

## Large population of Pied Imperial Pigeons *Ducula bicolor* on Belitung island, off southeast Sumatra

MUHAMMAD IQBAL

KPB-SOS, Jl. Tanjung api-api km 9 Komplek P & K, Blok E 1 Palembang 30152, Sumatera Selatan. Email: [kpbsos26@yahoo.com](mailto:kpbsos26@yahoo.com)

**Ringkasan.** Pada bulan Februari 2014, Pergam laut dalam jumlah mencapai 5.000 teramati di Pulau Belitung, Sumatera. Informasi dari masyarakat lokal dan catatan tambahan dari Pulau Lengkuas dan Pulau Tanjung Kelayang, pulau-pulau kecil di Belitung, menunjukkan bahwa Belitung dan pulau-pulau kecil sekitarnya merupakan salah satu habitat penting bagi jenis ini di Indonesia.

### Introduction

The Pied Imperial Pigeon *Ducula bicolor* has a range that includes Andaman and Nicobar islands, Myanmar, Malay Peninsular, Thailand, Cambodia, Philippines and Indonesia (Baptista *et al.* 1997). The species is clearly very closely related to the Torresian Imperial Pigeon *D. spilorrhoea*, Yellowish Imperial Pigeon *D. subflavescens* and White Imperial Pigeon *D. luctuosa*, and all four taxa are sometimes considered conspecific (Gibbs *et al.* 2001; del Hoyo & Collar 2014). The Pied Imperial Pigeon is a locally common coastal resident in Southeast Asia, mostly on offshore islands (Robson 2011).

In the Greater Sundas, the species is still common on islands off Borneo and Sumatra, particularly in coastal mangroves and on small islands, but is now rare in Java and Bali, probably due to excessive hunting (MacKinnon & Phillipps 1993). Although the bird is locally abundant through most of its range (Mann 2008; Gibbs *et al.* 2001), large numbers are rarely reported. In this paper, I report observations of significant numbers of Pied Imperial Pigeons on Belitung Island, off southeast Sumatra, and discuss the importance of the island for its habitats.

Belitung lies in the Karimata Strait between South Sumatra and West Kalimantan. It covers 4,800 km<sup>2</sup>, and had a human population of 271,868 in 2014 (Anon. 2011). Administratively, it is part of the province of Bangka-Belitung. It is roughly round in shape, and based on Google Earth images, c.75 km in diameter. The ornithological history of Belitung Island has been reviewed (Vorderman 1890; Chasen 1937), but there have been few visitors since 1937 (Iqbal 2015a, 2015b). In February 2014, I visited several coastal areas on Belitung Island, as well as four of its satellite islands. During this visit, Pied Imperial Pigeons were observed in south-east and northwest Belitung.

### Observations

On 14 February 2014, between 16:15 and 16:45hrs, we counted Pied Imperial Pigeons (Plate 1) as they flew out to sea from heath forests near Tanjung Lebar beach (03°08'S, 108°11'E), Lilang village, Gantung subdistrict, Belitung Timur district, in the southeast corner of the island. Seven large flocks comprised approximately 200, 600, 1300, 500, 1000, 800 and 600 birds, totalling c.5,000 birds. The birds were heading southeast towards the group of small offshore islands known as the Selokat Kecil islands, c.3-5km offshore, which they probably reached at least 30 min before sunset, around 18:10 hrs. According to local guides, the birds were regularly seen flying from the small offshore islands to Belitung in the early morning, and returning in the afternoon to roost for the night.

On the following day, I visited the home of a local bird hunter in Nyuruk subvillage, Jangkar Asam village, Gantung subdistrict, Southeast Belitung island. The hunter, whose name was Bahidi, was well known in the village and surrounding area. In his house we found at least ten Pied Imperial Pigeons (Plate 2). During an interview, he said hundreds or thousands of the birds usually visit the remnant coastal and hill forests of Southeast Belitung to obtain food from fruiting trees, such as Pelangas *Aporosa aurita*.



**Plate 1.** A flock of Pied Imperial Pigeons at Tanjung Lebar beach, SE Belitung, February 2014.



**Plate 2.** Four of the ten Pied Imperial Pigeons caught and kept by a local hunter in Jangkar Asam village, SE Belitung.

