardii diardii
Harpactes whiteheadi
Harpactes duvaucelii (heard)
Harpactes oreskios dulitensis

Oriental Pied Hornbill
Black Hornbill
Rhinoceros Hornbill
Helmeted Hornbill
Bushy-crested Hornbill
White-crowned Hornbill
Wrinkled Hornbill
Wreathed Hornbill

Anthracoceros albirostris convexus
Anthracoceros malayanus
Buceros rhinoceros borneoensis
Rhinoplax vigil
Anorrhinus galeritus
Berenicornis comatus
Aceros corrugatus
Rhyticeros undulatus



Wrinkled Hornbill

Photo Stefan © Lithner

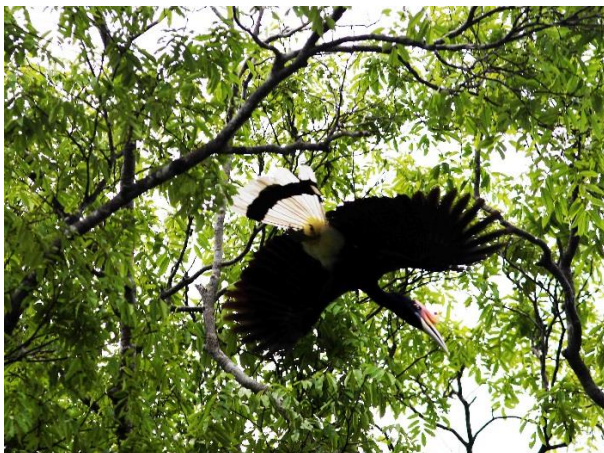


Black Hornbill

Photo Stefan © Lithner

Gold-whiskered Barbet
Red-crowned Barbet
Red-throated Barbet
Mountain Barbet

Psilopogon chrysopogon
Psilopogon rafflesii
Psilopogon mystacophanos
Psilopogon monticola



Rhinoceros Hornbill

Photo Stefan © Lithner



Black-and-red Broadbill

Photo Stefan © Lithner

Yellow-crowned Barbet
Golden-naped Barbet
Blue-eared Barbet
Bornean Barbet
Brown Barbet
Rufous Piculet
Rufous Woodpecker
White-bellied Woodpecker

Psilopogon henricii
Psilopogon pulcherrima
Psilopogon duvaucelii duvaucelii
Psilopogon eximia
Caloramphus fuliginosus
Sasia abnormis
Celeus brachyurus badius
Dryocopus javensis javensis

Banded Yellownape
Checker-throated Yellownape
Crimson-winged Woodpecker
Olive-backed Woodpecker
Maroon Woodpecker
Buff-rumped Woodpecker
Buff-necked Woodpecker
Great Slaty Woodpecker

Chrysophlegma miniaceum malaccensis
Chrysophlegma mentale humii (heard)
Picus puniceus observandus
Dinopium rafflesii dulitense
Blythipicus rubiginosus
Meiglyptes tristis grammithorax
Meiglyptes tukki tukki
Mulleripicus pulverulentus



Brown Barbet

Photo Stefan © Lithner



Stork-billed Kingfisher

Photo Stefan © Lithner

Blue-eared Kingfisher
Rufous-backed Kingfisher

Alcedo meninting verreauxii
Ceyx rufidorsa motleyi



Blue-eared Kingfisher sleeping

Photo Stefan © Lithner



Rufous-backed Kingfisher sleeping

Photo Stefan © Lithner

Banded Kingfisher
Stork-billed Kingfisher
Ruddy Kingfisher
Collared Kingfisher
Rufous-collared Kingfisher
Red-bearded Bee-eater
Blue-throated Bee-eater
Dollarbird
White-fronted Falconet
Peregrine Falcon

Lacedo pulchella melanops
Pelargopsis capensis inominata
Halcyon coromanda minor
Todiramphus chloris laubmannianus
Actenoides concretus borneanus
Nyctornis amictus
Merops viridis viridis
Eurystomus orientalis
Microhierax latifrons
Falco peregrinus ernesti

Blue-rumped Parrot
Long-tailed Parakeet
Blue-crowned Hanging-Parrot

Psittinus cyanurus
Psittacula longicauda
Loriculus galgulus



White-fronted Falconet sleeping

Photo Stefan © Lithner



Red-bearded Bee-eater

Photo Stefan © Lithner

PASSERINES:



Malayan Blue Flycatcher

Photo Stefan © Lithner

Green Broadbill
Hose's Broadbill
Whitehead's Broadbill
Dusky Broadbill
Black-and-red Broadbill
Banded Broadbill
Black-and-yellow Broadbill
Long-tailed Broadbill
Giant Pitta
Bornean Banded Pitta
Blue-headed Pitta
Hooded Pitta
Blue-banded Pitta
Black-crowned Pitta
Golden-bellied Gerygone
Blyth's Shrike Babbler
Erpornis
Dark-throated Oriole
Black Oriole
Black-and-crimson Oriole
Bornean Whistler
Bar-winged Flycatcher-shrike
Black-winged Flycatcher-shrike

Calyptomena viridis
Calyptomena hosii
Calyptomena whiteheadi
Corydon sumatranus
Cymbirhynchus macrorhynchos
Eurylaimus javanicus
Eurylaimus ochromalus
Psarisomus dalhousiae
Hydrornis caerulea hosei (heard)
Hydrornis schwaneri
Hydrornis baudii
Pitta sordida mulleri
Erythropitta arquata
Erythropitta ussheri
Gerygone sulphurea (heard)
Pteruthius faeralatus robinsoni
Erpornis zantholeuca
Oriolus xanthonotus consobrinus heard)
Oriolus hosii
Oriolus cruentus vulneratus
Pachycephala hypoxantha
Hemipus picatus intermedius
Hemipus hirundinaceus



Blyth's Shrike Babbler

Photo Stefan © Lithner



Malaysian Pied Fantail

Photo Stefan © Lithner

Rufous-winged Philentoma
Maroon-breasted Philentoma
Bristlehead
Common Iora
Green Iora
White-breasted Woodswallow
Sunda Cuckooshrike
Roving (Bar-bellied) Cuckooshrike
Lesser Cicadabird
Pied Triller
Scarlet Minivet
Grey-chinned Minivet
White-throated Fantail
Sunda (Malaysian) Pied Fantail

Philentoma pyrhoptera (heard)
Philentoma velata
Pityriasis gymnocephala
Aegithina tiphia aequanimis
Aegithina viridissima
Artamus leucorhynchus
Coracina larvata normani
Coracina (striata) sumatrensis
Lalage fimbriata schierbrandii
Lalage nigra nigra
Pericrocotus speciosus insulanus
Pericrocotus solaris cinereigula
Rhipidura albicollis kinabalu
Rhipidura javanica

Spotted Fantail
Sunda (Ashy) Drongo
Bronzed Drongo
Bornean Spangled Drongo

Rhipidura perlata
Dicrurus leucophaeus stigmatops
Dicrurus aeneus malayensis
Dicrurus borneensis



