

Volume 1/2024, March 2024

Malaysian

Bird Report



Malaysian Bird Report Volume 1/2024, March 2024

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Dusky Eagle-Owl (Burung-Hantu Bertanduk Kelabu Asia) *Bubo coromandus*, Wang Kelian, Perlis, September 2023 © Teik-Hoong Teoh

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Website

Malaysian Bird Report website: <https://malaysianbird.report/>

Access to past and current issues available at the website.

Editorial

Editorial Team, Malaysian Bird Report

The March 2024 issue, spanning more than 100 pages, brings an exciting array of ornithology and bird ecology information.

Of great interest is a report by Dave Bakewell on new breeding records and potential new breeding observations for Malaysia, Peninsular Malaysia and Bornean Malaysia; with at least 12 new species added and more possible. For those interested in raptors, Hans Peeters describes in great detail mimicry in birds of prey; look especially at the write up on the Honey-buzzard which often shows this mimicry locally.

There are field reports on anting behaviour in birds, the Bornean Frogmouth, prey taken by the Black-thighed Falconet, diet of the Blue-crowned Hanging Parrot and courtship of the Rufous-backed Dwarf Kingfisher.

The Southeast Asia Regional Office of TRAFFIC (monitor trade in wildlife species) shares very concerning data on the plight of Malaysia's Oriental Magpie-Robins. Two websites that support our birdwatching for bird and prey identification are described - Ecology Asia and the recently launched Shorebirds Malaysia. There is a report on the Rundum Highlands in Sabah interior which may well become a premier bird watching site.

Tou Jing Yi kindly updates us on recent taxonomic changes of birds in Malaysia; this time focusing on passerines, while Lim Kim Chye informs us of recent avian research relevant to Malaysia.

The report/data on the February 2024 Great Backyard Bird Count (GBBC) shows that we have done well, but we could do better. Please consider a deeper involvement for the upcoming Global Big Day on 11 May 2024.

The Malaysian Bird Report website: <https://malaysianbird.report/> has continued to be developed and now offers more searchable functions. We hope you will share this with colleagues and friends.

As always, we thank everyone who has kindly submitted articles, data, reports and images. We welcome contributions and encourage different language submissions.

Field Notes

Anting Behaviour in Birds in Malaysia

Amar-Singh HSS, Lee-Fung Chai, Sein-Chiong Chiu, Sivapragash Periannan, Vincent Chow, Kim-Chye Lim, Connie Khoo & Samuel BL Ong

Introduction

Anting behaviour by birds, the application of ants or other substitutes to the plumage either actively or passively, has been reported since the early 19th century and has been observed in more than 200 species of bird, mostly passerines (Morozov 2015; Hendricks 2016). In active anting the bird will pick up one or more ants or other insects (occasionally inorganic objects) in the beak and swipe it through the plumage, under the tail or wings and on the breast. Passive anting involves the bird using an aggregation of ants, like an ant's nest, and allowing the ants to climb all over the body; often provoking the ants to 'attack'.

The function of anting remains the subject of controversy and debate. Many reasons and hypotheses have been proposed for the activity including (Morozov 2015; Hendricks 2016):

1. Ridding the feather of ectoparasites – formic acid from ants assisting in removing mites or fungi/bacteria in the feathers.
2. Feather grooming – a form of feather maintenance to remove old preen oil and lipids.
3. Functions in moult – assists in stimulating feather growth during moult.
4. Food preparation – the anting process is to remove formic acid from ant's bodies before consuming them.
5. Sensory self-stimulation – that anting offered a sensory pleasure.

The purpose of this article is not to focus on the reason for anting but a collaborative effort to document anting activities seen in birds in Malaysia. It is hoped that this will encourage others to be on the lookout for anting activities and report their observations.

Observations

Masked Finfoot *Heliopais personatus*, Amar-Singh HSS & Connie Khoo

On 02 May 2015 at Perak, Amar observed active anting in a male Masked Finfoot. The Masked Finfoot used a large millipede (*Trigoniulus sp.*) to rub on various parts of the body and wings. The millipede was initially used coiled up and then used 'open' or in fragments. The activity took many minutes and the remainder of the insect was eaten. A short video recording of the activity can be seen here: <https://twitter.com/dramarmoh/status/1233976362001518594> Video grab image in Plate 1. Millipedes secrete hydrogen cyanide from glands in body segments as a defence and may be useful for anting purposes.

This activity has also been observed by Connie Khoo (Plate 1) in the same bird on 02 June 2014 and 27 December 2014. She has seen the bird use a millipede and an unidentified insect for anting.

This observation of anting for the Finfoot is possibly one of the first documented.



Plate 1: Active anting by a male Masked Finfoot using a millipede

Banded Woodpecker *Chrysophlegma miniaceum*, Lee-Fung Chai, Samuel BL Ong & Sein-Chiong Chiu

On 29 October 2023 at Taman TAR, Selangor, Lee-Fung observed passive anting in a male Banded Woodpecker (Plate 2). The woodpecker was allowing ants to crawl all over its body for a good 20 minutes. This is the second time Lee-Fung has seen this behaviour for this species; the other occasion was on 15 May 2021 also at Taman TAR, Selangor.

On 20 October 2021 at about 11 am, Samuel Ong saw a Banded Woodpecker covered with ants on the road up from the Gap to Fraser's Hill (Plate 2). The ants were actively crawling about the woodpecker, but the woodpecker was not in any distress and seemed to be quite comfortable with the ants on it. However, before he could observe the relationship between the ants and the woodpecker, it flew off.

Chiu saw a pair of Banded Woodpeckers on 30 April 2022 at Ulu Chepor, Perak that intentionally visited an Asian Weaver Ants *Oecophylla smaragdina* (locally known as Kerangga) nest in a Jackfruit (Nangka) tree *Artocarpus heterophyllus* (Plate 3). The pair was taking turns at anting. A video recording showed that the ants were very agitated and that the birds were allowing many ants to crawl all over its body. The birds also appeared to be picking up ants to rub on the body as well as feed on them. This observation suggests a combined passive and active anting activity with feeding. A video recording of the activity can be seen here: <https://youtu.be/nHBIFc4u21I>

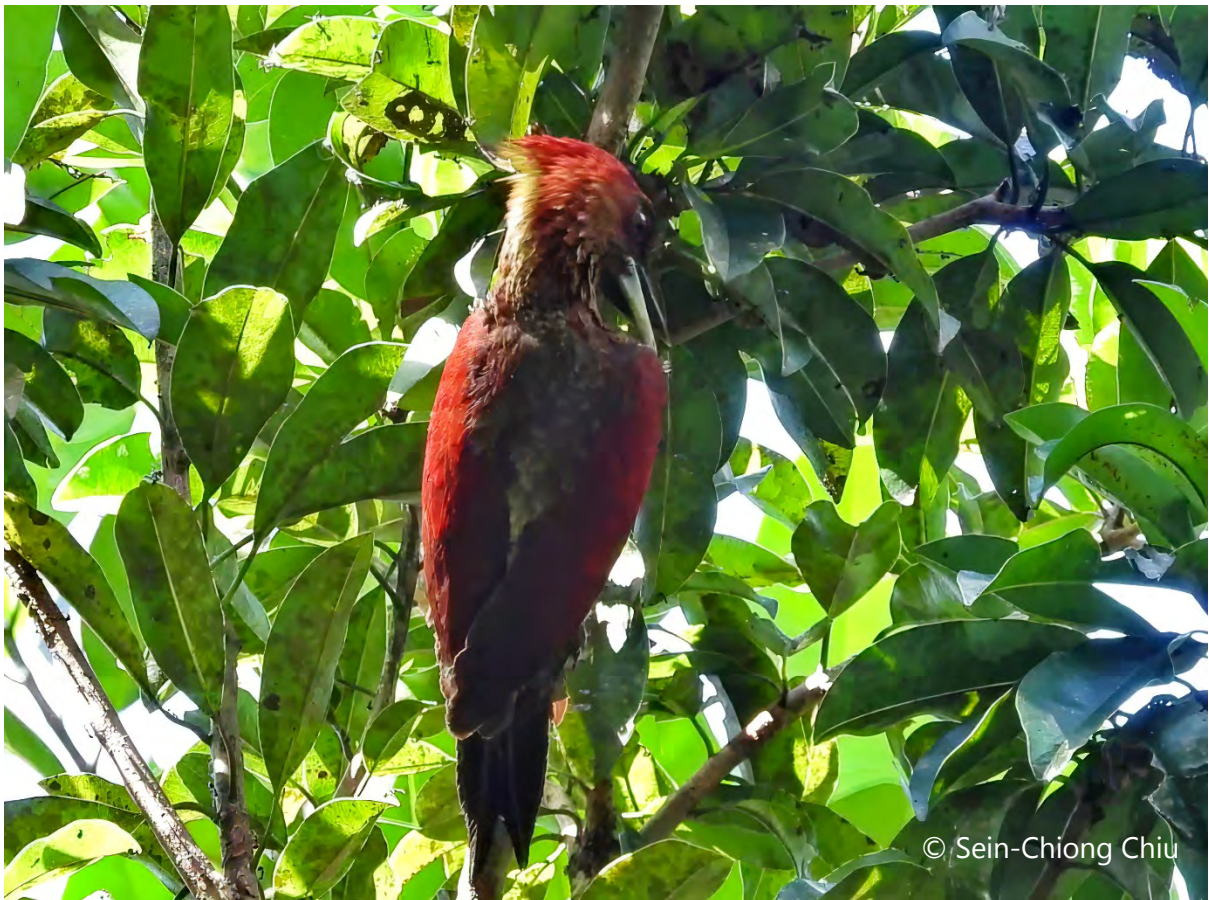


© Lee-Fung Chai



© Samuel BL Ong

Plate 2: Passive anting by a Banded Woodpeckers



© Sein-Chiong Chiu

Plate 3: Passive and active anting by a Banded Woodpecker

Buff-rumped Woodpecker *Meiglyptes tristis*, Lee-Fung Chai & Sein-Chiong Chiu

On 3 Aug 2023 at Lenggong Forest, Johor Lee-Fung observed a male Buff-rumped Woodpecker actively catching (not sure if it was eating) ants (Plate 4). It would grab the ants with the foot and then use its beak to pick them up one after another. She was not sure if it ate the ants or it was anting. It continued to repeat this for about 5 minutes.



Plate 4: Possible anting by a male Buff-rumped Woodpecker

Chiu observed a pair of Buff-rumped Woodpeckers at Merapoh, Pahang, on 20 August 2023, using their beak to obtain sap from a tree for anting (tree species unknown). In a 37-second-long recording, multiple episodes of sap application to various parts of the body were observed. The pair were taking turns at using the same branch to get sap for anting. During the observation an ant passed by, but it was picked up and tossed away and not used for anting. Plate 5 is a composite video grab showing the activity.

Sunda Pygmy Woodpecker *Yungipicus moluccensis*, Sein-Chiong Chiu

On 08 June 2023 Chiu observed an adult Sunda Pygmy Woodpecker, that was nesting, perform anting for 5 minutes (video recordings; Plate 6). Although the bird was predominantly eating the ants and the ant eggs, it also was picking up ants to rub on the tail, chest and underbelly. The bird would intermittently pick up ants and place them on its back. The identity of the black ants is not known. The activity was concluded by the bird flying back to the nest hole entrance to feed the chick. This observation again suggests a combined passive and active anting activity with feeding. A video recording of the activity can be seen here: <https://youtu.be/8qoH6QjB-gQ>



Plate 5: Video grab composite image showing female Buff-rumped Woodpecker 'harvesting' sap and using it for active anting

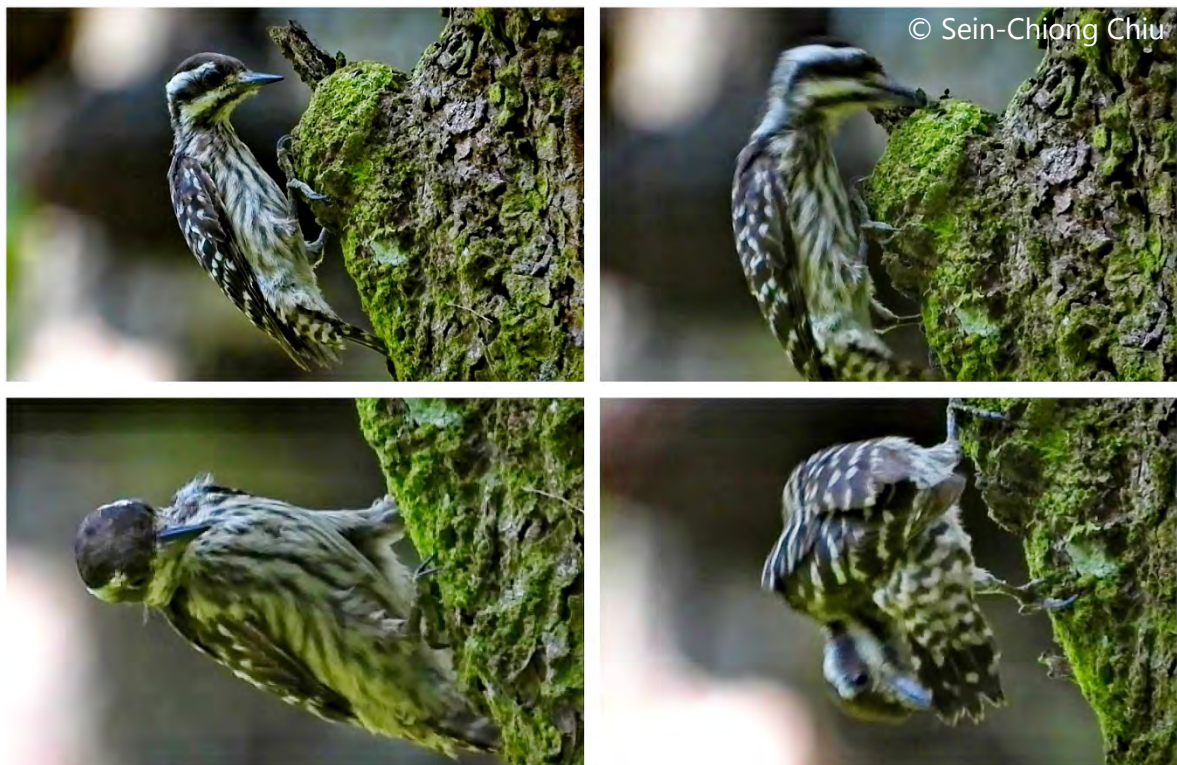


Plate 6: Composite video grab image of passive and active by Sunda Pygmy Woodpecker
Common Myna *Acridotheres tristis*, Kim-Chye Lim

Kim-Chye has observed anting behaviour by the Common Myna on three occasions (Kim-Chye Lim 2005). Twice he observed the typical behaviour of birds picking up Asian Weaver Ants *Oecophylla smaragdina* to place on the body and under the wings. On 10 September 2005 he saw a Common Myna at Taiping, Perak landing near an Asian Weaver Ant nest which resulted in ants swarming all over its body. The bird then flew to a nearby lamp post where it continued anting but also picked up and ingested several of the ants. The Common Myna returned to the ant nest a second time. After about a minute, it flew to a utility cable where it continued anting and was seen opening and closing one wing after the other, possibly to allow the ants access to the underside of the wings. It was again seen picking off ants from its legs and ingesting them.

Blue-winged Leafbird *Chloropsis cochinchinensis*, Sivapragash Periannan & Vincent Chow

On the morning of 06 May 2021 Siva and Vincent were traveling along the access road of the Panti Bird Sanctuary, Kota Tinggi. With cameras ready, they scanned the trees and shrubberies on both sides of the road for birds. Just about 3 to 4 km into the sanctuary, they spied a small group of Blue-winged Leafbirds foraging among the *Clidemia hirta* bushes which were decked with inviting purplish berries. Behind these bushes was also a common small tree *Macaranga javanica*, which when in season, also produces reddish berries that attract scores of birds and small mammals like squirrels. They stopped the car, less than 3 meters away, from birds which were not feeding but were acting strangely and were preoccupied with something else, based on their behaviour.

Siva videoed a female Blue-winged Leafbird. In video recordings lasting 77 seconds, the bird was seen taking 17 small ants and rubbing them on the wing, underside of the wing and tail. Most episodes were a single use of the ant and lasted two to three seconds. The ants were not eaten. Plate 7 is a composite video grab showing one episode and a close-up of an ant in the beak. One of the video recordings can be seen here:

<https://www.facebook.com/watch/?v=301736708154168>

Vincent observed a male Blue-winged Leafbird. The bird was hopping among the *Macaranga* branches searching and picking up the ants using its beak and appeared to be inserting the ants under the wing and tail feathers (see Plate 8). This was repeated several times and made Vincent marvel at how each ant was handled deftly by the bird without injuring the ant. Vincent has seen similar behaviour by the same bird species previously at Panti.

The ants used on this occasion were the Asian Weaver Ants.



Plate 7: Video grab composite image showing active anting by a female Blue-winged Leafbird



Plate 8: Composite image showing active anting by a male Blue-winged Leafbird

Pin-striped Tit-Babbler *Mixornis gularis*, Amar-Singh HSS

Amar observed active anting by a Pin-striped Tit-Babbler on 16 November 2012 at Ipoh, Perak. A pair of Pin-striped Tit Babblers were foraging when one of them captured a small black beetle. Instead of eating it immediately, it retained it in the beak for some time, and used it as part of the preening activity (Plate 9). The beetle was eventually eaten.



Plate 9: Composite image showing active anting by a Pin-striped Tit-Babbler

Discussion

This attempt at documenting anting behaviour shows that it is not uncommon and occurs in a wide range of birds; both passerine and non-passerine birds. It is interesting to note that while anting behaviour is thought to be rare in non-passerine birds (Morozov 2015; Hendricks 2016), we have a number of observations of woodpecker species and a Finfoot. One of the observations shows the use of sap instead of ants for the activity.

Once birdwatchers and photographers are aware of anting activity, they can often spot it as part of 'preening behaviour'. It would be important to both report such observations as well as study them to better understand the behaviour. Some of our observations suggest a combined passive and active anting activity with concomitant feeding.

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Sighting of Bornean Frogmouth *Batrachostomus mixtus* in Lowland Forests at Kubah National Park, Sarawak, Borneo

Jannie Tan

Introduction

There are 14 known species of the Genus *Batrachostomus* distributed throughout the Oriental region, from South Asia and South East Asia to the Philippines and Greater Sundas. Borneo has six known species (MNS Bird Conservation Council 2021) of which two are endemic. A brief outline of these six species is given below (Puan *et al* 2020; Phillipps & Phillipps 2014; Myers 2009; Smythies & Davidson 1999; Birds of the World 2024).

1. Bornean Frogmouth *Batrachostomus mixtus* (endemic)

This rare species is reported to occur in lower montane and montane forest of the Bornean mountains. It is formerly considered conspecific with the Short-tailed Frogmouth *B. poliolophus* (Sumatra) but lacks extensive white on underparts, the male has a much darker crown and the female is more contrastingly rich rufous.

2. Sunda Frogmouth *B. cornutus*

This species is the commonest observed frogmouth and is found in secondary lowland forest throughout Borneo and also the Kelabit Highlands. It is formerly considered conspecific with the Javan Frogmouth *B. javensis* (Java) by some, but combined study of vocalisations and museum specimens supported earlier suggestions that the two should be regarded as separate species.

3. Dulit Frogmouth *B. harterti* (endemic)

A submontane resident found on Mount Dulit, Usun Apau Plateau and the Kelabit Highlands in the northern part of the state of Sarawak. A data deficient species and currently considered Near Threatened.

4. Blyth's Frogmouth *B. affinis*

An uncommon, predominantly lowland forest species but has been reported up to 1,700 m in Indonesia. Previously placed with Hodgson's Frogmouth *B. hodgsoni*, Javan Frogmouth *B. javensis* and Sunda Frogmouth *B. cornutus*. But study of vocalizations and museum specimens support that it should be regarded as a distinct species.

5. Large Frogmouth *B. auritus*

Largest of the Asian frogmouths, it is rare but widespread in lowland primary forest throughout Borneo. Also occurs in Peninsular Malaysia, Sumatra and south Thailand.

6. Gould's Frogmouth *B. stellatus*

Another uncommon resident but widespread in lowland and hill primary forest throughout Borneo. Distinguished from Sunda and Blyth's Frogmouths by plain breast with indistinct pale scallop pattern and no dark chest band or distinct heavy white spotting. Range includes Peninsular Malaysia, Sumatra and Borneo.

This field report serves to report the sightings of Bornean Frogmouths in lowland forest at Kubah National Park, Sarawak, Borneo, Malaysia.

Study Site and Observations

Kubah National Park has an area of heavily forested slopes and ridge of 2,230 hectares. The type of vegetation is that of mixed dipterocarp forest with small acres of scrub forest and isolated patches of *Kerangas* Forest. The upper most section is at 762 m above sea level (ASL), within the range of lowland and hill dipterocarp forest (Mountain biodiversity 2015).

On 04 May 2013, while birdwatching at 250 m ASL, I observed a nesting frogmouth. The nest was about 8 m above the ground. The cup-shaped nest was built on a horizontal branch under a fairly large leaf of the *Neonauclea* spp. Nesting material looked like a pile of soft downy white feathers. The nest looked newly built as the soft white feathers were still clean and fresh. Only one frogmouth was seen. The frogmouth sat still and upright with occasional eye opening, change in head position and observation of the surroundings. The presence of ants on the nesting branch did not seem to trouble the frogmouth. It would occasionally snap its beak at flying mosquitoes. After two hours observation I left. No calls were heard during this period. I returned on the 05 and 18 May 2013 to the nesting site and observed for two to three hours on each occasion. Similar behaviour was observed and no calls were heard. When returning on the 25 May 2013, I noticed that the nesting site had been destroyed by a falling tree, possibly during a thunderstorm the night before. Plate 1 shows the nesting frogmouth.



Plate 1: Nesting frogmouth observed at Kubah National Park, Sarawak, Borneo, May 2013

The frogmouth observed was relatively small, brownish with a wide strong bill, hooked at the tip. It had two large eyes with yellow iris, a whitish supercilium and a narrow whitish collar on the hind neck. Facial bristles were long and obvious. The throat, chest and belly of this male had irregularly shaped white spots with distinct black fringing. There were bold blackish fringed white spots on scapulars and a relatively short tail, barred pale buff.

I encountered a similar frogmouth five years later on 12 August 2017. I came across a pair of frogmouths perched on a horizontal branch at a higher elevation of 305 m ASL. The pair had eyes closed and were seated side by side. Every once in a while, the female would sway like a leaf and move away from the male frogmouth. The male would respond by getting closer to its mate. Occasionally both had horizontal movement along the branch and they would snap their bill at mosquitoes that were buzzing in front of their faces. No vocalisation was heard. Towards the latter part of the day, there were more moments when the pair was active, and they were observed preening. I stayed there observing the pair for about four hours. Plates 2 show the frogmouth pair.



Plates 2: Frogmouths observed at Kubah National Park, Sarawak, Borneo, August 2017, male on the left

The male frogmouth, situated on the left in images, had a uniformly brownish plumage with long, wispy facial bristles. It had yellow iris but the whitish supercilium was not very prominent. The bill was wide, strong and hooked at the tip. It had a distinct broader white collar at the hind neck compared to the female. The underparts were boldly scalloped spotted white and there were large white spots with a blackish fringe on the scapulars. The tail was relatively short and boldly barred/banded buffy. The female had brighter plumage that was more rufescent-tawny and had long wispy facial bristles. The iris was yellow eyes with an indistinct whitish supercilium and a wide, strong and hooked bill. There was a thin narrow white collar at the hind neck with fewer and smaller white spots on scapulars and underparts. The tail was relatively short with barring/bands.

Three other sightings of this species of frogmouth were observed at Kubah National Park. On 20 August 2017 a female was sighted (Plate 3) with a narrow white nuchal collar, very few spots on scapulars, bi-coloured primaries. The inner-web was light brown and the outer-web a shade darker.



Plates 3: A female frogmouth observed at Kubah National Park, Sarawak, Borneo, 2017-2018

A male with similar features was observed on 09 June 2018 (Plate 4) and another male (Plate 5) on 12 September 2018. No vocalization was heard from any of the birds.



