

# The identity of white-eyes on Green Island, North Queensland

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## Abstract

In Australia, the Ashy-bellied (Pale) White-eye (*Zosterops citrinella*) is known from islands in Torres Strait and off Cape York Peninsula as far south along the east coast as Rocky Islets, 85 km northeast of Cooktown. In the literature it has been confused with the Silvereye (*Z. lateralis*), at time from locations well outside the Ashy-bellied White-eye's known range. The identity of a population of white-eyes on Green Island, northeast of Cairns, has been controversial. Birders have recorded them as Silvereye but provided no supporting evidence, while others with photographic evidence have identified them as Ashy-bellied White-eye. While this species is an inhabitant of offshore islands, the northern subspecies of Silvereye (*Z. l. vegatus*) is a mainland bird and is fairly common on the mainland adjacent to Green Island. There appears to be no positive records of either species from the other's range and there is no evidence that the two interbreed. In March 2021 I spent three days on Green Island observing white-eyes and all proved to be Ashy-bellied. This extends its known range southward from Rocky Islets on the east coast of Queensland by approximately 220 km.

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## Introduction

Ashy-bellied White-eye is distributed through islands of southern Indonesia from the Lesser Sunda Islands to northern Cape York Peninsula (del Hoya *et al.* 2008). The most southerly known point of the range of the Ashy-bellied White-eye on the east coast of Cape York Peninsula (CYP) has been Rocky Islets, 14°51' S, 145°29' E, 21 km southeast of Lizard Island and 85 km northeast of Cooktown (Holmes 1986; Lowry 1998; Higgins *et al.* 2006). It is present on nearby Eagle Island (Smith 1987) and common on Lizard Island (Thornton 1999).

Green Island, 16°35' S, 145°58' E, is a 12 ha low coral cay on the Great Barrier Reef, 27 km northeast of Cairns, Queensland (Fig 1). It is covered with closed tropical monsoon rainforest. Most of the island is National Park while there is a large tourist resort on the west of the island. Bird species diversity is relatively poor but it supports

a substantial population of white-eyes, the most common passerine on the island. The identity of this population has long been debated. Today, dedicated birders are photographing white-eyes on Green Island and identifying them as Ashy-bellied White-eye (e.g. eBird records, <https://ebird.org/australia/home>, accessed 24 Oct. 2021) while others record them as Silvereye (Anonymous 2021; Queensland Government 2021b). No indication of the characters being used for identification is given by either source.

Until the late 1990s, few people had experience with Ashy-bellied White-eye in the field because of the geographical remoteness and difficulty of access of its habitat. This has probably been a major factor in creating confusion. It was not until Klaus Uhlenhut on his annual Cape York Bird Week in the 1990s began taking observers to Mount

