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SHORT NOTE

First record of rose-crowned fruit-dove (*Ptilinopus regina*) from New Zealand

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A juvenile rose-crowned fruit-dove (*Ptilinopus regina*) was captured alive on the deck of FPSO *Raroa* in the South Taranaki Bight at about 2100 h on 22 August 2019. This is the first record of rose-crowned fruit-dove from New Zealand.

The *Raroa* is a petroleum processing and storage vessel that remains at anchor about 1.5 km from the Maari oilfield wellhead, at 39.972°S 173.300°E (*c.* 73 km south-west of Opunake and *c.* 69 km north-east of Farewell Spit). Conditions were cold when the lethargic bird was found, with strong westerly winds for the preceding 2 days (Gary Ingram *pers. comm*., 22 Jan 2020). Oil-tankers periodically come alongside FPSO *Raroa* to take on processed fuel, but there were no off-takes in the 2 weeks before 22 August 2019 (Gary Ingram *pers. comm*., 24 Jan 2020).

The bird was placed in a carton, and perked up once warm (Fig. 1). It was taken by helicopter to New Plymouth the following morning, where it was brought to the attention of Biosecurity New Zealand staff. After seeking advice on the identity of the bird, Biosecurity New Zealand decided that the bird presented an undue biosecurity risk to native wildlife, as it may have carried pests and/or diseases not present in New Zealand. The bird was put down, and subsequently forwarded to Te Papa, where it was preserved as specimen OR.030538 (Fig. 2).

Figure 1 (A & B). Juvenile rose-crowned fruit-dove on 23 August 2019, the day after it was found and caught on FPSO *Raroa* (Photographs: Biosecurity New Zealand).

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Figure 2. Study skin OR.030538 (dorsal, lateral and ventral views) and spread right wing OR.030538/1 (dorsal and ventral views) of the juvenile rose-crowned fruit-dove caught in the South Taranaki Bight on 22 August 2019 (Photographs: Te Papa).

The following description is based on images of the bird in life, and from the specimen. Measurements of the New Zealand bird are compared with measurements of juvenile and immature rose-crowned fruit-doves from eastern Australia in Table 1. The bird is predominantly mid-green on the head and back, with thin yellow fringes to the scapulars and greater wing coverts. The primaries and secondaries are dark grey on the inner webs, merging into mid-green on the outer webs, with contrasting thin pale outer edges, and with whitish tips to the primaries. The rectrices are dark grey. A small pale-yellow vertical stripe just in front of the eye (well separated from the beak) and a very narrow pale yellow eye-ring (single row of tiny feathers) are the only markings on the otherwise uniformly grey-green head. The green extends onto the upper breast (with very narrow pale feather tips giving a slightly barred appearance) apart from a small, narrow grey chin patch. The lower breast and belly are mottled pale yellow and green (rather scruffy, with some paler feathers), with a mottled orange patch each side of the mid-line in front of the legs. The undertail coverts are lemon yellow, with the underside of the rectrices pale grey. The underwing is entirely pale grey, with little contrast between remiges and coverts. The eye was dark brown with a large black pupil. The beak was mid-grey, darker at the tip, with paler grey cere (poorly developed). The legs and toes were mid-grey, with prominent grey scales accentuated by pale off-white skin separating them. The claws were darker grey than the toes. The specimen has no evidence of missing feathers or the waxy sheaths of growing feathers. Nor are there signs of feather wear or fault bars, which could be indicators of captive-rearing or previous cage confinement (Petrak 1982; Wolf *et al*. 2003; Vriends & Erskine 2005).

Table 1. Measurements of the juvenile rose-crowned fruit-dove captured in the South Taranaki Bight (OR.030538) compared with measurements of juvenile and first-year rose-crowned fruit-doves of the subspecies *regina* from eastern Australia (sourced from Higgins & Davies 1996). All measurements in millimetres.