Plates 4: A male frogmouth observed at Kubah National Park, Sarawak, Borneo, 2017-2018



Plates 5: A male frogmouth observed at Kubah National Park, Sarawak, Borneo, 2017-2018

Discussion

Images of the birds were sent to frogmouth specialist Nigel Cleere who identified and confirmed the pair observed in August 2017 as the Bornean Frogmouth *B. mixtus*.

The Bornean Frogmouth is currently said to occupy the lower montane and submontane forest habitat at 610–1675 m, occasionally up to 2540 m. Most observations reported (eBird 2024) are in highland regions. The observations in this report occurred at 250–300 m, the lowest sighting of this species thus far. Together with reports from the Borneo Highland Resort (eBird 2024), these sightings also constitute the furthest east the species has been on the island of Borneo.

In Kubah National Park, there is the possibility of sighting three species of frogmouths, namely the Bornean, Sunda and Blyth's Frogmouth. The table below outlines the key features that may aid the observer in differentiating these three frogmouths (based on Cleere 1998 & 2010).

	Bornean Frogmouth	Sunda Frogmouth	Blyth's Frogmouth
Length(cm)	20-23	23-28	20-23
General appearance	Small, cryptic, brownish. Lacks white markings in wings & tail, but large whitish spots on wing coverts. Sexes similar, although female brighter, rufescent-tawny all over, with fewer & smaller white spots on the wing coverts, scapulars & underparts. A narrower white collar around hind-neck.	Medium sized, cryptic, brownish. Lacks white markings in wings & tail. Female is browner & plainer than male. Scapulars less boldly marked with smaller whitish oval shaped spots.	Small to medium, cryptic, brownish or rufescent-brown. Lacks white markings in wings & tail. Female is browner & plainer than male. Scapulars with fewer whitish oval shaped spots. underparts generally tawny or rufescent-tawny, with some bold whitish spotting.
Head	Narrow whitish collar around hind neck. Chin and throat, cinnamon finely speckled brown.	White collar around hind neck & broad supercilium buffish or whitish.	Narrow whitish collar around hind-neck & white supercilium.
Upperparts		Upperparts strongly spotted blackish.	Upperparts strongly spotted blackish.
Underparts	Boldly scalloped and spotted white.	Whitish dotted black.	Whitish, dotted black.
Scapulars	Bold black-fringed white spots.	Whitish oval spots.	Whitish oval spots.
Tail length	Relatively short tail. Male: 95-102 mm Female: 91 mm Boldly barred, pale buff across.	Male: 118-142 mm Female: 120-131 mm Brown mottled greyish-brown or pale buff, broadly barred pale buff or greyish buff, bars mottled brown.	Male: 95-111 mm Female: 90-107 mm

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Predation, Prey Sizes and Prey Species Diversity of the Black-thighed Falconet

Microhierax fringillarius

Connie SY Khoo, Amar-Singh HSS, Keshav Suthagar & Hans Peeters

Introduction

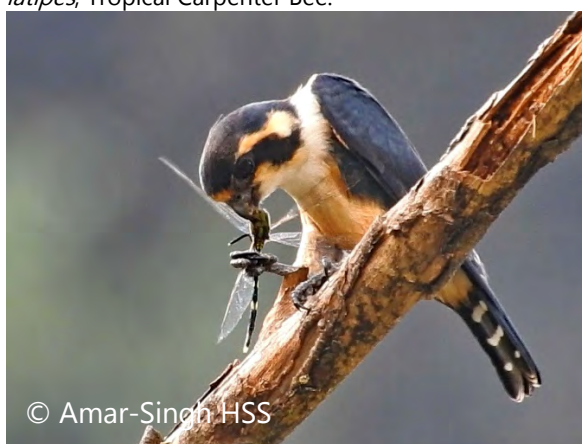
Black-thighed Falconets *Microhierax fringillarius* are well known, and personally observed by many of us (see Plate 1), to feed mainly on arthropods, especially dragonflies but also moths, butterflies, bees, beetles, grasshoppers, cicadas, mantids and alate termites (Wells 1999; Ferguson-Lees, & Christie 2001; Clark & Kirwan 2020). They are also known to hunt for and take small birds including Munias and Sunbirds as well as feed on lizards and bats (Wells 1999; Ferguson-Lees, & Christie 2001; Clark & Kirwan 2020). Sody (Becking 1989) identified three bird prey including the White-capped Munia *Lonchura ferruginosa*, White-headed Munia *L. maja* and the Barn Swallow *Hirundo rustica*. There is one record of feeding on a Cave Swiftlet *Collocalia linchi* from Java (Winnasis *et al* 2011).



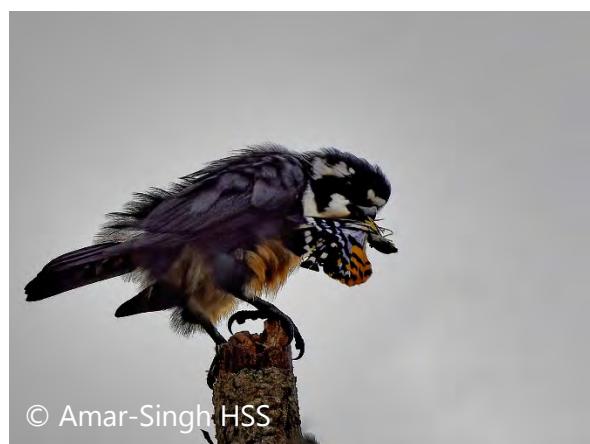
Juvenile Black-thighed Falconet feeding on *Xylocopa latipes*, Tropical Carpenter Bee.



Black-thighed Falconet feeding on a Cicada.



Juvenile Black-thighed Falconet feeding on a dragonfly.



Black-thighed Falconet feeding on a moth, *Dysphania militaris*.

Plate 1: Common arthropod prey of Black-thighed Falconets

There is one published report of a Black-thighed Falconet feeding on an unusually large prey, a Black-capped Babbler *Pellorneum capistratum* (Setiyono *et al* 2014). The bird was initially

observed with the prey perched on a shrub near to the ground and over a two-hour period moved to higher perches (three to four meters) while feeding.

This collaborative work attempts to document predation, prey sizes and prey species diversity of Black-thighed Falconets in Malaysia. An attempt was made to identify larger bird prey.

Observations

Prey Observations by Connie Khoo

Detailed and frequent observations by Connie Khoo from 2004 to the present (Connie Khoo 2007, 2001), of many nests, showed that Black-thighed Falconet's chicks were fed dragonflies, butterflies, beetles and spiders when they were young. Older juveniles were fed sunbirds (including the Ornate Sunbird *Cinnyris ornatus*), tailorbirds (possibly the Common Tailorbird *Orthotomus sutorius*), munias (including the Scaly-breasted Munia *Lonchura punctulata*), Java Sparrows *Padda oryzivora*, Common Iora *Aegithina tiphia*, House Swift *Apus nipalensis* and Eurasian Tree Sparrows *Passer montanus* (see Plate 2 & 3). Eurasian Tree Sparrows are the commonest bird prey and numerous episodes of predation have been observed. House Swift as prey has been observed on numerous occasions. The Black-thighed Falconets will either disturb the House Swift nest or wait for the bird to fly out from the nest (due to slow flying speed at that time). Once an adult House Swift was caught while resting outside a falconet's limestone nest entrance; it was most likely inspecting the location as a potential nest site.

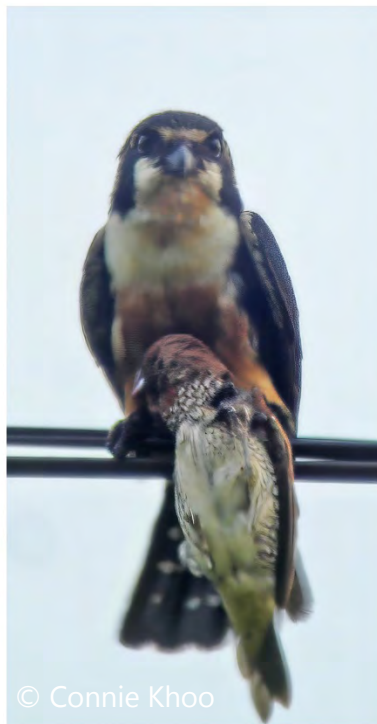


Plate 2: Black-thighed Falconet with bird prey - Tailorbird (left), Scaly-breasted Munia (centre) and Java Sparrow (right). All items were caught in flight.

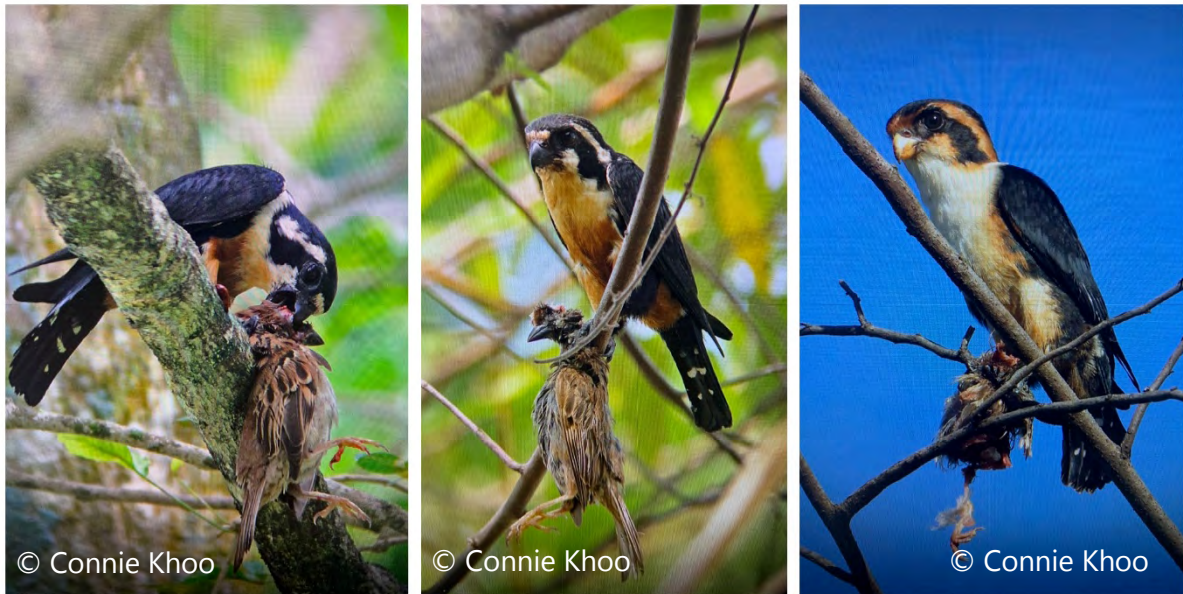


Plate 3: Adults and juvenile (far right) Black-thighed Falconets with Eurasian Tree Sparrow prey. All items were caught in flight.



Plate 4: Adult and juvenile (right) Black-thighed Falconets with Black-bearded Tomb Bat *Taphozous melanopogon*

Connie has also seen the adult Black-thighed Falconets take larger items including *Calotes versicolor* (Changeable Lizard or Garden Fence Lizard), and bats (see Plate 4). On one occasion she saw them chasing a young rat which escaped through a tiny gap.

Prey Observations by Keshav Suthagar

On 14 of January 2024 at 0830hrs Keshav was observing birds at Malim Nawar, Perak, Malaysia. Birds present in the area were Black-naped Orioles *Oriolus chinensis*, Lineated Barbets *Psilopogon lineatus*, Coppersmith Barbets *Psilopogon haemacephalus*, Asian Glossy Starlings

Aplonis panayensis, Pied Trillers *Lalage nigra* and a pair of Long-tailed Parakeets *Psittacula longicauda*. He was observing the Long-tailed Parakeets and taking frequent images when a Black-thighed Falconet, that was sitting on a high tree about 20-30 meters away, swooped in and snatched the female Long-tailed Parakeet (see Plate 5). The companion male Long-tailed Parakeet flew away. The Black-thighed Falconet carried the female Long-tailed Parakeet some distance away to a dead tree to feed on it.



Plate 5: Black-thighed Falconet taking a female Long-tailed Parakeet

Prey Observations by Amar-Singh HSS

Amar has two observations of Black-thighed Falconets taking Eurasian Tree Sparrows as prey (no images). On 26 October 2019 at Ipoh City, Perak, Malaysia, he observed a family of four birds, two of which were first year birds, pursuing rather large bird prey (Amar-Singh HSS 2022). They attacked and chased Pink-necked Green Pigeons *Treron vernans* on three occasions, a Black-naped Oriole *Oriolus chinensis* on one occasion and a Spotted Dove *Stigmatopelia chinensis* on one occasion. All these large birds were attacked while they were perched in trees and then pursued in the air. No kills were observed, and the actions were likely redirected activity. The large birds appeared to be threatened, responding defensively and many flew away.

Feeding Behaviour

Helper adults are common with nesting Black-thighed Falconets and assist in hunting prey and bringing them to juveniles. Communal hunting was common with older fledged juveniles involved, possibly as part of training activities. Shared feeding has also been observed.

Large prey (birds) was usually taken on the wing but also from perches. The activity was a swift attack that is hard to document on camera. The bird often takes the prey to a different perch or occasionally to the ground (Plate 6).

Prey brought to juveniles was carried in the feet but delivered using the beak. Prey was killed before being presented to juveniles. The prey is usually held in one foot and plucked as needed, and small pieces are then pulled off with the beak for feeding.



Plate 6: Adult Black-thighed Falconet with Eurasian Tree Sparrow prey taken to the ground after capture

Discussion

The falconid family exhibits a number of foraging behaviours including stooping, coursing, tail-chasing, hovering and mid-air food transfer. Black-thighed Falconets have predominantly been observed to watch for prey from an open perch and take prey by coursing or tail-chasing. Kemp and Crowe (1994) note that the distances of flights from perch to prey were estimated at 15-150 m with most strikes being made level with (29%) or below (57%) the perch.

Phillipps and Phillipps (2014) propose that the chiefly black and white coloration of falconets of the genus *Microhierax* is aposematic; i.e, the pattern suggests toxicity, as it mimics the colour composition of a very large South-east Asian butterfly whose larvae feed on poisonous plants and pass on the toxicity to the adult forest butterflies (which are numerous and poor flyers but go unmolested). We would propose, however, that this coloration might facilitate the approach of avian prey for the falconets, the victims paying little attention to large black and white lepidopterans fluttering amidst the treetops. Hence, the coloration may indicate mimicry on the part of the falconets, instead of aposematism.

Our observations suggest that Black-thighed Falconets occasionally take prey that is considerably larger than expected. Table 1 compares the average size of the Black-thighed Falconet with the larger prey documented to have been taken. The commonest prey, the Eurasian Tree Sparrow, is about the same size but half the weight of the Black-thighed Falconet. However, prey larger in size and weight is occasionally taken.

Kemp and Crowe (1994) who observed Black-thighed Falconets hunting at Taman Negara National Park, Pahang, noted that of 57 hunting attempts over 150 minutes only 46% were successful. All hunting attempts were for insects except for one unsuccessful strike at a sunbird. This suggests that attempts at hunting larger birds may also not always be successful, as described in our observations, and hence the limited observations.

Table 1: Comparison of the size of the Black-thighed Falconet with large prey taken

Species	Weight (g)	Length (cm)	Wingspan (cm)
Ornate Sunbird	6-9	10-11	NA
Common Tailorbird	6-10	10-14	NA
Scaly-breasted Munia	12-16	12-13	NA
Common Iora	12-17	12-13	NA
House Swift	20-35	14-15	NA
Eurasian Tree Sparrow	18-28	14-15	NA
Black-bearded Tomb Bat	10-50	6-10	Forearm span 5-7
Changeable Lizard or Garden Fence Lizard	71	Snout to vent 10 (total length 37)	Not relevant
Long-tailed Parakeet	168-196	40-48	NA
For Comparison			
Black-thighed Falconet	28-55	14-17	27-34

NA = not available; Size reference for birds used was Puan *et al.* (2020). Size reference for other animals was from online sources including Ecology Asia website.

Note: Birds seen attacked but not taken were not included.

Regarding the attempts to capture of very large birds, our observations suggest that the falconets that attempted this were mostly juveniles. Such behaviour is typical for falconid youngsters that are yet unaware of their own strength limits. They quickly learn to focus more on prey of manageable size. Where adults attack (but not take) birds that are extra-large compared to the falconet size, it is likely that such actions are evidence of nest defence; large falcons routinely attack other birds even much larger than themselves in the vicinity of the falcons' nests. In California, coast-nesting Peregrine Falcons *Falco peregrinus* almost daily will strike and sometimes kill pelicans passing by the falcons' cliff nest, and Prairie Falcons *Falco mexicanus* also have been known to kill pelicans and other large birds in the same situation, without any intent to feed on the victims. Another consideration is that much larger prey taken could be disabled in some way that enables capture. More work is required on understanding 'outsized prey'.

Note that most of our observations of the prey taken are from urban or semi-urban areas with nesting often in limestone cavities. The prey of Black-thighed Falconets in the forest, where nesting is in tree cavities (old nest holes of other species), and the range of bird species wider, may be different.

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Diet and Foraging Behaviour of the Blue-crowned Hanging Parrot *Loriculus galgulus* Amar-Singh HSS

Abstract

This review provides an update on the diet and foraging behaviour of the Blue-crowned Hanging Parrot in the region. Personal observations were supplemented with a literature search and use of citizen science via image databases. The Blue-crowned Hanging Parrot has a wide diet range with fruit and nectar appearing to be the primary food sources. Seeds, flowers, pollen and leaf food are also eaten, as are 'food bodies' of the *Macaranga* species. There is limited data on animal food sources except for gall feeding episodes. Some uncommon feeding behaviour is described. There is limited information on the diet of juveniles which may contain more animal prey.

Introduction

Blue-crowned Hanging Parrots *Loriculus galgulus* are found in forested lowlands from South Thailand, through Peninsular Malaysia and Singapore, Sumatra, Borneo, and some of the nearby islands (Juniper & Parr 1998; Collar & Boesman 2020). According to Forshaw (1977) they feed on nectar, fruits, seeds, blossoms and possibly small insects. Juniper *et al.* (1998) state that their diet contains flowers, buds, fruits, nuts, and seeds. Wells (1999) notes their diet includes the mesocarp of oil-palm fruits and a number of figs including *Ficus caulocarpa*, *F. virens*, *F. delosyce*, *F. pisocarpa*, *F. kerkenhovenii*, *F. crassiramea* and *F. stupenda*. He describes visits to flowers, possibly for nectar, but had no verification. Collar *et al.* (2020) mention that there are few specific records and lists the flowers of *Erythrina* and *Durio zibethinus* (durian) as part of the diet.

This report provides an update on the diet and foraging behaviour of the Blue-crowned Hanging Parrot.

Material and Methods

Observations were made at a number of forest reserves in Perak state, Peninsular Malaysia over the past 30 years. These include the Kledang-Sayong Forest Reserve, Ulu Kinta Forest Reserve, the foothills of Bukit Larut (Maxwell's Hill) in Perak, Malaysia and the surrounding secondary forest of these three areas.

Data was supplemented by a literature search, examination of Oriental Bird Images, eBird, Macaulay Library and Birds of the World databases, and an internet search for images and feeding reports. Feeding information from databases or online images was accepted if the bird was seen feeding directly in the image or in any description provided by the observer. Birds feeding in captivity were not included. More than 1,500 images and videos were reviewed. Care was taken to avoid repeat images in the different databases and online postings.

Plant identification was done using a variety of sources including Holttum *et al.* (1991), Polunin (1988), Gardner *et al.* (2015, 2016, 2018), Chin *et al.* (1988), Wee (2003), and Plants of the World Online (2019). In addition, numerous online sources were used to assist in the verification of individual plant species.

Results

Fruit and Seed Food Sources

Rambutan fruit *Nephelium lappaceum* is a common food source and observed often (Plate 1). The birds hang upside down to gain good access to the fruit, use the beak to break off small pieces of the skin and then take bites of the flesh of the fruit. On 30th December 2009 at the foothills of Bukit Larut I observed four Blue-crowned Hanging Parrots feeding at fruiting Rambutan trees. They were soon displaced by other birds who took over the feeding site. These included Greater Green Leafbirds *Chloropsis sonnerati* and Yellow-eared Spiderhunters *Arachnothera chrysogenys*; a form of kleptoparasitism. I have also observed Brown-throated Sunbird *Anthreptes malacensis* take over Rambutan fruit opened by Blue-crowned Hanging Parrots at the Ulu Kinta Forest Reserve on 11th September 2010. Birds have frequently been observed feeding on the mesocarp of Oil Palm fruit *Elaeis guineensis* (Plate 2).



Plate 1: Female Blue-crowned Hanging Parrot feeding on *Nephelium lappaceum* fruit, Taiping, Perak, Malaysia, 30 December 2009



Plate 2: Male Blue-crowned Hanging Parrot feeding on the mesocarp of Oil Palm fruit *Elaeis guineensis*, Sandakan, Sabah, Borneo, Malaysia, 2 May 2016

The Common Mahang *Macaranga bancana*, a fast-growing tree of secondary forest that has a mass-production of deep purple-red fruits (10–11 mm in size) twice a year, attracts a wide range of birds including Blue-crowned Hanging Parrots. They also feed on the fruit of the Giant Mahang *M. gigantea* (fruits measure 7 mm in diameter) and *M. tanarius* (fruit measure 9–10 mm in size with one black seed 5 mm in diameter) both of which also attract many other bird species.

All fruit food sources identified from personal observations and literature/image search are summarised in Table 1.

Table 1: Fruits and seed food sources of the Blue-crowned Hanging-Parrot

Scientific Name of Plant	Common Name of Plant	Comment on Feeding Technique	Location	Source
<i>Ficus caulocarpa</i> , <i>F. virens</i> , <i>F. delosyce</i> , <i>F. pisocarpa</i> , <i>F. kerkenhovenii</i> , <i>F. crassiramea</i> and <i>F. stupenda</i>	Ficus or Fig Trees	Biting small pieces of flesh off to feed	Peninsular Malaysia	Wells (1999), Happ (Flicker 2012), Wheatley (ML 2016), Kinard (Flicker 2016), Smith (ML 2018)
<i>Nephelium lappaceum</i>	Rambutan	Bite open a small hole and then work around that to get to the fruit flesh	Peninsular Malaysia; Borneo; Singapore	Pers obs. (2008, 2009), Hassie (Flicker 2011), O'Neill (2012a), Irving (Flicker 2013), Yap (2014), Wee (2015), De Win Lim (Flicker 2015), (ML 2016), Wee (Flicker 2016), Ong (MNS Perak Bird Group, 2017), Ishak (Flicker 2018), Lee (Flicker 2019)
<i>Elaeis guineensis</i>	Oil Palm	Feeds on mesocarp; may use the foot to assist	Borneo; Peninsular Malaysia; Singapore	Pers obs. (2016), Wee (2007a), Kee (Flicker 2009), Lee (Flicker 2009), Yap (2014), Jearwattanakanok (ML 2018)
<i>Macaranga bancana</i>	Common Mahang		Peninsular Malaysia	Pers obs. (2011), Chan (OBI 2003), Sharif (Flicker 2014), ATeng (Flicker 2018), Fuller (ML 2019), Brooks (ML 2019), Callaghan (ML 2019), Koay (Flicker 2019)
<i>Macaranga gigantea</i>	Giant Mahang		Peninsular Malaysia	Pers obs. (2012), Ooi (2001), Adler (Flicker 2016)
<i>Macaranga tanarius</i>		Feeding on fruit and seed	Peninsular Malaysia; Thailand	Pers obs. (2020), Padungtin (Flicker 2019), Chantasuban (Flicker 2011)
<i>Rhopaloblaste ceramica</i>	Ceram Palm	Bites off pieces of the pulp	Singapore	Wee (2005)
<i>Psidium guajava</i>	Guava	Larger upper hooked mandible will anchor on the fruit while it's lower mandible will scrape off small pieces of flesh; eats mainly the outer core of the fruit; does not eat the seeds	Singapore	Lam (2007), Pooi (2008), Ng (Flicker 2008), Goh (2012), Khor (Flicker 2013)
<i>Psidium spp.</i>			Malaysia	Chong (Flicker 2010)
<i>Syzygium spp.</i>	Roseapple, Water Apple or Jambu		Borneo; Singapore; Peninsular Malaysia	Todd (ML 2016), Lim (Flicker 2017), Chew (Flicker 2017), Tang (ML 2017), Hooi (MNS Perak Bird Group, 2018), MyBIS (2020)
<i>Manikara zapota</i>	Sapodilla or Chiku		Singapore	Goh (2012)



Scientific Name of Plant	Common Name of Plant	Comment on Feeding Technique	Location	Source
<i>Mangifera spp.</i>	Mango		Singapore	Sandhu-Chin (2010), Ling (Flicker 2012), Loei (2013), Wee (Flicker 2013), Johnson (Flicker 2013), Leong (Flicker 2016)
<i>Spathodea campanulata</i>	African Tulip Tree		Singapore	Strange (2017)
<i>Trema tomentosa</i>	Rough Trema		Peninsular Malaysia	Adler (Flicker 2016)
<i>Averrhoa carambola</i>	Starfruit		Peninsular Malaysia	Parker (ML 2006)
<i>Muntingia calabura</i>	Village Cherry		Indonesia	Goenarto (ML 2016)
<i>Casuarina equisetifolia</i>	Casuarina Tree	Feeds on the seeds	Singapore	Cheong (Flicker 2010), Boracayangels (Flicker 2010)
<i>Terminalia brassii</i>			Malaysia	Koh (Flicker 2017)

Key ML = Macaulay Library, OBI = Oriental Bird Images, Pers obs. = personal observation

Note: There are a number of observations of birds feeding on papaya and apple fruit but all of these reports are of staged feeding sites where the fruit has been cut and offered at a bird feeder.