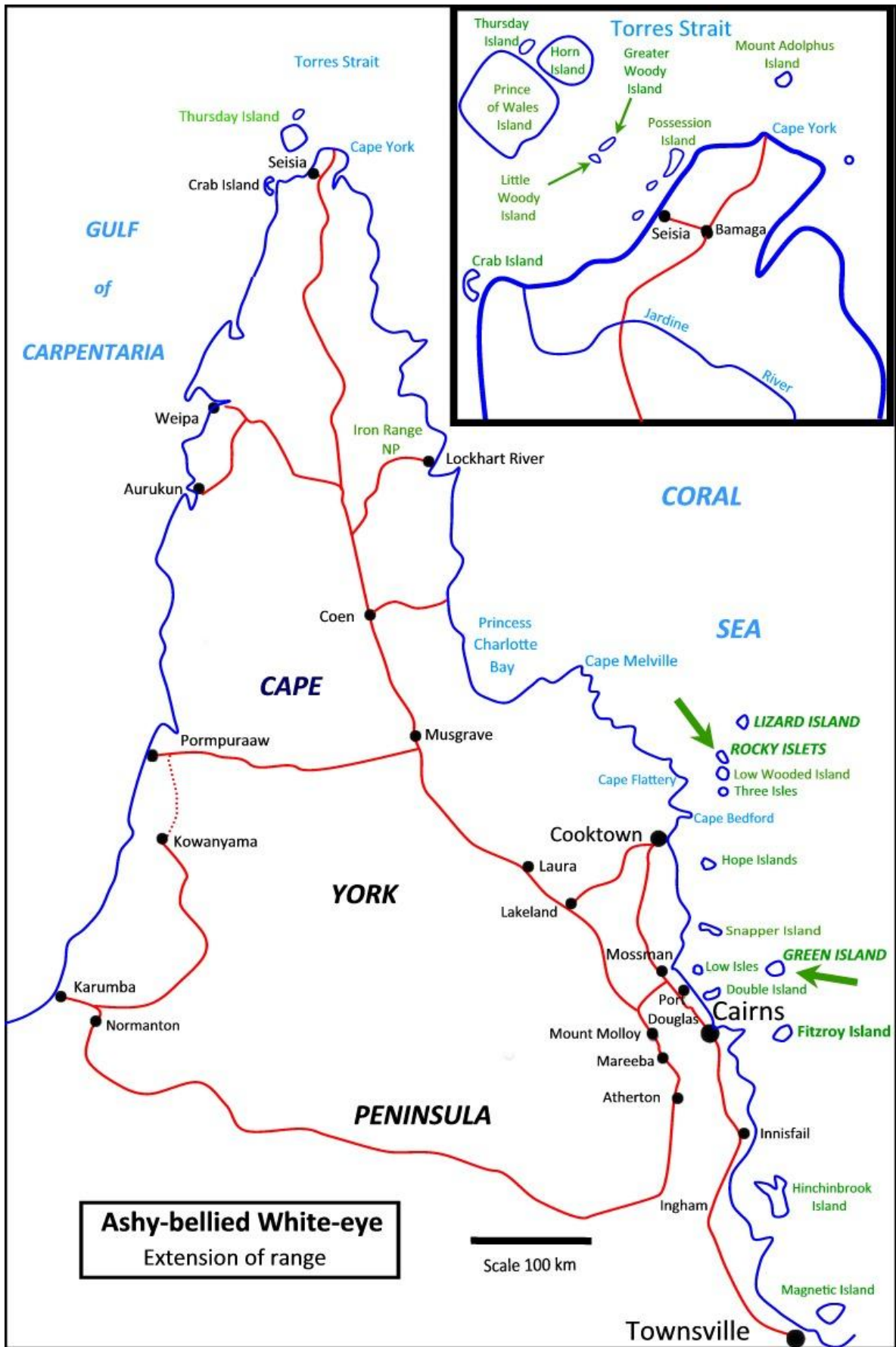


Figure 1. Map of Cape York Peninsula showing locations mentioned.

Adolphus Island, 10°38' S, 142°39' E, in Torres Strait, where a large population exists, that observers obtained field experience of this species. Even today, only visitors to far northern CYP and Torres Strait have the opportunity to see Ashy-bellied White-eye in the field.

Ornithologists presumed that all white-eyes on the coast of Queensland were subspecies of Silvereye. Ashy-bellied has had several names attributed to it over time. The literature shows examples of this confusion. Kikkawa (1973: 34) wrote, "According to Mees (1969: 85), *albiventris* [Ashy-bellied] was believed to occur on Low Isles and Green Island off Cairns by Whittell (1954) and Immelmann (1960) respectively, but White (1946), McKean (Mees 1969) and Wheeler (1967) identified Green Island birds as *lateralis*" [Silvereye].

Kikkawa (1973), who studied the Capricorn White-eye (*Z. lateralis chlorocephalis*) extensively on Heron Island and through the Capricorn and Bunker Groups of islands in southern Queensland, hypothesised a cline probably existed between grey-backed *lateralis* in the south to green-backed *citrinella* [Ashy-bellied] in the north. This notion was dashed by Schodde and Mason (1999: 683) stating "there is inadequate material evidence to support this", and again by Higgins *et al.* (2006: 1737) stating "[It] is not supported by evidence from skins and no intermediates between the two taxa have been described."

