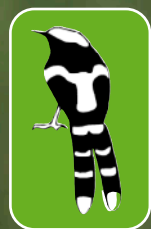


BirdingASIA

Number 36 • December 2021



The Oriental Bird Club aims to:

- encourage an interest in wild birds in Asia and their conservation
- promote the work of local bird and nature societies in the region
- support projects on the ground for research and conservation of threatened birds
- collate and publish information on Asian birds

Two issues of *BirdingASIA* and one issue of *Journal of Asian Ornithology* are published annually.



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Oriental Bird Club

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Contents



Cover image:
Bali Mynas *Leucopsar rothschildi*, Bali Barat National Park, Bali, Indonesia, November 2018, by James Eaton

- 3 BirdingASIA briefings**
- 5 Conservation Fund**
- 11 Reviews**
- 13 EDITORIAL Sangihe's forest birds under threat**
ALEX J. BERRYMAN
- 16 CONSERVATION UPDATE The impact of the COVID-19 pandemic on songbird conservation**
VICKI GUTHRIE, SOFIYA SHUKHOVA, SERENE C. L. CHNG & JESSICA G. H. LEE
- 22 IDFORUM Identification of the Narcissus Flycatcher–Yellow-rumped Flycatcher complex in subadult and female plumages**
DAVID N. BAKEWELL, PHILIP D. ROUND, AYUWAT JEARWATTANAKANOK, JAMES A. EATON, PARK JONG-GIL & YOSHIMITSU SHIGETA
- 36 LITTLE-KNOWN ASIAN BIRD Visayan Plumed-warbler *Micromacronus leytensis***
ROBERT O. HUTCHINSON
- 39 FIELD STUDY The vocalisations of two little-known Himalayan birds, Orange Bullfinch *Pyrrhula aurantiaca* and Spectacled Finch *Callacanthus burtoni*, with some field notes on diet and foraging behaviours**
ANDREW J. SPENCER & PUJA SHARMA
- 45 NOTEBOOK Evidence of a 'spring' *Stercorarius skua* passage off western Sri Lanka**
GARY ALLPORT, MODITHA HIRANYA KODIKARA ARACHCHI & LESTER PERERA
- 53 BIRDING SITES Birdwatching areas of Bangladesh**
PAUL M. THOMPSON
- 61 ID FORUM Brief remarks on the phenotypic variability of White-shouldered Triller *Lalage sueurii* in comparison to White-winged Triller *L. tricolor***
THORE KOPPETSCH & TILL TÖPFER
- 66 BIRDING AREA San Kala Khiri Proposed National Park: an important site for the conservation of Large Green-pigeon *Treron capellei* and other globally threatened species in Thailand**
INGKAYUT SA-AR, WICH'YANAN LIMPARUNGPATTHANAKUJ, PORNTHIP SUNTONSAWAT, AYUWAT JEARWATTANAKANOK, PHAYUDECT PERKHONG, KRIT ADIREK, SAKSIT KHUNNARONG, DING LI YONG & JAMES A. EATON
- 76 TAXONOMIC UPDATE Taxonomic insights on Asian birds published in 2020**
PAUL F. DONALD & NIGEL J. COLLAR
- 93 PHOTOSPOT Collared Owlet *Glaucidium brodiei* and Thick-billed Warbler *Arundinax aedon***
- 95 FIELD STUDY Field notes on the breeding behaviour and vocalisations of Tytler's Leaf-warbler *Phylloscopus tytleri*, and an eastern extension of its breeding range in the Himalaya**
PUJA SHARMA
- 103 NOTEBOOK Observations of nesting Whitehead's Spiderhunter *Arachnothera juliae* in northern Sarawak, Malaysian Borneo**
SIEW TECK YEO & DING LI YONG
- 106 CONSERVATION ALERT Two major bird habitats declared as national parks in Assam**
ANWARUDDIN CHOUDHURY
- 109 NEW RECORDS New and interesting avifaunal records for Pakistan, 2013–2021**
AZAN KARAM & ZAFEER AHMED SHAIKH
- 116 NEW RECORDS First records of Slaty-breasted Rail *Lewinia striata* from Timor-Leste (Timor island), Sumbawa and Flores islands, Nusa Tenggara, Indonesia**
JAFET POTENZO LOPES, MARK SCHELLEKENS, YOVIE JEHABUT, SALEH AMIN, JAN VERHOEYE & COLIN R. TRAINOR
- 119 NEW RECORDS The first occurrence of 'Masked Wagtail' *Motacilla alba personata* in the Philippines**
ADRIAN M. CONSTANTINO & ROBERT O. HUTCHINSON
- 121 From the field**

FRONTISPIECE

M. MONIRUL H. KHAN

Great Eared-nightjar *Lyncornis macrotis*, photographed at Takerghat, Sunamganj, Bangladesh, by OBC member M. Monirul H. Khan.

BirdingASIA briefings

COMPILED BY SIMON RODDIS & ALEX BERRYMAN

AGM

The Oriental Bird Club's 37th Annual General Meeting was held via Zoom on 18 September 2021. Over 70 members joined the meeting. The outgoing Chair of the Club, John Gregory, took members through the financial prospects of the Club in the near and medium terms and our stated aim to reduce reserves and invest in frontline conservation. John also talked about the impact of the COVID-19 pandemic on the Club and our sponsors.

Chris Gooddie was appointed Chair of the Club and we formally welcomed Jess Borer and Richard Webb to Council. John Gregory will become Treasurer, replacing Michael Edgecombe, who, along with Simon Roddis is stepping down from Council after many years of service. The Chair thanked them for all that they have done over the years.

With the formal part of the meeting over, John welcomed Professor Stuart Marsden and Dr Harry Marshall, who together gave an enlightening update on the Asian songbird situation and the demand reduction strategies being put into place. The Club continues to see this issue as a top priority for conservation in the region.

Spurn Migration Festival (MigFest)

On 10–12 September, the Club had a stall at the annual Spurn Migration Festival at Spurn Bird Observatory in the UK. The event was well attended and we were delighted to sponsor honorary memberships to the two winners of the Martin Garner Young Birder of the Year award, which this year went to Levi Gravett (junior award) and Corin Woodhead (senior award).

Postponement of Conservation Fund tour to Taiwan

We regret to announce that we have decided, in conjunction with Rockjumper, to postpone the planned Conservation Fund tour to Taiwan, from May 2022 to April/May 2023. When we announced the tour, we were very hopeful that it would be able to run. Unfortunately, the emergence of the Delta variant has complicated the situation considerably and at present it is unclear as to when things might improve to the extent that visits to Taiwan will be possible.

Given this, we believe that it is sensible to postpone the trip for a year to make things easier for potential participants to plan ahead. The revised dates in Taiwan will be 28 April to 9 May 2023. We are sorry to have to take this decision but hope that it will be possible for Rockjumper to run a highly successful tour in 2023.

Email difficulties

In the latter months of this year (2021), the Club suffered difficulties with our email hosting service. As a consequence, we are aware of a number of correspondences, including to the inboxes of *BirdingASIA* and the *Journal of Asian Ornithology*, that never made it to us. If you sent an email to any OBC email

address and received no reply, please resend it and we will endeavour to reply as a matter of urgency. We apologise for this inconvenience.

Corporate Sponsor news

New Corporate Sponsor

OBC are delighted to welcome WILD Sounds & Books as a corporate sponsor. OBC will receive commission on every book that WILD Sounds & Books sell to an OBC member. To order items online please go to www.wildsounds.com/obc. Alternatively, call (+44)1263 741100 and mention OBC when placing an order.

Sunbird Tours

OBC are very sorry to hear that Sunbird Tours, one of our longest-standing corporate sponsors, has ceased trading. We are sure that many of our members will have had great experiences travelling with the late David Fisher, Steve Rooke and the rest of the Sunbird team. We are very grateful for all the support that the company has given the Club over many years and wish Steve Rooke and the Sunbird leaders our very best wishes for the future.

Cley Spy—binoculars for conservation

Cley Spy (www.cleyspy.co.uk), one of the Club's corporate sponsors, are collecting and donating old, unwanted binoculars to help bird conservation in the Oriental region. Donations by Cley Spy and their customers have already helped support conservationists working on important projects including one involving the Critically Endangered Banggai Crow, the Endangered Peleng Tarsier and the Vulnerable Sula Scrubfowl on Peleng in the Banggai Islands group of Indonesia.

OBC have many more projects urgently in need of optical equipment and any donations of binoculars or telescopes would be very welcome. If you are visiting Norfolk, you can drop items into the Cley Spy shop at Manor Farm Barns, Glandford, Holt NR25 7JP, or their satellite shop at the Cley NWT Visitor Centre.

A call for new Corporate Sponsors

Support from the Club's many corporate sponsors provides important funding for many conservation projects across the region and we are always looking for more sponsors to support our work. There are three categories of sponsorship, Gold, Silver and Bronze, with rates starting from as low as £200 per year. This can be in the form of a cash donation or in some cases donations of items that can be used in our Grand Draw, etc. If you know of anyone who might be interested in supporting the Club as a corporate sponsor and who would like more information, please ask them to contact us at mail@orientalbirdclub.org.

Follow OBC on social media

It is easier than ever to keep up to date with the latest news from the Oriental Bird Club by following our social media pages. We share updates from conservation projects funded by our members and supporters, as well as additional bird news stories and spectacular photographs from throughout the region. You will find us on Twitter (@orientbirdclub) and Facebook ('Oriental Bird Club'). You could even join our Facebook Photography Group ('Oriental Bird Club Photo Group') to share your own images from the region. We're also on YouTube ('Oriental Bird Club') where you can view recordings from our latest online webinars, as well as video updates from related conservation projects.

David Fisher (1954–2021)

The Club was sad to hear of the passing of David Fisher, Chairman of the Neotropical Bird Club and renowned tour leader, especially for Sunbird which he co-founded and co-owned. Over many years of birding and travel—visiting no fewer than 102 countries, leading over 180 tours to six continents, and seeing c.8,700 species of bird—David established a vast network of friends and contacts throughout the birding world, including our region. He was among the first to pioneer birding tours to regions including Siberia, Mongolia and Trinidad and Tobago. He was chair of both the East African Rarities Committee and The Seychelles

Bird Records Committee, and contributed to countless birding publications, including the HBW series and most of the field guides to countries across the Neotropics. David had been battling against a form of lung cancer for over a year, which ultimately did not respond to treatment. He died peacefully in his sleep on 22 May. He was a genuine, caring man who gave his time and considerable knowledge generously. Great qualities to have, especially in combination with a dry wit and a very sharp eye.

Stuart Elsom
October, 2021

ERRATUM

We apologise for the following errors in *BirdingASIA* 35. First, the correct location for Plate 1 on p.11 is 'Sailana Kharmor Sanctuary', not 'Saukaba Kharmor Sanctuary' as written. Second, the citation referred to as 'Menzies & Rao (2020)' on pp.38–42 was incorrectly cited, and should have been referenced as:

Menzies, R., Rao, M. & Naniwadekar, R. (2021) Assessing the status of the Critically Endangered White-bellied Heron *Ardea insignis* in north-east India. *Bird Conserv. Int.* 31(2): 255–267.

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OBC IN ACTION

Conservation Fund



COMPILED BY PAUL INSUA CAO, DUNCAN MCNIVEN & GRAHAM HIRONS

Conservation Committee

Chair: Paul Insua Cao. **Small Grants:** Duncan McNiven, Graham Hirons. **Council sub-group:** John Gregory, Chris Gooddie, Yong Ding Li. **Shorebirds Conservation Group:** Sayam Chowdhury, Vivian Fu, Yong Ding Li. **Conservation Officers:** Nick Brickle, Simon Wotton, Joe Taylor, Francis Buner, David Showler, Will Duckworth, Sayam Chowdhury, Jacqui Weir.

Introduction

The Conservation Committee continues to develop its grant-giving programme through the larger team established in 2020. The small grants programme and the relationship with the Asian Species Action Partnership (ASAP) continue as established means of grant-giving. In addition, OBC has a group focussed on shorebirds and is planning a group to bring focus to our support on the songbird trade issue.

The Covid-19 pandemic has meant that several projects have been delayed over the past year. We remain in contact with grantees to monitor progress and no projects have had to be abandoned.

We thank the March Conservation Fund for its continuing support of OBC in 2021. Donations to support projects can be made directly through the OBC website. Specify 'shorebirds' as the purpose if you wish to support that fund. For enquiries about large donations, email mail@orientalbirdclub.org. As the Conservation Committee is run by volunteers, 100% of donations received go directly to conservation projects.

Conservation projects funded by OBC since May 2021**Small grants (£1,000 to £3,000)**

- Monitoring the Endangered Black-bellied Tern *Sterna acuticauda* and other riverine bird species in Tamil Nadu, India—P. Jeganathan. The population and habitat of this species will be studied along the Kaveri River, which is subject to anthropogenic pressures.
- Migration routes of Egyptian Vulture *Neophron percnopterus* on the central Asian–Indian flyway, Uzbekistan—Robert J. Burnside. Using satellite tags to track the poorly known migration of Egyptian Vultures from Central Asia towards the south.
- Bridging the gap: capacity building for standardised Galliformes research in Pakistan—Muhammad Naeem Awan. Training will be given to ornithologists to ensure reliable and consistent data are collected when surveying Galliformes to assess the conservation status of several of Pakistan's poorly known species.

Small grants (£1,000 to £3,000) supported by the March Conservation Fund

- Survey of Yellow-breasted Bunting *Emberiza aureola* in north-east Bangladesh—Nazim Uddin Khan. There has been no specific and systematic survey of this Critically Endangered species in Bangladesh previously.
- Exploring the enigma: identifying key distribution and threats of Black-browed Babbler *Malacocincla persipillata* (Plate 1), Indonesia—Panji Gusti Akbar, Birdpacker Indonesia Foundation. This bird was recorded in October 2020 for the first time in 170 years (see BA34: 13–14); the surveys carried out in this project will provide a basis for understanding the status and ecology of this almost unknown species.



Plate 1. The first wild photograph of Black-browed Babbler *Malacocincla persipillata* from an ongoing OBC project. Kalimantan, Borneo, September 2021.



PANJI GUSTI AKBAR

Large grant (>£3,000) supported by the March Conservation Fund

A follow-up grant was provided to Irfan Rosyadi of Yayasan Kanopi Indonesia for a second phase of the project 'Implementing bird and habitat conservation through community development at Jatimulyo Village, Menoreh Landscape, Java, Indonesia'. A summary of the first phase is given below.



Migratory shorebirds

Thanks to a generous donation to the Club, a migratory shorebirds team was set up earlier this year to guide the focus of OBC support to where we could best have an impact on migratory shorebird conservation regionally. One of our first activities was organising OBC's inaugural online webinar on 20 March 2021, entitled 'Spoon-billed Sandpipers and the East Asian-Australasian Flyway'. It included guest presentations by Dr Christoph Zöckler of the EAAFP's Spoon-billed Sandpiper Task Force, giving background history on Spoon-billed Sandpiper *Calidris pygmaea* conservation, Dr Nigel Clark on satellite-tagging of this species, and Ayuwat Jearwattanakanok from Bird Conservation Society of Thailand who spoke on the management of Pak Thale Nature Reserve. A recording of the webinar can be found on OBC's YouTube channel (<https://bit.ly/3bpl1zf>). The webinar raised over £1,500 for our Migratory Shorebirds Fund.

As migratory birds start to move south for the winter, the Club has relaunched—in collaboration with the East-Asian Australasian Flyway Partnership (EAAFP), BirdLife International and the Spoon-billed Sandpiper Task Force—the #legflagchallenge. This campaign encourages bird photographers to submit photographs of shorebirds marked with coloured flags or rings, building on last year's campaign (see BA34: 15–16). Photos can be submitted under #legflagchallenge on Facebook or Instagram with details of species, date, location and leg-flag information. More information can be found at <https://www.eaaflyway.net/join-the-legflagchallenge/>.

As part of this campaign, OBC supported another webinar organised by EAAFP on 7 October to mark World Migratory Bird Day. Bringing together two leading experts, Dr Lee Ki-Sup and Dr Marcel Klaassen, this webinar highlighted the importance of understanding bird migration and how anyone can get involved, with presentations on submitting records of Black-faced Spoonbill *Platalea minor* and for the newly launched BirdMark website. A recording of that webinar can be found through the EAAFP website at <https://www.eaaflyway.net/join-the-quest-of-legflag-challenge-2021-wmbd-webinar-1/>.

Our Young Conservation Scientist Award for Shorebirds was launched to support early-career scientists from the region under the age of 30 to conduct research that supports shorebird conservation. Two award winners were selected for work starting this winter season:

- Gayomini Panagoda, for the project 'To save the only freshwater lake in a migratory mega hotspot in the Central Asian Flyway from poaching and encroachment' in Sri Lanka. This project will work with local stakeholders at Korakulam Lake, the only freshwater lake on Mannar Island and part of the Rama Bridge between Sri Lanka and India, to address poaching and encroachment.
- Shoeb Ali, for shorebird surveys at Teknaf Peninsular on the south-east coast of Bangladesh. This area, which borders Myanmar, is poorly known for shorebirds and is under high human pressure due to the influx of refugees from Myanmar.

Summary reports of recently completed projects supported by the Conservation Fund

Population and nesting habitat survey of the North Philippine Hawk-eagle and other raptors in five protected areas in Luzon. Project kindly funded by Richard Heaver.

North Philippine Hawk-eagle *Nisaetus philippensis* is an Endangered raptor endemic to the islands of Luzon and Mindoro in the northern Philippines. It inhabits forests and is threatened by habitat loss and hunting. Little research has been done on Philippine forest raptors in general, with scant information about population and breeding biology for most species including *N. philippensis*. This project conducted raptor field surveys in six sites in Luzon, modelled species distribution for six raptors, and documented the breeding activities of *N. philippensis*.

Raptor surveys were conducted using point and line transects along a total of 511 km of forest roads between November 2019 and January 2020. Fourteen species were recorded in generally low abundances, with Philippine Serpent-eagle *Spilornis holospilus* being the most abundant. North Philippine Hawk-eagle occurred at five sites but less than one individual per 10 km² was encountered on average. The abundance estimates obtained can serve as baseline data for temporal comparisons when surveys are repeated using the same methods.

To supplement the survey, the potential suitable habitats of six other raptor species were also modelled using Maxent. Only 13–25% of Luzon were deemed suitable for these species, with strongholds located in the Sierra Madre mountain range, the northern part of the Cordillera Central, and the southern part of the Zambales Mountains. These areas contain some of the last remaining lowland dipterocarp forests on the island and cover at least 13 key conservation sites in the Philippines.

Lastly, the breeding biology of North Philippine Hawk-eagle was described for the first time. A pair was monitored for two breeding seasons, in 2019 and 2020, when the parents were successful in fledging one chick a year. Incubation started in late January and lasted for more than 30 days, while the nestling period lasted for more than 53 days. Nest attendance was highest during the incubation period, while sprig and prey deliveries peaked during the first month of the nestling period. The species exhibited strong role asymmetry in parental care. The female was responsible for incubating, brooding and taking care of the chick, while the male provided food for the family. The most common prey type consumed by the hawk-eagles was birds, with a particularly high representation of waterhens and rails, and mammals, mainly comprised of rats and bats. Although observation was limited as they came from a single breeding pair, this study provides important life history data to inform conservation action.

In all study sites, local government offices were given reports about the study. These included data, maps and recommendations for species and habitat conservation. Community engagement activities, such as bird walks and

lectures, were conducted at the nesting site. The project led to a local movement on habitat restoration and biodiversity protection, where pocket forests of native trees have already been created.

Grant awarded to, and summary prepared by, Jelaine L. Gan, Institute of Biology, University of the Philippines, Diliman, Quezon City, NCR, Philippines.

Promotion of bird feeding stations to strengthen interest in bird conservation in Lao PDR

Attitudes in Lao PDR towards nature conservation are changing. A key contributing factor has been a national logging ban through Prime Minister Order No. 15 in May 2016. This has resulted in a rethink regarding the values of the forest estate and, in particular, the emerging national park system. Five new national parks have become established in the last 30 months and nature-based tourism has been seen as an integral part of these positive conservation developments. While these policy changes have occurred relatively rapidly, changes in behaviour and attitudes towards wildlife take a great deal longer and need to be nurtured, particularly when wildlife is persecuted with such high intensity. How can a Lao national enjoy a nature experience when so many birds are either shy or being consumed?

In 2018, we estimated the number of Lao birdwatchers in the country at 11, of whom only half owned a pair of binoculars. If people are to enjoy birds, they need to enjoy some wildlife experiences, and experience birds close-up. It was this notion that led to the idea of creating a video of a bird feeding and watering station in Thailand. Through the OBC Country Rep in Thailand, Phil Round, Khemthong Tonsakulrungruang was engaged to produce a video of bird feeding stations, which are used to attract birdwatchers and photographers to the periphery of Kaeng Krachan NP. The video shows the establishment and management of the bird feeding stations as much as footage of the birds themselves. Khemthong, working with an OBC seed grant of £300, produced a superb video in Thai (generally understood by Lao people), which can be seen on the OBC's YouTube channel. To date, the video has been shared in Lao PDR with national bird photographers in Nakai Nam Theun NP, Nam Et-Phou Louey NP and Nam Kan National Protected Area; private-sector concessionaires in four ecotourism sites; the arboretum in Luang Prabang; and four university lecturers working in conservation who intend to pilot a bird feeding station within the National University of Laos campus. We remain very positive that several bird feeding stations will become established in Lao PDR in the coming two years and start generating more interest in birds and wildlife among Lao nationals.

Grant awarded to, and summary prepared by, John Parr, Vientiane, Lao PDR.

The following five projects were supported by the **March Conservation Fund**.



An assessment of protected areas management effectiveness for the conservation of the Red Listed Western Tragopan *Tragopan melanocephalus* in Pakistan

Protected areas are a critical tool for conserving biodiversity in the face of the global crisis of species extinction. Here we report on the first ever assessment of the management effectiveness of 26 of Pakistan's Protected Areas (PAs), including all the PAs within the range of the threatened Western Tragopan *Tragopan melanocephalus*, which is endemic to Pakistan and India. We linked the assessments to the delivery of conservation outcomes for the Western Tragopan as a case species given its conservation significance in this region. However, the same methods could be applied to many other species of global conservation concern.

We adopted two approaches: (1) mapping the spatial distribution of potential habitat coverage using machine learning ensemble models; and (2) assessing the management effectiveness of protected areas by using an adaptation of the Management Effectiveness Tracking Tool (METT) for PAs. This is based on the notion that good protected area management follows a process that has six distinct stages: understanding existing values and threats, planning, allocation of resources (inputs), management actions/processes, producing products and services (outputs), resulting in conservation outcomes.

Our results show that only Machiara National Park scored (just) above 40% (itself indicating relatively weak management), 22 of the PAs fell within the 25–50% quartile (indicating weak management), and three scored below 25% (indicating poor management). PAs within the species' distributional range covered 92,387 ha, only 2% of the total potential habitat of the tragopan. Scoring showed that the planning element was insufficient both in terms of the site and species. Likewise, inputs (e.g. research and monitoring programmes, staff numbers, staff training, current budget, security of budget, and management) were also inadequate.

We concluded that currently protected areas are not sufficiently contributing to protecting the Western Tragopan and its habitat in Pakistan. We recommend establishment of more protected areas within the potential habitat of the species and the inclusion of species-specific plans in Pakistan's PAs management.

Grant awarded to, and summary prepared by, Muhammad Naeem Awan, Department of Environmental Sciences, Abbottabad Campus, COMSATS University, KPK, Islamabad, Pakistan.

Assessing the population status, anthropogenic threats and people's perception to enhance the conservation of hornbills (Bucerotidae) in Sarpang District, southern Bhutan

This project is one of a series of formulaic hornbill ecology projects conducted by Forest Research Institute students in Bhutan and funded by OBC, and is novel as it examined

government-designated habitat corridors linking three large protected areas.

Sarpang District, in southern Bhutan, lies between three large protected forests: Royal Manas NP, Jigme Singye NP and Phibsoo Wildlife Sanctuary. The protected areas hold important populations of hornbills, which have been the focus of several recent studies mapping distribution and identifying their preferred habitat features. This information has been used to plan management of the protected areas and the conservation awareness programmes that are used to promote wildlife protection.

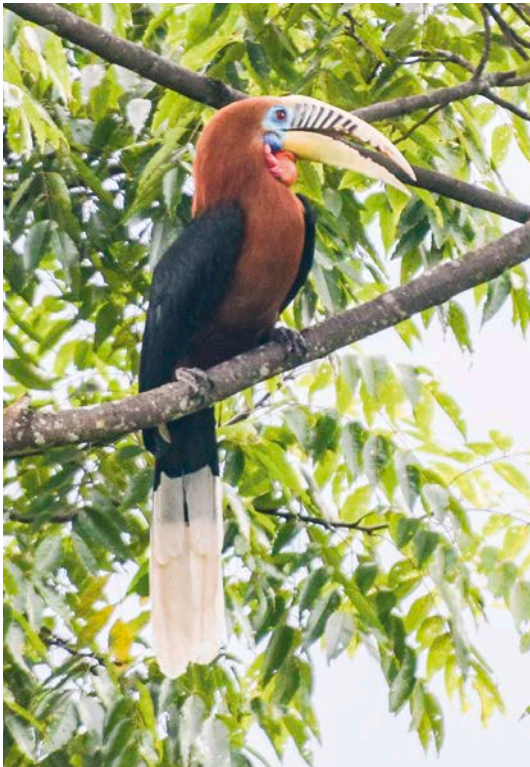
The three protected areas are linked by a designated biological corridor, itself a protected forest. The remainder of the district consists of a mixture of settlements, community forests and disturbed secondary forests. The project was designed to see how hornbills used the corridor. The team undertook transect surveys in both the corridor and the surrounding settled areas. Fieldwork took place in May–June 2020, when hornbills were breeding. Structured interviews were used to gather additional information on how people and hornbills used the forests. The surveys and interviews were hampered by coronavirus restrictions and all fieldwork ended when the country went into lockdown in August 2020.

Four hornbill species were encountered: Rufous-necked Hornbill *Aceros nipalensis* (Vulnerable; Plate 2), Great

Hornbill *Buceros bicornis* (Vulnerable), Wreathed Hornbill *Rhyticeros undulatus* (Vulnerable) and Oriental Pied Hornbill *Anthracoceros albirostris* (Least Concern). Encounter rates were relatively low, but all four species were widely distributed across the district, both in the biological corridor and the settled areas. Local people provided useful information on the hornbills' feeding and nesting behaviour (Plate 3), demonstrating that they fed in forest edges all over the district but only nested in the undisturbed forests of the biological corridor. All the forests were exploited for timber and other forest products by local people, indicating that some form of protection was needed for large nesting trees in the corridor. Most local people understood the ecological importance of the corridor to hornbills but there was little awareness of the conservation importance of the hornbills or that Rufous-necked Hornbill has legal protection in Bhutan. The team concluded that further conservation awareness work would be needed to secure better protection of nesting habitat in the corridor. They also suggested that Great and Wreathed Hornbills would benefit from being offered legal protection given the importance of Bhutan's surviving populations and their deteriorating international conservation status.

Summary prepared by Dave Buckingham.

Plate 2. Rufous-necked Hornbill *Aceros nipalensis*, Nepal, August 2020.



DAMUDAR DAHAL

Plate 3. Local man with a hornbill nest cavity.



DAMUDAR DAHAL

Public awareness campaign to enhance the conservation of avifauna and habitat at Gadi-Siraichuli Forest Area, central Nepal

Gadi-Siraichuli, an Important Bird and Biodiversity Area (IBA), lies in the Chepang Hills of central Nepal. It has some of the best remaining mid-altitude subtropical Sino-Himalayan forest in the region and supports an important and diverse avifauna. This includes the only known Nepalese locality of the nationally critically endangered Red-faced Liocichla *Liocichla phoenicea*, the globally Vulnerable Grey-crowned Prinia *Prinia cinereocapilla* and the endemic Spiny Babbler *Acanthoptila nipalensis*. Although recognised as an IBA, the birds and other wildlife face enormous pressure, some species being threatened by anthropogenic activities including hunting, (illegal) collection for sale in the local pet-trade market, and habitat degradation and loss due to infra-structure development, e.g. landslides resulting from construction of a new road (now temporarily halted). There have been no previous, other than very cursory, conservation education initiatives in the area.

A primary goal of the project was to develop within the local people an understanding of the value of birds (and biodiversity in general) and their habitats, and to promote a reduction of hunting/collection of wildlife. The Chepang ethnic group who reside in the area traditionally led a nomadic hunter-gatherer lifestyle living off the formerly more extensive forests. They are now mostly subsistence farmers but many still engage in hunter-gatherer activities, through necessity, for their own use and income generation. Ways of enhancing nature conservation through 'compensatory' income generation via alternative livelihood schemes were discussed through the project.

In January 2021, a team led by Kiran Magar carried out an education programme at eight schools within the Gadi-Siraichuli area. In total, 1,041 pupils and their teachers attended. An additional 136 community members were also involved. Interest and engagement were enhanced (and to provide a lasting reminder) through production of high quality, attractive education materials: the rare and important birds (i.e. species of conservation concern) were highlighted in 3,000 colour brochures and 500 posters distributed to participants and schools. The conservation message was also summarised on informative hoarding boards entitled 'Save birds and their habitats', installed at five locations. At the end of the programme, the performance of students and others was evaluated through comparison of answers to 'before' and 'after' questions. This demonstrated that participants had successfully gained knowledge (to varying extents) on the wildlife of their area. In addition, four 'avifauna ambassadors' were nominated to promote nature conservation in the area, selection primarily based on their keenness to engage in conservation activities and liaison ability.

It is hoped that the education programme can be repeated in c.2 years, links with the avian ambassadors are maintained and strengthened, and that alternative livelihood schemes (e.g. ecotourism and trekking) within and around the IBA can be enhanced and developed.

Summary prepared by Dave Showler. Grant awarded to Kiran Thapa Maga, Biodiversity Research and Conservation Society, Kathmandu, Nepal.

Bird and habitat conservation through sustainable community empowerment in the Menoreh landscape, Jatimulyo Village, Kulonprogo, Yogyakarta

Trapping wild birds for trade is an issue throughout Java and recognised as driving many species, especially Javan endemics, to extinction. Working with communities living close to the habitat of many of the sought-after species is critical to preventing these extinctions, while the demand side needs to be addressed simultaneously. However, it takes time for community-based interventions to be effective.

This project is situated in the Menoreh Mountains, west of Yogyakarta in and around Jatimulyo village in Kulonprogo Regency. The surrounding habitat is typically mixed agroforestry with crops such as clove, coffee, cocoa, coconut and areca palm, combined with timber trees. It is notable for the presence of the Javan Blue-flycatcher *Cyornis banyumas sensu stricto* and other birds known to be targeted by hunters for the songbird trade.

Environmental regulations had been established prohibiting hunting birds in the village area and in 2018 a forest farm community group called Kelompok Tani Hutan (KTH) Wanapaksi was established to support bird conservation and manage a bird adoption scheme. Regulations were ineffective, being unknown to most people living in the area and were unenforced. Awareness raising efforts had not been far-reaching and only a few members of the local community were involved in KTH Wanapaksi.

The project took a further step in raising awareness and building local skills in bird conservation in the area. Fifteen members of KTH Wanapaksi received training on bird identification and monitoring. Some trainees joined a team of ornithologists and birdwatchers from Kanopi Indonesia and students from Yogyakarta in bird surveys around the village. Eight transects were followed in four hamlets and recorded 61 species. Species densities were estimated from point count surveys for 23 species. Javan Blue-flycatcher was recorded in one of the four hamlets.

The nest adoption scheme was also further developed through a series of village meetings to develop standard operating procedures. 'Nest adoption' involves sponsors, often from Yogyakarta, making a donation to support local residents to monitor the nests of target birds until the young birds fully fledge. During the project period, two nests were adopted for Oriental Dwarf-kingfisher *Ceyx erythaca* and the Javan Blue-flycatcher, with three fledging from the former and the flycatcher nest failing due to parasitisation by a cuckoo. The project also delivered awareness-raising events in two hamlets.

The project was implemented between August and December 2020, with a follow-up phase funded by OBC beginning in May 2021.

Grant awarded to Irfan Rosyadi, Kanopi Indonesia, Yogyakarta, Java, Indonesia. Summary prepared by Irfan Rosyadi and Paul Insua-Cao.

Continuing breeding programmes at Cikananga Conservation Breeding Center, Java

Last year, when the COVID-19 global pandemic hit, the Cikananga Conservation Breeding Center (CCBC) found itself struggling financially as donor support dropped (see article on pp.15–20). With reduced funding and global uncertainty, CCBC faced the prospect of reducing all activities to only those deemed essential, potentially halting conservation breeding for two Critically Endangered species: Javan Green Magpie *Cissa thalassina* and Rufous-fronted Laughingthrush *Garrulax rufifrons* (Plate 4). With financial assistance from the ASAP Rapid Action Fund and OBC, CCBC was able to continue vital conservation breeding efforts, enabling two keepers to receive full salary over this period and maintain a diverse diet for the two aforementioned species. A nutritious diet with a consistent supply of live food for all species is key to

Plate 4. Rufous-fronted Laughingthrush *Garrulax rufifrons* undergoing a health check. Cikananga Conservation Breeding Center, Java, Indonesia, April 2021.



CIKANANGA CONSERVATION BREEDING CENTER

encourage breeding, especially the heavily carnivorous diet of the Javan Green Magpie. CCBC was successful in breeding both of these species during the year: three Javan Green Magpies and one Rufous-fronted Laughingthrush fledged. The latter is proving particularly challenging to breed in captivity and the one individual is considered an indicator of success. Furthermore, all successful pairings included an individual who is a founder and was not yet represented in the local population, increasing the centre's genetic diversity for these species. The non-breeding pairs of both species exhibited promising breeding behaviour (e.g. nest-building) that we hope to build on in the next breeding season as we learn how to adapt their environmental conditions in the aviaries.

CCBC will continue to focus on a small number of species in urgent need of conservation, including the continuation of current *ex situ* operations and the development of future *in situ* ones. Consistently breeding Rufous-fronted Laughingthrush is a considerable challenge and over-reliance on this as a conservation approach is risky. Moving forward, the financial threats which this funding helped to alleviate are still present and fundraising is currently a priority for CCBC. To support our breeding centre, please visit <https://www.cikanangawildlifecenter.com/donate-us/>.

Grant awarded to and summary prepared by Bertie Ferns, Cikananga Conservation Breeding Center, West Java, Indonesia.

Ongoing OBC-supported conservation action



NONI TIRTANINGTYAS

Plate 5. In Jakarta Bay, Indonesia, videographers capture footage of fishermen who had previously found frigatebirds in their nets, as part of an OBC-funded film to raise awareness of the plight of Christmas Island Frigatebirds *Fregata andrewsi*.

Reviews

Birds of the Indonesian Archipelago: Greater Sundas and Wallacea. Second edition.



By James A. Eaton, Bas van Balen, Nick W. Brickle and Frank E. Rheindt. 2021. Lynx Edicions, Barcelona. 536 pages, 232 colour plates (2,800 illustrations), 1,350 maps. Hardback ISBN 978-84-16728-43-5. Price EUR 38.90. Flexi-bound ISBN 978-84-16728-44-2. Price EUR 34.90.

Only four years after first being published, James Eaton and colleagues have provided us

with a fully revised and updated field guide, partly made possible by the pandemic keeping the authors out of the field. Nevertheless, a second edition is certainly justified, as anyone able to compare the two editions will quickly see, although it may not be greeted with enthusiasm by anyone who purchased the first edition but has not yet had an opportunity to use it. For a review of the first edition, please see http://www.birderslibrary.com/reviews/books/field/birds_of_the_indonesian_archipelago.htm.

This guide covers a biogeographic region comprising more than 17,000 islands stretching some 5,000 km along the equator, including not only most of Indonesia, but also the small countries of Brunei and East Timor, as well as the East Malaysian (Bornean) states of Sabah and Sarawak. It does not include the eastern Indonesian provinces of Papua and West Papua (the island of New Guinea and its satellites). Maps inside the book's covers show this region and name most of the important islands, though unfortunately not the major rivers on the larger islands. Altogether, this excellent guide describes an incredible 1,456 species, of which 628 are endemic to the area of concern, and 106 are vagrants.

The brief introduction to the book is almost identical to that of the first edition and defines the geographic scope of the guide as well as describing the biogeography, topography, climate and habitats of the region. It also includes a section on conservation, ornithological history and, perhaps of more interest to many users, a succinct section on taxonomy and systematics. The illustrations were mostly borrowed from Lynx's *Handbook of the Birds of the World* series, but a considerable number (325) of mostly new illustrations have been added to the second edition and nearly 500 others were improved. In particular, there are many new figures of birds in flight, especially in the sections on waterbirds, pigeons, raptors and hornbills. The addition of new figures and increased number of species has required the addition of eight plates, and the book is 40 pages longer than the first edition.

Considering the number of taxa covered, this guide is reasonably sized. While it won't fit in most pockets, it is

certainly not too heavy to carry in the field. One consequence of producing a manageable size is that the font is rather small. The guide is similar in size to Craig Robson's excellent *Birds of South-East Asia*, but unlike that book it includes maps for almost every species. As with the first edition, and others in the *Lynx and BirdLife International Field Guides Series*, the maps are found on the plates themselves. This arrangement leaves more room for text on the facing page, where all the details about the species are to be found (although I prefer the format of *Birds of Colombia*, also published recently by Lynx in 2021). One minor but important improvement has been a completely revamped (and now typical) index which many users found to be wholly inadequate in the first edition.

The individual species accounts provide key information on taxonomy, voice and identification features, including notes on similar species where relevant: this edition has more emphasis on the 'similar species' sections, which should prove especially useful for identifying lesser-known and trickier species. The maps have been improved by the addition of new base maps, so as well as the single, archipelago-wide map used for all species in the first edition, there are now specific maps for species confined to the Greater Sundas, Lesser Sundas or Wallacea. The maps also differ in having new colours for 'passage migrant', 'introduced' and 'extinct' distributions, while the tick boxes alongside the maps that featured in the first edition have been removed.

The first edition contained some taxonomic decisions and suggestions that attracted disapproval from various quarters but, as I predicted in my review of the first edition, subsequent research has vindicated many of them. Much of this research was carried out by the authors, who have produced an impressive steady stream of taxonomic papers since 2016. This is one reason why the number of species has increased, from 1,417 (including 601 endemics, 98 vagrants) in the first edition, to 1,456 now, whilst there has also been a considerable number of accepted new records. Indeed, much has been discovered about the region's birds in the four years since the publication of the first edition as more and more birders have visited Indonesia and Borneo, recognising the incredible riches of their avifauna. This is hardly surprising: Indonesia has far more endemics than any other nation, and the most species of any country outside South America.

Although few new taxa have been discovered between the publication of the two editions, there are two worth mentioning here: Cream-eyed Bulbul *Pycnonotus pseudosimplex*, a cryptic Bornean endemic described in 2019, and Glissando Babbler *Pellorneum saturatum*, another overlooked cryptic Bornean taxon that doesn't even feature on world checklists (see Collar & Donald 2020 for a summary). Another small-island leaf-warbler, recently found on Selayar, is also included, awaiting formal description, whilst a possible new grasshopper-warbler, with a distinctive song (e.g. XenoCanto #601648) from the Mekongga Mountains of Sulawesi is presently under genomic investigation. Another

major discovery since 2016 has been the documentation of the striking Black-browed Babbler *Malaccocincla perspicillata*, known from a single specimen of uncertain provenance at the time the first edition was published, but now known to inhabit rugged karst slope habitat in South Kalimantan. It had been 'missing' for 172 years before its discovery by local birders: a truly remarkable find!

In the first edition, a good number of new English names were adopted that could confuse some users, such as Bloodhead instead of Crimson-headed Partridge *Haematoritys sanguineiceps*, Heinrichia (Great Shortwing) *Heinrichia calligyna*, Rhinorhina (Raffles's Malkoha) *Rhinorhina chlorophaea*, Jay Shrike (Crested Jay) *Platylophus galericulatus*, Sumatran Rimator (Sumatran Wren-babbler) *Rimator albostratus* [note that the genus *Rimator* may be merged with *Napothera*, so that use of the English name Rimator may prove to be short-lived] and Mountain Leaftoiler (Mountain Tailorbird) *Phyllergates cuculatus*. Such changes may be justified on taxonomic grounds, but there were other English name changes that seemed a little unnecessary, such as changing White Cockatoo to Umbrella Cockatoo *Cacatua alba*, Long-tailed Fantail to Charming Fantail *Rhipidura opistherythra*, and White-shouldered Triller to Lesueur's Triller *Lalage sueurii*. With the publication of the second edition, we find even more new names to familiarise ourselves with, mostly a result of taxonomic changes. In this edition, these include three species derived from the splitting of Short-tailed Babbler, these being Mourning Babbler *Pellorneum malaccense*, Leaflicker Babbler *P. poliolegne* and Glissando Babbler, as well as Malayan and Bornean Swamp Babblers (*P. rostratum* and *P. macropterum* respectively); these derived from the splitting of White-chested Babbler. Cerulean Silktail *Eutrichomyias rowleyi* has also been adopted as the English name for what was formerly called Cerulean Paradise-flycatcher, following the discovery that this species is most closely related to scattered members of a newly recognised ancient family, Lamproliidae. Other species derived from the splitting of existing taxa that feature in the second edition include Sabah Partridge *Tropicoperdix graydoni*, Scaled Lory *Eos squamata*, Minahasa Hooded Pitta *Pitta forsteni*, Charlotte's Bulbul *Iole charlottae*, Tenggara Friarbird *Philemon buceroides*, Javan Oriole *Oriolus cruentus*, Javan Pied Starling *Gracupica jalla* and Deignan's Prinia *Prinia polychroa*.

While the first edition did not recognise the widely accepted splits within the Red-bellied Pitta *Erythropitta erythrogaster* complex, we find some of them accepted in the second edition, with six species, and the recent split of Elegant Pitta *Pitta elegans* into three species (see p.80 of present issue) is also incorporated. On the other hand, the lumping of Garnet Pitta *E. granatina* and Black-crowned Pitta *E. ussheri*, as suggested by the work of Shakya *et al.* (2020), is not followed. There are numerous other splits and recently recognised species in the guide, including a significant number of taxa elevated to species level in Java and from the Barusan islands off western Sumatra. The foreword to the second edition reminds us that the taxonomic studies that have resulted in such splits and the necessity of 'inventing' new English names is ongoing, and that there are likely to be future taxonomic insights relevant to this part of the world that include

junglefowl, redshanks, swiftlets, leaf-warblers and shortwings. Indeed, Heinrichia *Heinrichia calligyna*, previously known as Great Shortwing, probably involves 3–4 species, all endemic to the mountain tops of Sulawesi. Like the cuckoo-doves, and some of the other polytypic species that were split in the first edition (including boobooks, whistlers, leaf-warblers, drongos, fantails and myzomelas), various species covered by this guide seem destined to be subjected to more taxonomic shake-ups soon. Indeed, some of the named species have still to be formally described, such as Mount Mutis Parrotfinch *Erythrura* sp.

The book contains some unverified splits, such as Black-headed Kingfisher *Actenoides capucinus* and Flores Leaf-warbler *Phylloscopus floresianus* (see Collar & Donald 2020) and it may seem to some users that the authors have tended to split too many taxa, but there are many more that have not been recognised as full species, even though they have been split elsewhere, including Tricoloured Grebe *Tachybaptus tricolor*, Eastern Cattle Egret *Ardea coromanda*, the drongo-cuckoos *Surniculus* spp., Javan Broadbill *Eurylaimus javanicus*, various serpent-eagles *Spilornis* spp., Eastern Grass-owl *Tyto longimembris*, Sunda Scops-owl *Otus lempiji*, Plain-backed Kingfisher *Actenoides regalis*, Morotai Pitta *Pitta morotaiensis*, Striated Swallow *Cecropis striolata* and Nias Hill Myna *Gracula robusta*, whilst Sulawesi, Sula and Kai Cicadabirds (split in the first edition) have been lumped as Common Cicadabird *Edolisoma tenuirostre*. One thing that seems a little irregular with this guide is that Lynx publish field guides that do not follow the *HBW and BirdLife International Checklist of the Birds of the World*, since Lynx is the major proponent of this evolving world list, although personally I do not have a problem with most of the taxonomic decisions followed by Eaton *et al.*

Finally, it should be noted that the second edition includes a 23-page list of Indonesian bird names which will certainly help some users, and that an Indonesian-language version of this guide is being prepared.

The second edition of *Birds of the Indonesian Archipelago* is a first-rate field guide and essential for anyone visiting any part of Borneo or the numerous Indonesian islands stretching from Sumatra and Java to Sulawesi, Timor, Halmahera and the Tanimbar Islands. The authors' vast experience of the region's birds has provided us with an indispensable field guide that should not only encourage more visitors to this remarkably diverse region, but one that will become the standard field guide until the next edition arrives. Whilst owners of the first edition may be tempted to use that guide instead of the second edition, they are significantly different, and it would be well worthwhile getting the second edition if you are visiting the parts of the Oriental region covered by this guide.

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Frank Lambert

EDITORIAL

Sangihe's forest birds under threat

ALEX J. BERRYMAN

Situated between the islands of Sulawesi (Indonesia) and Mindanao (Philippines), the small, biologically diverse volcanic island-group comprising Sangihe and Talaud has long been recognised as hosting an important endemic avifauna and is admitted by BirdLife International as an Endemic Bird Area (the Sangihe-Talaud EBA; as profiled by Stattersfield *et al.* 1998). Sangihe, the largest island, hosts ten endemic bird species (*sensu* BirdLife International 2020): five are Critically Endangered, two Endangered and two Near Threatened (Table 1), among them the much sought-after Cerulean Paradise-flycatcher *Eutrichomyias rowleyi* (Plate 1) for which the island is best known. It is also home to Sangihe Tarsier *Tarsius sangirensis* and Talaud Bear Cuscus *Alluops melanotis*, two of the most range-restricted and threatened mammals in the world.

Forest loss has afflicted Sangihe since the 17th century and intensified in the early 20th as the planting of coconut, nutmeg and clove plantations proliferated (Whitten *et al.* 1987). By the turn of the millennium, primary forest covered less than 1% of the island (Riley 2002) and recent estimates suggest just 5.2 km² persists (Mamengko & Mole 2006), most of it in a remnant area around the peak of Gunung Sahendaruman in the south of the island. All four Critically Endangered bird species to have been seen since 1900 (Cerulean Paradise-flycatcher, Sangihe Whistler *Coracornis sanghirensis*, Sangihe Golden Bulbul *Hypsipetes platenae* and Sangihe White-eye *Zosterops nehrkorni*) have been restricted to this forest patch for several decades, making them among the most



YANN MUZIKA

Plate 1. Cerulean Paradise-flycatcher *Eutrichomyias rowleyi*, Sangihe, Indonesia.

geographically confined birds in the world (Whitten *et al.* 1987, Martin 2018, Burung Indonesia 2021). For other taxa, it is already too late: the island's endemic subspecies of Red-and-blue Lory *Eos histrio histrio* is extinct and, following the retraction of the sole 20th century record in 1997 (see Riley 2002, Martin 2018), Sangihe Dwarf-kingfisher *Ceyx sangirensis* has remained unseen since the initial collection of approximately seven specimens some time prior to 1879 (Blasius 1888, Meyer & Wiglesworth 1898). These forests and

Table 1. Bird species (*sensu* BirdLife International 2020) endemic to Sangihe and their respective IUCN statuses and population sizes.

Endemic species	IUCN status	Population size
Sangihe Scops-owl <i>Otus collari</i>	LC	Unknown
Sangihe Lilac Kingfisher <i>Cittura sanghirensis</i>	NT	Unknown
Sangihe Dwarf-kingfisher <i>Ceyx sangirensis</i>	CR	? [possibly extinct]
Sangihe Hanging-parrot <i>Loriculus catamene</i>	NT	6,700–31,000
Cerulean Paradise-flycatcher <i>Eutrichomyias rowleyi</i>	CR	21–100
Sangihe Golden Bulbul <i>Hypsipetes platenae</i>	CR	30–150
Sangihe Whistler <i>Coracornis sanghirensis</i>	CR	50–249
Sangihe White-eye <i>Zosterops nehrkorni</i>	CR	1–49
Sangihe Pitta <i>Erythropitta caerulescens</i>	EN	50–249
Elegant Sunbird <i>Aethopyga duyvenbodei</i>	EN	13,000–29,000

mountain streams are also the main source of water and electricity (via micro hydro power) for people living in remote villages on and around the mountain. Sahendaruman is designated as a Protected Forest by the Indonesian Government in recognition of its vitally important ecological functions—however, this imposes no requirement to conserve the species within the forest and small-scale loss for agriculture and timber has continued. Without forest restoration, the island's endemic birds are at great risk of extinction (Martin 2018).

