

OBC-FUNDED CONSERVATION

Bangkaru Island: the challenges and successes of protecting one of Indonesia's last refuges for three Critically Endangered taxa

TOM AMEY

Introduction

Bangkaru Island, the largest uninhabited island in the Pulau Banyak archipelago, lies 75 km west of Sumatra and is part of Aceh province (Figure 1). The neighbouring islands of Tuangku and Balai host three small communities. The Pulau Banyak archipelago is part of the west Sumatran (or Barusan) island chain which extends along the west coast of Sumatra. Many of the Barusan Islands have either never been connected to Sumatra, or have not been connected since the Quaternary Period, which has led to high levels of endemism within the chain.

Bangkaru lies within the Kepulauan Banyak Taman Wisata Alam (TWA, or Nature Tourism Park), which confers landscape-level conservation protection and is managed by Balai Konservasi Sumber Daya Alam (BKSDA), Indonesia's government sector for natural resources and conservation (Dirhamsyah & Yani 2016).

Having never been subjected to development or permanent human habitation, Bangkaru retains 319 km² of uninhabited, intact, old-growth primary rainforest (Plate 1). Furthermore, there has been a conservation ranger programme on Bangkaru for

over 20 years—initially Yayasan Pulau Banyak (1997–2013), then Forest, Nature and Environment of Aceh (2015–2019), and most recently Ecosystem Impact Foundation (EcosystemImpact) from 2019 to the present day. As a result, the island's biodiversity has remained intact to a degree that is almost unrivalled in the region.

Species of interest

Bangkaru is home to Nias Hill Myna *Gracula [religiosa] robusta*; Silvery Pigeon *Columba argentina*; an undescribed/unidentified shama, possibly an endemic subspecies of Barusan Shama *Copsychus [malabaricus] melanurus*; a subspecies of Brown Wood-owl *Strix leptogrammica nyctiphasma* endemic to the Banyak Islands; a subspecies of Green Imperial-pigeon *Ducula aenea consobrina* endemic to the Barusan Islands; and Black-naped Oriole *Oriolus chinensis mundus* and Asian Glossy Starling *Aplonis panayensis altirostris*.

Nias Hill Myna *Gracula [religiosa] robusta*

Bangkaru Island is likely to host the last surviving viable population of this species (Švejcárová 2017,

Figure 1. Bangkaru Island lies within the Kepulauan Banyak TWA area (contained within the purple box).





ALEX WESTOVER

Plate 1. Bangkaru Island is a rare example of intact, primary growth forest. December 2019.

Ng *et al.* 2020). Common Hill Myna *Gracula religiosa* is one of the most widely traded Asian songbirds, with Nias Hill Myna among the most sought-after taxa within the complex (Lee *et al.* 2016, Ng *et al.* 2020). With an estimated 50–249 wild individuals in 2018 (BirdLife International 2021a), Nias Hill Myna has been so heavily impacted by poaching for the songbird trade that in 1994 it was declared extinct on Nias, the largest island in its historic range (Dymond 1994). BirdLife International (2021a) comment that Nias Hill Myna has ‘declined very rapidly in the recent past because of unsustainable trapping for the domestic cage bird trade’.

Barusan Shama *Copsychus [malabaricus] melanurus*

It was recently noted that Bangkaru was home to an ‘unidentified subspecies’ of Barusan Shama, and that it is ‘likely [to now be] extinct in the wild’ (Rheindt *et al.* 2019). Remarkably though, in September 2020, the rangers photographed a shama on Bangkaru whilst on a forest patrol (Plate 2). BirdLife International (del Hoyo & Collar 2016) do not consider Barusan Shama to be a full species, but rather a subspecies of the widespread White-rumped Shama *Copsychus malabaricus*, and the IUCN classify White-rumped Shama as Least Concern. Consequently, Barusan Shama does not receive the international conservation awareness and concern that it perhaps deserves. The IUCN Species Survival Commission (SSC), Asian Songbird

Trade Specialist Group (ASTSG) and the European Association of Zoos and Aquaria (EAZA) Silent Forest Group consider Barusan Shama to be close to extinct in the wild and afford it the ‘highest priority Tier 1’. Lee *et al.* (2016) consider many subspecies of White-rumped Shama to be ‘seriously threatened with extinction’.