Slender-billed Crow

Photo Stefan © Lithner



Pacific Swallow

Photo Stefan © Lithner

Greater Racket-tailed Drongo
Black-naped Monarch
Blyth's Paradise-flycatcher
Crested Jay
Bornean Black Magpie
Bornean Green Magpie
Bornean Treepie
Sunda (Slender-billed) Crow
Rail-babbler

Dicrurus paradiseus brachyphorus
Hypothymis azurea prophata
Terpsiphone affinis borneensis
Platylophus galericulatus coronatus
Platysmurus aterrimus
Cissa jeffreyi
Dendrocitta cinerascens
Corvus enca compilator
Eupetes macrocerus (heard)



Little Pied Flycatcher (female)

Photo Stefan © Lithner



Chestnut-crested Yuhina

Photo Stefan © Lithner

Grey-headed Canary-flycatcher
Barn Swallow
Pacific Swallow
Straw-headed Bulbul
Black-headed Bulbul
Bornean Bulbul
Grey-bellied Bulbul
Puff-backed Bulbul

Culicicapa ceylonensis
Hirundo rustica gutturalis
Hirundo tahitica
Pycnonotus zeylanicus
Pycnonotus atriceps atriceps
Pycnonotus montis
Pycnonotus cyaniventris
Pycnonotus eutilotus

Pale-faced Bulbul
Yellow-vented Bulbul
Olive-winged Bulbul
Cream-vented Bulbul
Red-eyed Bulbul
Spectacled Bulbul
Finsch's Bulbul
Ochraceous (Penan) Bulbul

Pycnonotus leucops
Pycnonotus goiavier gourdini
Pycnonotus plumosus plumosus
Pycnonotus simplex perplexus
Pycnonotus brunneus brunneus
Pycnonotus erythrophthalmos
Alophoixus finschii
Alophoixus ochraceus ruficrissus



Black-capped White-eye

Photo Stefan © Lithner



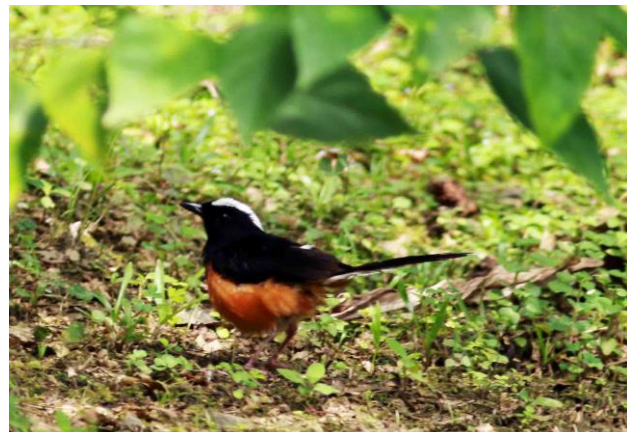
Sunda Bush Warbler

Photo Stefan © Lithner



Common Hill Myna

Photo Stefan © Lithner



White-crowned Shama

Photo Stefan © Lithner

Grey-cheeked Bulbul
Yellow-bellied Bulbul
Hairy-backed Bulbul
Charlotte's Bulbul
Cinereous Bulbul
Hook-billed Bulbul
Bold-striped Tit Babbler
Fluffy-backed Tit-Babbler
Chestnut-winged Babbler
Rufous-fronted Babbler
Chestnut-backed Scimitar Babbler
Grey-throated Babbler
Grey-headed Babbler
Black-throated Babbler

Alophoixus bres gutturalis
Alophoixus phaeocephalus
Tricholestes criniger
Iole charlottae
Hemixos cinereus connectens
Setornis criniger
Mixornis bornensis
Macronus pilosus reclusus
Cyanoderma erythroptera bicolor
Cyanoderma rufifrons sarawacensis
Pomatorhinus montanus bornensis
Stachyris nigriceps borneensis
Stachyris poliocephala
Stachyris nigricollis (heard)

Chestnut-rumped Babbler
Moustached Babbler
Sooty-capped Babbler
Scaly-crowned Babbler
Rufous-crowned Babbler
Grey-breasted Babbler
White-chested Babbler
Ferruginous Babbler
Short-tailed Babbler
Temminck's Babbler

Stachyris maculata maculata
Malacopteron magnirostre cinereocapilla
Malacopteron affine phoeniceum
Malacopteron cinereum cinereum
Malacopteron magnum saba
Malacopteron albogulare
Pellorneum rostratum macropterum
Pellorneum bicolor
Pellorneum malaccense sordidum
Pellorneum pyrrogenys canicapillus



Little Pied Flycatcher

Photo Stefan © Lithner



Blue-and-white Flycatcher

Photo Stefan © Lithner

Black-capped Babbler
Striped Wren Babbler
Horsfield's Wren Babbler
Black-throated Wren Babbler
Mountain Wren Babbler

Pellorneum capistratum morrelli
Kenopia striata
Turdinus sepiarius harterti
Turdinus atrigularis
Turdinus crassus



Indigo Flycatcher

Photo Stefan © Lithner



Temminck's Sunbird

Photo Stefan © Lithner

Bornean Ground Babbler
Brown Fulvetta
Sunda Laughingthrush
Bare-headed Laughingthrush
Chestnut-hooded Laughingthrush
Chestnut-crested Yuhina

Ptilocichla leucogrammica
Alcippe brunneicauda
Garrulax palliatus
Garrulax calvus
Garrulax treacheri treacheri
Yuhina everetti