Since 2002, Burung Indonesia (the national BirdLife Partner) has pioneered the development of Village Resource Management Agreements (VRMAs) in local communities around the mountain, agreements forged between individual villages and local government to achieve multiple conservation and development goals, including to maintain natural forest cover for the benefit of people and biodiversity by preventing encroachment and reducing threats such as the use of fire and pesticides on nearby agricultural lands. The VRMAs support and complement the work of the local Forest Management Unit in the Protected Forest by ensuring participation of local people in discussions about the use of natural resources and helping resolve disputes concerning the borders between the forest and farmland. In an ongoing Burung Indonesia project, supported by BirdLife International's Preventing Extinctions Programme, they are developing and supporting VRMAs in additional villages around Gunung Sahendaruman. Permaculture home gardens are being established in these villages to increase agricultural productivity and reduce pressure for encroachment into the natural forest. In consultation with local villagers, the project is identifying areas with potential for forest restoration, with the long-term aim of increasing the area of suitable habitat for the endemic species (M. Crosby *in litt.* 2021). However, despite these best efforts, new threats continue to emerge.

In January 2021, mining firm PT Tambang Mas Sangihe (TMS)—70% owned by Canadian-listed Baru Gold Corporation, the remaining 30% by three Indonesian companies—was controversially granted a permit for gold mining by the Ministry of Energy and Mineral Resources that allows 'construction, mining, production, and geological and geotechnical investigations' across a 42,000-ha concession that spans more than half of the island (see Figure 1). Within it: the critical forests of Sahendaruman.

Mining activity on small islands (<2,000 km²; Sangihe is c.600 km²) and in coastal areas is usually illegal since the introduction of a protecting law in 2014. However, the company was granted a contract of work in 1987, predating the legislation

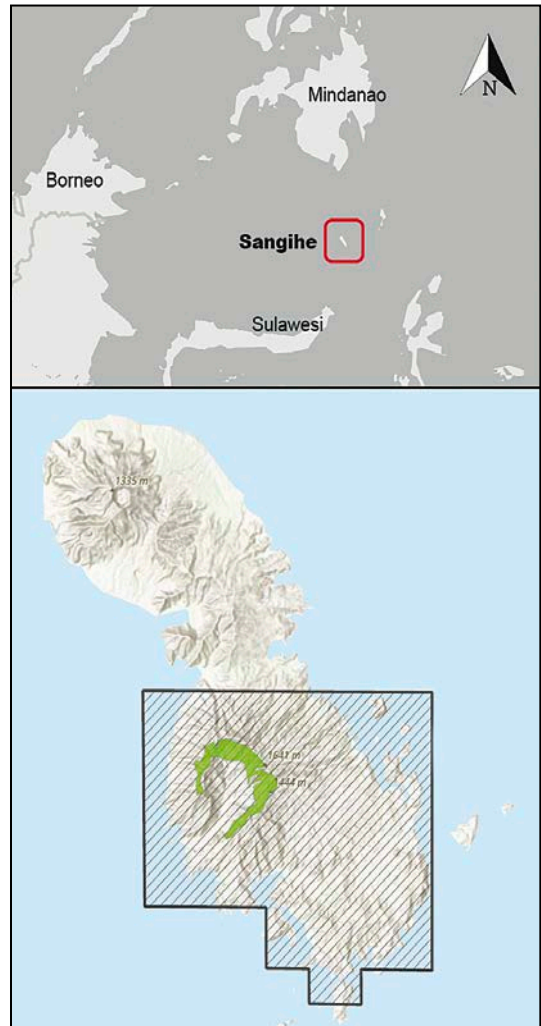


Figure 1. The location of the island of Sangihe. The only area of remnant forest (green) that hosts the island's remaining Critically Endangered bird species is entirely encapsulated by the newly issued mining concession permit (hashed).

that typically would have shielded the island from such proposals—as a result, it was given the green light. Currently, the concession encompasses an area of 110 ha that is approved for mining (65 ha for 2021 activities); none, thankfully, is very close to Sahendaruman forest. While the endemic scops-owl, hanging-parrot and lilac kingfisher may occur in the proposed mining area, these species are widespread across the island and adaptable to degraded habitats. In the absence of dedicated bird surveys of the site, it is plausible that Sangihe Pitta *Erythropitta caeruleitorques* (Plate 2) and Elegant Sunbird *Aethopyga duyvenbodei* are present—both are Endangered.

Local communities claim to have never been consulted about the company's planned mining



JAMES A. EATON

Plate 2. Sangihe Pitta *Erythropitta caeruleitorques*, Sangihe, Indonesia.

operation and have understandably expressed their concern of the potential impacts on their health and livelihoods, especially in response to TMS's failure to offer attractive compensation for their land. They have joined environmental defence lawyers to file a lawsuit against the company's mining and environmental permits. The trial for the first lawsuit took place on 12 August 2021 in the Jakarta administrative court and legal disputes and protests remain ongoing.

It is vital that Sahendaruman is conserved and no explorations of its remnant forests—as would be legally permissible under the concession—are made. If this does occur, and mining sites are identified that threaten the island's key species, additional operation permits would have to be sought—and no doubt contested by local people and NGOs. Already the forest is too small and needs expanding to prevent the extinction of irreplaceable species: there is no room for more damage.

Acknowledgements

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CONSERVATION UPDATE

The impact of the COVID-19 pandemic on songbird conservation

VICKI GUTHRIE, SOFIYA SHUKHOVA, SERENE C. L. CHNG & JESSICA G. H. LEE

Introduction

Global awareness of wildlife trade and its impact on ecosystem and human health has increased during the COVID-19 pandemic (TRAFFIC 2021a). According to research by GlobeScan and WWF (GlobeScan & WWF 2020, WWF 2021), 81% of research participants believed that the closure of high-risk wild-caught animal markets is effective in preventing similar pandemics from happening in the future, while 85% said they were likely to support government efforts to close these markets. Since the outbreak of COVID-19, over 250 NGOs have called for a permanent end to commercial trade in terrestrial wild animals (Global Wildlife Conservation 2020), and at least four governments have adopted wildlife trade restrictions (TRAFFIC 2021a).

However, despite various initiatives for raising awareness, campaigning and tackling the illegal wildlife trade, poaching, trading and selling have continued. The Asian songbird trade has persisted on both national and international levels. Bird seizure data indicate that trade in Indonesia and Malaysia has not decreased despite the restrictions on travelling and moving goods (e.g. Chng *et al.* 2021, TRAFFIC 2021b). Moreover, some aspects of the trade—bird singing competitions, for example—shifted online during lockdowns, making them even more difficult to police and regulate (Armstrong & Chng 2020).

While the songbird trade has continued to thrive throughout the pandemic, conservation projects, researchers and local communities were negatively affected by COVID-19 and had to adapt to new working conditions. The IUCN SSC Asian Species Action Partnership (ASAP) is a partnership platform to end species extinctions in South-East Asia. At the end of 2020, ASAP conducted a survey of its 160 partner organisations to determine the impacts of COVID-19 on their work to conserve Critically Endangered land and freshwater vertebrate species in South-East Asia. Of the 64 respondents, an overwhelming 94% said their work had been affected. The most common impacts experienced were overall activity delays, travel restrictions, changes in funding and access to field sites. Close to 50% of respondents had seen funding reduced by 10–50% due to COVID-19, with another 11%

experiencing an even higher reduction. In addition, some felt that the threats to the species they work to conserve had been heightened during the pandemic because of increases in poaching (35%), forest loss (22%) and other human activities (27%).

To better illustrate the implications of the COVID-19 crisis on the conservation of songbirds, this article investigates the ongoing efforts of three organisations (Cikananga Conservation Breeding Centre, FLIGHT and EcosystemImpact) in Indonesia and how they have navigated this unprecedented crisis. We also consider how tourism-reliant industries, such as the birdwatching community, are impacted by the prevailing movement restrictions precipitated by the pandemic.

Reduced income and increased costs—the importance of emergency funding

Indonesia felt the impacts of the COVID-19 pandemic some time after Europe and the Americas. Cikananga Conservation Breeding Centre (CCBC), situated in West Java, however, is funded almost exclusively by institutions from those continents. Therefore, the effects of the pandemic were felt from the early stages in the form of funding uncertainty.

CCBC breeds endemic Indonesian species, particularly songbirds, that are threatened with extinction, using tools including genetic management software to preserve their genetic diversity. These captive populations act as insurance for species at risk of becoming extinct in the wild, with the eventual aim of releasing individuals back into their native range.

The Center is in a privileged position to have core partners and other sponsors who remain committed to funding during this period of uncertainty. Other sponsors, however, had to reduce or entirely cease their funding, while income from visitors and volunteers dried up as international travel slowed and borders closed. This left CCBC in a position of financial instability, with a shortfall of around €15,000 within the first six months of the pandemic.

In response, CCBC had to restrict their operations and programmes to those that were deemed essential. This meant focusing primarily on *ex situ* activities: maintaining populations of



Plate 1. Rufous-fronted Laughingthrush *Garrulax rufifrons*, Cikananga Conservation Breeding Center, West Java, Indonesia, February 2017.

Critically Endangered and Endangered species, facilities, and staff. Whilst this undoubtedly reduced the strain on their finances, other sources of funding still had to be sought.

Amid this global pandemic, it is more challenging than ever to secure funding for conservation projects which, at the best of times, is competitive. Emergency conservation funds such as the ASAP Species Rapid Action Fund, supported by Fondation Segré, are designed to have funds readily available for emergencies and urgent conservation action. Being a recipient of support from the ASAP Species Rapid Action Fund, CCBC could quickly commit to continue employing their local staff and recommence conservation breeding efforts for select songbird species such as the Javan Green Magpie *Cissa thalassina* and the Rufous-fronted Laughingthrush *Garrulax rufifrons* (Plate 1). These species were prioritised because they are both Critically Endangered, with populations estimated at less than 250 individuals, and their breeding season was approaching. Besides funding, ASAP also tapped into their network of partners and connected CCBC with the Oriental Bird Club (OBC), who co-funded this work. Having both ASAP and OBC funding during this period helped CCBC mitigate the knock-on effects of the COVID-19 pandemic, enabling them to make progress in conservation breeding efforts. This included the successful breeding by two Critically Endangered female Javan Green Magpies who had previously never bred.

Unfortunately, Indonesia, and particularly West Java, has seen rising COVID-19 infection rates throughout 2021. Social restrictions are significantly

impacting the availability and price of products needed by CCBC, e.g. feed, medical supplies and building materials. This, in turn, has impeded the progress of conservation efforts and, at times, threatened to impact the welfare of the local bird populations housed within CCBC.

At the time of writing (August 2021), conservation efforts in Indonesia are at their most vulnerable point of the pandemic. With attention and resources being diverted away from illegal wildlife trade and conservation, many wildlife populations are in a state of desperation. The experience of CCBC shows the vital importance of accessible emergency grants which can act as a lifeline when unprecedented situations such as a global pandemic arise.

Heightened risks of tackling songbird trade in the field during the COVID-19 pandemic

The persistence of the songbird trade during the pandemic has meant that conservation groups and law enforcement agencies have continued to work in the field during these difficult times, risking their health and safety (Plates 2–4). FLIGHT, an Indonesian non-profit conservation organisation, investigates and reports the illegal bird trade and assists law enforcement agencies and the police to stop smuggling.

Based on FLIGHT's observations and surveys, COVID-19 did not reduce the bird trade between Sumatra and Java. In Java, markets and bird shops remain busy, driving demand for wild-caught birds from other islands, particularly Sumatra. Hence, FLIGHT sees a need to continue investigations and tackle illegal trade in the field, even during the pandemic.

In 2020, a successful FLIGHT investigation led to the seizure of thousands of smuggled birds en route from Sumatra to Java. However, after the investigation, two of the five staff were confirmed

Plate 2. White-eyes *Zosterops* sp. seized by law enforcement authorities with the help of FLIGHT in South Lampung, Sumatra, Indonesia. June 2021.



FLIGHT



Plate 3. Smuggled crates with songbirds found in a truck on its way from Sumatra to Java. June 2021.

FLIGHT



Plate 4. FLIGHT staff during one of the bird seizure operations in South Lampung, Sumatra. June 2021.

to have contracted COVID-19. One was quarantined in a government facility and the other self-isolated at home. Upon their recovery, the team returned to the field to continue their work.

“The COVID-19 pandemic has not stopped the smuggling of Sumatran birds to Java. There was no choice: we had to go back with the risk of contracting COVID-19 again.”—Marison Guciano, executive director of FLIGHT.

Even with a high COVID-19 infection rate and death toll in Indonesia, the illegal wildlife trade continues to thrive and songbird smuggling continues. In June 2021 alone, more than 25,000 birds were seized in Indonesia. Birds were confiscated on multiple occasions, including a smuggling attempt of 10,995 birds on 30 June, 3,726 on 22 June and

3,320 on 29 June. Conservation groups and enforcement agencies have to continue tackling the constant wildlife trafficking, even while experiencing reduced capacity and facing higher risks due to the pandemic.

Building an *ex situ* conservation breeding programme over a conference call

Since the pandemic began, many conservation projects and initiatives have had to adapt their practices and make adjustments to their programmes to enable them to continue. Despite these challenges, EcosystemImpact successfully established a new breeding programme during COVID-19 (Plates 5 & 6) and had its first breeding success of a highly threatened songbird species (Plate 7). Technology has played a big role in these achievements.

EcosystemImpact is an Indonesian foundation that aims to protect the wild landscapes of Simeulue and Bangkaru Islands, Aceh, Sumatra, through a sustainability approach where nature, people and business thrive alongside each other. Due to their isolated location, Simeulue and surrounding islands are home to endemic bird species of high conservation concern, including Nias Hill Myna *Gracula robusta*, Simeulue Hill

Plate 5. Aviary under construction at the Simeulue Barusan Shama Breeding Programme, Aceh, Sumatra, in July 2020.



ECOSYSTEMIMPACT

Plate 6. Aviary completed in September 2020.



ECOSYSTEMIMPACT



ECOSYSTEMIMPACT

Plate 7. A Barusan Shama *Copsychus malabaricus hypolizus* fledgling from the project's first successful brood in July 2021.

Myna *Gracula religiosa miotera*, Babi Barusan Shama *Copsychus malabaricus opisthochrus*, Simeulue Barusan Shama *C. m. hypoliza*, Simeulue Oriental Magpie-robin *Copsychus saularis zacneus* and Silvery Pigeon *Columba argentina* (Lee *et al.* 2016, Amey 2021).

Barusan Shama is considered seriously threatened with extinction (Lee *et al.* 2016, Rheindt *et al.* 2019). However, the taxon is currently considered a subspecies of the widespread White-rumped Shama on the IUCN Red List, which remains classified as Least Concern. As a result, the conservation of this taxon was not prioritised until recently.

In 2019, the IUCN SSC Asian Songbird Trade Specialist Group (ASTSG) and European Association of Zoos and Aquaria (EAZA) Silent Forest Group agreed that a breeding programme should be established to secure the survival of Barusan Shama. Funded by Mandai Nature, Marlow Bird Park and Zoologischen Gesellschaft für Arten und Populationsschutz (ZGAP), EcosystemImpact started the development of a breeding facility on Simeulue Island in March 2020, during the early phase of the COVID-19 pandemic.

The pandemic made the initial development and building phase of the project challenging to execute. Simeulue is a remote island with limited access to building supplies and many materials had to be shipped from Sumatra. Due to the lockdown on Simeulue Island and in Medan in 2020, only a limited number of ferry services for food and supplies were operating, causing a delay in the project's building phase. Nevertheless, with the dedication of the EcosystemImpact team, the aviary was completed in September 2020.

COVID-19 also made it more difficult for EcosystemImpact to communicate and cooperate with partners and the conservation groups of which it is a member. Due to travel restrictions, technology became the primary means for maintaining close working partnerships and networks. They joined online video meetings and workshops hosted by IUCN SSC ASTSG and Silent Forest Group on the Asian songbird crisis and communicated frequently via messaging services. A number of these discussions focused on Barusan Shama conservation in the region and greatly benefitted the development of EcosystemImpact's Barusan Shama breeding programme. With Simeulue Island being a remote location with no access to veterinary services or guidance, these chats became crucial in developing EcosystemImpact's breeding programme and receiving guidance on husbandry.

Despite the challenges, the online communications established because of travel restrictions made EcosystemImpact more connected to the network of conservation partners and international experts, which consequently helped to establish and endorse the conservation breeding programme of Barusan Shama. The two offspring (Plate 7) hatched in 2020 represent the first successful breeding of this taxon. EcosystemImpact now has six male and six female adult birds, two fledglings, and five recently hatched chicks.

Bird guides and communities left high and dry: COVID-19's impact on birding tourism

The pandemic also devastated birding tourism in Asia and, along with it, the bird guides and communities who play a vital role in keeping wild bird populations safe from poaching (Plates 8 & 9). Not only are professional bird guides deprived of their primary source of income, but many local communities throughout the region also lost their revenue stream from providing logistical support to birdwatchers.

James Eaton, of Birdtour Asia, shared that the situation in Asia has been more challenging compared to other continents, where border restrictions have been less severe. 'Many of our clients managed to go on relatively hassle-free tours, albeit at short notice, to countries in Central and South America and Africa', he said.

In some countries, such as China and India, there remains domestic birding tourism from locals with higher disposable income and an interest in birding. However, professional bird guides in many South-East Asian countries, where the main clientele is international birdwatchers, saw guiding jobs grind to a complete halt from March 2020. Skilled guides in local communities were among the worst hit.



SAM VEASNA CENTRE.

Plate 8. The award-winning Tmatboey community ecotourism project is solely reliant on birding tourism and safeguards several Critically Endangered species. Cambodia, 2020.



MARK JASON VILLA

Plate 9. Carlito Gayramara, the local bird guide, scanning for Philippine Eagles *Pithecophaga jefferyi* on Mount Kitanglad, Mindanao, the Philippines, in 2018. We wish to share our condolences with the Gayramara family for the loss of Amelia, the wife of Carlito who for decades has welcomed and cooked for visiting birders. She sadly passed away due to COVID in September 2021.

‘Adun Bahrum, the finest local birder from Gunung Gede, and his team are always helping me and other tour companies or solo birders who visit Gunung Gede’, shared Khaleb Yordan, who runs Jakarta Birder, in Indonesia. ‘Now, he has no job due to the pandemic.’

The communities involved in birding ecotourism were seriously impacted too. As tours were cancelled, local communities involved in birding tourism were badly affected, with everyone associated with these tours (local guides, drivers, hosts) losing much or all of their annual income. ‘We were told some heart-breaking stories, where local agents had to sell their houses to keep themselves afloat’, said Eaton.

Bird guides and local communities involved in birding tourism are guardians of important bird habitats. Some guides are ex-poachers, using their knowledge and expertise to find rare species for birders. Other ex-poachers have turned their hunting hides and waterholes into photographic

hides, giving birdwatchers and photographers unprecedented views of birds. Furthermore, birding tourism deters poachers from operating freely in those areas. This is particularly important in many parts of Asia where there is a lack of large, landscape-scale protected areas, such that conservation relies heavily on local communities who protect their land. Birding tourism is often the only viable way for this to be achieved and it stands to reason that the COVID-19 pandemic could lead to developments that cause local extinctions.

Some guides have been able to pivot to alternative jobs to make ends meet. A few could leverage their extensive bird knowledge and were hired as consultants by conservation NGOs and researchers to carry out field surveys or trade research, and so continue contributing directly to songbird conservation. Yordan, for example, was recruited by Project Wallacea to do bird and habitat surveys in eastern Indonesia with the University of Indonesia. But, with conservation organisations themselves struggling, others have been less fortunate.

There remains a concern that some members of the communities might return to poaching in desperation. An investment in the continued survival of these communities is therefore an investment in community-led, *in situ* conservation of songbird populations and habitats. To keep guides and communities going through these times, Birdtour Asia raised over £11,500 (and an additional 50% matched funding) for local guides and communities in Indonesia, India, Cambodia, Laos, Vietnam and the Philippines.

A lifeline for songbird conservation

The COVID-19 pandemic has put songbird conservation organisations, bird guides and birding tourism communities under new levels of pressure. They in turn have demonstrated their ability to be highly adaptable and innovative in overcoming the unprecedented challenges they have faced. The case studies outlined in this article show that being able to prioritise, be flexible, shift focus, use alternative and new tools, collaborate and ask for help are key for long-term resilience. However, there is no telling how long this pandemic will persist, and how those without safety nets—such as local communities—will be negatively impacted.

The *in situ* and local *ex situ* Asian songbird conservation projects affected by COVID-19 still need funding and support. ASTSG will continue to provide expertise and advise its partners during these challenging times. The ASAP Species Rapid Action Fund grants are still open for projects that need emergency funding to tackle the conservation of highly threatened species in South-East Asia, including Critically Endangered songbirds. More

details can be found at <https://www.speciesonthebrink.org/asap-grants>.

We encourage foundations, corporations, governments and individual donors to consider supporting songbird conservation efforts and bird guides, financially or otherwise. OBC has recently created a new conservation fund specifically targeted at the Asian Songbird Crisis. Members can be sure that every penny donated will go directly into the prevention of the extinction of the many avian species now under threat across the region. Should you wish to contribute to this work you can do so at <https://www.orientalbirdclub.org/donate>.

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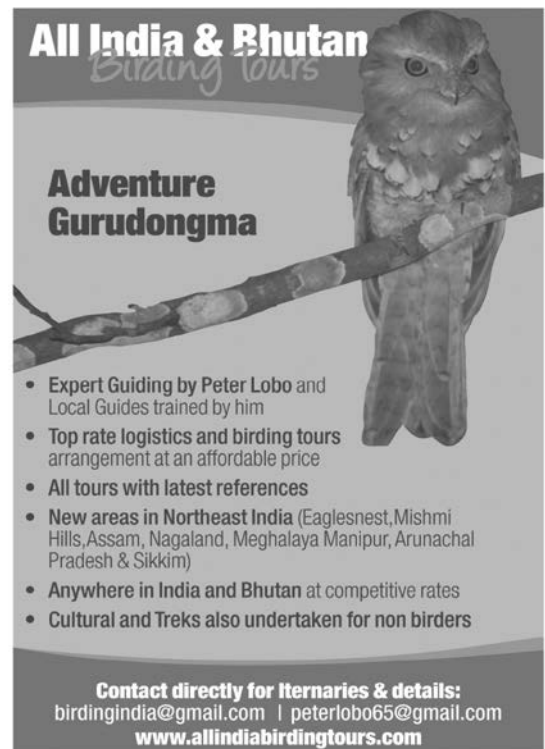
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Identification of the Narcissus Flycatcher–Yellow-rumped Flycatcher complex in subadult and female plumages

DAVID N. BAKEWELL, PHILIP D. ROUND, AYUWAT JEARWATTANAKANOK, JAMES A. EATON, PARK JONG-GIL & YOSHIMITSU SHIGETA

Introduction

The taxonomy of the Narcissus Flycatcher *Ficedula narcissina*–Yellow-rumped Flycatcher *F. zanthopygia* complex was investigated by Dong *et al.* (2015) and, on the basis of ‘congruent differences in multiple independent traits and the deep genetic divergences among the four taxa in the complex’, treatment of all (Yellow-rumped Flycatcher, Narcissus Flycatcher, Green-backed Flycatcher *F. elisae* and Ryukyu Flycatcher *F. owstoni*) as separate species was proposed. These recommendations were accepted swiftly by BirdLife International (del Hoyo & Collar 2016) and more recently by the ‘IOC’ (Gill *et al.* 2021) and Clements/eBird (Clements *et al.* 2021) taxonomies.

The plumage of adult males of all four taxa is largely distinctive and well-described, but birds in female/immature plumages present a far greater identification challenge for the field observer. In recognition of the major gaps in understanding that existed at the time, Moores (2005) provided a preliminary and tentative treatment of the four taxa in all known plumages. Despite his conclusions being provisional, this has remained the principal reference for dealing with identification of members of this group. Most English language regional field guides make no or only brief mention of subadult plumages. Ageing criteria for Yellow-rumped Flycatcher were described in detail by Round & Gardner (2008) and recently depicted in Norevik *et al.* (2020), but none of the taxa formerly lumped as Narcissus Flycatcher were discussed.

This paper focuses on the identification, ageing and sexing of these taxa in subadult and female plumages and, in response to the growth of interest in them, provides an update on Moores’ article, re-examining proposed identification criteria and, in some cases, proposing clarifications or modifications to criteria upon which identification is based.

Methods

Field observations, photographs and morphometric data (from birds ringed on migration) provide the basis for the descriptions herein. The distribution map in Dong *et al.* (2015), showing the breeding

and wintering ranges of all four taxa, was used as a primary reference. Pictures of birds photographed in the core breeding and wintering ranges of each ‘Narcissus complex’ species (i.e. **Green-backed** in eastern China, Thai-Malay Peninsula and Singapore; **Narcissus** in Japan south to Kyushu, the Philippines and Borneo; **Ryukyu** in the Ryukyu islands, Japan) were analysed for discrete structural and plumage features to build up an initial impression of appearance and variation. Photographs were sorted by month in an attempt to differentiate age classes and sex. Once a suite of features was built to distinguish the former Narcissus complex species, photographs of birds out of their known range were analysed and identification attempted. Photographs of Yellow-rumped Flycatchers were similarly analysed, with particular attention being paid to birds viewed from below, when rump, tail and wing pattern were not visible.

Identification criteria gleaned from this analysis were compared with those proposed by Moores (2005) and Dong *et al.* (2015).

Range and distribution

Dong *et al.* (2015) summarise the known breeding and wintering areas of each taxon. They draw attention to the allopatric distribution of Narcissus and Green-backed Flycatchers, the former having a more easterly breeding and wintering range (principally being a bird of the East Asian island chains of Japan, the Philippines and Borneo) and the latter having a more westerly range (being restricted to continental East and South-East Asia), overlapping in both breeding and wintering distribution with the more widespread Yellow-rumped Flycatcher. This baseline information is useful as a starting point for separating the four taxa in the field, as is an understanding of where and when the species might be expected to occur outside the breeding and wintering ranges.

A general picture of migration routes and timing was traced using the eBird mapping and bar chart tools which revealed the frequency of sightings by region (country, county, city, etc.) and month.

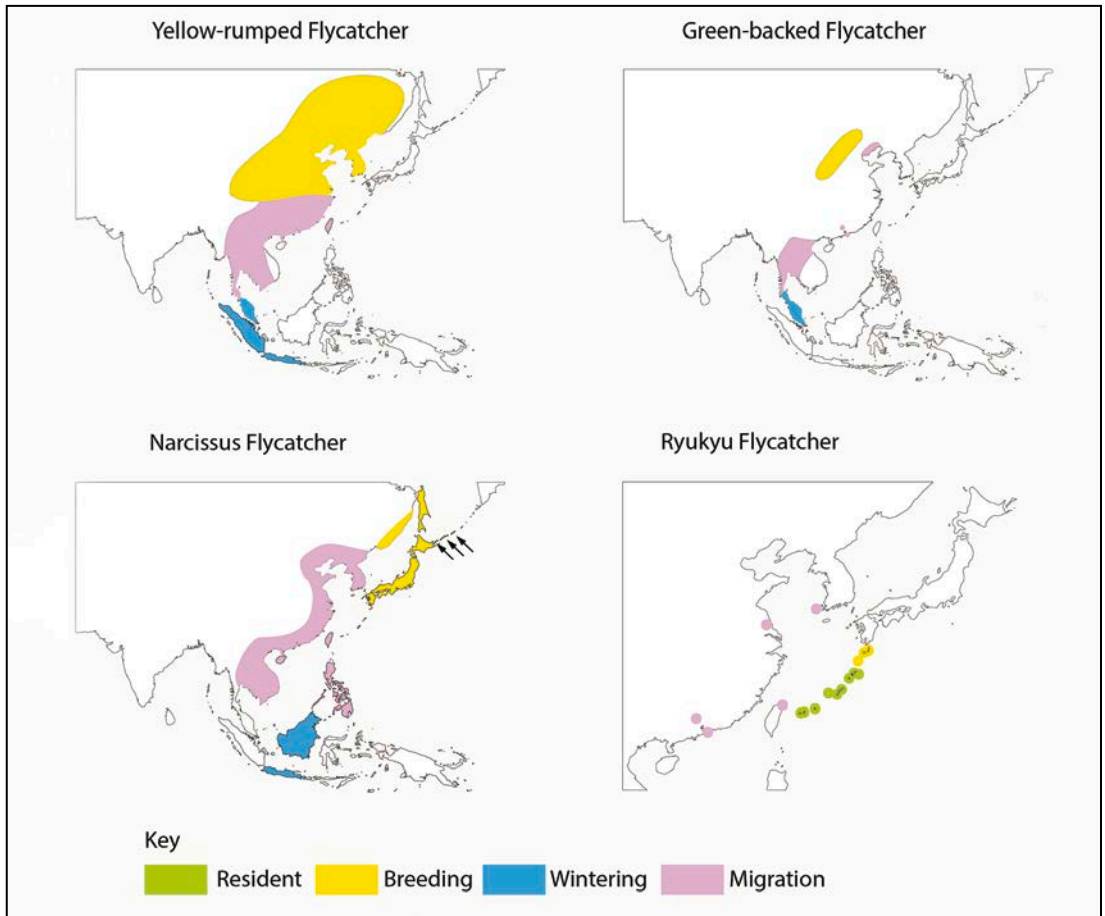


Figure 1. Distributions maps of the four species.

Yellow-rumped Flycatcher *Ficedula zanthopygia*
Breeding. From late May to July, almost all records are from central and northern China, Mongolia, the Korean Peninsula and parts of the Russian Far East. Possible oversummering birds have been reported in India and Singapore (per eBird).

Autumn migration. Moves southward significantly earlier than other taxa, with the earliest autumn record in Thailand on 1 August (Round & Gardner 2008). Migrants peak in South Korea from mid-August to mid-September. Increasing numbers move through Vietnam, Cambodia, Thailand and Peninsular Malaysia from August onwards, with the first arrivals on Sumatra being noted in September and Java in October. There are ‘few confirmed records from Borneo’ (Eaton *et al.* 2021); Mann (2008) cites three in September.

Wintering. Records from Taiwan, Hong Kong and the Indochinese Peninsula are sparse by November, with the majority of records coming from an arc stretching from the Thai-Malay

Peninsula to Java. By December and January, most records are confined to Peninsular Malaysia south to western Java. There are two records of presumed winterers in Borneo (Mann 2008), and a few vagrant midwinter records from the Indian Subcontinent at this time (per eBird).

Spring migration. Mid-March sees the first northward migrants reaching the Inner Gulf of Thailand and northern Vietnam. By April, there is large-scale northward migration with some birds passing through South Korea from mid-April and north-east China by the end of the month. By May, records from Java and Peninsular Malaysia are scarce and, while some are still moving through Korea, others have arrived in Russia. By June there are almost no records south of Sichuan province in central China.

Green-backed Flycatcher *Ficedula elisae*
Breeding. Because of the confused identification criteria, records of Green-backed without photographic documentation were treated as

provisional. However, an overall picture emerges of birds present on their breeding grounds in Hebei, China, from mid-May until August, subsequently moving south to their wintering grounds in the Thai-Malay Peninsula.

Autumn migration. The first eBird report of Green-backed south of their breeding grounds is from Hubei province, China, in early September. Birds flying due south from the known breeding area would inevitably avoid the Chinese coastline until reaching the vicinity of Hong Kong, where the species is considered rare (with just three accepted records: G. Carey *in litt.* 2020). There are no records from Taiwan (Hsiao & Li 2017). By the end of September, the first birds have arrived in the Thai-Malay Peninsula; by November, there are no eBird reports north of 14°N (south-east Thailand and Cambodia).

Wintering. Between December and February most eBird reports are clustered in the Thai-Malay Peninsula from Krabi to Singapore (chiefly in lowland forest, including semi-urban parks). There is a confirmed (photographed) record from Sabah, Borneo, on 19 November 2017 (Eaton *et al.* 2021). Given the small number of annual records from Singapore, it is presumed also to winter in the Sumatran lowlands but there are no confirmed records, probably due to a lack of observer coverage.

Spring migration. In April, while many birds are still on their wintering grounds, others are moving north through Thailand and Vietnam, with the main passage peaking slightly later than that of Narcissus Flycatcher. By mid-May there are very few left in South-East Asia, while from the first to third week of May there is a significant arrival on the Hebei coastline, China.

Narcissus Flycatcher *Ficedula narcissina*

Breeding. In June and July, almost all records are from the northern islands of Japan, with a few from eastern Russia. Occurs most frequently on eBird checklists in Japan from May to October.

Autumn migration. There are isolated records away from breeding areas as early as the first week of September (Borneo), but the bulk of southward migrating birds are recorded in Shanghai, China (c.30°N), from late September to late November; in Taiwan (c.25°N) from the first week of October to the end of November; in Hong Kong (c.20°N) from the second week of October to mid-December; in the Philippines (c.10–15°N) from the beginning of October to the first week of December; and on Borneo (c.5°N) from mid-October to December. There are a few autumn records in South Korea. The pattern of observations suggests that most birds move south from breeding areas via Taiwan (autumn records from Hong Kong are

relatively rare) to the Philippines and thence to Borneo, largely avoiding the Indochinese and Malay Peninsulas.

Wintering. Few records December–January, probably because migrants disperse into comparatively less-birded inland forests after their arrival at better-watched coastal sites, and because the monsoonal weather reduces the number of bird observations. There are two December records involving three birds in Hong Kong (D. Diskin *in litt.* 2021), well north of the known wintering area. There are a few midwinter records from northern Borneo. Records south of c.4°N are rare, although there are sparse sightings from Peninsular Malaysia (in late November, MNS 2017), Singapore (four records: November and December (Tan 2021)), Java and Bali, and Australia (Western Australia, Ashmore Reef and Cocos (Keeling) Islands) (Menkhorst *et al.* 2017).

Spring migration. The frequency of observations increases once more from early March to the end of April on Borneo; from February to early March in the southern Philippines; from mid-March through to mid-April in central and eastern Thailand, southern and central Vietnam and Cambodia; from mid-March into May in Hong Kong and Taiwan; and from April to late May in Shanghai and South Korea.

The pattern of observations suggests that in spring many birds move north via a sea-crossing from northern Borneo to the south and south-east facing coasts of central Thailand, Cambodia and Vietnam, and from there follow the east coast of the continent back to the breeding grounds.

Ryukyu Flycatcher *Ficedula owstoni*

Breeding. Breeds in southern Japan, from Yakushima island in the north to the Nansei islands in the south. Three subspecies have been recognised: nominate *owstoni* (Miyakojima to Iriomote), *shonis* (Amami, Okinawa, central Ryukyu Islands) and *jakushima* (Yakushima and northern Ryukyu Islands) (Otani 2019, Dong *et al.* 2015), although IOC (Gill *et al.* 2021) and the Ornithological Society of Japan (2012) currently treat the species as monotypic. Southernmost populations are considered resident, but birds breeding at the northern end of the range are not present in the winter months, presumably migrating south to unknown wintering grounds (Ministry of the Environment 2009).

Autumn migration. No information. See below.

Wintering. No information. Wing length of the northern migratory population suggests a migratory capability similar to Narcissus Flycatcher, so more attention should be paid to ‘Narcissus-type’ flycatchers on migration and in wintering areas.

In particular, it is worth giving scrutiny to midwinter records of ‘Narcissus-type’ flycatchers north of known wintering areas.

Spring migration. Adult males have been photographed in Jiangsu (<https://bit.ly/3zPqJFc>) and Guangdong, China, in March (eBird S66262293) and in north-east Taiwan in April (eBird S85887777), where it is a vagrant (Dong *et al.* 2015). There are at least eight accepted records (all males) from Hong Kong, between 21 March and 13 April (D. Diskin *in litt.* 2021). There are also several records backed up by photographic documentation from South Korea.

Identification

Detailed descriptions

When considering the colour and tone of birds in the field or in photographs, it is important to bear in mind the effect of light. Darker backgrounds generally make colours appear richer; poor lighting can make colours look duller; and lighter backgrounds and strong light can make colours look paler and ‘washed out’. Strong sunlight filtering through green leaves can cause a green or yellow hue to plumage. All of these factors can make precise perception of colour challenging.

Yellow-rumped Flycatcher

Appears bulkier and bigger-headed than Narcissus and Ryukyu. Bill deep-based, often appearing short and stubby. Primary projection much shorter than longest tertial (often only 2/3 length) with 6–7 primary tips visible on the closed wing. Looks shorter-tailed and longer-winged than Green-backed. Undertail-coverts appear long, extending >1/2 way along the tail length. The bill is dark to pale grey, with a grey-flesh base to the lower mandible. Legs and feet are blue-grey.

Adult female. Grey-olive to grey-brown upperparts, bright yellow rump, blackish uppertail-coverts and tail in summer. Following post-breeding moult, the upper tail is brown or grey with blacker uppertail-coverts, often tipped paler. Broad, diffuse pale grey supercilium from behind or over eye to bill base (extends over bill); lores often pale, creating an open-faced appearance; eye-ring greyish white. Inner 4–5 median and greater coverts broadly tipped and thinly edged white. In some individuals, the inner greater coverts form a large white patch in the inner wing (somewhat recalling that of adult male Green-backed). Outer greater coverts lack pale tips. Outer web of longest tertial edged white along entire length; inner tertials uniform grey-brown.

Table 1. Summary of key field characters of Yellow-rumped, Green-backed, Narcissus and Ryukyu Flycatchers in female and subadult plumages.

	Yellow-rumped Flycatcher <i>Ficedula zanthopygia</i>	Green-backed Flycatcher <i>F. elisae</i>	Narcissus Flycatcher <i>F. narcissina</i>	Ryukyu Flycatcher <i>F. owstoni</i>
Bill	Deep-based. Blue-grey; pinkish base	Deep-based. Blue-grey	Slim. Blackish; blue-grey base	Slim. Some hook-tipped. Blackish; blue-grey base
Head	Buff-white eye-ring, otherwise grey-brown with pale grey lores	Obvious yellowish eye-ring, otherwise plain olive	Rusty, buff or (rarely) yellowish eye-ring. Grey-brown supercilium from bill to behind eye	Yellowish eye-ring, especially above eye. Supercilium from bill to eye, yellow-tinged
Underparts	Off-white to yellow; mottled breast	Yellowish, often bright; indistinct breast mottling	Off-white or yellow-tinged; often mottled breast and throat	Greyish brown or yellowish; heavy mottling to lower flanks
Greater coverts (adult female)	Inner 4–5 broadly tipped and thinly edged white	Inner 3–4 tipped greyish. Outers lack obvious contrasts	Lack obvious contrasts	Lack obvious contrasts
Greater coverts (immature)	Inners as ad ♀. Outers narrowly tipped and edged white or buff	Narrowly tipped white or buff. Edges dull. Clear wingbar	Buff or rusty fringes	Buff or rusty fringes
Mantle	Dull olive-grey	Olive-green	Brownish, sometimes olive-tinged	Olive-tinged
Rump	Bright yellow	Greenish olive	Greenish olive	Dull olive
Uppertail-coverts	Olive to blackish	Olive-brown	Rufous	Olive-brown
Tail	Olive-brown to blackish brown	Olive-brown with slightly rufous base	Dark brown with rufous base	Dark brown with slightly rufous base
Undertail-coverts	Long; over ½ tail length	Short: ½ tail length	Long; over ½ tail length	Short: ½ tail length

Underparts off-white to pale yellow; throat often whiter; breast often mottled or scaled, forming ill-defined greyish-brown band; vent white.

1cy. (Plates 1 & 5, Figure 2) Following post-juvenile moult, can be separated from adult ♀ as follows: white- or buff-tipped greater coverts extend across the entire greater covert array to the outermost; inner tertials usually show whitish terminal spots (Round & Gardner 2008). 1cy ♀ has olive uppertail-coverts (some may be replaced with blacker feathers) and tail; rump yellow mottled with olive; off-white to pale lemon-yellow underparts. 1cy ♂ may have brighter yellow rump, blacker uppertail-coverts and tail and slightly brighter lemon-yellow underparts. However, differences are minor and most first-years are not safely distinguished to sex in autumn.

2cy (spring). ♀ may retain some juvenile tail and uppertail-coverts, and (increasingly worn) pale tips to outer greater coverts and inner tertials. 2cy spring ♂ resembles adult male in most respects, with black upperparts and bright yellow throat, breast and belly, but retaining unmoulted brown primaries and secondaries, primary-coverts and alula, and usually a few (up to 3 or 4) outer greater coverts. A few brown body feathers may also be retained, most often on the nape.

Similarity to other taxa. Yellow-rumped Flycatcher is straightforward to identify if the white-edged longest tertial and contrastingly dull inner tertials can be seen. Some immature Narcissus Flycatchers show whitish edges to all three tertials. Some adult male Ryukyu Flycatchers may show a white edge to the longest tertial, but can easily be distinguished by the all-yellow supercilium. If seen only from below, confusion between Yellow-rumped and Green-backed can occur (Plate 12). From below, Yellow-rumped can be identified by the flesh base to the bill, long-looking undertail-coverts and, if present, paler throat than underparts and, usually, more prominent scaling on the breast.

Green-backed Flycatcher

Structurally more similar to Yellow-rumped than to Narcissus or Ryukyu, appearing larger and bigger-headed than either. Primary projection is much shorter than the longest tertial (often only 2/3 length) with 6–7 primary tips visible on the closed wing. Usually four (rather than three) primaries are emarginated (p5–8, numbering primaries from innermost to outermost), although this is not always the case. Undertail-coverts typically extend about half the tail length (shorter than Yellow-rumped and Narcissus), and tail appears long compared to Narcissus. Bill relatively broad and deep, typically grey or blue-grey with

darker culmen and paler cutting edge to lower mandible. Legs and feet blue-grey with pinkish soles and posterior.

Adult female. Bright olive upperparts, rump slightly brighter; uppertail-coverts olive-brown, tail brown with rufous edges which can make the base of the tail look rufous (although less so than Narcissus), contrasting with greenish rump. Head concolorous with upperparts except for paler, yellower lores and eye-ring and indistinct yellower streaks on ear-coverts. Yellowish supraloral area does not meet over bill, or just barely. Inner median and greater coverts olive, indistinctly tipped grey-olive, and remiges with brighter fringes in fresh plumage but, overall, wing lacks strong contrasts. Underparts lemon-yellow to bright yellow, particularly the throat. Olive shading at breast-sides may extend across the breast as an indistinct band, sometimes lightly mottled or scaled. Vent white or pale yellow.

1cy. (Plate 2, Figure 2) In autumn, may look brighter than adult ♀, with more contrasting rump and base to tail. Differs from female as follows: all greater coverts tipped white to creamy buff; some birds have similar tips to some or all median coverts. These form thin but distinct wingbars on otherwise dull wing-coverts. Tertials are distinctly edged pale buff and have a whitish apical spot which often extends up the feather shaft, forming a broader wedge on the inner two. This may remain after the pale edges have worn away.

2cy (spring). (Plate 6) Usually takes two full cycles to reach adult plumage (Otani 2002). 2cy (spring) birds may retain pale tertial and covert tips into June and July. By January, as birds undergo a partial moult, ♂ may show some adult-like features such as: yellow or yellowish feathers in the rump, brighter olive upperparts and brighter yellow underparts (especially the throat), and/or a vestigial yellow supercilium; otherwise they resemble females. Replaced inner median and greater coverts may show significant white edges and tips, the inner greater coverts being slightly longer than the more worn, unmoulted outer.

Similarity to other taxa. For similarities to Yellow-rumped Flycatcher, see above. Confusion with Narcissus Flycatcher has been a perennial problem, in large part due to confusion over the variability in appearance of Narcissus Flycatcher (see below). Green-backed can be distinguished from Narcissus structurally by its shorter wings and larger-looking head and bill. Green-backed shows a plainer, less contrasting face with (in females and 1cy males) a less pronounced supercilium, and less distinctly streaked ear-coverts. The tail is less rufous than Narcissus, offering less contrast with the uppertail-coverts

(which are olive-brown rather than rufous) and rump. Subadult Green-backed median and greater coverts can be strongly tipped white or buff (usually brighter than on Narcissus), but the edges are not significantly paler, as is often the case with subadult Narcissus. The apical spot on the upper tertials, which is whiter than the rest of the feather fringe, tends to be broadest where it meets the feather shaft, whereas it is more or less uniform in thickness on subadult Narcissus. From below, Green-backed typically shows less scaling on the breast and has shorter-looking undertail-coverts and longer tail than Narcissus.

Narcissus Flycatcher

Although similar in size to Yellow-rumped and Green-backed, Narcissus Flycatcher can resemble smaller *Ficedula* or *Muscicapa* flycatchers in the field, appearing 'petite' in a way that Green-backed and Yellow-rumped do not. It can look smaller-headed and -billed, and appears shorter-tailed, than Green-backed. The primary projection is equal to, or just short of, the length of the longest exposed tertial—significantly longer than all except the northern populations of Ryukyu (Dong *et al.* 2015). Narcissus most commonly shows 7–8 visible primary tips, compared to 6–7 in Green-backed and Yellow-rumped. Dong *et al.* (2015) mention differences in wing shape: on Narcissus, p9 is long, falling nearer the tip of p6 than p5. In individuals of the other three species measured by Dong *et al.* (2015), p9 was close to the length of p4 or p5 on the closed wing. However, on the majority of Yellow-rumped Flycatchers measured in spring and autumn in South Korea, p9 was nearer to p6 than p5 in length; this feature may therefore be of limited use. The undertail-coverts typically extend over half the tail length—appearing longer than those of Green-backed and Ryukyu. The bill typically looks shorter and slighter than in the other three species, and is darker overall (it is dark grey or black, sometimes with a blue-grey base to the lower mandible). The legs and feet are blue-grey with pinkish soles and posterior.

Adult female. Grey-brown to olive upperparts. Rump brighter olive than mantle; uppertail-coverts are contrastingly rufous; tail brown with rufous edges, becoming blackish towards the tip. Ear-coverts grey-brown to olive, finely or coarsely streaked or mottled buff; eye-ring cream or buff, sometimes pale yellow or warmer buff; supercilium buff or creamy-buff, more or less distinct over eye and only visible at certain angles, often with a more distinctly paler supraloral area, obviously meeting above bill; crown and nape may be darker, offering slight contrast to paler supercilium and ear-coverts. Wings dull grey-brown, lacking strong

contrasts; median and greater coverts fringed slightly paler brown. Some (older?) females have a few greyish or whitish inner median and greater coverts. Tertials in fresh plumage fringed brighter buff-brown. Underparts dingy off-white or pale olive. Brown at wing bend and along flanks. Scaly or heavily mottled brown on throat and especially breast, sometimes forming a complete breast-band. Belly sometimes shows a pale yellow central line. Vent white.

1cy. (Plate 3, Figure 3) In fresh plumage, differs from adult ♀ in having clearly demarcated pale buff to chestnut fringes to unmoulted juvenile median and greater coverts and tertials. Tertial tips sometimes paler than edges but lack broadened apical spot of Green-backed. 1cy ♂ may be sexable from late autumn by showing some of the following: wholly white or prominently white-tipped inner greater and median coverts, variable number of blackish-centred median and outer greater coverts, pale yellow underparts (especially throat and breast), partly or wholly yellow rump (inviting confusion with Yellow-rumped Flycatcher), black uppertail-coverts, and/or pale yellow upper crescent of eye-ring and supraloral area.

2cy (spring). (Plate 7) 2cy ♀ can sometimes be told from adult ♀ by the contrast between new, indistinctly tipped inner greater coverts and unmoulted juvenile outer greater coverts, which show paler tips or fringes, although these may have worn almost completely off. By early spring, most ♂ are sexable. The replacement of first-winter head and body plumage with black, adult-like feathers starts on the ear-coverts, crown, mantle, rump and uppertail-coverts, with the nape feathers often being the last to be replaced. A variable number of tertials, secondary-coverts, tail and secondary feathers are moulted before northward migration (Okahisa 2014), and the unmoulted juvenile primaries, secondaries, primary-coverts and alula are noticeably browner than the moulted feathers. A significant caveat to this description of 2cy spring ♂ is occasioned by a phenomenon known as 'delayed plumage maturation'. Some 2cy ♂ delay the development of adult-like plumage, perhaps to avoid aggressive interactions with adult males on the breeding grounds, and thus increase their breeding success (Okahisa 2014). Such birds show a combination of male and female plumage characteristics, particularly brown or olive upperparts and lemon-yellow underparts, yellow tones to the rump and white inner median and greater coverts. Birds photographed exhibiting such features on migration and in breeding areas are often misidentified.

