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Novel ecological information for Silvery Pigeon *Columba argentina*, with first description of the chick

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SUMMARY. — Silvery Pigeon *Columba argentina* is a Critically Endangered species whose known population is apparently tiny and confined to islands off western Sumatra. In July 2021, during a bird survey of Simeulue and surrounding islands (Aceh province, Sumatra) we found a chick of this species collected by local people, an adult kept as a cagebird, and made several observations in the wild. We describe the species' chick, report other anecdotal information concerning nesting, and supply dietary information for this little-known pigeon.

Silvery Pigeon *Columba argentina* is a Critically Endangered small-island specialist now found only on a few islands in the Barusan chain off western Sumatra (BirdLife International 2021, Eaton *et al.* 2021). Its historical range is thought to have been also restricted but to a broader area of the Sundaic region, on small islands between Borneo, Sumatra and the Malay Peninsula, along with islands off west Sumatra (Simeulue to Pagai), and possibly at a few coastal mainland locations (Collar *et al.* 2001, Wilson 2004, Mann 2008, Yong 2009, Iqbal 2010, BirdLife International 2021).

Until it was finally documented photographically in 2008, Silvery Pigeon was thought to be extinct in the wild (Lee *et al.* 2009) but has since been recorded on the west Sumatran islands of Banyak, Simeulue, Nias, Babi and Siberut (Eaton & Rossouw 2011, Lee *et al.* 2009, Verbelen 2010, Eaton 2011, Eaton *et al.* 2021). During a taxonomic and conservation re-appraisal of the avifauna of Nias, Rheindt *et al.* (2020) recorded groups of up to 50 birds, which—along with the sightings discussed herein—is likely to represent one of the largest extant populations of Silvery Pigeon.

Columba argentina is similar to Pied Imperial Pigeon *Ducula bicolor* in size and plumage pattern (MacKinnon & Phillipps 1993, Iqbal 2005, Yong 2009). It has been recorded in large mixed colonies with Pied Imperial Pigeon, and the two species have also been observed feeding together; although detailed studies are lacking, this suggests they consume the same fruits (Gibbs *et al.* 2001). Great care therefore must be taken when identifying the species. Silvery Pigeon is safely identified from Pied Imperial Pigeon by its reddish orbital skin, bluish-horn bill with a black tip (not dark brown with a pale yellowish tip), bluish-grey (not pink to flesh-grey) legs, often a greyish overall hue to the white parts (rather than yellowish white), and a rounder head. In flight, Pied Imperial shows black bases (as well as tips) to the underside of the primaries (which can be difficult to see) and appears heavier and longer necked with broader wings (MacKinnon & Phillipps 1993, Gibbs *et al.* 2001, Eaton *et al.* 2021).

The ecology of Silvery Pigeon is poorly known, with no information on breeding season or diet (Baptista *et al.* 1997, Gibbs *et al.* 2001, BirdLife International 2021). Here, we present the first documented record of a chick and additional information on feeding.

First description of a Silvery Pigeon chick

Whilst undertaking a bird survey on Simeulue and surrounding islands, on 3 July 2021 we were informed by local people at Lamerem village, Alafan subdistrict, Simeulue Island, Aceh province, Indonesia, about two young columbids collected in the wild. They were taken on Tepi (02°53'N, 95°45'E), a small island of c.70 ha that lies just c.550 m off Simeulue and close to Lamerem. One was a young *Treron* sp., presumably a Pink-necked Green Pigeon *T. vernans*, as this is the commonest *Treron* in the coastal zone around Lamerem village and on Tepi.

The other chick, however, drew our attention; it had a blackish pink-skinned body with yellow down, dark eyes and bill, darkish legs and reddish feet (Fig. 1). The bird was presumed to have hatched fairly recently. It was 84 mm long and weighed 40 g. Unlike other altricial birds, the chick was silent and did not open its bill to beg for food. The owner forced open the gape to feed it mashed chicken or bird pellets, namely 'lima sebelas' or '511', a mix that is often used to feed wild-caught birds, especially White-rumped Shama *Copsychus malabaricus* and Oriental Magpie-Robin *C. saularis*.

Local people knew that the adult of this chick is a black-and-white pigeon with a red-eye ring, and distinguish the two species of 'pied' pigeon by eye colour, size, calls and overall colour. Convincingly, the owner of the chick showed us a captive Silvery Pigeon kept by his neighbour (Fig. 2). He explained that there are differences between the breeding behaviour of Silvery and Pied Imperial Pigeons: whereas the latter nests in colonies on smaller islands that are rarely visited by humans, Silvery Pigeon breeds singly or in smaller groups on islands closer to the mainland such as Tepi.

We were informed that the adult in Fig. 2 was also collected as a chick on Tepi, with both birds taken from nests in Coconut Palms *Cocos nucifera*. Gibbs *et al.* (2001) reported that



Figure 1. Silvery Pigeon *Columba argentina* chick, collected on Tepi Island, Aceh province, Sumatra, 3 July 2021 (Muhammad Iqbal)



Figure 2. Adult Silvery Pigeon *Columba argentina*, collected on Tepi Island as a chick c.2 years earlier by a villager at Lamerem, Simeulue Island, Aceh province, 3 July 2021 (Muhammad Iqbal)

another tropical forest *Columba* (Metallic Pigeon *C. vitiensis*) incubates for 17–19 days, with the young fledging at 21 days. As the Silvery Pigeon chick was thought to be c.3–5 days old, based on the data for Metallic Pigeon we suspect that Silvery Pigeons lay in early to mid June, the eggs hatch in late June, and chicks fledge around early August.

