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Rediscovered after Nearly a Century: The Silvery Pigeon *Columba argentina* (Columbiformes: Columbidae) on Natuna Island, Sumatra, Indonesia

ABDUL HAKIM SYAH[1*], AHDIANI[2] & MUHAMMAD IQBAL[3]

[1]*Citizen Scientist, Tanjungpinang, Riau Islands Province, Sumatra, Indonesia*
**Corresponding Author. E-mail: hakimidun@gmail.com; https://orcid.org/0009-0002-4729-6833*
[2]*Mantau Kekah Community, Mekar Jaya Village, West Bunguran Barat, Natuna Island 29776, Riau Islands Province, Sumatra, Indonesia*
E-mail: ahdiani.mt81@gmail.com; https://orcid.org/0009-0005-9978-4195
[3]*Department of Biology, Universitas Indo Global Mandiri, Jalan Jend. Sudirman No. 629, Palembang 30129, South Sumatra Province, Indonesia*
E-mail: miqbal@uigm.ac.id; https://orcid.org/0000-0002-6657-0183

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Abstract
The Silvery Pigeon *Columba argentina*, a Critically Endangered species endemic to Indonesia, was long thought to be possibly extinct, with confirmed records limited to a few offshore islands west of Sumatra. Here, we report the rediscovery of *C. argentina* on Natuna Island, Riau Islands Province, Sumatra, Indonesia, representing the first confirmed record from this locality since 1928, nearly a century ago. Field observations and photographs obtained in July 2023 and May 2024 confirm the species' continued survival in coastal and lowland habitats on Natuna Island. This rediscovery extends the known current range of *C. argentina* beyond the western offshore islands of Sumatra and provides crucial evidence that remnant populations persist in the Riau Islands. This finding underscores the significance of Natuna Island and surrounding areas for the conservation of *C. argentina*.

Keywords: *Columba argentina*, Critically Endangered, Indonesia, Riau Islands Province, Sumatra.

Introduction

Columbiformes, the order of birds that includes pigeons and doves, are an essential part of Indonesia's rich biodiversity (Gregory 2017; Eaton *et al.* 2021). Indonesia is home to a substantial number of the world's over 300 pigeon species, featuring a diverse range from common birds like the Pied Imperial Pigeon *Ducula bicolor* to rare ones such as the Large Green Pigeon *Treron capellei* (Iqbal *et al.* 2012; Iqbal 2016). These birds are are generally found in trees, but some species also inhabit cliffs and the ground (Baptista *et al.* 1997). These birds thrive in a wide range of ecosystems, from lush lowland rainforests to mountainous regions, highlighting their adaptability and importance in Indonesia's varied landscapes (Gibbs *et al.* 2001; Taufiqurrahman *et al.* 2022).

The Silvery Pigeon *Columba argentina* is a Critically Endangered species native to Indonesia and Malaysia (Collar *et al.* 2001; BirdLife International 2019). After being lost to science for decades, it was found again in the early 2000s on remote islands near Sumatra (Verbelen 2010; Eaton 2011). The most recent sightings of the species have been limited to islands off Sumatra's west coast, specifically Simeulue, Nias and the Mentawai Islands (Svensson & Yong 2016; Iqbal *et al.* 2022). The species has not been reported in recent years in other known habitats, such as the Riau-Lingga Island group and Natuna Island, located off Sumatra and West Kalimantan (Bruslund *et al.* 2022; Iqbal *et al.* 2022). Here, we report a remarkable finding of *C. argentina* on Natuna Island, Sumatra, Indonesia, representing a significant rediscovery of this Critically Endangered species after nearly a century. This rediscovery provides new insights into the species' distribution and highlights the need for further research to understand its population dynamics.

Methods

Observations and photographs of *C. argentina* were taken by the authors (AH and AHS) at three locations in 2023 and 2024, on Natuna Island, Riau Islands Province, Sumatra, Indonesia. Due to conservation concerns, the exact locations are not specified. The species was observed on 6 July 2023 and May 2024 (Figs. 1-2). As noted in previous reports (Iqbal 2010; Iqbal *et al.* 2022), the habitat of Natuna Island is described as being similar, characterized by coastal or lowland areas on smaller islands off the west coast of Sumatra.

Hunting and other human-induced threats present significant conservation challenges for *C. argentina* and other pigeons in Indonesia (Bruslund *et al.* 2022; Leupen *et al.* 2025). Species on smaller islands like Natuna are especially at risk from overhunting due to their restricted distribution and small population sizes. Activities such as hunting for bushmeat, traditional practices, or involvement in the illegal wildlife trade can quickly diminish local populations. Our observations confirm that hunting occurs on Natuna Island as well.