Similarity to other taxa. For similarities to Ryukyu Flycatcher, see species account below. The

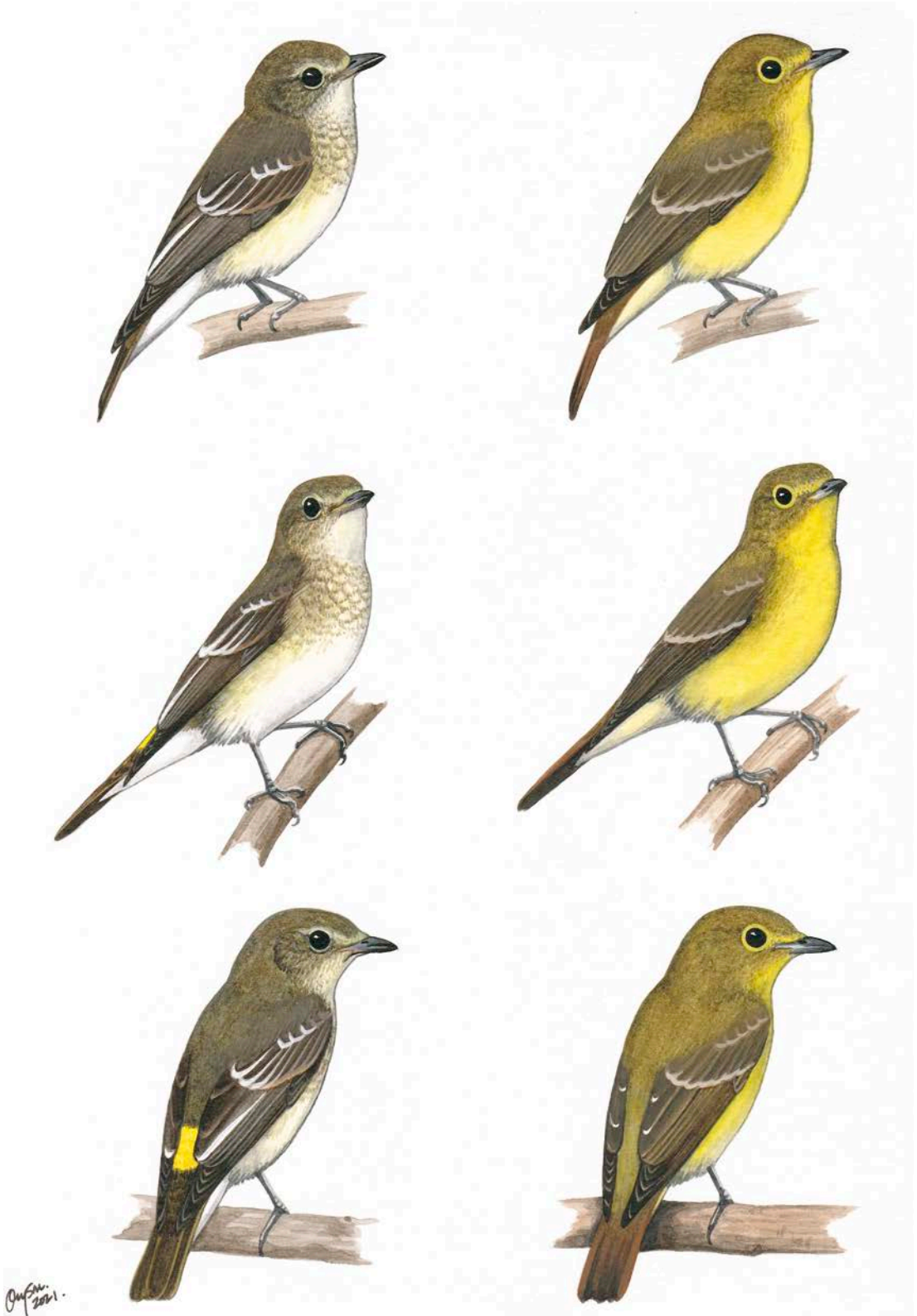


Figure 2. Yellow-rumped *Ficedula zanthopygia* (left) and Green-backed *F. elisae* Flycatchers showing typical 1cy plumage in profile, ventral and dorsal aspects. Illustrations by Ayuwat Jearwattanakanok.

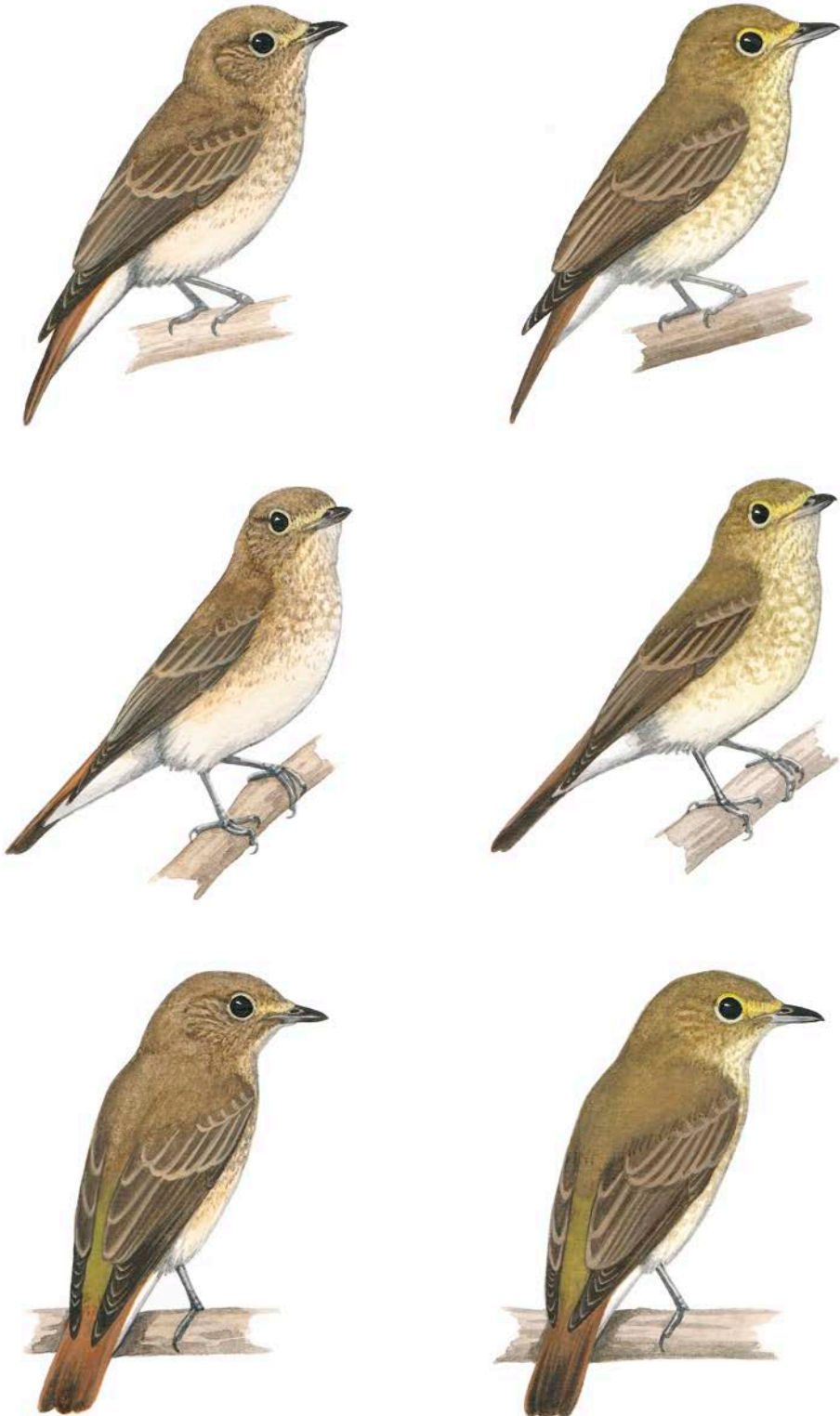


Figure 3. *Narcissus F. narcissina* (left) and *Ryukyu F. owstoni* Flycatchers showing typical 1cy plumage in profile, ventral and dorsal aspects. Illustrations by Ayuwat Jearwattananok.



KAI PFLUG

Plate 1. 1cy Yellow-rumped Flycatcher *Ficedula zanthopygia* in fresh plumage, showing typical grey-olive head with pale grey supraloral area and eye-ring; short thick bill with flesh-coloured base. Breast can be heavily mottled and throat whiter than breast. Undertail-coverts appear long, around half the tail length. Shanghai, China, 24 August 2020.



JOHNYU

Plate 2. 1cy Green-backed Flycatcher *F. elisae* in fresh plumage, showing typical bright olive upperparts and yellow underparts, plain 'face' with yellow eye-ring and longish blue-grey bill, and thin but distinct wingbars. Undertail-coverts less than half the tail length. Guangzhou, China, 18 October 2014.



ZHONG YING KOAY

Plate 3. 1cy Narcissus Flycatcher *F. narcissina* in worn plumage, showing indistinct pale brown supercilium which goes over the small, dark bill, mottled throat and breast. Greater coverts show complete pale fringes and undertail-coverts appear long, more than half the tail length. Taiping, Malaysia, 18 November 2017.



KIYOHISA TATEMATSU

Plate 4. Adult female Ryukyu Flycatcher *F. owstoni* showing yellow-tinged supraloral area and eye-ring, 'muddy-looking' underparts with mottling extending to flanks and belly. Undertail-coverts look short, less than half the length of the tail. Isolated yellow patches on underparts may be a feature of females in breeding plumage. Ishigaki Island, Okinawa, Japan, 11 May 2017.



KAI PFLUG

Plate 5. 1cy Yellow-rumped Flycatcher showing typical wing pattern of broad white tips to inner greater coverts and isolated white 'slashes' on outermost tertial. Aged as a 1cy by thin pale tips to outer greater coverts and, when fresh, pale tips to inner tertials (the latter have almost completely worn off on this bird). Shanghai, China, 16 September 2020.



NATTHAPHAT CHOTJUCKIKUL

Plate 6. Heavily worn 2cy Green-backed Flycatcher still showing vestigial pale tips to inner tertials and median and greater coverts. The bill looks unusually dark. Chon Buri, Thailand, 21 April 2018.

KAI PFLUG



Plate 7. Female Narcissus Flycatcher (probably 2cy). Short, rusty-based tail with darker tip. The paler edges to the greater coverts wrap around each feather and do not form a conspicuous wingbar. The eye-ring and supraloral area on this bird are particularly rusty—there is considerable variability. This photo shows the long p9, similar in length to p6. Shanghai, China, 26 April 2021.



KIYOHISA TATEMATSU

Plate 8. 2cy Ryukyu Flycatcher, probably of the southern *shonis* race. The long bill is often hook-tipped, the wings appear short and the tail long. Despite the rather bright olive upperparts, the rump and tail are dull. The yellow-tinged eye-ring, supraloral area and underparts suggest that it may be a male. Ishigaki Island, Okinawa, Japan, 31 May 2021.

CHEN YANLIN



Plate 9. Narcissus Flycatcher, initially identified as a Yellow-rumped Flycatcher because of the obvious yellow rump. However, the small bill, tail, tertial pattern and rufous uppertail-coverts indicate that this is a 1cy male Narcissus Flycatcher which has already begun to moult some inner greater coverts, rump and uppertail-covert feathers. Taichung, Taiwan, 5 November 2016.



KAI PFLUG

Plate 10. Blue-and-white or Zappey's Flycatcher *Cyanoptila cyanomelana/cumatilis*. The bulky structure, very long primary projection and short, thick bill, together with fairly concolorous rump and tail, are factors which distinguish it from Narcissus Flycatcher. Shanghai, China, 2 May 2018.

MICHELLE & PETER WONG



Plate 11. Narcissus or Ryukyu Flycatcher. Although identified in Moores (2005) as a 2cy Green-backed Flycatcher, the small head and bill and petite structure indicate that this is a Narcissus or Ryukyu Flycatcher. The short undertail-coverts, short-looking primary projection, heavily mottled underparts and apparently hook-tipped bill suggest Ryukyu Flycatcher. Hong Kong, China, 3 April 2005.



AMAR-SINGH HSS

Plate 12. Yellow-rumped Flycatcher. Initially identified as a Green-backed Flycatcher, this image shows how similar Green-backed and Yellow-rumped Flycatchers can seem from below. The flesh base to the bill, long undertail-coverts (not visible in this image), white-edged outer tertial and inner greater coverts and blackish, pale-tipped uppertail-coverts indicate that this is a Yellow-rumped Flycatcher, probably an adult female. Perak, Malaysia, 3 October 2017.

misunderstanding that female and immature Narcissus cannot show strongly yellow-toned underparts and olive-toned upperparts has frequently led to misidentification of Narcissus Flycatchers as Green-backed (see, for example, plates 5 and 40–44 in Moores 2005). Unusually olive and yellow Narcissus Flycatchers can be distinguished from Green-backed by having a smaller-looking bill, longer primary projection, proportionately shorter tail and longer-appearing undertail-coverts. In fresh plumage, the median and greater coverts often show complete pale brown or buff fringes (tips are paler than edges on Green-backed). The breast and ear-coverts are more mottled. Subadult Green-backed often has white tips to all the greater coverts, while Narcissus most commonly shows warm chestnut or buff tips to these feathers. Young ♂ Narcissus Flycatchers (in late autumn and spring) that develop a yellow rump patch can be mistaken for Yellow-rumped Flycatcher. They can be distinguished by the shorter, more rufous-based tail, tertial pattern and smaller bill (Plate 9).

Female and subadult Blue-and-white/Zappey's Flycatchers *Cyanoptila cyanomelana/cumatilis* (Plate 10) are appreciably larger than Narcissus (16–17 vs 13 cm), but size differences may not be apparent in photographs of single birds, or to those not familiar with the genus in the field. Structurally, Blue-and-White/Zappey's differ from Narcissus in being generally bulkier, longer-tailed and longer-winged, bigger-headed and proportionately shorter-billed. From above, Blue-and-white/Zappey's can be distinguished by their longer tail, which is uniformly rufous-tinged, lacking strong contrast with the rest of the upperparts (Narcissus's tail has a rufous base but is blackish toward the tip, and the tail colour contrasts strongly with the olive-green rump), and their even longer primary projection (roughly equal to the length of the longest tertial), plainer, browner tertials and coverts, plainer head pattern (no hint of a supercilium) and grey-brown mantle (lacking olive tones). From below, the undertail-coverts are much shorter than Narcissus and there is often a narrow, well-demarcated white throat patch. From all angles, the bill is broader and thicker than Narcissus, and it often has a flesh-coloured base.

Ryukyu Flycatcher

Very similar to Narcissus in structure and plumage. May appear smaller in the field. Structural differences from Narcissus are subtle, but include: longer bill (there is overlap, but on some individuals the difference is noticeable), the upper mandible of which is often noticeably hook-tipped. Some photographs suggest a subtly upturned gony,

creating an impression that the bill is upturned on some individuals. Shorter primary projection (particularly southern populations) and shorter-looking undertail-coverts (approximately equal to half the tail length) are also useful features. There is also a difference in wing formula, with p9 being close to the length of p4 or p5 on the closed wing (as opposed to near p6 on Narcissus) (Dong *et al.* 2015). On the closed wing, the gaps between primary tips increase in regular increments, whereas on many Narcissus Flycatchers there is a disproportionately wide gap between the tips of p5 and p6 (see Figure 4).

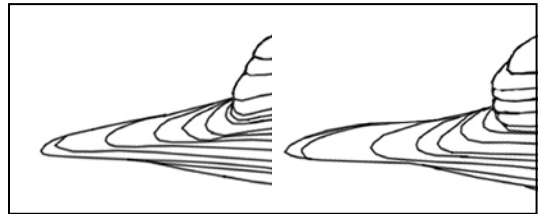


Figure 4. Typical primary tip spacing on the closed wing of Ryukyu Flycatcher (left) and Narcissus Flycatcher (right).

Adult female. (Plate 4) Very similar to Narcissus, and many may not be safely identifiable in the field. Upperparts similar in variation to Narcissus, from grey-brown to olive, though more olive-toned birds may predominate. Features which may be distinctive are presented here for further study: pale supercilium extends only from the bill base to in front of the eye, not over or behind it, and is sometimes tinged yellow. Eye-ring tinged yellow, especially the upper half. Uppertail-coverts olive-brown, not rufous as on Narcissus. Underparts more heavily and extensively mottled than most Narcissus, with mottling extending from the chin to the belly and flanks on some birds, often giving a dirty, dark appearance. Underparts may be off-white or yellow-toned, particularly the central belly, and some apparent adult females may show isolated brighter yellow feathers on chin, throat and/or breast. The bill may show a more extensive blue-grey base to the lower mandible (Moores 2005) than most Narcissus.

1cy. (Figure 3) Differs from adult ♀ as Narcissus.

2cy (spring). (Plate 8) The rate of acquisition of adult-like male plumage is apparently clinal, with northern populations (*jakuschima*) appearing as advanced as Narcissus in first-summer plumage (Dong *et al.* 2015), while southern populations may take two full cycles to attain adult plumage (Otani 2002). In the latter case, 2cy ♂ resemble adult females more than adult males, retaining juvenile tail and wing feathers. Any moulted inner median and greater coverts may show whiter tips than unmoulted

outers. Yellow feathers may be present in the rump and supraloral area, and the upper eye crescent may become brighter yellow. Blackish feathers may appear on the lores and lower ear-coverts. Underparts retain some degree of mottling but are generally yellower than ♀, especially the throat.

2–3cy. From their second autumn onwards (southern population), ♂ increasingly shows adult-like plumage features. The crown, nape and mantle become dark olive, the ear-coverts (especially the lower ear-coverts) blackish, and the supercilium and underparts bright yellow. Frequently the yellow areas on the underparts (chin and throat, or chin, throat and upper breast) are sharply demarcated from the off-white remainder of the underparts. The supercilium typically extends from the bill base to over the eye, rarely extending far behind it, unlike many 2cy male Narcissus. The supercilium on 2cy Narcissus typically stops short of the bill and frequently extends behind the eye. By spring (3cy), inner median and greater coverts may be largely white.

Similarity to other taxa. If seen well, the only potential confusion species is Narcissus Flycatcher. Consideration of potential extralimital Ryukyu Flycatchers should include careful assessment of both structural and key plumage features, as described above. Many may remain indistinguishable in the field, especially without photographic documentation showing a variety of angles and critical details. Spring males should be aged carefully by paying attention to flight feathers; 2cy spring ♂ Narcissus can show olive crown and mantle, and yellow underparts lacking orange tones similar to Ryukyu, but also retain most juvenile remiges, which are brown, in contrast with black moulted inner flight feathers. Additionally, some male Narcissus can show a white ‘spur’ on the base of the third tertial, though this is never as long as can be shown by adult male Ryukyu Flycatchers. The supercilium of Narcissus often narrows in front of the eye and stops short of the bill base; on Ryukyu it often flares in front of the eye and reaches the bill base (and may even extend over the bill) (Otani 2002). However, these are suggestive rather than diagnostic features.

Conclusion

Since this paper is based chiefly on photographic documentation, vocalisations are not covered, especially as such information is covered in depth in Dong *et al.* (2015). This paper builds on the ground-breaking (at least in English texts) work of Moores (2005) and Round & Gardner (2008), using a much larger corpus of photographic evidence than was available over a decade ago, as well as more extensive field and in-hand observations. It

also owes much to the detailed examination of the Narcissus/Yellow-rumped Flycatcher complex undertaken by Dong *et al.* (2015), which brought to a wider audience critical differences in measurements between the four taxa. Our contribution chiefly differs from Moores (2005) in finding Green-backed Flycatcher to be a more distinctive and separable taxon from Narcissus and Ryukyu than was appreciated. It is hoped that this will correct a tendency to identify unusually green/yellow-toned Narcissus Flycatchers as Green-backed. It is also hoped that additional pointers to identification of Ryukyu Flycatcher may help to give a better understanding of the migratory patterns and wintering grounds of the northern population of this cryptic species.

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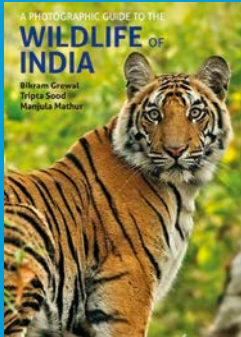
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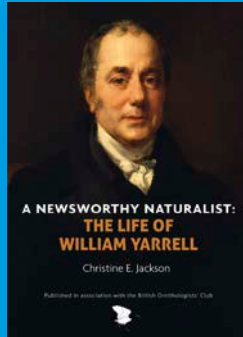
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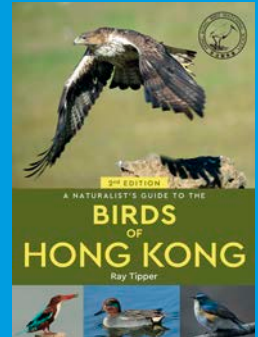
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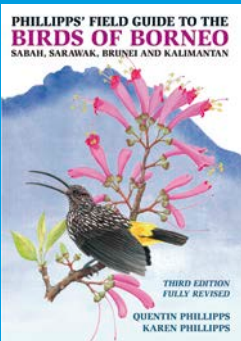
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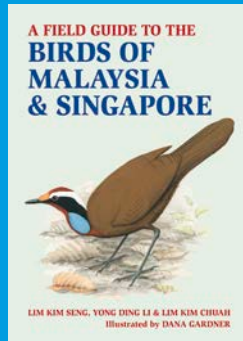
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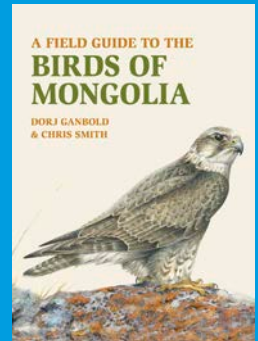
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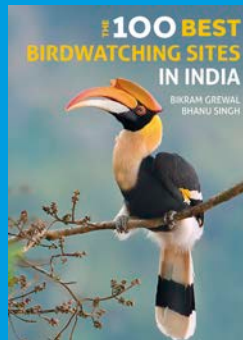
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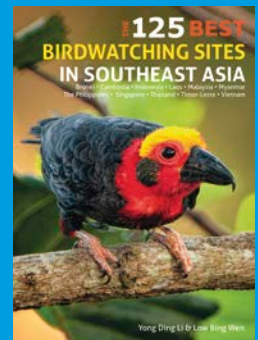
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LITTLE-KNOWN ASIAN BIRD

Visayan Plumed-warbler *Micromacronus leytensis*

ROBERT O. HUTCHINSON

Visayan Plumed-warbler *Micromacronus leytensis* is endemic to the East Visayan islands of Leyte and Samar, the Philippines. It is the rarer of an enigmatic species pair that is among the least known of all Philippine birds owing to their restricted ranges and tiny size which, at 7–8 cm, makes them the smallest species in the archipelago.

A fascinating taxonomic history began with the two species lumped as Miniature Tit-babbler *Micromacronus leytensis* within the Timaliidae, in spite of Rand (1970) suggesting that each taxon deserved specific status. It was Collar (2006) who began unravelling the mystery, using striking plumage differences to separate them as Mindanao (*sordidus*) and Visayan (*leytensis*) Miniature Babbler. Further clarity came when the phylogenetic work of Oliveros *et al.* (2012) showed

only a distant relationship to the Timaliidae, but instead placed them within the Cisticolidae. While the position of *Micromacronus* within the family remains unclear, neither species shows any resemblance to other cisticolas and the species name ‘plumed-warbler’ was coined with reference to the distinctive extended plumes on the back and flanks (Plate 1). While the sister species on Mindanao was found at a number of widely scattered mid-montane locations, Visayan Plumed-warbler remained elusive and evaded many searches by me and others from 2005 onwards (Taylor *et al.* 2015).

My several searches all concentrated on Samar Island Natural Park (SINP), which protects the largest tracts of forest on the island, focusing on accessible areas of forest and forest edge and

Plate 1. Visayan Plumed-warbler *Micromacronus leytensis* showing extended plumes projecting from the back and flanks. Samar Island Natural Park (SINP), Philippines, April 2018.





MARK BEZUIJEN

Plate 2. Typical undulating lowland forest habitat of Visayan Plumed-warbler in SINP. June 2016.

paying particular attention to the mixed-species flocks which are favoured by Mindanao Plumed-warbler. It was not until May 2016, when Michael Kearns located and photographed the species in undulating lowland forest (Plate 2) at 100 m deep within SINP (and accessible only by a 10-km boat adventure through the rapids of the Ulot River), that the species became better known. Subsequent observations in the area have shown that they

typically follow mixed-species flocks through the mid to high canopy, making for challenging viewing, but on 6 April 2018 I was privileged to obtain incredible eye-level views (Plate 3). Comparing it to images of *sordidus* (Plate 4), the differences are striking.

Sound recordings have shown the calls of Visayan Plumed-warbler to be a series of rapid high-pitched twittering notes and very similar to those of *sordidus*. All records from the limited specimen data and field surveys detailed in Gruezo & Gonzalez (2014) lie between sea level and 500 m, indicating a preference for lowland forest, and our own observations suggest it has a localised distribution and is absent from many apparently suitable areas. Like other areas within SINP, the forests surrounding the recent observations appear to be heavily impacted by illegal logging, with recent signs of clearance along the trails and an almost constant sound of chainsaws during recent visits (Plates 5 & 6). Further surveys are required to establish the species' true population status (especially on Leyte, where it has not been seen since the collection of the type series, on the eastern flank of Mt Lobi, in 1961; Collar *et al.* 1999) and to understand the threat posed to the species by ongoing habitat destruction.

Plate 3. Visayan Plumed-warbler giving exceptional low-level views; the species typically remains in the mid to high canopy. SINP, April 2018.



ROBERT O. HUTCHINSON



BRADLEY HACKER

Plate 4. Mindanao Plumed-warbler *Micromacronus sordidus*. Mount Apo, Mindanao, Philippines, February 2020.



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Plates 5 & 6. Illegal logging deep within SINP. June 2016.

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FIELD STUDY

The vocalisations of two little-known Himalayan birds, Orange Bullfinch *Pyrrhula aurantiaca* and Spectacled Finch *Callacanthis burtoni*, with some field notes on diet and foraging behaviours

ANDREW J. SPENCER & PUJA SHARMA

Orange Bullfinch *Pyrrhula aurantiaca* and Spectacled Finch *Callacanthis burtoni* are two finch species endemic to the temperate zone forest of the Western Himalayas Endemic Bird Area (BirdLife International 2021). They are both poorly known species and their vocalisations, and most aspects of their vocal behaviour, are inadequately reported. Here, we describe the vocal repertoire of the two species, based on observations from Jammu and Kashmir, India, in late June 2019, at Liddarwat (34.164°N 75.249°E), in Overa-Aru Wildlife Sanctuary, and at Bangus Meadows (34.366°N 74.030°E). We include observations of their vocal behaviour, supplementing the descriptions of Roberts (1992) and Magrath (1912a,b). Additionally, we note some field observations on the diet and foraging behaviour of Orange Bullfinch, as well as identify plant/tree species as food sources of Orange Bullfinch from photographs that are available online.

Orange Bullfinch *Pyrrhula aurantiaca*

Vocalisations

Based on our observations, the repertoire of Orange Bullfinch appears to be broadly similar to closely related *Pyrrhula* species, and nearly indistinguishable from Red-headed *P. erythrocephala* and Grey-headed *P. erythaca* Bullfinches. These vocalisations can be grouped into a highly variable song and several more stereotyped calls.

The song (Figure 1A–C), apparently only from males, is a relatively low (c.2–3 kHz) series of melodious whistles that are most often initiated by a *tew* note. It has a generally jumbled quality and contains some polyphony. The total song length is c.1–7 seconds. Simpler and shorter versions are apparently more common. More complex song variants sometimes contain sharper notes as well as the typical mellow whistles and are usually quieter in volume; this may be analogous to the song described by Roberts (1992) as soft and warbled subsong. True subsong has

been recorded in early May at about 1,800 m at Dachigam National Park, Jammu and Kashmir, below the usual breeding elevation of the species (Macaulay Library 24565). Songs were heard by us only from birds perched at mid-heights in tall conifers *Abies pindrow* or birches *Betula utilis*, and also, on one occasion, in cherry *Prunus cornuta*.

By far the most common call of Orange Bullfinch is a whistled, slightly descending *tew* (Figure 1D–E), at a similar pitch to the song, often delivered as a couplet. While there is some variation in the length, pitch and pattern, it is very similar to the analogous call in other closely related *Pyrrhula*, although it may average slightly lower in frequency. It is given by both sexes in a variety of contexts, both in flight and perched, including from on the ground, and appears to function as a general contact call.

Less commonly heard calls include a polyphonic, sharply rising *chweep* (Figure 1G). In our single experience with the call, it was interspersed with slightly higher pitched, very quiet and short *peep* notes, and given by a male soon after flushing. This *peep* call is also sometimes given by members of a flock in close contact. Finally, a sharp, descending *keer* note (Figure 1F) at c.3 kHz, sometimes given in series, was recorded. In our encounters with the species, this vocalisation was given by a paired male while chasing conspecifics, and it may function as an aggression call.

As our observations are entirely during the early breeding season, we are unable to make any claims concerning the phenology of Orange Bullfinch vocal behaviour. Anecdotal accounts suggest that flocks in winter seem to be less vocal, especially when feeding, and give only occasional soft contact calls (James Eaton pers. comm., and ML303273391). We also have little information on the daily pattern of vocalising, although the individuals encountered were slightly more vocal (including song) early and late in the day. There is little information available on the sex differences

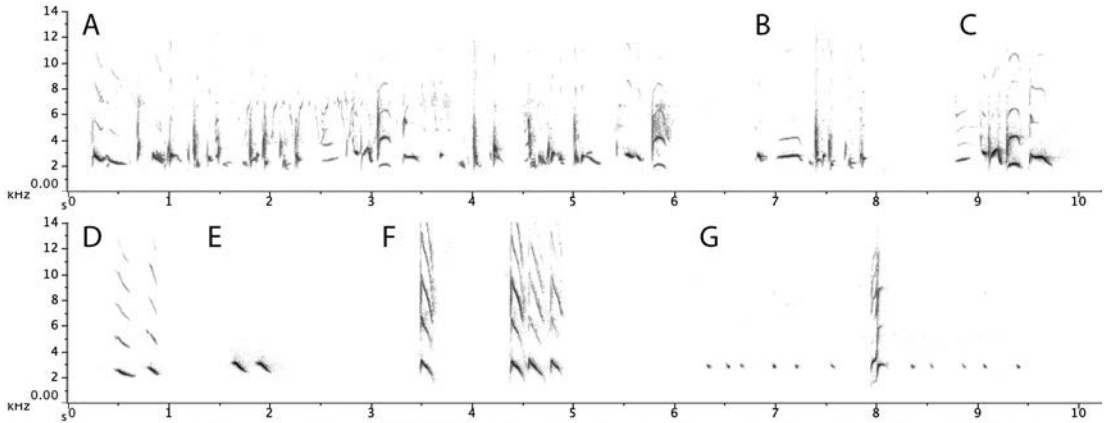


Figure 1. Orange Bullfinch *Pyrrhula aurantiaca* vocalisations. A: song, long example; B & C: song, two short variants; D & E: *tew*, two variants; F: *keer*; G: *pip* and *chweep*. All recordings made by Andrew J. Spencer.

of the vocalisations. Song and *keer* calls were recorded only from males, but our sample size precludes any claims that females don't produce these sounds. Similarly, Magrath (1912b) described regular encounters with singing males, but did not make any mention of female song or vocalisations. He also described variation in the repertoire of different males, recognising individuals from their songs, and most of his observations on vocalisations and breeding are reiterated in Ali & Ripley (1999).

Diet and foraging behaviour

All our observations of foraging Orange Bullfinches were from a small area near a shepherd's settlement on the east bank of Liddar river (34.164°N 75.249°E; 2,875 m), where several small, grazed clearings of grassy meadows were surrounded by tall forest. The dominant tree species was west Himalayan silver fir *Abies pindrow*, with a shrubby understorey of 0.5–2 m-high *Viburnum grandiflorum*. There were also scattered mature stands of Himalayan bird cherry *Prunus cornuta* and maple *Acer* sp., and Himalayan birch *Betula utilis* was abundant at the treeline.

Bullfinches were observed feeding both in small flocks of up to eight birds as well as in apparently mated pairs, primarily in fairly open patches with herbaceous undergrowth fed by rainwater run-offs and shielded by tall silver firs all around. All birds were observed probing moist patches of grassy undergrowth (often at the bases of trees, shrubs or fallen logs), feeding on various plant seeds that had fallen on the ground and fruits of small flowering plants. The birds would hop swiftly while foraging on the ground, but often paused quite motionless when a food item was discovered and spent time consuming it.

The most commonly observed foraged plant species was fruiting dandelion *Taraxacum* agg., which was flowering abundantly on the hillside

(ML265867541). They preferred feeding on plants in early fruiting stages, with immature fruit capsules (achenes) enclosed inside the inflorescence (involucral bracts), and would tear the fruit capsules (achene bodies) off the flower-head (capitulum), consume the fruit by vigorously chewing the basal ends, and discard the feathery pappus on the distal end (Plate 1). Whenever the birds were alarmed while feeding, they would fly to a nearby perch, carrying the torn dandelion fruits in their bills, and proceed to consume them (ML265867341). They would soon return to the same patch and resume foraging on the ground. Pairs and flocks were also observed in the same areas feeding on unidentified grass seeds, carefully selecting them by way of quick, short hops (ML265869721).

Plate 1. Male (foreground) and female Orange Bullfinch *Pyrrhula aurantiaca* feeding on dandelion *Taraxacum* agg. Liddarwat, Jammu and Kashmir, India, June 2019.



A single male was also observed foraging high in a 15 m-tall cherry *Prunus cornuta* tree, tearing off the curled or discoloured parts of its leaves while perched on one of the outermost branches. It was apparently feeding on the leaves, biting off and chewing some portions of the leaf and discarding the remains (ML265868421). Once finished, the bird appeared to inspect and look for similar leaves in the tree. It remained in the tree for nearly 15 minutes, after which it flew to another cherry tree higher up the slope, 10 m from the previous one. It perched on the second tree in such a way that it could access a cluster of 3–4 leaves together without changing its perch. It was again observed tearing off the sides of the leaves, and apparently continued feeding on them in the same manner as before (ML210731981). It was later found that the bird was not feeding on the leaves but was instead consuming a type of woolly aphid (Eriosomatinae), or some other kind of sucking insect, from curled or discoloured leaves of the cherry tree (Dave Leatherman, pers. comm.).

We found that most of the birds were typically shy and skittish while feeding on the ground and, when sensing human presence or disturbance within 12 m, would fly to a nearby perch (0.3–2 m), or at times much higher to take refuge in a tall tree, where they would be obscured from view. They would, however, drop down in approximately the same patch after varying intervals to resume feeding after the disturbance passed. This is analogous to similar observations in the past (Meinertzhagen 1927, Roberts 1992). However, our observations depart from some historical literature where authors termed the birds as tame, fearless, or confiding (Henderson & Hume 1873, Bates & Lowther 1952), including observations of birds feeding by tent-ropes or even entering tents (Unwin 1895, Magrath 1912b).

In the breeding season, Orange Bullfinch is found in openings in fir and birch forest, partial to the vicinity of young tree growth and herbaceous plants (Osmaston 1927). However, there is very little information published on their diet and foraging behaviour. Only three works document that birds specifically feed on fruit or seeds of trees: Magrath (1912a,b) noted their staple food in summer as buds and catkins of the Himalayan birch at Liddar and Sind Valleys, Kashmir, in August, whilst Jones (1948) considered it a woodland species feeding on fruit, berries and buds of trees such as cherry and willow, but did not mention season or location; this information is repeated in Ali & Ripley (1999). Raja *et al.* (1999) observed a flock of at least 15 birds feeding on willow *Salix* seeds at Palas valley, Pakistan, in May. Three works document the birds feeding on

herbaceous plants or shrubs, but do not mention specific details or identify plants: Henderson & Hume (1873) observed them feeding on berries in bushes in Sonamarg, Kashmir, in June; Magrath (1912b) noted that early in the season they were found hopping on snow patches in forest, picking up minute seeds left on the surface of melting snow, though late in summer they were found taking mouthfuls of fine-grained dry yellow clay from the roots and hollow bases of old silver fir trees; and Bates & Lowther (1952) found them feeding on fallen weed and grass seeds within the forest or at the edges of meadows.

There are no published accounts on the diet, foraging behaviours or microhabitat of Orange Bullfinch outside the breeding season. While we don't record any first-hand observations of non-breeding season diet here, we have identified some plant/tree species as food sources of the species from photographs available online; most records were from the non-breeding season (Appendix 1).

Social and interspecific behaviour

Most of our observations of Orange Bullfinch were of monospecific groups or pairs, but on one occasion we observed a pair of Orange Bullfinches feeding on the ground near a pair of Spectacled Finches (Plate 2). The male Orange Bullfinch was easily chased off potential food items by the male Spectacled Finch, and thus appeared to be subordinate to that species during such interspecific encounters. The female Orange Bullfinch fed unobtrusively in the same flock but appeared to follow the male when the birds dispersed. Later, both species were observed foraging close to each

Plate 2. Male Orange Bullfinch feeding close to a male Spectacled Finch *Callacanthis burtoni* (foreground). Liddarwat, June 2019.



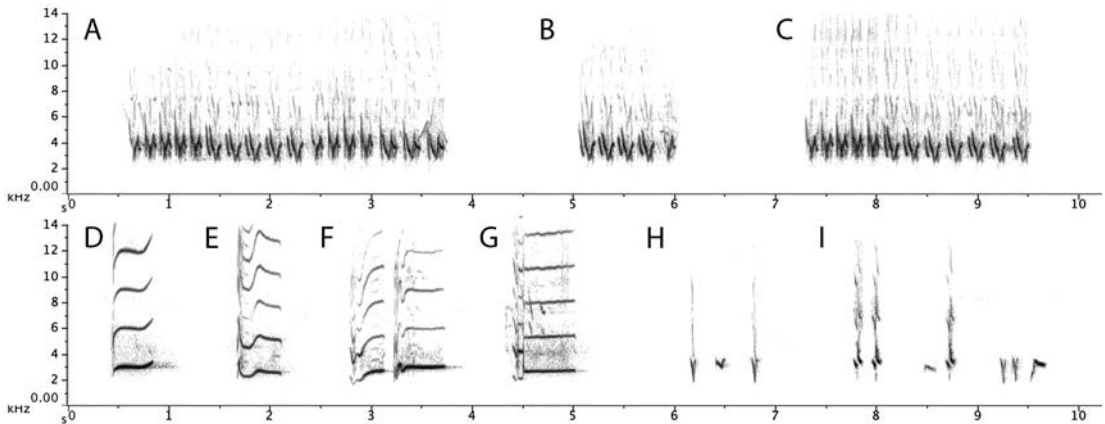


Figure 2. Spectacled Finch *Callacanthus burtoni* vocalisations. A–C: song, three variants; D–G: *pwee*, four variants; H & I: *pip*-like notes, two variants of call series. All recordings made by Andrew J. Spencer.

other, but not interacting. The Orange Bullfinch has not been reported to regularly flock with other species, although it has been documented that, where it occurs, it is usually sympatric with Spectacled Finch (Roberts 1992). Our observations at Liddarwat confirm that the two species were co-occurring in this area (sympatric) and using the same habitat (syntopic) within that area.

Spectacled Finch *Callacanthus burtoni* Vocalisations

As befitting the uniqueness of the species, the vocal repertoire of Spectacled Finch is rather unlike that of any other bird of the western Himalaya. What appears to be the song (Figure 2A–C) is a series of variable trills consisting of complex repeated notes at a relatively even frequency of c.2.5–3.3 kHz. The trills can consist of anywhere from one to four

different phrases, lasting between c.0.7–4 seconds. Each bird appears to have a few different phrases from which it can construct the song strophe. Comparison of our recordings to songs recorded in northern Pakistan showed little difference in pattern and only minor differences in note shape. Song is apparently given only by males, which vocalise while perched on high, exposed branches or at the top of a tall tree (Plates 3 & 4). This vocalisation is probably similar to that described for a male, perched on a post, uttering a little trill while displaying to a female (Bates & Lowther 1952).

Of the numerous different calls uttered by the species, the most common is a ringing, mellow *pwee* (Figure 2D–G), lasting 0.2–0.8 seconds. There is much variation in the quality of this note, with some versions polyphonic and others disyllabic. It is given by both sexes and is rather ventriiloqual

Plate 3. Male Spectacled Finch singing from top of a Silver Fir *Abies pindrow*. Rakchham-chitkul Wildlife Sanctuary, Himachal Pradesh, India, August 2014.



Plate 4. Male Spectacled Finch. Liddarwat, June 2019.



in quality, often sounding much further away than it is; this effect has been attributed to imparting an impression of greater abundance than is true (Roberts 1992). This call may also have a territorial function, often being ascribed as the song of the species, and is sometimes given from prominent perches in a repeated pattern similar to song.

What may be variations of the *pwee* call are sometimes given in alarm by both males and females; one version of this can be transcribed as *tweeyah*, and is a sharply rising, disyllabic call, given repeatedly. A shorter version, transcribed as a *pew* note, is frequently uttered quietly in contact or mild alarm, sometimes when flushed from the ground. More rarely heard is a very variable, quiet *pip*-like note (Figure 2H-I) that can be interspersed with other call types or songs; it has so far been documented only from male birds.

The repertoire of recent fledglings is documented in Sharma & Singh (2016): these birds appear to have similar calls to adults and it is likely that a full adult repertoire is developed in the first few months after fledging. Relatively little is known about the phenology of vocalisations for Spectacled Finch, but most calls appear to be given throughout the year (Roberts 1992). However, anecdotal evidence suggests that it is a rather quiet bird on its wintering grounds, and it tends to be less vocal even when alarmed or disturbed, especially when feeding. Songs have been documented only early in the breeding season, and all vocalisations appear to be most common early and late in the day, with the *pwee* call the most likely to be heard at other times.

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Appendix 1. Tree/plant species identified as food sources of Orange Bullfinch *Pyrrhula aurantiaca* from photographs deposited in the Macaulay Library (<https://www.macaulaylibrary.org/>).

Reference	Date	Location	Tree/plant species	Food items
Himachal Pradesh				
ML76486681	12 November 2017	Tindi-Hadsar, Lahaul	<i>Spiraea</i> sp. (likely <i>canescens</i>)	Fruit
ML144427191	3 March 2019	Sainj, Kullu	<i>Urtica ardens</i>	Seeds
ML319896561	17 March 2021	Matiyana, Kullu	<i>Prunus</i> sp. (likely <i>avium/cerasus</i>)	Flower buds
ML60178321	24 April 2017	Bhagsunag, Kangra	<i>Prunus cerasoides</i>	Probably insects on leaves
ML322390541	19 May 2017	Tindi-Hadsar, Lahaul	<i>Ulmus wallichiana</i>	Green, winged fruit
ML169593701	1 July 2019	Chasak, Chamba	<i>Salix</i> sp.	Fruit
Jammu and Kashmir				
ML322394681	19 December 2020	Srinagar	<i>Lonicera quinquelocularis</i>	White, translucent fruit
ML205784471	28 January 2014	Dachigam NP	<i>Deutzia corymbosa</i>	Fruit
ML322720351	26 January 2021	Dachigam NP	<i>Deutzia corymbosa</i>	Fruit
ML323120671	14 February 2016	Dachigam NP	<i>Deutzia corymbosa</i>	Fruit
ML323111071	13 February 2019	Srinagar	<i>Rosa webbiana</i>	Fruit
ML322808641	6 March 2014	Dachigam NP	<i>Deutzia corymbosa</i>	Fruit
ML323131161	15 March 2016	Srinagar	<i>Rubus hoffmeisterianus</i>	Fruit
ML322444311	7 April 2019	Srinagar	<i>Ulmus villosa</i>	Reddish, hairy fruit
ML323473891	3 April 2021	Srinagar	<i>Ulmus villosa</i>	Reddish, hairy fruit
ML87154141	30 June 2015	Minhat Paddar, Kishtwar	<i>Prunus cornuta</i>	Flower buds



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NOTEBOOK

Evidence of a ‘spring’ *Stercorarius skua* passage off western Sri Lanka

GARY ALLPORT, MODITHA HIRANYA KODIKARA ARACHCHI & LESTER PERERA

The seabirds of Sri Lanka are comparatively well known, based on data from land-based seawatches (de Silva 1997, 2001, 2003), pelagic surveys (Ilangakoon 2001, Perera & Ilangakoon 2016) and collations of records at national (Warakagoda 1994) and regional levels (Robertson 1995, Praveen *et al.* 2013). The understanding of seabird distributions and movements has advanced substantially in the last 20 years in Asia as both optical and photographic equipment have improved (e.g. Karuthedathu 2019), and the techniques for studying seabirds, especially on offshore pelagic trips, have become better known and understood (Poole *et al.* 2011).

As part of a recent effort to develop more knowledge of seabirds in Sri Lanka and generate further interest and skills in seabirding, regular seawatches from watch points around Colombo (since August 2019) and opportunistic but regular pelagic trips using whale-watching vessels from Mirissa (since September 2020) have been undertaken. There are a number of interesting results and this article reports evidence of a ‘spring’ *Stercorarius skua* passage off the west coast of Sri Lanka, first noted in April 2021.

Methods

The majority of land-based seawatching by de Silva (1997, 2001, 2003) was from Wellawatte, Colombo (6.86°N 79.85°E), and previous watches had also been undertaken from Galle-Buck (6.93°N 79.83°E) in central Colombo (van den Berg *et al.* 1982). However, recent development of the Colombo Port City has extended newly claimed land 2.3 km offshore (an area that is currently not publicly accessible) and we found this to be causing seabirds to pass further offshore, making viewing conditions at Wellawatte and Galle Face very difficult. Two new localities to the north and to the south were therefore explored. Mount Lavinia, 11 km to the south, was found to be a suitable watchpoint and, while many birds were still distant (most birds pass southward), the viewing conditions were satisfactory even in poor weather. Negombo lies 28 km to the north and, although the only location for watching is at a low elevation and exposed, seabirds were found to be passing close inshore. Regular watches were undertaken by GA and MHK from both these locations, particularly

when onshore winds in the south-west monsoon season (May–November) were suitable to drift seabirds within viewing range of the coast.

Four day-long pelagic trips were undertaken from Mirissa using a large whale-watching vessel ranging a maximum of 18 km to the south-west.

Recent observations

A seawatch was carried out at Negombo on 14 March 2021 in light offshore winds and, whilst there was visible migration of marsh terns and Barn Swallows *Hirundo rustica*, no pelagic species were seen, as might have been expected. In late March 2021 the prevailing winds swung to the south-west across the Laccadive Sea, marking the onset of the inter-monsoonal season, transitioning to the south-west monsoon two weeks or more earlier than normal. On 1 April, a 10–15 knot SSW wind picked up and persisted for 72 hours. Noticing this, GA watched from Negombo on 3 April, starting at 06:00.

Apart from brief views of a small *Stercorarius* at dawn, the first hour of the watch was initially quiet, but between 07:00–08:00 22 Pomarine Skuas *S. pomarinus* passed less than 1 km offshore. These were all adults, many with full ‘spoon’ tails, in singles, pairs and groups of up to five birds (Plate 1). This was followed by a further 29 birds (the largest flock comprising 10 birds) and 21 Long-tailed Skuas *S. longicaudus* in the next two hours, including three flocks comprising both species (see Table 1 for totals).

It was clear that this was a notable passage, so a group of observers watched the following day. The wind had abated and birds were passing further offshore but despite this the passage continued, with 27 Pomarine Skuas, seven Long-tailed Skuas and a single Arctic Skua *S. parasiticus*, plus one small *Stercorarius* sp. The passage had abated by 6 April, when a watch yielded only single Pomarine and Long-tailed Skuas. Due to other commitments around the Sri Lankan New Year, it was not possible to watch again until 18 April but it was clear that passage was continuing, with 29 Pomarine Skuas recorded on that date, a further 12 on 22 April (S. Bandara *in litt.* 2021) and seven on 24 April, along with one Arctic Skua (Table 1).

In total, 162 skuas were seen in 26.5 hours of watching (Table 1), a mean rate of 6.1 birds per



GARY ALLPORT

Plate 1. A group of five adult Pomarine Skuas *Stercorarius pomarinus*, part of a movement of 73 skuas in 4.5 hours at Negombo, Western Province, Sri Lanka, on 3 April 2021.

hour. A total of 56 groups (counting singles as 'groups') were sighted, 37 of Pomarine, 13 of Long-tailed (Table 2), one group of seven unidentified and five other singles (Table 1), a mean of 2.17 sightings per hour. The majority of birds were migrating in parties of multiple birds, with 43% of Pomarine Skuas in groups of 3, 4 or 5 birds. Mean group size was 3.27 birds for Pomarine and 2.23 for Long-tailed Skuas (Table 2). All birds were flying purposefully south. Notably, all Pomarine Skuas ignored the opportunity of chasing abundant locally feeding terns, although Long-tailed Skuas were seen twice chasing terns.

Tail-feather condition was not recorded for each bird, but it was notable that (disappointingly) none of the Long-tailed Skuas had yet grown their distinctive long central tail-feathers, despite all being in mostly adult plumage. However, most of the Pomarine Skuas were carrying apparently fully grown spoon-shaped central tail-feathers (Plate 1).