Longmore (1991: 379), after discussing reports [of *citrinella*] from Green Island stated, [It] "could indicate that there is an occasional or seasonal movement of the birds to that island which is currently occupied by the closely related Silvereye." He further states, "but the taxonomic status of populations on the Great Barrier Reef is confused...".

Apart from a small number of specimens from Torres Strait and the east coast of northern CYP, little was known of wild Ashy-bellied White-eye. For example, "On Green Island the flank colour appears to vary as much as the northern mainland form, but the area of grey on the back is much reduced giving the appearance of a green back with yellowish uppertail coverts. This approaches the description of the Pale Silvereye *Z. citrinella lateralis*." (Kikkawa 1973: 34) [underline mine]. This suggests Kikkawa had no field experience with Ashy-bellied White-eye.

Following considerable recent discussion on the identity of white-eyes on Green Island on a Facebook page (<http://www.facebook.com/groups/718576241555767/search/?g=White-eyes>, viewed Dec. 2020), I decided that the matter needed to be resolved. I was able to spend three days on Green Island during 22nd to 24th March, 2021.

Unfortunately, when updating my book *Birds of Queensland's Wet Tropics & Great Barrier Reef* in 2015, I was mostly guided by Kikkawa's (1973) paper, Longmore's statement (1991), and some local opinion for my text on Silvereye and Green Island, so it was important to correct or confirm that entry.

### Personal Experience

My experience with Ashy-bellied White-eye is extensive, extending over 20 years, mostly while guiding for Klaus Uhlenhut on his then annual early January Cape York Bird Week, centred on Bamaga at the tip of CYP. Ashy-bellied White-eye was always one of the main target birds of Bird Week.

Originally, guests were taken to Mount Adolphus (Muri) Island, 14 km northeast of the tip of CYP to see the species. This involved a long boat trip over the open rough waters of Torres Strait, so in the year 2000, Klaus Uhlenhut and I decided to try to locate a closer population, with shorter, safer access for this species. After investigating a number of islands on the western side of northern CYP, substantial populations were found on two sister islands, Greater Woody (Kal-yulubi) and nearby Little Woody (Meggi Yalubi), 10°43' S, 142°20' E, both 8 km from the mainland. These islands were 16 km and 17 km north-northwest of Seisia and 21 km southwest of the tip of CYP respectively, both with a covering of closed, scrubby monsoon-type forest and vine thicket.

Several open-forested islands, as well as others with only small areas of mangrove forest, e.g. Possession (Bedanug), Dayman (Terau) and Red (Ithunchi) were searched without success. Neither was the bird found in areas where small patches of apparent suitable vegetation existed. Large areas of scrubby habitat may be the key to the establishment of populations. Draffan *et al.* (1983) suggested a similar situation for this southwestern group of islands in Torres Strait.

There are no authenticated mainland records of Ashy-bellied White-eye on the immediate coast

even where islands they occupy are close to the coast. It is well known as an “island species” (Kikkawa 1976; Draffan *et al.* 1983; Holmes 1986; Longmore 1991; Schodde & Mason 1999; Higgins *et al.* 2006). In 30 years of numerous visits to CYP, I have never seen Ashy-bellied White-eye away from the scrubby islands, nor Silvereye away from the mainland (Silvereye extends north to about Iron Range and is absent from there to the tip of CYP (Higgins *et al.* 2006; personal observation)).

Little Woody proved to be the better site for visitation, being a mere 20 minute trip by boat from Seisia with easy access onto a small sandy beach, unlike Greater Woody where access included a 500 m walk over a rough, submerged reef flat. Nearly all observations were done on Little Woody. For the following 15 years, birders were taken to Little Woody Island for Ashy-bellied White-eye, which were common there.