Brown-throated Sunbird

Photo Stefan © Lithner

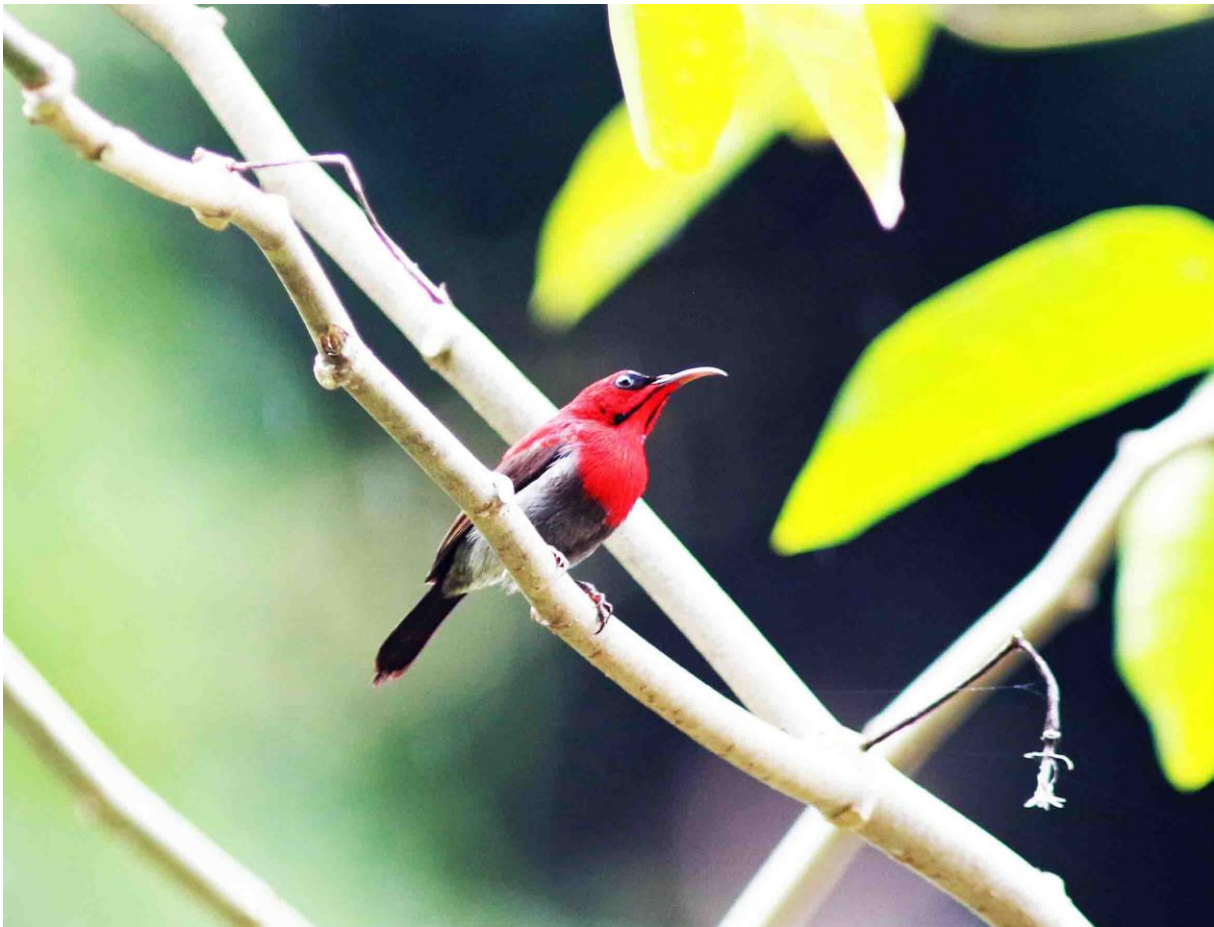


Whitehead's Spiderhunter

Photo Stefan © Lithner

Pygmy Ibon
Black-capped White-eye
Mountain Black-eye
Mountain Leaf Warbler
Yellow-breasted Warbler
Yellow-bellied Warbler
Bornean Stubtail
Sunda Bush Warbler
Mountain Tailorbird
Striated Grassbird
Dark-necked Tailorbird

Heleia squamifrons
Zosterops atricapillus
Zosterops emiliae
Seicercus trivirgatus kinabaluensis
Seicercus montis floris
Abroscopus superciliaris schwaneri
Urosphena whiteheadi
Horornis vulcanius oreophila
Phyllergates cucullatus cinereicollis
Megalurus palustris
Orthotomus atrogularis atrogularis



Crimson Sunbird

Photo Stefan © Lithner

Rufous-tailed Tailorbird
Ashy Tailorbird
Yellow-bellied Prinia
Velvet-fronted Nuthatch
Asian Glossy Starling
Common Hill Myna
Javan Myna
Everett's Thrush
Eye-browed Thrush
Fruithunter
Oriental Magpie Robin
White-crowned Shama
White-rumped Shama
Rufous-tailed Shama
Dark-sided Flycatcher
Asian Brown Flycatcher

Orthotomus sericeus sericeus
Orthotomus ruficeps borneoensis
Prinia flaviventris latrunculus
Sitta frontalis corallipes
Aplonis panayensis
Gracula religiosa
Acridotheres javanicus
Zoothera everetti
Turdus obscurus
Chlamydochaera jefferyi
Copsychus saularis adamsi
Copsychus stricklandii
Copsychus malabaricus (heard)
Copsychus pyrropygus (heard)
Muscicapa sibirica
Muscicapa dauurica dauurica