Nectar, Flowers, Pollen and Leaf Food Sources

A number of individuals have observed Blue-crowned Hanging Parrots feeding on nectar, eating flowers and feeding on pollen and young leaves. Two mistletoe species have been documented for nectar feeding from Singapore; *Macrosolen cochinchinensis* (Wee & Chan 2007b; Koh, Flicker 2007) and the Malayan Mistletoe *Dendrophthae pentandra* (Loke 2017; Yap, OBI 2005; Wokoti, Flicker 2010). Both these mistletoe species have adapted to have flowers that only open when visited by birds; so-called 'exploding flowers' (Ladley 1997). Wee *et al.* (2007b) described it as "When a bird grasps the flower bud, the petals suddenly unfold to expose the stamens and style. At the same time pollen is probably discharged from the anthers on to the bird. The bird helps itself to the nectar and at the same time assists in the pollination of the flower."

Chan (2012), Cheah (Flicker 2015), Khor (Flicker 2015) and Ng (Flicker 2016) observed the parrots feeding on the nectar of the Golden Penda *Xanthostemon chrysanthus*, a plant that originates from the rainforests in the north-east of Australia and is extensively planted in Singapore. The nectar of *Syzygium grande* is a particular favourite and many birds can be seen feeding when a tree is flowering (Plate 3).

There have been a number of reports of these parrots eating flowers. Chung (2016), Ng (Flicker 2014), KT (Flicker 2016), Gan (Flicker 2016) observed Golden Shower (*Cassia fistula*) flowers being eaten, Wee (2015) noted Alexandra Palm *Archontophoenix alexandrae* flowers, and Sun (2013) Yellow Flame tree *Peltophorum pterocarpum* flowers being consumed. It has been assumed that the birds eat flowers to get to the nectar. However, there may be other possible reasons like obtaining trace elements, vitamins, antioxidants, antimicrobial, or when conventional food sources are limited.



Plate 3: Male Blue-crowned Hanging Parrot feeding on the nectar of *Syzygium grande*, Taiping, Perak, Malaysia, 01 February 2024

Ng (2011) included pollen as a food source in the diet of the species. Finlay (ML 2018) saw pollen taken from the Golden Shower *Cassia fistula*. Yap (2014) documented feeding on the pollen of the African Tulip Tree *Spathodea campanulata* and also attempts to break into unopened flowers for the copious nectar the flowers produce. Lim (Flicker 2011) observed feeding on unopened buds of the African Tulip Tree. Nectar, flower, pollen and leaf food sources identified are summarised in Table 2.

Table 2: Nectar, flower, pollen and leaf food sources of the Blue-crowned Hanging-Parrot

Scientific Name of Plant	Common Name of Plant	Food Item	Location	Source
<i>Erythrina spp.</i>	Coral Tree	Nectar and pollen	Indonesia; Singapore	Juniper <i>et al.</i> (1998), Perdana (OBI 2010), Kee (Flicker 2011)
<i>Durio zibethinus</i> <i>Durio spp.</i>	Durian	Nectar	Malaysia	Juniper <i>et al.</i> (1998), Ishak (Flicker 2016)
<i>Macrosolen cochinchinensis</i>		Nectar	Singapore	Wee <i>et al.</i> (2007b), Koh (Flicker 2007)
<i>Dendrophthae pentandra</i>	Malayan Mistletoe	Nectar	Singapore	Yap (OBI 2005), Wokoti (Flicker 2010), Loke (2017)
<i>Callistemon spp.</i>	Bottlebrush	Nectar	Singapore	KayBSteve (Flicker 2013), Ng 2014 (Flicker)

Scientific Name of Plant	Common Name of Plant	Food Item	Location	Source
<i>Syzygium spp.</i> (including <i>S. grande</i>)		Nectar	Malaysia; Singapore	Pers obs. (2024), Melling (Flicker 2011), Fadzrun (ML 2017), Ng (Flicker 2017), Fadzrun (ML 2018), Finlay (ML 2019)
<i>Tabebuia rosea</i> (<i>T. pentaphylla</i>)	Trumpet Tree or Tecoma	Possibly nectar robbing technique at base of flower	Singapore	Ong (Flicker 2016), Alan (Flicker 2017), Naden (Flicker 2018)
<i>Malvaviscus arboreus</i>	Wax Mallow or Ladies Teardrop	Nectar robbing technique	Singapore	Kee (Flicker 2011, 2013)
<i>Poikilospermum suaveolens</i>		Feed on the flowers to get to the nectar	Borneo; Peninsular Malaysia	AlanYWM (Flicker 2012); Beadle (Flicker 2011); Naden (Flicker 2018); Goh (2019)
<i>Cassia fistula</i>	Golden Shower	Flowers	Singapore	Chung (2016), Ng (Flicker 2014), KT (Flicker 2016), Gan (Flicker 2016)
<i>Cassia spp.</i>		Flowers or nectar	Singapore	Burtner (ML 2018)
<i>Archontophoenix alexandrae</i>	Alexandra Palm	Flowers	Singapore	Wee (2015)
<i>Adonida merrillii</i>	Manila Plam	Flowers	Singapore	Seow (Flicker 2007), Tan (Flicker 2011), Ichiyama (ML 2018)
<i>Cocos nucifera</i>	Coconut Tree	Flowers	Malaysia	Naden (Flicker 2015)
<i>Peltophorum pterocarpum</i>	Yellow Flame tree	Flowers	Singapore	Sun (2013), Lim (Flicker 2016)
<i>Tamarindus indica</i>	Tamarind	Flowers and young leaves	Singapore	Noob (Flicker 2013), Naden (Flicker 2015)
<i>Callerya atropurpurea</i> (<i>Millettia atropurpurea</i>)	Purple Millettia	Flowers (possibly also nectar)	Singapore	Budihardjo (Flicker 2011), Ghosh (OBI 2014)
<i>Spathodea campanulata</i>	African Tulip Tree	Pollen & Unopen Buds	Singapore	Yap (2014), Lim (Flicker 2011)
<i>Cassia fistula</i>	Golden Shower	Pollen (eating stamens)	Singapore	Finlay (ML 2018)

Key: ML = Macaulay Library, OBI = Oriental Bird Images

Note: Feeding was noted on 8 other nectar, flower and leaf food sources that were not identified.

Animal Prey

Although said to take animal prey by some sources, there are limited records of this. Kwong (2012) documents feeding on caterpillars. Also see below under feeding on gall growths.

Less Well Understood Food Sources and Feeding Behaviour

There are a number of feeding observations that are not well understood and are described in this section.

Blue-crowned Hanging Parrots were observed on 30th December 2009 at the foothills of Bukit Larut (Maxwell's Hill) and on 30th January 2010 at the Ulu Kinta Forest Reserve feeding on moss covered dead branches (Plate 4). The birds would bite hard into the moss covering the branch, 'digging' with their strong beaks for long durations, and feed on what was 'unearthed'. Having observed this behaviour a number of times on dead and living trees, I considered the

possibility of feeding on burrowing insects, tree sap, or eating vegetable matter for medicinal value. According to Collar (1997), pygmy-parrots *Micropsitta* spp. glean trunks and branches of trees principally for lichens, "...shuffling along the tops of limbs and frequently bobbing the head around the side of a branch, picking up small objects from the bark surface or flaking off pieces of bark and consuming the items thus exposed." Forshaw (1973) similarly reports pygmy-parrot feeding on lichens and fungus. It is possible that Blue-crowned Hanging Parrots may be foraging for lichens and/or fungus. I have observed similar feeding behaviour locally by the Long-Tailed Parakeets *Psittacula longicauda*. A variation of this behaviour has been observed when the branch has no moss and the birds bite into the bark or stem, especially coconut stems (O'Neill 2012b; Yen, OBI 2014; MyBIS 2020).



Plate 4: Composite of a female Blue-crowned Hanging Parrot feeding on a moss covered dead branch, Taiping, Perak, Malaysia, 30 December 2009

A second uncommon feeding behaviour is on the gall growths on leaves. On 9 August 2015 at the Kledang-Sayong Forest Reserve I observed Blue-crowned Hanging Parrots feeding on growth present on the leaves of the *M. gigantea* (Plate 5). These galls or abnormal outgrowths are often caused by the larvae of insects and mites, possibly Gall Midges (Family *Cecidomyiidae*). This may be a source of animal protein. Other gall feeding episodes have been documented from Singapore by TeocMeng (Flicker 2010), Allnt (Flicker 2011), Chan (2012), Chow (2014) and Ng (Flicker 2017).

A third, yet undescribed food source, is the 'food bodies' offered by *Macaranga* species. On 1st June 2020, at the Ulu Kinta Forest Reserve, I observed juvenile birds not just eating the fruit of the *M. tanarius* but also 'biting' into or licking the stem of the plant and the under-surface of stipules (Plate 6). The *Macaranga* species often form symbioses with ant (*Formicidae*) species (particularly *Crematogaster* ants of the subgenus *Decacrema*). The trees provide 'nectar' or food bodies (also called starchy bodies) and benefit because the ants attack herbivorous insects. These food bodies are cellular structures produced by the plant and contain large amounts of lipids, proteins and carbohydrates (Linsenmair 2001). There are two groups of myrmecophilic *Macaranga*. One group are obligate myrmecophytes and house specific ant colonies in their hollow shoots. The other group have a facultative myrmecophilic strategy and offer food bodies on the under-surface of stipules or on leaf blades to ants. *M. tanarius* has a facultative myrmecophilic strategy with food bodies hidden under re-curved stipules or on the leaf blades of the plant; food bodies in *M. tanarius* are largely carbohydrate based.

One final feeding behaviour is apparent 'alcoholism', with Blue-crowned Hanging Parrots known to steal palm toddy from collection pots placed over the palm inflorescences and becoming intoxicated (Wee 2005).



Plate 5: Juvenile Blue-crowned Hanging Parrot feeding on leaf galls of the *M. gigantea*, Kledang-Sayong Forest Reserve, Ipoh, Perak, Malaysia, 9 August 2015



Plate 6: Juvenile Blue-crowned Hanging Parrot feeding on food bodies of the *M. tanarius*, Ulu Kinta Forest Reserve, Ipoh, Perak, Malaysia, 1 June 2020

Foraging Behaviour

The commonest feeding behaviour noted in the majority of observations are birds hanging upside down to feed. Birds will at time also hold the fruit or seed in one foot to aid feeding. Juveniles are fed by regurgitating feeds. A number of observations of juveniles being fed (Damodaran, Flicker 2018; Low, Flicker 2019; Luanluanpai, Flicker 2018) show regurgitation of feeds in a thick liquid paste, possibly nectar; one image suggests regurgitation of Mango *Mangifera* species.

Discussion

This review has highlighted the wide diet range of the Blue-crowned Hanging Parrot. A sizeable number of observations are from Singapore, as the bird visits gardens in the city-state and lends to easier observation. The list of food sources presented here is possibly a limited selection of all those taken, as those in the forest are less often observed.

Fruit and nectar appear to be the primary food sources. Seeds, flowers, pollen and leaf food are also eaten, as are 'food bodies' of the *Macaranga* species. There is limited data on animal food sources except for gall feeding episodes.

More observation is required regarding prey for juveniles which are likely to have a greater animal component.

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Notes on the courtship and nesting of the Rufous-backed Dwarf Kingfisher *Ceyx rufidorsa*

Kai-Soon Chan, Sein-Chiong Chiu, Kuan-Yaow Poon, Swee-Yian Lim & Amar-Singh HSS

Introduction

The Rufous-backed Dwarf Kingfisher *Ceyx rufidorsa* is a small kingfisher that is resident in lowland forests. It is an uncommon bird with limited information about its courtship and nesting behaviour (Wells 1999; Limparungpatthanakij & Hansasuta 2022). In 2023, several birdwatchers were fortunate to chance upon a courting pair in Eco Park, Kledang-Saiong Forest Reserve, Perak, Malaysia. From opportunistic encounters of the pair over several months, they were able to obtain some interesting information about the courting behaviour and nesting of this species. This brief report is based on observations, photos and videos contributed by the authors.

Key Timelines and Brief Observation Notes

April 2023

11 April 2023. A single kingfisher was seen near a stream regularly visited by Rufous-backed Dwarf Kingfishers. The bird, thought to be female, was feeding on a *Cicada* (Cicadidae) (Plate 1).



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Plate 1: Rufous-backed Dwarf Kingfisher feeding on a *Cicada*

June 2023

No kingfisher was seen at the stream on five consecutive visits in mid-June. Beginning in the last week of June, the presumed pair of kingfishers was regularly seen at the stream, interacting with each other. On several occasions, the male was seen presenting various animal prey to the female, in what appeared to be courtship behaviour.

24 June 2023

The pair was seen at the usual stream. Male offered an agamid lizard prey to the female which accepted the food and proceeded to eat it (Plate 2).

26 June 2023

The male offered the female a juvenile agamid lizard and, later, a freshwater crab. However, the female did not accept the crab and flew off. The male then ate the crab (Plate 3).



Plate 2: Courtship food offering of an agamid lizard prey



Plate 3: Courtship food offering of a freshwater crab

28 June 2023

The male presented a small frog to the female and, later, also gave her a fish.

29 June 2023

The male was seen presenting a spider to the female which ate it. The male also dived for fish at the stream and fed the female several times (Plate 4). Mating was observed on a nearby perch at least three times.

30 June 2023

One kingfisher was seen at the stream. It then dived and caught a fish and flew off with it.

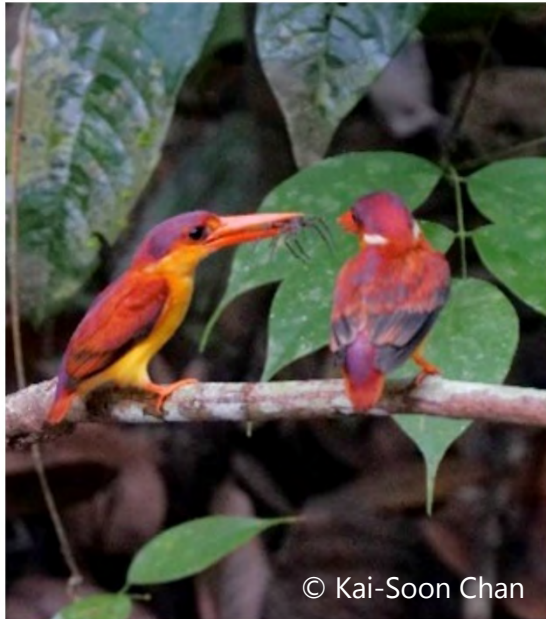


Plate 4: Courtship food offering of a spider and fish (right)

July 2023

1 July 2023

The pair was seen mating. The male caught and offered a fish to the female. Not long after, the male mounted and copulated with the female on a branch. Copulation lasted around 23 seconds. After copulation the male flew to another perch nearby. Around 12 minutes later the male perched near the female and then copulated for a second time, after which the male offered a fish to the female (Plate 5). Around 10 minutes later, both copulated for a third time. Within a half-hour period, the pair had copulated thrice. No further copulations were observed thereafter. On a few occasions, one flew off with fish. Link to a mating video here: <https://youtu.be/pQVmOF6eiBs>

2 July 2023

One bird was seen several times flying off with fish.

4 July 2023

The male was seen feeding a fish to the female.

5 July 2023

The male fed the female a few times at the stream.

16 July 2023

One kingfisher seen at the stream.

22 July 2023

One kingfisher was seen taking fish. There was little activity at the stream.



Plate 5: Mating and post copulating food offering of a fish

29 July 2023

Two birds were seen at the stream but no male-female feeding observed. The nest was discovered behind the area where the female was first seen on 11 April 2023. The nest hole was on an exposed part of the hill slope along an old trail (Plate 6). A minor landslip had caused the earth there to be exposed. The kingfishers had then made a nest hole at the exposed part of the slope. One bird was seen flying out from the nest hole.



Plate 6: Rufous-backed Dwarf Kingfisher nesting site (see arrow)

30 July 2023

During a watch of about 45 mins from a concealed position, the pair was seen returning to perch about 6 m in front of the nest hole (Plate 7). Both birds had fishes in their bills, and one later flew into the hole with a fish.



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Plate 7: Rufous-backed Dwarf Kingfisher with food for juveniles in nest

August 2023

However, a few days after the discovery of the nest, for unknown reasons, undergrowth and small trees had been cut about 3 m from the nest. Subsequently, there was no activity at the nest hole, which prompted the question if this was because the chicks had fledged, or the nest had been abandoned. Given that the pair was still encountered at the stream but did not bring fish back to the nest hole and no fledglings were seen, the likelihood is that the nest had been abandoned.

Discussion

The location of the nest in forest habitat and the burrow in the exposed earth bank generally fit that described for Rufous-backed Dwarf Kingfisher (Wells 1999; Limparungpatthanakij & Hansasuta 2022). However, whereas nests described were built into steep earth banks and about one meter from the ground, the present nest was on a slope and less than one meter above the forest floor (Plate 6). Such a vulnerable situation raises the question if the nest had been abandoned due to predation or disturbance from clearing of vegetation.

The limited nesting information observed here seem to indicate that breeding occurred about a month later than the report of eggs found in early March to May and fledglings in late June and early August (Wells 1999; Limparungpatthanakij & Hansasuta 2022). Courtship feeding was observed during the last week of June, with mating first noted on 29 June 2023. Egg laying would have occurred not long after this, with the first indication of nesting on 30 June 2023, when a kingfisher was seen flying off with a fish, probably to feed its nesting mate. Chicks were only confirmed a month later on 30 July 2023 when a kingfisher was seen flying into the hole with a fish. Unfortunately, the loss of the nest precluded the opportunity to obtain important data on incubation and fledging periods which are yet to be reported for the region (Wells 1999).

Addendum: Sexing of the Rufous-backed Dwarf-Kingfisher

The courting pair of Rufous-backed Dwarf-Kingfishers offered opportunities to image the adults side-by-side, in the same lighting conditions, on a number of occasions. They often perch on a fallen bamboo branch before plunging into a stream for a bath.

In Plate 8 the bird on the right is an adult male and the one on the left an adult female, in both images. Note that the male has a stronger lilac sheen on upperparts; especially appreciated on the cap. The female gives a general overall appearance of being a little darker on the back and cap. Limparungpatthanakij and Hansasuta (2022) state the "*intensity of lilac wash on crown and mantle varies*". Hybrid or intermediates are unlikely here as they usually have variable amounts of black and blue and less pure loreal spots.



Plate 8: Sexing of the Rufous-backed Dwarf Kingfishers. Male seen on the right in both images. Note that the bamboo pole distance between has been shortened to bring birds closer.

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The Chirping Dilemma for Malaysia's Oriental Magpie-Robins

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Keeping animals as pets has been an age-old tradition throughout history. Among these, a popular pastime is keeping songbirds, which holds a distinctive place in Asian culture. Their delightful song makes them sought after by enthusiasts and hobbyists, with millions being caught and traded. A 2018 study estimated that over 70 million caged birds were kept across 12 million households just in Java, Indonesia (Marshall *et al.*, 2020).

Over the decades, the composition of species sought after for this trade has evolved, bringing new and more diverse species into the trade. In some cases, this evolution is caused by species becoming scarcer in the wild, where 'replacement' species are identified to fill the void. In others, common melodious birds hold a unique and persistent position, and for as long as they exist, they will be sought after.

The Oriental Magpie-Robin *Copsychus saularis* is one such species. It is a familiar, chirpy call not just in forests but in many Malaysian neighbourhoods in the city or the outskirts - so common that it is hard for one to imagine that a species like this faces a threat. Because it is considered a common species, it is not protected by law in Peninsular Malaysia or Sarawak, meaning its capture and trade go unregulated and unrecorded. Trapping and trade in Sabah however require a permit from the Sabah Wildlife Department. Any international trade involving Malaysia must be accompanied by, at minimum, a quarantine certificate.

The combination of high demand-no regulation unfortunately spells trouble for the Oriental Magpie-Robin, with thousands of birds entering the illegal trade chain (Chng *et al.*, 2020). It faces a double whammy from illicit domestic and international trade. TRAFFIC data shows that in the decade from 2014-2023, more than 32,000 illegally sourced birds were confiscated, implicating Malaysia – meaning birds were either a) seized in Malaysia or b) seized elsewhere, but where Malaysia was part of its trade chain as a source, transit or end-destination (see Figure 1).



Figure 1: Volume of Oriental Magpie-Robins confiscated
Countries implicating Malaysia either as a source, transit or end destination | 2014-2023

In Malaysia, the three states most acutely connected to the trafficking of Oriental Magpie-Robins are Johor, Melaka, and Sarawak, with over 11,000 birds, 4,400 birds, and 3,100 birds implicated in seizures, respectively. All three states served as a point of entry or exit for trafficked birds and almost 40% of confiscations involved cross-border trafficking. Malaysia's

largest confiscation of Oriental Magpie-Robins occurred in Melaka in June 2020. Four men, including three Indonesians, were found in the wee hours of the morning departing Pulau Besar on two boats with over 3,300 birds stuffed in 188 basket crates (Yaacob 2020).



Figure 2: Seizures of trafficked Oriental Magpie-robins. Image courtesy of PERHILITAN

The country closely associated with Malaysia's Oriental Magpie-Robin trafficking is Indonesia. Riau and Kalimantan Barat are the two most prominent Indonesian Provinces where birds were being smuggled out of or into the country. Over 20,000 Oriental Magpie-Robins exported from Malaysia to Indonesia were confiscated during the 2014-2023 period – either those that were confiscated in Indonesia after leaving Malaysia, or seized in Malaysia where Indonesia was the intended destination (see Figure 3). These incidences send a strong signal that Malaysia's population of the species was being sought after to feed the trade there. Indonesia's largest confiscation occurred in Batam in July 2017. This time, 4,280 Oriental Magpie-Robins were found on a speedboat carrying the birds, in 214 basket crates (Yunita 2017).

Such high volumes trafficked from Malaysia to Indonesia point to a likelihood that the population in Indonesia is on a downward trend, forcing traders to seek the birds from other neighbouring countries. It could also mean that Indonesian traders feel birds can be easily sourced and smuggled from Malaysia, at minimal cost or risk. In either case, this is a cause for serious concern, which requires closer coordination by authorities in both countries to detect and prevent persistent illegal trapping and trade in Malaysia. This is paramount if songbird

keepers and hobbyists want to continue their hobby in the decades to come, without compromising the species' survival in the wild.