Barusan Shama is known locally as *murai batu ekor hitam*, ‘Black-tailed Shama’, and it is this taxon’s distinct black tail, and its restricted geographic range, that have led some to recognise Barusan Shama as a species (Eaton *et al.* 2016). However, the recently captured photograph shows a large white area on the outer-tail, in this respect resembling birds from mainland Aceh (Figure 2). This might

Plate 2. ‘Bangkaru Shama’ photographed by rangers; note the conspicuous white on the undertail, September 2020.



BANGKARU RANGERS

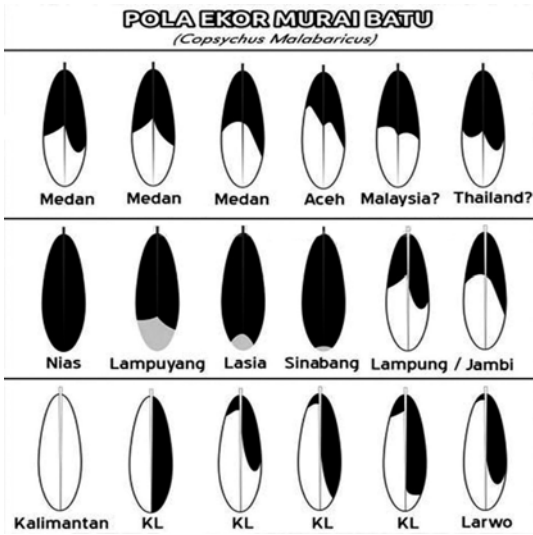


Figure 2. Spectrum of tail colouration of White-rumped Shama *Copsychus malabaricus* populations. Obtained from hewanpeliharaan.org.

suggest that the bird was introduced, although Bangkaru's remote location and EcosystemImpact's close relationship with the government make this unlikely, as they would almost certainly have been informed of any releases. Alternatively, Eaton *et al.* (2021) recently suggested that the population on Bangkaru 'may constitute [a] hybrid population with intermediate tail colouration'.

Silvery Pigeon *Columba argentina*

Silvery Pigeon is a small-island specialist, believed to have always had a highly restricted range. Occurring on only a small number of Indonesian and Malaysian islands, it was thought to be extinct in the wild until some were photographed in 2008 (Lee *et al.* 2009). The most recent IUCN population estimate is between 1–49 wild individuals (BirdLife 2021b). However, in 2020 a team of researchers sighted 'approximately 50 individuals' on Nias and Pulau Asu, recording what is likely to be the largest existing population of the species (Rheindt *et al.* 2020).

Rheindt *et al.* (2020) postulated that the extirpation of other columbid species on Nias, such as Green Imperial-pigeon, might have benefitted the supertramp behaviour of Silvery Pigeons. However, on Bangkaru, where there is no recorded hunting, there are regular sightings of Green and Pied *D. bicolor* Imperial-pigeons.

Although they are now extinct on all but a small number of Indonesian islands (Lee *et al.* 2009), the discovery of the Nias and Pulau Asu populations may now put the global estimate of

Silvery Pigeon at c.50–100 individuals. As Silvery Pigeon is not a songbird, it has not been heavily impacted by the Asian songbird trade. Nonetheless, it is severely threatened by habitat destruction, hunting, and the introduction of mammalian predators. With no introduced predators, a large area of primary forest, and the ranger team's protection, Bangkaru potentially remains a key site for this species. There has been no comprehensive survey on Bangkaru for Silvery Pigeon, such that their population there remains unknown; however, one was photographed in 2016, and the species was possibly heard again in 2018.

The ranger programme

The focus of the current EcosystemImpact ranger programme is the protection of the three bird taxa mentioned, along with the protection of Bangkaru's Leatherback *Dermodochelys coriacea* and Green *Chelonia mydas* Sea Turtle populations. Until 2016, poacher groups targeted Bangkaru, focussing on either songbirds, turtle eggs, or both. The ASTSG action plan states that to tackle the Asian Songbird Crisis, 'hotspots of bird capture will be identified for better law enforcement and anti-poaching actions' (Lee *et al.* 2016). In collaboration with ASTSG, EAZA Silent Forest Group, National University of Singapore (NUS) Avian Evolution Lab, Asian Species Action Partnership (ASAP), Oriental Bird Club (OBC) and Balai Konservasi Sumber Daya Alam (BKSDA), EcosystemImpact has worked to reduce poaching via twice-daily patrols (Plate 3), law enforcement action and community education.