Brown-Whistling Thrush

Photo Stefan © Lithner



Yellow-bellied Prinia

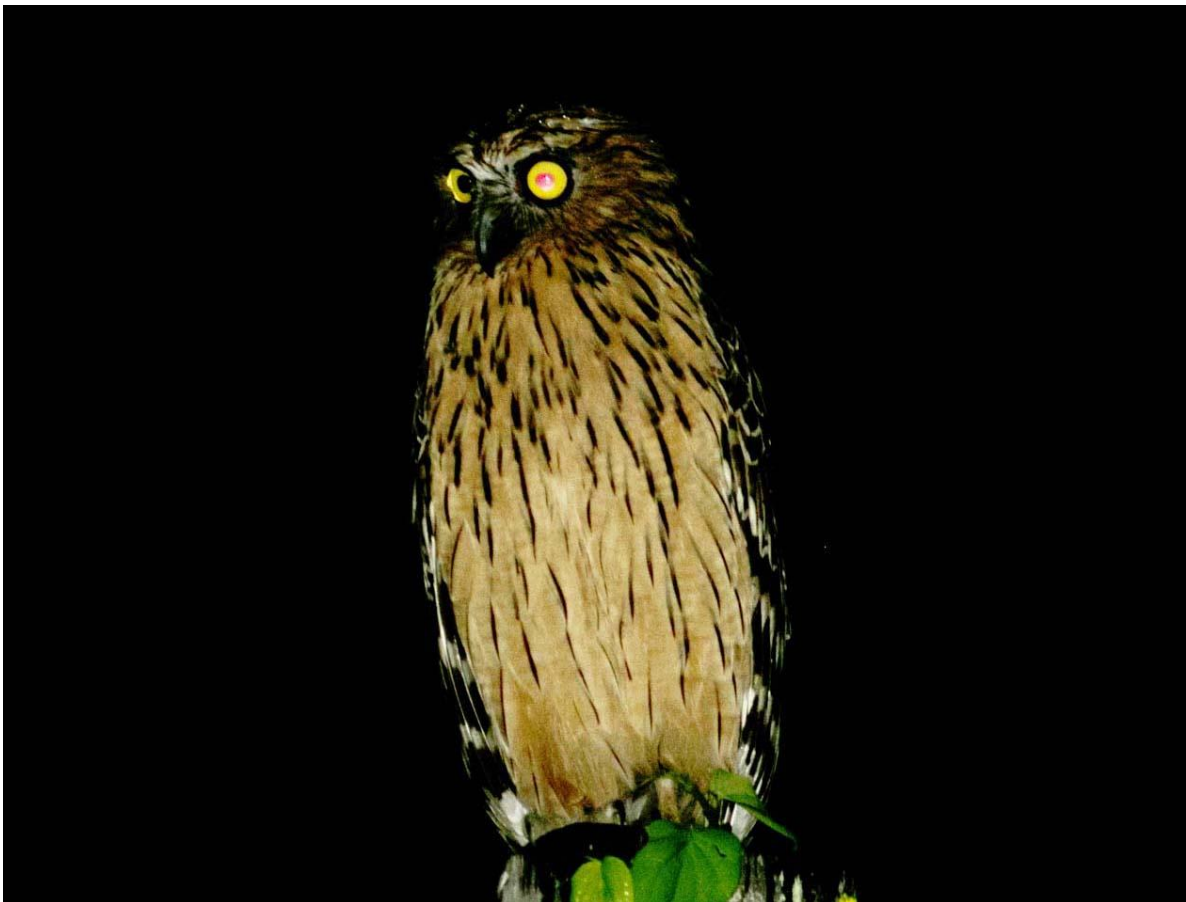
Photo Stefan © Lithner

Grey-chested Jungle Flycatcher
Pale Blue Flycatcher
Hill Blue Flycatcher
Sunda Blue Flycatcher
Malaysian Blue Flycatcher
Bornean Blue Flycatcher
Blue-and-White Flycatcher
Verditer Warbling-flycatcher
Indigo Flycatcher
Eye-browed Jungle Flycatcher
White-browed Shortwing
Chestnut-naped Forktail
Bornean Forktail
Bornean Whistling-thrush
Mugimaki Flycatcher
Rufous-chested Flycatcher
Little Pied Flycatcher
Greater Green Leafbird
Lesser Green Leafbird
Bornean Leafbird
Blue-winged Leafbird
Asian Fairy-bluebird
Yellow-breasted Flowerpecker

Cyornis umbratilis
Cyornis unicolor harterti
Cyornis banyumas coeruleatus
Cyornis caerulatus
Cyornis turcosus
Cyornis superbus
Cyanoptila cyanomelana
Eumyias thalassinus
Eumyias indigo
Vauriella gularis
Brachypteryx montana erythrogyna
Enicurus ruficapillus
Enicurus borneensis
Myophonus borneensis
Ficedula mugimaki
Ficedula dumetoria
Ficedula westermanni
Chloropsis sonnerati zosterops
Chloropsis cyanopogon cyanopogon
Chloropsis kinabaluensis
Chloropsis (cochinchinensis) moluccensis
Irena puella crinigera
Prionochilus maculatus maculatus

Yellow-rumped Flowerpecker
Scarlet-breasted Flowerpecker
Yellow-vented Flowerpecker
Orange-bellied Flowerpecker
Black-sided Flowerpecker
Scarlet-backed Flowerpecker
Ruby-cheeked Sunbird
Plain Sunbird
Brown-throated Sunbird
Red-throated Sunbird
Olive-backed Sunbird
Copper-throated Sunbird
Van Hasselt's Sunbird
Crimson Sunbird
Temminck's Sunbird
Purple-naped Spiderhunter
Spectacled Spiderhunter
Little Spiderhunter
Yellow-eared Spiderhunter
Bornean Spiderhunter
Whitehead's Spiderhunter
Eurasian Tree Sparrow
Dusky Munia
Scaly-breasted Munia
Grey Wagtail

Prionochilus xanthopygius
Prionochilus thoracicus
Pachyglossa chrysoorrhea
Dicaeum trigonostigma dayakanum
Dicaeum monticolum
Dicaeum cruentatum nigrimentum
Chalcoparia singalensis
Anthreptes simplex
Anthreptes malacensis
Anthreptes rhodolaemus
Cinnyris jugularis ornatus
Leptocoma calcostetha
Leptocoma brasiliانا
Aethopyga siparaja
Aethopyga temminckii
Arachnothera hypogrammica
Arachnothera flavigaster
Arachnothera longirostra
Arachnothera chrysogenys
Arachnothera everetti
Arachnothera julliae
Passer montanus malaccensis
Lonchura fuscans
Lonchura punctulata cabanisi
Motacilla cinerea cinerea



Buffy Fish Owl

Photo Stefan © Lithner

MAMMALS



Bornean Urang-utan

Photo Stefan © Lithner

Species presented in order as in Phillips Q. and Phillips K: Philipps Field Guide to the Mammals of Borneo. References to the book will be used as Phillipps.

B A T S S E E N

According to Phillipps Borneo holds at least 81 species of bats. Two are fruit bats and 79+ are more or less insectivorous bats.

Only very few of them show features rendering us to determine their specie, unless caught or studied/photographed roosting.

Two species I believe I have been able to identify, partly with help of local ranger, thanks to white on their wings. One because of roosting habits and the abundant Asian Wrinkle-lipped Bat

Pouched Tomb Bat

Saccolaimus saccolaimus

In the evening of March 31st at Borneo Echo Lodge of Kinabatangan River I was overflown by a rather large insectivorous bat revealing a wing-pattern strongly reminiscent of those of Sabine's Gull (*Xema sabini*) and adult winter White-cheeked Tern (*Sterna repressa*) i.e. with white/whitish keels from the rear of forearm towards thumb. Phillipps reveal only one species with this feature; *S. saccolaimus* p 114: 1:d and

https://www.google.se/search?source=hp&ei=ERfXWombOMutsAG9v4LQDw&q=saccolaimus+saccolaimus+images&oq=saccolaimus+saccolaimus+images&gs_l=psy-ab.3..35i39k1.1077.11592.0.12818.31.30.0.0.0.141.1745.29j1.30.0....0...1c.1.64.psyab..1.30.1742.0..0j0i131k1j0i203k1j0i10i203k1j0i30k1j0i5i30k1.0.-A1Ae-4SSd0 This species is common throughout lowlands of Borneo.

Vordemann's Pipistrelle

Hypsugo vordemanni

During spotlighting on foot in the evening of April 3rd my accompanying ranger Henry asked me if I had seen the pipistrelle with white wings, which I saw before daybreak the same day. He told me those were Vordemann's Pipistrelle. My observation does not oppose his statement.

Asian Whiskered Myotis

Myotis muricola

During mammal-search together with ranger Henry in in the garden of Danum Valley Rainforest Lodge asked me whether I had seen the neat little *Myotis* roosting in banana leaves. I had seen some tiny bats flying around the lodge which had dark wings, but not until the morning of April 6th I found one roosting.

Asian Wrinkle-lipped Bat

Tadarida plicata

At Gomanyong Caves in the evening of Mar 31st most of the participants were able to see a huge stream of bats leaving the caves at a fair distance off the ground. The abundance of bats leaving these cave has previously been estimated to "at least two millions", and the vast majority of these being Asian Wrinkle-lipped Bat.

Hairy-winged Bat

highly plausible

Harpiocephalus harpa

During spotlighting on foot in the evening of April 3rd in the garden of Danum Valley Rainforest Lodge my accompanying ranger Henry and I saw a bright orange bat hanging freely from a tiny twig about ¾ of a meter above the ground looking like an orange ready to harvest, surrounded by no cover at all. It was a medium sized bat. It reminded me sizewise

of the *Scotophilus kuhlii* which I have seen twice. Its ears were just barely protruded out of the pelage. When taking off its wings looked very pale, nearly pinkish with an orange tinge. Turning pages in Phillipps' book, only the Hairy-winged Bat (*H. harpa*) shows such bright orange pelage. Other bats also being orange, but to a lesser extent exist. According to Phillipps' book the second most orange bat is Orange Tube-nosed Bat (*Murina peninsularis*). Returned from the trip I googled on all bats in Phillipps' book (2008) with an orange tinge. None of the alternatives (i. e. except *H. harpa*) show such bright orange pelage as the bat we saw.