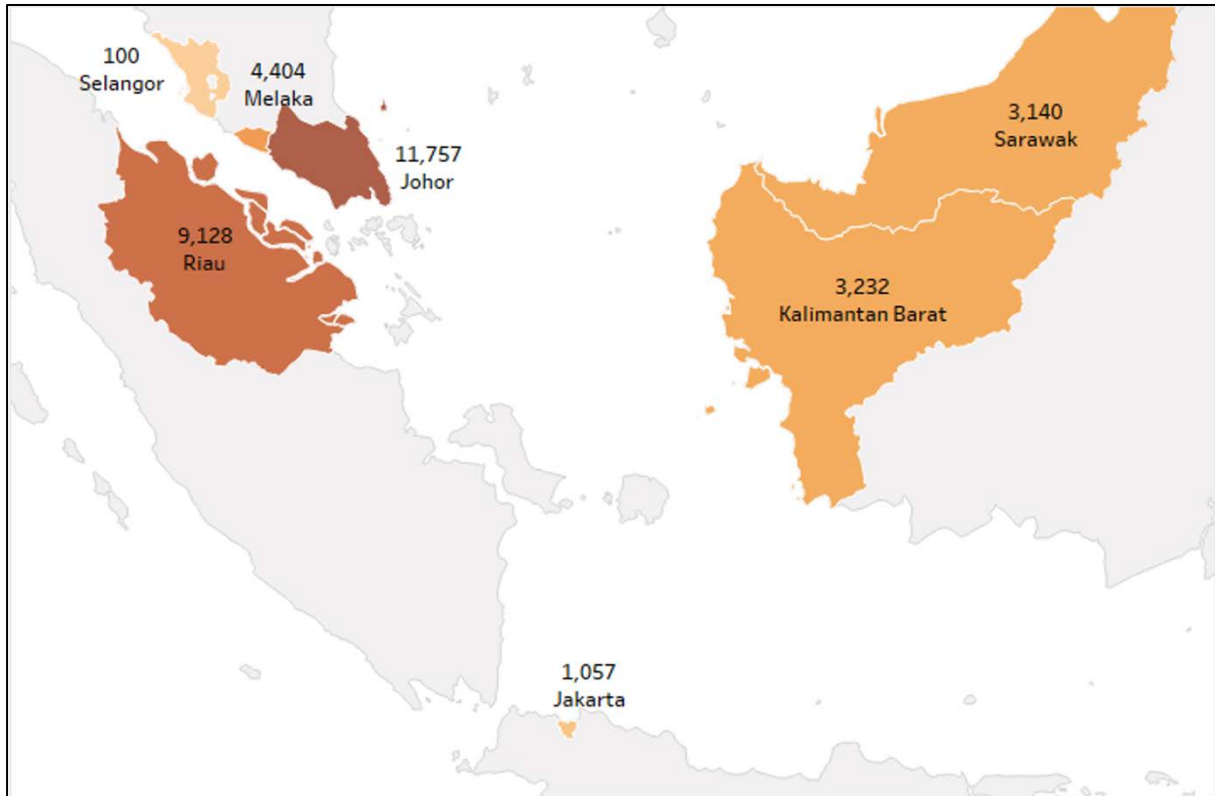


Figure 3: Volume of Oriental Magpie-Robins confiscated
States/Provinces involving Malaysia where more than 20 confiscations occurred | 2014-2023



Figure 4: Seizures of trafficked Oriental Magpie-robins. Image courtesy of the Royal Malaysian Police

Just because the species is common today, we should not take for granted that this will always be the case. History has shown that wild populations of once common and highly sought-after songbirds can be severely impacted within a very short time. The poster child for this unfortunate situation is the Straw-headed Bulbul. Once common across the Greater Sundas, it is now recognised to be a Critically Endangered species, almost gone from much of its original range due to trade pressures (Bergin *et al.*, 2017; Chiok *et al.* 2019). It is hard to imagine such a scenario for the Oriental Magpie-Robin, but the possibility exists. Before such a point of no return is reached, control measures for legal trapping and sustainable trade along the source-to-market chain must be introduced now. The future of the Oriental Magpie-Robins depends on it.

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Rare Bird Reports

The next MNS-BCC Records Committee Report will be in the December 2023 issue and will detail 'Recent Additions to the Breeding Avifauna of Malaysia'.

Reporting Rare Birds

MNS - Bird Conservation Council - Records Committee

All birdwatchers are encouraged to report new birds seen. See details at the Records Committee Website: <https://sites.google.com/site/mnsbccrecordscommittee/>

The species that are assessed by the Records Committee (species that you should submit) include:

1. All claims of potentially new species for Malaysia.
2. All claims of potentially new species for Bornean Malaysia.
3. All claims of potentially new species for Peninsular Malaysia.
4. All claims of wild species which are currently only in Category B, C or D (for either Bornean or Peninsular Malaysia)

B: Species recorded at least once in a wild state, but not since before 1963.

C: Species believed to occur only as a result of human introduction. The population is considered self-sustaining.

D: Species believed to occur (or to have occurred) only as a result of human introduction. Continued existence in the wild is considered dependent upon repeat introductions.

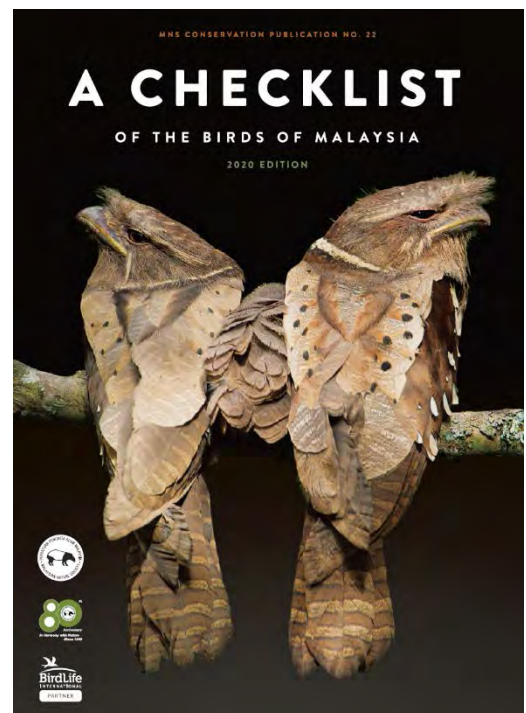
You can download the latest (2020) Malaysia Checklist of birds in pdf format at this link:

https://malaysianbird.report/wp-content/uploads/Checklist_Birds-of-Msia-2020.pdf

1. Rare & New Records submission form
2. Rare & New Records submission form (shortened version for submissions with photos attached)

<https://sites.google.com/site/mnsbccrecordscommittee/home/rare-and-new-record-submission-form?authuser=0>

The Records Committee encourages observers to submit all observations of wild birds in Malaysia to eBird. Claims of rare and scarce species will be assessed by a team of eBird reviewers on that site.



New Breeding Records and Possible New Breeding Observations for Malaysia, Peninsular Malaysia and Bornean Malaysia

Dave Bakewell

This article attempts to compile new breeding and possible breeding records in Malaysia over the last decade. For the purpose of this article, a breeding record is considered confirmed if any of the following are true:

1. Eggs were seen.
2. Chicks or dependent juveniles were seen.
3. Adults were seen repeatedly carrying food to one spot, or faecal sacs from one spot.

A breeding record is considered unconfirmed but possible if none of the above were observed but any of the following are true:

1. Nest (but no eggs or young) were seen.
2. Birds carrying nest material were seen.
3. Courtship display, copulation, distraction display or other behaviour consistent with possible breeding were observed.

Confirmed New Breeding Records for Malaysia

Sunda Teal *Anas gibberifrons*

Breeding first confirmed by the discovery of an adult in Tawau, Sabah with at least seven ducklings on 8 March 2016 (Bakewell & Kudus 2017) by Stanley Shao *et al.* Since then, the species has been observed in the Tawau region and near Sandakan, Sabah (Ang *et al.* 2023), though in small numbers (Stanley Shao, *in litt*).

Bornean Peacock-Pheasant *Polyplectron scliermacheri*

First confirmed breeding record for Malaysia was of a pair with chicks coming to a hide in the Telupid area, Sabah, in Apr 2022 (Matnin 2022).

Slaty-legged Crake *Rallina eurizinoides*

After the first Borneo records from Labuan, Sabah in 2018 and Brunei in June 2020, birds were discovered at two localities in Labuan, with confirmed breeding at one of them, with the sighting of up to three chicks from 31 Jan 2024 (Noralip Hassanuddin, *in litt*). Observations have continued of this family, and a full report will be available in due course. Photographs of the adults suggest that they are either of the *minahasa* race (resident in Sulawesi and Sula Islands) or (more likely) the nominate race (resident in most of the Philippines) rather than the *telmatophila* race which occurs as a scarce migrant in Peninsular Malaysia.

Black-winged Stilt *Himantopus himantopus*

In Peninsular Malaysia, first recorded breeding in 1998. The first confirmed breeding in Bornean Malaysia was in Tawau, Sabah, when adults with two dependent juveniles were photographed on 31 Aug 2018 (Shao, S. 2018). Two adults with a dependent juvenile were photographed in Miri, Sarawak, on 9 Oct 2023 (Bakewell 2023).

Pied Stilt *Himantopus leucocephalus*

The first Malaysian breeding record was by Stanley Shao *et al.* at Tinagat, Tawau, Sabah, on 23 Sep 2016, with at least three broods raised. (Bakewell & Kudus 2017). Further breeding was recorded at the same site in 2019 (Stanley Shao *in litt.*). In Peninsular Malaysia, breeding was observed for the first time in Pahang in Sep 2021 by Azmic AB (Roddis & Loseby 2022).

Bronze-winged Jacana *Metopidius indicus*

The first Malaysian breeding record was at Chuping, Perlis in Nov 2015 (Bakewell *et al.* 2015). This was followed by a breeding pair in Perak from 2019 (Yvonne Blake *in litt.*) and a pair at Batu Kawan, Pulau Pinang from 18 Apr 2021 (Chapman 2021) which bred prolifically over the coming years.

Asian Openbill *Anastomus oscitans*

After the first national record in 2008 (MNS-BCC RC 2024), this species has occurred in large numbers in Peninsular Malaysia since 2010. Breeding was finally proven with the presence of young juveniles in Seberang Prai, Pulau Pinang and in Perak in Jan 2022 (Roddis & Loseby 2022).

Little Cormorant *Microcarbo niger*

Like many other colonial-nesting waterbirds, this species' status has moved from vagrant to widespread resident in Peninsular Malaysia in the past decade. The first confirmed breeding record was of at least 11 chicks in nests and four fledged juveniles at Malim Nawar, Perak in January 2018 by Sein-Chiong Chiu. Breeding had been suspected at the site as early as 2014, and nests were seen in 2016 (Amar-Singh 2020).

Chinese Pond Heron *Ardeola bacchus*

One of the more surprising additions to the list of new Malaysian breeding birds, a nest with young was discovered in Wilayah Persekutuan Kuala Lumpur in May 2021 by Victor Loo (Roddis & Loseby 2022).



Plate 1: Nesting Chinese Pond Heron; adult with food left & juvenile in nest; WP Kuala Lumpur

Black Bittern *Ixobrychus flavicollis*

The first confirmed record of breeding in the country was of at least one pair near Alor Star, Kedah in July 2018 (Neoh 2018, Lim 2018), and nesting occurred at the same site in July 2020 (Neoh 2020a).

Eurasian Hoopoe *Upupa epops*

A pair bred on Langkawi, Kedah, under the eaves of a house roof in Apr-Jun 2017 (not, as previously published, in 2019 (Roddis & Loseby 2022) (Zack 2017). Another pair nested in Taiping Lake Gardens, Perak, in April 2021, raising two young (Roddis & Loseby 2022).



Plate 2: Nesting Eurasian Hoopoe; adult with food left & feeding juvenile in nest; Taiping

House Sparrow *Passer domesticus*

A breeding colony of House Sparrows was discovered at Kuala Perlis, Perlis, on 26 Dec 2020 by Harn Sheng Khor (Roddis & Loseby 2021). This was both a first national record and first breeding record.

Confirmed New Breeding Record for Peninsular Malaysia

Oriental Darter *Anhinga melanogaster*

Despite being reasonably widespread as a breeding bird in Bornean Malaysia, Oriental Darter was formerly only a vagrant or scarce migrant to Peninsular Malaysia. Observations in the Peninsula became more frequent from 2015 onwards. The first documented breeding was of several nests at Kinta Nature Park, Perak in Oct 2022 (Amar-Singh *et al.* 2023).

Possible New Breeding Records for Malaysia

Silver-rumped Needletail *Rhipidura leucopygialis* At least one pair was observed attending a nest under the eaves of a multi-storey building in Kapit, Sarawak in close proximity to nesting House Swifts *Apus nipalensis* and Asian Glossy Starlings *Aplonis panayensis* on 11 Mar 2022 by Chris Gibbins (Roddis & Loseby 2022). This is an extraordinary record, given that the nest

of this species has never been described and that the species has previously been suspected of nesting in hollow trees in primary forest.

Pheasant-tailed Jacana *Hydrophasianus chirurgus*

In the last 4-5 years, the number of Pheasant-tailed Jacanas found during the northern winter season in Peninsular Malaysia has increased significantly, with around 50 birds being reported in the Oct 2022 – Mar 2023 (Roddiss & Loseby 2023). Several of these birds lingered into May, and there were some undocumented reports of breeding in Perak.

Indian Pond Heron *Ardeola grayii*

One bird was observed in full breeding colours, apparently paired with a Javan Pond Heron, at the same site as a Javan Pond Heron pair near Alor Star, Kedah in July 2020 by (Neoh 2020a).

Javan Pond Heron *Ardeola speciosa*

The first breeding attempt recorded in Malaysia was of a pair seen nest-building and in courtship display near Alor Star, Kedah (Neoh 2020b).

White Wagtail *Motacilla alba*

An extraordinary series of observations of a pair of White Wagtails (subspecies *leucopsis*) was made by Chris Gibbins at Semenyih, Selangor, between 8 July and August 2017 (C. Gibbins *in litt.*). They were observed frequenting the rooftops of a new development. Usually, only one of the pair was visible at any one time, suggesting that the other bird was sitting on eggs, with the other coming in with food after periods of foraging. However, distance prevented any actual observations of food being brought, and the suspected nest site was not visible from the ground viewpoint. On one occasion, the birds were observed copulating on a rooftop. Work commitments prevented more regular observations, and no juveniles were observed later in the birds' stay. White Wagtails are normally scarce migrants in Malaysia, and the *leucopsis* race has been recorded breeding no nearer than southeastern China (Badyaev *et al.* 2020).



Plate 3: Nesting White Wagtail; Semenyih, Selangor

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Articles

Ornithological Controversies Series: Mimicry in Birds of Prey

Hans Peeters

Editorial Note: This article first appeared in 2018 in a German language annual hardcover publication titled 'Greifvögel und Falknerei' (Birds of Prey & Falconry). The author, Hans Peeters, has kindly allowed us to publish his English language version, with permission from his German publishers, Deutscher Falkenorden.

A raptor rescued by hunters in Russia's Far East Province was given to naturalists who identified it as an Osprey and consequently fed it a diet of fish. After several weeks, a visiting colleague realized the bird was actually a Crested Honey-buzzard *Pernis ptilorhynchus*, which, when offered, greedily ate a piece of honeycomb, accepting a second helping with apparent relish (Slaght 2016). How could biologists possibly make such a mistake? After all, an Osprey *Pandion haliaeetus* is one of the most distinctive birds of prey and is not even in the same family as the Honey-buzzard. The answer can be found in a phenomenon that is surprisingly widespread in raptors, namely mimicry. Photos of the hawk in question (Plate 1, right) show a bird that does resemble an Osprey albeit marginally, but it is a much more convincing double of a juvenile Rufous-bellied Eagle *Lophotriorchis kienerii* (Plate 1, left), a species that is a potent predator of weaker birds such as a Honey-buzzard. Among raptors, mimicry most commonly takes the form of a weaker species imitating a stronger one, which may offer some protection from aggression or predation by the stronger model.



Plate 1: Rufous-bellied Eagle, juvenile (left) and Crested Honey-buzzard, juvenile (pale morph). Both have largely white heads with a small crest and a dark eye stripe, which in the honey-buzzard provides a false shadow (see text and Plate 15).



Plate 2: Sulawesi Hawk-eagle *Nisaetus lanceolatus* (left) and its close mimic, the Barred Honey-buzzard *Pernis celebensis*, both in adult plumage

Mimicry in vertebrates has not been as well studied as it has in invertebrates, yet some avian examples have long been widely accepted. In raptors, however, the phenomenon is underreported. Perhaps the best-known examples of mimicry in birds of prey are the nuchal eye spots and associated marks of *Glaucidium* owls and American Kestrels *Falco sparverius*, the function of which is very likely to repel predators (similar to the eye spots of some *lepidopterans*) or to deter intruding competitors for nest cavities, as the markings resemble owls' faces. But similar, though less elaborate, nuchal spots are also found in other non-cavity-nesting falcons (Negro 2008) and in the Bathawk *Machairamphus alcinus* (Ferguson-Lees *et al* 2001). More elaborate forms of simulation are evident in a number of diurnal raptors of diverse phylogenetic affinities.

Efforts have been made to classify types of mimicry, prominent among them Batesian mimicry (in which a noxious model is more or less closely imitated in appearance, and sometimes behaviour, by a non-poisonous or palatable, harmless mimic) and Müllerian mimicry (in which both model and mimic are pernicious, toxic or unpalatable, thereby bestowing a measure of protection on both mimic and model) (Prum 2014). Both types may be purely behavioural. Other kinds do not cleanly fit into either category.

Sharp-shinned Hawks *Accipiter striatus* and Merlins *Falco columbarius* have been observed to approach flocks of feeding shorebirds or sparrows *Passer*, *Zonotrichia* in an undulating flight that instantly brings to mind the flying style of a woodpecker or jay or some other bird that presents no danger to shorebirds or sparrows (pers obs; J. Schmitt, pers com; Campbell & Lack

1984). Such behaviour, which appears to be uncommon in raptors, has been labelled aggressive mimicry, the most well-known example of which is the Zone-tailed Hawk *Buteo albinotatus*, which mimics the harmless, carrion-eating Turkey Vulture *Cathartes aura* not only in shape and colour but also behaves like the vulture, often joining roaming groups of such and, imitating their teetering flight, approaches unsuspecting, alert prey presumably without being recognized. This *buteo* occurs from the American southwest states deep into South America in substantially smaller numbers than those of the vulture (Bildstein 2017) as is often the case with mimics. It has been suggested that the low, rocking flight seen in both species, with wings held in a shallow V, is more a feature of low-altitude aerodynamics than of mimicry; if so, it certainly promotes successful imitation.

Yet another kind of mimicry, this one intraspecific, was discovered in a population of Eurasian Marsh Harriers *Circus aeruginosus* in France. Researchers demonstrated that about 40 percent of the males were female-coloured all their lives, that is, they mimicked female harriers. These 'transvestites' mated normally and were able to nest near normal-coloured males, without the development of conflict. With the aid of plastic models, it was shown that these 'pseudofemales' tolerated both normal and disguised males but attacked genuine females, whereas normal-coloured males attacked more often models of normal-coloured males than models of female-coloured males. Thus, a sort of 'permanent non-aggression pact' exists because of this intraspecific mimicry (Sternalski *et al* 2012). The benefits here include the optimization of breeding habitat, use of food supply, reduction of intraspecific aggression, and avoidance of potential injuries.

Intraspecific mimicry has also been suggested in the Eurasian Kestrel *Falco tinnunculus* in which the young males' moult from an essentially female plumage into that of an adult male one is delayed, ostensibly to mimic females or to signal subordination, again to avoid aggression during the breeding season (Vergara & Fargallo 2007). But raptor males in general during the breeding season have a delayed moult, likely because they require optimal feathering in order to provide food for the non-hunting female during incubation and care of the small young (females start moulting while incubating).

Conflict-reducing mimicry, both inter- and intraspecific, appears to be operative in highly similar sympatric eagles of the Palearctic. Six species of large eagles (nearly all brown as adults), of the genera *Aquila* and *Clanga*, winter in the Middle East and in India, and many may feed together on carrion at a dump site. Often, confrontations arise over food (Pröhl & Baumgart 2012), resulting in mutual grabbing, but lethal combat is rare, presumably because of the shared appearance of the participants.

How important is the mimic's precise imitation of its model? It is surprising how poorly the ability to recognize one's kind is developed in some birds. Decoys easily attract ducks and geese to within gun range; even cardboard sheets and white windsocks that move attract Snow Geese, and pigeons hasten to join gunners' quite primitive impostors equipped with wing-like appendages that flutter like those of landing pigeons.

Songbirds mob very simple dummy owls. A flattened, eyeless study skin of a Burrowing Owl *Athena cunicularia*, laid horizontally, belly-up, on tree branches, was quickly mobbed by passerines (pers obs), and Italian hunters of songbirds attract their quarry with crude, painted owl decoys whose paddle-like wings rotate in the wind (Peeters 2007). On the other hand, extremely accurate interspecific mimicry appears common in raptors, chiefly taking the form of classic Batesian mimicry, with the mimic benefiting from the 'unpalatability' of the model.

The Besra *Accipiter virgatus* and the Crested Goshawk *A. trivirgatus* are so similar in appearance that they are, besides large eagles and honey-buzzards, the most commonly confused raptor species in India despite a substantial difference in size; the weight of the female Besra is around 135 grams, whereas that of the Goshawk about 420 grams, meaning that it is more than three times as large. The Besra is surely the mimic.



Plate 3: Crested Goshawk (left) and Besra (female), both in adult plumage. The Besra's tail-tip appears squarer than the rounded tip of the goshawk's tail.

One would think that the substantial size difference alone would facilitate differentiating the Besra from the goshawk, but usually, no immediate size comparison is possible, and both raptors in their adult plumage are very nearly identical in both colours and pattern, despite the goshawk having a very small and often scarcely visible nuchal crest. It also has much thicker tarsi and toes and a relatively heavier beak, but without a comparison, these differences are not always helpful. It is noteworthy that only the adult female Besra so closely resembles the Crested Goshawk, suggesting that this may have to do especially with the defence of the nest

against the numerous egg-robbing monkeys and giant squirrels and not necessarily to prevent attacks by the goshawk; circumstantial evidence suggests the latter.

Convergent evolution might explain the similarity. Environmental factors (both hawks can be found in the same forests) could have selected for the particular colours and patterns of the two species (as they appear to have done in owls), so that these traits are somehow of advantage and therefore separately evolved in the two raptors. The Besra is almost exclusively a predator of small birds, whereas the goshawk kills larger birds as well as other vertebrates; both could benefit from their nearly identical, possibly camouflaging colours. Yet compelling evidence argues otherwise: on the island of Luzon in the Philippines (where there are Besras but no Crested Goshawks, despite the similar habitat) the females of the local race of Besra are coloured very differently from the Crested Goshawk and rather resemble other small local species of the genus *Accipiter*. As an aside, in turn, several cuckoo species very closely mimic specifically the female Besra, including even in behaviour, especially in flight and when landing, in order to, as currently thought, give away the presence of nests of potential hosts for these nest parasites, by eliciting mobbing.

The plumage of juvenile accipiters is characterized nearly worldwide by a streaked underside, but juvenile Eurasian Sparrowhawks *A. nisus* are horizontally barred below, like their parents; both juvenile and adult may thus mimic the Northern Goshawk *A. gentilis* in its adult plumage. Goshawk and sparrowhawk are widely distributed in the Palaearctic, with the smaller raptor faithfully mimicking the local races of its larger relative. Such coincidence in appearance is observed nearly globally where two or more species of the genus *Accipiter* coexist, from Madagascar to South America and New Britain. For example, the Henst's Goshawk *A. henstii* of Madagascar is closely mimicked by two much smaller sparrowhawks (*A. madagascariensis* and *A. francesii*) as well as by an aberrant snake eagle (*Eutriorchis astur*) (Negro 2008). In East and South Africa, the diminutive Gabar Goshawk *Micronisus gabar* resembles in nearly every detail the sympatric, much larger and much more robust Pale Chanting Goshawk *Melierax canorus*.

In North America, the Sharp-shinned Hawk *A. striatus* in its adult plumage appears to mimic the adult Cooper's Hawk *A. cooperii*, the resemblance being so great that the two species famously confound and confuse knowledgeable observers. It is noteworthy that the adult Sharpshin does not mimic the adult Northern Goshawk (the range of which partly overlaps that of *A. striatus*) but rather the mid-sized relative which it is likely to encounter far more often. (I have found the nests of *A. striatus* and *A. cooperii* a few hundred meters apart.) Nevertheless, all three North American accipiters share similar, ventrally streaked juvenile plumages, which may be advantageous on migration; all three share common flyways.



Plate 4: Northern Goshawk (left) and Eurasian Sparrowhawk, both wintering in the same forest in Rajasthan, India. This goshawk is of the race *schvedowi*, closely mimicked by the smaller sparrowhawk (but note the latter's droopy beak, bulging cere, and extremely thin tarsus).