On 20 February 2014, between 13:00 and 14:00hrs, c.100 birds were observed on Lengkuas island (02°32'13"S, 107°37'13"E), a tiny islet 4.8 km off the northwest coast of Belitung island (Plate 3). Later on the same day (14:30 – 16:00 hrs), 30 birds were also seen on Tanjung Kelayang island, c.3.0 km from Lengkuas Island.



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**Plate 3.** A Pied Imperial Pigeon on Lengkuas island, NW Belitung, February 2014.

## Discussion

The Pied Imperial Pigeon is locally common across its range, but large numbers are rarely reported. In Sumatra, “large flocks” were seen on the off-shore islands of Riau archipelago in 1984 (Silvius & Verheugt 1986), while 200 birds were counted at Bagansiapi-api in August 1990 (Holmes 1996). Other records from Sumatra are of less than 100 birds (Verheugt *et al.* 1993; Dymond 1994; Rajathurai 1996). The numerical abundance of the species in Borneo is not addressed by most authors (Smythies 1999; Mann 2008; Phillipps & Phillipps 2014). In Wallacea, the bird is widespread, but again most records are of less than 100 birds (eg. Bowler & Taylor 1989; Riley 1997; Bishop & Brickle 1999). Pied Imperial Pigeons have previously been recorded on Belitung Island (Vorderman 1890; Chasen 1937). Vorderman (1890) reported that the species was collected for trading by local people in Djangkar Asam, Gantoeng (Gantung). This is less than 1.0 km from the site visited on 15 February 2014 when we found a local bird hunter with Pied Imperial Pigeons, indicating that hunting in this area has a history spanning at least 124 years.

Compared to known sizes of Pied Imperial Pigeon populations or flocks in Indonesia, the estimate of 5,000 birds on Belitung is very large. There are no reports of large numbers from the Thai-Malay Peninsular or Singapore (Wells 1999; Seng 2009). The estimate of 5,000 Pied Imperial Pigeons on Belitung constitutes the largest known population of this species in Indonesia, and the second largest for Southeast Asia after

Ursula Island, off Palawan, Philippines, where over 9,000 were counted arriving before sunset, and departing the following morning, some leaving before dawn (Hornskov 1995).

The Pied Imperial Pigeon is well known for its habit of roosting and nesting in large numbers on small offshore islands, and dispersing by day to forage in more diverse forested habitats on larger islands and adjacent mainland areas. Habitat loss in mainland areas, and hunting for food and the cage bird market, have probably reduced their numbers, except in the more remote areas. On Tetepare Island, Solomon Islands, 13,300 Island Imperial Pigeons *D. pistrinaria* were counted as they flew from an island to the mainland between 06:15 and 06:45hrs (Read 2013). In Australia, dense summer breeding colonies of its migratory congener, Torresian Imperial Pigeon *D. spilorrhoea*, are found in small islands off the coast of Queensland, six of which exceed 10,000 breeding pairs (King 1990). One of these on the Low Isles contained 20,000 to 25,000 birds (Crome 1975), and long-term counts of another colony on North Brook Island have regularly recorded up to 35,000 birds in their evening flight (Winter *et al.* 2016). In southern Papua-New Guinea, 1,200 Torresian Imperial Pigeons were counted flying over in one hour (Coates 1985).

The presence of thousands of Pied Imperial Pigeons on Belitung suggests that the island provides highly favourable feeding habitat and may hold one of the largest populations of the species in Indonesia. Further survey and monitoring would be useful to assess the impact of hunting and land-use changes on this population. Promoting conservation awareness among local people, and integrating it with ecotourism, are the best conservation measure to protect the large population of this species on the islands.