Status in South Asia

Pomarine Skua occurs regularly on the coast of Pakistan (Rasmussen & Anderton 2012) and these birds are thought to be part of a significant wintering population in the Arabian Sea, mostly in the Persian Gulf and the Gulf of Aden (Olsen & Larsson 2013). Small numbers occur year-round on the south and west coasts of India, but this species is most frequent off Sri Lanka (Rasmussen & Anderton 2012), where it is considered an uncommon migrant (Warakagoda *et al.* 2012). However, it was found in good numbers in Lakshadweep and the western Laccadive Sea in February by Prince (2011) and more recent observations in south-west India have shown an arrival in coastal waters from October, with a peak in November but probably lower frequency in January–April (Karuthedathu 2019).

Arctic Skua has been considered a vagrant to Indian and Sri Lankan waters (Rasmussen &

Table 1. Seawatch dates and times in April 2021 from Negombo, Sri Lanka, with details of counts of Pomarine *Stercorarius pomarinus*, Long-tailed *S. longicaudus* and Arctic *S. parasiticus* Skuas.

Date	Time	Duration (hrs)	Pomarine	Long-tailed	Arctic	<i>Stercorarius</i> sp.	Total skuas
3 April	06:00–10:30	4.5	51	21	0	1	73
4 April	05:55–10:55	5.0	21	7	1	1	30
6 April	06:30–11:00	4.5	1	1	0	0	2
18 April	06:00–10:00	4.0	29	0	0	0	29
22 April	07:00–10:00	3.0	12	0	0	7	19
24 April	06:00–11:30	5.5	7	0	1	1	9
	Totals	26.5	121	29	2	10	162

Table 2. Group sizes of Pomarine and Long-tailed Skuas from observations given in Table 1.

Group Size	1	2	3	4	5	6	8	9	10	11	Total
Pomarine											
Number of groups	13	6	4	5	4	1	1	1	1	1	37
Number of birds	13	12	12	20	20	6	8	9	10	11	121
										Mean	3.27
Long-tailed											
Number of groups	7	2	2	0	0	2	0	0	0	0	13
Number of birds	7	4	6	0	0	12	0	0	0	0	29
										Mean	2.23

Anderton 2012, Warakagoda *et al.* 2012) but Karuthedathu (2019) found it to be the commonest of the three species off south-west India, occurring from September, with a peak in October and regularly occurring until April.

Long-tailed Skua is the rarest of the three species in the region, with only a handful of records noted from coastal Sri Lanka (Wijeyeratne 2010, Rasmussen & Anderton 2012, Herath 2016, Warakagoda 2019, R. Cader *in litt.* 2021). However, Praveen *et al.* (2013) noted previous documented records from the Maldives (Anderson 2007), and Karuthedathu (2019) went on to show a series of records from south-west India, indicating that small numbers occur in October–November and March–April.

All three species of *Stercorarius* are thus relatively poorly known in South Asia and there have been no movements of skuas previously noted of the scale reported herein.

Discussion

It is clear that these observations show a boreal 'spring' passage of skuas like that first noted in the United Kingdom in the 1970s (Davenport 1975, 1981), comprising many groups of adult birds moving purposefully in a single direction and tracking the coast in light winds. Since there is no documented observation of a movement of this sort in South Asia this was an unexpected finding, but a review of previous records in Sri Lanka showed four sightings of similarly notable numbers at this time: 17 Pomarine Skuas in an 82 km-long pelagic trip up to 16 km offshore from Negombo in May 1994 (Ilangakoon 2001), 42 in groups of up to 17 birds off Mirissa on 17 April 2008, 5 there on 9 April 2009 and 5 off Kalpitiya on 6 April 2012 (G. d. S. Wijeyeratne *in litt.* 2021). Furthermore, a regular eastward passage of Pomarine Skuas was recorded off Mirissa in April during 2007–2013 (Anderson & Alagiyawadu, *in prep.*, R.C. Anderson *in litt.* 2021). A request to Ceylon Bird Club did not yield further sightings data.

Limited data mean that the timing of this movement is yet to be clearly ascertained, but early

to mid-April appears to be the peak time, with a suggestion from our data that Long-tailed Skuas pass earlier. These dates fit with other spring records further north. Passage of both species in the Atlantic has been noted from Pointe des Almadies, Senegal (14°N), where there was a strong movement of Pomarine Skuas on 21–28 April 1992, which peaked slightly later than in Sri Lanka on 23 April. Long-tailed Skua was also recorded but in smaller numbers with no evident peak (Marr *et al.* 1998). Further north, Pomarine Skuas pass the south coast of the UK and headlands of west Ireland and Scotland from 28 April–16 May (Davenport 1981), and there are records at sea off Japan from 23 April–30 May, especially in late April (Austin & Kuroda 1953).

Group sizes of Pomarine Skuas were similar to but smaller than those observed off the British Isles (means of 4.54 in the English Channel [Davenport 1975] and of 4.84 off western Scotland [Davenport 1979]) but Long-tailed Skua groups are not easy to compare as they vary significantly, with mostly single birds recorded but groups of up to 112 in Scotland (Davenport 1991).

Migratory routes

All *Stercorarius* are Holarctic breeders and therefore might be expected to be travelling northwards to their breeding grounds in the boreal spring. However, on the west coast of Sri Lanka most seabirds appear to migrate southwards, irrespective of season. The reasons for this are not clear but it may be that seabirds travelling south along the west coast of India either follow the continental shelf of the Laccadive Sea or track east from the southernmost point of India and then continue to track southward on the west coast of Sri Lanka (Figure 1). Birds travelling in the opposite direction, north- and west-bound, may not be evident as they track directly north-westward from the southern coast of Sri Lanka, thus missing the west coast. This would suggest that these skuas were seeking to travel south or, more likely, east.

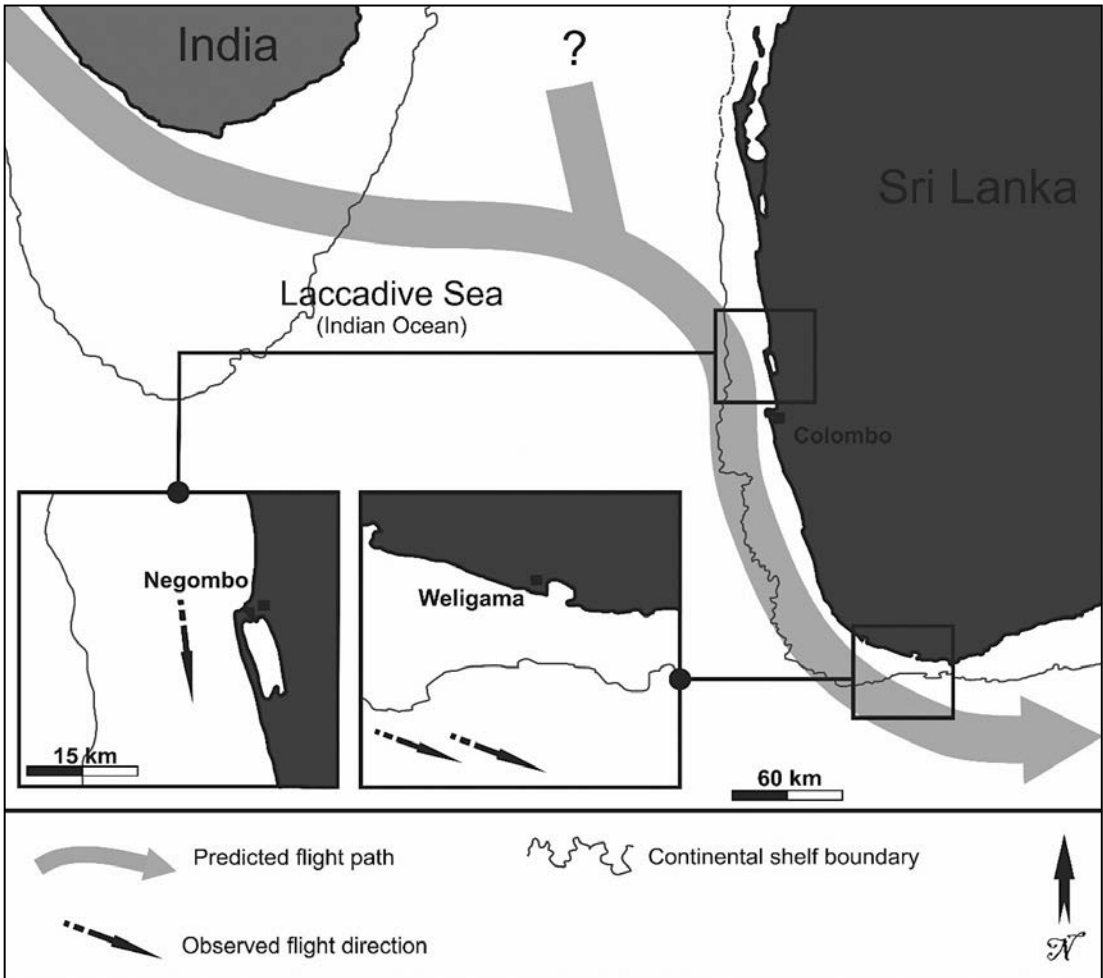


Figure 1. Observed flight directions of Pomarine Skuas *Stercorarius pomarinus* at two locations in south-west Sri Lanka (insets) in April 2021, and predicted flight path of skuas drifted onshore in light south-westerly winds as they cross the Laccadive Sea.

Assuming both species are tracking the coastline and ultimately heading east across the Bay of Bengal, seawatches further south on the Sri Lankan coast, from localities such as Galle, Mirissa or Dondra, may be even more productive. There have been anecdotal observations of Pomarine Skuas in this area (see above) but recent offshore trips have not found significant evidence of passage. Pelagics from Matara found one Long-tailed Skua on 25 March (LP) and no skuas on 18 April (LP), and from Mirissa on 27 March one Long-tailed Skua (GA, MHK, LP *et al.*), and on 24 April two Pomarine Skuas (when nine skuas were seen off Negombo); one of these was a third-calendar-year bird (eBird: S86469084) and both were heading south-east (MHK, LP *et al.*). De Silva (2001) noted that passage Bridled Terns *Onychoprion anaethetus*, which are abundant in seawatches off the west coast of Sri Lanka in July–October, were

less frequent off southern watchpoints. He suggested that they head south-east and so track further offshore as they pass the southern part of the Sri Lankan coastline; it is possible that skuas follow a similar route.

Pomarine Skua *Stercorarius pomarinus*

Breeds in the high Arctic, further north than the other two species, in coastal Siberia, northern Alaska and Arctic Canada, and winters mostly in subtropical regions (Olsen & Larsson 2013, Harrison *et al.* 2021). There are migration routes known in the Atlantic to and from wintering grounds off west Africa, with major movements observed at Pointe des Almadies, Senegal (Allport 1995, Marr *et al.* 1998), and from Ireland and the UK (Davenport 1981). The west Atlantic population winters in the Caribbean but the migration is probably on a broad front and there are records of birds in the Great Lakes in North America,

suggesting a partial overland route too (Olsen & Larsson 2013, Harrison *et al.* 2021). In the Pacific Ocean there is an eastern population wintering off equatorial South America and a western population wintering mainly off south-east Australia (Olsen & Larsson 2013). There is no evidence to suggest that the Pacific wintering populations are divided on the breeding grounds, but the majority of both populations probably pass through the Bering Straits and are broad front migrants once in the Pacific (Higgins & Davis 1996, Olsen & Larsson 2013).

There is strong evidence to suggest that the smaller but still significant population that winters in the northern Arabian Sea migrates mostly northwards through the Gulf of Oman and Persian Gulf and then overland, probably mostly crossing Iran to the Caspian Sea and then, assumedly, north to the Siberian coast overland (Olsen & Larsson 2013). However, the migratory route of the birds in the eastern part of the north Indian Ocean is unclear. Olsen & Larsson (2013) suggest that they are part of the wintering population in the Arabian Sea, but Higgins & Davis (1996) suggest that these birds originate in the Pacific, entering the eastern Indian Ocean from the south-western Pacific via South-East Asia. It is also possible that there is a trans-continental crossing via the Bay of Bengal, but there are very few records to support this hypothesis. However, our recent observations show that there is a significant eastern migration in the boreal spring and that these birds are likely to be crossing the Laccadive Sea from waters off south-west India, and are therefore likely to be exiting the Indian Ocean via South-East Asia rather than via the northern Bay of Bengal.

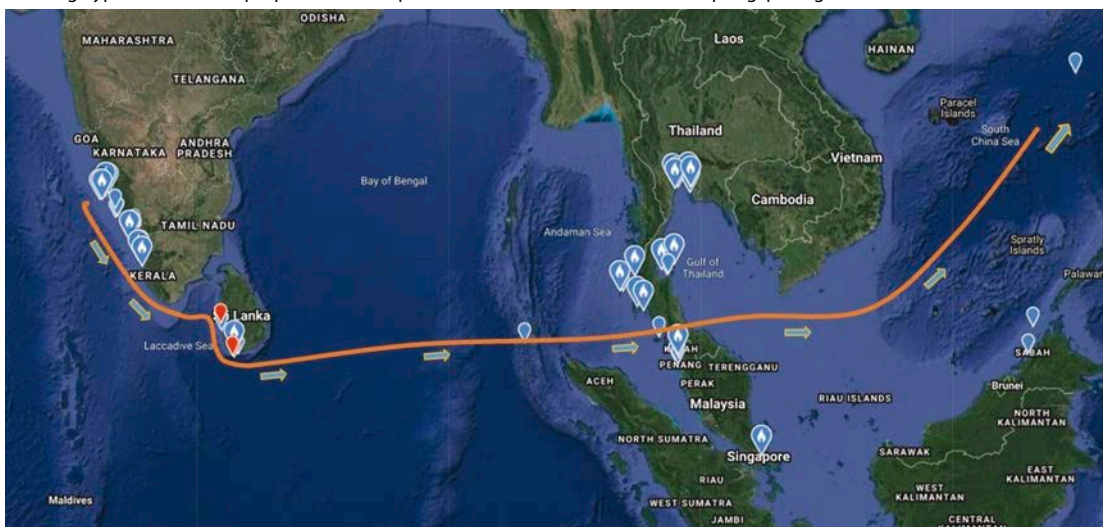
A review of eBird records in South-East Asia shows that there is a wintering population in the Gulf of Thailand but also a seasonal cluster of records in southernmost Thailand and northern Peninsular Malaysia evident in March–May (D. Bakewell & D. Gandy *in litt.* 2021; Figure 2). There are comparatively few records further south in the Straits of Malacca and Singapore (Poole *et al.* 2014), suggesting that there may be an overland crossing at the Isthmus of Kra between the Indian and Pacific Oceans. It is possible that there may be a migratory divide in Pomarine Skuas overwintering in South Asia, with birds from Pakistan waters perhaps heading west and those from south-west India heading south and east, but it is equally possible that both westward and eastward routes are used by birds present in the eastern Arabian Sea.

Long-tailed Skua *Stercorarius longicaudus*

Migratory routes are thought to be broadly similar to Pomarine Skua, but this species winters further south in three main areas of upwellings off southern Africa, Argentina and Chile and, probably less densely, across a sub-Antarctic region in the southern Indian Ocean to south-east Australia and New Zealand (Olsen & Larsson 2013). Tracking of breeding birds in the Atlantic Ocean confirmed that adults from Greenland and Spitzbergen wintered mostly off southern Africa but also ventured eastwards into the southern Indian Ocean (Sittler *et al.* 2011, Gilg *et al.* 2013).

Long-tailed Skuas (Plate 2) are detected at the main watchpoints mentioned above for Pomarine Skua (except for south-east England) but generally in smaller numbers and more often related to poor

Figure 2. eBird records of Pomarine Skua *S. pomarinus* in March–May in the north-east Indian Ocean and Gulf of Thailand, showing hypothetical route proposed as an explanation of observations of boreal ‘spring’ passage in west coast Sri Lanka.





RIAZ CADER

Plate 2. Long-tailed Skuas *Stercorarius longicaudus* off Kalpitiya, western Sri Lanka, in April 2019.

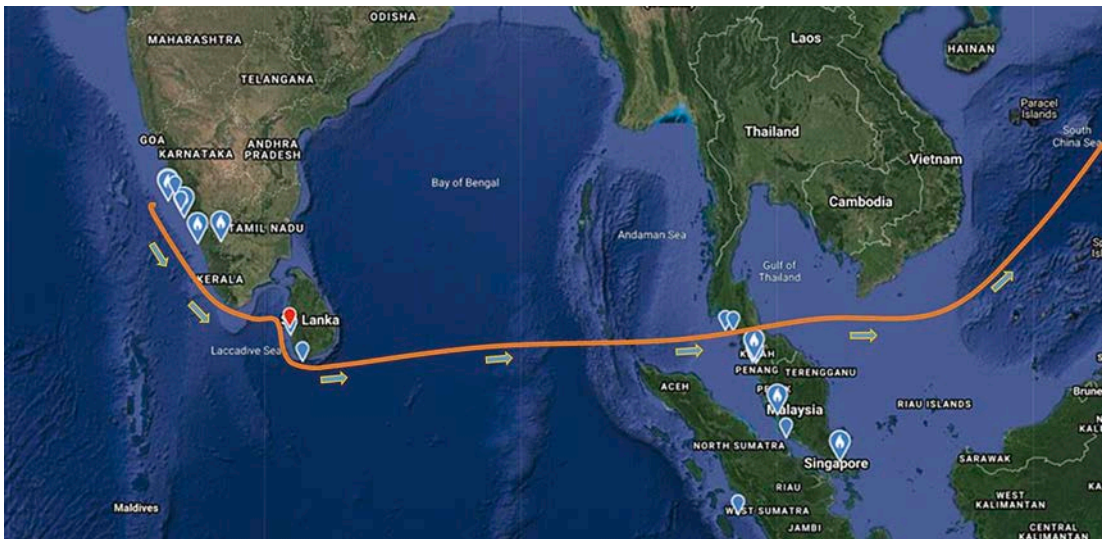
weather (Davenport 1981, Wiley & Lee 2020). Records in the Indian Ocean are sparse and difficult to interpret. A small number of birds pass northwards through the Red Sea and Gulf of Oman in spring, suggesting some minor movement (Olsen & Larsson 2013), and there is a cluster of records on the east coast of the Straits of Malacca in March–May (Figure 3). It seems likely therefore that the birds reported here were following the same eastern route as postulated above for Pomarine Skuas.

There are two inland spring records of adult Long-tailed Skuas from this region: one c.60 km inland at Walayar Reserve Forest, Kerala, India, 9

May 2015 (Moorthy 2015, eBird S23887381), which was probably crossing overland to the Bay of Bengal, and two adults at Kuala Selangor, Malaysia, 23 April 1986, 2 km from the coast and heading inland, eastwards, in good weather (F. Hawkins *in litt.* 2021, eBird S32970537), apparently intending to cross overland to the Gulf of Thailand.

Two subspecies of Long-tailed Skua are recognised: nominate *longicaudus*, which breeds in the north-western Palearctic, and *pallascens*, which breeds from Greenland west to north-east Siberia (Olsen & Larsson 2013). The nominate is darker on the belly and lower breast in full breeding

Figure 3. eBird records of Long-tailed Skua *S. longicaudus* in March–May in the north-east Indian Ocean and Gulf of Thailand, showing hypothetical route proposed as an explanation of observations of boreal 'spring' passage in west coast Sri Lanka.



dress, while *pallescens* is on average paler, with 50% of birds showing a clean white belly contrasting with darker flanks, vent and undertail-coverts. All the Long-tailed Skuas we observed appeared not to have completed moult into full breeding plumage (showing no long tails), and so distinguishing the two forms in our observations is probably unwise. Several showed paler underparts but this may have been retained winter plumage contour feathers. However, it is worth noting that, if the proposed migration route of these birds eastwards and into the Pacific Ocean is correct, then they are birds that breed in north-east Siberia or Alaska and so are all of the form *pallescens*.

Arctic Skua *Stercorarius parasiticus*

There were very few records of Arctic Skua in our observations (supporting the national status assessment of 'vagrant' by Warakagoda *et al.* [2012]), probably insufficient to be noteworthy nor to draw any conclusion, but it is worth noting that the rarity of this species in the observations in west coast Sri Lanka does not compare to the recently noted higher frequency of this species off south-west India (Karuthedathu 2019). This might suggest that Arctic Skuas wintering in the Lakshadweep Sea may enter and exit the Indian Ocean to the west via the Gulf of Oman rather than through the eastern route postulated for the other two species (Figures 2 & 3). However, the March–May pattern of records in South-East Asia for Arctic Skua held in eBird is similar to the other two species of *Stercorarius*, with a cluster of records in the Straits of Malacca. It may be that Arctic Skuas migrate from the southern Indian Ocean tracking further east and join the two other species west of Sumatra, or birds enter the seas around the Thai-Malay Peninsula from the Pacific Ocean but do not venture further west into the Bay of Bengal. Another possibility is that Arctic Skuas might take a more southward route on their eastward migration, from the southern tip of the continental shelf of south India to the southern shelf of Sri Lanka (and so not tracking the western coast of Sri Lanka), although there is currently no evidence to support this hypothesis.

Further research

Our observations of skua migration reported here are clearly indicative of a previously unreported 'spring' migration, but the data are limited and our understanding will be greatly enhanced by further observations off west coast Sri Lanka. However, spring skua passages are notoriously difficult to observe, being weather-dependent at certain sites (Davenport 1981) and the early change in wind direction in April 2021 may have made this passage

unusually evident. Further observations may be needed, possibly for several years, to better understand the nature of this movement. Assuming that both species are tracking the coastline and ultimately head east across the Bay of Bengal, then spring seawatches further south on the Sri Lankan coast, from localities such as Galle, Mirissa or Dondra, in a range of wind conditions, would be valuable.

The migration route postulated suggests that skuas may be passing along the coast of south-west India before embarking on their crossing of the Laccadive Sea, and land-based watches in this period from suitable coastal locations in Kerala in particular would be a valuable contribution to our understanding of this movement. Similarly, observations from the northern tip of Sumatra, near Banda Aceh, may yield valuable observation data, as might further observations in the Isthmus of Kra in Thailand, targeted at suitable corridors for low altitude land crossings, such as Krabi to Surath Thani.

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BIRDING SITES

Birdwatching areas of Bangladesh

PAUL M. THOMPSON

Located by the transition from South to South-East Asia and with an area of 147,570 km², Bangladesh is one of the most densely populated and intensively cultivated countries on Earth, and remnant natural and semi-natural habitats are under immense pressure. Despite this, the country boasts the Sundarbans, the largest area of mangroves in the world, vast expanses of intertidal habitat, rich tropical forests, and a fine number of accessible and productive sites to go birdwatching. Domestic tourism and interest in nature and birds have grown in recent years, but foreign tourists remain few and travelling birders are missing some notable birding. Visitors will find Bangladeshis in general to be very hospitable, although they may find birdwatching unusual. The monsoon climate means that birding is most productive and pleasant during the cool dry winter season (November–February) when resident species are augmented by many winter visitors; summer and the pre-monsoon (March–May) can be uncomfortably hot but are interesting for some passage migrants and breeding activity. Conditions are hot, humid and wet during the monsoon (June–October). Some sites for birds in Bangladesh have featured in *BirdingASIA* in recent years, but here an overview is given of the best and most accessible areas throughout the country (see Figure 1 for locations). This article is adapted from the text of the recently published field guide to the birds of Bangladesh (Grimmett *et al.* 2021). Species totals were valid to the best of my knowledge up to the end of 2019.

Central

In and close to the capital of Dhaka are a few well-watched sites but these also attract many people for recreation. The National Botanical Gardens in Mirpur, Dhaka, has extensive groves of planted trees, ornamental lakes, and an area of bamboo. Over the years, a total of 177 species has been recorded but an early morning visit is best to avoid the crowds. Highlights include resident Orange-headed Thrush *Geokichla citrina*, Forest Wagtail *Dendronanthus indicus* on spring and autumn migration, and the chance of other winter visitors and migrants such as Indian Blue Robin *Larvivora brunnea*. The adjacent zoo lake attracted a diversity of wildfowl in the past but is now too heavily disturbed. Elsewhere in the city, nesting Red-headed Falcon *Falco chicquera* and a small colony

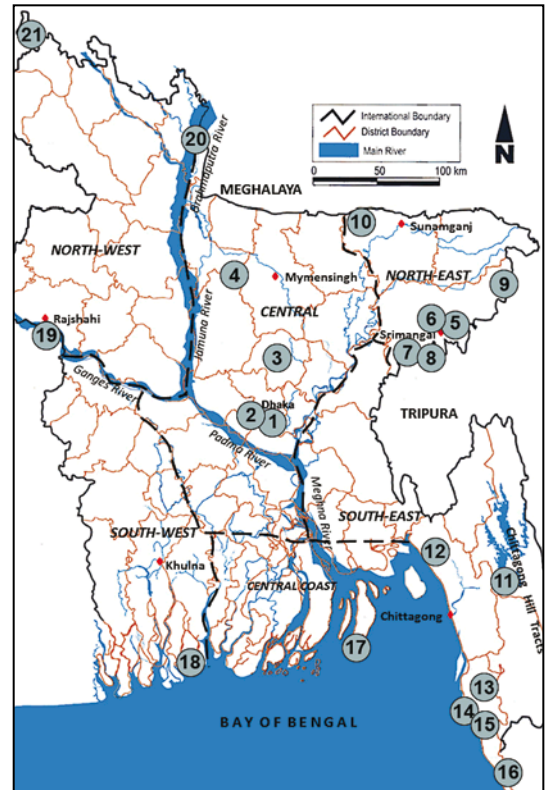


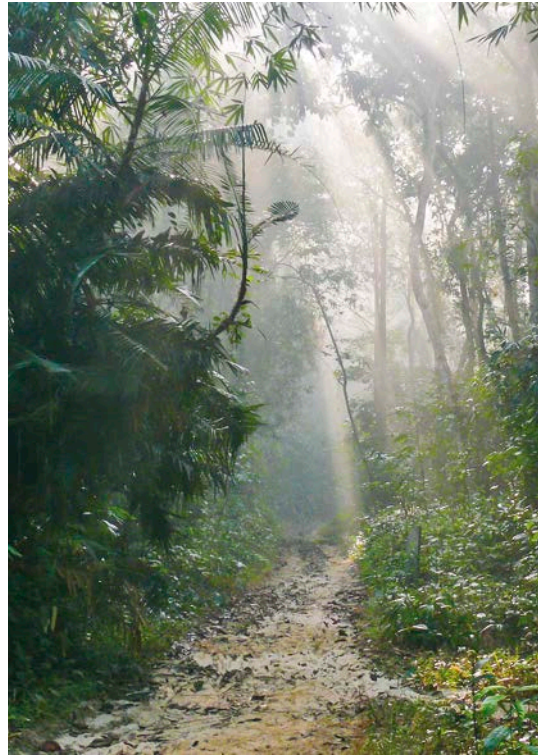
Figure 1. Map of Bangladesh showing key birdwatching locations. (1) National Botanical Gardens; (2) Jahangirnagar University; (3) Bhawal NP; (4) Modhupur NP; (5) Lawacharra NP; (6) Hail Haor and Baikka Beel; (7) Satchari NP; (8) Rema-Kalenga Wildlife Sanctuary; (9) Hakaluki Haor; (10) Tanguar Haor; (11) Kaptai NP; (12) Hazarikhil Wildlife Sanctuary and Baroyadhala NP; (13) Medakachapia NP and Fashiakhali Wildlife Sanctuary; (14) Sonadia Island; (15) Himchari NP; (16) Teknaf Wildlife Sanctuary; (17) Nijhum Dwip NP; (18) Sundarbans East Wildlife Sanctuary; (19) Rajshahi chars; (20) Brahmaputra river; (21) Tetulia.

of Alexandrine Parakeet *Psittacula eupatria* (Sourav *et al.* 2018) are present but elusive. Jahangirnagar University campus in Savar is c.1 hour west of Dhaka and has several lakes and wooded areas and a bird list of over 200 species. It is worth at least a morning visit and notable regular birds include Grey-headed Fish-eagle *Ichthyophaga ichthyæetus*, Brown Fish-owl *Ketupa zeylonensis* and Stork-billed Kingfisher *Pelargopsis capensis*. The scrub, grasses and farmland in land reclamation areas to the north-east and south of Dhaka can be good for birding before housing estates are built

there. For example, the Purbachal area has for several years been a regular site for Yellow-wattled Lapwing *Vanellus malabaricus* and produced a few rarities. These sites require exploration and local knowledge to get the best from them. Bhawal NP is only 40 km north of the centre of Dhaka, but may take two hours to reach by road due to heavy traffic. Large numbers of visitors can be present on winter weekends, but the degraded deciduous sal *Shorea robusta* forest interspersed with paddyfields can still be quite productive (Jahan *et al.* 2017). This is probably the best site for the localised White-eyed Buzzard *Butastur teesa* and is home to Indian Spotted Eagle *Clanga hastata*, Orange-headed Thrush and, in the monsoon, Indian Pitta *Pitta brachyura*. Elsewhere in the central region the most notable site is Modhupur NP, between the towns of Mymensingh and Tangail and at least 3–4 hours' drive from Dhaka. Although it deserves an evening and day of exploration, accommodation on site is difficult to arrange but staying in Mymensingh necessitates an early morning start to reach the main track into the forest and central lake for the prime morning time. The sal forest here was diverse and very productive for birds, particularly owls and winter visitors, and 211 species have been recorded. However, most of the large trees have now been felled and care may need to be taken due to robberies in recent years. In addition to the species found in Bhawal, wintering thrushes and flycatchers, Yellow-wattled Lapwing and resident owls are more likely to be seen here.

North-east

The north-east region has some of the most accessible and productive birdwatching sites in the country. The town of Srimangal is a tourist and tea-growing centre and has long been known as a top birding destination (Thompson & Johnson 1996). Approximately 5–6 hours from Dhaka, it is easily reached by train or road, has a wide range of guest houses and hotels, and makes a good base. Within about 10 km of the town, 450 species have been recorded at three sites well known to local three-wheeler ('CNG') and hire car drivers. Lawacharra NP (Plate 1) is the best-studied evergreen forest in the country and within only 1,250 ha has a list of 266 species. The main trails north and south of the ticket counter in the centre of the forest are the most productive and are rarely visited by tourists beyond the first 500 m. At times the trails can be quiet for birds until a mixed-species flock is encountered in winter but most of Bangladesh's resident and wintering evergreen forest species have been recorded here, including such prizes as Red-headed Trogon *Harpactes*



PAUL THOMPSON

Plate 1. Early morning in winter along a trail through Lawacharra NP in the north-east. This semi-evergreen forest is kept moist in the dry season by fog and dew, and is one of the most biodiverse forests in the country. December 2007.

erythrocephalus, Blue-naped Pitta *Hydrornis nipalensis* and, in the monsoon, Western Hooded Pitta *Pitta sordida*. Lawacharra and the other eastern evergreen forests described here are notable for resident species at the edge of their ranges, for example Kalij Pheasant *Lophura leucomelanos* at only c.50 m above sea level, and Olive Bulbul of the form recently split by some (including the 'IOC') as Cachar Bulbul *Iole [virescens] cacharensis*. This is also an excellent forest for primates, with some of the most readily seen Western Hoolock Gibbon *Hoolock hoolock* and Phayre's Leaf Monkey *Trachypithecus phayrei* (both Endangered) in the world. Immediately north and east of the town are easily accessible tea estates worth a walk for species of open woodland; near small rivers and lakes, remnant scrubby areas and tall grassy patches are good for Rufous-necked Laughingthrush *Garrulax ruficollis* and Yellow-eyed Babbler *Chrysomma sinense*. A short distance north-west of the town is the large wetland of Hail Haor. *Haors* are unique to north-east Bangladesh: large saucer-shaped depressions which are deeply flooded in the monsoon to form inland seas, but in the dry season each contains multiple large and



SAYAM U. CHOWDHURY

Plate 2. The *haor* basin is the winter home of significant numbers of nesting and immature Pallas's Fish-eagle *Haliaeetus leucoryphus*. Hail Haor, February 2010.



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Plate 3. This Large-billed Reed Warbler *Acrocephalus orinus*, caught at Baikka Beel in December 2011, was a new species for Bangladesh and the first undoubted record in South Asia for 78 years.

small areas of residual permanent water and marshy vegetation known as *beels*. Within Hail Haor is the 170-ha community-managed sanctuary of Baikka Beel, with a list of 198 bird species. This is well worth a day's visit and takes most of an hour to reach by road from Srimangal due to the winding rough village roads for part of the way, but these also pass interesting fish-ponds. With a visitor centre, two observation towers and a 1-km

nature trail through restored swamp forest, the site is well developed for birdwatching. A wide diversity of ducks and waders, often in substantial numbers (e.g. over 2,200 Ruff *Calidris pugnax* in January 2019 and 4,500 Fulvous Whistling-duck *Dendrocygna bicolor* in January 2010), can be seen in winter in the open *beel*, while Cotton Pygmy Goose *Nettapus coromandelianus* (using nestboxes) and Pheasant-tailed Jacana *Hydrophasianus chirurgus* are resident. A few non-breeding Pallas's Fish-eagle *Haliaeetus leucoryphus* (Plate 2) are usually present in winter, and wintering warblers and two species of rubythroat are common in the scrub and swamp thickets where rarities such as Large-billed Reed-warbler *Acrocephalus orinus* (Plate 3) have been found (see Round *et al.* 2014).

Further afield—but accessible as day trips from Srimangal—are several good sites. Approximately 60 km west of Srimangal, Satchari NP covers only 243 ha but from the ticket counter a short concrete track leads to an observation tower overlooking excellent forest and in spring a flowering tree (Chowdhury 2021). This is a good place to see canopy species such as *Treron* green-pigeons, Blossom-headed Parakeet *Psittacula roseata*, Vernal Hanging-parrot *Loriculus vernalis* and Black Baza *Aviceda leuphotes*, while several rarities have been attracted to the flowering tree. Trails accessed from near the tower or road to the east go into good forest and a patient watch of streams and pools in winter has revealed regular Siberian Blue Robin *Larvivora cyane*, Hill Blue-flycatcher *Cyornis banyumas* and other rarities; overall, 221 species have been seen here. Also west of Srimangal but more difficult to access is Rema-Kalenga Wildlife Sanctuary. There are more extensive forests here covering 1,795 ha and an 'eco-cottage' to stay in. A small colony of White-rumped Vulture *Gyps bengalensis* is protected, a vulture restaurant operates (Plate 4) and the wider surrounding area has been designated a 'vulture safe zone' through cooperation between the Bangladesh Forest Department and the IUCN. In total, 220 species have been recorded, including a wide range of evergreen forest and forest edge species.

Approximately two hours east of Srimangal along minor roads is Hakaluki Haor. This 18,000-ha Ecologically Critical Area contains in the dry season a maze of *beel* wetlands and open grazed lands. A long walk with a guide is needed to find the better *beels*, since these change between years according to fishing activity, but once located large numbers of waterbirds can be found, including, in most years, a few Falcated Duck *Mareca falcata* and Baer's Pochard *Aythya baeri* (Plate 5).

Also in the north-east, the main complex of *haor* wetlands can be found to the west of



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Plate 4. In Rema-Kalenga Wildlife Sanctuary, a partnership between IUCN Bangladesh, the Bangladesh Forest Department and the local community protects one of the last nesting colonies in Bangladesh of the Critically Endangered White-rumped Vulture *Gyps bengalensis*. They also operate the vulture feeding station, shown here, and have established a 'vulture safe zone' in the wider area. December 2016.



PAUL THOMPSON

Plate 5. A typical winter view of a beel in Hakaluki Haor. Once a winter stronghold of the Critically Endangered Baer's Pochard *Aythya baeri* (circled), individuals still occur in most winters. February 2017.

Sunamganj. The most notable of these is Tanguar Haor, a 9,527-ha *haor* nestled below the hills of Meghalaya (India); it is one of only two Ramsar sites in the country and 179 species have been recorded. To reach it requires a rough drive of over two hours from Sunamganj followed by a one-hour boat journey. A day trip is possible, but the tourist boats are not geared to entering the *haor* (which requires permission and a smaller boat), so keen birdwatchers need to be prepared to camp here and hire a boat to access the *beels*. However, some of the wildfowl and swamp thickets can be accessed by foot from the usual entry point. In winter typically over 50,000 waterbirds occur and the large flocks of ducks usually include thousands of

Red-crested Pochard *Netta rufina*, and the occasional Falcated Duck and Baer's Pochard occur on the *beels*. Pallas's Fish-eagle nests here, and the swamp thickets hide a large diversity of elusive wintering warblers and other species, regularly including Firethroat *Calliope pectardens* (Plate 6).

South-east

The south-east has numerous protected areas, the Chittagong Hilltracts, and some notable coastal sites. The Chittagong Hilltracts have the only significant hills in Bangladesh, supporting a somewhat different avifauna from the forests in the north-east or the low coastal hills of the south-east (Khan 2018). In this region species absent from

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Plate 6. Near annual ringing camps have shown that Firethroat *Calliope pectorata* is a regular scarce winter visitor to reed-thickets at Tanguar Haor. This male, photographed in January 2020, had been ringed in a previous year.

the rest of the country, such as Mountain Imperial-pigeon *Duculia badia*, Great Barbet *Psilopogon virens*, Nepal House Martin *Delichon nipalensis* and Streaked Spiderhunter *Arachnothera magna*, are relatively common and many other species absent from the rest of the country may be encountered. However, some of the best remaining forest here is difficult to access and requires a trek of several days. In addition, foreigners require special permission to visit the three hill districts. The most accessible area here is Kaptai NP adjacent to Kaptai town and 57 km east of Chattogram (Chittagong) city. Here there is evergreen forest and plantations with a few trails and stream walks where 220 species have been seen, and there are chances of Great Slaty Woodpecker *Mulleripicus pulverulentus*, Malay Night-heron *Gorsachius melanolophus* and Grey Peacock-pheasant *Polyplectron bicalcaratum* as well as many typical forest birds. About 65 km north of Chattogram, close to the main road to Dhaka (and not within the hilltracts), are two adjoining forests, Hazarikhil Wildlife Sanctuary and Baroyadhala NP. These have been less visited by birdwatchers but over 180 species have been recorded, including many of the typical eastern forest birds, with potentially more to be discovered.

South of Chattogram, next to the main road to the seaside resort of Cox's Bazar (c.60 km from the resort), are two accessible forests: Medakachapia NP and Fashiakhali Wildlife Sanctuary. Approximately 170 species have been recorded in this area, which is a regular area for Great Slaty Woodpecker. Just north of Cox's Bazar town (which has many hotels), and accessible by hiring a boat from the town jetty and asking for Belekardia, is Sonadia island, with mudflats, sand dunes and tidal creeks. Within this Ecologically Critical Area, 144 species have been recorded and it is the main wintering site in the country for three threatened

shorebirds: Spoon-billed Sandpiper *Calidris pygmaea*, Spotted Greenshank *Tringa guttifer* and Great Knot *C. tenuirostris*. There are several interesting sites south of Cox's Bazar town, including Himchari NP, Teknaf Wildlife Sanctuary and St. Martin's Island (the only location with coral formations in the country), and this area has a long bird list. However, these forests are now degraded and have been heavily impacted by an influx of refugees from Myanmar.

Central coast

The central coast from Noakhali District west to south of the large island of Bhola has extensive intertidal mudflats and new island *chars* (silty or sandy islands) in a landscape that is constantly changing with the interactions of sediment from the Ganges, Brahmaputra and Meghna Rivers, tides and storms. Birdwatching in most of this area is best done on an expedition with a boat for a week, for example by joining a survey with members of the Bangladesh Bird Club. Within this area, Nijhum Dwip NP, and in particular Domar Char to the east of Nijhum Dwip island, are relatively more accessible by taking an overnight launch (ferry) from Dhaka to Hatiya (the island immediately to the north). Here 172 species have been recorded, including some in the planted mangroves on Nijhum Dwip and many waterbirds on Domar Char. Shorebird numbers are particularly high and diverse in the early spring. Until recently this was the favourite location of wintering flocks of Indian Skimmer *Rynchops albicollis* (Mohsanin 2014) (Plate 7) but in the past, and again recently, they have been found further east off the Noakhali coast (Chowdhury *et al.* 2019).

South-west

The Sundarbans in the south-west is a prime birdwatching area where over 250 species have been recorded, including a distinctive set of mangrove specialists (Chowdhury 2020). All access involves travel by boat. Although the entire mangrove forest has some protected status, within it there are three main Wildlife Sanctuaries, of which Sundarbans East is the most visited and probably the best for birds. Khulna is well connected by road and air with the rest of the country. Two main strategies are possible to visit this popular tourist destination. The visitor facilities at Karamjal in the northern part of Sundarbans, including a boardwalk, can be reached as a day trip by hiring a boat from Mongla port. In the pre-monsoon species such as Mangrove Pitta *Pitta megarhyncha* and Ruddy Kingfisher *Halcyon coromanda* are possible here. However, the most productive and easiest way to visit the forest is to book on a tour of three or more days with one of several tour

SAYAM U. CHOWDHURY



Plate 7. The chars, mudflats and shallow waters of the central coast—from Nijhum Dwip east to Sandwip—are a major wintering area for flocks of the Endangered Indian Skimmer *Rynchops albicollis*. November 2009.

SAYAM U. CHOWDHURY



Plate 8. Close encounters with the Endangered Masked Finfoot *Heliopais personatus* are still possible along narrow mangrove-lined creeks in the eastern Sundarbans, its global stronghold. Out of a world population of just 108–304 individuals, 60–80% live in the Sundarbans. February 2016.

companies operating boats that can accommodate 20 or more visitors and provide an all-inclusive service. These usually depart from Khulna or Mongla and sail through the length of the forest along wide rivers to the Katka area of Sundarbans East. Here you can be taken in a small boat into the side creeks to search for Masked Finfoot

Heliopais personatus (Plate 8) in what is now this threatened species' last major stronghold (Chowdhury *et al.* 2020), along with Brown-winged Kingfisher *Pelargopsis amauroptera*. A guided walk to an observation tower, meadow and the coast may yield Streak-breasted Woodpecker *Picus viridanus*. Although there is a substantial

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Plate 9. The large riverine island close to Rajshahi in the north-west is the most accessible char. In the dry season, extensive areas of sand and silt, grasses and wet channels are important for specialised birds.

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Plate 10. After its rediscovery in Tanguar Haor in 2014, surveys have revealed a healthy population of the Vulnerable Bristled Grassbird *Chaetornis striata* breeding in remnant patches of tall grassland along the main rivers. Rajshahi, April 2019.

Plate 11. The discovery of Sykes's Nightjar *Caprimulgus mahrattensis* in the Ganges chars of Rajshahi in 2017 was a major range extension; small numbers are present in winter and summer. May 2018.

PAUL THOMPSON



population of Tiger *Panthera tigris* present, the chance of seeing one is very low.

North-west

There are three widely separated locations with notable birding in the north-west. Rajshahi, on the north bank of the Ganges River, has several hotels and is easily reached from the rest of the country. From the riverside, a boat can be hired for the day to explore the large char and nearby channels opposite the city (Plate 9). Walking several kilometres on this open sandy char may yield several very localised species. Between April and June Bristled Grassbird *Chaetornis striata* (Plate 10) is widespread, song-flying over tall grasses, Blue-tailed Bee-eaters *Merops philippinus* are common, and Sykes's Nightjar *Caprimulgus mahrattensis* (Plate 11) has recently been found to be regular. In winter here and further upstream along the Ganges in Chapai Nawabganj, large waterbirds such as Painted Stork *Mycteria leucocephala*, Black Stork *Ciconia nigra* and Asian Woollyneck *C. episcopus* may be found, along with a range of waterfowl.

In the far north of this region, the Brahmaputra River in Kurigram and Gaibandha districts has a range of species similar to those found along the Ganges and typical of the main rivers along its many branch channels and islands. Exploring this area requires hiring a boat for the day from one of several small landing places. In common with wider trends in Asia, riverine specialists such as Black-bellied Tern *Sterna acuticauda* have been lost or greatly declined in recent years.

A rather different area is around Tetulia in the far north-west. This can be reached on a long overnight bus journey from Dhaka. The farmland and few tea estates of this area have the only

(small) population of Black Francolin *Francolinus francolinus* in the country and there is potential for finding interesting wintering birds—there are recent records of Crested Bunting *Emberiza lathami*, for example.

Concluding remarks

Bird tourism has not yet developed in Bangladesh. A few local companies offer nature tours but do not have bird guides. Several companies operate boat tours in the Sundarbans; of these, 'The Guide' is long established and more oriented to foreign birders. Many sites have local 'eco-guides' who can guide visitors around trails and know the commoner species, while some also have locally run 'eco-cottages'. However, the coast and more remote *haors* are best visited by joining surveys organised by members of Bangladesh Bird Club. Contact can be made through social media, e.g. the Birds Bangladesh facebook group, or via the author.

Although Bangladesh has no endemic birds, this small country has a high diversity of wetland and forest habitats supporting an impressive diversity of birds, with 705 species reliably recorded up to the end of 2019. These include 44 globally threatened and 37 near-threatened species (per IUCN/HBW and BirdLife International 2019). Highlights include a significant percentage of the global population of several species, notably on the coast in winter Indian Skimmer, Spoon-billed Sandpiper and Great Knot, in the Sundarbans resident Masked Finfoot, along the main rivers breeding Bristled Grassbird, and in the *haors* of the north-east Baer's Pochard and Pallas's Fish-eagle. Threats are many but conservation efforts have strengthened over the past two decades, so there is much to appreciate and to attract birders.

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ID FORUM

Brief remarks on the phenotypic variability of White-shouldered Triller *Lalage sueurii* in comparison to White-winged Triller *L. tricolor*

THORE KOPPETSCH & TILL TÖPFER

The Wallacean region is characterised by a unique biogeographical composition (Lohmann *et al.* 2011). The island of Sulawesi is inhabited by a diverse avifauna consisting of endemic species and widely distributed Australasian ones. Among the latter, the island is home to two *Lalage* triller species, a group of small-sized birds distributed across South-East Asia and Australasia to the Oceanian region. Phenotypically, they are sexually dimorphic (except Tanimbar Triller *L. moesta*), with females being less conspicuously coloured and often more similar between different species than males. In some of the species, males show a conspicuous pied colour pattern, with specific diagnostic features being the extent of white in the wings, the colour of the rump and uppertail-coverts, and the presence or absence of a supercilium or supraloral spot. Two of these black-and-white trillers co-occur on Sulawesi: the White-shouldered (or Lesueur's) Triller *L. sueurii* and the White-rumped (or Sulawesi) Triller *L. leucopygialis* (Taylor 2005). While a white supercilium is frequently encountered in males of both taxa, they can be distinguished in the field by their rump colouration (greyish in White-shouldered, whitish in White-rumped) (Eaton *et al.* 2021).

On 4 June 2019, one of us (TK) observed and photographed a black-and-white triller perched on a power line near Pelawa Baru in Parigi Moutong, Central Sulawesi, Indonesia (0.738°S 120.110°E). The area is characterised by open shrub vegetation and interspersed coconut trees. The bird was identified as a male White-shouldered Triller on the basis of its glossy black upperparts with the black on its head reaching below the eye, its pure white underside and broad white wing panel, and by its all-greyish lower back. However, in this individual a white supercilium was obviously absent (Plate 1). Since the presence of a supercilium appears typical of the two black-and-white triller species found on Sulawesi, and because there are other *Lalage* taxa in which the absence of a supercilium is considered a diagnostic character, we here discuss this observation in the context of the genus' phylogeographic background to prompt

further careful field studies on the plumage variation of the taxa in question.

According to recent molecular studies into the phylogeography of the Campephagidae (Jønsson *et al.* 2010, Pepke *et al.* 2019), *Lalage* is characterised by a deep split which separates a so-called 'Eastern clade' and a 'Western clade'. Regarding the black-and-white trillers on Sulawesi, the White-shouldered Triller (whose range extends from East Java through the Lesser Sundas east to the Tanimbars, and north to Sulawesi and Sula islands) belongs to the Eastern clade while White-rumped Triller (found on Sulawesi, the Togian and Sula islands) belongs to the Western clade, indicating their substantial evolutionary separation. The closest relative of the White-shouldered Triller is the allopatric White-winged Triller *L. tricolor* of Australia and south-east New Guinea. Because of their relatively shallow molecular differentiation, Pepke *et al.* (2019) suggested that White-shouldered and White-winged Trillers be reunited as a single widespread species, thus reviving the arrangement in previous works (e.g. Mayr 1940, Keast 1958, Peters *et al.* 1960), that was previously abandoned when White

Plate 1. White-shouldered Triller *Lalage sueurii* found near Pelawa Baru in Central Sulawesi, Indonesia. June 2019. Note the total absence of a white supercilium.