H. harpa also is in size similar to *S. kuhlii*. which speaks against the *Marina*-bats. Phillipps' book reveals *H. harpa* is a rare bat to Borneo (2008), but has been registered in Sabah (Tawau and Sepilok). I find no better suggestion for this bat.

During our hike towards M.t Kinabalu Pouring Hot Springs Mars 29th we had just passed a second wading-site on our hike towards the hot springs when we passed a limestone arcade only about 25 metres from the path. Here we saw a number of bats, however not accessible unless you were prepared to leave the bird-expedition for some time, which I did not. Our BirdingAsia guide Wilbur asked a ranger about what species they might be, and found out that the commonest bat in the park is **Fawn Roundleaf Bat** (*Hipposideros cervinus*), but **Cantor's Roundleaf Bat** (*Hipposideros galeritus*) is also fairly common here. The bats were not assessed to species at the sight. Photos were taken which show two species. One slightly larger, dark or very dark brown, and one slightly smaller of which some individuals were "fawn-coloured". Photos are not good enough to assess species but strongly support the two species mentioned above.

BATS RECORDED

In the evening of April 1st at Borneo Eco Lodge of Kinabatangan River I made some recordings with my Pettersson D 240x ultra sound bat detector. When returning home I analyzed the recordings with Pettersson BatSound version 4.03. Our Birdtour Asia guide Wilbur collected a list of bats known from the site (Lodge-list). I also received help to analyze the recordings from Ellen Mc Arthur (EMA) (Research and Community Education Officer Mulu World Heritage Borsarmulu Park Management SDN BHD) and Chris Corben (Anabat). I made 15 recordings successfully.

The Lodge-list obtained contains 15 species.

EMA's analysis suggest *Myotis horsfieldi* (rec no 14 n 15) but also stresses it could be another *Myotis*. The Lodge-list contains only one *Myotis*: *M. gomantongensis*. My analysis does not support the latter.

EMA's analysis suggest *Emballonura alecto* or *monticola* (rec no 13). The Lodge-list contains no *Emballonura*.

EMA's analysis suggest *Miniopterus australis*. **Lesser Bent-winged Bat** (rec no 4 10) The Lodge-list contains: *M. magnater*. My analyse supports *australis*.

Bornean Shrew

Suncus hosei

M.t Kinabalu Pouring Hot Springs Mar 29th; The hike to the main Waterfalls is about 5 km. We did not walk all the way up there. On our walk back towards the entrance we had just passed one of the smaller waterfalls when a tiny shrew slipped into a crevice about half a meter in front of me. Size, short tail, relative tail-length, colour of pelage on back and colour of tail made it easy to identify. Bornean Shrew/Hose's Pygmy Shrew was split from Savi's Pygmy Shrew *Suncus savi* by Hunterer Wilson and Reender 2005. According to Phillipps the

shrew is locally common in virgin lowland dipterocarp forest up to 800 metres a.s.l. in Crocker Mountains.

Pen-tailed Treeshrew

Ptilocercus lowii

M:t Kinabalu along Bukit Ular (Trail) at about 1750 metres a.s.l. The animal was seen trotting on a branch in the canopy about 30 metres above the ground. The observers (David et al) saw the animal raising its tail vertically as it turned on the branch and trotted back to where it was first spotted.

Lesser (Pygmy) Treeshrew

Tupaia minor

One was seen in Poring Hot Springs National Park near the entrance garden in the morning of March 29th and one was seen in Danum Valley near the road to Rain Forest Lodge Apr 3rd in submontane disturbed forest.

Lesser Treeshrew is by features easily confused with *T. gracilis* (see below). According to Yeo, our guide in Sabah the habit is probably the best sign separating the two species. Later Wilbur, our guide in Sabah states the same thing.

Slender Treeshrew

Tamiops gracilis

Two were seen in Sarawak, near Black Oriole Campsite Mar 21st

Mountain Treeshrew

Tupaia montana

One was seen in M:t Kinabalu National Park in the morning of March 27th.

Smooth-tailed Treeshrew

Dendrohgale melanura

Driving from Long Tivo to Bakalalan March 22nd at the altitude of about 1300 metres a.s.l, about ten minutes before reaching Bukit Demaring (the lookout), while climbing slowly up the muddy clay road, a Smooth-tailed Treeshrew made its way across. It was spotted about 20 metres from us and was only about five meters from us when it reached the right side of the road.

Its size, tail, relative tail-length, and above all its very special tail beginning with a massive base evenly tapered all the way into nearly a needle-sharp looking point offers only one alternative when studying Phillips book, as well as illustrations on the internet after returning home.

This species is rare, local, arboreal, endemic declining in population. In a report by Coolidge et al.

1940 it was known in Sabah from Kinabalu and Crocker Range, and in Sarawak from M:t Dulit, M:t Murud and M:t Mulu. Efforts to assess the species abundance in later years have not found it using terrestrial traps. According to Yeo the closest site to Bukit Demaring is M:t Murud about 30 km away as the crow flies.

Bornean Colugo

Galeopterus (variegatus) borneanus

One was encountered during spotlighting conducted by the staff of Danaum Valley Rainforest Lodge for Birdtour Asia April 3rd.

This taxon's status is currently debated. Janečka et al. (2008) investigated genetic variation in this broadly distributed species. Based on results from both mitochondrial and nuclear genetic loci, in combination with morphological analyses, argue that mainland, Javan, and Bornean colugo subspecies may be better recognized as distinct species rather than as subspecies within a single species. (Janečka et al. 2008).

http://eol.org/pages/1040858/hierarchy_entries/59755437/details



Bornean Colugo

Photo Stefan © Lithner



Maroon Leaf Monkey

Photo Stefan © Lithner

Bornean Loris

Nycticebus borneanus

During spotlighting conducted by the staff of Danaum Valley Rainforest Lodge for Birdtour Asia April 3rd one was encountered.

Maroon Leaf Monkey (Red Leaf Monkey, Maroon Sureli) *Presbytes rubicauda*

At Gomantong Caves Mar 31st Two were seen, one along the walkway to the caves and another one at the lookout for evening bat-departure from the caves. In Danum Valley along the road to Rainforest Lodge a family was encountered crossing the road Apr 3rd.

Grey Leaf Monkey (Hose's Grey Langur) *Presbytes hosei*

Heard Sarawak near Black Oriole Camp in the morning of Mar 22nd (Det. Siew) and one seen during boat-ride on Kinabatangan River Mar 31st.

Sunda Silvered Leaf Monkey *Trachypithecus cristatus*

At least two were seen at Kinabatangan River in the evening of Mar 31st, and one seen on April 1st.



Maroon Leaf Monkey
Lithner

Photo Stefan © Lithner



Sunda Silvered Leaf Monkey

Photo Stefan ©

Proboscis Monkey

Nasalis larvatus

Along Kinabantan River and tributaries several families were seen at dawn and dusk March 31st, April 1st.

Long-tailed Macaque (Crab-eating Macaque) *Macaca fascicularis*

This species was seen during five days. Along Kinambantang River and tributaries March 31st - April 2nd it was seen daily.