Plate 5: Cooper's Hawk (left) and Sharp-shinned Hawk, both adults. Seen in the field, these species are often very difficult to differentiate.

This kind of Batesian or, in some cases, Müllerian mimicry is so widespread in raptors that it is not difficult to assemble dyads of raptor species in other genera and families that consist of a

smaller or weaker species matched with a larger, stronger one. In the *Falconidae*, the fairly rare Buckley's Forest-Falcon *Micrastur buckleyi* is smaller, somewhat more short-tailed and weaker than the much more common, stronger, and far more widely distributed Collared Forest-Falcon *M. semitorquatus*; it also has shorter legs and smaller feet, indicating that it, unlike *semitorquatus*, does not hunt birds. Otherwise, the two species look nearly like one. The Collared Forest-Falcon is also mimicked to near perfection by the sympatric Bicolored Hawk *Accipiter bicolor* in its juvenile plumage.

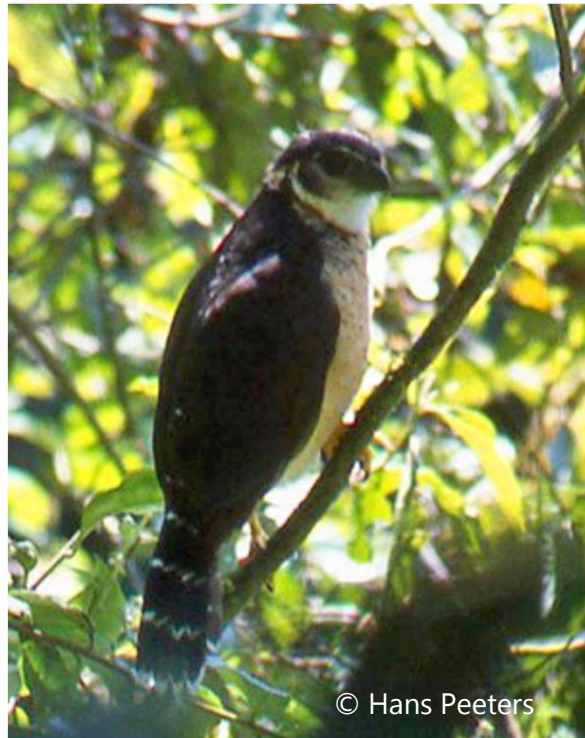


Plate 6: Collared Forest-Falcon (left) and Buckley's Forest-Falcon - note the smaller beak, shorter legs and tail.

The Oriental Hobby *Falco severus* is a miniaturized mirror image of the Black Shaheen *F. peregrinus peregrinator* of India. The two species are sympatric and both hunt birds, albeit of different sizes. In the forests of the American tropics, their counterparts in the New World appear to occupy the same ecologic niches: the Bat Falcon *F. albigulis* is almost to the smallest detail a miniature of the Orange-breasted Falcon *F. deiroleucus*.

Might these conforming colours and patterns be inherited traits of a common ancestor? Such may indeed sometimes be the case, and is most probably so with *F. albigularis* and *F. deiroleucus*. Because of appearance, a third species can be added to these two, the Aplomado Falcon *F. femoralis*, which, as an inhabitant of savannas is allopatric and, although clearly related to the other two species, demonstrates the consequences of genetic drift and natural selection.



Plate 7: Black Shaheen (left) and Oriental Hobby, both adults. The large feet of the Shaheen likely aid seizing birds above forest canopies, although this Shaheen, unlike other Peregrines, is also known to enter such. See also Orange-breasted Falcon, below.



Plate 8: Orange-breasted Falcon (left) and Bat Falcon, both adults. The heavy beak and great feet of the first are probably very useful for catching and dispatching large and well-armed parrots.

Because of their very different habitats, the smaller Aplomado would hardly become prey of the Orange-breasted Falcon and was therefore shaped by other agents of selection. Through allopatry alone, one would expect that, in the course of speciation by way of various mechanisms, multiple differences would manifest themselves between the species, something that is readily observed in the subspecies of the American Kestrel on Caribbean islands - where there seems to be no need for mimicry.

The danger to a small raptor of becoming a meal for a larger bird-eating congener must not be underestimated; a male *tundrius* Peregrine, trapped on migration and trained for falconry, proved an expert hunter of American Kestrels, to the falconer's dismay (pers obs). Merlins fling themselves into bushes and trees to escape larger falcons such as Peregrines and also Prairie Falcons *F. mexicanus* (pers obs).

A diminutive trained male African Taita Falcon *F. fasciinucha*, appearing a near-perfect miniature Peregrine, while flying at height in California was approached several times by wild female adult Peregrines that, upon drawing near, uttered calls associated with courtship (pers obs). Interestingly, an adult male merlin with a blue-grey back (but lacking the prominent blackish cheek patch of the Taita) was also courted by an adult female Peregrine (pers obs). In both cases, the mimics are smaller and weaker than the models and could serve as potential prey.

According to Prum (2014), these would be examples of interspecific social dominance mimicry, a type of social parasitism in which a subordinate species evolves to mimic and fool a dominant ecologic competitor in order to prevent attacks from the dominant model species. Prum states that the weights of the mimics are 56 to 58 percent of the models; these size relations, though, may differ in raptors, nor do the species necessarily compete except marginally. The female Peregrine suitors of the 200g Taita Falcon weighed from about 900 to 1,000g (White *et al* 2013). Strictly speaking, the models are only partly ecologic competitors, because they do not occupy the same niches as the mimics, which, however, in this context, is of no importance. The Taita and the Peregrine may compete for relatively scarce nest sites, i.e. cliffs; and confrontations over such by different species are often violent. Mimicry on the part of the Taita may save its life.

Perhaps the most remarkable and at times dramatic mimicry occurs in raptors of different genera and indeed sometimes different families.

Juveniles of the Grey-bellied Hawk *Accipiter poliogaster* of tropical America are coloured and patterned very precisely like adults of the much larger, sympatric Ornate Hawk-eagle *Spizaetus ornatus*, lacking only the few elongate crest feathers of the model. The feeble Grey-headed Kite *Leptodon cayanensis* produces young of three morphs, each of which mimics one or another of the three species of powerful sympatric hawk-eagles that also inhabit the same neotropical rain forests, namely *S. ornatus*, *S. tyrannus*, and *S. melanoleucus*. In Brazil not long ago, individuals were discovered of the *S. ornatus* morph of the kite that even sported the elongate occipital crest feathers of the model, not observed before (Menq 2013).



Plate 9: Ornate Hawk-eagle, adult (left) and Grey-bellied Hawk (an accipiter), juvenile, a convincing mimic of an Ornate Hawk-eagle though lacking long crest feathers.

Some of these species likely display deceptive polymorphism, which protects against a predator: following initial success, the predator develops a certain search image while disregarding other morphs of the same species because they do not fit the search image (Hailman 1977; Tinbergen 1946).

The Crested Honey-buzzard that so duped its keepers in Russia was just one variant of a species that surely falls prey to several more powerful raptors. All Honey-buzzards present themselves as possible large and relatively slow prey to a number of dangerous predators: they have short legs suitable for walking and digging, and long toes with weakly curved talons for hanging from limbs to reach honeycombs underneath or to extract them from tree cavities, methods of feeding that put this raptor in very vulnerable positions. Even while digging up wasps' nests, the buzzards can find themselves in self-excavated pits from which there is no rapid escape. This vulnerability is confirmed by a kind of 'fright molt' discovered in the Western Honey-buzzard *Pernis apivorus*, in which feathers grabbed by an attacker easily detach and thereby facilitate escape, as also seen, for example, in *columbids* (Van Nie, 2002).



Plate 10: Grey-headed Kite, adult (left) and juvenile. Note the very weak feet. Individuals of this inconspicuous but apparently vulnerable species can produce offspring of three morphs, each of which mimics at least one species of sympatric hawk-eagle. Some that mimic an Ornate Hawk-eagle, such as this juvenile, even have a crest, which is absent in adults. The adults may be mimics of adult Black-and-white Hawk-eagles.



Plate 11: Honey-buzzards, such as these Crested Honey-buzzards shown, assume awkward positions while reaching for honeycombs.

Western Honey-buzzards winter in Africa and in fact spend more time there, in a variety of habitats, than on their breeding grounds. In this species, every morph matches an age-class or colour morph of several stronger African raptors, including six hawk-eagles, seven snake-eagles, and two large species of *Accipiter* (Ferguson-Lees & Christie 2001), though its juvenile plumage appears to imitate that of a juvenile Common Buzzard *Buteo buteo*, which much less often becomes prey of the sympatric Northern Goshawk than do honey-buzzards on their breeding grounds (Arbeitsgruppe Greifvögel Nordrhein-Westfalen der NWO 2000).

The Crested Honey-buzzard of the East is distributed from Siberia to southern Asia, the northern forms being migratory. These Palaearctic winter guests can be seen in autumn as they arrive in waves at various points in India, Thailand, Malaysia, and elsewhere - relatively easy prey for eight *Nisaetus* hawk-eagle species alone, plus several other eagles of different genera - which may explain why Honey-buzzards in particular have so many morphs. The vulnerability of honey-buzzards appears to have led to convincing mimicry of their predators and also other raptors that do not usually eat birds but are too powerful to be preyed upon by the eagles, such as Ospreys—but their young may become prey (Kunze & Griessbach 2015). They, too, serve as models, along with sea eagles of the genera *Ichthyophaga* and *Haliaeetus* and the snake-eagle genera *Spilornis* and *Circaetus*.

Apart from the various plumages, honey-buzzards imitate other traits of more powerful raptors, such as their appearance in flight. Their outsized, yellow feet likely also act as defensive signals, although they would scarcely serve as effective weapons because of their extremely short legs and not very potent talons. Honey-buzzards lack the supraorbital ridges, so commonly seen in raptors, that shade the eyes and protect them in dives through dense vegetation and that endow eagles and other birds of prey with a fierce gaze. The laterally flat face of a *Pernis* and its mild expression are instead reminiscent of those of a pigeon.



Plate 12: Crested Serpent-eagle (left) and Crested Honey-buzzard (male, dark morph), both in adult plumage. Note the slender head of the honey-buzzard.



Plate 13: Mountain Hawk-eagle (left) & Crested Honey-buzzard (male, 'typical' morph), both adults



Plate 14: Crested Honey-buzzard (adult male, dark morph). Note short legs and long toes. Perhaps a mimic of the Grey-headed Fish-eagle *Ichthyophaga ichthyaetus*.

Duff (2006) points out that in juvenile Western Honey-buzzards, a patch of dark feathers around the eye seems to mimic convincingly the shadow cast by the missing supraorbital ridge. This pseudo-shadow is also seen in juveniles of some morphs of the Crested Honey-buzzard, and possibly all. For example, at least one juvenile morph of the Crested Honey-buzzard appears a convincing double of a juvenile Bonelli's Eagle *Aquila fasciata*. Intriguingly, the Javan race of the Crested Honey-buzzard *P. p. ptilorhynchus* achieves the same effect with a white line above the eye that extends toward the nape and again imitates a supraorbital ridge, suggesting a different evolutionary pathway to simulate the same feature.



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Plate 15: Bonelli's Eagle (left) and Crested Honey-buzzard, both juveniles. Note the brow shadow: genuine in the eagle, false in the honey-buzzard.

Van Balen *et al* (1999) suggested that it is the Javan Hawk-eagle *Nisaetus bartelsi* that may actually be the mimic of the innocuous (and unfeared) local Honey-buzzard race, which would especially benefit inexperienced juvenile eagles. The authors cite various sources that report a lack of fear of Hawk-eagles by "*bird species with good powers of flight*" unlike their reaction to falcons and accipiters. But the reason for this fearless behaviour is that the Javan Hawk-eagle is, like its congeners, not an aerialist but rather a confirmed still hunter; it perches quietly, usually in the forest canopy for a protracted period waiting for prey (usually a reptile, mammal or terrestrial bird) to emerge. If unsuccessful, it eventually moves on to another perch. While the Hawk-eagle may indeed benefit from mimicking the Honey-buzzard, the presence of a false brow (or suggestion of one) strongly argues for the buzzard being the mimic, not the eagle.

The adult plumages of the Ornate Hawk-eagle of tropical America and the Javan Hawk-eagle are remarkably similar; these widely allopatric species, formerly placed in the same genus, were assigned separate genera (Lerner *et al* 2017) and are likely an example of parallel evolution on separate continents.

The young of most hawk-eagle species are white-headed (and if not, light caramel coloured), presenting an overall colour pattern that is nearly universal in forest eagles. Commenting on Bornean species, Phillips and Phillips (2016) suggest that white-headedness in young prevents attacks by eagles either of their own species or others as these birds disperse into adjacent territories, an attractive hypothesis, as this trait is observed not only in most *Nisaetus* but also in sympatric, only distantly related forms. For instance, *Lophotriorchis kienerii*, as well as the neotropical Hawk-eagles (*Spizaetus*) and indeed also the Harpy *Harpia harpyja* and the Crested Eagle *Morphnus guianensis*, all illustrate such colouring, providing examples of Müllerian mimicry (injurious species benefit from a shared warning signal, in this case, plumage traits). Batesian mimicry is probably seen in some of the distinctly smaller and weaker white-headed species of the neotropical genera *Leptodon* and the fairly recently revised *Leucopternis* (Raposo do Amaral 2006). Some of these forms surely represent examples of convergent evolution.



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Plate 16: Sulawesi Hawk-eagle fledgling. Like the young of most forest eagles, it is white-headed.

The Black-and-white Hawk-eagle *Spizaetus melanoleucus* is white-headed in both the juvenile and adult plumages, the latter likely a product of neoteny; throughout its life, it may be a mimic of the somewhat larger juvenile Ornate Hawk-eagle. Among the Honey-buzzards and Bazaes of Asia, the adults also mimic adult eagles; perhaps they succeed in warding off attacks by real forest eagles, or deter monkeys from robbing their nests.

Doubtless numerous additional examples of mimicry in raptors will be uncovered. Possibly, the Eurasian Hobby *Falco subbuteo* survives because its facial markings and streaked underparts suggest a juvenile of its own kind to a hungry Peregrine. The evaluation of the success of

mimicry is frequently difficult and is subject to the observers' knowledge of identification points and behaviour, experience in the field, and gullibility.

On the Kinabatangan River in Sabah (Borneo), I noticed from afar a very large, flat nest at the top of a high tree recalling the kind of platform nest one might expect to be built by either of the two *Ichthyophaga* species of fish-eagles (the smaller of which mimics the larger) or of a sea-eagle (*Haliaeetus*), all of which I had observed along the river. Two raptors, perched very near the structure and seen from behind, had pale caramel heads topped with long upright crests resembling Prussian helmets. I was almost certain they were juvenile Wallace's Hawk-eagles *Nisaetus nanus* (a common species there), although they certainly did not belong with the nest, because *Nisaetus* eagles' nests are normally much smaller and are usually found in branch forks under the canopy. Binoculars revealed that some of the branches making up the nest were as thick as my arm and had been broken and bent down. This was clearly the night nest of a large orangutan.

Soon, the two raptors turned toward me, presenting flat-sided, pigeon-like heads and very short legs. They were juvenile Crested Honey-buzzards.

Acknowledgment

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Bird Identification Series: Identifying the Short-toed Coucal

Con Foley

The Short-toed Coucal *Centropus rectunguis* is on the wanted list for many birders. But it is quite shy and hard to see. I have encountered the Short-toed Coucal several times, perhaps a dozen or so. I am using the term 'encountered' to mean heard or briefly glimpsed. But I have only gotten verifiable views twice, and only photographed it once. This is a story of that encounter.

But first we must talk about identification, as the Short-toed Coucal looks very much like a Greater Coucal *C. sinensis*. First let's start with the name, 'Short-toed'. First described by H.E. Strickland in 1846, he examined skins of a number of specimens purchased in Malacca by another party. He found a coucal with a shorter hind claw that Wells (1999) writes is less than 50% the length of the hind claw of the Greater Coucal. Hence the name 'Short-toed'. But I think it will be quite impossible to see that in the field, and even in the photo below (Plate 1) which shows the hind claw, I think it will be difficult to determine.



Plate 1: Short-toed Coucal showing the hind claw

Next, the size, which most field guides describe as approximately 80% as large as the Greater Coucal (Robson 2011; Jeyarajasingam 2012). But caution is appropriate, as females of both species are larger than males, and the lighting conditions in the closed canopy rainforest will be dim. If you see a smaller coucal, it is suggestive of Short-toed Coucal but a bit more evidence would help.

Next coloration. Many field guides describe the Short-toed Coucal as having a violet or purplish wash or tinge on the black nape. If I squint very hard, perhaps I can see this in my photo below (Plate 2). However, one of the newest field guides to describe birds in this region by Eaton, *et al.* (2016) states that both Greater and Short-toed Coucals have a violet or purplish wash. So, I would disregard this factor as a compelling ID guide.



Plate 2: Short-toed Coucal showing the violet or purplish wash or tinge on the black nape

Next habitat. The Short-toed Coucal prefers primary or secondary rainforest habitat, although it is sometimes found closer to the forest edge or in peat swamp forest. The Greater Coucal prefers grassland or woodland habitat. So, if you see a coucal deep inside a good quality primary or secondary forest, it will almost certainly be a Short-toed Coucal. They are extirpated from Singapore if it was ever present, so no chances here. And even in its preferred habitat, it is sparse.

Lastly, voice, which for me is diagnostic. Although superficially both species sound a bit similar, upon careful listening or by referring to a recording, they are separable. Listen carefully to the recordings on Xeno-Canto (<https://xeno-canto.org/species/Centropus-rectunguis>). At least in Johor, the Short-toed Coucal starts with a single 'boop' with a pause of about 1.2 seconds, followed then by a series of 'boops' descending in tone slightly for a further 5-6 'boops' (Plate 3). Use your cellphone to record the call, it will be good enough. There could be regional differences in Sumatra and Borneo, but I cannot claim knowledge in these areas. The species, although described as monotypic, ranges from extreme Southern Thailand, to most of peninsular Malaysia, lowland Sumatra and lowland Borneo; its status is Vulnerable.

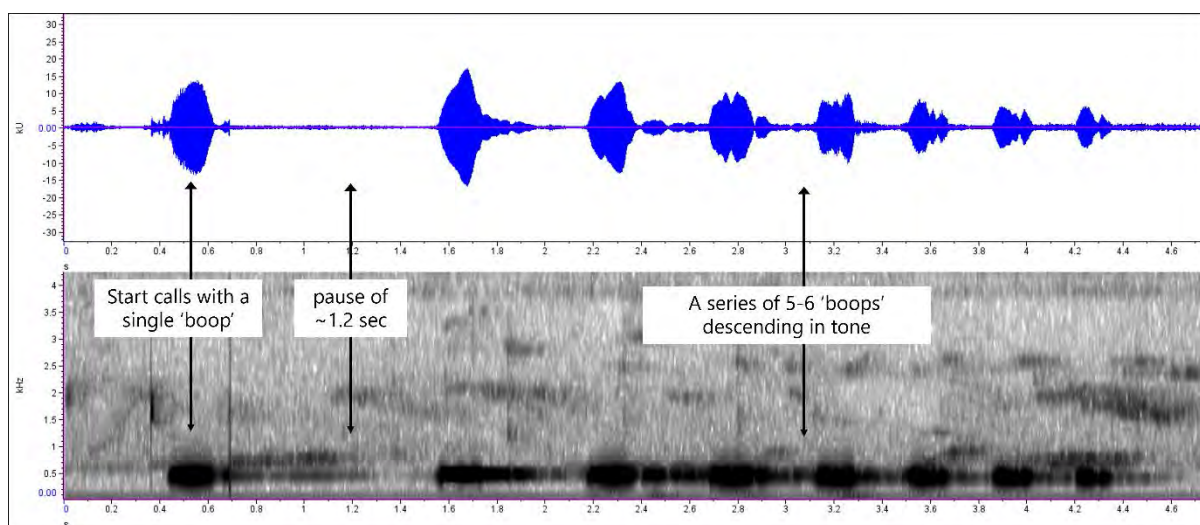


Plate 3: Sonogram and waveform of a typical Short-toed Coucal call

Source: Recording by Kok-Hui Tan in August 2017 (see below).

I had never heard a Short-toed Coucal call so early in the day, nor for such long periods. In my experience normally they call once or twice and then are silent which makes tracking them very difficult, and I've tried several times before. This, plus the favourable terrain and the close proximity of the calling bird, really made that day our lucky day!

On the day of the encounter in August 2017, we entered the forest before dawn hoping to find some night birds. To our surprise, a Short-toed Coucal started calling nearby before dawn while the Malayan-eared Nightjar was still calling at 0650hrs, but at this time it was clearly too dark to do anything. Later in the morning, around 0930hrs, the coucal started calling again at the same spot where we had been birding since before dawn. I took a couple of sound recordings from the logging track. After a bit of a thought, two of us decided to tramp into the forest in search of the bird just before 1000hrs. We were located near a dry wash, and I had used this wash to enter this part of the forest several times before. The undergrowth here was filled with Bertam Palms, which have thorns on the palm stems. Using the dry wash we were able to avoid getting entangled. The call was getting louder as we were getting closer. We were moving slowly and cautiously, but soon we were upon the bird perched in a Bertam Palm. This may be the best view obtainable for this rarely seen bird, but then the bird did something we were not expecting. It flew to the next Bertam Palm clump, and in so doing it perched briefly on one of the exterior palm stems, before diving into the palm clump. I was

able to snap a few photos while it was perching by jamming my camera lens against a small tree trunk for additional stability; it was quite dark under the closed canopy. The whole show was over in seconds, and then the bird disappeared into the Bertam Palm clump, but we had a great view of the bird.

On this trip we also got a Cinnamon-headed Green Pigeon and a Cinnamon-rumped Trogon, quite a productive trip!

Acknowledgements

Thanks for the great company on this trip to Ding-Li Yong and Kok-Hui Tan. Appreciate the sonogram/waveform image from Amar-Singh HSS.

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Birdwatching Hotspots Series:

Rundum Highlands, a New Frontier for Bird Watching

Ron Pudín, Jason Bugay Reyes & Amar-Singh HSS

On a recent bird watching trip to Sabah, North Borneo, Ron Pudín suggested I (Amar) visit the Rundum Highlands. Prior to this, there have been only two trips to explore the Rundum Highlands; both occurring this year (Wu 2024). Our trip there, as well as recent explorations by Ron Pudín, Jason Bugay Reyes and colleagues, suggest that this location is an exciting new frontier for bird watching.

The Rundum Highlands are located in the southern part of Sabah, North Borneo, not far from the Kalimantan border (see Plate 1). The elevation is 1,200-1,300 m ASL, making it a submontane region. Much of the region is primary forest and it is cold at night with lots of mist (clouds) in the early morning.