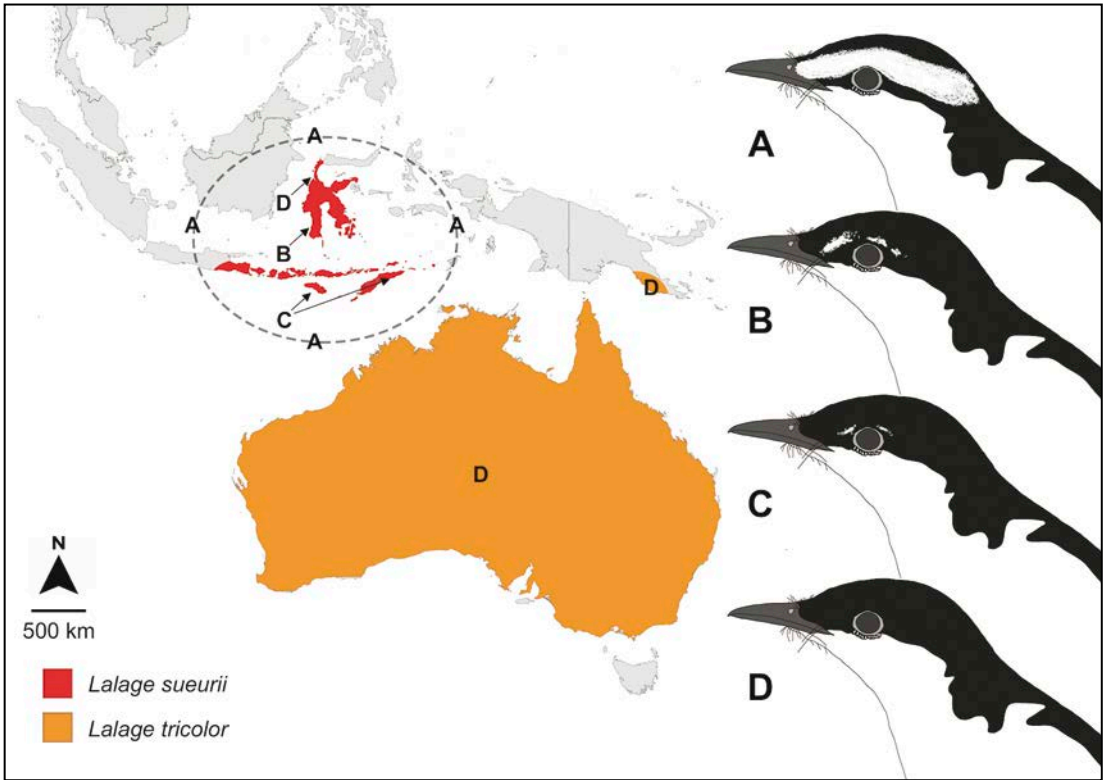


Figure 1. Map of the distribution of White-shouldered Triller *Lalage sueurii* and White-winged Triller *L. tricolor*. Portraits illustrate the range of phenotypic variation in head patterns. A: supercilium present (potentially found throughout the area circumscribed by the dashed line); B: reduced supercilium; C: loral spot; D: no supercilium or loral spot. The 'D' on Central Sulawesi represents the bird in Plate 1.

& Bruce (1986) suggested their treatment as different species. Since then, the two-species approach was widely adopted (see Christidis & Boles 2008, del Hoyo & Collar 2016, Gill *et al.* 2021), with the notable exceptions of Higgins *et al.* (2006) and Christidis & Boles (1994, 2008).

In light of the evidently close relationship between White-shouldered and White-winged Trillers, and for the sake of their field identification, a closer look at their phenotypic variability is worthwhile. Both sexes of the two taxa resemble each other closely except for the white supercilium that is lacking in males of the White-winged Triller.

Results and discussion

We did not find any photograph of a White-winged Triller with a white supercilium in the online database of the Macaulay Library ($n=721$). Although all illustrations in field guides and handbooks depict male White-shouldered Trillers with a white supercilium (White & Bruce 1986, Taylor 2005, Higgins *et al.* 2006, Beehler & Pratt 2016, del Hoyo & Collar 2016, Arlott 2018), del Hoyo & Collar (2016) did acknowledge that the

supercilium might be reduced or lacking and Eaton *et al.* (2021) also point to that taxon's substantial plumage variation (and depict two male plumage variants with differently sized supercilia). Photographs of White-shouldered Trillers from Sulawesi, Sumba and Timor ($n=21$; Appendix 1) demonstrate that this appears to be a variable trait, spanning those with well-pronounced supercilia to those with a small supraloral spot or no discernible supercilia at all (Plates 2–5).

The observation of a black-and-white triller without supercilia on Sulawesi documented herein indicates that such phenotypic variability might occur elsewhere in the range of White-shouldered Triller. Except for the few records from Sumba and Timor, there is no other documentation of intermediate populations that would phenotypically connect the ranges of White-shouldered and White-winged Trillers (Figure 1). Biogeographically, this is very interesting as it could produce valuable data on the evolutionary history and the degree of (sub) specific distinctiveness between *sueurii* and *tricolor*; in particular as only in *tricolor* has a regular change between eclipse and nuptial

Plates 2–5. Plumage variation in male *Lalage* trillers.

KAMA JAYA SHAGI



Plate 2. White-shouldered Triller *L. sueurii* in Bantimurung Bulusaraung NP, Sulawesi. March 2014.



PETE MORRIS

Plate 3. White-shouldered Triller, Makassar, Sulawesi, September 2007.

NEVILLE KEMP



Plate 4. White-shouldered Triller, Sumba, Nusa Tenggara, Indonesia, November 2004.



JOHN J. HARRISON

Plate 5. White-winged Triller *L. tricolor* in Lithgow, New South Wales, Australia. November 2019.

plumage been documented, while all other *Lalage* trillers do not have an eclipse plumage at all (Mayr 1940, Taylor 2005).

The most north-westerly locality in which White-winged Trillers regularly breed is the environs of Port Moresby in south-east New Guinea (Mayr 1940, Mayr & Ripley 1941, Beehler & Pratt 2016), a distance of more than 3,000 km from Sulawesi (Figure 1). Migrating White-winged Trillers have been documented as far away as New Zealand (McPherson 1973) and many non-breeding records from New Guinea, as well as from Australia, apparently refer to irregular migrants (Higgins *et al.* 2006, Beehler & Pratt 2016).

Although we consider it extremely unlikely, we cannot entirely exclude the possibility of a vagrant White-winged Triller on Sulawesi, e.g. from mainland Australia, which would still represent a distance of more than 1,600 km. Nevertheless, the observation from Central Sulawesi more likely represents a variation of the local *sueurii* population. We also rule out that the observed individual was a superficially similar Northern Black-and-white Triller *L. melanoleuca* from the Philippines, which can be separated from the White-shouldered Triller by the broader extent of white on its wing-coverts and by its whitish rump colouration (Taylor 2005).

Such plumage character variation is not unusual in this species group. For example, in White-shouldered Triller the wing-patch is formed by a varying amount of white on the lesser, median (both almost entirely white) and greater secondary coverts (completely white or with black central streaks, often particularly pronounced in the proximal coverts), plus white outer fringes or completely white outer vanes on secondaries and tertiaries. A similarly variable white wing-patch is also seen in the sympatric White-rumped Triller, rendering species identification based on the extent of wing-patches ambiguous, at least on Sulawesi. In any case, we hope to stimulate further careful observations of *Lalage* trillers in the area, particularly with respect to their potential phenotypic variability that could contribute to a better understanding of regional avian diversification.

Acknowledgements

We are very thankful to Kama Jaya Shagi, Pete Morris, Neville Kemp and John J. Harrison for kindly providing photographs. TK is grateful to Fabian Herder (ZFMK) for the opportunity to participate in fieldwork on Sulawesi and to the German Academic Scholarship Foundation for providing a travel grant.

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Appendix 1. Photographic records of White-shouldered Trillers *Lalage sueurii* and White-winged Trillers *L. tricolor* available online from the Macaulay Library (ML) and Oriental Bird Club Image Database (OBI), accessed on 19/11/2022. Localities are given (in Indonesia unless otherwise stated); designation of type of head plumage pattern as in Figure 3.

- Type A.** OBI96678 (Bantimurung Bulusaraung NP, Sulawesi); ML256677701 (Oelnasi, West Timor, Nusa Tenggara); ML242520101 (Retrorika Cafe, Java); ML230516361 (Menjangan Resort, Bali); ML217898701 (Beloi, Dili, Timor-Leste); ML217898651 (Beloi, Dili, Timor-Leste); ML142981651 (Subaun ki'ik, Manatuto, Timor-Leste); ML205072191 (Leti, Maluku); ML62247111 (Serwaru, Maluku); ML718218 (Tukangbesi islands, Sulawesi); ML106815301 (Banyu Wedang, Bali).
- Type B.** ML71084091 (Palu, Sulawesi); ML68112791 (Karaenta Forest, Sulawesi); OBI122484 (Makassar, Sulawesi); OBI33795/OBI33793 (Sulawesi); ML205269811 (Ujung Pandang, Sulawesi); ML141380071 (Karaenta Forest, Sulawesi).
- Type C.** OBI12158 (Sumba, Nusa Tenggara); ML191868941 (Waingapu salt pans, Nusa Tenggara); ML239183541 (Balibo Fort Hotel, Balibo, Timor-Leste).
- Type D.** ML186177401 (Lithgow, New South Wales, Australia); ML188812671 (Penrith Weir Reserve, Penrith, New South Wales, Australia); ML184215521 (Royal Park, Melbourne, Victoria, Australia); ML123687451 (Sandy Camp Road Wetlands, Brisbane, Queensland, Australia); ML204362691 (Lake Gilles Conservation Park, South Australia, Australia).



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BIRDING AREA

San Kala Khiri Proposed National Park: an important site for the conservation of Large Green-pigeon *Treron capellei* and other globally threatened species in Thailand

INGKAYUT SA-AR, WICH'YANAN LIMPARUNGPATHANAKIJ, PORNTHIP SUNTONSAWAT, AYUWAT JEARWATTANAKANOK, PHAYUDECT PERKHONG, KRIT ADIREK, SAKSIT KHUNNARONG, DING LI YONG & JAMES A. EATON

Introduction

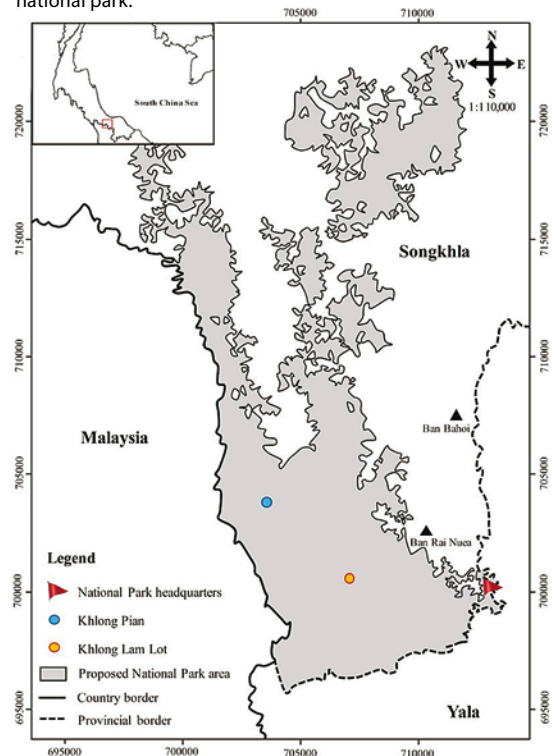
Located at the southern tip of Saba-Yoi district, Songkhla province, Thailand, on the border with Malaysia, San Kala Khiri Proposed National Park (hereafter SKK) is a little-studied, hilly forested landscape covering c.143 km² that has been officially proposed for designation as a protected area by the Department of National Parks, Wildlife and Plant Conservation (DNP) under the Ministry of Natural Resources and Environment since 6 June 2000 (Sa-ar & Limparungpatthanakij 2017). SKK is located north-west of the forest complexes encompassing Bang Lang National Park and Hala-Bala Wildlife Sanctuary in Yala and Narathiwat provinces, and is contiguous with the extensive forests of Bukit Keramat, Padang Terap, Pedu, Bukit Saiong and Ulu Muda Forest Reserves in Kedah, Malaysia, to the west (Figure 1). Much of SKK is covered with primary broadleaf evergreen (dipterocarp) and secondary forest, at 100–626 m (Plate 1). The area forms the north-western foothills of the San Kala Khiri (Titiwangsa in Malaysia) range, one of the most extensive mountain ranges in the Thai-Malay Peninsula. SKK has become increasingly frequented by local birders since July 2017 because of species highly sought-after in Thailand such as Large Green-pigeon *Treron capellei*, Plain-pouched Hornbill *Rhyticeros subruficollis* and Malay Black Magpie *Platysmurus leucopterus*, resulting in regular visits by birders from across the country and leading to discoveries of further rarities.

Here, we summarise observations of globally threatened species recorded in the park from July 2017 to December 2020 based on information compiled from eBird and the bulletins of the Bird Conservation Society of Thailand (BCST), complemented by first-hand information from park rangers. Many notable observations made were within 4 km of the park headquarters (6.326°N 100.923°E) and the Khiri Thong Phrai Nature Trail (hereafter KTPNT), approximately 4 km in length

and mainly composed of secondary forest with numerous dense bamboo clumps. The entrance road to the headquarters is easily accessible by car. Apart from a campground and public toilets, facilities in the park are limited, although a range of accommodation is found outside the park in Bahoi.

The major forest complex in southern Thailand frequently mentioned here is Hala-Bala, the most extensively forested and well-studied area in the

Figure 1. The location of San Kala Khiri PNP, Saba-Yoi district, Songkhla province, Thailand, and locations referred to in the text. Adapted from San Kala Khiri National Park Management Plan 2020–2023, DNP unpublished report for proposed national park.





PORNTHIP SUNTONSAWAT

Plate 1. Panoramic view of Thepha Upstream covered with primary broadleaf evergreen forest along the Thailand–Malaysia border. SKK, January 2019.

region, comprising Bang Lang NP and Hala-Bala Wildlife Sanctuary. These sites are contiguous with the Belum–Temengor Forest Complex (c.2,660 km²) in Malaysia (Yeap *et al.* 2007, Lim 2010).

Globally threatened bird species

Between July 2017 and December 2020, no fewer than 10 globally threatened species were recorded at SKK, most of which have a highly localised distribution in Thailand. We summarise records and observations of these species. The taxonomy and global conservation status used in this article follows BirdLife International (HBW and BirdLife International 2020) and the IUCN Red List respectively.

Great Argus *Argusianus argus* [VU]

First recorded on 16 March 2019, when a male was heard calling around 07:30 by PS at Khlong Lam Lot, an area of lowland evergreen forest east of SKK headquarters. This species is still frequently detected by calls in a handful of protected areas in southern Thailand. At a study site in the Hala-Bala WS, it was estimated to have declined by more than 35% between 2001 and 2014, suggesting that birds avoided the forest edge, probably due to human disturbance (Dawrueng *et al.* 2017). With SKK being largely bordered by forest along the national border and by fewer villages, it has the potential to hold a high density of this species.

Large Green-pigeon *Treron capellei* [VU]

Once common in southern Thailand, this species has undergone a major decline because of lowland forest loss and hunting, such that it is now scarce

(Treesucon & Limparungpathanakij 2018). In the past 20 years in Thailand, Large Green-pigeon has been regularly sighted in only two protected areas, Mu Ko Surin NP and SKK. However, a lack of recent sightings elsewhere is also likely to be a consequence of poor observer coverage. Given the numbers seen by JAE (14 and 26 on consecutive days in September 2020 in Bang Lang NP, which borders Royal Belum State Park in Malaysia, where over 100 birds are regularly recorded), it is assumed that with more frequent observer coverage, Bang Lang NP will also prove an important area for the species.

At SKK, the first confirmed record wasn't until July 2017, near the visitor centre by Danai Plikomol, followed by a sighting of eight feeding on fruits of *Aglaiia lawii* inside KTPNT on 17 September 2017 by IS. It has been recorded regularly since then (Plates 2 & 3). Between September 2017 and February 2018, PP observed Large Green-pigeons roosting approximately 25 m off the ground in a tall Malacca Teak tree *Intsia palembanica* near the visitor centre. Groups of over 70 individuals were recorded between August and September 2020.

Most facets of this species' breeding ecology remain poorly known: a nest with a single egg was noted in February from Sumatra (Indonesia), and breeding in mainland Asia is said to take place between April and July (in Gibbs *et al.* 2001, without further comment). Here we provide seemingly the first nest description for the species. Following a fledgling near the visitor centre on 17 July 2017 (Plate 4), on 27 April 2019 PP discovered a nest c.7 m above the ground in a *Lagerstoemia floribunda* near the park entrance. A male was



PHAYUDECT PERKHONG

Plate 2. Pair of Large Green-pigeons *Treron capellei*: male (left), female (right). SKK, July 2019.

Plate 3. Six adult Large Green-pigeons and two adult Thick-billed Green-pigeons *T. curvirostra* perched on a snag near the visitor centre. SKK, June 2019.



PHATTARADECH THANANPHITCHAYAKON

WICH'YANAN LIMPUNGPATTHANAKUJ



Plate 4. Fledgling Large Green-pigeon hiding in the tree canopy. SKK, July 2017.



CHALARD THONGDAM

Plate 5. Male Large Green-pigeon with a nestling in the nest. SKK, April 2019.

CHINTANA SUWAWAN



Plate 6. Male Large Green-pigeon with two fledglings. SKK, August 2019.



KHEMTHONG TONSAKULRUNGUANG

Plate 7. Female White-crowned Hornbill *Berenicornis comatus*. San Kala Khiri Proposed National Park, Songkhla province, Thailand, August 2019.

observed with two nestlings on a nest (Plate 5), which was merely a platform made of loosely arranged twigs and leaves on horizontal branches, similar to other *Treeron* nests observed by the authors. On 10 May 2019, a female with two fledglings was photographed near the park entrance. Another nest was found nearby in mid-July 2019 by PP and PS in *Microcos tomentosa*, c.4.5 m above the ground, only 5 m from an officer's residence. However, the nest was obscured by dense foliage, making it difficult to determine the nest materials used. Subsequently, on 12 August 2019, two fledglings hidden under the male's wings were observed before the male was chased away by a Large-billed Crow *Corvus macrorhynchos*, a

potential nest predator, and a fledgling was flushed to another tree (eBird: S58977693). Soon after, on 15 August, two fledglings perching beside the male near the nesting tree were noted (Plate 6).

White-crowned Hornbill *Berenicornis comatus* [EN]
In August 2019, a female White-crowned Hornbill was photographed in forest edge approximately 300 m from the visitor centre (Plate 7). This constitutes the first photographic evidence of this species at the park, although it had reportedly been seen by park rangers along the KTPNT before. White-crowned Hornbill is known to be a low-density species that is regularly encountered in adjacent areas in Malaysia (e.g. Pedu and Ulu Muda FR).

Rhinoceros Hornbill *Buceros rhinoceros* [VU]

The only record in SKK was a carcass of an adult male found near Khlong Lam Lot by PS in June 2019. This species is presumed to be extinct further north, including in Thale Ban NP (Sanguansombat 2005), despite reasonable effort looking for it since 1996, and Khao Banthad WS, where the last confirmed record was a sighting of two individuals on 18 May 1988 in Thung Wa district, Satun (McLoughlin & Parr 1988, Wells 1999). It can still be regularly found only in Budo-Sangai Padi NP, the Hala-Bala forest complex and Namtok Sipo Proposed NP (P. Thiensongrassamee pers. comm. 2021). The species is relatively common in adjacent areas of Malaysia.

Helmeted Hornbill *Rhinoplax vigil* [CR]

A carcass, of unknown sex, was found at Ban Bahoi in 1997 (Nikorn Suwannakan pers. comm. 2021). It was described as 'uncommon' between June 1997 and May 1998 in Khlong Songkae Community Forest (Rattana 1999), a small forest patch 4 km to the north-west of the park headquarters. There was no confirmed record of the species in SKK until members of BCST heard its distinctive call in September 2020 at KTPNT. However, they were unable to determine the specific location of the call, which may have originated in Khlong Lam Lot. More surveys should urgently be undertaken, especially in the core area along the national border, to determine its population status.

Black Hornbill *Anthracoceros malayanus* [VU]

Just two records: in a remote area of Khlong Thepa, SKK, near the national border in April 2003 (Sukanya Thanombuddha pers. comm. 2020) and a pair photographed flying over the visitor centre

in September 2020 by BCST (ebird: S56706372). Although Kemp *et al.* (2020) state that the northern limit of its distribution in Thailand is Trang province, it is recorded as far north as Thagyet Reserve Forest, Thanintharyi, southern Myanmar (Win & Moses 2011), while there are records at Krung Ching Forest Protection Unit at Khao Luang NP (ebird: S56706372), and Chaloe Prakiat WS, where the species has been seen regularly since 2011. Elsewhere in Thailand, the last confirmed sighting was a record of four individuals at Khlong Phraya WS by John Parr on 14 December 1988 (Round 1989). In Malaysia, the species is widespread and regular in areas adjacent to SKK.

Plain-pouched Hornbill *Rhyticeros subruficollis* [VU]

Regularly recorded in the area between late May and mid-September when sizeable flocks can be seen migrating from the breeding grounds in Myanmar and sites straddling the Thai-Myanmar border to the non-breeding quarters along the Thai-Malaysia border (Wells 1999, Kaur *et al.* 2011, Yeap *et al.* 2017). A record of six observed on 10 December 2020 by PP is considered exceptional. It can be seen flying in flocks throughout the day, with a maximum count of c.120 individuals, which could equate to 8% of the global population, thought to number 1,500–7,000 mature individuals (BirdLife International 2021). SKK is a significant locality for this declining species, with annual counts at Belum Temengor (Malaysia) having shown steep declines, from 3,261 in 2008 to around 1,000 in the years since (Yeap Chin Aik *in litt.* 2021). Groups of Plain-pouched Hornbill are sometimes perched on *Artocarpus elasticus* along the main entrance road, especially in the early morning and at dusk (Plate

Plate 8. Flock of Plain-pouched Hornbills *Rhyticeros subruficollis* perched on *Artocarpus elasticus*. SKK, August 2020.





PRAPOJ RUKRUENREANG

Plate 9. Male Plain-pouched Hornbill. SKK, July 2018.

8). Birds have been observed foraging on dark purplish fruits of *Beilschmiedia* sp. (Plate 9) and fruits of *Endocomia canarioides* (ebird: S92038175). Movements between large forest patches either side of the border, such as the Hala-Bala forest complex, Ulu Muda Forest Reserve and Royal Belum State Park in Malaysia, are suspected and are likely to include SKK (Yeap *et al.* 2017).

Worryingly, two carcasses were found next to bonfire traces in Khlong Pian, north-west of SKK headquarters, on 19 June 2019. Additionally, there are at least two reports of persecution along its migration routes: a male shot in Ban Bang Khram, Krabi, on 7 October 2002 (Robson 2003) and another male shot near Khlong Phraya WS on 19 July 2021 (ebird: S91982115). These troubling records provide evidence of illegal poaching which, given that the entire population migrates across vast areas of non-protected areas, is a potentially serious and underestimated issue that requires further, urgent research.

Great Slaty Woodpecker *Mulleripicus pulverulentus* [VU]

A party of three individuals observed by IS inside KTPNT in September 2017 was the first record. Since then, there have been several sightings

between January and August 2018 of up to five individuals foraging along forest edge close to rubber plantations. This species has seemingly disappeared from much of southern Thailand; since 2005, it has been recorded in only five areas: Tarutao NP, Thale Ban NP, Bang Lang NP, Hala-Bala WS (ebird: S92691953) and SKK.

Grey-cheeked Bulbul *Alophoixus tephrogenys* [VU]

Frequently recorded around the visitor centre. It is still a fairly common species in many forested areas throughout southern Thailand (Treesucon & Limparungpatthanakij 2018). However, Grey-cheeked Bulbul is threatened by the increasing demand for the illegal caged bird trade, along with many other songbirds, and populations of the species are under pressure, especially those residing in forests outside protected areas. It was uplisted from Least Concern to Vulnerable in 2020.

Greater Green Leafbird *Chloropsis sonnerati* [EN]

A female photographed feeding on the fruits of a *Ficus* sp. in December 2020 (Somkiat Pakapinyo pers. comm. 2020) is the only confirmed record at SKK of this species, despite it being formerly common in forested areas throughout southern and south-western Thailand (Lekagul & Cronin 1974). It has declined heavily across much of southern Thailand due to its recent popularity in the illegal songbird trade. It was uplisted from Least Concern to Vulnerable in 2016, then to Endangered in 2019.

Conservation issues

Despite the majority of bird and large mammal species in Thailand being protected under the Wildlife Preservation and Protection Act, B.E. 2562 (2019), ongoing illegal poaching poses a pervasive threat. In the regenerating secondary forests surrounding SKK, Wild Boar *Sus scrofa* and Red Junglefowl *Gallus gallus* are the principal species targeted by hunters for bushmeat. The carcasses of two Plain-pouched Hornbills near Khlong Pian and a detached head of a male Rhinoceros Hornbill (Plate 10) demonstrate that hornbills are also among species targeted by poachers in the area. Nestlings of all hornbill species, including the Near Threatened Bushy-crested Hornbill *Anorrhinus galeritus* and other species recorded in SKK, are frequently found for sale in the illegal pet trade, as well as Changeable Hawk-eagle *Nisaetus cirrhatus limnaeetus*, Blyth's Hawk-eagle *N. alboniger* (Siriwat & Nijman 2020), Barred Eagle-owl *Bubo sumatranus*, Black-thighed Falconet *Microhierax fringillarius* and Common Hill Myna *Gracula religiosa*.



SIVANAN KHLONGKOBSSOM

Plate 10. Carcass of an adult male Rhinoceros Hornbill *Buceros rhinoceros*. Khlong Lam Lot, SKK, June 2019.

Moreover, trapping for the caged bird trade appears to be an increasing threat affecting many species formerly commoner in southern Thailand. These include Blue-crowned Hanging-parrot *Loriculus galgulus*, Dark-throated Oriole *Oriolus xanthonotus*, Crested Jay *Platylophus galericulatus*, Grey-cheeked Bulbul, Scaly-breasted Bulbul *Ixidia squamata*, Black-crested Bulbul *Rubigula flaviventris*, Red-whiskered Bulbul *Pycnonotus jocosus*, Stripe-throated Bulbul *P. finlaysoni*, Olive-winged Bulbul *P. plumosus*, White-rumped Shama *Kittacincla malabarica*, Oriental Magpie-robin *Copsychus saularis*, Asian Fairy-bluebird *Irena puella*, Greater Green Leafbird, Lesser Green Leafbird *Chloropsis cyanopogon*, Blue-winged Leafbird *C. moluccensis*, Orange-bellied Flowerpecker *Dicaeum trigonostigma*, Ruby-cheeked Sunbird *Chalcoparia singalensis*, Maroon-bellied Sunbird *Leptocoma brasiliana* and Pintailed Parrotfinch *Erythrura prasina* (Techachoochert & Round 2013, Chng *et al.* 2015, 2017, Lee *et al.* 2016, Rentschlar *et al.* 2018). Indeed, one species, Straw-headed Bulbul *Pycnonotus zeylanicus*, that was previously widespread and common in southern Thailand (Lekagul & Cronin 1974), may already be extinct in the country due to capture for the bird trade (Treesucon & Limparungpatthanakij 2018, Chiok *et al.* 2019).

Lowland specialist species in southern Thailand are also threatened by the continuing loss of plains-level lowland forests, a habitat almost wholly disappeared from Peninsular Thailand. The southern sections of SKK adjacent to Kabang Forest Reserve, Kabang, Yala province, are affected by logging, while rubber plantations and fruit

orchards have largely displaced the primary and secondary lowland forest in the area. Mismanagement of habitat in protected areas elsewhere in Thailand, including reforestation programs and construction of check-dams in forest streams, are also expected to impact ecosystems (Treesucon & Limparungpatthanakij 2018).

Discussion

A total of seven globally threatened species have so far been recorded within a 4 km radius of the SKK headquarters and the nearby KTPNT. Only three species—Great Argus, Helmeted and Rhinoceros Hornbills—were recorded only in the interior of SKK. Our observations, and the data from other visiting birdwatchers, highlight the importance of safeguarding regenerating lowland forests that have been heavily logged in the past as they can support several species of conservation concern. Tall trees in the headquarters area, particularly *Intsia palembanica* surviving from previous logging cycles, provide a roosting site for the globally threatened Large Green-pigeon, which has also been recorded nesting in the vicinity, and is used by Helmeted Hornbill for nesting.

Native trees in the headquarters area including *Vitex pinnata*, *Aglaiia lawii*, *Endocomia canarioides*, *Ficus* sp. and *Beilschmiedia* sp. are known to provide important food sources for frugivorous species, notably Large Green-pigeon and White-crowned, Black and Plain-pouched Hornbills.

Secondary and bamboo forest along the KTPNT supports a high diversity of forest birds, particularly babblers and woodpeckers. The Khlong Thepa Canal flows through lowland primary forest below 200 m that is still largely unexplored and may host more species of conservation concern. The globally threatened Chestnut-necklaced Partridge *Arborophila charltonii* and Malay Peacock-pheasant *Polyplectron malacense*, thought to be extinct in Thailand, are still present in adjacent areas of forest immediately across the Thai-Malaysian border (Yeap *et al.* 2007, ebird 2021). Other species that have not been recorded recently in Thailand are also known to occur there, including Large Frogmouth *Batrachostomus auritus*, the nominate subspecies of White-bellied Woodpecker *Dryocopus javensis*, and Sooty-capped Babbler *Malacopteron affine*.

The sooner the conservation priority of SKK is raised through the official establishment as a national park, the better for the area's wildlife and their habitats. The park officers will then be able to enforce regulations more effectively, particularly when it comes to confrontation with poachers. Furthermore, the official designation as a protected area will facilitate access to necessary

funding for carrying out surveys, research and conservation plans.

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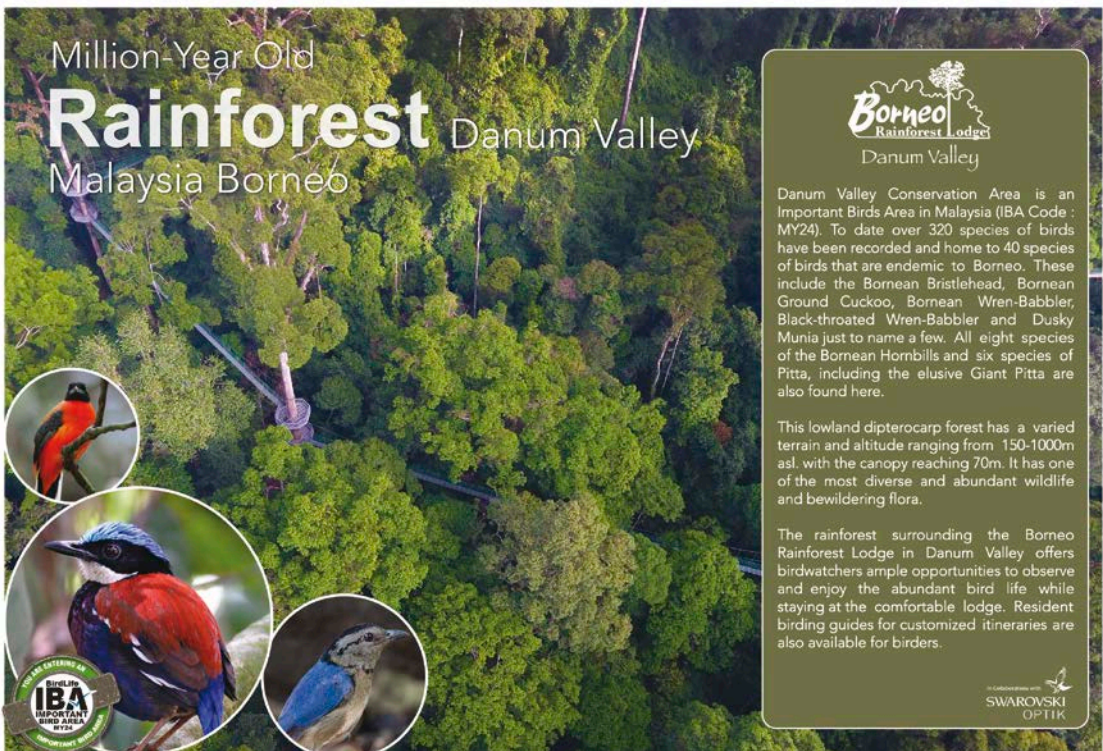
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TAXONOMIC UPDATE

Taxonomic insights on Asian birds published in 2020

PAUL F. DONALD & NIGEL J. COLLAR

This is the latest in our series of annual reviews, the principles and aims of which are detailed in *BirdingASIA* 34: 27 and *BirdingASIA* 35: 67. In the interests of space, they are not repeated in detail here. We remind readers, however, that while we represent one of four widely accepted global checklists, we aim to be impartial in our review with recently published literature, whether it accords with our accepted taxonomy or not. These articles aim only to describe recent publications, not to judge the validity of their findings. As before, where a paper is published online in one year prior to being published in hard copy in another, we generally include it in the latter year's review. And as before, we apologise if we have missed any relevant publications and urge readers to alert us to them so we can include them in the next review. We remind readers that BirdLife International welcomes suggestions for changes to its current checklist: please email taxonomy@birdlife.org or use the BirdLife taxonomy forum which can be accessed here, along with a downloadable copy of the current checklist: <http://datazone.birdlife.org/species/taxonomy>. Due to the large number of relevant articles published in 2020, our summaries of each are necessarily shorter than in previous reviews.

New families and subfamilies

Elanidae

The distinctive elanine kites in the genera *Elanus*, *Chelictinia* and *Gampsonyx* diverged from other raptors 21.3 mya, warranting their recognition as the family Elanidae, with New World *Gampsonyx* in subfamily Gampsonychinae and the Old World remainder in Elaninae (Starikov & Wink 2020).

Estrildidae

Olsson & Alström (2020) present the first time-calibrated phylogeny of the entire waxbill family Estrildidae, including the great majority of currently recognised species and all genera represented in the OBC region. They propose the recognition of six subfamilies within the waxbills, three of which are represented in the region: Amandavinae (with genus *Amandava* represented in the region), Erythrurinae (*Erythrura*) and Lonchurinae (*Euodice*, *Lonchura* and *Padda*). Olsson & Alström (2020) recommend that this last

genus be reinstated for what both 'IOC' (Gill *et al.* 2020) and HBW/BirdLife (del Hoyo & Collar 2016) currently recognise as Java Sparrow *Lonchura oryzivora* and Timor Sparrow *L. fuscata*.

New species

Myzomela prawiradilagae

Irham *et al.* (2020) describe a new *Myzomela* honeyeater from the highlands of Alor Island, Indonesia, which they name Alor *Myzomela* *M. prawiradilagae* (Plate 1). It is most similar in appearance to Wetar *Myzomela* *M. kuehni* from the adjacent island of Wetar, but differs in having a more intensely red-coloured hood that does not extend as far onto the nape or breast. The breast below the red throat is smoky grey in the new species, white in Wetar *Myzomela*. Alor *Myzomela* is also distinctly olive-tinged on the upperparts compared to the uniformly grey mantle of the Wetar species. Furthermore, there are highly significant differences between them in vocalisations, particularly contact calls. Genetic data confirm that the new taxon is closest to Wetar *Myzomela* but that the dissimilarity in mtDNA, at just 1.7%, is on the low side of mitochondrial divergence typically associated with avian species-level differences. However, the authors point out: 'When available, biological data should trump mitochondrial divergence values in assigning species rank', a sentiment we endorse (and to which we would add the suggestion that a *lack* of biological data should trump mitochondrial divergence values in *not* assigning species rank). Interestingly, while Wetar *Myzomela* occurs at all elevations on its home island, and in a range of forest habitats, Alor *Myzomela* is largely restricted to *Eucalyptus* woodland above 1,000 m.

New Wallacean species

In a single paper, Rheindt *et al.* (2020) describe no fewer than five new species, briefly detailed below, from the Togian Islands (in the Gulf of Tomini, off the coast of Central Sulawesi), Peleng (the largest and highest island in the Banggai Archipelago) and Taliabu (in the Molucca Sea between Banggai and Buru). Their descriptions are based almost entirely on specimens and other data collected during a six-week expedition from November 2013 to January 2014.

Plates 1–6. Six species in our region were described as new to science in 2020, all from Indonesia.

PHILIPPE VERBELEN



Plate 1. Alor Myzomela *Myzomela prawiradilagae*, Manmas-Subo, Alor, Indonesia, April 2014.



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Plate 2. Taliabu Myzomela *Myzomela wahe*, Taliabu, Indonesia, November 2015.

ALPIAN MALESO



Plate 3. Peleng Fantail *Rhipidura habibiei*, Peleng, Indonesia, August 2020.

Plate 5. Peleng Leaf-warbler *Phylloscopus suaramerdu*, Peleng, March 2009.



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Plate 4. Taliabu Grasshopper-warbler *Locustella portenta*, Taliabu, November 2015.

Plate 6. Taliabu Leaf-warbler *Phylloscopus emilsalimi*, Taliabu, November 2015.

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- ***Myzomela wahe***

Taliabu Myzomela *M. wahe* (Plate 2) occurs on Taliabu in forest canopy and edge habitats from sea level to 1,300 m, though it may only breed at higher elevations. It may also occur on the other two main islands of the Sula Archipelago, Mangole and Sanana. It is most similar to, and geographically intermediate between, Sulawesi Myzomela *M. chloroptera* and the myzomelas on Seram, which are variously treated as a full species *M. elisabethae* or as a subspecies of *M. wakoloensis*. Rheindt *et al.* (2020) separate Taliabu Myzomela on the basis of plumage differences and mitochondrial DNA divergence, but vocal differences remain unclear. Compared to *M. chloroptera*, the new species has a more extensive and brighter red body and blacker wings, scapulars and tail. Compared to *M. [wakoloensis] elisabethae*, *wahe* is paler and greyer on the vent and abdomen and has a more smudgy scarlet body colouration compared to the more uniform red underparts, head and mantle of *elisabethae*.

- ***Rhipidura habibiei***

Peleng Fantail *R. habibiei* (Plate 3), endemic to montane forest on the island of Peleng, is most similar to Taliabu Fantail *R. sulaensis* of the Sula Islands and Sulawesi Fantail *R. teysmanni* (these two are lumped as Rusty-bellied Fantail *R. teysmanni* by HBW/BirdLife) and falls geographically between them. The new taxon differs in plumage from the two adjacent species in a number of subtle but consistent ways, but the most interesting difference is in its simple descending song, which lacks the typical complex tinkling quality of its congeners on either side (Ng *et al.* 2017). *R. habibiei* is likely to be threatened, given its small extent of occurrence and continuing loss of habitat.

- ***Locustella portenta***

Taliabu Grasshopper-warbler *L. portenta* (Plate 4), endemic to the highest montane forests on the island of Taliabu, is most similar to Chestnut-backed Grasshopper-warbler *L. castanea* of Sulawesi, Seram and Buru (often split into endemic species on each of these three islands), but it differs in inevitably subtle plumage features, in particular in being darker brown above than any adjacent forms. It is also distinct vocally, its song differing more from surrounding forms of *L. castanea* than from the much more distant Friendly Grasshopper-warbler *L. accentor* of Borneo. Patterns of genetic divergence support species-level recognition and suggest that it is most closely related to *L. [castanea] disturbans* from Buru. The new species is likely to have a small range and to be threatened by habitat loss and climate change.

- ***Phylloscopus suaramerdu***

Peleng Leaf-warbler *P. suaramerdu* (Plate 5) is restricted to the highland forests of western Peleng in the Banggai Archipelago, at elevations above 700 m. It differs from all other Wallacean members of the *P. poliocephalus* species complex in a number of plumage features, including its white (not yellowish) supercilium and throat, and by its grey-and-white mottled ear-coverts (yellow-and-grey or unmottled in other taxa). It differs additionally from *P. [sarasinorum] nesophilus* (see under Confirmations below) of adjacent parts of Sulawesi in the greater contrast between crown and mantle colour and in its paler yellow lower underparts. The species is unusual in its behaviour of frequently climbing along larger branches and trunks of trees in the manner of a treecreeper (*Certhia*). The song also appears to differ from that of *P. nesophilus* to the west and *P. emilsalimi* (see next species) to the east, although this was not analysed quantitatively. The song of *P. suaramerdu* is characterised by melodious jumbles of 1–1.5 s, mostly at 2–6 kHz, with short individual higher notes occasionally interspersed. Song motifs generally lack repetitive element sequences or trills. In contrast, the song of *P. emilsalimi* is characterised by 1.5–3 s strophes, mostly at 2–6.5 kHz, that constitute a melodious jumble often followed by a final repetitive phrase.

- ***Phylloscopus emilsalimi***

Taliabu Leaf-warbler *P. emilsalimi* (Plate 6) has entirely lemon-yellow underparts and lacks a central crown-stripe and wing-bars. It differs from the newly described *P. suaramerdu* (see previous species), which is geographically the closest congener, in its yellow (*vs* white) supercilium, throat and facial grizzling, and apparently song. *P. emilsalimi* also has less of a mottled appearance on the breast, a greener crown, and a paler bill and tarsus. It is most similar to *P. nesophilus* from Sulawesi, but differs in its paler bill and tarsus, duller olive upperparts, and less olive mottled appearance on the breast. It inhabits disturbed and undisturbed montane forest on Taliabu from 700 m up to probably the highest elevations above 1,400 m.

Splits

- ***Rheinardia ocellata nigrescens* = *R. nigrescens***

Crested Argus *R. ocellata* occurs as two disjunct forms, one in Vietnam and Laos (n nominate *ocellata*) and one in Peninsular Malaysia (subspecies *nigrescens*). Museum specimens, photographs, videos and sound recordings reveal that *nigrescens* differs by a yellower bill with blackish nares, buffier supercilium, throat and breast, differently coloured and structured crest, differently patterned

upperparts and tail, purer, more fluent, longer, lower ‘short call’ (used by advertising males), and more loud notes in the ‘long call’, including a bimodal vs unimodal pattern; in combination these differences are taken to indicate species rank in *nigrescens* (Davison *et al.* 2020).

Phasianus colchicus elegans* + *rothschildi* = *P. elegans

***Phasianus colchicus vlangalii* + 14 subspecies = *P. vlangalii* (= *P. torquatus*)**

Molecular sampling of seven nuclear and two mitochondrial loci in 204 individuals from 90 locations across its range reveals to Liu *et al.* (2020a) that the Common Pheasant *P. colchicus* diversified during the Late Pleistocene, 0.2 mya, into eight distinct lineages (Green Pheasant *P. versicolor* having diverged 0.6 mya, in the Mid-Pleistocene). Of these eight, one, containing the form *elegans* of south-central China and northern Myanmar (probably plus *rothschildi* of southern Yunnan and northern Vietnam), split from the others 0.23 mya and hence is sister to the other seven, which formed two clades (called here A and B) estimated to have separated 0.17 mya. Of these two, A contains three subclades (1: *torquatus* with *pallasi*, *karpowi*, *decollatus* and *takatsukasae*; 2: *vlangalii* [misspelt throughout *vlangalii*] with *strauchi*, *suehschanensis*, *kiangsuensis*, *hagenbecki*, *satscheuensis*, *edzinensis*, *sohokhotensis* and *alashanicus*; 3: *formosanus*) and B four (4: *tarimensis*; 5: *chrysomelas* with *septentrionalis*, *bergii*, *zarudnyi*, *principalis*, *zerafschanicus*, *bianchii* and *shawii*; 6: *mongolicus* with *turcestanicus*; 7: *colchicus* with *talischensis* and *persicus*).

Using a program called ‘BPP’ (Bayesian Phylogenetics and Phylogeography) to analyse multilocus sequence data and thereby, apparently, determine species limits, Liu *et al.* (2020a) recommend that, pending further sampling which might involve further splitting, Common Pheasant be broken into three: Yunnan Pheasant *Phasianus elegans*; ‘Chinese Pheasant *P. vlangalii* [sic]’, consisting of clade A above, even though *torquatus* is much the oldest name in this clade; and Common Pheasant *P. colchicus*, consisting of clade B above.

Gygis alba candida* = *G. candida

All modern taxonomies treat ‘White Tern’ *G. alba* as including nominate *alba* in the South Atlantic and *candida* in the Indian Ocean and most of the Pacific Ocean. However, Pratt (2020) points out that *candida* differs from nominate *alba* by its shorter and more conical bill, with cobalt-blue over the basal third and the feathering forming a straight receding line, whereas on *alba* it makes concave arcs over the bases of the upper and lower mandibles. One common call of *candida* is a series

of short raspy notes while its equivalent in *alba* consists of longer, lower notes; moreover, *alba* calls with low-pitched long-sustained notes that appear not to have been recorded in *candida*. Disliking the name ‘White Tern’, Pratt (2020) proposes calling the species of *Gygis* ‘fairyterns’: Atlantic Fairytern *G. alba* and Common Fairytern *G. candida* plus Little Fairytern *G. microrhyncha*, with the very different *Sternula nereis* of Australia, New Caledonia and New Zealand remaining, simply, Fairy Tern.

Pitta elegans concinna* = *P. concinna

Pitta elegans vigorsii* = *P. vigorsii

Elegant Pitta *P. elegans*, confined to Wallacea in central Indonesia and intriguing for the short-distance migrations of some of its constituent taxa to islands to the north of its breeding range, proves in a new arrangement based mainly on voice to be a complex of species. Eight years ago, Trainor & Verbelen (2013) mentioned the occasional treatment of the form *vigorsii* as a full species (‘Double-striped Pitta’), established its vocal distinctiveness, and indicated the value of ‘further taxonomic consideration’. Seemingly oblivious of this paper, Yue *et al.* (2020) nonetheless rise to the challenge it contains. The forms *elegans* (Timor and associated islands), *maria* (Sumba) and *virginalis* (Flores Sea islands) comprise a vocally uniform group (three-note territorial call, the first two notes close together), unified further by their black throats and buff supercilia, to which Yue *et al.* (2020) give the name Temminck’s Elegant Pitta *P. elegans* (Plates 7 & 8). The form *concinna* (Lesser Sundas from Nusa Penida east to Alor), which the authors call Wallace’s Elegant Pitta *P. concinna* (Plate 9), has a two-note territorial call, the black throat extends onto the upper breast, and the front half of the supercilium is rufous, the rest white. The form *vigorsii* (Banda Sea islands from Babar east to the Kai islands), named Banda Elegant Pitta *P. vigorsii* (Plate 10), has a two- and a three-note territorial call, but both are much slower than the others, and both its throat and its supercilium are white.

Eremophila alpestris penicillata* = *E. penicillata

Eremophila alpestris longirostris* = *E. longirostris

The horned lark complex has long puzzled ornithologists. Horned Lark *E. alpestris* (*sensu lato*) occurs across North America and much of Eurasia, with isolated outposts in South America and North Africa. It has long been suspected to comprise more than one species—as early as 1904 Bianchi suggested that six or more species might be represented, and genetic analyses published in 2014 broadly supported the same view—but its huge range of local variation (over fifty subspecies have been described) has complicated the issue. Using two mitochondrial



NOAH STRYCKER

Plate 7. Temminck's Elegant Pitta *Pitta elegans elegans*, Tangkoko NP, Sulawesi, Indonesia, November 2015.



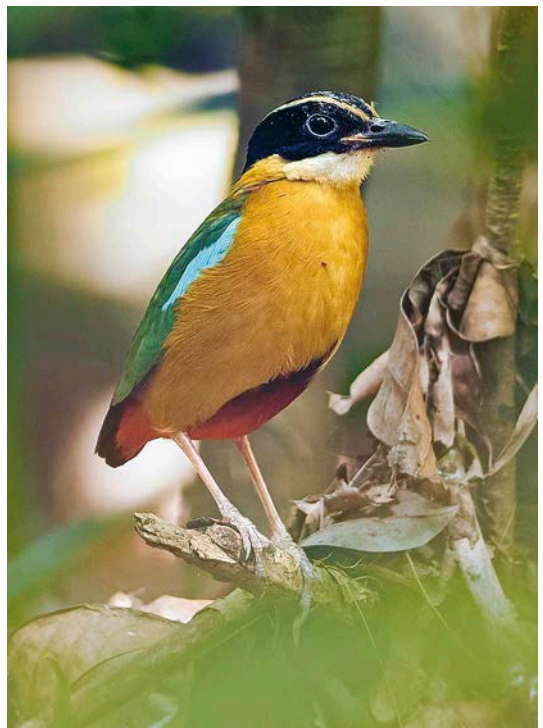
JAMES A. EATON

Plate 8. Temminck's Elegant Pitta *P. p. vernalis*, Tanahjampea, Flores Sea Islands, Indonesia, October 2018. Note the greatly reduced black under the bill in this taxon.



MOHIT KUMAR GHATAK

Plate 9. Wallace's Elegant Pitta *Pitta concinna*, Kerandangan Nature Reserve, Lombok, Indonesia, July 2017.