A team of six rangers from neighbouring island communities now provides constant protection on Bangkaru, under the leadership and direction of BKSDA, Indonesia's government centre for conservation and natural resources, and following the successful arrest of a poaching group on Bangkaru in 2016, there has subsequently been no recorded poaching on the island. The Bangkaru

Plate 3. The rangers on their twice-daily forest and beach patrols. December 2019.



ranger programme has been running for over 20 years and its success has been a long, hard-fought battle. When asked about the challenges faced, and on how poaching has been successfully reduced on Bangkaru, the project coordinator Uzhar commented:

Twenty-five poachers were on the shore and two people chased us with a machete. We almost retreated but decided to stand our ground, also holding machetes. They saw that their machetes were smaller than ours and they retreated. Every night we met poachers. People hated us (the new rangers). We received a lot of hate when we went back to the community. But every time we went home, we would report the poaching information back to the head of the Foundation, to BKSDA and the police. In the end, in 2016, BKSDA and the police had a law enforcement operation and the poachers were arrested. This was not easy for BKSDA and the police, and we congratulate them for it. Since then, our work has been so much easier.

To maintain the level of protection required, BKSDA and EcosystemImpact carry out twice-daily anti-poaching ranger patrols and species monitoring. During the patrols, the rangers carry out a forest transect which follows paths deep into the forest, allowing locations known to be previous poacher entry points or camping spots to be checked. If any illegal activity is recorded, quick communication with BKSDA will allow for similar law enforcement action to the successful operation in 2016 to be implemented.

A crucial component of the programme's success has been community involvement. Each ranger is from one of Bangkaru's neighbouring island communities, and the two longest serving having been with the programme for more than 13 years. The rangers are now well-respected members of their communities, and the scheme's conservation mission has slowly been accepted by the local community.

The ASTSG, ASAP and BirdLife International recommend community environmental education and awareness-raising as a method of installing a sense of pride within local communities, and thus a desire to protect wildlife. EcosystemImpact carries out environmental education sessions in local communities to help reduce the supply and demand associated with poaching.

As part of the wider Bangkaru scheme, EcosystemImpact runs the Local (Incentive) Ranger Community Involvement Programme. This allows local community members from neighbouring islands to build positive conservation ethics and is one element of the ranger programme of which



MUZIRWAN, SENIOR RANGER

Plate 4. A Bangkaru ranger on forest patrol. September 2020.

EcosystemImpact is most proud. Local rangers spend 15 days on Bangkaru, taking part in a range of activities, for which they are paid a modest fee. The programme has led to a positive change in the attitudes of local people towards conservation issues, and the programme's coordinator, who is jointly in charge of mediating programme and community relations, now receives regular tip-offs from concerned community members if environmentally damaging or illegal activity is witnessed or suspected.

As many bird taxa across South-East Asia decline or experience regional or local extinctions due to the Asian Songbird Crisis, habitat destruction and hunting (Ng *et al.* 2017, Silentforest.eu 2019, Ng *et al.* 2020), the Bangkaru Rangers are working to fight against this trend. With such low population numbers for the three bird taxa discussed herein, EcosystemImpact does not believe that the activities on Bangkaru alone will relieve any of these (sub) species of their Critically Endangered or ASTSG Tier 1 statuses. However, they do believe that poaching and habitat destruction on Bangkaru can be reduced to the extent necessary to protect the populations of these three taxa on the island, and we hope that it will serve as a successful model for other projects.

Acknowledgements

The Bangkaru Ranger Programme would not be possible without BKSDA's support, hard work and guidance, nor without the support of the conservation partners that have provided guidance and funds to run the programme: Oriental Bird Club, Asian Species Action Partnership, Configura, EAZA Silent Forest Group, IUCN SSC Asian Songbird Trade Specialist Group, Marlow birdpark, NUS Avian Evolution Lab, Pacsafe, Zoo Liberec, Turtle Foundation, Wildlife Reserves Singapore, Mahi-Mahi Surf Resort and āluān. Further support is always welcome and information can be found at www.ecosystemimpact.com.