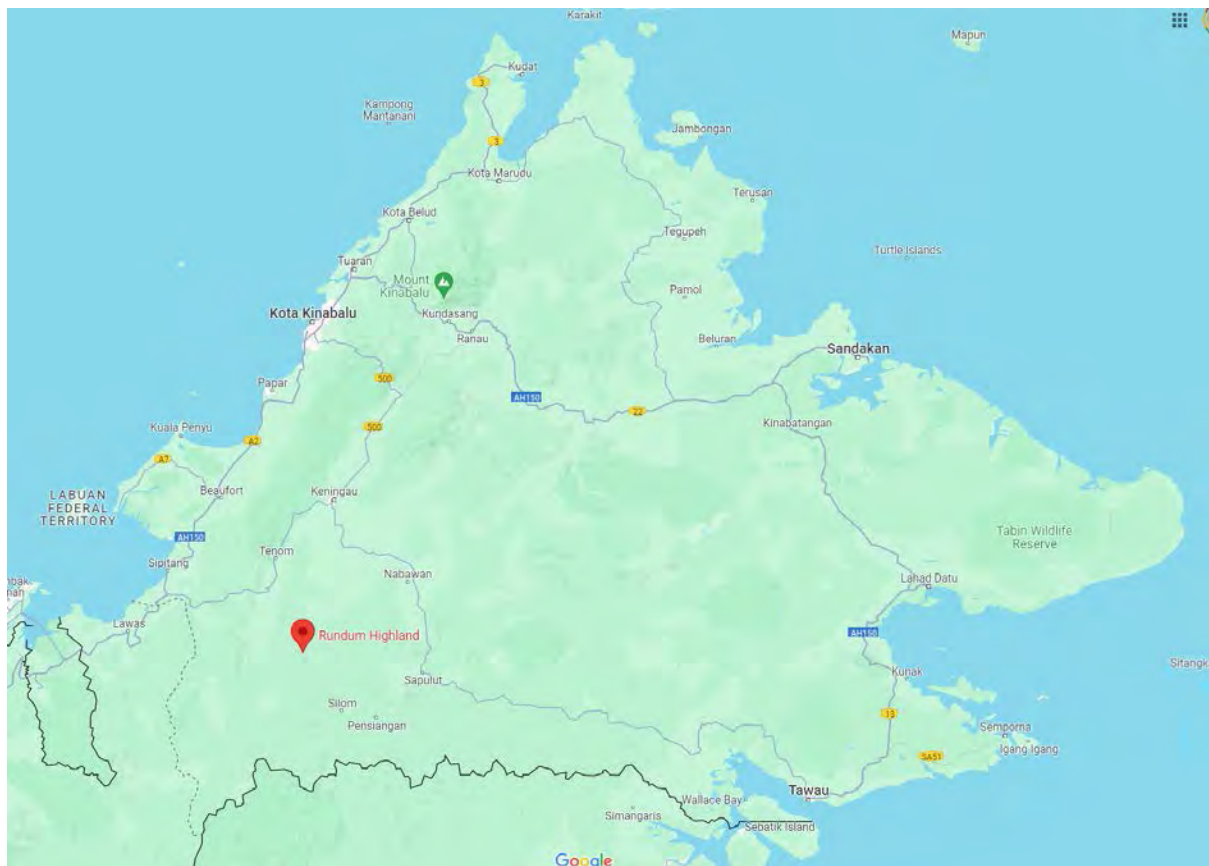


Plate 1: Location of the Rundum Highlands on Google Maps

Rundum Highlands is 60-70 km from Tenom. Getting there currently is difficult as the access 'road' is being upgraded, and many sections are mud based and are difficult to negotiate when it rains. An experienced driver with a good 4-wheel drive is required. It is expected by the end of the year that most of the road will have gravel and possibly be tarred by early 2025.

There is a small village with a small primary school and the main agricultural activity is planting hill padi. Accommodation at present is a simple rest house (see Plate 2). Comfortable chalets, nestled in the forest, have been built by Gerald Ramsay Baxter and are awaiting electricity supply and road access to become operational. Currently a portable generator is used at night for electricity supply and hot showers. Internet connectivity is extremely poor which makes it a great place to disconnect but note that there are plans to erect a telecommunications tower soon. Food is catered from the villagers – simple but nourishing fare. Vegetables cooked with ginger flowers were surprisingly both spicy and tasty. There is a well-equipped kitchen in the rest house to use.

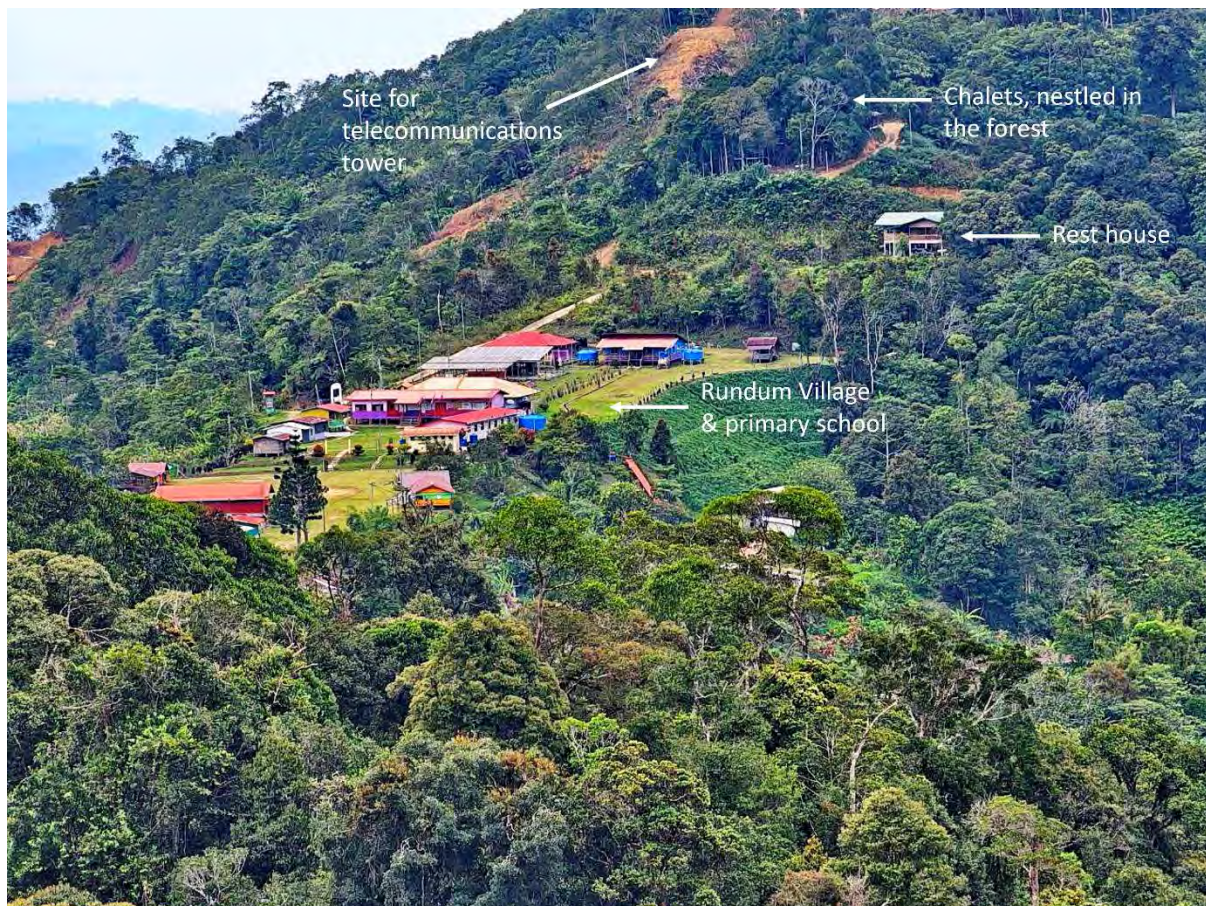


Plate 2: Rundum Highlands Village and accommodation

The villagers see the potential for ecotourism, especially bird watching and bird photography, as well as camping. They are surprisingly knowledgeable about birds and have local names for many birds – there is a need to document this from the village elders. For example, Alimbunu refers to the Black-and-crimson Oriole *Oriolus consanguineus*, and Lumbar to the rarely seen Black Oriole *Oriolus hosii*. They have good observations and spotting skills. We were informed about, and observed, the active nests of the Aberrant Bush Warbler (Sunda) *Horornis flavolivaceus* [*vulcanius* Group] and Sunda Scimitar-Babbler *Pomatorhinus bornensis*. The Sunda Scimitar-Babbler is heard often and can be seen at the rest house (see Plate 3).



Plate 3: Sunda Scimitar-Babbler seen at the rest house and a nest spotted by villages

Two brothers, Rusli and Din Tampisan, were our local guides. Rusli leads the Rundum village community-based ecotourism and has hopes to develop the work for the village. They are learning how to establish hides and bird watching trails are being developed north and south of the village. Right now, these are in their infancy stages but the potential is huge. At one hide the Blue-banded Pitta *Erythropitta arquata* visits occasionally and at another we heard the calls of the Long-billed Partridge *Rhizothera longirostris*. The Black Partridge *Melanoperdix niger* has been sighted and the Black Oriole calls heard.

While sitting in a hide or walking the trails do not be surprised to have a number of Wreathed Hornbills *Rhyticeros undulatus* fly close overhead with loud wing beats (see Plate 4). Or to hear the frequent calls of Barking Deer. We were also fortunate to see a beautiful Malayan Weasel *Mustela nudipes* hunting for rats at the chalets (see Plate 4). At night do not be fooled by the many frogs and insects that make bird-like calls.



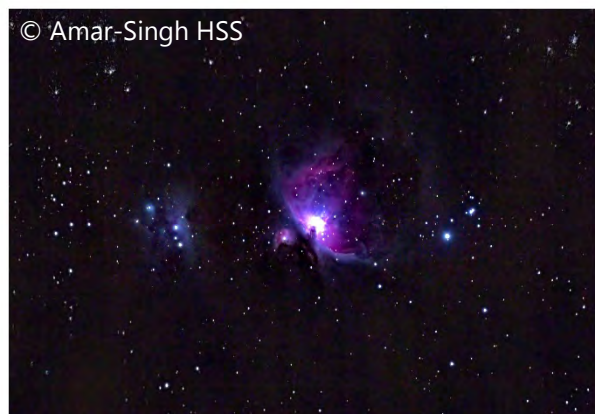
Plate 4: Wreathed Hornbills in flight (left) and Malayan Weasel hunting for rats

Other interesting birds seen include the Bornean Bristlehead *Pityriasis gymnocephala*, and the less frequently seen Eyebrowed Wren-Babbler *Napothera epilepidota* (see Plate 5). Rundum Highlands is a great place to see the elusive and usually high canopy barbets - Bornean Barbet *Psilopogon eximius* and Mountain Barbet *Psilopogon monticola*. We saw large numbers and understood from the villagers that during the fruiting season they are even easier to see much lower down.

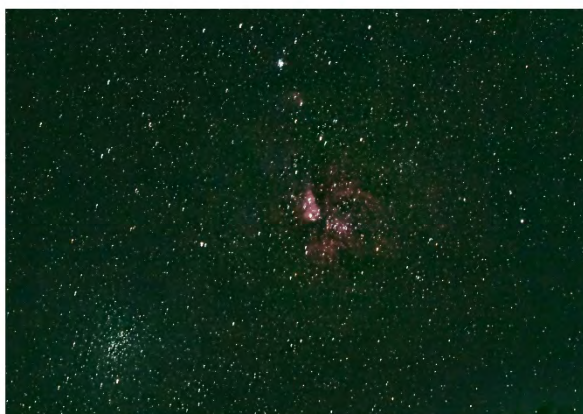


Plate 5: Eyebrowed Wren-Babbler

Bird watchers and photographers should take advantage of the dark skies at Rundum Highlands to do long lens astrophotography (see Plate 6).



Orion's Nebula. Nikon Z9, 600mm, f/5.6, 1 sec exposures, ISO 16,000, 25 image stack.



Carina Nebula & nearby star clusters in the Milky Way. Nikon Z9, 200mm, f/5.6, 1 sec exposures, ISO 16,000, 40 image stack.

Plate 6: Long lens astrophotography

Once access has been developed, bird watchers may want to consider spending time not just at Rundum but also at the lowlands Naluyan Jungle Lodge which is nestled into the Crocker Range – two hours from the Rundum Highlands. It is a well-developed resort, rich in bird life.

The potential of Rundum Highlands and the surrounding forest is best summed up in the stirring words of a village elder. He pointed to a nearby range of mountains and said that, as far as he is aware, no one has ever visited them. Rundum holds the prospects of birds yet undiscovered.

Rundum in History: The Rundum Rebellion

The forest at Rundum is well known as the location of the uprising of the Murut community against the British North Borneo Chartered Company (BCNBC). The BCNBC imposed many taxes on the locals and compelled every Murut family to give their first-born children as forced (unpaid) labour. In 1915 Ontoros Antanom united the Murut communities to fight the BCNBC and free them from exploitation. Despite using blowpipes, swords and spears, they prevailed against the British soldiers equipped with firearms. The British then invited Antanom to a peace conference at Rundum but actually laid a trap for him and his followers on their way to the conference. He and followers were arrested and executed, ending the resistance.

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Bird Tree Series:

Belimbing Pipit *Sarcotheca monophylla*

Amar-Singh HSS

The *Sarcotheca monophylla*, commonly known as Belimbing Pipit or Asam Pupoi Daun Tunggal, is a favourite fruit tree in the forest for many birds.

This is a species of plant in the family Oxalidaceae which includes many plants including the Starfruit (*Sarcotheca philippica* or *Averrhoa carambola*) and Belimbing Asam (*Averrhoa bilimbi*). *Sarcotheca monophylla* is said to be endemic to Peninsular Malaysia (Chung 1998) and listed as Near Threatened internationally (1998 IUCN Red List of Threatened Species) but Not Evaluated locally (2010 Malaysia Plant Red List) (MyBIS 2024). This tree species has not been studied locally and little is known about it.

Sarcotheca monophylla is a tall forest tree and can grow to a height of 30 m. Leaves are bright green, unifoliolate, measuring approximately 6-7 by 3 cm. The tree appears to flower and fruit throughout much of the year. Flowers have deep red petals and fruits are bright red and oval (subglobose to ovoid) measuring up to 13 mm in size; they are said to be edible and taste sour (Flora Malesiana 2024). Although a tall tree, foliage extends quite low, allowing good views of feeding birds at near eye level.



Plate 1: *Sarcotheca monophylla* tree showing the abundant oval, red fruits

Large numbers of birds can be seen, almost year-round, feeding on the fruit of *Sarcotheca monophylla*. Birds that have been observed feeding on the fruit of *Sarcotheca monophylla* include (Amar-Singh HSS 2018):

1. Sooty Barbet *Caloramphus hayii*
2. Gold-whiskered Barbet *Psilopogon chrysopogon*
3. Red-throated Barbet *Psilopogon mystacophanos*
4. Black-eared Barbet *Psilopogon duvaucelii*

5. Asian Fairy Bluebird *Irena puella*
6. Lesser Green Leafbird *Chloropsis cyanopogon*
7. Greater Green Leafbird *Chloropsis sonnerati*
8. Blue-winged Leafbird *Chloropsis cochinchinensis*
9. Olive-winged Bulbul *Pycnonotus plumosus*
10. Yellow-vented Bulbul *Pycnonotus goiavier*
11. Cream-vented Bulbuls *Pycnonotus simplex*
12. Red-eyed Bulbul *Pycnonotus brunneus*
13. Spectacled Bulbul *Rubigula erythrophthalmos*
14. Cinereous Bulbul *Hemixos cinereus*
15. Buff-vented Bulbul *Iole crypta*
16. Black-headed Bulbul *Brachypodius atriceps*
17. Scaly-breasted Bulbul *Rubigula squamata*
18. Hairy-backed Bulbul *Tricholestes criniger*
19. Yellow-vented Flowerpecker *Dicaeum chrysorrheum*
20. Crimson-breasted Flowerpecker *Prionochilus percussus*
21. Orange-bellied Flowerpecker *Dicaeum trigonostigma*



Plate 2: Male Greater Green Leafbird feeding on *Sarcotheca monophylla* fruit

The fruit is a bit large for the Yellow-vented Flowerpeckers but they will hold it up to get the juice and whittle away at the flesh. The Orange-bellied and Crimson-breasted Flowerpeckers will take pieces of the fruit. Asian Fairy Bluebirds and Leafbirds are very common at this fruiting tree. Squirrels will also feed on the fruit.



Plate 3: Yellow-vented Flowerpecker (left) and Red-throated Barbet feeding on *Sarcotheca monophylla* fruit

The tree is under appreciated as an important bird food source and, being an endemic forest tree, should be considered to be planted in our many forest reserves and nature parks in Peninsular Malaysia. Unlike the *Ficus* trees that fruit once or twice a year, *Sarcotheca monophylla* fruits often and hence can attract birds to parks. For those unfamiliar with the tree, and would like to gain some experience with them, quite a number can be found at the Taman Eko Rimba Kledang Saiong, Ipoh, Perak. I would encourage some of us to consider doing an extensive study on the tree to identify locations where they are found and a more comprehensive account of birds that feed on it.

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Citation: Amar-Singh HSS. (2024). Bird Tree Series: Belimbing Pipit *Sarcotheca monophylla*. *Malaysian Bird Report*. Volume 1/2024, March 2024: pg. 80-82.

Tips & Tools to Aid Birdwatching & Bird Photography Series: Useful Websites for Bird and Prey Identification

Shorebirds Malaysia

<https://shorebirds.my/>



The *Shorebirds Malaysia* website was launched on 27 January 2024 together with a celebration of World Wetlands Day and the unveiling of interpretive signboards at Teluk Air Tawar-Kuala Muda (TAT-KM) Coast, Key Biodiversity Area by the Shorebirds Peninsular Malaysia Project (SPMP).

Shorebirds Malaysia aims to provide a reference platform for Malaysia's 70 shorebird species and serve as a valuable resource for researchers, conservationists, and enthusiasts. It hopes to raise awareness and understanding of the vital role these birds play in the ecosystem and to advance the cause of shorebird conservation and protection of their habitats within Malaysia and along the East Asian Australasian Flyway.

Shorebirds are not the easiest to identify, especially plovers, sandpipers and snipe, when on migration in non-breeding plumage. The *Shorebirds Malaysia* website has excellent descriptions of shorebird families and species (some still under construction). See the example in the image. There are video guides to understand shorebird topography and more video guides on moult are in the pipeline.

Common Redshank



The website is a work in progress and will be updated from time to time. Please drop by regularly to check for the latest information. The team welcome comments on the usability, information, and other relevant topics that can improve the website for everyone. You can contact them at shorebirds.pm@gmail.com and follow their media social <https://www.facebook.com/shorebirdspeninsularmalaysia>.

Shorebirds Malaysia website is managed by a group of researchers and volunteers comprising Nur Munira Azman, Mohd Nasir Azizan, Nurul Salmi Abd Latip, Aini Hasanah Abd Mutalib, and Dave Bakewell. The establishment of the website is supported by Canon Malaysia.

Ecology Asia

<https://www.ecologyasia.com/index.htm>

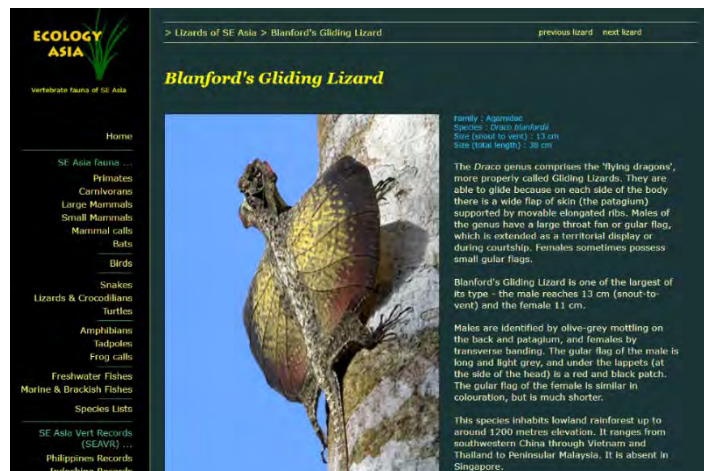
Ecology Asia is a common 'go-to' website for many birdwatchers to identify prey that birds have taken or to identify animals they encounter while in the field. The website, a personal endeavour of Nick Baker, has been online since 2000. The site features over 1000 species of vertebrate, including reptiles, amphibians, birds, mammals and fishes.



The layout is simple, and easy to view and navigate on smartphones, tablets or desktop computer; there are no complicated menu systems to navigate, and as a result web pages download quickly. The site is best described as 'easy-viewing'.

Ecology Asia has a section on birds, which slowly expands with the addition of new images taken by Nick as he comes across species that are new to him. This section is dedicated to the late Charles Currin (credited for ~20% of the species on the site) with whom Nick corresponded during the 2-year covid pandemic. The value of the birds section is in the preference for images of birds deep in their habitat tangle, rather than 'birds on sticks'.

However, the real strength of Ecology Asia lies in its comprehensive coverage of mammals (including bats), reptiles, amphibians and fishes (freshwater and intertidal), particularly in the Malay Peninsula. Birds such as barbets and kingfishers often take protein-rich reptile prey to feed their growing chicks. The site has an excellent account of small diurnal reptiles including skinks (which may be ground-dwelling or arboreal) and agamids (which are mainly arboreal).



The agamids include the gliding lizards (*Draco* spp.), of which 11 species occur in Peninsular Malaysia, with additional species in Sabah/Sarawak. See example in the image.

The site also helps with the identification of diurnal mammals which might visit fruiting trees where birds (and bird watchers/photographers) are active. For example, there are 11 species of diurnal primate in Peninsular Malaysia, and 15 species of squirrel; all are well covered in the website.

Though simple in its traditional layout, this website is packed full of useful information and is clearly a 'labour of love' for Nick Baker, who you may cross paths with while birding in the forests around Ipoh, Taiping and Penang.

**Birds in Art and Culture Series:
Featuring bird artist Yeow Teck Chai**

How and why did you become interested in birds? Any interesting anecdotes?

Birds and their melodious calls have always intrigued me. It was these same lyrical bird songs that drew me, a young carefree boy, to explore the jungles around my hometown Kuantan in pursuit of the source of these melodies. As my intrigue grew, I learnt to mimic different bird calls, teasing them to respond.

I kept a Common Myna as a pet and lured Spotted Doves and Zebra Doves into cages, training them to call on command in the hopes of attracting more of their own kind. Once, I visited a place with many caged Spotted Doves and made a fighting call. All the male doves got excited and started making fighting calls back, surprising the owner with my ability to communicate with his birds.



Great Hornbill © Yeow Teck Chai

Tell us how you became involved in and developed as a bird artist and came to publish a bird book. Did you receive any formal training in drawing and art? What art medium do you use?

As an artist who enjoys painting various subjects, including birds, I was looking for my next fundraising project after holding art exhibitions in 2018 and 2019. Inspired by birder Dr. Samuel Ong's stunning photos of Malaysian birds, I realised the beauty of our local wildlife and decided to transform these photographs into paintings. Despite finding many bird books, none focused exclusively on painted birds with stories behind them.

So, I planned to create a watercolour book featuring Malaysian birds in their natural habitats and hold an exhibition to sell the paintings and books together. However, the Covid pandemic halted my plans for an exhibition. With charities struggling to raise funds, I chose to proceed with painting and published the book knowing we could sell the book without an exhibition.

I'm mostly self-taught in art, with my main mediums being watercolour and ink, and only had art classes in school.

What makes you choose a particular bird or species group to draw? Where do you find your inspiration?

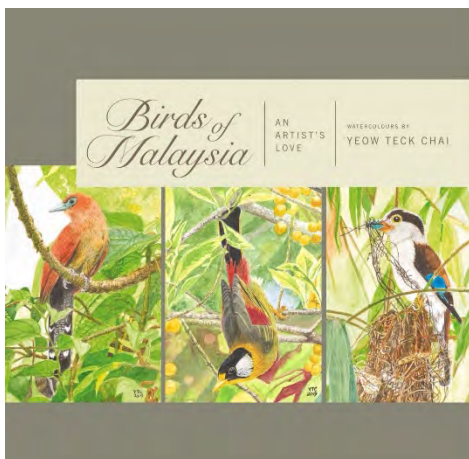
I paint birds of all kinds without focusing on specific groups, inspired by the beauty and intrigue of their photos, aiming to capture them in watercolour with their natural habitats as backgrounds.



Grey-headed Swamphehen © Yeow Teck Chai

How long does it typically take you on one art work of a bird species? Any tips for artists who are just starting to draw birds or have a desire to become a bird artist or a book illustrator?

Depending on the intricacies of the subject matter and size of painting, it can take me from one day to a week to complete the painting. For those new to bird painting, enjoying birds is crucial for finding inspiration. Being skilled isn't necessary to start; what matters is how you interpret a bird's image, whether in an impressionistic or realistic style like mine. Practice is key. With time, you'll develop your unique style, possibly becoming a bird artist or illustrator.



You have given 80% of the proceeds of your book "Birds of Malaysia" to two charities. Could you tell a little more about this and why you did it?

Painting is my hobby, and I've always wanted to use it to support good causes. This led me to seriously pursue painting to raise funds for charities through sales of my artwork and books. I could have taken the easy way out by just donating to the charities but I thought my donation has limited impact and why not use this talent that God has given me to generate a greater source of income for the charities. This move not only provided me the inspiration to paint but also gives me the satisfaction of being able to contribute back to society.

We notice that you have published a new art book on children with your daughter "Let Our Children Dream". Could you tell us more about this and what you plan to do next?