JAMES A. EATON

Plate 10. Banda Sea Pitta *Pitta vigorsii*, Tanimbar, Indonesia, October 2018.

genes and morphometric analyses, Ghorbani *et al.* (2020) recovered three primary lineages within *E. alpestris* (together with a fourth, Temminck's Lark *E. bilopha*, which has generally long been recognised as a species) which they suggest be treated as separate species, under the names Common Horned Lark *E. alpestris* (*sensu stricto*; with subspecies *flava* and *brandti* occurring in the OBC region), Mountain Horned Lark *E. penicillata* (subspecies *albigula* breeds in western China and south to northern Afghanistan and north-western Pakistan), and Himalayan Horned Lark *E. longirostris*, which is endemic to the OBC region. Subspecies limits in the last of these are unclear, but *longirostris*, *elwesi*, *argalea* and *teleschowi* are generally recognised. Note that the taxon *longirostris* was not sampled by the analysis; its name is used by priority, on the assumption that *longirostris* and *elwesi* (which was sampled) belong to the same species. Previous suggestions that *flava* and *brandti* should be regarded as separate species are not well supported. Vagrant horned larks sometimes occur in southern Asia—observers will have to take detailed notes of these birds if they are to be assigned to species.

Prinia crinigera and *P. polychroa* = five species

With great attention to detail and extraordinary breadth of scope (641 specimens, 86 recordings and 29 tissue samples investigated in a paper running to 32 pages with a zipped supplementary file of 122 mb), Alström *et al.* (2020) re-examine—and revolutionise—the unsettled case of Striated Prinia *P. crinigera* and Brown Prinia *P. polychroa*, two species once treated as conspecific but now open to study from molecular and acoustic as well as morphological angles in a strong attempt at a genuinely integrative analysis. On their evidence Striated Prinia breaks into two species, one of them with the revived subspecies *yunnanensis* and incorporating subspecies *bangsi* hitherto assigned to Brown Prinia, the other synonymising subspecies *parvirostris* with *catharia*. Brown Prinia breaks into three species, with one of its subspecies, *cooki*, itself breaking into two (belonging to two different species) and therefore requiring the establishment of a new name, *deignani*, for one of the resulting taxa. In the overview below, the subspecies distributions under 'Before' follow those in del Hoyo & Collar (2016), and the names for the resulting five species under 'After' are those proposed by Alström *et al.* (2020).

BEFORE

- Striated Prinia *Prinia crinigera* – Pakistan east to Taiwan
 - P. c. striatula* – E Afghanistan and hills of W Pakistan

P. c. crinigera – Himalaya from N Pakistan to NE India

P. c. catharia – NE India, N & W Myanmar, S & C China

P. c. parvirostris – SE Yunnan

P. c. parumstriata – SE & C China

P. c. striata – Taiwan

- Brown Prinia *Prinia polychroa* – Myanmar south to Vietnam, plus Java

P. p. cooki – C & E Myanmar, S China, N & E Thailand, Cambodia, N & S Laos

P. p. bangsi – SE Yunnan

P. p. rocki – SC Vietnam (and adjacent Cambodia *fide* recent observers)

P. p. polychroa – Java

AFTER

- Himalayan Prinia *Prinia crinigera* – Pakistan east to NE India

P. c. striatula – E Afghanistan and hills of W Pakistan

P. c. crinigera – Himalaya from N Pakistan to NE India

P. c. yunnanensis – NE India, W Myanmar, W Yunnan

P. c. bangsi – SE Yunnan

- Chinese (or Striped) Prinia *Prinia striata* – NE India, N & W Myanmar, China to Taiwan

P. s. catharia – S & C China

P. s. parumstriata – coastal SE China

P. s. striata – Taiwan

- Burmese Prinia *Prinia cooki* – C & E Myanmar

- Annam Prinia *Prinia rocki* – SC Vietnam and adjacent Cambodia

- Deignan's Prinia *Prinia polychroa* – N & E Thailand, Cambodia, N & S Laos, Java

P. p. deignani – N & E Thailand, Cambodia, N & S Laos

P. p. polychroa – Java

In this new arrangement, where genetic, acoustic and morphological data appear mostly to align (cross-checking is not straightforward), Himalayan Prinia is found to differ clearly from Chinese Prinia and to be sympatric with it in Yunnan, China. Himalayan Prinia *vs* Chinese is: strongly *vs* moderately sexually dimorphic in size and colouration, darker *vs* lighter on face, buffier *vs* whiter below, with a longer wing, weaker supercilium (completely lost on breeding males), less obvious rufous wing-panel and much bolder undertail markings. Both species only sing what Alström *et al.* (2020) call Type A songs, consisting of 'complex multi-note phrases repeated in long rattling series', but Himalayan songs (A2) are easy to tell by ear from Chinese (A1) by their longer, usually paired, phrases; shorter intervals between the phrases; presence of

thin rattling, buzzing notes; a higher proportion of ascending notes, but lower frequency of \wedge -shaped notes; and distinctly harsher, more 'squeaky', 'nasal' tone.

Burmese Prinia is much like Himalayan Prinia but 'paler, browner, less streaked above, whiter and less mottled below, with more distinct pale supercilium in breeding male', and its Type A3 song differs from Himalayan's A2 in 'usually having just a single phrase-type' and sounding 'drier' and 'clearly less squeaky'.

The other two species produce Type B songs, consisting of 'one or two pure notes repeated at longer intervals' (it is not clear what the 'longer intervals' comparison is with), but *P. rocki* and *P. p. polychroa* occasionally indulge in Type A songs also (A4 and A5 respectively). However, the division into Type A and Type B singers is, a little perplexingly, not reflected in the authors' preferred phylogeny, which suggests that *P. rocki* (mostly B) and *P. cooki* (A) are closely related to each other, with successive sister relationships of *P. crinigera* (A), *P. polychroa* (mostly B) and *P. striata* (A).

Annam Prinia is more saturated in plumage than other taxa, and less streaked above than either Himalayan or Chinese Prinia (no comparison offered with Burmese or other taxa), lacking the blackish face of breeding male Himalayan (the reader is referred to a non-existent Table S9). Its Type B song consists of 'soft whistled, usually clearly disyllabic notes, which in sonograms show up as a pure-sounding, drawn-out U-shaped note, followed by a shorter, \wedge -shaped one'.

Deignan's Prinia is 'very drab' and shows only slight seasonal or sexual differences; its Type B song consists of single notes. Continental

subspecies *deignani* (formerly the mainly Indochinese component of *P. p. cooki*) is paler, browner and smaller than nominate *polychroa* and, when fresh, shows a rufescent wing-panel and weaker undertail markings. Its song notes are more variable and shorter than the U-shaped notes of *P. p. polychroa*.

Carpodacus sibiricus lepidus = *C. lepidus*

Long-tailed Rosefinch *C. sibiricus* (Plates 11 & 12) occurs as five subspecies, with the nominate in the great majority of the range, from south-west Siberia into north-east China, the weakly marked *ussuriensis* in the Russian Far East and adjacent areas, *sanguinolentus* on Sakhalin and northern Japan, and the more distinctive, disjunct *lepidus* in central China and *henrici* in southern China. The distinctiveness of the last two taxa was noted by del Hoyo & Collar (2016), who lamented that the 'scarcity, distribution and condition of museum material' hampered a taxonomic reassessment. This, however, is now achieved by Liu *et al.* (2020b), who find that on mtDNA the first three subspecies form a northern clade and the last two a southern clade which separated 1.36 mya, and that southern birds have (a) the crown reddish *vs* silvery pink in the males, (b) mantle brownish, less reddish *vs* brown-streaked pink to deep red, (c) median and greater covert wing-bars narrow *vs* broadish, and (d) three outer rectrices extensively white *vs* outermost rectrices fully white, with next adjacent less than half white. Surprisingly, however, the authors find no diagnosable differences between the songs of the five taxa, in spite of which they argue for the two clades to be treated as two species, Siberian Long-tailed

Plate 11. Siberian Long-tailed Rosefinch *Carpodacus sibiricus*, Wuerqihan, Inner Mongolia, China, December 2016.



Plate 12. Chinese Long-tailed Rosefinch *Carpodacus lepidus*, Sichuan, China, May 2013.



Rosefinch *C. sibiricus* (with subspecies *sanguinolentus* incorporating the indistinct *ussuriensis*) and Chinese Long-tailed Rosefinch *C. lepidus* (with subspecies *henrici*), asserting that ‘This split better reflects both the genetic divergence and biogeographical sorting than the traditional treatment as a single species’.

Pyrrhula erythaca owstoni* = *P. owstoni

The three subspecies of Grey-headed Bullfinch *P. erythaca* occupy the eastern Himalaya into central China (nominate, Plate 13), north-east China (weakly marked *wilderi*) and Taiwan (grey-breasted *vs* orange-breasted *owstoni*, Plate 14). Already earmarked as a potential split (‘Taiwan Bullfinch’) with the proviso ‘detailed evaluation of all differences required’ (del Hoyo & Collar 2016), *owstoni* has been subject to molecular and acoustic study (Dong *et al.* 2020), which finds that it separated 0.81 mya and that its two-syllable song involves a descending sequence rather than an ascending one. On this basis Dong *et al.* (2020) propose that *owstoni* be recognised as a full species.

Chloris sinica kittlitzi* = *C. kittlitzi

Oriental Greenfinch *C. sinica* occurs as six subspecies, with the nominate in the great majority of the range (central and eastern China plus Vietnam), *ussuriensis* (north-east China, Korea, south-east Russia), *chabarovi* (Russian Far East and adjacent areas), *kawarahiba* (eastern Russia to north Japan), *minor* (extreme south Korea, Japan) and *kittlitzi* (Osagawara [Bonin] and Iwo Islands of Japan). Already earmarked as a potential split (‘Bonin Greenfinch’) on the basis of its genetic divergence (del Hoyo & Collar 2016),

kittlitzi has been subject to molecular (mtDNA) and morphometric study (Saitoh *et al.* 2020), which finds that it separated 1.06 mya and has a distinctly shorter wing and slightly longer bill than any other subspecies. On this basis (and the fact that it lays a smaller clutch) Saitoh *et al.* (2020) propose that *kittlitzi* be recognised as a full species, Ogasawara Greenfinch. Their genetic findings with other populations largely fail to match the subspecific breakdown of Oriental Greenfinch (including two not recognised on world lists), but they opt to suggest no change to existing arrangements.

Support for previous re-arrangements

Ducula aenea nicobarica* = *D. nicobarica

In their ground-breaking field guide, Rasmussen & Anderton (2005) split the Nicobar form *nicobarica* of Green Imperial-pigeon *D. aenea* on the basis of several plumage characters and its ‘much less gloomy’ voice. This arrangement was not accepted by del Hoyo & Collar (2014), simply because (a) the darker, blue-glossed mantle and dusky-brown *vs* chestnut vent did not in themselves constitute a particularly solid basis for changing taxonomic rank, and (b) the strength of the vocal difference could not be gauged in the absence of recorded evidence. However, accessing and analysing the same recorded evidence as in the field guide, Collar *et al.* (2020) confirm that the Nicobar bird’s primary call, a burbling *bububub* or *bubububub*, rendered *bullullul(lu)* in the field guide, is unique to it, and that a second call is somewhat divergent, and these factors combined with the plumage differences lead them to lend full support to the split.

Plate 13. Male Grey-headed Bullfinch *Pyrrhula erythaca*, Bhutan, August 2014.



JONATHAN ROSSOUW

Plate 14. Male Taiwan Bullfinch *Pyrrhula owstoni*, Alishan, Chiayi, Taiwan, April 2012.



PETE MORRIS

Collocalia swiftlets

In a paper summarised in one of our previous reviews (*BirdingASIA* 30: 33), Rheindt *et al.* (2017) took on the seemingly impossible task of making sense of the wide variation in the white-bellied swiftlets in the *C. esculenta* complex, using extensive genetic, morphometric and plumage character data. They concluded that the complex comprised no fewer than ten different species between the Andamans and Nicobars in the west to New Caledonia and Vanuatu in the east. A general pattern among the complex is for birds west of Stresemann's Line (a line separating the Philippines, Borneo and Lombok to the west from Sulawesi and Sumbawa to the east) to have plain tails and those to the east to have white tail-spots. Within this broad division, different populations are characterised by having either green- or blue-glossed plumage and by the presence or absence of a single small plumelet at the base of the hind toe. Using both mitochondrial and nuclear markers, Davies *et al.* (2020) confirm several of the splits proposed by Rheindt *et al.* (2017) but show that there is a high degree of phenotypic variation within populations. For example, a minority of birds in populations east of Stresemann's Line have plain tails, and others have very reduced tail-spotting. Furthermore, the extent and colour of glossy plumage varies within populations, probably in relation to age and wear, and the presence or absence of a toe plumelet, although difficult to assess because of moult, also appears to vary within populations. The authors conclude that while the taxa they examined are well differentiated genetically, some exhibit wide phenotypical variation that undermines the use of plumage features in assessing taxonomic relationships within the group.

Nisaetus cirrhatus limnaeetus

Previously, many authorities recognised Crested Hawk-eagle *N. cirrhatus* and Changeable Hawk-eagle *N. limnaeetus* as separate species, but checklists now unanimously treat *limnaeetus* as a subspecies of *N. cirrhatus*. In an exhaustive study of biometrics, plumage characters, calls and genetics, Gjershaug *et al.* (2020) conclude that the two forms could not be unambiguously separated under any criteria and that reproductive isolation is weak, justifying the prevailing treatment.

Dicrurus hottentottus striatus = *D. striatus* or

D. balicassius striatus

Dicrurus hottentottus palawanensis =

D. palawanensis

The taxonomy of drongos is notoriously complex. HBW/BirdLife is unique among the four major world checklists in recognising Short-tailed Drongo

D. striatus as a full species (with subspecies *D. s. samarensis*), others considering it a subspecies of Hair-crested Drongo *D. hottentottus* or of Balicassiao *D. balicassius*. Shakya *et al.* (2020) add genetic evidence in support of the split of *striatus* from *D. hottentottus*, showing that on mtDNA (ND2) sequence divergence *striatus* forms a clade with *balicassius*. Whether the two should be treated as one or two species is currently unclear, although as HBW/BirdLife has shown, there are considerable phenotypic differences between the two.

Shakya *et al.* (2020) also add genetic evidence in support of the split of *palawanensis* (Plate 15) from *D. hottentottus*, showing that on mitochondrial ND2 DNA sequence divergence *palawanensis* is closer to *balicassius* than to *hottentottus*. The authors also propose, without explanation, that *palawanensis* is probably conspecific with Tablas Drongo *D. menagei*, which is recognised by all four global checklists.

Calandrella dukhunensis

Stervander *et al.* (2020) use mtDNA and morphometrics to confirm previous analyses

Plate 15. Genetic data suggest that 'Palawan Drongo' *Dicrurus [hottentottus] palawanensis* merits species status and is more closely related to Balicassiao *D. balicassius* than it is to Hair-crested Drongo *D. hottentottus*. Magarwak Ecopark, Palawan, Philippines, November 2017.



showing that Sykes's/Mongolian Short-toed Lark *C. dukhunensis* is genetically much closer to *C. acutirostris* than it is to *C. brachydactyla*, with which it was previously lumped, adding further weight to its now generally accepted recognition as a full species. Yet further confirmation of this split is provided by Alström & Sundev (2021; included in this review to reduce later duplication) on the basis of morphology, vocalisations and song-flight. Those authors also show that the range of this species is much smaller than previously recognised and is probably restricted largely to the eastern half of Mongolia.

Phylloscopus sarasinorum nesophilus* = *P. nesophilus

Eaton *et al.* (2016) split Sulawesi Leaf Warbler *P. sarasinorum* (*sensu lato*) into two species, Lompobattang Leaf Warbler *P. sarasinorum* of the Lompobattang massif, south-western Sulawesi, and Sulawesi Leaf Warbler *P. nesophilus* of the rest of Sulawesi, on the basis of consistent differences in song and plumage. Berryman & Eaton (2020) confirm these differences, showing that, although there is overlap, the song of *P. nesophilus* has 'a peculiar squeaky quality unmatched by *sarasinorum*, principally a result of its significantly greater bandwidth'. Comparison of photographs of the two forms confirm that they are consistently different in appearance: for example, *P. nesophilus* lacks a central crown-stripe, a pale wing-bar and white in the tail (all prominent features in *P. sarasinorum*).

Sitta arctica*, *S. leucopsis*, *S. europaea

Päckert *et al.* (2020) develop a time-calibrated multilocus phylogeny of Palearctic nuthatches (*Sitta*), confirming the species status of Siberian Nuthatch *S. arctica* and White-cheeked Nuthatch *S. leucopsis* (both now recognised by most global checklists). European Nuthatch *S. europaea* proves to contain three well-differentiated phylogroups (which the authors term European, Asian and Oriental) but the available data do not support their recognition as separate species.

Miomela diana sumatrana* = *M. sumatrana

Eaton *et al.* (2016) split Sunda Blue Robin *M. diana* into Javan Blue Robin *M. diana* and Sumatran Blue Robin *M. sumatrana* because they are 'vocally and morphologically distinct'. Ng *et al.* (2020) seek to shore up this taxonomic revision with more evidence on these characters. Overall *M. sumatrana* is slightly smaller than *M. diana*, and its tail is distinctly shorter. The plumage of both sexes is darker in *M. sumatrana*, the female of which also lacks the 'small grey wedge on the lower throat'

in female *M. diana*. The song of *M. sumatrana* is more protracted and heterogeneous.

Possible splits and splits lacking a name

Phoebastria albatrus

Short-tailed Albatross *P. albatrus* breeds at only two sites, the island of Torishima and the Senkaku islands, Japan. These two populations appear to differ genetically, although the Senkaku island population is inaccessible for study. Recently, unringed birds have started to appear in the well-studied Torishima population, their genetic signatures suggesting that they originate from the Senkaku population. Eda *et al.* (2020) collected biometric measurements and genetic data from birds on Torishima that were assumed to include representatives of both populations. They identify small but consistent differences in morphometrics between the two, Torishima-type birds being larger than Senkaku-type birds but having relatively shorter bills. Their genetic data suggest that the two forms are more divergent than other generally recognised species pairs in albatrosses, and they conclude that the two populations should be regarded as separate species.

Elanus caeruleus vociferus

Starikov & Wink (2020) argue that mainland Asia's representative *vociferus* of Black-winged Kite *E. caeruleus* could be treated as a full species, given that it shows 'well-defined black tips of underwing coverts' and separated 1.5 ± 0.8 mya from nominate *caeruleus* endemic to Africa and Europe. It is not, however, clear where such an arrangement would leave the Philippine/Indonesian form *hypoleucus* or New Guinea's *wahgiensis*.

Calandrella acutirostris

Stervander *et al.* (2020) use mtDNA and morphometrics to clarify species limits in the cryptic lark genus *Calandrella*. Of relevance to the OBC region, they identify three deep clades in Hume's Lark *C. acutirostris*. Unexpectedly, the holotype of the nominate subspecies *C. a. acutirostris* falls within the clade ascribed to the eastern subspecies *C. a. tibetana*, rendering the latter name a synonym of the nominate *acutirostris* by priority. Western populations, which now lack a name, may be sufficiently divergent to warrant separation at species level.

Pycnonotus simplex*, *Cyanoderma erythropterum*, *Trichastoma rostratum

At higher altitudes and latitudes, past glaciation events generally led to habitat fragmentation as spreading ice forced surviving wildlife into ice-free refugia. Elsewhere the opposite pattern often

occurred, as falling sea levels exposed land that frequently connected existing landmasses, thus forming bridges between them. Cros *et al.* (2020) investigate patterns of gene flow between Borneo and western Sundaland (in this case Sumatra and Singapore) in five forest bird species (two forest babblers and three bulbuls) to assess whether they can be linked to movements across Quaternary land-bridges during previous glaciations. In three of the five species (Cream-vented Bulbul *Pycnonotus simplex*, Chestnut-winged Babbler *Cyanoderma erythropterum* and White-chested Babbler *Trichastoma rostratum*), there is no evidence of gene flow between populations in Borneo and western Sundaland for at least the last two glaciations (up to 130,000 years ago), and in the case of the two babblers perhaps for three or more glaciations, despite opportunities to do so over emergent land-bridges. Furthermore, the authors identify consistent differences in song and plumage between Bornean and western Sundaic populations of the two babbler species that might indicate that speciation has already occurred. The authors conclude that gene flow between Borneo and Sumatra/Singapore ended earlier in forest specialists and forest undergrowth species than it did in more dispersive canopy species and habitat generalists, and therefore that life history plays an important role in determining how species respond to opportunities for expansion, for example along newly emerged land-bridges.

Phylloscopus sp. on Selayar

In 2017, a *Phylloscopus* warbler was discovered on the island of Selayar, which lies in the Flores Sea to the south of Sulawesi (Eaton & Rheindt 2017). ‘Selayar Leaf Warbler’, for which no scientific name is available, appears to differ from other Wallacean *Phylloscopus*, including *P. sarasinorum* of south-western Sulawesi, the nearest congeneric species, in its very dull olive-green upperparts with almost no yellowish hue, a broad, whitish crown-stripe, a long supercilium extending to the rear crown, unmarked ear-coverts, and whitish underparts. Berryman & Eaton (2020) provide further evidence for the recognition of the Selayar warbler as a new species by showing that its song differs from those of all other *Phylloscopus* species in the region. Its song is most similar to that of *P. sarasinorum* but is simpler (as is typical for small island taxa) and lacks that species’ rambling or squeaky quality.

Napothera epilepidota exsul = *N. exsul*

Eye-browed Wren-babbler *N. epilepidota* was previously regarded by several authorities as comprising two species, *N. epilepidota* of Java and Sumatra, and *N. exsul*, comprising most mainland

Asian populations plus the Bornean subspecies *exsul*. Meyer de Schauensee & Ripley (1939) reported the presence of both forms on mountains in Aceh, Sumatra, segregated by altitude, with paler, scalloped *N. exsul* occurring at c.450–750 m and darker, streaked *N. epilepidota* of the local subspecies *diluta* at c.1,100 m. They named the lower form *N. exsul lucilleae*. Subsequently, Deignan *et al.* (1964) treated *lucilleae* as a junior synonym of *diluta* and merged them and all other subspecies of *N. exsul* into a single species *N. epilepidota*. This treatment has largely been followed since. However, Shakya *et al.* (2020) collected two forms of *N. epilepidota* on Mt Talamau (Sumatra) that differ in appearance and segregate by elevation exactly as described by Meyer de Schauensee & Ripley (1939). The two taxa on Talamau differ by 11% in their ND2 sequences and are not sister taxa in a phylogeny containing other, more distant subspecies. *N. e. diluta* of Sumatra’s highlands is recovered as sister to nominate populations on Java, birds from Borneo forming a monophyletic group within the complex, and other taxa being more deeply divergent. It thus appears possible that Eye-browed Wren-babbler might be a complex of different species. Pending further work, particularly the genetic sampling of other subspecies, the authors suggest that *N. epilepidota* be restricted to the nominate *epilepidota* of Java and *diluta* of Sumatra, that *Napothera exsul* be resurrected for *N. e. exsul* of Borneo (with the proposed common name of Whitehead’s Wren-babbler in the absence of any more obvious alternatives), and that *Napothera roberti* is available as a temporary, although probably not monophyletic, holding place for *N. epilepidota lucilleae* of Sumatra and the subspecies of mainland Asia. The population of *N. (e.) exsul* from the Meratus Mountains (Kalimantan) is distinct genetically from the north and central Bornean populations and may warrant subspecies rank.

Cyornis [hainanus] dialilaemus

Singh *et al.* (2020) assessed taxonomic limits of the Blue-throated Flycatcher *Cyornis rubeculoides* complex in India. They conclude that, while *C. r. rubeculoides* (western Himalayan foothills) and *C. r. rogersi* (higher elevations in the north-east Indian hill states) are genetically sufficiently divergent to be recognised as subspecies *C. r. dialilaemus* (lower elevations in the north-east Indian hill states) is genetically much closer to Hainan Flycatcher *C. hainanus*. The authors suggest that further data are needed to assess whether *dialilaemus* is better treated as a subspecies of Hainan Flycatcher or as a separate species (there are reports of widespread sympatry with nominate *C. h. hainanus* in Thailand,

which would support the latter treatment). Unlike nominate *C. h. hainanus*, *dialilaemus* has an orange upper breast, and closely resembles *C. h. klossi* from Indochina. An interesting feature of this study is the complete lack of vocal differentiation between any of the taxa investigated; in playback experiments, *C. r. rubeculoides* often responded strongly to the songs of *C. [h.] dialilaemus* and Tickell's Blue-flycatcher *C. tickelliae*.

Lumps

Anser serrirostris = *Anser fabalis serrirostris*

The taxonomic treatment of the bean geese differs between checklists, 'IOC' and eBird/Clements (Clements *et al.* 2019) regarding Taiga Bean Goose *A. fabalis* and Tundra Bean Goose *A. serrirostris* as different species, whereas HBW/BirdLife has them lumped. Both forms occur in the OBC region. Ottenburghs *et al.* (2020) present data to support their treatment as a single species. Their genetic analyses of Scandinavian birds suggested that the two forms diverged about 2.5 mya but more recently, from about 60,000 years ago, there have been high levels of gene flow between them, mainly from Tundra Bean Goose to Taiga Bean Goose. Given the low genetic differentiation, considerable morphological variation within as well as between taxa, and incomplete reproductive isolation, the authors argue that the two forms should be regarded as subspecies. However, it should be noted that the distinctive Asian subspecies *A. f. middendorffii* and nominate *A. s. serrirostris* were not sampled in this analysis.

Caprimulgus centralasicus = *C. europaeus*

The strange case of Vaurie's Nightjar *C. centralasicus* (Plate 16) was most recently reviewed by Leader (2009). As pale as an Egyptian Nightjar *C. aegyptius* but notably small, the one and only specimen by which it is known was collected on the southern edge of the Taklamakan Desert, Xinjiang, China, in September 1929, with no sightings of similar birds since. Leader (2009) thought that it was valid because of its size and growth pattern, but admitted that it might be a juvenile European Nightjar *C. europaeus* of the pale subspecies *plumipes*, the only caprimulgid known in Xinjiang.

Genetic barcoding by Schweizer *et al.* (2020) very strongly indicates that the latter option is the best explanation for the specimen, which makes an identical fit with several European Nightjars, including two *plumipes*. However, even allowing that the specimen is, as the authors argue, 'a still not fully grown fledgling', its size remains puzzling and its plumage structure and pattern do not fully match specimens of *plumipes*. The possibility that the specimen is a hybrid cannot be entirely



GUY M. KIRWAN

Plate 16. One of Asian ornithology's greatest enigmas may now be (partially) solved: genetic data suggest that Vaurie's Nightjar *Caprimulgus centralasicus* is not a valid species. Vaurie's Nightjar (right) compared with a European Nightjar *C. europaeus plumipes* from Pakistan. © Trustees of the Natural History Museum, London.

excluded, but Schweizer *et al.* (2020) 'definitely conclude that the mother of the type of *C. centralasicus* possessed a COI haplotype present in the eastern clade of *C. europaeus*'. Thus either way Vaurie's Nightjar can be confidently removed from world lists of bird species.

Acridotheres tricolor = *A. melanopterus tricolor*

Acridotheres tertius = *A. melanopterus tertius*

The occurrence of three well-marked forms of the globally threatened Black-winged Myna *A. melanopterus* across Java and Bali (nominate *melanopterus* in West, Central and westernmost East Java plus Madura, *tricolor* in remaining East Java and *tertius* on Bali) has been a nightmare for conservationists attempting to maintain pure forms in captivity (Collar *et al.* 2012). So distinctive are these forms that they were split by del Hoyo & Collar (2016), although this made no difference to the captive management programmes that have continued to attempt to secure each form. However, Sadanandan *et al.* (2020) find the level of genomic

differentiation across the three taxa ‘well below that traditionally associated with species-level differentiation in birds using the same mitochondrial gene or other genes with similar evolutionary rates’. They also detect evidence that introgression with Javan Myna *A. javanicus* has affected the darkest form, *tertius*. Nevertheless, while these findings support the view that the three taxa are better treated as conspecific, (and despite a title claiming ‘the conservation value of admixed phenotypes’) the authors uphold the long-standing decision to seek to maintain separate captive populations for each.

New subspecies and subspecies changes

Phaethon lepturus

Three subspecies of White-tailed Tropicbird occur in the OBC region: nominate *P. l. lepturus* of the Indian Ocean, *P. l. fulvus*, which breeds only on Christmas Island, and *P. l. dorotheae* of the seas of South-East Asia and the south Pacific. Humeau *et al.* (2020) report that their separation at subspecies level is not well supported by either genetic or morphometric data, although *fulvus* has a unique apricot-coloured morph.

Dendrocopos major iturupensis

Red’kin (2020) describes a distinctive new subspecies of Great Spotted Woodpecker *D. major* from the Kuril Islands of Iturup and Urup, Far East Russia. *D. m. iturupensis* is smaller and paler than the neighbouring form *D. m. japonicus*, with larger white spots on the wings, narrower black stripes on the outer tail feathers, a shorter wing and tail and a longer bill.

Dicrurus sumatranus viridinitens = *D. hottentottus viridinitens*

Shakya *et al.* (2020) find that in a phylogeny based on mitochondrial ND2 DNA sequences, the Sumatran Drongo *D. sumatranus* taxon *viridinitens* from Mentawai, just off the south coast of Sumatra, actually falls within the Hair-crested Drongo *D. hottentottus* clade, the nearest representatives of which are in Java.

New subspecies of *Corvus (corone) orientalis*

Whether they accept the split of Hooded Crow *C. cornix* from Carrion Crow *C. corone* or not, no world list admits the subdivision of the eastern form *C. corone orientalis*. However, Zhigir & Red’kin (2020) take as their starting point that there are at least three subspecies from the Caspian Sea to Japan, by accepting *saghalensis* (which they call *saghalense*) from Sakhalin and *interpositus* from Japan. In measuring specimens from across this vast region they find the basis for establishing two further subspecies, *turkestanicus* from ‘Central

Asia’ (limits poorly defined) and *lobkovi* from the Kamchatka Peninsula. Diagnoses are not entirely comparable, but *orientalis* is smallest, and ‘the line of junction of the mandible and upper mandible is sharply curved’; *turkestanicus* is the largest and ‘the line of closure of the mandible and the upper mandible has a smooth curve’; *saghalensis* is almost as large as *turkestanicus*, ‘the line of closing of the mandible and upper mandible with a sharp bend’; *lobkovi* is close in size to *orientalis* but its tarsus is shorter and bill larger, the latter when compared to *interpositus* having ‘a less sharp curve of the closing line of the mandible and upper mandible’; *interpositus* has the longest tarsi of all ‘neighbouring’ taxa, bill thinner than in *lobkovi* and ‘with a sharper curve of the closing line of the mandible and upper mandible’. A sixth form, *yunnanensis*, was not measured but is expected to show the thinnest bill. Sample sizes in these analyses were, by sex and age, commonly <10 except for *orientalis*, and often much lower.

Hirundo rustica mandschurica = *H. r. gutturalis*

Liu *et al.* (2020c) review plumage and morphometric differences between subspecies of Barn Swallow *H. rustica* breeding in China, namely *H. r. rustica* in the west, *H. r. gutturalis* in the centre and east, and *H. r. mandschurica* in the north-east. They find that nominate *rustica* is easily discriminated on its larger size and longer tail-streamers but, although *mandschurica* is darker and redder ventrally than *gutturalis* (and respective males but not females are smaller), it fails the 75% rule for subspecies recognition (in which ‘at least 75% individuals of a given subspecies [are phenotypically] separable from other subspecies’). Instead, *mandschurica* is regarded as an intergrade between *gutturalis* and the more northerly (Siberian) subspecies *tytleri*. Having mentioned the uncertain status of another subspecies, *saturata*, from eastern Siberia and Kamchatka (junior synonym of *gutturalis* or *tytleri* or senior synonym of *mandschurica*), the authors say no more about it.

Allophoxix ruficrissus meratusensis

Reinforcing the split of Chestnut-vented (or Penan) Bulbul *A. ruficrissus* of Borneo from Ochraceous Bulbul *A. ochraceus* (Indochina and Sumatra), Shakya *et al.* (2020) describe a new subspecies *A. r. meratusensis* from the Meratus Mountains in south-eastern Kalimantan. It differs from the other two subspecies, *A. r. ruficrissus* and *A. r. fowleri*, in having a greyish-olive crown (*vs* greyish-brown), shorter crest, yellow breast and belly (*vs* drab grey), olive-tinted upperparts, blackish wings with olive edgings (*vs* brownish), dark brown uppertail-coverts (*vs* rufous) and cinnamon undertail-coverts (*vs* rufous).

New Wallacean subspecies

In the same paper where they describe five new species from Wallacea (see above), Rheindt *et al.* (2020) also describe five new subspecies from the same spread of islands, which are briefly detailed here:

- ***Phyllergates cucullatus sulanus*, *P. c. relictus***

Mountain Tailorbird (or Mountain Leaftoiler, as the authors call it) *P. cucullatus* has many recognised subspecies in Sundaland and Wallacea, to which two more are now added, *P. c. sulanus* on Taliabu (and perhaps other islands in the Sula Archipelago) and *P. c. relictus* on Peleng. The former resembles subspecies on Sulawesi but differs in having a rufescent suffusion on the throat and breast, especially pronounced on breast-sides and ear-coverts. *P. c. relictus* differs from *sulanus* in its darker chestnut crown and less reddish overall appearance.

- ***Turdus poliocephalus sukahujan***

To the already huge number of subspecies of Island Thrush *T. poliocephalus* a new one is added from the highlands of Taliabu above 1,000 m. It is distinctly different in plumage from adjacent subspecies in its lack of solid white or rufous on the belly, its uniform dark brown colouration in which only the underparts show a faint warm tinge, and its unmarked dark brown vent.

- ***Cyornis omissus omississimus***

The Togian Archipelago proves to hold a new subspecies of Sulawesi Blue-flycatcher (or Sulawesi Jungle-flycatcher) *C. omissus*. Unlike the nominate taxon on nearby Sulawesi, which is found above 500 m, the new form *omississimus* is found down to sea level. It differs from the nominate in its darker bare parts and, in the male, a broader, blacker face-mask resulting in a narrower orange-rufous throat-stripe (Plate 17). The female has darker, richer blue upperparts than female nominate *omissus*.

- ***Ficedula hyperythra betinabiru***

A population of Snowy-browed Flycatcher *F. hyperythra* found in the understorey of dense montane forest in the highlands of Taliabu above 800 m takes the name *betinabiru*. The male is similar to other subspecies, differing only subtly in plumage, but the female is distinct from most subspecies of *F. hyperythra* in its bluish upperpart colouration, extensive cold brown mottling on breast and washed-out face pattern ghosting that of the male, with a whiter brow. The only other subspecies that equals female *F. h. betinabiru* in the bluish tinge to the upperparts is *alifura* from adjacent Buru, in which the back colour is slightly



JAMES A. EATON

Plate 17. Rheindt *et al.* (2020) describe five subspecies new to science, among them *Cyornis omissus omississimus* from the Togian Archipelago. Togian, Indonesia, November 2015.

brighter blue. The female of *alifura* has a more rufous (less white) supercilium, and brighter, more extensive rufous underparts with reduced brown mottling.

Genus changes and new genera

Amauornis

The White-browed Crake *Amauornis cinerea* (South-East Asia east to Samoa), which has previously been placed in a number of other genera, is shown by Garcia-R *et al.* (2020) to be genetically most closely related to the New Guinea Flightless Rail *Megacrex inepta*. This, together with the grouping of Watercock *Gallicrex cinerea* within other species currently assigned to *Amauornis*, renders the genus as currently recognised non-monophyletic. The authors do not propose a solution, but the grouping of *Gallicrex*, *Amauornis* and *Megacrex* is as close as that of some other genera in the family and so could arguably be merged into one. Of the three names, *Gallicrex* appears to have taxonomic priority.

Taenioptynx

Salter *et al.* (2020) use DNA sequences of ultraconserved elements to study the relationships of all but one of the currently recognised genera of the typical owls (Strigidae, i.e. excluding the barn owls [Tytonidae]). They uncover significant paraphyly of currently recognised taxonomic groups across the family, suggesting that divergence and convergence in morphological characters have obscured our understanding of evolutionary relationships within typical owls. Of relevance to the OBC region their analyses suggest that Collared

Owlet *Glaucidium brodiei* emerges as most closely related to the Neotropical Elf Owl *Micrathene whitneyi* and Long-whiskered Owllet *Xenoglaux loweryi*. The authors propose that a new genus is warranted for it, and by implication for Sunda Owllet *G. sylvaticum* which was recently split from it, and suggest that the name *Taenioptynx* Kaup (1848) has priority. However, *G. brodiei* is the only Asian *Glaucidium* sampled by Salter *et al.* (2020) and they do not speculate on whether other Asian representatives should also be transferred to *Taenioptynx*. Moreover, they do not cite Sun *et al.* (2015), who suggested that *G. brodiei* is closely related to Asian Barred Owllet *G. cuculoides* and Jungle Owllet *G. radiatum* (although their tree contained few species).

Dinopium rafflesii = *Chloropicoides rafflesii*

A molecular phylogeny of the Picidae (Shakya *et al.* 2017) found the genus *Dinopium* paraphyletic, because Olive-backed Woodpecker *D. rafflesii* (Plate 18) was recovered as sister to Pale-headed Woodpecker *Gecinulus grantia*. Thus either (1) *Gecinulus* should be merged in *Dinopium*; (2) *D. rafflesii* should be merged in *Gecinulus*; or (3) *D. rafflesii* should be transferred to another genus.

Plate 18. Despite its similarity to the flamebacks, Olive-backed Woodpecker *Dinopium rafflesii* is more closely related to Pale-headed Woodpecker *Gecinulus grantia*. The genus name *Chloropicoides* is available for it. Panti Forest, Johor, Malaysia, January 2015.



Itemising the distinctive characters of *D. rafflesii*, Kirwan & Collar (2020) elect to take the third option, establishing—with a degree of uncertainty owing to the precise date of publication—that the oldest available name is *Chloropicoides*.

Lorikeets

Joseph *et al.* (2020) use existing phylogenetic relationships and a newly estimated time-calibrated tree for the lorikeets to assess where paraphyletic assemblages have misled the classification of genera. Of relevance to the OBC region the changes they recommend are:

- Red-flanked Lorikeet *Charmosyna placentis* should be moved to *Hypocharmosyna*
- Blue-fronted Lorikeet *Charmosyna toxopei* should be moved to *Charmosynopsis*
- Ornate Lorikeet *Trichoglossus ornatus*, Yellow-and-green Lorikeet *T. flavoviridis* (also known as Citrine or Sula Lorikeet, and split by HBW/BirdLife into Yellow-and-green Lorikeet *T. flavoviridis* and Mustard-capped Lorikeet *T. meyeri*), Mindanao Lorikeet *T. johnstoniae* and Iris Lorikeet *Psittuteles iris* should be moved to a newly described genus *Saudareos*. The distinctiveness of Iris Lorikeet from the other two species generally placed in *Psittuteles* (both of which occur outside the OBC region but both of which are moved to new genera by Joseph *et al.* [2020]) is confirmed by Tilston Smith *et al.* (2020).

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Collared Owlet *Glaucidium brodiei* and Thick-billed Warbler *Arundinax aedon*

In February 2020, I was on a birding trip to Manas Tiger Reserve in Assam, India, with my wife. On the evening of the 24th, I had been waiting silently for over two hours hoping to get a glimpse of an elusive Black-tailed Crake *Porzana bicolor* as dusk was setting in. Disappointed to get nothing more than a very brief view of the crake, I started to look for other birds. My attention was drawn to some birds calling frantically and mobbing something on a close tree.

A Collared Owlet *Glaucidium brodiei* (17 cm) had just caught a much larger sized bird, a Red-vented Bulbul *Pycnonotus cafer* (20 cm). The bulbul was still alive so I was able to observe the incident for some time and take a series of pictures as the owl completed the kill. Among the confusion, a Thick-billed Warbler *Arundinax aedon*—a scarce bird in Assam—appeared, and when I looked back, the owllet (and bulbul!) had gone.

Pranjal J Saikia
India

Technical details: Canon 7D Mark II with a 500 mm lens and 1.4 extender; ISO 3,200, 1/800 second at F5.6.



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FIELD STUDY

Field notes on the breeding behaviour and vocalisations of Tytler's Leaf-warbler *Phylloscopus tytleri*, and an eastern extension of its breeding range in the Himalaya

PUJA SHARMA

Tytler's Leaf-warbler *Phylloscopus tytleri* is a poorly known, range-restricted, Near Threatened species that breeds in the temperate-zone forest of the Western Himalayas Endemic Bird Area (BirdLife International 2021). The known breeding range of the species encompasses a small area in the western Himalaya, from Nuristan in extreme north-east Afghanistan to the Kaghan Valley and Gilgit areas in northern Pakistan, and east through Kashmir in India; evidence of breeding from further east has previously been discounted or was found to be inconclusive (Rasmussen 1998, Rasmussen & Anderton 2012). Although relatively well-studied on its breeding grounds in Kashmir (Price 1991, Price & Jamdar 1992), some aspects of its nesting and breeding behaviours are inadequately reported. While some of its vocalisations have been described

(Martens 1980), much of its vocal repertoire during the breeding season is unknown, and most aspects of its vocal behaviour are poorly documented.

Here I describe some breeding behaviours, including a nesting record of the species, based on field observations from Himachal Pradesh and Uttarakhand, India, from three summers between 2016 and 2018. These records conclusively extend the breeding distribution of the species east of its previously described range by at least 500 km (see Figure 1). I also describe the vocalisations and behaviours of adults during nesting and rearing of young, as well as information on the vocal development of begging juveniles. Among the vocalisations I describe are previously unknown components of their breeding season repertoire, including apparent courtship song.

Figure 1. Breeding distribution of Tytler's Leaf-warbler *Phylloscopus tytleri* (shaded grey) and the sites where the principal observations were made.



Breeding behaviour

Pair formation and courtship

Courtship was observed at Maggu Chatti, Uttarakhand (30.630°N 78.936°E; 3,245 m), in early May 2016, from a small south-facing sunny meadow near a shepherd's settlement. The forest surrounding this sloping meadow was dense and difficult to penetrate owing to the excessive steepness, especially on the northern aspects, where it was dominated by West Himalayan Fir *Abies pindrow*. The forest was otherwise mixed, consisting primarily of Kharsu Oak *Quercus semecarpifolia* and *Rhododendron arboreum*, with a shrubby understorey of *Sorbus foliolosa*, *Rosa sericea*, and *Viburnum grandiflorum* at the meadow, along with abundant patches of Himalayan Birch *Betula utilis* and *Rhododendron campanulatum*. At least six birds were observed in this area in close proximity, and all were partial to the flowering rhododendrons. Their foraging behaviour was meticulous and deliberate, methodically probing and gleaning each flower slowly while perched on or near the flower; no hovering was involved. Most birds were also very territorial and vocal while feeding, constantly giving their primary song.

An apparently mated or courting pair was found feeding in the flowers of a *Rhododendron arboreum* tree. One of the birds, presumably the male, perched on a low (2 m-high) branch in the shade, and would suddenly burst into a long song of several phrases, while the other bird continued foraging close by. The bird continued singing for about 1.5 minutes, and exhibited heterospecific territoriality when a Yellow-bellied Fantail *Chelidorhynchus hypoxanthus* landed on a nearby branch for its typically vocal aerial feeding sorties. It was aggressively chased off by the warbler, which charged at it with open wings, instantly changing its vocalisation from the song-phrases to a *sweet* call. This call was given repeatedly and relentlessly for about a minute until the fantail disappeared, after which the warbler resumed its song, and continued singing for the next 2.5 minutes. Soon afterwards both of the warblers amicably flew together to another tree nearby, suggesting it was indeed a courting pair. Later in the afternoon what was probably the same pair was again observed at the rhododendron tree, and the presumed male was again observed singing the same song for over 2 minutes. This vocalisation has not been described previously, and apparently functions as a courtship song, probably given just before nesting commences.

On 2 May 2016, one of an apparently mated or nesting pair was found collecting nesting material here. Only one bird of this pair was observed assiduously tearing off strands of grass from the ground, while the other, presumably the male,

perched on a low twig above the first bird. Both birds then flew together to a height of nearly 12 m into the thick outer boughs of a tall fir *Abies pindrow*, with one bird carrying the grassy strands in its bill. Similar nesting material collection sorties were observed over the next three days. However, the final whereabouts of the birds could not be traced owing to the height and dense foliage of the tree and the steep terrain. Consequently, the actual nest-site could not be located despite several attempts.

Nest-site and nest-building

Observations on nesting behaviour were made in late May 2017, primarily from a small open field at the edge of forest on the west bank of the Baspa river at Rakcham, Himachal Pradesh (31.392°N 78.35°E; 3,130 m). Such open clearings were cultivated with buckwheat *Fagopyrum* sp. and edged with young forest and natural undergrowth. While the forest was dominated by fir *Abies pindrow* and spruce *Picea smithiana*, mature trees of Blue Pine *Pinus wallichiana*, Himalayan Bird Cherry *Prunus cornuta*, Birch *Betula utilis* and maple *Acer* sp. dotted the edges of fields, along with a shrubby

Plate 1. Nest-site of Tytler's Leaf-warbler *Phylloscopus tytleri* in a Blue Pine *Pinus wallichiana*, marked with an 'X'. Rakcham, Himachal Pradesh, India, May 2017.



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Plate 2. The nest of Tytler's Leaf-warbler in a Blue Pine. Rakcham, May 2017.



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understorey of *Viburnum cotinifolium*, Himalayan Lilac *Syringa emodi* and Jaeschke's Barberry *Berberis jaeschkeana*. At least four birds were found foraging in flowering cherry (*Prunus cornuta*) trees here, although they spent most of their time feeding low in the undergrowth, being especially partial to viburnum and barberry flowers. They were very territorial, constantly vocalising from high in trees, as well as while foraging low in shrubs.

On 29 May 2017, one bird was observed picking up grassy strands from the ground and carrying them straight into the lower boughs of a 30 m-tall Blue Pine. This bird, presumably a female, was busy collecting nesting material and was usually quiet. Another bird, presumably its mate, was repeatedly vocalising from fixed perches, one of them being the lowermost bough of the tree on which I suspected the nest was placed. The female was somewhat secretive once she reached the lower boughs of the tree and this, combined with irregularities of the boulder-strewn ground, foiled my initial attempts at locating the nest. The nest was finally discovered at a height of 4 m from the ground on the lateral lowermost bough (Plates 1 & 2). It was well concealed, at a distance of 3 m from the trunk in the middle of the bough towards the outer end, an area that was most foliated with long pine-needles. It appeared to be in its initial stages, with only the outer structure having been built. Throughout the period, only one bird, the presumed female, collected nesting material and built the nest. Over the next three days, she was observed collecting pieces and threads of moss and lichen from the bark of the nesting tree, 15 cm-long thin strands of birch bark from nearby trees, and dried grassy strands and fine fibres of dried bracken *Pteridium* sp. from the ground (Plates 3–5). Material was sourced from within a small radius of 30–40 m, at regular short intervals of about 5–10 minutes during sunny times throughout the day, with relatively longer intervals of 15–30 minutes during overcast and rainy periods.

Territoriality

While the presumed female was typically quiet during the nest-building process, the male was aggressively territorial and vocalised throughout this period, taking short breaks to feed but continuing to vocalise even during foraging. He patrolled a small territory within a radius of 50–60 m from the nest tree, repeatedly giving the primary song from fixed perches, especially on or near the branch on which the nest was placed (Plate 6). The *sweet* call was given occasionally to drive away conspecifics, especially during disputes in common feeding areas. The only time the female was heard vocalising was when a Long-tailed Shrike *Lanius schach* appeared near the nest,



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Plate 3. Presumed female with nesting material. Rakcham, May 2017.



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Plate 4. Presumed female with nesting material. Rakcham, May 2017.



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Plate 5. Presumed female with nesting material. Rakcham, May 2017.

creeping around the boulders and barberry bushes underneath the nesting tree. On seeing the shrike, she promptly dropped all nesting material held in her bill and repeatedly gave a shorter version of the *sweet* call as an alarm or warning.

Another pair of Tytler's Leaf-warblers was suspected to be nesting in nearby Blue Pines, suggesting that their territories were quite small and overlapping—here within a distance of 80–100 m—but their nest could not be located.



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Plate 6. Tytler's Leaf-warbler singing primary song, Rakcham, May 2017.