References

- BirdLife International (2021a) Species factsheet: Nias Hill Myra *Gracula robusta*. Accessed at <http://www.birdlife.org> on 07/04/2021.
- BirdLife International (2021b) Species factsheet: *Columba argentina*. Accessed at <http://www.birdlife.org> on 07/04/2021.
- Dirhamsyah, R. & Yani, A. (2016) Kajian Pengelolaan Kawasan Taman Wisata Alam (TWA) Gunung Asuansang Kecamatan Sajingan Besar Kabupaten Sambas Provinsi Kalimantan Barat (Management Study Area Amusement Park (Twa) Asuansang Mountain District Of District Sajingan Sambas West Kalimantan Province). *Jurnal Hutan Lestari* 4(4): 672–684.
- Dymond, N. (1994) A survey of the birds of Nias Island, Sumatra. *Kukila* 7: 10–27.
- Eaton, J.A., van Balen, B., Brickle, N.W. & Rheindt, F.E. (2016) *Birds of the Indonesian Archipelago: Greater Sundas and Wallacea*. Barcelona: Lynx Edicions.
- Eaton, J.A., van Balen, B., Brickle, N.W. & Rheindt, F.E. (2021) *Birds of the Indonesian Archipelago: Greater Sundas and Wallacea*. Second edition. Barcelona: Lynx Edicions.
- hewanpeliharaan.org (2021) Cara Membedakan Jenis Murai Batu dari Ekornya Update - Binatang Peliharaan. [online]
- del Hoyo, J. & Collar, N.J. (2016) *The HBW–BirdLife International illustrated checklist of the birds of the world, 2: passerines*. Barcelona: Lynx Edicions.
- Lee, M., Yong, D.L. & Tun Pin, O. (2009) A photographic record of Silvery Pigeon *Columba argentina* from the Mentawai Islands, Indonesia, with notes on identification, distribution and conservation. *Bull. Brit. Ornith. Club* 129(3): 122–128.
- Lee, J.G.H., Chng, S.C.L. & Eaton, J.A. (eds.) (2016) Conservation strategy for Southeast Asian songbirds in trade. Recommendations from the first Asian Songbird Trade Crisis Summit 2015 held in Jurong Bird Park, Singapore, 27–29 September 2015.
- Ng, E., Garg, K., Low, G., Chattopadhyay, B., Oh, R., Lee, J. & Rheindt, F.E. (2017) Conservation genomics identifies impact of trade in a threatened songbird. *Biol. Conserv.* 214: 101–108.
- Ng, D., Švejcárová, T., Sadanandan, K., Ferasyi, T., Lee, J., Prawiradilaga, D., Ouhel, T., Ng, E. & Rheindt, F.E. (2020) Genomic and morphological data help uncover extinction-in-progress of an unsustainably traded hill myna radiation. *Ibis* 163(1): 38–51.
- Rheindt, F.E., Baveja, P., Ferasyi, T., Nurza, A., Rosa, T., Ramadhan, R. & Gwee, C. (2019) The extinction-in-progress in the wild of the Barusan Shama *Copsychus (malabaricus) melanurus*. *Forktail* 35: 30–37.
- Rheindt, F.E., Gwee, C., Baveja, P., Ferasyi, T., Nurza, A., Rosa, T. & Haminuddin (2020) A taxonomic and conservation re-appraisal of all the birds on the island of Nias. *Raffles Bull. Zool.* 68: 496–528.
- Švejcárová, T. (2017) Revize Taxonomie Loskutáků Rodu Gracula V Oblasti Sumatra a Přilehlých Ostrovů [Revision of the taxonomy of the genus Gracula in Sumatra and adjacent islands]. PhD thesis. Czech Agrary University, Prague.

Tom Amey

EcosystemImpact

Email: tom@ecosystemimpact.com

All India & Bhutan
Birding tours

Adventure Gurudongma

- Expert Guiding by Peter Lobo and Local Guides trained by him
- Top rate logistics and birding tours arrangement at an affordable price
- All tours with latest references
- New areas in Northeast India (Eaglesnest, Mishmi Hills, Assam, Nagaland, Meghalaya Manipur, Arunachal Pradesh & Sikkim)
- Anywhere in India and Bhutan at competitive rates
- Cultural and Treks also undertaken for non birders

Contact directly for Iteneraries & details:
birdingindia@gmail.com | peterlobo65@gmail.com
www.allindiabirdingtours.com



MALDIVES & Sri Lanka

Small-group pelagics,
Seabirds, Whales,

Dolphins & much more.

Nov 2021 & Mar–Apr 2022

Chas and Sue Anderson

The Whale and Dolphin Company

www.whale-and-dolphin.com