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## References

- Anon. 2011. *Belitung dalam Angka 2011*. Badan Perencanaan Pembangunan Daerah Kabupaten Bangka Belitung dan Badan Pusat Statistik Kabupaten Belitung, Belitung.
- Baptista, L.F., P.W. Trail & H.M. Horblit. 2016. Pied Imperial-pigeon (*Ducula bicolor*). In: del Hoyo, J., A. Elliott, J. Sargatal, D.A. Christie & E. de Juana (eds.). *Handbook of the Birds of the World Alive*. Lynx Edicions, Barcelona. Retrieved from <http://www.hbw.com/node/54397> on 27 August 2016.
- Bishop, D. & N. Brickle. 1999 An annotated checklist of the birds of the Tanimbar Islands. *Kukila* 10: 115-150.
- Bowler, J. & J. Taylor. 1989. An annotated checklist of the birds of Manusela National Park, Seram. Birds recorded on the Operation Raleigh Expedition. *Kukila* 4: 3-29.
- Chasen, F.N. 1937. The birds of Biliton Island. *Treubia* 16: 205-238.
- Coates, B.J. 1985. *Birds of Papua New Guinea Vol. 1*. Dove Publications, Queensland.
- Coates, B. & K. Bishop. 2000. *Burung-burung di Kawasan Wallacea*. Dove Publications/BirdLife International Indonesia Programme, Bogor, Indonesia.
- Crome, F.H.J. 1975. Breeding, feeding and status of the Torres Strait Pigeon at Low Isles, north-eastern Queensland. *Emu* 75: 189-198.
- Dymond, N. 1994. A survey of the birds of Nias Islands, Sumatra. *Kukila* 7(1): 10-27.
- Gibbs, D., E. Barnes & J. Cox. 2001. *Pigeons and Doves of the World: A Guide to the Pigeons and Doves of the World*. Yale University Press, New Haven, US.
- Holmes, D. 1996. Sumatra bird report. *Kukila* 8: 9-56.

- Hornskov, J. 1995. Recent observations of birds in the Philippine Archipelago. *Forktail* 11: 1-10.
- Iqbal, M. 2015a. Javan Plover *Charadrius javanicus* on Belitung Island, a new site for Sumatra (Indonesia). *Wader Study* 122: 160–161.
- Iqbal, M. 2015b. Natuna Serpent Eagle *Spilornis cheela natunensis*: first photographic record in the wild. *BirdingASIA* 24: 116–118.
- King, B.R. 1990. Distribution and status of the Torresian Imperial Pigeon *Ducula spilorrhoa* in north-eastern Queensland: Cooktown to Cape York. *Emu* 90: 248-253.
- MacKinnon, J. 1988. *Field Guide to the Birds of Java and Bali*. Gadjah Mada University Press, Yogyakarta.
- MacKinnon, J. & K. Phillipps. 1993. *A Field Guide to the Birds of Borneo, Sumatra, Java and Bali*. Oxford University Press, Oxford.
- Mann, C. 2008. *The Birds of Borneo*. BOU Checklist No. 23. British Ornithologists' Union, London.
- Marle, van. J.G. & K.H. Voous. 1988. *The Birds of Sumatra: An Annotated Check-list*. British Ornithologists' Union (Checklist 10), Tring, UK.
- Rajathurai, S. 1996. The birds of Batam and Bintan Islands, Riau Archipelago. *Kukila* 8: 86-113.
- Read, J.L. 2013. The birds of Tetepare Island, Solomon Islands. *Australian Field Ornithology* 30: 67-78.
- Riley, J. 1997. The birds of Sangihe and Talaud, North Sulawesi. *Kukila* 96: 3-36.
- Robson, C. 2011. *A Field Guide to the Birds of South-East Asia*. New Holland Publishers, London, UK.
- Seng, L.K. 2009. *The Avifauna of Singapore*. Nature Society, Singapore.
- Silvius, M. & W.J.M. Verheugt. 1986. The birds of Berbak Game Reserve, Jambi province, Sumatra. *Kukila* 2(4): 76-84.
- Smythies, B.E. 1999. *The Birds of Borneo. 4th edition*. Natural History Publications, Kota Kinabalu, Malaysia.
- Verheugt, W.J.M., H. Skov & F. Danielsen. 1993. Notes on the birds of the Tidal Lowlands and Floodplains of South Sumatra Province Indonesia. *Kukila* 6: 53-84.
- Vorderman, A.G. 1890. De vogels von Billiton. *Natuurkundig Tijdschrift voor Nederlandsch-Indie* 50: 411-519.
- Wells, D.R. 1999. *The Birds of the Thai-Malay Peninsula, 1. Non-passerines*. Academic Press, London.
- Winter, J., D. Green, M. Thorsborne. & M. Parsons. 2016. Population trends over 50 years of a Pied Imperial-Pigeon breeding colony on North Brook Island, a tropical Great Barrier Reef island, Australia. *Emu* 116: 14-21.