Sunda Pig-tailed Macaque *Macaca nemestrina*

This species was seen along Kinambantang River and tributaries 31st - April 2nd and also in Danum Valley along the road to Rainforest Lodge March 6th.

Bornean Gibbon *Hylobates muelleri*

This species was frequently heard but difficult to see. It was seen in Sarawak from Black Oriole Camp Mar 20th and along the track back to vehicles March 21st. It was heard in Bakalalang March 23rd - 24th and every morning in Danum Valley April 3rd - and April 6th.

Bornean Urang-utan *Pongo pygmaeus*

Along Kinabatang River March 21st orangutans came close to the river towards the evenings. Our first sighting was a big male. A while later we saw a female with a young. In Danum Valley we saw one big male on April 4th and April 5th we encountered the same male in the canopy along one of the trails.

Sunda Giant Squirrel *Ratufa affinis*

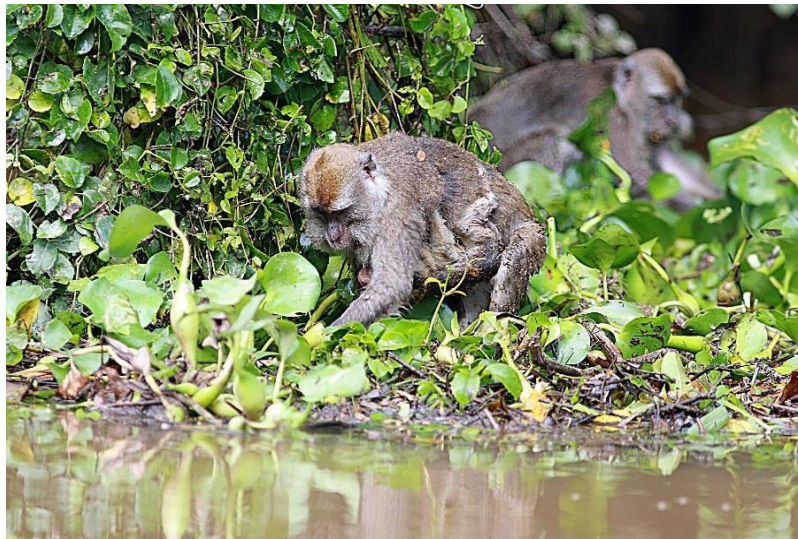
One was seen running on the reels at Kinabatangan Bornean Eco-lodge March 31st (Pamela) and one was seen in Danum Valley April 6th.

Prevost's Squirrel *Callosciurus prevosti*

The first one was seen on Mt Kinabalu March 27th, and was then seen at least during six days in Kinambantang River-system and Danum Valley.



Proboscis Monkey Photo Stefan © Lithner



Long-tailed Macaque

Photo Stefan © Lithner

Kinabalu Squirrel *Callosciurus ballurensis*

One was spotted and identified by our guide Wilbur on Mt Kinabalu March 27th along Ular Trail at 1870 metres a.s.l, and was then seen by several participants.

Plantain Squirrel

Callosciurus notatus

One seen in Rainforest Discovery Centre Sepilok April 30th. (Stefan)

Bornean Black-banded Squirrel

Callosciurus orestes

At Timpohon Gate, M:t Kinabalu several had gathered since tourists here feed them despite restrictions not to do so march 27th.

Low’s Squirrel

Sundasciurus lowii

One was seen near the entrance of Pouring Hotsprings March 29th. (Wilbur)

Jentink’s Squirrel

Sundasciurus jentinki

A few were seen daily in Sarawak March 25th-28th. Particularly well the species was seen at Timpohon Gate, M:t Kinabalu were several had gathered since tourists here feed them despite restrictions not to do so march 27th.

Brooke’s Squirrel

Sundasciurus brookei

Both were seen in submontane forest, one near Black Oriole Camp March 21st (Det. Siew) and one at Bakalalan March 30th.

Four-striped Ground Squirrel

Lariscus hosei

One was seen on M.t Kinabalu, along Bukit Ular Trail at about 1750 metres a.s.l. March 26th. This animal passed us running across a small opening partly hidden by a small branch lying on the ground. Size and proportions very similar to *Dremomys everettii* which I saw the day before, except of tail being more even in width. The animal was very dark above, much darker than *D. everettii*, almost black, but some dark brown was shining though. Underneath, at least from chin to chest it was orange. (Stefan)

Bornean Mountain Ground Squirrel

Dremomys everettii

One was seen at Bakalalan running across the road just before dusk March 24th and one was seen on M:t Kinabalu on Ular Trail March 27th.



Bornean Black Banded Squirrel

Photo Stefan © Lithner



Sunda Giant Squirrel

Photo Stefan © Lithner

Plain Pygmy Squirrel

Exilisciurus exilis

One was seen climbing a naked trunk in Danum Valley April 4th.

Whitehead's Pygmy Squirrel*Exilisciurus whiteadi*

One was spotted and identified by Wilbur on Mt Kinabalu at about 1750 metres a.s.l., climbing around in the canopies about 30 metres above the ground March 27th.

Thomas' Flying Squirrel*Aeromys thomasi*

This species was shown to us twice by ranger Henry during spotlighting drive starting from Danum Valley Borneo Rainforest Lodge in the evening of April 2nd.

Red Giant Flying Squirrel*Petaurista petaurista*

This squirrel was seen during spotlighting at night in Danum Valley: three times on April 2nd, four times on April 3rd (Stefan; private drive).