	OR.030538	**Eastern Australia**			
		Mean	SD	Range	N
Bill	13	13.0	1.2	10.6–14.9	13
Tarsus	19	21.9	1.1	20.2–23.7	15
Mid toe & claw	26	24.1	0.8	23.0–25.3	8
Wing	122	127.3	4.6	119–134	16
Tail	65	71.4	3.0	66–77	15

The orange feathering on the belly and the pale patch in front of the eye are diagnostic of rose-crowned fruit-dove when compared to other *Ptilinopus* fruit-dove species found in Australia and the south-west Pacific (Higgins & Davies 1996; del

Hoyo *et al*. 1997; Watling 2001). The predominantly green plumage (combined with these diagnostic characters), without evidence of initiation of moult into first basic plumage, is typical of a juvenile rose-crowned fruit-dove less than 10 weeks old (Higgins & Davies 1996; moult from juvenile to adult plumage commences 43–70 days after hatching). The relatively short wing and tail (Table 1), together with fresh (unworn) fine pale margins to the remiges point to the bird being a recent fledgling that was still growing its main flight feathers.

Rose-crowned fruit-doves are found in rainforests of coastal eastern and northern Australia, and north-west into Indonesia as far north as Morotai in the North Maluku (Moluccas) Islands (Higgins & Davies 1996). The nominate subspecies occurs from islands in Torres Strait south to northern New South Wales, and is vagrant to Victoria and Tasmania (Higgins & Davies 1996). It is a seasonal migrant in southern parts of its range (from southern Queensland south), being more abundant in summer (Higgins & Davies 1996; Menkhorst *et al*. 2017). Breeding has been recorded from mid-August to February (Higgins & Davies 1996). As loss of juvenile plumage commences within 2–3 months of fledging, this again points to the Taranaki bird being a recent fledgling (and from an unusually early breeding event, as the bird presumable hatched from an egg laid in June or July).

Fruit-doves of the genus *Ptilinopus* are well known for their ability to colonise remote islands (Mayr & Diamond 2001). The genus contains about 55 species, spread from south-east Asia east as far as Henderson Island in the Pitcairn group, eastern tropical Pacific (Pratt *et al.* 1987; del Hoyo *et al*. 1997).

This is the first reported occasion where a new vagrant bird species to New Zealand has been intercepted at the border and killed due to biosecurity concerns. This situation arose partly due to misalignment of two different pieces of legislation. Since 1996, the Wildlife Act 1953 has covered waters out to the edge of the New Zealand exclusive economic zone (200 nautical miles = 370.4 km from the coast; Miskelly 2016). In contrast, the Biosecurity Act covers only territorial seas (12 nautical miles = 22.2 km from the coast). As the bird was flown to shore by helicopter from a vessel anchored *c*. 73 km offshore, Biosecurity New Zealand staff treated it as an importation of a live bird, which is not covered by an existing Import Health Standard (Biosecurity New Zealand, *pers. comm*., 27 Aug 2019).

The case has close parallels with the first Nicobar pigeon (*Caloenas nicobarica*) to reach the Australian mainland. Soon after its discovery near the coast on the remote Dampier Peninsula (northern Western Australia), the bird was captured by indigenous Bardi Jawi rangers and held in quarantine "as part of biosecurity protocol" by the Western Australia Department of Agriculture (*Australian Geographic* 2017). Once it had been deemed clear of any pathogens, parasites, and potential weed seeds by the Australian Quarantine and Inspection Services, it was transferred to permanent captivity at the Adelaide Zoo (Davis & Watson 2018). Davis & Watson argued that extra-limital dispersal is an intrinsic aspect of the ecology and life history of many species, and that vagrancy (and establishment of new populations) may provide a buffer to the impacts of climate change. Ironically, they cite New Zealand's Wildlife Act 1953 as one of the few pieces of legislation globally that provides automatic protection to vagrant birds.

Although this is the first accepted record of rose-crowned fruit-dove from New Zealand, there is at least one previous record that may have been of this genus (UBR 2008/07; Scofield 2008). Bill Malpress and Paula Barrett reported a small "greenish-fawn" dove at their property in Manchester Street, Christchurch, during 3–17 Feb 2008. When first seen, the bird was perched in a damson plum tree (*Prunus domestica* subsp. *insititia*) that was heavily laden with fruit. Although it was seen occasionally in flight, and more often heard, several times over the following fortnight, the information recorded was insufficient to determine the identity of the bird (Scofield 2008). Bill Malpress and Paula Barrett consider that their bird more closely resembled a female whistling fruit-dove (*Ptilinopus layardi*) from Kadavu, Fiji (Bill Malpress *pers. comm*., 29 Mar 2020).

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