After publishing and selling "Birds of Malaysia," I planned to work on a project about my childhood in Kuantan. However, the concept evolved to focus on children and their dreams. My daughter Charlotte, who was instrumental in my bird book's publication, took on the writing and editing for 'Let Our Children Dream'. This 100+ page hardcover features over 70 original watercolour prints of children. It is an homage to the freedom of childhood and explores the journey of growing up, questioning whether children's dreams are truly their own or influenced by their surroundings and circumstances. It also addresses the challenges some children face in achieving their dreams and highlights societal inequalities, urging awareness and action towards bridging these gaps.



We would be happy to receive more information that you deem relevant and interesting.

Painting, just like birding as a hobby, is a very relaxing and gratifying activity. I would like to encourage birders to try taking up painting and painting birds that they have photographed. It is also my hope that birders will be able to find ways to utilise their hobby to raise funds for charities.



Citation: Birds in Art and Culture Series (2024): Featuring bird artist Yeow Teck Chai. *Malaysian Bird Report*. Volume 1/2024, March 2024: pg. 86-88.

Recent Publications & Research

Food items of Oriental Pied Hornbills *Anthracoceros albirostris* discovered from their faeces indicate their adaptability and potential human interaction in Datai, Langkawi
Teik-Yuan Soo, Ravinder Kaur & Felicia Chung

Summary Report:

Observations were conducted at Teluk Datai, Langkawi, Malaysia in 2023. The main aim of staying around Teluk Datai area for two weeks was to collect Oriental Pied hornbill's (OPH) *Anthracoceros albirostris* faeces in addition to observing their behaviour. The period of observation was within the post-breeding season of the OPH.

The study site was nestled within a rainforest where animals seem to be already habituated to the presence of humans. The team observed animals such as the Monitor Lizard, Dusky Langur, OPH, Greater Flameback *Chrysocolaptes guttacristatus*, and others could move as close as two meters to human beings. Hence, several resting spots for the OPH to perch were easily located just within the study site instead of venturing deep into the forest.

We found two locations with faeces and eaten fruit on leaves or the pathways. Through the two weeks, a total of six samples were collected; four wet samples and two dry samples (Plate 1).



Plate 1: An example of OPH faeces in wet (left) or fresh and dry (right) conditions

During the field study period, not many observations were observed in terms of adult OPHs feeding their juveniles. One foraging behaviour observed was OPHs eating the fruit of the Fishtail Palm *Caryota mitis*. On the other hand, from shotgun sequencing carried out on faecal samples, a method that unbiasedly sequences all DNA found in samples, we found that during nonbreeding season, they consume more plants instead of small animals (such as insects, reptiles, amphibians or other birds). The two most popular plant families found in faecal samples were of Moraceae (fig family) and Malvaceae (non-fig family). Some insects, such as aphids and fig wasps, were also detected, but they may have been accidentally consumed when the OPHs were feeding on the fruits from the plants. Interestingly, common foods eaten by humans such as rice, wild grape, white mulberry, wheat, and white yam were also detected from their faeces. This indicates that OPH might be consuming food from the garbage dump with food waste or from hand feeding; the former circumstance being more likely.

By knowing the diet or favourite food of animals, not limited to OPH, conservation and replantation of those specific trees may facilitate the population growth with abundant food sources. These valuable findings could be used by the forestry department and wildlife conservation teams, or serve as feeding guidelines for captive breeding programmes by zoos. This method to understand the OPH diet may be useful for other genus such as the more endangered species such as Helmeted Hornbills *Buceros vigil*, Wrinkled Hornbills *Rhabdotorrhinus corrugatus* and others.

Special thanks to Sunway University, Datai Langkawi's Nature Center and PERHILITAN [Permit number JPHLTN.600-6/1/4 JLD 3 (04)].

Citation: Teik-Yuan Soo, Ravinder Kaur & Felicia Chung. (2024). Food items of Oriental Pied Hornbills *Anthracoceros albirostris* discovered from their faeces indicate their adaptability and potential human interaction in Datai, Langkawi. *Malaysian Bird Report*. Volume 1/2024, March 2024: pg. 89-90.

Recent Taxonomic Changes of Birds in Malaysia (Part II: Passerines)

Jing-Yi Tou

Introduction

As Part I focused on the taxonomical changes for non-passerines, this article will now focus on the taxonomical changes for passerines that happened after the publication of the official checklist for birds of Malaysia (MNS Bird Conservation Council, 2021). The discussion is mainly focusing on the taxonomical placement of recent updates on Clements Checklists of the Birds of the World (Clements *et al.*, 2019, 2021, 2022, 2023).

Western Hooded Pitta *Pitta sordida*

The Hooded Pitta *P. sordida* was split into five different species in the latest 2023 Clements update, following the treatment of Birdlife/HBW. The Malaysian species is the most widespread of the five. The other four species are endemic to their respective regions, otherwise they are difficult to be distinguished visually.

White-browed Shrike-Babbler *Pteruthius aeralatus*

Blyth's Shrike-Babbler *P. aeralatus* was reunited back with Himalayan Shrike-Babbler *P. ripleyi* and Dalat Shrike-Babbler *P. annamensis* as White-browed Shrike-Babbler in the 2022 Clements update, as the previous split was based mainly on vocal differences which was proven to be not as consistently different.

Dark-throated Oriole *Oriolus xanthonotus* and Ventriloquial Oriole *O. consobrinus*

The Ventriloquial Oriole from northeast Borneo was recently split from the Dark-throated Oriole in the 2023 Clements update. The Ventriloquial Oriole has a different call, larger, generally greener and has a larger spot in the tail in the males. The females have a stronger contrast between the dark grey-green crown and bright olive back.

Black-and-crimson Oriole *O. consanguineus*

The scientific name of the Black-and-crimson Oriole was revised in the 2023 Clements update to *O. consanguineus* when the Javan Oriole *O. cruentus* was split off from it.

Pallas's Grasshopper Warbler *Helopsaltes certhiola* and Middendorff's Grasshopper Warbler *H. ochotensis*

It was found that some previous members of genus *Locustella* belongs to a diverged group and therefore these members were reassigned to new genus *Helopsaltes* in the 2021 Clements update.

Grey-cheeked Bulbul *Alophoixus tephrogenys*

The Grey-cheeked Bulbul *A. bres* is split into two in the 2021 Clements update, in which our species kept the English name but received a new scientific name.

Ochraceous Bulbul *A. ochraceus* and Penan Bulbul *A. ruficrissus*

The Ochraceous Bulbul is split into two, where the Bornean population is now considered as a distinct species, the Penan Bulbul, since the 2021 Clements update. Besides the separated distribution range, the Penan Bulbul has a little more reddish tinged with a deep rufous vent.

Finsch's Bulbul *Iole finschii*

Following IOC's earlier treatment, Clements finally moved the species from genus *Alophoixus* to *Iole* in the 2023 update.

Puff-backed Bulbul *Microtarsus eutilotus* and Black-and-white Bulbul *M. melanoleucos*

Reassigned from *Brachypodius* in 2023

Black-headed Bulbul *Microtarsus melanocephalos*

The specific name is updated from *Brachypodius atriceps* in the 2021 update. Moved to *Microtarsus* in the 2023 update.

Pale-faced Bulbul *Pycnonotus leucops*

This Bornean endemic is finally accepted as a split from Flavescent Bulbul *P. flavesceus* in the 2023 update.

Aberrant Bush Warbler *Horornis flavolivaceus*

The Sunda Bush Warbler *H. f. vulcanius* was long considered as a distinct species. However, recent studies suggested that it probably wasn't that distinctive and is now lumped into Aberrant Bush Warbler in the Clements 2022 update.

Chestnut-crested Yuhina *Staphida everetti*

The genus *Yuhina* is not monophyletic and therefore split into three genera, with our only member being assigned to genus *Staphida* in the 2021 update.

Pygmy White-eye *Heleia squamifrons*

This species was found to be part of genus *Heleia* instead of its own monotypic genus *Ochulocincta* and was moved to *Heleia* in the 2021 Clements update.

Mountain Black-eye *Zosterops emiliae*

Genetic evidence showed that the Mountain Black-eye is part of genus *Zosterops* instead of a genus of its own, *Chlorocharis*. In the 2021 Clements update, it was merged into genus *Zosterops*.

Swinhoe's White-eye *Z. simplex*

The white-eyes are a huge group of very similar looking birds that was found to have a rather erroneous placement for a very long time. Although the major revision and update occurred in the 2019 Clements update and therefore is the taxonomical placement used in the 2020 Malaysian checklist, a good number of birdwatchers are still confused with this confusing update, that wasn't a straightforward split or merge case, and is therefore included here as a special inclusion. The commonest white-eye in coastal areas and some lowland areas in

Malaysia was previously considered to be the Oriental White-eye *Z. palpebrosus*, subspecies *auriventer*. Genetic studies revealed that many of the placement of subspecies in the Asian white-eyes were wrong. The nominated group of Oriental White-eye is then split off as the Indian White-eye *Z. palpebrosus*. The remaining subspecies was not split as a species of its own, in fact, it was found to be associated with the Asian mainland population of the then Japanese White-eye *Z. japonicus*. These Asian mainland subspecies that were taken off the original Oriental and Japanese White-eyes now form their own species, the Swinhoe's White-eye. The local subspecies is also updated to *erwini* when the southern Myanmar population of *auriventer* was not only distinct from the rest of the population that were originally assigned to *auriventer* which distributes along coastal areas of the Malay Peninsula, Natuna and Bangka islands as well as western Borneo, but was also not even the same species, and should belong with the next species, the Hume's White-eye. The subspecies *simplex* is a common cagebird that is also traded in Malaysia and is sometimes released into the wild as an escapee although no populations were known to have established itself; these were previously known as Japanese White-eye *Z. j. simplex* and should be treated as merely a foreign subspecies of the Swinhoe's White-eye today.

Hume's White-eye *Z. auriventer*

The lowland and highland forest species of white-eye in Peninsular Malaysia, the only other white-eye species besides Swinhoe's White-eye (originally Oriental White-eye) was previously assigned under Everett's White-eye *Z. everetti*. The southern Philippine subspecies of the Everett's White-eye was found to be distinct from the Sunda subspecies and therefore the species is split into two, with the Philippine form keeping the English and scientific name. The Sunda population, that is now named as Hume's White-eye should therefore pick the oldest subspecies name *tahanensis* as the new specific name. However, it was found that the original population of subspecies *auriventer* that was originally assigned to Oriental White-eye which includes the current subspecies *erwini* of the new Swinhoe's White-eye actually belonged here instead and the subspecies name was older than *tahanensis*. Therefore, the new species name is *Z. auriventer* and care should be taken not to confuse it with the use of *Z. palpebrosus auriventer* that is equivalent to *Z. simplex erwini* today in the broader sense.

Chestnut-winged Babbler *Cyanoderma erythropterum* and Gray-hooded Babbler *C. bicolor*

The Chestnut-winged Babbler that was accepted earlier by Birdlife/HBW in the 2022 Clements update as the subspecies *bicolor* and *rufum* from Borneo was split off as the Gray-hooded Babbler. The Gray-hooded Babbler is endemic to Borneo and has a fully dark grey head to the breast, that forms like a hood, compared to the Chestnut-winged Babbler in the peninsular that has a brown cap and pale grey on the face and less extensive into the breast.

Black Laughingthrush *Melanocichla lugubris* and Bare-headed Laughingthrush *M. calva*

Laughingthrushes were collected under genus *Garrulax* in the past. While most local laughingthrushes were split into different genera over the years, this pair was kept in the original *Garrulax* until 2021. The 2021 Clements update moved the species pair to genus *Melanocichla* when it was found that this pair of laughingthrushes were not even members of

Leiothrichidae, where other laughingthrushes were placed in. Therefore, the new genus name was given as the species pair was moved to Timaliidae.

Sunda Scimitar-Babbler *Pomatorhinus bornensis*

The Chestnut-backed Scimitar-Babbler *P. montanus* was split into two in the 2022 Clements update. The original nominated group was now the Javan Scimitar-Babbler which only occurs on Java and Bali.

Large Scimitar-Babbler *Erythrogenys hypoleucos*

The genus name was changed from *Megapomatorhinus* to *Erythrogenys* in the 2021 Clements update for being found to be a junior synonym.

Malayan Black-capped Babbler *Pellorneum nigrocapitatum* and Bornean Black-capped Babbler *P. capistratoides*

The Black-capped Babbler *P. capistratum* was split into three species in the 2023 Clements update where the Javan Black-capped Babbler retained the original scientific name. In Malaysia, the Malayan Black-capped Babbler occurs in the peninsular where it has a greyish face, whereas the Bornean Black-capped Babbler is endemic to Borneo has a blackish face so the white supercilium stands out.

Abbott's Babbler *Malacocincla abbotti* and Horsfield's Babbler *M. sepiaria*

Genetic research showed that many members were wrongly placed in *Turdinus*, therefore these two species were moved back to an older treatment of genus *Malacocincla* in the 2021 Clements update.

Mountain Wren-Babbler *Gypsophila crassa* and Streaked Wren-Babbler *G. brevicaudata*

Genetic research showed that these two species were not supposed to be in *Turdinus* and thus moved to genus *Gypsophila* in the 2021 Clements update.

Chestnut-capped Laughingthrush *Pterorhinus mitratus* and Chestnut-hooded Laughingthrush *P. treacheri*

Genetic data suggested that genus *Ianthocincla* should represent two genera and both the Malaysian members were moved to the new genus, *Pterorhinus*, in the 2021 Clements update.

Siamese Pied Starling *Gracupica floweri*

The Asian Pied Starling *G. contra* was split into three species in the 2022 update. Siamese Pied Starling that occurs in Malaysia has a whitish forehead streaked blackish compared to the other two that has black foreheads. Both the naturally occurring and introduced birds in Malaysia were only known to be Siamese Pied Starlings.

Vinous-breasted Myna *Acridotheres leucocephalus*

The Vinous-breasted Myna *A. burmanicus* was split into two species in the 2022 Clements update where the original nominated form is now split as the Burmese Myna. Compared to the Burmese Myna, the Vinous-breasted Myna has a yellowish bill instead of a red one, a darker grey upperpart and paler underparts.

White-rumped Shama *Copsychus malabaricus* and White-crowned Shama *C. stricklandii*

The White-crowned Shama in northeast Borneo has a distinctive white crown and was often considered a distinct species, but Clements remained to treat it as a subspecies of the White-rumped Shama until 2022 when the split is finally accepted.

White-tailed Flycatcher *Leucoptilon concretum*

This flycatcher was traditionally placed in genus *Cyornis* together with other mainly blue flycatchers, but this species was reassigned to monotypic genus *Leucoptilon* in the latest 2023 Clements update with the major revision on taxonomy and relationship between bluish flycatchers and their non-bluish relatives, as this species is not as related to the rest of the species in *Cyornis* (Garg *et al.*, 2024).

Hill Blue Flycatcher *Cyornis whitei* and Dayak Blue Flycatcher *C. montanus*

The Hill Blue Flycatcher *C. banyumas* was split into three in the 2021 Clements update with the original nominated form, now the Javan Blue Flycatcher. The other two occurs in Malaysia with the one in Peninsular Malaysia retaining the original English name and the one endemic to Borneo named as the Dayak Blue Flycatcher.

Bornean Shortwing *Brachypteryx erythrogyna*

The White-browed Shortwing *B. montana* was split into five different species in the 2022 Clements update, based on genetic data. The only form to occur in Malaysia is the Bornean Shortwing, which is endemic to Borneo.

White-crowned Forktail *Enicurus leschenaultia* and Bornean Forktail *E. borneensis*

The White-crowned Forktail was split into two species in the 2022 Clements update. The Bornean Forktail is an endemic species in the Bornean highlands and shows a smaller white patch on the forehead compared to the widespread White-crowned Forktail that is mainly found in lower elevations, especially in Borneo.

Amur Stonechat *Saxicola stejnegeri*

The Siberian Stonechat *S. maurus* was split into two with the eastern populations that migrate to Malaysia now being known as the Amur Stonechat in the 2021 Clements update. It is not easy to differentiate the two visually where their main differences were known to be the slightly broader bill and slightly less white on the rump in the Amur Stonechat. It is worth noting that the *przewalskii* subspecies of the Siberian Stonechat is a resident in parts of Indochina and might be the easier subspecies to tell apart if it strays into Malaysia, with its darker rufous chestnut on the underparts extending to the belly instead of just on the breast area for the breeding males.

Spectacled Flowerpecker *Dicaeum dayakorum*

Resident birds were relatively well studied in Malaysia, with barely any new discovery of any previously not described species in the region for decades. In 2009, sightings and photographs of a mysterious flowerpecker in Sabah sparked some interest that we might have found a new undescribed species. The species remained a speculation, as a specimen was not studied to confirm that it was indeed a species of its own, or that it wasn't an aberrant plumage of a

known species, and its taxonomical placement was not confirmed. The first specimen was only caught in 2019, 10 years after its first discovery which allowed it to be finally confirmed genetically as a new species in genus *Dicaeum* (Saucier *et al.*, 2019). Since Clements missed the 2020 update, the species was only added in the 2021 update, and therefore the species was not included in the national checklist published in 2020.

Ornate Sunbird *Cinnyris ornatus*

Olive-backed Sunbird *C. jugularis* was split into eight different species in the 2023 Clements update. The species in the Asian mainland and the Sunda region including Malaysia is now renamed as the Ornate Sunbird.

Blue-winged Leafbird *Chloropsis moluccensis*

The Blue-winged Leafbird *C. cochinchinensis* was split into two species in the 2023 Clements update where the original nominated form, the Javan Leafbird inherited the original scientific name.

Java Sparrow *Padda oryzivora*

Closely related to munias but appeared larger, they were moved to genus *Lonchura* and away from it by different authors in the recent years. The Clements 2021 updated resurrected genus *Padda* and moved it back there.

POTENTIAL FUTURE CHANGES

Just like Part 1, many taxonomic updates were also accepted or proposed for passerines. Eaton *et al.* (2021) included a good number of potential splits/merges proposals.

Banded Broadbill *Eurylaimus harterti*

The Javan Broadbill *E. javanicus* was considered as a distinct species by Birdlife/HBW and therefore after the split, the widespread species will have an update in the scientific name. The Javan Broadbill has a yellow instead of blue iris and is endemic to Java.

Sunda Gerygone *Gerygone sulphurea*

The Golden-bellied Gerygone is sometimes proposed to be split into three species based on the differences of their vocalizations. The Malaysian form would be renamed as Sunda Gerygone after the split.

Roving Cuckooshrike *Coracina (striata) sumatrensis*

The Bar-bellied Cuckooshrike is sometimes proposed to be treated as multiple species, supported by morphological differences and some genetic data that supports the treatment.

Malayan Triller *Lalage (nigra) striga*

The genetic data shows a deep mtDNA divergence between subspecies *nigra* and *striga* of the Pied Triller, recommending that the Malayan Triller should be split from it. The Malayan Triller occurs in Peninsular Malaysia. After the split, the Pied Triller occurs in Borneo, separated by

range from the Malayan Triller, that is otherwise difficult to tell apart for the males. The females are greyer instead of brown in Pied Triller.

Sunda Golden Oriole *Oriolus (chinensis) maculatus*, Chinese Golden Oriole *O. (chinensis) diffusus* and Philippine Golden Oriole *O. chinensis*

The Black-naped Oriole is now a familiar bird in Peninsular Malaysia, but for many years, it was shown to include at least three different species, where the mainland subspecies *diffusus* was considered most distinct from the Sundaic and Philippine forms. The split wasn't accepted yet because the assignment of subspecies between the Sundaic and Philippine groups were not resolved. Instead of only 2 species in the South East Asian islands, it is now believed that there were probably up to seven species in these islands. If split, Malaysia would include three of them. The Sunda Golden Oriole is the common resident throughout Peninsular Malaysia. The Chinese Golden Oriole is a scarce to uncommon migrant in the peninsular, separated by largely yellowish tertials, and white breasts in the juveniles. The Philippine Golden Oriole was photographed in Sabah at least, as a vagrant, and shows a more solid and completely black wings, along with thicker black napes.

Malayan Black-and-crimson Oriole *O. (consanguineus) malayanus* and Whitehead's Oriole *O. (consanguineus) vulneratus*

The Black-and-crimson Oriole is sometimes proposed to be further split into three species, where two of them occurred in Malaysia, where the Malayan Black-and-crimson Oriole occurs in Peninsular Malaysia and the Whitehead's Oriole in Borneo. The Whitehead's Oriole showed a larger crimson patch on the wings.

Bornean Spangled Drongo *Dicrurus (hottentottus) borneensis*

The Hair-crested Drongo has a wide range, with a few subspecies mainly distributed on different islands, and is often proposed to be split into eight different species according to distribution. The Bornean endemic is proposed to be split as the Bornean Spangled Drongo. The mainland Asian population, remained to be known as Hair-crested Drongo *D. hottentottus* after the split, was recorded in Singapore once on 26 Nov 2019, thus showing possibility of this species to have migrated over Peninsular Malaysia at least once.

Bornean Black Magpie *Platysmurus (leucopterus) aterrimus*

The Black Magpie was accepted by IOC and HBW/Birdlife as two species but was surprisingly not accepted by Clements yet. The Bornean Black Magpie is endemic to Borneo, separated in distribution from the renamed Malayan Black Magpie *P. leucopterus* in Peninsular Malaysia, and it lacks the white wing band, appearing completely black.

Sunda Crow *Corvus enca*

The Slender-billed Crow is sometimes treated as the Sunda Crow, with the Sulawesi Crow *C. celebensis* being considered as a distinct species.

Double Zitting Cisticola *Cisticola (juncidis) tinnabulans*

The eastern subspecies of the Zitting Cisticola *C. juncidis* which includes *malaya* in Malaysia that gives a double zit call is sometimes considered as a possible split from other subspecies of this widespread species.

Pacific Swallow *Hirundo (tahitica) javanica*

Birdlife/HBW accepted the split of the Pacific Swallow from *H. tahitica* which the nominated form there was split as the Tahiti Swallow, primarily based on ecological and plumage differences.

Pink-billed Bulbul *Tricholestes (criniger) sp.*

The Sabah population of the Hairy-backed Bulbul was never described as a subspecies, but the genetic data indicate that it is probably rather distinctive and could potentially be an undescribed species by itself. It also shows a distinct pink bill compared to a dark horn-grey bill in the rest of the range of the Hairy-backed Bulbul.

Bornean Yellow-bellied Bulbul *Alophoixus (phaeocephalus) sulphuratus*

The Bornean subspecies is sometimes proposed to be split off from the Yellow-bellied Bulbul due to presence of genetic data that suggested separation of the nominated form and the subspecies in Borneo, separated by range from the Malayan Yellow-bellied Bulbul *A. phaeocephalus*.

Baker's Bulbul *Iole (viridescens) cinnamomeiventris*

Discovered in Perlis in recent years, this close relative of the Buff-vented Bulbul *I. crypta* has an extremely confusing taxonomic placement. Clements considered it to be a subspecies of the Olive Bulbul *I. viridescens* but Birdlife/HBW treated it as a subspecies of the Gray-eyed Bulbul *I. propinqua* instead. Furthermore, the subspecies has been proposed to be a monotypic species of its own, probably best method to resolve the current taxonomic confusion for it.

Green-winged Bulbul *Hemixos (cinereus) connectens*

The Bornean population of the Cinereous Bulbul was treated by Birdlife/HBW as a distinct species, besides the separated distribution range, it shows a distinctive bright olive green wings and tail compared to the Cinereous Bulbul in Peninsular Malaysia.

Sunda Yellow-vented Bulbul *Pycnonotus (goiavier) analis*

The Philippine Yellow-vented Bulbul *P. goiavier* which is the current nominated group in Yellow-vented Bulbul is sometimes proposed to be treated as a distinct species from the Sunda Yellow-vented Bulbul based on genetic and vocalization differences.

Sunda Warbler *Phylloscopus grammiceps*

The Yellow-breasted Warbler *P. montis* shows nearly identical mtDNA and territorial song with the Sunda Warbler. Despite the different plumage due to the yellow underparts, it was believed to be not that genetically different from the Sunda Warblers with white underparts and therefore with more supporting genetic data, Yellow-breasted Warbler might be lumped into Sunda Warbler in the future.

Orchid White-eye *Zosterops (atricapilla) clarus*

Black-capped White-eye is distributed on Sumatra and Borneo, but preliminary genomic evidence showed that the Bornean population might not be as closely related with the Sumatran population, and they might not be each other's closely related species. The Bornean subspecies is proposed to be split as Orchid White-eye and shows pale grey iris.