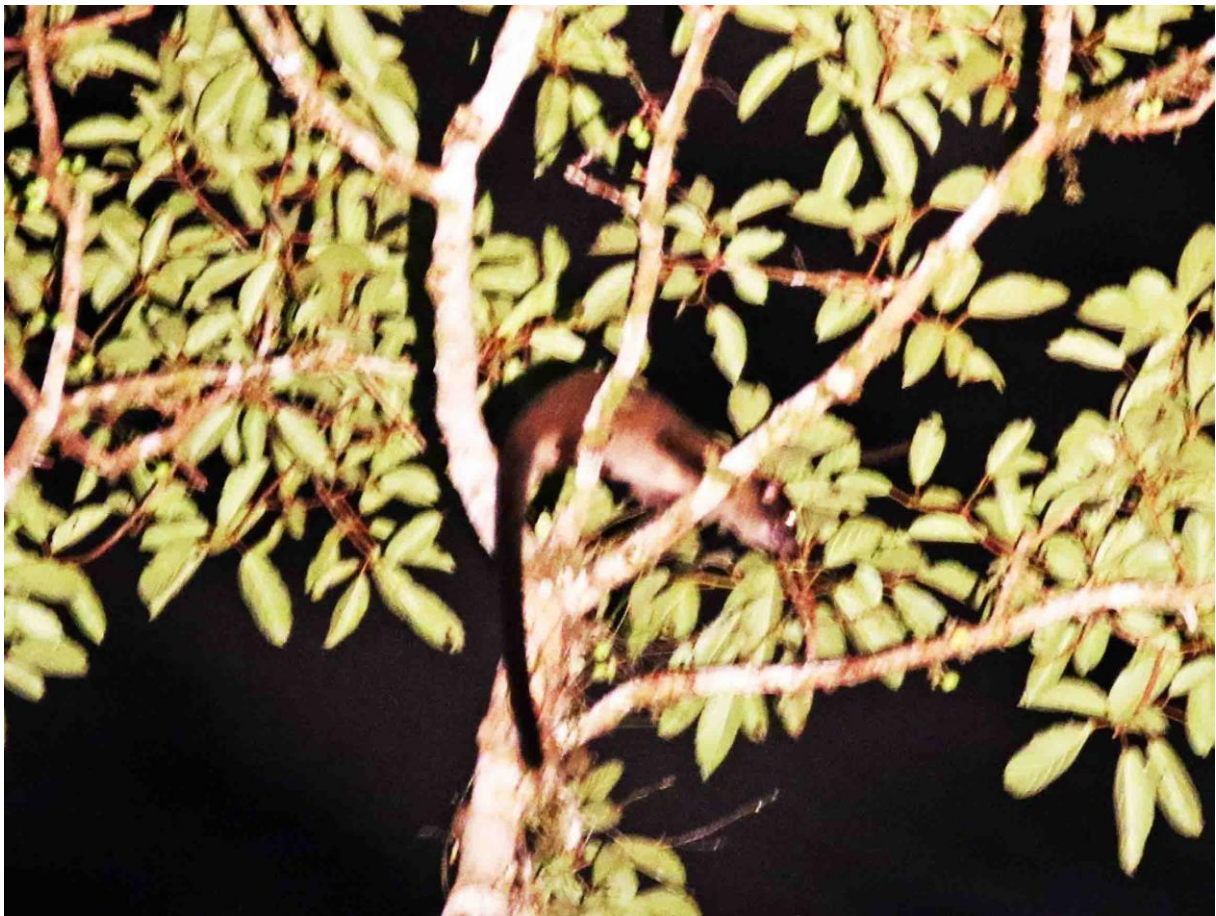
Tioman Rat*Rattus tionanicus*

Less than ten metres from the kitchen of Black Oriole Lodge in Sarawak a pile of leavings after our supper was placed. About 22:15 March 22nd a Tioman Rat left the scrap pile and disappeared under the house when illuminated by spotlight. (Stefan)

Müller's Rat*Rattus muelleri*

One was seen on the river bank less than a meter from the forest edge of Kinabatang River at dawn April 1st. (Stefan)

According to Phillipps this large very dark brown rat with an even darker tail, slightly longer than body (HB) is common and often seen foraging along stream- and river banks.



Bornean Striped Palm Civet

Photo Stefan © Lithner

Malayan Porcupine*Hystrix brachyura*

One was seen during spotlighting-drive starting from Danum Valley Borneo Rainforest Lodge in the evening of April 5th.

Yellow-throated Marten*artes flavigula*

One seen along the road to Black Oriole Drop-off March 20th.

Bornean Striped Palm Civet*Arctogalidia stigmatica*

One was seen during spotlighting from boat on Kinabatang River March 31st and one was seen during spotlighting in Danum Valley starting from Bornean Rainforest Lodge April 2nd. According to Phillipps split by Vernon 2015 from Three-striped Palm Civet (*A. trivirgata*), because differing from Three-striped Palm Civets elsewhere on the mainland, in DNA by 5.7% (about three times more than the difference between Humans [*Homo sapiens*] and Chimpanzee [*Pan troglodytes*]). *A. stigmatica* is endemic to Borneo.

Palm Civets and Small-toothed Civets at least from the genera *Paradoxus* in SE Asia among other things feed on perfectly ripe coffee fruits. Faces from these animals is rich in coffee beans liberated from their fruit meat. The coffee plant was introduced to Java by Dutch people in 1819. Coffee made from these defecated beans on the islands of Sumatra, Bali, Sulawesi, Java and to some extent also adjacent islands and mainland is claimed to be less bitter and better tasting than coffee made from hand-picked beans. It occurs under the names Kopi Luwak, Kopi Musang, Civet Coffee and Weasel Coffee. It is the most expensive coffee you can get (about \$ 700/kg). Appreciation for this coffee is limited on Malaysian part of Borneo. (Phillips and Wikipedia)

Malay Civet*Viverra zibetha*

This species was seen in Danum Valley during night spotlighting starting from Bornean Rainforest Lodge; one was seen April 2nd, and one on April 5th.

Unidentified Civet*Viverra sp.*

One briefly seen crossing the road to Black Oriole Drop-off March 20th

Flat-headed Cat*Felis planiceps*

One was seen in the morning of April 6th in Danum Valley close to dams near Bornean Rainforest Lodge.

Having focused far too much on assessing tail-length of this cat it was not difficult to identify, due to much smaller ears than Leopard Cat, bright white spots below eyes, greyish body and with a few vertical dark stripes on flanks.

Sunda Leopard Cat*Prionailurus javanensis*

Seen in Danum Valley; one near Bornean Rainforest Lodge in the morning of April 3rd, one seen thrice during spotlighting (private arrangement, Stefan) in the evening and one seen during night drive April 4th.

Historically, the leopard cat of continental Asia was considered the same species as the Sunda leopard cat. Five subspecies have long been recognized. As of 2017, this taxon is recognized as a distinct species, with the taxonomic *Prionailurus javanensis* (https://en.wikipedia.org/wiki/Leopard_cat)

Bornean Pygmy Elephant**not seen***Elephas maximus bornensis*

The Pygmy Elephant is probably one of the two most famous mammals of Borneo.

According to Phillipps the population in 2010 was estimated to be 2040 (Alfred et al). They are present in Kinabatang River-system and in Danum Valley. In the morning of April 6th about 80 – 100 metres upstream Mananggol tributary by boat from the main stream of Kinabatangan River the smell of elephant was very strong for about 20 metres, but no animals were seen in the dense forest surrounding the river. When we passed the same spot on our way back to the main stream the smell was nearly gone. At a virtually identical incident in Thailand 2010 my guide and I could also hear the elephants. Then they were less than 50 metres away from us. On the about 60 km gravel road from the main road up to Bornean Rainforest Lodge in some parts were rather full of droppings. Every here and there the paths we were walking on within two to three kilometres from Danum Valley Bornean Rainforest Lodge there were elephant droppings, however not fresh.

Bearded Pig

Sus barbatus

Our first sighting was made in Sarawak on our way back from Black Oriole Camp towards the drop off/pick up April 22nd (Lisa), when we made a stop to try to catch sight of a calling Bulwer's Pheasant (Yeo).

In Danum Valley it was spotted outside the Bornean Rainforest Lodge close to the restaurant before our breakfast 05:30, on April 3rd (Bill) and on April 4th (Stefan). One pig also nearly rushed into Lisa at dusk April 3rd when watching for Bornean Crested Pheasant about 200 metres from the lodge, and another one was seen crossing the gravel road when leaving Danum Valley (First vehicle) April 6th. According to Susan Myers; Birds of Borneo (2010), the bird is documented to associate with migrating Bearded Pig.