Parental care and juveniles

Observations of fully-fledged young under parental care were made in mid-August 2018, from two areas along the Baspa river (the same as where the nest-building observations were made) and also from 5 km to the east at Mastrang (31.368°N 78.391°E; 3,220 m). The habitat was similar in both areas, except that there was large-scale cultivation of apples, peas and buckwheat in the latter. Two juveniles were found in the former area, whereas only one was found in the latter. In both areas, the fully-fledged young were fed by two adults. The young were usually perched low, from 2–3 m, in small trees or bushes, begging loudly and incessantly. Their flight was relatively weak, and the adults communicated with them intermittently with *pip* and *swee* calls. The adults primarily foraged low in the herbaceous or shrubby undergrowth, and the young would occasionally follow them to the ground. When being fed by the parents they would solicit by shivering their open wings and give their begging calls more excitedly. The adults occasionally gave *swee* calls as an alarm or warning on sensing human presence, but no songs were heard.

Vocalisations

Previous work has shown that the repertoire of Tytler's Leaf-warbler is unique among *Phylloscopus*; its primary song was considered the shortest of all

territorial songs of the 19 species in the genus *Phylloscopus* treated in Martens (1980). My observations include several vocalisations not previously described, and the repertoire description below draws on this as well as previous descriptions.

Primary song

An extremely brief, explosive, chirpy cluster of 4–6 unique notes, with a large frequency range of 2–10 kHz, lasting from 0.45–0.75 seconds (Figure 2C–2H), which can be rendered as *shitsu-shuwitsu* or *chitsi-chitsu*. It shows some variation in quality and length of the first few notes, although the structure of the phrase remains the same, with the final note falling dramatically and having the greatest frequency range. This vocalisation appears to serve primarily as the territorial song of the species, and it is often considered to be its primary song. It is apparently given only by males, as it was not heard from the nest-building individual (presumed female) during my observations. Given from a variety of perches, including from high in conifer trees, on prominent vantage points, and while foraging low in shrubs or undergrowth near the ground, it is usually repeated at intervals of 2–5 seconds for long periods of up to 3 minutes throughout the day, especially early in the breeding season. Based on observations from Himachal Pradesh, as well as from Bangus meadows, Kashmir

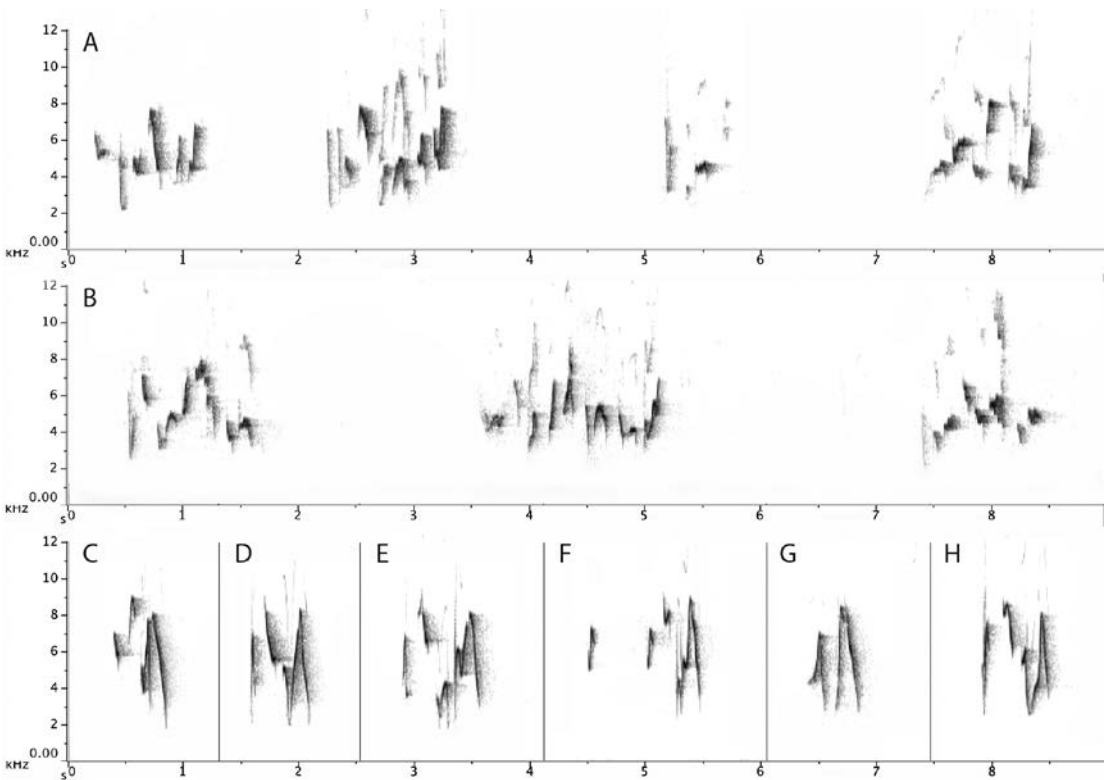


Figure 2. Vocalisations of Tytler's Leaf-warbler: (A & B) courtship song, long examples (ML182580551); (C–H) primary song, six variants, including one with an introductory note in (F).

(34.366°N 74.030°E), more than two and up to six males can be heard giving this song from 80–200 m distance in suitable habitat and, at times, while foraging together in the same plant or tree. While the primary song is given from spring onwards and through the breeding season up to at least late July, it has been heard by birds on passage in March outside the breeding range in the western Himalayan foothills (pers. obs.) and also from Mahabaleshwar, Maharashtra (www.xeno-canto.org/XC461214) in the same month. There are no known recordings from outside the breeding season in either autumn or winter and it is probably seldom heard once the young have fledged.

Courtship song

A series of complex, warbling, musical phrases of rising and falling elements consisting of 3–12 unique notes, with a large frequency range between 2–9 kHz, and variable duration of 0.3–1.6 seconds per phrase (most phrases around 1 second long), lasting for a duration of 1.5–4 minutes (Figure 2A & 2B). There are no repetitions of the song-phrases, with each phrase unique and showing great variability in quality and construction. It is known from only two recordings in early May, at different times of day, possibly from the same presumed

male (pers. obs.). It was given from the same low (2 m) branch of a rhododendron tree, while another individual quietly fed close by on the flowers of the same tree. This vocalisation, not previously described, differs from the primary song in its much greater variety of phrases. It apparently functions as a courtship song, probably given just before nesting commences.

Primary call

A thin, penetrating, up-slurred whistle at around 4–7 kHz, lasting about 0.3 seconds, and repeated every few seconds (Figure 3A–3C), rendered as *sweet* or *suweet*. It is given by both sexes in a variety of contexts, primarily as an alarm or warning, but it may also function as a contact call, and is used by males to drive away conspecifics from territory or suitable foraging areas. A slightly shorter and lower-pitched variation was given by a female when an intruding shrike was near her nest-site. Both parents would give this call while feeding begging juveniles, upon sensing human presence, or as a result of a disturbance. This vocalisation is given throughout the year, being the only call typically heard during the non-breeding season or in its wintering range. A short *pip* contact call was used by adults to keep in touch with recently fledged juveniles.

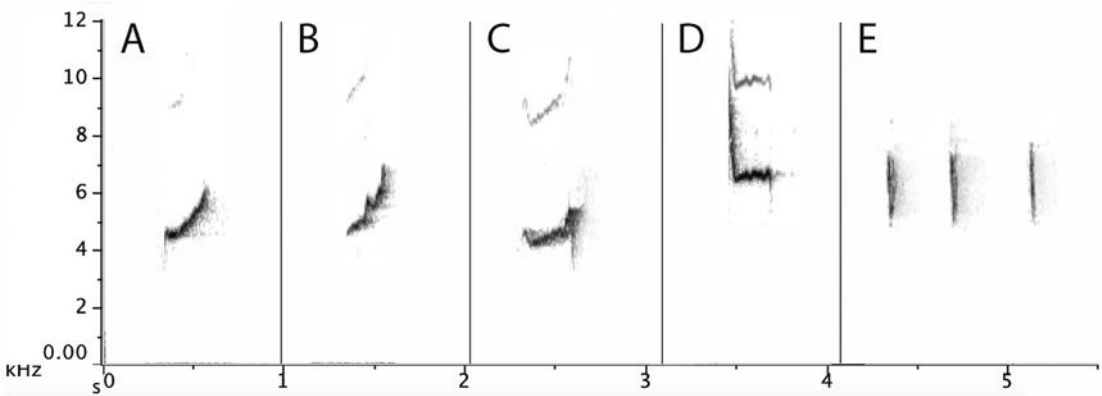


Figure 3. Vocalisations of Tytler's Leaf-warbler: (A–C) *sweet* or *suweet* call of adults, three variants; (D) begging call of recently fledged young/juveniles (ML350598681); (E) *tsip* flight-calls of juveniles.

Begging calls

A clear thin, piercing, high-pitched squeak at around 6–10 kHz lasting about 0.3 seconds; reminiscent of treecreepers (Certhiidae) and unlike the *sweet* whistle of the adults (Figure 3D). It was given constantly through the day, more insistently when the parents were foraging nearby, at the rate of one note per second for long durations of up to 2 minutes, until the begging juvenile was fed. As the parent approached to feed the juveniles, the rate of calling would accelerate to as fast as two notes per second for 4–6 seconds. Though it was given from low (2–3 m), inconspicuous perches where the juveniles were well obscured, their loud, penetrating calls would give their positions away. During short, weak flights they would give a short series of *tsip* calls (Figure 3E) at a constant 6–7 kHz, typically when following their parents to the ground or while changing perches.

Discussion

Historically, several authors have mentioned similar problems and difficulties in finding the nest of this species to those described in this note (Hume 1890, Whitehead 1914, Osmaston 1926, Bates & Lowther 1952). Many aspects of the breeding biology of the species are unknown and there is no information published on parental care or behaviour of juveniles. Only six works have described the nest of the species, some with incomplete information, of which details are summarised in Table 1.

It has been suggested that Baker's (1933) breeding records can only stand when corroborated by more observations (Rasmussen 1998). Paludan (1959) eventually proved the occurrence and breeding of the species in Afghanistan, and corroborated Baker's (1933) statement that it breeds there. The observations I describe corroborate his assertion that the species breeds in Garhwal,

Uttarakhand, and also establishes that it breeds in Kinnaur district in eastern Himachal Pradesh. This further suggests that it may also breed in the Kukti area, Chamba district in western Himachal Pradesh, considering that a specimen (Field Museum of Natural History, FMNH 241166) in worn plumage was collected there by W.N. Koelz on 4 July 1936. The species should also be searched for in other potential breeding areas in suitable habitats such as Kishtwar in eastern Kashmir, Kumaon in eastern Uttarakhand, and areas of western Nepal.

Acknowledgements

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Table 1. Historical nesting records of Tytler's Leaf-warbler *Phylloscopus tytleri*.

Reference	Location	Elevation	Date	Details	Nest-site
Captain Cock in Hume (1890)	Sonamarg, Kashmir	n/a	late May 1871	Nest-building in late May 1871; 4 eggs collected on 4 June 1871	12 m up in a pine
Davidson (1898)	Sonamarg, Kashmir	2,743 m	9 & 11 June 1896	Two nests with eggs collected, 4 and 5 eggs respectively	3–5 m from the ground in forks of small pollarded trees
Whitehead (1914)	Kaghan Valley, Pakistan	2,987 m	prior to 1914	Domed type, composed of grass lined with feathers and hair	9 m up in a Blue Pine <i>Pinus wallichiana</i>
Osmaston (1923, 1927)	Gulmarg, Kashmir	n/a	late June 1922	Nest had young by end of June	6 m or more from the ground. Several nests were found in fir trees <i>Abies pindrow</i>
Bates & Lowther (1952)	Tanin, Liddar Valley, Kashmir	n/a	28th June [year unknown]	Domed nest placed low so that it could be reached from an adjacent boulder	n/a
Price & Jamdar (1992)	Overa-Aru Wildlife Sanctuary, Kashmir	n/a	n/a	Fledging date from one nest recorded on 19 July 1987	Several nests found in a birch <i>Betula utilis</i> (at 8 m), in a hedgerow (at 2 m) and in a fir tree <i>Abies pindrow</i> (at 15 m)

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NOTEBOOK

Observations of nesting Whitehead's Spiderhunter *Arachnothera juliae* in northern Sarawak, Malaysian Borneo

SIEW TECK YEO & DING LI YONG

Few species of spiderhunter are as distinctively marked as Whitehead's Spiderhunter *Arachnothera juliae* of Borneo's montane forests, with its dark greyish-brown wings and bold, pale streaking on the head, mantle and underparts (Myers 2009, Phillipps & Phillipps 2011). Of the nine spiderhunter species on Borneo, the endemic Whitehead's Spiderhunter is best associated with montane forest and occurs principally from sub-montane elevations at c.950 m to as high as 2,000–2,100 m on Gunung Kinabalu and Trus Madi in Sabah (Sheldon *et al.* 2001, Mann 2008, Harris *et al.* 2012). Although by no means a common species, Whitehead's Spiderhunter has been most frequently observed in the mountains of Sabah, with regular records from Kinabalu and other parts of the Crocker Range (e.g. Sinsuran Road) from fieldworkers and birdwatchers (Sheldon *et al.* 2001, Moyle & Wong 2002, Phillipps & Phillipps 2011, Harris *et al.* 2012). In recent years, there have also been more records from the Malingan Range and Bario Highlands in northern Sarawak (e.g. B'akelalan, Gunung Mulu, see Burner *et al.* 2016), as well as sites in northern Indonesian Borneo (e.g. Kayan Mentarang, see van Balen 2011).

Despite being frequently sought for and observed by visiting birdwatchers, the nesting ecology of Whitehead's Spiderhunter and other closely-related species remains poorly documented (see Moyle *et al.* 2011, Amar-Singh 2020). Mann (2008) reported an active nest of Whitehead's Spiderhunter in March 1992 at Kinabalu but provided no further details. Brady & Burner (2015) provided a comprehensive description of a nest discovered at Gunung Mulu National Park after careful observation of a pair nest-building on 3 August 2014, a first for the species then. According to Brady & Burner (2015), this nest was found in old-growth montane forest at an elevation of c.1,420 m, and the authors described it as a 'hanging ball of moss and vegetation' within which the nest bowl was housed. The ball-like structure that held the nest measured 25 cm wide and was suspended from a mossy vine approximately 19 m above the ground. Brady & Burner (2015) described the constituent material of the nest to be mostly moss, supplemented with live stems and leaves,

and with a well-hidden opening near the bottom. Here we report our observations of a nesting Whitehead's Spiderhunter in the mountains of northern Sarawak, which likely represents the first time that nesting behaviour of this species has been documented.

Observations and discussion

On 5 May 2019, during a field visit to the Bario Highlands, we observed an unusual nest-like structure consisting of a clump of epiphytes (mostly a mass of orchids and ferns) and other vegetation suspended approximately 10 m above the ground from a dead tree (Plate 1). This was at an elevation

Plate 1. Nest of Whitehead's Spiderhunter *Arachnothera juliae* on a roadside tree on the B'akelalan–Bario road on the Sarawak/Kalimantan border on Borneo. May 2019.



of c.1,600 m, on the B'akelalan–Bario road (3.941°N 115.583°E), along the forested mountains that mark the international border of Malaysia and Indonesia. Shortly after, we observed a Whitehead's Spiderhunter on the structure with a clump of vegetation in its beak, leading us to suspect that the individual was constructing a nest rather than bringing food items to chicks. Upon closer inspection, we observed this individual repeatedly leaving the nest structure with pieces of plant matter in its beak. Each time, the spiderhunter clung to the side of the structure and pulled off bits of vegetation, apparently to excavate an entrance and cavity in the large clump of epiphytes (Plate 2). During this period of observation, we did not observe the spiderhunter bring back additional plant matter to build the nest cup.

When we revisited the site on 15 June (41 days later), we were now able to observe the adults bring back food items several times to feed the chicks (Plate 3). During casual observations, we noted that the adult(s) brought back both brightly coloured berries and what appeared to be arthropods to feed their two chicks (visible from the nest entrance). During our last visit to the nest on 11 July, we did not observe any activity in and around the nest and presumed that both chicks had fledged. We noted that the entrance hole appeared damaged but are unsure if this was caused by a predation event.

Although we were only able to collect observations on three widely separated occasions between early May and July 2019, we believe our observations to be the first ever documentation of

the Whitehead's Spiderhunter's nesting and chicks, and builds upon the observations made by Brady & Burner (2015). Previous reports have only described the nest structure and provided approximate times of breeding based on mist-netted birds; the timing of our observations is consistent with that of male birds with enlarged gonads mist-netted in June and fits in with the general timing of breeding known for Bornean forest species (Sheldon *et al.* 2001, Phillipps & Phillipps 2011). Our observations suggest that the breeding season of Whitehead's Spiderhunter spans from as early as March (Mann 2008) to at least August (Brady & Burner 2015) and that, consistent with other *Arachnothera* species, the clutch size is typically two.

Moyle *et al.* (2011) assessed the higher-level phylogenetic relationships of spiderhunters and found three distinct groups of closely-related species. Yellow-eared Spiderhunter *A. chrysogenys* was shown to form a species-group with Whitehead's Spiderhunter and Naked-faced Spiderhunter *A. clarae* (Moyle *et al.* 2011). Amar-Singh (2020) described the nest of the Yellow-eared Spiderhunter as a cup embedded in a mass of epiphytes suspended 7–8 m above the ground, while an online photograph of a Naked-faced Spiderhunter's nest appeared to be of similar structure and composition (Foley 2014). All three species build nests unlike those of other spiderhunters: typically structures of leaves lined with finer fibrous materials entered through a narrow opening and attached to the underside of banana or palm fronds (Mann & Cheke 2010). The

Plate 2. Adult Whitehead's Spiderhunter on 5 May 2019 pulling out pieces of plant material from the clump of epiphytes, apparently to excavate an entrance cavity.



SIEW TECK YEO

Plate 3. Nest of Whitehead's Spiderhunter observed on 15 June 2019; the adults were regularly bringing arthropod and plant food to two chicks.



CHRIS & ROSEMARY LESTER

close phylogenetic relationships of the three species are somewhat concealed by their very different morphology and their very dissimilar distributions (the first species endemic to the Philippines, the second widespread across the lowlands of Sundaland, and the last restricted to the highlands of Borneo) (Mann & Cheke 2010, Moyle *et al.* 2011). Our observations of the nest of this species are consistent with that of Burner & Brady (2015), and further demonstrate the similarities in the nest structure of the Whitehead's Spiderhunter with what is known about the nests of the closely-related Naked-faced and Yellow-eared Spiderhunters (Foley 2014, Amar-Singh 2020). All three appear to build similarly shaped, pendulous nests of vegetation suspended from high lianas and branches in the canopy, unlike those of all other *Arachnothera* spp., and thereby alluding to the close taxonomic relationships of this species trio.

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CONSERVATION ALERT

Two major bird habitats declared as national parks in Assam

ANWARUDDIN CHOUDHURY

The government of Assam, north-east India, has recently declared two new national parks (see Figure 1) in a global biodiversity hotspot and two endemic bird areas (Eastern Himalaya and Assam plains). Dihing-Patkai Wildlife Sanctuary (111 km²), established in 2004, has been upgraded to a national park covering an increased area of 234 km² (vide notification dated 15 June 2021). In addition, a section of Ripu Reserve Forest has been declared as Raimona NP (422 km²), vide notification dated 8 June 2021. Both the parks are Important Bird and Biodiversity Areas (Rahmani *et al.* 2016) and are well-served by highways and railways, and there are basic tourist facilities.

Dihing-Patkai National Park

Dihing-Patkai in Tinsukia and Dibrugarh districts was identified as an important area of lowland rainforest (that hosted important populations of threatened primates) during fieldwork conducted in 1987–1988 (Choudhury 1989). Soon after, I found it to be a critical site for the Endangered White-winged Wood Duck *Asarcornis scutulata* (Plate 1) and recommended an area of 267 km² as Upper Dihing NP (Choudhury 1996). The park covers part of Upper Dihing (west block) Reserve Forest and the whole of Dirak and Joypur Reserve Forest. At the

time of notification I had to change the name from Upper Dihing to Dihing-Patkai (I was Joint Secretary in the Forest Department at the time) as the then Forest Minister of Assam wanted a new name.

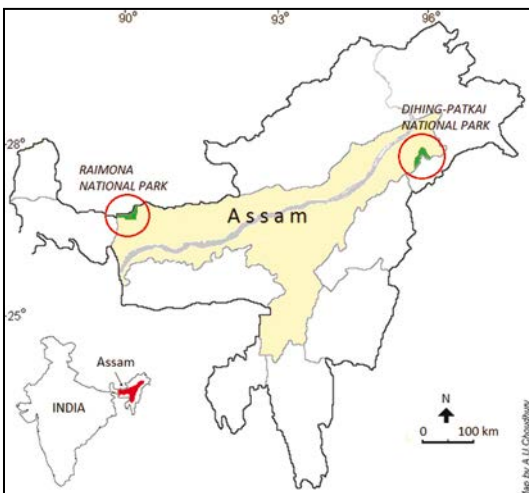
The rainforest in Dihing-Patkai is dominated by Hollong *Dipterocarpus macrocarpus* (the State Tree of Assam) and Mekai *Shorea assamica*. The park's notable birds include four Vulnerable species: Wreathed *Rhyticeros undulatus* (Plate 2), Rufous-necked *Aceros nipalensis* and Great *Buceros bicornis* Hornbills, and Pale-capped Pigeon *Columba punicea*. For the Near Threatened Austen's Brown Hornbill *Anorrhinus austeni* and White-cheeked Partridge *Arborophila atrogularis*, it is also an important area.

Raimona National Park

Raimona NP is located in Kokrajhar district in the Bodoland Territorial Region at the foot of the Himalaya and on the Bhabar tract. It is contiguous with Bhutan's Phibsoo Wildlife Sanctuary and West Bengal's Buxa Tiger Reserve, thus forming a larger transboundary protected wilderness covering 1,459 km². It is already part of the buffer zone of Manas Tiger Reserve. In the past, the Kochugaon Game Reserve was also in the vicinity, but this designation is now defunct. The need for a protected area in this area had frequently been highlighted (Choudhury 1999, 2002a,b) and proposals for a sanctuary were prepared twice during the last decade by local forest authorities—these however were never pursued.

The deciduous forest in the park is dominated by tall Sal *Shorea robusta* trees. There are patches of mixed semi-evergreen forest and scattered grassy areas. There is a single record of the Critically Endangered White-bellied Heron *Ardea insignis* sighted in October 2009 (Das 2010). There are also records of this extremely rare bird from the nearby Phibsoo Wildlife Sanctuary in Bhutan in 2014 (Anon. 2014). Raimona is a stronghold for Wreathed and Great Hornbills, and Indian Grey Hornbills *Ocyrceros birostris* are occasionally encountered; in winter, sightings of Rufous-necked Hornbills are not infrequent. Indian Peafowl *Pavo cristatus* (rare in north-east India) has a fairly large population in Raimona and there are past records of Swamp Francolin *Francolinus gularis*.

Figure 1. Map showing the locations of the two new national parks.





ANWARUDDIN CHOUDHURY

Plate 1. White-winged Wood Duck *Asarcornis scutulata*, Dihang-Patkai National Park, Assam, India, January 2020.



ANWARUDDIN CHOUDHURY

Plate 2. Raimona NP is a stronghold of the Vulnerable Wreathed Hornbill *Rhyticeros undulatus*.

Concluding remarks

Dihing-Patkai is home to seven species of primates, including Stump-tailed Macaque *Macaca arctoides*, Capped Langur *Trachypithecus pileatus* and Hoolock Gibbon *Hoolock hoolock*, while Raimona is a key area for the Endangered Golden Langur *T. geei* (Plate 3). Other notable mammals found in both newly established national parks are Asian Elephant

Elephas maximus, Black Bear *Ursus thibetanus*, Tiger *Panthera tigris*, Clouded Leopard *Neofelis nebulosa*, Marbled Cat *Pardofelis marmorata*, Dhole *Cuon alpinus* and Gaur *Bos gaurus*. Dihing-Patkai has Red Serow *Capricornis rubidus* while Raimona has Himalayan Serow *C. thar*.

The Critically Endangered White-backed Gyps *bengalensis*, Slender-billed *G. tenuirostris* and



Plate 3. Raimona NP has a significant population of the Endangered Golden Langur *Trachypithecus geei*.

Red-headed *Sarcogyps calvus* Vultures used to occur in both parks, but are now extremely scarce, with few stray sightings. The Vulnerable Lesser Adjutant *Leptoptilos javanicus* and some other Near Threatened species found in both parks include Oriental Darter *Anhinga melanogaster*, River Lapwing *Vanellus duvaucelii*, Himalayan Griffon Gyps *himalayensis* and Red-breasted Parakeet *Psittacula alexandri*. In addition, Kaleej Pheasant *Lophura leucomelanos*, Grey Peacock-pheasant *Polyplectron bicalcaratum*, Green Imperial-pigeon *Ducula aenea* and Oriental Pied Hornbill *Anthracoceros albirostris* also occur widely in both parks.

The major conservation issue in the fringe areas of Dihing-Patkai is mining for petroleum and coal—Digboi is home to India's oldest oilfield and

refinery—while illegal logging, occasional poaching and river-sand collection are present in both areas. Along the fringes of Raimona there is continued encroachment into Chirang Reserve Forest, especially in Ultapani area. It will be necessary to ensure that these activities do not cross into the new national park.

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NEW RECORDS

New and interesting avifaunal records for Pakistan, 2013–2021

AZAN KARAM & ZAFEER AHMED SHAIKH

Pakistan's avifauna was well documented in the two-volume work *'The Birds of Pakistan'* (Roberts 1991, 1992), thanks to the numerous ornithologists and birdwatchers who visited, many of them stationed as civil service officers. Pakistan's bird list was added to by Roberts (2002), and Grimmitt *et al.* (2008) published the first modern field guide to the country, providing a more contemporary country list in the process.

Since this time birdwatching and ornithology across the country have grown and, as a consequence, numerous new and interesting bird records have come to light. This article highlights and classifies the notable records in two categories from mid-2013 to mid-2021: (1) records which constitute an addition to the checklist of Pakistan, in some cases presenting substantial range extensions; and (2) vagrant species with five or fewer previous records. In total, we document 23 new species for Pakistan and discuss 17 vagrant species. The initials of the first sightings and the full names of contributors to these and vagrant records are as follows:

Akbar Ali Asif (ASA), Azan Karam (AK), Ahmad Kamal (AKa), Ali Hassan (AH), Arshad Ashraf (AA), Atif Riaz Baba (ARB), Alamgir Kiyani (AKi), Azmat Raza (AR), Ehtasham Ul Haq (EUH), Fahad Mehmood (FM), Imran Shah (IS), Imran Bhutto (IBh), Irtiza Bukhari (IBu), Irshad Sheikh (ISH), Ishaq Kamal Baloch (IKB), Jaffar Hussain Mandhro (JHM), Jawad Ahmed (JA), Khaliq Hyder Baloch (KHB), Khalid Mehmood Khan Gorchani (KMKG), Khizar Sharif (KS), Mirza Naim Beg (MNB), Mudasar Rao (MR), Muhammad Babar (MB), Muhammad Naveed (MN), Muhammad

Illyas Hingoro (MIH), Mayen Khan (MK), Noor Alam (NA), Nusrat Ihsan (NI), Riaz Muhammad Khan (RMK), Sajid Saeed (SS), Saeed Jamal Tariq (SJT), Sheri Gul (SG), Salman Baloch (SB), Tahir Abbas Awan (TAA), Taimur Mirza (TM), Usama Tabani (UT), Waqar Mursalin (WM), Waja Sadiq Baloch (WSB), Wasif Khan (WK), Yasir Pechuho (YP), Zaghham Awan (ZAw), Zeenat Bayat (ZB), Zafeer Ahmed Shaikh (ZAS), Zoltan Kovacs (ZK) and Zohaib Ahmed (ZA).

Records of bird species new for Pakistan

Tibetan Snowcock *Tetraogallus tibetanus*

First recorded by FM, who noted and photographed (Plate 1) 10 individuals on 29 October 2015 at Khunjerab, Gilgit-Baltistan. Later, IS recorded them on several occasions at Pidakkesh and Khunjerab, Gilgit-Baltistan. They appear to be rare residents in the higher northern tips of Hunza district. Records from Pakistan are almost certainly attributable to the nominate subspecies, which is already established as a resident in north-west India, the east Pamirs and east Tajikistan.

White-bellied Sea-eagle *Haliaeetus leucogaster*

AAA found photographs (Plate 2) of an adult White-bellied Sea-eagle on an old hard drive. He was on a fishing trip and saw the bird at Sonehri beach, in western Karachi, Sindh, in late October 2014. This is the first national record of this typically sedentary raptor. We believe this to constitute the most westerly ever record of the species.

Plate 1. A group of Tibetan Snowcock *Tetraogallus tibetanus* at Khunjerab, Gilgit-Baltistan, Pakistan, in October 2015.





AKBAR ALI ASIF

Plate 2. White-bellied Sea-eagle *Haliaeetus leucogaster*, Sonehri Beach, western Karachi, Sindh, Pakistan, October 2014.

Amur Falcon *Falco amurensis*

A satellite-tagged adult male Amur Falcon, nicknamed 'Naga', flew over south-east Sindh on its return migration from Africa on 4 May 2015. It was the first time the presence of this species had been confirmed in Pakistan, albeit without anyone having seen the bird! However, on 22 November 2020, MNB, ZB and WK found an adult female (Plate 3) in scrubland earmarked for housing at the Defence Housing Society–Phase 8 site, Karachi, Sindh. The bird was next to the Arabian Sea, so it could have been on migration heading for Africa although the late date and age of the bird also potentially indicate a bird wintering in the region (as is not uncommon in India).

River Lapwing *Vanellus duvaucelii*

In late March 2017, TAA photographed an adult River Lapwing on the bank of the River Ravi, Sialkot, Punjab, feeding alongside other waders. This was the first record of this typically sedentary Near Threatened species for Pakistan. It was later followed by another record from the same wetland of another individual on 27 January 2019 by SS.

Black-legged Kittiwake *Rissa tridactyla*

On 12 December 2016, IS was surprised to find this normally pelagic gull at a high-altitude inland lake named Borit, in Gojal, Gilgit-Baltistan. This species has been recorded in the neighbouring Persian Gulf and south Indian coast. We suspect this record refers to the subspecies *pollicaris*.

Little Gull *Hydrocoloeus minutus*

A first-summer individual was found in a mixed flock containing Whiskered Tern *Chlidonias hybrida*, Little Tern *Sternula albifrons* and Black-headed Gull *Chroicocephalus ridibundus* at Rawal Lake, Islamabad, on 27 May 2013. The record has not been submitted, but the details are available on the Islamabad Birding Blog (see <https://bit.ly/391LzW2>). AH found a second juvenile Little Gull mixed with River Terns *Sterna aurantia* resting at the edge of a



ZEENAT BAYAT

Plate 3. Amur Falcon *Falco amurensis*, Defence Housing Society–Phase 8, Karachi, Sindh, November 2020.

fish-pond in Multan, Punjab, in mid-August 2016. The same individual was sighted in the same area a week later and photographed by IBu.

Namaqua Dove *Oena capensis*

An adult male arrived on a mast of a boat in inshore waters off Paradise Point, Karachi, Sindh, on 9 October 2016 (see Moazzam *et al.* 2018). The bird was photographed, transpiring to be Pakistan's first record. It has been recorded in both Iran and India. The bird was later released at Karachi port. As Namaqua Doves are often kept in collections, its provenance remains unknown and may not constitute a genuine vagrant.

Brown-headed Barbet *Psilopogon zeylanicus*

Aka photographed one on 4 December 2015 at Baghsar, Bhimber, Azad Jammu & Kashmir (Plate 4). After this, it was discovered in districts Narawal and Gujrat, as well as Sialkot where breeding was reported. We presume it to be subspecies *caniceps*, which is already known from Himachal Pradesh, India.

Oriental Dollarbird *Eurystomus orientalis*

On 30 November 2019, WM, SJT and KS found an Oriental Dollarbird (Plate 5) with several Indian Rollers *Coracias benghalensis* near Mubarak village, in Karachi's outskirts, Sindh, in an area of semi-desert scrub dominated by *Prosopis juliflora*. This record is of considerable interest because, in addition to being the first national record for Pakistan, it constitutes the westernmost occurrence of this species and the habitat is also unlike that found in the species' native range.

Asian Palm-swift *Cypsiurus balasiensis*

On 15 May 2021, two birds (Plate 6) were seen at 06:30 at Haleji Wildlife Sanctuary, Thatta, Sindh, by UT and JHM. The birds may have been the geographically-closest subspecies *balasiensis* found in India. Cyclone Tauktae had been building that day in the Arabian Sea, which may have pushed them west.

AHMED KAMAL



Plate 4. Brown-headed Barbet *Psilopogon zeylanicus*, Baghsar, Bhimber, Azad Jammu & Kashmir, Pakistan, December 2015.

Sand Martin *Riparia riparia*

On 7 August 2018, AA photographed a Sand Martin at Balaili, Quetta, Balochistan. Race *indica* likely occurs (either on passage or as a winter visitor) in Pakistan since this subspecies is known already from Afghanistan and northern India.

Brown-breasted Flycatcher *Muscicapa muttui*

In January 2019, NA photographed an adult Brown-breasted Flycatcher at the WWF-Wetland Centre at Hawksbay, Sindh. The bird was found on a dry dead bush on the mangrove edge behind the centre. Brown-breasted Flycatchers breed in north-east India (and South-East Asia) and winter in the south-west Peninsular strip down to the Malabar coast and Sri Lanka, with a handful records from Gujarat, India. A second bird was recorded at Karachi Zoological Garden on 29 November 2020 by ZAS (Plate 7) in the company of an Asian Brown Flycatcher

Plate 6. Asian Palm-swift *Cypsiurus balasiensis*, Haleji Wildlife Sanctuary, Thatta, Sindh, May 2021.

USAMA TABANI



WAGAR MURSALIN

Plate 5. Oriental Dollarbird *Eurystomus orientalis*, Mubarak village, Karachi, Sindh, November 2019.

Muscicapa dauurica and a Greenish Warbler *Phylloscopus trochiloides*. It was followed for 40 minutes as the bird was very bold and gave plenty of photo opportunities.

Rufous-gorgeted Flycatcher *Ficedula strophiate*

On 24 January 2014, a male of this species was photographed as the first national record. Details can be found on the Islamabad Birding Blog (see <https://bit.ly/2XfnJUo>). This record was followed by another on 5 February 2018, when MR found and photographed an adult male in the Margallah Hills NP, Islamabad, a hilly area with mixed temperate forest, while photographing a group of Indian White-eyes *Zosterops palpebrosus*. Another record then came to light: a female found by SB, also from Margallah Hills, in January 2018. These records suggest that this species is either a winter vagrant or resident in Pakistan.

Plate 7. Brown-breasted Flycatcher *Muscicapa muttui*, Karachi Zoological Garden, Sindh, November 2020.



ZAFEER AHMAD SHAIKH

Brown Shrike *Lanius cristatus*

The first record of this species for Pakistan dates to 7 December 2017, with another just six weeks later. Reflecting a trend also seen in Europe, it has since turned from a very rare vagrant into an annual occurrence (see Table 1), with small numbers recorded in the south-east of Sindh province. In Pakistan all records have been from the south-east tip.

Table 1. Recent records of Brown Shrike *Lanius cristatus* in Pakistan.

Number	Location and observer	Date of find
1	Kathore, Karachi (KHB)	7 December 2017
1	Karachi Zoological garden, Karachi (ZA)	15 January 2018
1	Bhambore, Thatta (JHM)	21 January 2018
1	Bhambore road, Thatta (JHM)	25 November 2018
1 juvenile	Darsano Channa, Malir, Karachi	28 September 2019
1	Karachi Zoological garden, Karachi (ZA)	3 November 2019
1 first-winter	Dhabeji Pumping Station, Thatta (JHM)	23 December 2019
1	Dhabeji Pumping Station, Thatta (JHM)	4 January 2021
1	Defense Housing Society, Karachi (TM)	14 January 2021

Common Iora *Aegithina tiphia*

AH found two birds (Plate 8) at Jlalpur Jattan, Gujrat district, Punjab, on 12 February 2021. They were most likely race *septentrionalis*, which occurs in the north-west Himalaya in northern India, close to Pakistan. Jlalpur has a unique geography as it is almost adjacent to Indian Kashmir and Deva Vatala NP (Azad Jammu & Kashmir).

Plate 8. Common Iora *Aegithina tiphia*, Jlalpur Jattan, Gujrat district, Punjab, Pakistan, February 2021.



ALIHASSAN

Black-naped Oriole *Oriolus chinensis*

One found in an orchard at Kathore, Karachi, Sindh, in late November 2016 by IKB was the first country record. It was later followed by another, again in a small agricultural town, Dhabeji, in Thatta district, Sindh, on 31 December 2020, found by JHM and MIH, and most likely the same individual was observed in the same vicinity feeding on Peepal *Ficus religiosa* fruits on 9 February 2021. On 19 February, ZAS found an oriole at Karachi Zoological Garden; it was identified originally as an Indian Golden Oriole *O. kundoo* but was later re-identified as a first-winter male Black-naped Oriole. These records indicate that the species is likely to be a rare winter vagrant in lower Sindh.

Hair-crested Drongo *Dicrurus hottentottus*

Originally documented by Moazzam *et al.* (2018) erroneously as a Tristram's Starling *Onychognathus tristramii*, this bird arrived on an offshore boat, 45 km south-west of the mouth of the Indus River on the southern side of the Indus Canyon on 15 November 2016, where it was photographed by researchers. The bird, obviously exhausted, later flew in a northward direction. The subspecies is considered most likely to be *D. h. hottentottus*, given that this taxon is the geographically closest.

Pale Rock Sparrow *Carpospiza brachydactyla*

An individual was found by NI and NA in a mixed flock of Trumpeter Finches *Bucanetes githagienus*, Striolated Buntings *Emberiza striolata* and Black-crowned Sparrow-larks *Eremopterix nigriceps* in late November 2018 at a pool of water close to Khar centre, Kirthar NP. This species has already been recorded in India, in Gujarat, Rajasthan and Karnataka.

European Greenfinch *Chloris chloris*

This species is regularly reported in neighbouring Afghanistan and Iran, such that its presence in western Pakistan was not unexpected. A group of seven birds was sighted by EUH on 17 November 2019 at Hannah Urak, Quetta, Balochistan, where he was able to photograph one individual (Plate 9). It is likely to be the race

Plate 9. European Greenfinch *Chloris chloris*, Hanna Urak, Quetta, Baluchistan, Pakistan, November 2019.



ERTASHAM UL HAQ

turkestanica, a known altitudinal migrant that breeds in northern Iran and north-western Afghanistan, and winters to southern Iran.

Eurasian Siskin *Spinus spinus*

This species was first documented in Pakistan on 16 November 2016 in Hunza, Gilgit-Baltistan, and has since been frequently recorded in the north by IS.

Black-winged Snowfinch *Montifringilla adamsi*

Subspecies *adamsi* has recently been found to occupy high-altitude rocky areas of northern Pakistan. This species is nomadic and is known to form large flocks post-breeding. IS recorded them for the first time on 29 October 2017 at Khunjerab, Gojal, Gilgit-Baltistan, and they have been seen on many occasions since, suggesting that this species is a scarce and local resident in Pakistan.

Tricolored Munia *Lonchura malacca*

This species has recently (since 2016) become a resident breeder in the north-east Punjab region. It has now colonised major wetlands across Head Balloki, Head Marala, Phoolnagar and Hafizabad. The origin of this species remains uncertain but is considered likely to stem from escaped caged birds. It has also been reported from lower Sindh, believed also to be escapes.

Yellowhammer *Emberiza citrinella*

IS observed one (likely to be *E. c. erythrogegens*) on 18 November 2019 in Gojal, Gilgit-Baltistan, which is suspected to constitute the first country record.

Little Bunting *Emberiza pusilla*

There have now been three records in Pakistan: IS recorded one on 28 October 2017 in Passu, Gilgit-Baltistan, and one on 10 April 2019 in Borit, Gojal, Gilgit-Baltistan; MB and MR recorded another at Borit on 15 October 2020. Vagrants have been recorded from nearby Afghanistan. In Pakistan, they are considered either vagrants or possible passage migrants.

Additional records of note

Bewick's Swan *Cygnus columbianus*

Two records of poached birds in 2020: one from an unconfirmed location in Balochistan on 9 February, and a second at Tarbela lake, Khyber Pakhtunkhwa, on 18 November. Bewick's Swans are rare winter vagrants to Pakistan, with less than five official records since 1900.

Greater White-fronted Goose *Anser albifrons*

There were no reliable records of this species after 1968 until 6 February 2010, when ZK saw two individuals at Rawal lake, Islamabad. There was also a report of 30–50 at the same location, in the same year, by the Pakistan Wetlands Programme. On 17 December 2016, in Nowshera, Khyber Pakhtunkhwa, SG took a photograph which appears to be this species. MN also photographed a single bird in the company of Bar-headed Goose *Anser indicus* on 11 February 2021 at Sialkot, Punjab.

Although the status of this species in Pakistan remains uncertain, the subspecies *albifrons* is likely to be an uncommon migrant to Pakistan along the Indus River. Its migratory route to Pakistan is still largely unknown.

Long-tailed Duck *Clangula hyemalis*

An adult male was hunted on a fish-pond near the River Chenab at Muzaffargarh, Punjab, on 16 December 2018. It was attracted to Tufted Duck *Aythya fuligula* decoys as per the hunter's observations. There were occasional records of this species in the first half of the 20th century (Grimmett *et al.* 2008); Ali & Ripley (1978) mention three records: two from Baluchistan in 1933 and 1938, and one from Sindh in 1936.

Red-necked Grebe *Podiceps grisegena*

A sub-adult was observed at fish farms along the Indus at Vehar, Larkana district, Sindh, by YP on 29 September 2019. The bird was in the company of Little Grebes *Tachybaptus ruficollis* and was photographed. This was the first record for Sindh province and third for Pakistan. Another was seen by ARB and AR at Marala, Sialkot, Punjab, on 6 October 2019.

Horned Grebe *Podiceps auritus*

The fifth national record (in recent times) was documented by IS on 14 December 2016 at a high-altitude lake, Borit, Gojal, Gilgit-Baltistan. It was documented for the sixth time in Dinga, Gujrat district, Punjab, on 26 November 2020 by ARB. We suspect this to be the Palearctic subspecies *auritus*, which is also known to winter in the Caspian Sea.

Orange-breasted Green-pigeon *Treron bicinctus*

ZAW found an adult female feeding in H-9, Islamabad, in early November 2015. On 11 November 2019, WM and SJT photographed an adult bird in Karachi, Sindh. The only previous record was of two birds shot in Keamari, Karachi, Sindh, in January 1938. Roberts (1991) stated them to be accidental vagrants.

Oriental Pied Hornbill *Anthracoceros albirostris*

On 21 May 2016, MB was observing White-browed Fantails *Rhipidura aureola* in his garden in Lahore, Punjab, when he noticed a large black bird which transpired to be an Oriental Pied Hornbill. This was the second record of this species for Pakistan after the first record of one in Mirpur, Poonch, Azad Jammu & Kashmir, on 13 March 1990.

Black-capped Kingfisher *Halcyon pileata*

On 22 September 2019, AH found a Black-capped Kingfisher (Plate 10) at Head Muhammad Wala, Multan, Punjab. This is the first confirmed record of this species for Punjab province and comes after earlier records of one in the mangroves of Sandspit, near Karachi, on 11 January 1995 (Kylänpää 1998) and another photographed on 18 October 1998 at Hub Valley (Roberts 2002).

Bristled Grassbird *Schoenicola striatus*

On 25 September 2016, MB visited Balloki Headworks, near Phool Nagar, Punjab. He found a Bristled Grassbird singing and calling actively c.300 m from the Ravi River in a semi-cultivated area. This species was formerly only known from the same wetland: Roberts (1992) mentioned a small resident population in the seepage zone upstreams of the Ravi River in 1981. Although this species is regularly listed as occurring in Pakistan, we believe this constitutes the only documentation of it in the country since Roberts (1992).



ALI HASSAN

Plate 10. Black-capped Kingfisher *Halcyon pileata*, Head Muhammad Wala, Multan, Punjab, September 2019.

Bohemian Waxwing *Bombycilla garrulus*

First observed in March 1907 and noted subsequently in 1908, 1914, 1947, 1968 and 1969 (Roberts 1992), there were no modern records of this species until 7 December 2016 when AKi found two (Plate 11) at BUIITEMS Takatu Campus, Quetta, Balochistan, feeding on firethorn berries. A single bird was later seen on 15 February 2016 by MK in Quetta Cantt, Balochistan. During this winter large numbers had dispersed over Western Europe and had also been recorded in Iran and northern India. This species is prone to influxes and it could be more frequent than previously thought.

European Robin *Erithacus rubecula*

European Robin is a very rare vagrant to Pakistan, first recorded in February 2000 by Major Erkki Kallio at the foot of the Margallah

Plate 11. Bohemian Waxwing *Bombycilla garrulus*, Quetta, Baluchistan, December 2016.



ALAMGIR KIYANI

Hills, Islamabad. Another was seen shortly after by Juha Kylänpää on 28 December 2000 at Kao forest in Dunga Gali, Murree Hills (Roberts 2002). The third record for Pakistan was documented on 3–16 January 2017 by AKi and EUH in Quetta. It was possibly of the race *hyrcanus*, which is known to occur in northern Iran. On 9 February 2019, ISh found another at F9 Park in central Islamabad. The bird was photographed in the same area two weeks later.

White-browed Bush-chat *Saxicola macrorhynchus*

KMKG photographed this threatened species in the desert at Rajanpur, Punjab, in December 2019, unaware at the time of its significance. He later shared the photographs on social media where they were confirmed as White-browed Bush-chat. A year later, YP recorded two individuals of this species at marshes in Nagarparkar, Tharparkar district, Sindh (Plate 12). The reason for its late re-discovery is mainly attributed to the lack of birdwatchers and ornithological explorations made in this region of Pakistan.

Plate 12. White-browed Bush-chat *Saxicola macrorhynchus*, Tharparkar district, Sindh, January 2021.



YASIR PECHUHO

Barred Warbler *Curruca nisoria*

Previously recorded in September 1880 and July 1933 in the far north of Pakistan, it was more recently noted twice in Gilgit-Baltistan by IS: (1) on 30 August 2016 from Aliabad, Hunza; and (2) on 2 September 2020 at Borit, Gojal.

Yellow-breasted Bunting *Emberiza aureola*

On 28 January 2014, RMK photographed a Yellow-breasted Bunting at Head Maralla, Sialkot, Punjab. This was only the second record for Pakistan and came after a gap of 113 years since the first in 1901 from Makran coast at Ormara, Balochistan (Roberts 1992). This record was followed by about seven individuals found by TAA and JA in a mixed-species flock comprising Red-headed *E. bruniceps*, Reed *E. schoeniclus* and Rock Buntings *E. cia* in November 2017 in the same area. SS found a flock in the same wetlands again in November 2020, followed by c.12 individuals sighted again around the headworks by TAA.

These sightings suggest that this Critically Endangered species is a rare but regular winter visitor in small numbers to the north-east Punjab wetlands.

Corn Bunting *Emberiza calandra*

On 2 December 2018, TAA found a large flock (30+) of this species at Thokar No.4, near the Headworks of Maralla, Sialkot, Punjab. They were feeding along the reedbeds in a large, wide open natural pond. We believe this to be the first documentation of this species in Pakistan since a flock was recorded in Punjab in November 1917 (Roberts 1992).

Ortolan Bunting *Emberiza hortulana*

Ortolan Bunting is a vagrant to the Indian Subcontinent, particularly northern India and northern Pakistan. First-year individuals of this migratory bunting pass through the Chokpak Pass (south-east Kazakhstan) ahead of adults, with peak passage in early September. Passage continues south-west on a relatively wide front across Iran, Iraq and Arabia. Vagrants to Pakistan are probably coming from that region. It was previously recorded from Chaman, Baluchistan and Gilgit-Baltistan in May 1880–1882 (Roberts 1992). Far more recently, IS photographed a bird (Plate 13) in Borit, Gojal, Gilgit-Baltistan, on 4 October 2019.

Plate 13. Ortolan Bunting *Emberiza hortulana*, Borit, Gojal, Gilgit-Baltistan, October 2019.



IMRAN SHAH

Chestnut Bunting *Emberiza rutila*

This migratory bunting is a rare vagrant to Pakistan. On 24 October 2017, IS photographed an individual at Borit, Gojal, Gilgit-Baltistan, making it the second national record after one in April 1902 at Chitral, Gilgit-Baltistan.

Concluding remarks

Over the last few years birding has taken a game-changing turn across Pakistan, with an increasing and diversifying demographic showing interest, which has manifested itself in many forms including nature journalism, avian gallery exhibitions, bird photography and participation in birding tours. The frequent documentation of vagrants and rarities in this article indicates that birdwatching is likely to uncover many more additions to Pakistan's avifauna, which remains among the most poorly known in Asia. However, it cannot be ignored that our birds are imperiled by mass hunting, wetland degradation, habitat destruction and poaching. Pakistan has the potential to implement eco-tourism initiatives to the benefit of communities living in bird-rich areas in ways that will ensure the protection of habitats.