Results and Discussion

The Silvery Pigeon *C. argentina* is easily confused with the Pied Imperial Pigeon *Ducula bicolor* due to their similarities (Mackinnon & Phillips 1993; Iqbal 2005). However, they can be distinguished by distinct characteristics here: *C. argentina* has reddish orbital skin, a yellowish-green bill tip, a pale grey body with black primaries and secondaries, and a tail that is grey on the basal half and black distally; and in contrast, *D. bicolor* lacks reddish orbital skin, has a bluish-horn bill with a black tip, and bluish-grey legs (Eaton *et al.* 2021; Taufiqurrahman *et al.* 2022). Historical records indicate that *C. argentina* often associates with *D. bicolor*, which may have contributed to the former being overlooked (Yong 2009; Iqbal *et al.* 2022).

The rediscovery of *C. argentina* in Natuna Island, Sumatra, Indonesia, is a significant finding, given the species' Critically Endangered status. Our observations and photographs taken in 2023 and 2024 confirm the presence of this elusive species on the island. Historically, the species was documented from Natuna Island on 10 September 1928 (Collar *et al.* 2001; Yong 2009). The records of *C. argentina* in 2023 and 2024, in Natuna Island, are rediscovery of this species in the island for an after nearly a century (95 years). This species has been reported in the bird trade from Singkep, Riau Islands (Bruslund *et al.* 2022). The most recent sightings of the species have been limited to islands off Sumatra's west coast (BirdLife International 2019). These findings confirm that *C. argentina* still survive recently in Riau Islands, outside of islands off Sumatra's west coast.



Figure 1. The Silvery Pigeon *Columba argentina* on 6 July 2023 in Natuna Island, Riau Islands Province, Sumatra, Indonesia (Photograph: Abdul Hakim Syah).



Figure 2. A Silvery Pigeon *Columba argentina* in May 2024 on Natuna Island, Riau Islands Province Sumatra, Indonesia (Photograph: Ahdiani).



Figure 3. *Psychotria* sp. fruits, a common food source, were frequently consumed by *Columba argentina* on Natuna Island, as observed in May 2024: 3a. Ripe fruits of P*sychotria* sp., indicated by their black color, and 3b. Unripe fruits of *Psychotria* sp., identified by their green color (Photograph: Ahdiani).

Previous reports (Iqbal 2010; Iqbal *et al.* 2022) suggest that the habitat of smaller islands off Sumatra's west coast is characterized as coastal or lowland areas, featuring a mix of trees and shrubs, including Coconut Palms *Cocos nucifera*, Clove trees *Syzygium aromaticum* and Fig trees *Ficus* sp. and other lowland plants. In Natuna Island, an ecological study in forest area revealed a total of 141 tree species, with a density of 504 trees per hectare and a basal area of 12.35 m2 per hectare, distributed across three distinct forest types (Mirmanto 2014). Observations in May 2024 revealed that *C. argentina* on

Natuna Island frequently fed on ripe fruits of *Psychotria* sp. (Fig. 3). While there are some reports of birds feeding on ripe *Psychotria* sp. fruits (Nathaniel *et al.* 1985; Almeida *et al.* 2006), information on *Psychotria* sp. as a food source for birds in Indonesia remains limited.



Figure 4. *Columba argentina* that was killed by locals on Natuna Island using air rifles (Photograph: Ahdiani).

Historical reports and recent studies indicate that *C. argentina* has been a target in the illegal bird trade, with records from Singkep, Riau Islands, confirming its presence in the wildlife market (Svensson & Yong 2016; Bruslund *et al.* 2022; Iqbal *et al.* 2022). During our observations in 2023 and 2024, we found evidence suggesting that hunting occurs on Natuna Island, likely driven by local demand for bushmeat or the collection of rare species (Fig. 4). The species' similarity to the *D. bicolor* may further complicate conservation efforts, as hunters could mistakenly target *C. argentina*. The hunting of pigeons and doves on Natuna Island is easily observable through social media platforms (*e.g.* Karet 2021; @hobbymikatnatunachannel 2025). These threats, combined with the species' Critically Endangered status, make the situation particularly alarming. The rediscovery of *C. argentina* on Natuna Island is a crucial conservation finding, but it also highlights concerning evidence of hunting and poaching.

The confirmation of *C. argentina*'s presence on Natuna Island after a nearly century-long gap underscores the importance of continued conservation efforts. According to BirdLife International (2019), proposed conservation actions include conducting surveys on islands within the species' historical range to determine its current distribution, population status, movements, and threats. Priority areas for these surveys include Jemaja and Natuna islands, as well as small islands off South Bangka Island and remote islands in the Riau/Lingga island group. In conclusion, the rediscovery of the Silvery Pigeon on Natuna Island is a significant finding that highlights the importance of continued exploration and conservation efforts in Indonesia's rich biodiversity hotspots. This rediscovery not only sheds new light on the species' distribution but also underscores the need for further research and protection of this Critically Endangered species.

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