Lesser Mouse Deer

(Lesser Chevrotain)

Tragulus kanchil

One was seen in Danum Valley close to dams near Bornean Rainforest Lodge April 4th during spotlighting.

Greater Mouse Deer

(Greater Chevrotain)

Tragulus napu

One was seen in Danum Valley close to dams near Bornean Rainforest Lodge April 3rd during spotlighting together with local ranger enri (Private arrangement Stefan) after dark.

Sambar Deer

Cervus unicolor

Species noted in Danum Valley probably April 2nd.

Bornean (Yellow) Muntjac

Muntiacus atherodes

One was seen, dashing off from semi dense vegetation in Danum Valley as the group just stated to focus on a Bornean Ground Babbler April 5th (Stefan).

One individual was seen by our guiding ranger Henri while sneaking on Great Argus the previous day nearly at the same sight.

According to our local Ranger Henri, the Yellow Muntjac thrives at this altitude, while the Red Muntiac *M. muntiacus* also present in Danum Valley prefers higher altitude.

C R O C O D I L E

Estuary Crocodile

Crocodylus porosus

One seen in Menanggol River, tributary to Kinabatangan River March 31st.



Estuary Crocodile

Photo Stefan © Lithner

LIZARDS

Species listed according to: <http://phylodiversity.net/bb07/students/ruchira/lizards.html>

Dusky Flying Lizard

Draco obscurus

One seen from boardwalk at Rainforest Discovery Centre Sepilok April 30th.

Bornean Angle-headed Lizard

Gonocephalus borneensis

One was demonstrated by local ranger Henry and photographed at Bornean Echo Lodge at Kinabantan River April 3rd.

This species is also found under the common name Agamalike Lizard.

Four-clawed House Gecko

Gehyra mutilate

One photographed at the headquarters of Gomantong Caves March 30th.

Smith's Giant Gekko

Gekko smithii

Making a lot of noise at Bornean Echo Lodge at Kinabantan River March 30th – April 2nd.

http://phylodiversity.net/bb07/students/ruchira/species_accounts/gekko_smithii.html

Asian House Gecko

Hemidactylus frenatus

<http://phylodiversity.net/bb07/students/ruchira/lizards.html>

Kinabatagang River Bornean Echo Lodge March 31st.



usky Flying Lizard

Photo Stefan © Lithner



Four-clawed Hous Gecko

Photo Stefan © Lithner

Striped Treesink

One seen and photographed at Kinabantan River waiting for vehicle April 2nd.

Apterygodon vittatus

Water Monitor

One was encountered in the flowerbed outside Danum Valley Bornean Rainforest Lodge.

Varanus salvator



Striped Treeskink

Photo Stefan © Lithner

FROGS

Giant River Frog

Seen and photographed in Danum Valley near Bornean Rainforest Lodge April 3rd

Limninctes leporinus

Red-eyed Tree Frog (Fire-eyed Tree Frog) *Agalychnis callidryas*
Shown by local ranger Henry in Danum Valley near Bornean Rainforest Lodge April 3rd

File-eared Tree Frog *Polypedates otitophus*
Shown by local ranger Henry in Danum Valley near Bornean Rainforest Lodge April 3rd

Bornean Tree-Hole Frog *Metaphrynella sundana*
Pointed out by local ranger Henry in Danum Valley near Bornean Rainforest Lodge April 3rd

Short-nosed Tree Frog *Rhacophorus gauni*
Kinabatangan River, Borneo Echo Lodge In the bathroom of Bungalow no 8 March 31st.
Synonymes: , English; Four-lined Treefrog, White-lipped Treefrog.
Scientific; *Polypedates rugosus*, *Polypedates teraiensis* (www.IUCNredlist)

Kiau Borneo Frog **not assessed** *Meristogenys kinabaluensis*
M:t Kinabalu March 27th a frog most likely belonging to this species was seen.



Giant River Frog

Photo Stefan © Lithner



Short-nosed Treefrog

Photo Stefan © Lithner

SNAKES

Red-tailed Racer Snake *Gonyosoma oxycephalum*

One seen from the boat on the tributary Kinabatangan River March 31st.
According to <https://www.thainationalparks.com/species/gonyosoma-oxycephalum> this species occurs under 26 scientific synonyms and a few common names.

Keel-backed Snake

A keel-backed snake was briefly seen at Kinabatangan River while waiting for vehicle April 2nd, but not identified.

Elegant Bronze-backed Tree Snake *Dendrophis formosa*

Danum Valley April 4th. (Bill)
Synonyms: Bronzeback Treesnake, Elegant Treesnake (www.IUCNredlist)

BUTTERFLIES and MOTH



Colonel

Photo Stefan © Lithner



Common Tree Nymph Butterfly

Photo Stefan © Lithner

Species listed according to:

https://www.nss.org.sg/butterflies_list/check_list.php?cl_mst_id=1&ac=v

Common Jay

not assessed

Graphium doson

Some butterflies of the genus *Graphium* were assembled on the parking lot at Gomantong Caves April 30th. Butterflies of Borneo

http://www.pbase.com/lcgo/butt_borneo_papilionidae&page=all present three species of *Graphium* (*bathycles*, *doson* and *evemon*), all very variable and all very similar. White spots on neck and torso seem to indicate *G. doson*. (Stefan)

Great Mormon

Papilio memnon agenor

Seen along boardwalk at peat swamp forest April 6th.

Red Helen

Papilio helenus

One seen in Danum Valley April 6th. (Stefan)

http://www.pbase.com/lcgo/butt_borneo_papilionidae&page=all

Bornean Birdwing

Troides andromache

One seen on M:t Kinabalu March 26th. (Stefan)

Rajah Brooke's Birdwing

Trogonoptera brookiana

Seen most days on M:t Kinabalu National Park.

rookiana

Three Spot Grass Yellow

Erema blanda snelleni

Photographed along the boardwalk at Borneo Echo Lodge Kinabatangan River April 1st. (Stefan)

Blue Banded King Crow

Euploea eunice leucogonis

Photographed by Bill along the track to Pouring Hot Springs March 29th.

Common Tree Nymph Butterfly

Idea stollia alcine

One seen and photographed on Kinabatangan River April 2nd.

This species also appear as White Wood Nymph and Yellow Flyer on the internet.

TARANTULA



Malayan Earth Tiger Tarantula

Photo Stefan © Lithner

Malaysian Earth Tiger Tarantula

Cyriopagopus schioedtei

One photographed during spotlighting in Danum Valley April 5th.

Acknowledgement

I acknowledge our two excellent guides; Yeo Siew Teck and Wilbur Goh not only for their guiding but also for complementary information to this report. I also thank Ellen Mc Arthur; Research and Community Education Officer Mulu World Heritage Borsarmulu Park Management SDN BHD for her efforts to assess bats from ultrasound echolocation calls. I also acknowledge Arthur Larsson Swedish Threatened Species Unit Uppsala and Wilbur Goh for their work with one of the snakes, Wilbur Goh and Yeo Siew Teck for proof reading commenting on my manuscript. and finally Lars Petersson Bor for his support converting a number of images.

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