Malayan Montane Babbler *Stachyris (poliocephala) larvata* and Bornean Montane Babbler *S. (poliocephala) borneensis*

Gray-throated Babbler shows four deep lineages in the genomic data which are likely different species. The Bornean Montane Babbler in Borneo lacks breast flecking and have a darker crown than Malayan Montane Babbler in Peninsular Malaysia.

Malayan Moustached Babbler *Malacopterin magnirostre* and Bornean Moustached Babbler *M. cinereocapilla*

Moustached Babbler shows considerable vocal and plumage differences between the two subspecies, showing possibility that it represents two different species. The Bornean Moustached Babbler in Borneo shows a dark crown and darker breast than the Malayan Moustached Babbler in Peninsular Malaysia.

Mourning Babbler *Pellorneum malaccense*, Glissando Babbler *P. (malaccense) saturatum* and Leaflietter Babbler *P. poliogene*

Short-tailed Babbler is proposed to be split into three species because all 3 subspecies were found to have a lack of gene flow between them even for those with range contact. The Mourning Babbler is found in Peninsular Malaysia, the Glissando Babbler in the western parts of Borneo is best differentiated with its long descending glissando of 20-30 rapid notes, and the Leaflietter Babbler in the eastern parts of Borneo shares a similar series of downslurred notes with the previous two but lacks a subsequent main song. Differentiation based on plumage is rather minimal and difficult to be used in the field.

Malayan Swamp Babbler *P. rostratum* and Bornean Swamp Babbler *P. (rostratum) macropterum*

White-chested Babbler is proposed to be split into two due to genomic data showing a lack of gene flow between the two even when the land was connected. The Bornean Swamp Babbler in Borneo shows more olive tinge on the mantle and rump compared to the Malayan Swamp Babbler in Peninsular Malaysia.

Hartert's Babbler *Malacocincla (sepiaria) tardinata* and Salvadori's Babbler *M. (sepiaria) rufiventris*

Horsfield's Babbler might potentially be split into two to three species due to differences in plumage and vocalization. The Bornean form, Salvadori's Babbler has more rufous on the underparts than the Peninsular Malaysian form, Hartert's Babbler.

Austen's Wren Babbler *Napothera (epilepidota) roberti* and Whitehead's Wren Babbler *N. (epilepidota) exsul*

Eyebrowed Wren-Babbler has many subspecies and is suggested to be split into possibly as many as 6 species, but current proposal without more evidence more conservatively propose a three way split, with the Bornean birds split as Whitehead's Wren Babbler and the Peninsular Malaysian birds lumped with most subspecies as Austen's Wren Babbler temporarily until more evidence can be presented.

Sunda Fulvetta *Alcippa brunneicauda* and Bornean Fulvetta *A. (brunneicauda) eriphaea*

Brown Fulvetta Is proposed to be likely two different species due to the significant differences in vocalizations. Besides the separate range, where Sunda Fulvetta occurs in Peninsular Malaysia and Bornean Fulvetta in Borneo, they are probably difficult to be differentiated visually. The Bornean Fulvetta is described as providing a series of undulating notes compared to Sunda Fulvetta providing a series of descending notes.

Greater Sundaic Island Thrush *Turdus (poliocephalus) javanicus*

The Island Thrush has about 50 subspecies, with different appearance for almost all the subspecies, and has long been considered to likely represent several species. In Malaysia, it survives in montane areas in Sabah, which might be grouped up with other subspecies in the Sundaic region.

Umber Flycatcher *Muscicapa (williamsoni) umbrosa*

The poorly known resident race, *umbrosa*, of the Brown-streaked Flycatcher was recently discovered to also survive in Peninsular Malaysia and south Thailand instead of just Borneo. It is considerably different in plumage and shape, especially showing a rather longish tail, which makes it look different from the other *Muscicapa* species. It is believed to be likely a distinct species.

Rufous-vented Flycatcher *Eumyias (indigo) ruficrissa*

The Indigo Flycatcher was split into two based on plumage differences by Birdlife/HBW, but more evidence is required to support the split. The vent is deep rufous instead of white.

Yellow-vented Flowerpecker *Pachyglossa chrysorrhea*, and Brown-backed Flowerpecker *P. everetti*

The few members of *Dicaeum*, including the next, is sometimes considered to be split as a new genus of its own, *Pachyglossa*, as it was found to be more related to *Prionochilus* than *Dicaeum* (Saucier *et al.*, 2019).

Modest Flowerpecker *Pachyglossa (agilis) modesta*

The Thick-billed Flowerpecker *Dicaeum agile* is sometimes considered to be moved to genus *Pachyglossa*, as *P. agilis*. It is sometimes considered to be split into two, where the Southeast Asian subspecies were grouped as Modest Flowerpecker.

Lesser Crimson Sunbird *Aethopyga siparaja*

The Crimson Sunbird *A. siparaja* might be split into three species based on mtDNA divergence and plumage differences where the local nominated subspecies is raised as a distinct species, and has the dullest female.

Yellow Wagtail *Motacilla flava*

The Yellow Wagtail is popularly known to be split into two species, and often proposed to split into even more. However, the genome wide data suggested that the decision to split the species based on mtDNA data might not be correct, and there is potential to see the Eastern Yellow Wagtail *M. tschutschensis* being merged back with the Western Yellow Wagtail *M. flava* as a single species in the future.

Malay Bullfinch *Pyrrhula (nipalensis) waterstradti*

Birdlife/HBW considered the Brown Bullfinch that is endemic to Peninsular Malaysia to be a distinct species.

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Citation: Jing-Yi Tou. (2024). Recent Taxonomic Changes of Birds in Malaysia (Part II: Passerines). *Malaysian Bird Report*. Volume 1/2024, March 2024: pg. 91-101.

Research/Review Articles Relevant to Malaysia

Kim-Chye Lim

History, Annotated Gazetteer, and Bibliography of Sarawak Ornithology

Sheldon, Frederick H.; Gawain, Dency F.; Kho, Daisy G. S.; Regai, Rosalina; Shakya, Subir B. & Yeap, Chin Aik. (2023). Occasional Papers of the Museum of Natural Science, Louisiana State University: No. 92, Article 1.

Available at: <https://repository.lsu.edu/opmns/vol1/iss92/1>

An interesting paper on the history of scientific bird study in Sarawak, our largest state, yet its long heritage of ornithological research not widely known. It reviews bird research from the 1840s up to recent years and includes details of about 860 sites where birds have been collected and studied. A list of some 750 references associated with these sites is also included. Many famous names are mentioned during the early years of exploration and bird study in Sarawak e.g Wallace, Salvadori, Sharpe, Hose, Bonaparte, Whitehead and others. Excellent reference for those undertaking bird research in Sarawak and for background knowledge.

Cryptic species-level diversity in Dark-throated Oriole *Oriolus xanthonotus*

Rheindt, Frank E.; Wu, Meng Yue; Movin, Nyanasengeran & Jønsson, Knud A. (2022).

Bulletin of the British Ornithologists' Club, 142(2): 254-267

Available at: <https://doi.org/10.25226/bboc.v142i2.2022.a10>

Borneo is at least 500 km from the Asian mainland, yet despite its isolation, most of its lowland birds were traditionally as part of the more widely distributed Sundaic avifauna. However, in recent years, research have revealed that some populations of Bornean lowland species were more distinct than previously thought, with a few now upgraded to species level. The authors report that phylogenomic, bioacoustic, biometric and morphological analyses show that the Dark-throated Oriole *Oriolus xanthonotus* comprises two species-level taxa, both of which occur on Borneo. Birds from Sabah were found to be larger and had different plumage and calls compared to Sarawak birds which more similar to nominate Dark-throated Oriole. Based on the findings, the authors propose that the species from north and eastern Borneo be named Ventriloquial Oriole *O. consobrinus*, reflecting its characteristic call, with the western species retaining the name Dark-throated Oriole.

New distributional record of Asian Openbill *Anastomus oscitans* in Sumatra, Indonesia: an update to Aminuddin *et al.*

Syahrar Fathin Aminuddin, Chairunas Adha Putra, Prayitno Geonarto, Taufik Ardiansyah & Tedi Setiadi. (2022). Zoo Indonesia 2022 31(1): 76-81.

Available at:

https://www.researchgate.net/publication/364290851_New_Distributional_Record_of_Asian_Openbill_Anastomus_Oscitans_in_Sumatra_Indonesia_An_Update_to_Aminuddin_et_al_2020

The Asian Openbill population has been making rapid expansion in the region from its core range in Indochina. Its northward range extension was first recorded in China in 2006, followed by a southward expansion in 2009 into Peninsular Malaysia and then Singapore in 2013. This

article reports on the continuing expansion of Asian Openbill populations into Indonesia, with details of observations in eastern Sumatra.

Conserving migratory waterbirds and the coastal zone: the future of South-east Asia's intertidal wetlands.

Ding Li Yong, Jing Yi Kee, Pyae Phyo Aung, Anuj Jain, Chin-Aik Yeap, Nyat Jun Au, Ayuwat Jearwattananok, Kim Keang Lim, Yat-Tung Yu, Vivian W.K. Fu, Paul Insua-Cao, Yusuke Sawa, Mike Crosby, Simba Chan & Nicola J. Crockford. (2021). *Oryx* 2-22: 56(2) 176-183.

Available at: <https://doi.org/10.1017/S0030605320001374>

South-east Asia holds some of the largest area of mudflats and mangroves in the world, with habitats crucial for many migratory waterbirds using the East Asian-Australasian Flyway. These wetlands host nearly all the world population of the endangered Spoon-billed Sandpiper, Spotted Greenshank and other threatened species. However, recent studies have revealed knowledge gaps in the ecology and distribution of waterbirds and their migration connectivity to important wetlands sites, thus hindering effective conservation. Increasing human-factored threats, the undiscovered, potential sites along the region's vast coastlines and under-representation of coastal wetlands in the region's protected area network and other issues add to the conservation challenges. Long-term commitment from government and stakeholders and field-based research is needed to ensure the future well-being of South-east Asia's wetlands and its migratory waterbirds.

The endangered Brown Shrike subspecies *Lanius cristatus superciliosus* has a male-biased sex ratio and only early arriving males are paired.

Haruka Mizumura, Kohei Kubota & Hiroyoshi Higuchi (2022). *Bird Conservation International* (2022) 32:87–94.

Available at: <https://doi.org/10.1017/S0959270921000216>

Together with many long-distance migratory passerines in the East Asian-Australasian Flyway, the migratory Brown Shrike *Lanius cristatus superciliosus* has been sharply declining throughout its breeding range. In Japan, its breeding range has shrunk by more than 90% since 1910. To better understand this sharp decline, the authors compared the pairing success of Brown Shrike and the resident Bull-headed Shrike *L. b. bucephalus* over three seasons. The percentage of unpaired Brown Shrike males was about three times that of Bull-headed Shrike. Brown Shrike males arriving later in the breeding season did not pair because the population is heavily biased towards males. Factors for the shortage of females were discussed, including mortality in the wintering areas or on the migration routes but these theories need to be investigated using telemetry.

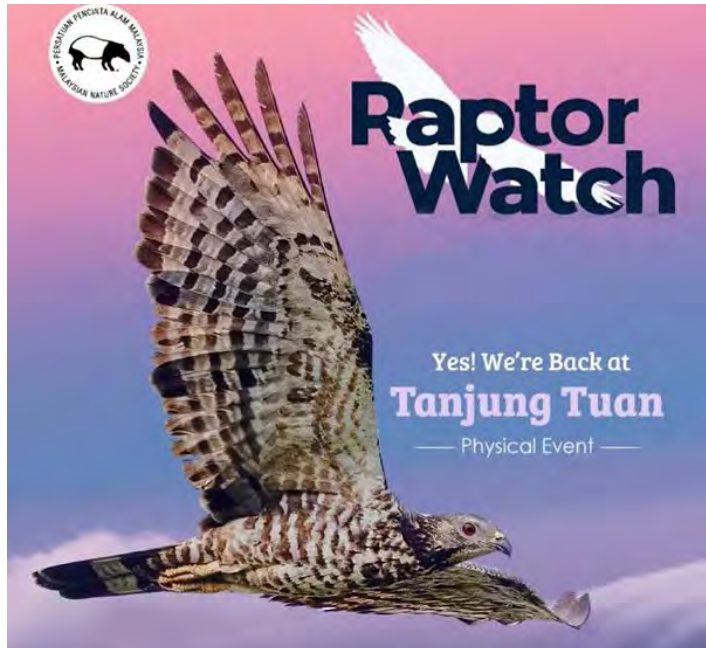
Upcoming & Recent Bird Activities

Swee-Yian Lim

Raptor Watch 09-10 March 2024, Tanjung Tuan, Melaka

Tanjung Tuan is only 20km from Port Dickson. The lighthouse of Tanjung Tuan stands at the top of a little hill in the only coastal-forest left in Melaka. Every year, from February to April, several species of raptor migrate over the Straits of Melaka from Indonesia on their homeward journey to their breeding grounds in the north. March is the peak migration season. The Malaysian Nature Society has been organising Raptor Watch at this site since 2000. The aim is to create awareness of this amazing natural phenomenon. The hope is that Tanjung Tuan coastal forest will be conserved and hence the raptors.

For more information contact the Malaysian Nature Society
<https://www.facebook.com/MalaysianNatureSociety.Official/>



Wings of KKB 2024

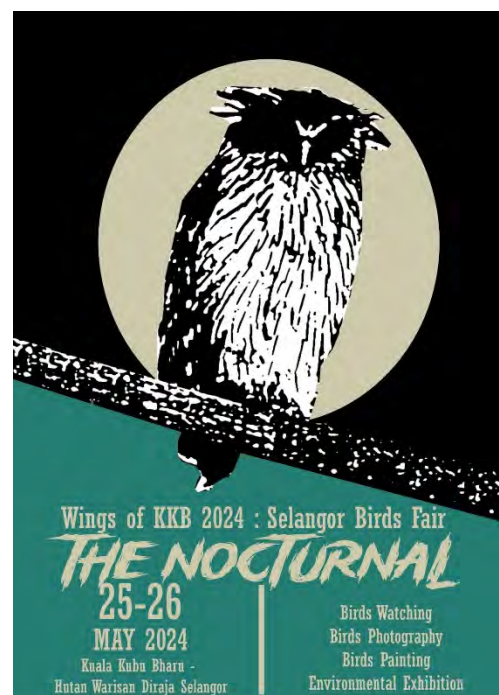
Selangor Birds Fair, 25-26 May 2024

Venue: Kuala Kubu Baru, Hutan Warisan DiRaja Selangor

Activities: Birdwatching, Bird photography, Bird painting, Environmental Exhibition

More details:

<https://www.facebook.com/WoKKBOfficial/>





Panti Bird Race 27-28 April 2024, Gunung Panti Recreational Forest, Kota Tinggi, Johor

The event will be held at the Panti Bird Sanctuary, Gunung Panti Recreational Forest, Johor on the 27 and 28 April. This event is for birdwatchers as well as bird photographers. There are 3 categories (see table below).

Categories	No. of members per team	Entry fee per pax for Malaysians (RM)	Entry fee per pax for Non-Malaysians (RM)
Novice	3	50	100
Advanced	3	50	100
Bird Photography Race	2	50	100

For enquiries please email: johorbirdrace@gmail.com

Google Form: Scan QR code or click <http://surl.li/ptjvg>

Download Form from <http://tinyurl.com/pantibirdrace2024>, fill up and email to johorbirdrace@gmail.com

More details: <https://www.facebook.com/MalaysianNatureSocietyJohor/>

Organizers:

Official Partners:

PANTI BIRD RACE JOHOR 2024

27th – 28th APRIL

**FANTASTIC PRIZES
AWAIT THE WINNERS!**

Categories:-
 Novice – 3 pax per team
 Advanced – 3 pax per team
 Photo Race – 2 pax per team
 *Malaysian : RM50 per pax
 *Non-Malaysian : RM100 per pax

Registration Option :

- 1) Google Form: Scan QR code or click <http://surl.li/ptjvg>
- 2) Download Form from <http://tinyurl.com/pantibirdrace2024>, fill up and email to johorbirdrace@gmail.com
- 3) Email us at johorbirdrace@gmail.com for copy of the Registration Form.

For further enquiries please contact:-
 Ms Belinda – 012 7080855
 Ms Norliza – 013 250 7297
 or email us at johorbirdrace@gmail.com

NOW OPEN FOR REGISTRATION!

*Enjoy Every Minute
WITH MAJESTIC JOHOR*



Fraser's Hill International Bird Race 08-09 June 2024

Venue: Fraser's Hill

Tourism Pahang No. 33 & 33A, ICT Hub (Indian Town), Jalan Putra Square 4, 25000 Kuantan, Pahang Darul Makmur.

Tel: 09-568 1623 / 1624 / 7001

Email: pahangtourism2015@gmail.com

Web: www.pahangtourism.org.my

Tourism Pahang FB: <https://www.pahangtourism.org.my/index.php/calendar-of-events/20-calendar-of-events/687-fraser-s-hill-international-bird-race-07-09-june-2024>



Report on The Great Backyard Bird Count (GBBC) 16–19 February 2024 Mark your Calendar for the Global Big Day on 11 May 2024

The Great Backyard Bird Count, organised by Cornell Lab of Ornithology (<https://www.birds.cornell.edu>) and associated organisations is a world-wide event connecting bird watchers and communities everywhere in their love of birds. This year's event, held on 16–19 February 2024 was a major success.

GBBC 2024 in a Snapshot:

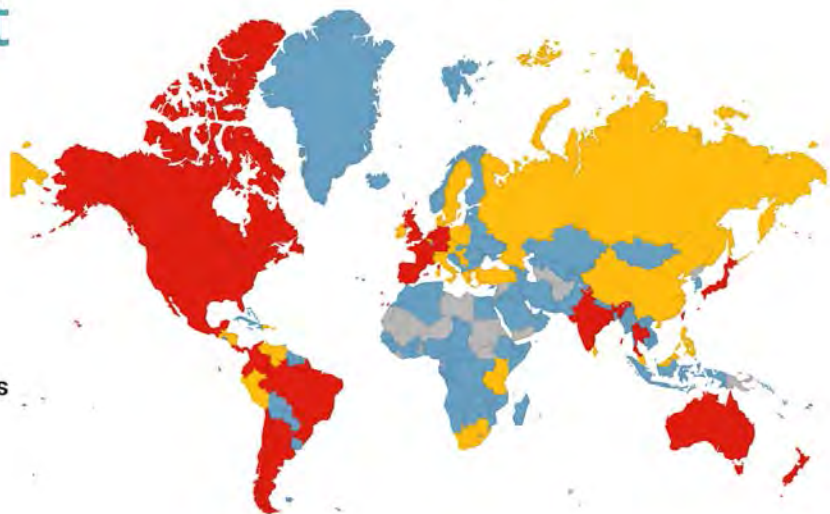
7,920 species of birds were identified globally
210 countries or subregions participated
384,416 eBird checklists were submitted
313,874 Merlin Bird IDs (step-by-step, sound, or photo)
164,740 photos, videos, and sounds were added to Macaulay Library
642,003 estimated global participants
385 reported community events organised

More details here: <https://www.birdcount.org/2024-final-results/#:~:text=7%2C920%20of%20the%20World's%20Known%20Species&text=Colombia%20took%20the%20top%20spot,was%20India%20with%201%2C039%20species!>

The Great Backyard Bird Count

Global Results

**Number of eBird Checklists
and Merlin IDs**
3. Orange/Red = > 2,000
2. Yellow = 500 - 2,000
1. Blue = 1 - 500
0. Gray = 0



For Malaysia we ranked number 19, with 5276 species observed, 371 checklists submitted to eBird (an increase of 58%) and 242 Merlin IDs (an increase of 152%) – see figure and table below. This was much better than the October Big Day 2023 where Malaysia ranked number 27 with 373 species recorded from the 133 checklists submitted.

The top regions for GBBC 2024 were Sabah, Kedah, Pahang, Selangor, Pulau Pinang and Perak. Sabah performed the best with 301 species from 74 checklists. Kedah was impressive, reporting 213 species from only 16 checklists.

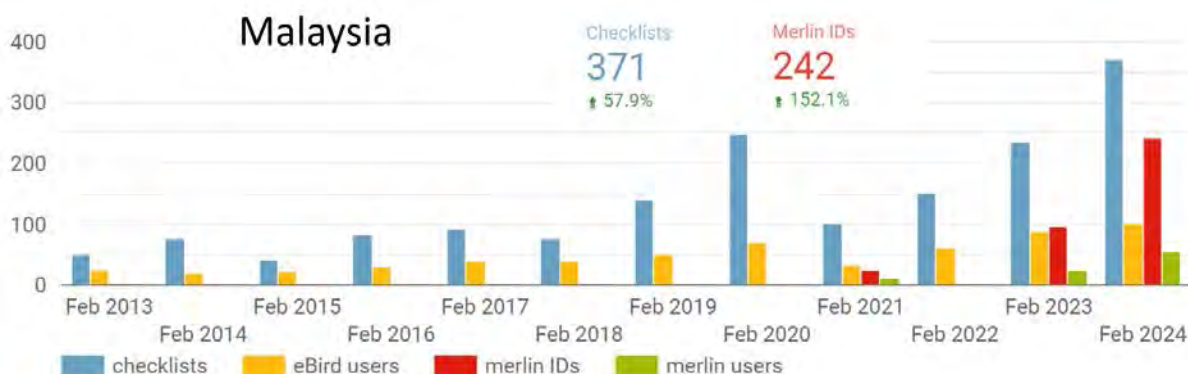


Table: Rank of bird species observed and checklist submitted by region, Malaysia

Rank	Region	Species	Checklists
1	Sabah	301	74
2	Kedah	213	16
3	Pahang	195	51
4	Selangor	175	50
5	Pulau Pinang	172	33
6	Perak	150	16
7	Sarawak	70	36
8	Johor	61	5
9	Negeri Sembilan	52	8
10	Wilayah Persekutuan Kuala Lumpur	41	8
11	Melaka	15	1
12	Kelantan	14	3
13	Wilayah Persekutuan Labuan	10	6
14	Perlis	0	0
15	Terengganu	0	0
16	Wilayah Persekutuan Putrajaya	0	0
	Total	526	371

Time to mark your calendar for the **Global Big Day on 11 May 2024** which will coincide with the spring migration of birds for Malaysia as birds return to their northern breeding grounds.

<https://ebird.org/globalbigday>



Contributions to the Malaysian Bird Report

Editorial Team, Malaysian Bird Report

The Malaysian Bird Report is intended to be an inclusive publication, one that offers a vehicle for established and young birdwatchers, and bird photographers, to share their field observations and expertise.

We welcome articles that help the birdwatching community to grow its understanding of bird behaviour, social interactions, identification, nesting, etc.

We hope to encourage all of us to go beyond capturing images and try to document and write-up our observations, especially of uncommon and unusual bird ecology, nesting behaviour, etc. The editor is committed to helping birdwatchers to write up their observations.

We welcome you to share the publication freely with all interested birdwatchers and bird photographers, as well as with the general public.

Guidelines for Submission of Articles:

1. All written contributions should be sent to the editor at: malaysianbirdreport@gmail.com using a Microsoft Word or Google Docs file. Articles submitted can be in English, Malay and Chinese. Malay and Chinese articles should contain an abstract in English.
2. Images submitted should be in JPEG (.jpg) format. As this is an electronic publication, we recommend images either 1000 pixels wide or 1000 pixels high. There should be no borders to the image. We will ensure that images submitted contain a watermark/copyright to identify the photographer; this will not obstruct the image in any way.
3. Images chosen for the cover page, back page, or other pages, to illustrate the publication, should be of higher resolution (2500 x 3500 pixels, 300dpi or higher) and not contain any watermark/copyright.
4. Copyright of images submitted will remain that of the photographer.
5. Any maps or other illustrative images should be sent as high-resolution JPEG or TIFF files.
6. Please use this reference for all bird names: MNS Bird Conservation Council. 2021. A Checklist of the Birds of Malaysia. 2020 Edition. Kuala Lumpur: Malaysian Nature Society. (MNS Conservation Publication No. 22).

We encourage collaborative work and hope that birdwatchers and bird photographers will combine observations to produce reports of interest to all of us.

We would like to thank all individuals who have contributed to the Malaysian Bird Report with articles, data, reports and images.