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First records of Slaty-breasted Rail *Lewinia striata* from Timor-Leste (Timor island), Sumbawa and Flores islands, Nusa Tenggara, Indonesia

JAFET POTENZO LOPES, MARK SCHELLEKENS, YOVIE JEHABUT, SALEH AMIN, JAN VERHOEYE & COLIN R. TRAINOR

Slaty-breasted Rail *Lewinia striata* occurs widely in Asia, from China, India, Bangladesh, Myanmar and Indochina to much of South-East Asia, including Malaysia, the Philippines and the Sundaic regions of Indonesia (Taylor 2020, eBird 2021). It is largely considered to be a resident species, with little known of its movements. The *L. s. albiventer* populations in India, Sri Lanka through to China may winter in southern Thailand and Malaysia (Taylor 2020). In India, birds move in response to drought or flood, and in the Philippines considerable post-breeding dispersal of resident birds has been recorded but no migrant birds have been observed (D. Allen *in litt.* 2021). Breeding patterns of resident Slaty-breasted Rail on Java, Indonesia, are well known, thanks to Hoogerwerf (1949). There are few published records of Slaty-breasted Rail from Wallacea, with observations from Sulawesi, Sawu (White & Bruce 1986) and Lombok (Coates & Bishop 1997, Eaton *et al.* 2016). The Sulawesi specimen records have been noted as the subspecies *L. s. striata* which is thought to be a resident in the Philippines (including the Sulu islands) and north Borneo, but is considered as either a possible resident (Coates & Bishop 1997) or a possible visitor to Sulawesi (Taylor 2020). The Nusa Tenggara (Lesser Sundas) records have been assumed to be vagrants of the same subspecies (Coates & Bishop 1997, Taylor & van Perlo 1998, Eaton *et al.* 2016, Taylor 2020).

In the Nusa Tenggara region there are only two widely-known published records. A female was collected on Sawu (Sabu/Savu) island between 7 August and 11 September 1896 (Hartert 1897) and a bird was observed for several minutes foraging on an intertidal mudflat at Lembar harbour, Lombok, in October 1991 (Johnstone *et al.* 1993). Timor is mentioned as part of the range of Slaty-breasted Rail in the *Birds of the World* account (Taylor 2020), but this is almost certainly an error (per G. Kirwan *in litt.* 2020) and was not mentioned in Taylor & van Perlo (1998). However, a Timor record was mentioned by Ash (1984) without any details, and that could be the source of the likely error in Taylor (2020). Our article was prompted by the surprising observation of Slaty-breasted Rail from Timor-Leste (Timor island)—the first confirmed record for the island—and also collates and summarises seasonal patterns of records from Nusa Tenggara and Bali.

New island records and seasonal patterns

We collated 10 unpublished records and three published (but overlooked) records of Slaty-breasted Rail from Indonesian Nusa Tenggara and Timor-Leste from literature, eBird (ebird.org),

personal observations and from colleagues (Appendix 1). We describe details of the observations and the seasonality of records to understand patterns in their occurrence in the region. Additional to the observation by Johnstone *et al.* (1993), we found two unpublished Lombok records and two that were published previously (Amin & Yusuf 2018), a single published (Yusuf & Nurwartha 2013) but overlooked first island record from Sumbawa, seven previously unpublished records from Flores (two accidentally omitted from the island review by Verhoeve & Holmes 1998), and describe the first record from Timor-Leste (Timor island). The Flores records were all from a small area along the north coast in the vicinity of Maumere city, probably largely caused by increased observer effort by two long-term visitors (JY & MS). All records were from coastal wetlands mostly associated with mangroves or ricefields, as well as a beach, as mentioned in literature and clear in Plates 1–4 (Coates & Bishop 1997, Taylor & van Perlo 1998, Taylor 2020). The Timor-Leste record was on the beach at near high-tide level, with a few mangrove trees only in the general vicinity (Plate 4). Slaty-breasted Rail can be a skulking species (Taylor & van Perlo 1998) but the majority of the Nusa Tenggara records (Appendix 1) were of birds readily seen in mostly open wetland habitats. Seven of these previously unpublished records are available on eBird, including three with photographic support, although the identification of this rail is relatively straightforward.

The 10 newly presented and five previously published Nusa Tenggara records span the months April to November (with the assumption of the Sawu record as 'August'): April (1 record), June (1), July (1), August (3), September (1), October (4) and November (4). The 15 Bali records on eBird, with the addition of one record mentioned in Ash (1984) and a second unpublished record by J.S. Ash on 15 November 1990 (Bas van Balen *in litt.* 2021), were recorded from January to December, with most in January (2 records), September (3) and October (3). Pooling all Bali, Nusa Tenggara and the one Timor-Leste record helps to highlight seasonal patterns, with 20 of 30 records (67%) in the period August to November.

Slaty-breasted Rail has been assumed to be resident on Bali, but the rate of records (broadly accounted for by observer effort) is little different from Nusa Tenggara and it may also occur there as a vagrant, or as regular dispersing birds from Java. Taylor & van Perlo (1998) consider this rail common on Sumatra, Borneo, Java and (surprisingly) Bali. The seasonal patterns described here perhaps refer to the dispersal of first-year birds from nearby resident populations such as Java (to Bali and the Nusa Tenggara

JAHIDYD



Plate 1. Slaty-breasted Rail *Lewinia striata* in mangrove habitat at Sekotong, Lombok, Indonesia. June 2015.



Plate 2. Slaty-breasted Rail in ricefield paddy habitat at Pagutan, Lombok. July 2005.

M. SALAMUDDIN YUSUF

YOVIE JEHA BUT



Plate 3. Slaty-breasted Rail on the mangrove boardwalk at Magepanda, Flores, Indonesia. November 2018.



Plate 4. Slaty-breasted Rail on rocks near high tide line at Subaun, Timor-Leste. October 2020.

JAFET POTENZO LOPES

region) or the Philippines (to Sulawesi). On Java, the breeding phenology of Slaty-breasted Rail is well known, thanks to the documentation of at least 244 breeding records (Hoogerwerf 1949) during January (1 breeding record), February (18), March (29), April (58), May (102), June (24), July (2), August (0), September (1), October (5), November (4) and December (0). The peak in breeding activity in April to June could conceivably be the source of dispersing first-year birds into adjacent regions, including Nusa Tenggara, particularly those few birds recorded in April to July. The small number of records that we document here, and the relative ease with which birds are seen, suggest that Slaty-breasted Rail is a vagrant to the Nusa Tenggara region. There are just two modern-day eBird records from Sulawesi (both in Minahassa, in May 2012 and May 2017), where it may

also be a vagrant. The increased rate of Bali and Nusa Tenggara records during August to November might be caused by small numbers of migrating birds, but there is currently no data available (such as verification of migrant subspecies in Indonesia) to support this speculation. However, there remains much to learn about the ecology and movements of this species, as with many other landbirds in the East Asian-Australasian Flyway (Yong *et al.* 2021).

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This article is dedicated to Mohammed Salamuddin Yusuf: a keen birdwatcher and biologist who worked on Sumbawa particularly monitoring Batu Hijau mine, and Lombok. He made the first and only observation of Slaty-breasted Rail on Sumbawa.

Appendix 1. Summary of Slaty-breasted Rail records from Nusa Tenggara, Indonesia, and Timor-Leste.

Island	Site	Date	Notes including habitat and source
Lombok	Lembar harbour	11 October 1991	One observed foraging for several minutes on intertidal mudflats (Johnstone <i>et al.</i> 1993)
	Pagutan (Mataram city)	28 July 2005	M. Salamuddin Yusuf, one bird seen in ricefield (<i>in litt.</i> to SA 2014) [Plate 2]
	Pagutan (Mataram city)	1 September 2007	M. Salamuddin Yusuf, one bird seen in ricefield (Yusuf & Nurwartha 2013, Amin & Yusuf 2018)
	Sekotong	28 June 2015	Jahidyn (Lombok Wildlife Photography), recorded in mangrove c.4 km south of Lembar harbour (<i>in litt.</i> to SA 2015, Amin & Yusuf 2018) [Plate 1]
	Gunung Tunak	17 April 2018	One bird, said to be immature; John Rose & SA (eBird: S44655604)
Sumbawa	Benete Pond, Benete village	October 2008	One seen (Yusuf & Nurwartha 2013), probably in disturbed area of a pond and estuary
Flores	Waira	11 August 1990	Two birds in a small tidal pool in mangrove habitat bordering <i>Chromolaena odorata</i> shrub by JV
	Tambak Koliaduk, Maumere	11 November 1990	One bird seen in muddy ditch in mangrove and aquaculture pond habitat by JV
	Tambak Koliaduk, Maumere	4 August 2002	One bird in mangrove and aquaculture pond area by MS (eBird: S49737216)
	Waira	24 November 2002	One bird in beach with river estuary and coastal lagoon habitat by MS (eBird: S50337626)
	Tambak Koliaduk, Maumere	6 October 2004	One bird in mangrove and aquaculture pond area by MS (eBird: S49912408)
	Tambak Koliaduk, Maumere	3 November 2004	Two birds in mangrove area by MS (eBird: S49912517)
	Magepanda, 21 km NW of Maumere	28 November 2018	One bird in mangrove habitat, photographed on a mangrove boardwalk by YJ (eBird: S50270990) [Plate 3]
Sawu (Sabu/Savu)	Unknown	7 August–11 September 1896	An adult female (Hartert 1897)
Timor-Leste (Timor)	Subaun, Uma Kaduak	16 October 2020	One bird photographed by JPL among coastal rocks on or just above a beach about 40 km east of Dili while monitoring whale migration (eBird: S74866088) [Plate 4]

He died unexpectedly in 2020. We wish to thank Bas van Balen and Guy Kirwan for guiding us to relevant literature; to Bas for providing an unpublished Bali observation by J.S. Ash; to Desmond Allen for information on rails captured at Dalton Pass in the Philippines; and to Jahidyn for allowing use of his photographs.

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The first occurrence of 'Masked Wagtail' *Motacilla alba personata* in the Philippines

ADRIAN M. CONSTANTINO & ROBERT O. HUTCHINSON

White Wagtail *Motacilla alba* is an uncommon but annual migrant to the Philippines, from where four subspecies have previously been recorded, with *ocularis* the commonest, followed by *leucopsis*, *lugens* and *baicalensis* in order of abundance (Tañedo & Hutchinson 2016). From 18–20 October 2019, AC visited Batan Island, Batanes, to conduct a birdwatching training seminar for resident naturalist tour guides, organised by the Philippine Department of Tourism. An archipelago lying midway between Luzon and Taiwan, Batanes has a long history of attracting vagrants (Jensen *et al.* 2015) and on 19 October

2019 at the town dump, near Chadpidan Boulder Beach, AC observed a White Wagtail that was not immediately assignable to one of the regularly occurring subspecies. Fortunately, the excellent series of photos obtained (Plates 1 & 2) allow identification as what is colloquially known as 'Masked Wagtail' *M. a. personata*. The presence of dark ear-coverts broken by a white subocular arc eliminated all other possible subspecies except *alboides*, which was discounted by virtue of the lack of extensive black on the crown and pale grey upperparts; extensive dark centres to all the greater coverts indicated that

Plates 1 & 2. 1st-winter White Wagtail *Motacilla alba personata*, Chadpidan Boulder Beach, Batan, Batanes, 19 October 2018.



the bird was in first-winter plumage (Alström & Mild 2003) but sexing of birds in the field at this age is generally considered unreliable (P. Alström pers. comm. 2020).

White Wagtails are known for their long-distance vagrancy and the same four subspecies identified in the Philippines have occurred in Australia, with 23 currently accepted records there (BARC 2020), and recent sightings of both *ocularis* and *lugens* in Indonesia (van Balen *et al.* 2020). The subspecies *personata* breeds in south-central Asia south to Persia, wintering in Iran and Afghanistan east to Bangladesh and southern Nepal (Alström & Mild 2003) but has a propensity for vagrancy, having been recorded as far west as the United Kingdom (Thorpe 2020), eastwards to Japan (Brazil 2009) and Taiwan (Ding *et al.* 2020), and its potential occurrence in the Philippines was highlighted by Tañedo & Hutchinson (2016).

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From the field

COMPILED BY SIMON RODDIS & TIM LOSEBY



These are largely unconfirmed records, covering mainly the period from May to September 2021. The year is only stated when records fall outside this period or for clarity. The symbol (📷) after a record indicates that confirmatory images were taken. We urge that if they have not already done so, contributors provide full details to the relevant regional organisations in due course.

BANGLADESH

Records (including three recently confirmed firsts) compiled by SUC and PMT. There were relatively few records during this monsoon period, with travel also restricted due to the COVID pandemic, but four country firsts are reported here: a non-breeding plumage **Red-headed Bunting** *Emberiza bruniceps* (📷) in Pabna (north-west), 26 November 2020 (MSo); a **Collared Pratincole** *Glareola pratincola* (📷) at Mohonpur, Rajshahi (north-west), 12 December 2020 (MAS, NuS); a **Water Pipit** *Anthus spinoletta* (Plate 1) at Lalmonirhat Char (north-west), 14 January 2021 (SAb, SAR, MMM); and a **Golden-crested Myna** *Ampeliceps coronatus* (📷) in Kassalong Reserve Forest, Chittagong Hilltracts (south-east), 25 July 2021 (MK, SD).

A **Short-tailed Shearwater** *Ardenna tenuirostris* on the Ganges River in Rajshahi (north-west), 19 May (MAS, ZZu, NuS, NIN, AAU) and 2 along the Padma river near Aricha (central), 29 May (MK, SKC) (Plate 2) were the fourth and fifth records. A male **Ultramarine Flycatcher** *Ficedula superciliosa* (📷) at Gajni Garo Hill, Sherpur (central), 15 May (ApT) was the third record. There were some notable records from the Chittagong Hilltracts (south-east): a flock of 7 **Brown-backed Needletail** *Hirundapus giganteus* at Sajek Valley, 19 September (OS) and a **Himalayan Swiftlet** *Aerodramus brevirostris* there, 21 September (SRa), raising the possibility that one or both species might be resident there; 2 **Great Hornbill** *Buceros*

Plate 1. Water Pipit *Anthus spinoletta*, Lalmonirhat Char, Bangladesh, 14 January 2021.



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Plate 2. Short-tailed Shearwaters *Ardenna tenuirostris* on the Padma river, Aricha, Bangladesh, 29 May 2021.

bicornis along the Matamuhuri river, 24 September (SS, SD, MK); and a flock of 8 **Grey-headed Parakeet** *Psittacula finschii* near Richang Waterfall, Khagrachhari, 20 September (OS).

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BRUNEI

At least 5 **Rainbow Bee-eaters** *Merops ornatus*, one of them an immature, were found along the fringes of Andulau Forest Reserve, 20 May 2021 (Plate 3). There are just 2 prior Bornean records, both in Sabah, so this is a first for Brunei (Keita Sin, Laura Marie Berman, Movin Sengeran).

CAMBODIA

Compiled by CP. A **Christmas Island Frigatebird** *Fregata andrewsi* (📷) was found exhausted on a ship entering Sihanoukville, 25 September, but its precise origin was unclear (per Facebook), and a **Red-footed Booby** *Sula sula* was reported at sea in Cambodian waters off Koh Kong, 20 September (per eBird). Two **Chinese Egret** *Egretta eulophotes* (📷) returned to Kep Thmei, Kampot, 27 August (SM), the earliest autumn record for Cambodia. At the same site, after successfully breeding, up to 8 **White-faced Plover** *Charadrius dealbatus* (📷) were present throughout (PS).



KEITA SIN

Plate 3. Rainbow Bee-eater *Merops ornatus*, Andulau Forest Reserve, Brunei, 20 May 2021.

Low water levels created attractive habitat for shorebirds at Boeng Choeng Aik, Phnom Penh, in July and August, resulting in a number of unusual inland records, including perhaps as many as 8 different **Lesser Sand Plover** *Charadrius mongolus* (¶), 30 July–26 August (CP,TG,RT). They were joined by a **Greater Sand Plover** *C. leschenaultii* (¶), 15–21 August (CP,RT) and a **River Lapwing** *Vanellus duvaucelii* (¶), 11 August (CP,TG,SM,RT). Two **Red-necked Stint** *Calidris ruficollis* (¶) were there, 21 August (CP) and Cambodia's first inland **Little Stint** *C. minuta* (¶), 4–15 August (CP,TG,SM,RT). There were also four coastal records of **Little Stint** (¶) at the Kampot Saltpans, Kampot, between 3 August and 23 September, but it is unclear how many birds were involved (PS,SP,SM).

Small Pratincole *Glareola lactea* are increasingly using temporary wetlands associated with landfill and construction areas away from the traditional mainstream Mekong, and were recorded breeding at four such sites around Phnom Penh and Kandal during the period (CP,TG,SM). A large post-breeding flock at one of these sites, Prek Ta Sek, Kandal, in July and August, peaked at 650 on 12 & 22 August (TG), likely representing a significant proportion of the entire remaining Cambodian population. Over the same period at Prek Ta Sek, there was a **Lesser Sand Plover** (¶), 31 July (SM, RT) and a **River Lapwing**, 12 August (TG).

Single **River Terns** *Sterna aurantia* wandering from the small remaining Mekong breeding population were recorded at Prek

Ta Sek, 4 July (TG) and at Ang Trapeang Thmor, Banteay Meanchey, 24 August (RT). A pair of **Little Terns** *Sternula albifrons* (¶) successfully bred at Prek Ta Sek, with 2 adults and 2 recently fledged young there, 25 July (SM,RT); it is now extremely rare inland and this is the first breeding record away from the mainstream Mekong.

A **Black-backed Dwarf-kingfisher** *Ceyx erithaca* at Arey Ksat, Kandal, 29 May–25 July (SM) was the first for the Phnom Penh area. A **Bamboo Woodpecker** *Gecinulus viridis* was at Phnom Aural, Kompong Speu, 17 September (SM,TG,RT), the only site from which the species has been recorded in the country. A single **Tiger Shrike** *Lanius tigrinus* (¶) was at Oromis, Mondulkri, 8–23 September (KB,CW,CI) and another at Arey Ksat (¶), 13 September (SM,RT). A **White Wagtail** *Motacilla alba* (¶) showing characteristics of the form *leucopsis* at Boeng Choeng Aik, 10 July (CP), is the first summer record of a migrant *alba* wagtail in Cambodia and perhaps the region. Up to 9 **Barn Swallows** *Hirundo rustica* (¶) were gathering nesting material at Boeng Choeng Aik, 19 June–3 July (CP), and carrying it into an inaccessible neighbouring construction site, apparently the southernmost breeding attempt in South-East Asia.

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CHINA

Mainland

At least 5 **Swinhoe's Rails** *Coturnicops exquisitus* were heard at Wuerqihan, Inner Mongolia, in June (per Terry Townshend).

Hong Kong

Compiled by RWL. Major rarities, all found singly and all species with only one or two previous records, were **Olive-backed Sunbird** *Cinnyris jugularis* at Mount Davis, 4 April (TLi), **Ashy Woodswallow** *Artamus fuscus* near Mai Po, 17 April (per CC), **Ruddy Kingfisher** *Halcyon coromanda* on Po Toi, 27 April–6 May (AK,RLo) and 2 September (YTY), **Japanese Leaf-warbler** *Phylloscopus xanthodryas* at Tai Lam CP, 6 May (B&MLis), **Swinhoe's Storm-petrel** *Hydrobates monorhis* off Po Toi, 27 May and 11 September (BDS), and **Brown Noddy** *Anous stolidus* (Plate 4) off Conic Island, 20 June (JAMC), with presumably the same bird off Tap Mun, 11–17 July (SY *et al.*) and another regularly seen from the Cheung Chau ferry, 16 July–9 August (MDW *et al.*).

Other birds of interest in spring were a **Eurasian Oystercatcher** *Haematopus ostralegus* in front of the Mai Po boardwalk, 7 April (TLi), only the seventh record, a **Grey-headed Swamphen** *Porphyrio poliocephalus* at HK Wetland Park, 22 April (per DAD) and then at nearby Fung Lok Wai, 6–29 May (BDS), about the ninth record, a record count of 147 **Red Turtle Dove** *Streptopelia tranquebarica* at San Tin, 5 April (EMSK), 72 **Little Terns** *Sternula albifrons* in front of the Mai Po boardwalk, 7 May (IT), possibly the highest count in the past 20 years, and a **Spoon-billed Sandpiper** *Calidris pygmaea* at Mai Po, 8–9 May (CC) which had an engraved leg flag indicating that it had been ringed as a head-started chick on the breeding grounds in Chukotka, Russia, the previous summer (KL).



MICHELLE AND PETER WONG

Plate 4. Brown Noddy *Anous stolidus*, off Tap Mun, Hong Kong, 12 July 2021.

Breeding season reports included a **White-tailed Robin** *Myiomela leucura* singing in Tai Lam CP, 21 April (JC), the latest record by 45 days, a juvenile **Oriental Turtle Dove** *S. orientalis* (thought to be locally bred) at Lok Ma Chau, 17 May (PJJ), dependent young of **Orange-headed Thrush** *Geokichla citrina* at Cheung Sheung (TLi) and **Brown-breasted Flycatcher** *Muscicapa muttui* at Tai Lam CP (AK), both 6 June, a very late **Oriental** or **Himalayan Cuckoo** *Cuculus optatus/saturatus* at Mai Po, 8 June (per PJJ), dependent young of **Grey Treepie** *Dendrocitta formosae* at Chung Pui, 25 June (RWL) and a **Masked Laughingthrush** *Pterorhinus perspicillatus* feeding both its own young and a young **Large Hawk-cuckoo** *Hierococcyx sparverioides* at Nam Sang Wai, 17 July (MRL).

The first landbird migrants of the autumn were an **Amur Paradise-flycatcher** *Tersiphone incei* at Tin Shui Wai Park and a **Yellow-rumped Flycatcher** *Ficedula zanthopygia* at Tai Tong, 29 July (KPC), the latter the earliest ever autumn record by 4 days. After a light passage in August, a steady stream of migrants passed through in September, including **Manchurian Reed-warbler** *Acrocephalus tangorum* at Mai Po, 2nd (DJS), the first of four in the month, **Fairy Pitta** *Pitta nympha* at Tai Lam CP, 4th (JAA), a **Brown-chested Jungle-flycatcher** *Cyornis brunneatus* at Ho Man Tin, 6th & 30th (KPC, MK), **Brown-breasted Flycatcher** *M. muttui* at Pak Sha O, 10th (PH), the first **Siberian Blue Robins** *Larvivora cyane* of the season at Ho Man Tin and Castle Peak, 11th (TLi, JK), **Tiger Shrike** *Lanius tigrinus* at Pak Sha O, 12th (GJC) and 2 at Ho Man Tin, 17–18th (AK, KPC), **Ferruginous Flycatcher** *M. ferruginea* at Tai Lam CP, 13th (EY, DAD), the earliest autumn record by 6 days, **Middendorff's Grasshopper-warbler** *Helopsaltes ochotensis* at Mai Po, 14th and **Styan's Grasshopper-warbler** *H. pleskei* there, 21st (PJJ), and **Rosy Starling** *Pastor roseus* and **Mugimaki Flycatcher** *F. mugimaki* on Po Toi, 28th (PH, RLO), the latter a new early autumn date.

A much better understanding has emerged of the status of various seabird species in Hong Kong waters as a result of regular sea-watches from Po Toi throughout the period, supplemented

by occasional boat-based surveys in nearby waters. There were new high counts of **Great Crested Tern** *Thalasseus bergii*, with 105, 16 April (SBB) and 161, 16 September (BDS), and **Streaked Shearwater** *Calonectris leucomelas*, with 129, 16 April (SBB) and 145, 22 July (BDS), and first summer and early autumn records of **Arctic Skua** *Stercorarius parasiticus*, up to 4, 25 June, 7–22 July, 27 August and 25 September (BDS), and first records in summer of **Short-tailed Shearwater** *Ardenna tenuirostris*, up to 6, 9–10 June and 8–21 July (BDS), after regular sightings in April–May. In addition to a suite of breeding and non-breeding tern species and the aforementioned Swinhoe's Storm Petrels, sea-watches also recorded **Lesser Frigatebird** *Fregata ariel* on several dates and two species of booby: **Red-footed Booby** *Sula sula*, 1 May (IT), 3 August and 23 September (BDS) and **Brown Booby** *S. leucogaster*, 9 June, 7 & 22 July (BDS), all singly.

The HKBWS Nightbird Survey concluded in May after 15 months (RWL, HF *et al.*). The three most frequently detected and widespread species were **Collared Scops-owl** *Otus lettia*, **Large Hawk-cuckoo** and **Slaty-legged Crane** *Rallina eurizinoidea*, as in the previous survey 20 years earlier, Collared Scops-owl being particularly widespread, with detections at all 51 regularly covered sites and in over 80% of 1-km squares surveyed. Three species, **Grey Nightjar** *Caprimulgus jotaka*, **Brown Fish-owl** *Ketupa zeylonensis* and **Hodgson's Hawk-cuckoo** *H. nicolor*, all showed large or very large increases compared to the previous survey. Of new species for Hong Kong in the past 20 years, **Malayan Night-heron** *Gorsachius melanolophus* (first recorded in 2003) and **Brown Wood Owl** *Strix leptogrammica* (first in 2007) were both detected at 11 sites and therefore appear to be fairly widespread, while **Collared Owlet** *Taenioptynx brodiei* (first in 2019) was detected at two sites.

Late news: a **Lapland Longspur** *Calcarius lapponicus*, the second record, was found at Long Valley, 27 October (HKBWS) (Plate 5).

Plate 5. Lapland Longspur *Calcarius lapponicus*, Long Valley, Hong Kong, 27 October 2021. The bird was ringed at Long Valley on the day of its observation.



MICHELLE AND PETER WONG

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JAPAN

An adult **Silver Gull** *Chroicocephalus novaehollandiae* (Plate 6), the first for Japan, was on Ishigaki island (east of Taiwan), 22 June. See <https://shimasoba.com/blog/1890/>.

Plate 6. Silver Gull *Chroicocephalus novaehollandiae*, Ishigaki island, Japan, 22 June 2021.



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LAOS

Compiled by BP. A **Ruddy Turnstone** *Arenaria interpres* (Plate 7) at Donkoi, Vientiane, 29 August–6 September (TK, BP *et al.*) was the first country record. An early returning **Garganey** *Spatula querquedula* was at Donkoi, 6–7 September (BP, SL), followed by another in Vientiane, 27 September (BP). A pair of **Green Peafowl** *Pavo muticus* with 2 chicks were photographed by camera-trap at Phou Xieng Thong NPA, Salavan province, 15 July. Up to 5 **Lesser Cuckoo** *Cuculus poliocephalus* were at 2,300–2,500 m at Phou Sam Soum, Xiengkhouang province, end June–early July (TK, JF, JP, SL). Two to three territorial pairs of **Black-winged Stilt** *Himantopus himantopus* were at Ban Na Khouay, Vientiane, April–May, then a pair with three recently hatched chicks, 11 June, (BP, SL), apparently the first confirmed breeding in Laos. Scarce waders at Donkoi included a **Lesser Sand Plover** *Charadrius mongolus*, 5–6 September, **Common Redshank** *Tringa totanus*, 29 August–2 September, **Long-toed Stint** *Calidris subminuta*, 6 September and **Whimbrel** *Numenius phaeopus*, 5–7 & 13 September (TK, BP *et al.*). A **Little Tern** *Sterna albifrons*



BRAM PIOT

Plate 7. Ruddy Turnstone *Arenaria interpres*, Donkoi, Vientiane, Laos, 30 August 2021.

was at Ban Na Khouay, Vientiane, 12 June, (PH, JF), a **Whiskered Tern** *Chlidonias hybrida* at Donkoi, 30 August, and 9 Ban Hat Kanxa, Vientiane, 5 September (BP, TK). A **Little Cormorant** *Microcarbo niger* was at Nong Kham Sen, Vientiane, 28 May (BP), a **Pied Kingfisher** *Ceryle rudis* at Ban Na Khouay, Vientiane, 10–18 June (JF *et al.*), a **Horsfield's Bushlark** *Mirafra javanica* at That Luang, Vientiane, 29 June, 16–17 August and 9 September (BP, TK) and a **Himalayan Cutia** *Cutia nipalensis* at Phou Sam Soum, 27 June (JP). Six or seven **Pin-tailed Parrotfinch** *Erythrura prasina* at Na Hin, Khammouane, 14 July, included at least 1 adult male, a female and several juveniles (BP).

Fieldwork in highland forest in Dakcheung district, Sekong province, along the border with Vietnam, February and June–July, revealed many scarce and little-known species in Laos, including **Vietnamese Crested Argus** *Rheinardia ocellata*, **Brown Fish-owl** *Ketupa zeylonensis*, **Oriental Pied Hornbill** *Antracoceros albirostris*, **Blue-rumped Pitta** *Hydroornis soror*, **Black-hooded Laughingthrush** *Garrulax milleti*, **Black-throated Suthora nipalensis** and **Grey-headed Psittiparus gularis Parrotbills**, **White-winged Magpie** *Urocissa whiteheadi*, **Vietnamese Cutia** *Cutia legalleni*, **Kloss's Leaf-warbler** *Phylloscopus ogilviegranti* and **Ferruginous Flycatcher** *Muscicapa ferruginea* (TK, SX *et al.*).

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PAKISTAN

Compiled by AK. An **Asian Palm Swift** *Cypsiurus balasiensis* at Haleji Wildlife Sanctuary, Thatta, Sindh, 15 May (UT, JHM) was the first record. Three **Marbled Teal** *Marmaronetta angustirostris* (♂) at Muzaffargarh, Punjab, 1 June (JL) with broods of 4, 10 and 3 ducklings, and another 12 ducklings on another nearby pond, constitute the first breeding records. A female **Knob-billed**

Duck *Sarkidiornis melanotos* (¶) at Mandhra Kalaan, Dera Ismail Khan, Khyber Pakhtunkhwa, 27 June (MAR) is likely to be the westernmost record in the country, and a **Woolly-necked Stork** *Ciconia episcopus* at Jhampir, Thatta, Sindh, 1 August (AHN) was another first provincial record. An **Indian Spotted Eagle** *Clanga hastata* was at Head Balloki, Punjab, 6 June (IB), where one has been seen previously, and it or another at Marala, Sialkot, Punjab, 29 June (TAA,ZAS), raising the possibility that it may be resident, perhaps even breeding, in the area. A **Dusky Crag Martin** *Ptyonoprogne concolor concolor* (¶) at DHA, Lahore, Punjab, 15 June (IB) was the first provincial record, while a 'healthy population' (¶) was noted at Bhodesar Mosque, Nagarparkar, Sindh, 20 June (MAHT).

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PHILIPPINES

Compiled by ROH. The most exceptional sighting was the first Philippine record of **Spotted Flycatcher** *Muscicapa striata* at Chadpidan, Batan, Batanes, 20 June (XV). A **Little Gull** *Hydrocoloeus minutus* (Plate 8) at Tanza Mudflats, Navotas, Luzon, 7 September (ID)—and again from 25 September into October (ROH *et al.*), enabling other birders to see it—was another country first, and 2 **Chestnut-tailed Starlings** *Sturnia malabarica* at Parkridge Estates, Antipolo City, Rizal, Luzon, 17 June (JG), currently added to Category G of the Philippine List as possible escaped cagebirds, are a potential first. A **Light-vented Bulbul** *Pycnonotus sinensis* at Ivana, Batan, Batanes, 6 July (BP) was the third country record (all from Batanes), while a **Chinese Grosbeak** *Eophona migratoria* photographed by rangers on Apo Reef Natural Park, Mindoro Occidental, 10 May, was another third and the first away from Batanes.

Plate 8. Little Gull *Hydrocoloeus minutus*, Tanza Mudflats, Navotas, Luzon, Philippines, 27 September 2021.



ROBERT HUTCHINSON



ROBERT HUTCHINSON

Plate 9. Common Ringed Plover *Charadrius hiaticula*, Tanza Mudflats, Navotas, Luzon, Philippines, 27 September 2021.

A **Black Kite** *Milvus migrans* was at Bugallon, Pangasinan, Luzon, 10 June (KMC). **Pied Avocets** *Recurvirostra avosetta* remained at Tanza Mudflats, peaking at 50, 13 May (GS,JdR,AM,RM) and the last spring sighting of 9, 29 May; the first returning birds were 4 there, 29 September (AB,BTB,CC,EM,GS,MJV). **Oriental Plover** *Charadrius veredus* appeared at Mati Airport, Mati, Davao Oriental, 31 August (EJGL), the first for Mindanao, and at Tanza Mudflats, 10 September (ROH,GS,JudR,JodR). The fourth **Common Ringed Plover** *Charadrius hiaticula* (Plate 9) was at Tanza Mudflats, 7 September (ID) and relocated on 27–29 September (ROH,BD,CP). Other rare waders were single **Little Stint** *Calidris minuta* at Lingayen, Pangasinan, Luzon, 4 September (KMC) and at Tanza Mudflats, 30 July–8 August (ID) and 10 September (ROH,GS), and a **Dunlin** *Calidris alpina* there, 30 September (ID).

The seabird highlight was the first **Chinese Crested Tern** *Thalasseus bernsteini* of the autumn at Lingayen, Pangasinan, Luzon, 5–6 August (KMC). A **Short-tailed Shearwater** *Ardenna tenuirostris* stranded at Pitogo, Zamboanga del Sur, Mindanao, 5 May (DO) occurred at a typical time as the species migrates north through the western Pacific on its loop migration. A single **Christmas Island Frigatebird** *Fregata andrewsi* at Tanza, Navotas, Luzon, 30–31 July (ID) was just the third to reach Luzon from its regular staging grounds in the Sulu Sea.

Migrant **Indian Cuckoo** *Cuculus micropterus* are rarely confirmed but a female was at Molino II, Bacoor City, Cavite, 17 September (ROH).

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SINGAPORE

Compiled by MK. There were five potential first records: a **Black Magpie** *Platysmurus leucopterus* was photographed independently by two observers at Hindhede Nature Park, 9

June (KC,VKS); what appeared to be a breeding pair of **Javan Plover** *Charadrius javanicus* with a fledgling were on Pulau Tekong, 20 June–2 August at least (FC); a male **Ashy-headed Green-pigeon** *Treron phayrei* was in the Central Catchment Nature Reserve, 9–11 October (YJW); a **Spotted Flycatcher** *Muscicapa striata* was at Kent Ridge Park, 15–22 October (AK), the first for mainland South-East Asia (see also the account for the Philippines); and a **Tree Pipit** *Anthus trivialis* (Plate 10) in parkland off Clementi Road, 23 October, was identified via photographs on social media (SKC) and relocated, 25 October (perhaps also a first for South-East Asia).

Other notable rarities were a storm-driven **Wedge-tailed Shearwater** *Ardenna pacifica* (which subsequently died) in Bishan, 23 June (*per WK*), initially thought to be a first for Singapore until an old photograph came to light of a previous storm-driven individual on the remarkably similar date of 22 June 1998; a male **Green Broadbill** *Calyptomena viridis* on Pulau Ubin, 6 April–22 August (HZZ), the third modern day record following 2 in 2014; the first **Black-thighed Falconet** *Microhierax fringillarius* of the current century was at Mount Rosie, 30 May (AT) and relocated on Jalan Mashood, 9–12 July (AT); and a male (possibly more than one) **Ruby-cheeked Sunbird** *Chalcoparia singalensis* (third record) was at Sungei Buloh Wetland Reserve, 7 July–5 September (YKH).

Singapore is suffering from a dearth of shorebirds, reduced numbers along the Asian Flyway partly contributing to the decline, but habitat management or retention is sadly lacking. Construction sites now attract the more interesting species: Pulau Tekong held both **Pied Stilt** *Himantopus leucocephalus* (second record) and **Black-winged Stilt** *H. himantopus* in June, when breeding of one of the species occurred (FC), and up to seven **Black-winged Stilt** graced another site at Tuas South, 24 August–24 September (RN,SN). The major highlight was a lone **Red Knot** *Calidris canutus*, the first since December 1987, at Seletar Dam for 20 minutes, 6 September (PTC,VY). An **Oriental**

Plover *Charadrius veredus* (seventh record) was at Tuas South, 4 September–6 October (KG,RN,SN). Numbers were otherwise very low: a **Greater Sand Plover** *C. leschenaultii* at Seletar Dam, 4–14 September (KH,AT); 2 **Black-tailed Godwit** *Limosa limosa* at Sungei Buloh Wetland Reserve, 14 August (TLK); a **Great Knot** *Calidris tenuirostris* on Pulau Tekong, 9 September (FC); 2 **Broad-billed Sandpiper** *Ca. falcinellus* at Sungei Buloh Wetland Reserve, 24 September (AD,PS); a **Curlew Sandpiper** *Ca. ferruginea* at Tuas South, 30 August (PS) and 2 **Long-toed Stint** *Ca. subminuta* there, 6 October (EA,MK); 8 **Red-necked Stint** *Ca. ruficollis* between 27 August and 6 October; 5 **Terek Sandpiper** *Xenus cinereus* from 13 August; a **Grey-tailed Tattler** *Tringa brevipes* on Pulau Tekong, 2 August (FC); and up to 3 **Marsh Sandpiper** *T. stagnatilis* at Sungei Buloh Wetland Reserve, 5–19 September.

Other notable records included: 2 very unexpected **Cinnamon-headed Green-pigeon** *Treron fulvicollis* at Jelutong Tower, 18 September (RA,LKC); 2 **Oriental Darter** *Anhinga melanogaster* continued to frequent Hindhede Nature Park and Pulau Ubin; a **Malayan Night-heron** *Gorsachius melanolophus* caught on a security camera on Sentosa Island, 10 June, the first ever June record (SDC); single **Gull-billed Terns** *Gelochelidon nilotica* at Sungei Buloh Wetland Reserve, 8 September (THB) and Seletar Dam, 10 September (AC,BCC); impressive counts of **Swinhoe's Storm-petrel** *Hydrobates monorhis* from Kusu Island: 203, 11 September, 800, 18 September and 418, 25 September (LJS); the female **Black Hornbill** *Anthracoeros malayanus* remains on Pulau Ubin; records of the once locally extinct subspecies of **Ruddy Kingfisher** *Halcyon coromanda minor* from Pulau Ubin, June and July, with an early migrant *H. c. coromanda* at Nanyang Technological University, 15 September (FCh); a **Black-naped Monarch** *Hypothymis azurea*, the fourth of the year (now 12 in 20 years), was along Rifle Range Link, 12–13 October (KGT); single **Brown-streaked Flycatchers** *Muscicapa williamsoni* were at Jurong Lake Gardens, 28–29 August (Anon), Singapore Botanic Gardens, 3–10 September (Anon), Bukit Timah Nature Reserve, 10 September (OKS) and Singapore Quarry, 8 October (JA); and a first-calendar-year male **Blue Rock Thrush** *Monticola solitarius philippensis* at the regular site, The Pinnacle at Duxton, arriving on 15 September (AC,BCC).

Three **Blue-tailed Bee-eaters** *Merops philippinus* at Tuas South, 29 August (MxK) were on a new early date for this southbound migrant, while there were significant breeding records of **Crested Serpent Eagle** *Spilornis cheela* (probably the first ever) and **Blue-winged Pitta** *Pitta moluccensis* at two sites on the mainland.

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Plate 10. Tree Pipit *Anthus trivialis* off Clementi Road, Singapore, 25 October 2021.



(OKS), Pary Sivararam (PS), Hui Zhen Tan (HZT), Kian Guan Tay (KGT), Art Toh (AT), Yip Jen Wei (YJW), Vincent Yip (VY).

SRI LANKA

Compiled by MHK. An exhausted **White Tern** *Gygis alba* (♂) off Colombo, 29 August (KP,CF) was a country first. **Lesser Noddies** *Anous tenuirostris* (♂) were at Mannar, 17, 18, 25 & 26 May (LPW,IJ,TWJ) and 5 **White-cheeked Terns** *Sterna repressa* at Negombo, 27 September (GA,SB,MHK). There were multiple sightings of **Arctic Skua** *Stercorarius parasiticus* (♂) at Negombo, 5–27 September (GA,MHK,SB), a **Long-tailed Skua** *S. longicaudus* was at Mt Lavinia, 2 September (MHK) and several more at Negombo, 5, 18 & 25 September (GA,MHK,SB). Single **Red-billed Tropicbirds** *Phaethon aethereus* were at Mannar, 25 July (LPW), at Gampaha, exhausted (♂), 31 August (HF) and at Negombo, 5 September (GA). A **Sooty Shearwater** *Ardeenna grisea* (♂) was picked up dead at Mannar, 15 May (LPW), having been seen exhausted the previous day. A **Bulwer's Petrel** *Bulweria bulwerii* was at Negombo, 25 September (GA) and **Masked Boobies** *Sula dactylatra* there, 5 September (GA) and 27 September (MHK,GA,SB). A **Chinese Pond-heron** *Ardeola bacchus* (♂) was at Rekawa, 23 April into May (SH,AC), a **Wire-tailed Swallow** *Hirundo smithii* at Mannar, 17 September (LPW) and an **Isabelline Wheatear** *Oenanthe isabellina* (♂) at Colombo, 8 September (NA).

Erratum: the report of an **Eyebrowed Thrush** *Turdus obscurus* at Nuwara Eliya, 14 November 2020, reported in *BirdingASIA* 35, should be disregarded as it was erroneously entered to an online database. The actual record dates back to February 2015.

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TAIWAN

Compiled by WHF. One country first: an exhausted **Black-backed Dwarf-kingfisher** *Ceyx erithaca* found at Linkou, New Taipei, was sent to Taoyuan Wild Bird Rescue Centre, 4 June. Records of threatened species included 8 **Oriental Stork** *Ciconia boyciana* at Hsiang-Shan, Hsinchu, 2 May (XLL), a **Fairy Pitta** *Pitta nympha* at Hualien river mouth, 8 May (ZHS), 26 **Chinese Egret** *Egretta eulophotes* at Lanyang River Estuary, Yilan, 5 June (KC), 6 **Chinese Crested Tern** *Thalasseus bernsteini* at Tiejian Islet, Matsu, 26 June (JFL) and the early arrival of 20 wintering **Black-faced Spoonbill** *Platalea minor* at Budai, Chiayi, 19 September (KHL).

Vagrants and rarities included 25 **Sand Martin** *Riparia riparia* at Checheng Sichong River, Pingtung, 6 May (CL), 2 **Pectoral Sandpiper** *Calidris melanotos* at Dayuan, Taoyuan, 9 May (HW), 2 **Gray's Grasshopper-warbler** *Helopsaltes fasciolatus* at Qigu, Tainan, 20 May (KHL), a **Wandering Tattler** *Tringa incana*

at Zhuwei Harbour, Taoyuan, 22 May (YSL), single **Tiger Shrike** *Lanius tigrinus* and **Common Cuckoo** *Cuculus canorus*, 2 June, 2 **Black Bittern** *Ixobrychus flavicollis*, 15 June (JZZ) and 2 **Great Frigatebird** *Fregata minor*, 21 June (RT), all at Mai-Liao, Yunlin, a **Collared Kingfisher** *Todiramphus chloris* at Qijin, Kaohsiung, 10 August (ZFW), 4 **Glossy Ibis** *Plegadis falcinellus* at Beimen, Tainan, 27 August (CLH), a **Brown-chested Jungle-flycatcher** *Cyornis brunneatus* at Qijin, Kaohsiung, 10 September (ZMS), 10 **Ruff** *Calidris pugnax* at Beimen, Tainan, 13 September (KHL), a **Pied Harrier** *Circus melanoleucos* at Yaoshan Platform, Taitung, 18 September (YTS), a **Black Baza** *Aviceda leuphotes* at Gongliao, New Taipei (KYY) and a **Rosy Starling** *Pastor roseus* at Nan-Ao river mouth, Yilan (LYS), both 19 September, 2 **Grey-headed Lapwing** *Vanellus cinereus* at Gangan, Hsinchu (SMM) and 2 **Siberian Blue Robin** *Larvivora cyane* at Qigu, Tainan (LTC), both 21 September, a **Yellow-rumped Flycatcher** *Ficedula zanthopygia* at Qijin, Kaohsiung, 23 September (MHX), 16 **Oriental Plover** *Charadrius veredus* at Lanyang River Estuary, Yilan, 24 September (KC) and a **Japanese Wood-pigeon** *Columba janthina* at Guishan Islet, Yilan, 27 September (KCW).

Seventy **Oriental Honey-buzzard** *Pernis ptilorhynchus* were at Tamsui, New Taipei, 17 May. Raptor migration later in the year included a peak of 33,778 **Chinese Sparrowhawks** *Accipiter soloensis* at Sheding, Kenting NP, Pingtung, 20 September (YHT), while at the same site there were 145 **White-shouldered Starling** *Sturnia sinensis*, 6 September, 8 **Pechora Pipit** *Anthus gustavi*, 19 September and 100 **Ashy Minivet** *Pericrocotus divaricatus* and 8 **White-throated Needletail** *Hirundapus cochinchinensis*, 25 September (YHT).

Seawatching at Magang Harbour, New Taipei, yielded 50 **Bulwer's Petrel** *Bulweria bulwerii*, 15 **Swinhoe's Storm-petrel** *Hydrobates monorhis* and 12 **Sooty Tern** *Onychoprion fuscatus*, 8 August (GC) and 158 **Common Terns** *Sterna hirundo*, 5 September (YCY). Elsewhere, a **Short-tailed Shearwater** *Ardeenna tenuirostris* was at Qigu, Tainan, 2 May (XQY), 15 **Masked Booby** *Sula dactylatra* at Three Northern Islets, Keelung City, 10 May (CJS), 2 **Lesser Frigatebird** *Fregata ariel* at Yehliu, New Taipei, 14 August (ZFW), 19 **Wedge-tailed Shearwater** *A. pacifica* at Shihtiping, Hualien, 15 August (FCC), 30 **Aleutian Tern** *Onychoprion aleuticus* at Qigu, 18 August (ZYW) and 2 **Long-tailed Skuas** *Stercorarius longicaudus* at sea north of Keelung, 21 September (TSD).

Significant numbers of breeding birds included 7 **Japanese Paradise-flycatcher** *Terpsiphone atrocaudata* at Lanyu Zhong'ai Bridge, Taitung, 11 May (LKY), 14 **Taiwan Hwamei** *Garrulax taewanus* at Jinlun River mouth, Taitung, 29 May (LL), 80 **Savanna Nightjar** *Caprimulus affinis* at Shalun Farm, Tainan City, 3 August (CH) and 8 **Swinhoe's Pheasant** *Lophura swinhoii* at 100 logging trail, Da-Tung, Yilan, 6 September (JGH), while shorebirds included 715 **Curlew Sandpiper** *Calidris ferruginea* at Fangyuan, Changhua, 25 July (CS), 3,000 **Greater Sand Plover** *Charadrius leschenaultii*, 25 July (SCX) and 2,500 **Red-necked Stint** *Ca. ruficollis*, 8 August (SL), both at Wanggong tidal flat, Changhua, and 3,300 **Oriental Pratincole** *Glareola maldivarum* at Beimen, Tainan, 25 September (SL). Twenty thousand **Whiskered Terns** *Chlidonias hybrida* were at Budai Salt Pan, Chiayi, 27 September (KHL).

On the outlying islands, records from Kinmen included 13 **Asian Dowitcher** *Limnodromus semipalmatus* at Lake Ci, 6 May (TWH), 1,000 **Blue-tailed Bee-eater** *Merops viridis* at Houlong, 2 May (peak breeding season) (CT), 3 **Dark-sided Flycatcher** *Muscicapa sibirica* at the Botanical Garden, 15 May (TWH), 4 **Chestnut-winged Cuckoo** *Clamator coromandus* at Maoshan Pagoda, 24 May (TWH), 13 **Chinese Pond-heron** *Ardeola bacchus*, 24 June (TWH) and 40 **Collared Crow** *Corvus torquatus*, 2 July (CPC) at Tai Lake, 2 **Amur Paradise-flycatcher** *T. incei* at Maoshan Pagoda, 8 September (CWW), 3 **Eurasian Wryneck** *Jynx torquilla* at Wusatou, 14 September, 5 **Greenish Warbler** *Phylloscopus trochiloides* and 2 **Plaintive Cuckoo** *Cacomantis merulinus* at Lieyu, 16 September and a **Thick-billed Warbler** *Arundinax aedon* at Hou-yu-po, 20 September (all TWH). On the Penghu islets, there were 3 **Red-footed Booby** *Sula sula*, 17 July and a **Red-tailed Tropicbird** *Phaethon rubricauda*, 18 July (CH), a **Sulphur-breasted Warbler** *Phylloscopus ricketti* and 4 **Grey-streaked Flycatcher** *Muscicapa griseisticta* on Dongjiyu Islet,

15 September (PS,CRH) and a **Ruddy Kingfisher** *Halycon coromanda* on Jibei Island, 26 September (CYP).

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