Next day (4 July 2021) we visited Tepi with the local people who had collected the chicks. Half a day was spent making bird observations during which we confirmed the presence of at least 20 Silvery Pigeons on the island (Fig. 3), and possibly more.

The local man showed us the Coconut Palm where the chick was collected. It was c.12 m tall, with the nest around 10 m above ground. Baptista *et al.* (1997) and Gibbs *et al.* (2001) reported that Silvery Pigeon builds flimsy stick nests in trees or shrubs, and its nests on Tepi appeared to be very rudimentary structures wedged between palm fronds (Fig. 4). The local man stated that he had taken the chick only because he had found it while climbing the palm to get a coconut to drink, and he had not been searching for chicks. On approaching the palms, we disturbed an adult Silvery Pigeon from the highest fronds, perhaps from a nest. No attempt was made to climb it for fear of disturbance. Another of our local guides reported that he had seen Silvery Pigeon nests on branches of trees and shrubs, including Clove *Syzigium aromaticum* and figs *Ficus* sp. On 8 July 2021, whilst surveying Linggam Island around Nasreuhe village, our guide, a coconut harvester based on the island, also reported that he had chanced upon and taken Silvery Pigeon chicks from coconut fronds.

Other ecological data

Two main local languages are spoken on Simeulue, with local names for Silvery Pigeon being 'Bakuk' or 'Boklem'. These names are different to those used for Pied Imperial Pigeon,



Figure 3. Adult Silvery Pigeon *Columba argentina*, Tepi Island, Aceh province, Sumatra, 4 July 2021 (Muhammad Iqbal)



Figure 4. Coconut frond where the Silvery Pigeon *Columba argentina* chick in Fig. 1 was reportedly found, Tepi Island, Aceh province, Sumatra, 4 July 2021 (Muhammad Iqbal)



Figures 5–6. Fig fruits *Ficus* sp., a food resource of Silvery Pigeon *Columba argentina*, Linggam Island, Aceh province, Sumatra, 8 July 2021 (Muhammad Iqbal)



Figure 7–8. Chinese Bayan fruit *Ficus microcarpa*, reportedly a major food resource of Silvery Pigeon *Columba argentina*, Bulu Hadik, Teluk Dalam subdistrict, Aceh province, Sumatra, 10 July 2021 (Muhammad Iqbal)

further indicating that they are capable of distinguishing between them. On Linggam Island, we found that Silvery Pigeon feeds on a fig *Ficus* sp. (locally known as ‘Sini-sini’). Figs are common on the island (Figs. 5–6). On both Linggam and Tepi, our guides reported they had seen Silvery Pigeon regularly feeding on seeds of cultivated Melinjo trees *Gnetum gnemon* (‘muling’). A large flock of Green Imperial Pigeons *Ducula aenea* was seen feeding on Melinjo by MI on Enggano Island, Bengkulu Province, Sumatra. It is therefore likely that Melinjo is a common food resource for large Columbidae on the west Sumatra islands.

On 10 July 2021, we visited Bulu Hadik village, Teluk Dalam subdistrict, Simeulue Island. Members of the local community reported that many species of pigeon, including Silvery Pigeon, feed on Chinese Bayan *Ficus microcarpa* fruit (‘Buah Rambung’) in the coastal zone (Figs. 7–8).

Following Baptista *et al.* (1997: 81), pigeons and doves can be divided into frugivorous and granivorous species, i.e. fruit-eating and seed-eating. Clearly, Silvery Pigeon is a frugivorous species. The man that we spoke to who had an adult captive Silvery Pigeon stated that he had fed it on cooked rice for a long period, suggesting that species is able to tolerate a varied diet, given that captive birds sometimes survive for several years (Svensson & Yong 2016, BirdLife International 2021).

Local people also reported that Silvery Pigeons are often seen drinking from freshwater rockpools on beaches (in this case, they presumably visit these areas for minerals, like other pigeons), both on smaller islands and in Simeulue's coastal zone.

Conservation challenges

Based on our observations of Silvery Pigeon on Simeulue and surrounding islands in Aceh province, the collection of chicks from nests appears to be relatively common, be it opportunistically or deliberate. We presume that other Silvery Pigeons, including captive individuals from Hong Kong and Nias, could also have been collected in the same way (Svensson & Yong 2016).

Coconut Palms are commonly planted on the western Sumatra islands, with harvesting of fruits being a significant source of income for local people. Many people we met during our survey, including forestry and conservation staff, are unaware that Silvery Pigeon is Critically Endangered and protected by Indonesian law. Columbids are commonly hunted on Simeulue, especially Green and Pied Imperial Pigeons, Nicobar Pigeon, and *Treron* spp.

Greater conservation awareness is urgently required to address the hunting of Silvery Pigeon throughout its limited range. Integrating this into general Simeulue conservation work should be considered. Managed by Ecosystem Impact Foundation (www.ecosystemimpact.com) a conservation community ranger programme on Bangkaru (in the Banyak Islands, 70 km south-east of Simeulue), is focused on protecting threatened bird and turtle species (Amey 2021a). Ecosystem Impact Foundation is now in the early phase of developing a similar conservation project on Babi and Lasia islands, 25 km south-east of Simeulue, and to operate a breeding project for Simeulue endemic and endangered songbirds (Amey 2021b). The foundation's next focus is to develop a community ranger and environmental education project on Simeulue, focusing on conserving the island's Critically Endangered bird species, and securing a release site for songbirds bred in captivity. By protecting habitat, and monitoring Silvery Pigeon populations, these projects will aim to positively impact the species' conservation on Simeulue and surrounding islands.

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