## Method

Each morning from just after daylight I visited sites on Green Island, mostly around the fringes of the island where birds were feeding, and I remained for about two hours observing white-eyes. Later in the morning and again through the afternoon I spent several hours either repeating this exercise, walking the substantially formed walking track, or walking along the shore. Approximately 20 hours of observations were made over the three days, checking those features which set this species apart, e.g. colour of upperparts, colour of underparts and so on.

## Identification (adults)

Ashy-bellied White-eye is fairly easy to separate from the northern subspecies *vegetus* of Silvereye (Higgins *et al.* 2006; personal observation); Figs. 2, 3, 4. However, there are several subtle character differences, the most important being:

1. Uniform olive-green upperparts in Ashy-bellied (Silvereye has similar upperparts but with a prominent wide mid-grey saddle sharply demarcated from olive yellowish-green head. Grey back extends as a narrow, paler band onto the upper-breast.). An occasional Ashy-bellied sometimes has a vague, tiniest tinge of grey below the nape where the colour of the head meets the back, but this is rare and one needs good light to see it. It does not vary. I have also seen this in

a very small number of birds from Little Woody Island.

2. Head of Ashy-bellied is olive-yellow and blends into back colour. (Head of Silvereye is slightly darker olive yellowish-green, sharply demarcated from both upperparts and underparts, appearing hood-like and more prominent than in Ashy-bellied.)

3. Large bright yellow chin and throat patch and bright yellow undertail-coverts in Ashy-bellied (Silvereye has a smaller duller yellow throat patch, more olive-yellow and close to the colour of the entire head). Yellow throat is noticeably larger and brighter in Ashy-bellied.

4. Breast and belly are uniform pale greyish-white and flanks are very pale buffy to mid-yellow in Ashy-bellied. (Silvereye has richer/darker greyish upper-breast, and more olive-yellow flanks).

## Juvenile plumage

Juvenile plumage of Ashy-bellied is essentially unrecorded (Higgins *et al.* 2006). Longmore (1991) shows a photograph of three fledglings from Warraber Island (Sue Islet), 10°12' S, 142°40' E, in central Torres Strait. These show a drab version of adult plumage with pale olive-yellow head, pale yellow throat and undertail-coverts. The white eye-ring is virtually absent. I saw no fledglings or juveniles on Green Island as coloured as these – most being a drab greyish. In one instance, three fledglings still being fed by adults had varying amounts of yellow on throat and undertail-coverts, from almost none to a small yellow patch. In two instances, an older free flying bird had much more and stronger grey on the underparts, darker than in adults. However, these had a pale base to the bill indicating juvenility and were probably from an early breeding event or from a late breeding event of the previous year. I suspected the latter were juveniles or immatures, not only for their pale base to the bill but also for the yellow on the throat and undertail-coverts which was duller and smaller in size than in mature adults.

In the adult population, an occasional bird showed a thin smudge of a slightly darker grey just below the yellow throat but this was usually vague and often difficult to detect. I suspect these were late immatures as it was absent from most birds in full adult plumage. This grey tinge has been seen in a very small number of birds from Little Woody



Figure 2. Ashy-bellied White-eye (*Zosterops citrinella*), Green Island. Photograph: Tanner Martin.



Figure 3. Ashy-bellied White-eye (*Zosterops citrinella*), Green Island. Photograph: Tanner Martin.





**Figure 4. Northern subspecies of Silvereye (*Zosterops lateralis vegetus*), Lake Tinaroo, northeast Queensland.** Photograph: Doug Herrington.

Island but again was uncommon. Because Little Woody visits were always in early January, at the commencement of the Wet Season and before the breeding season, fresh juveniles were never encountered. On the contrary, my visit to Green Island was at the end of the Wet Season when there were many fledglings and juveniles present. I suspect these juveniles and immatures may have been the cause of the ongoing confusion and may have given rise to the suggestion of hybridisation.

### Results

Following the conflicting reports from Green Island and with an open mind, I was not surprised to find a large population of Ashy-bellied White-eye present with no sign of Silvereyes, nor of hybridisation. All birds seen were Ashy-bellied. Many juveniles were present, many being fed by adults. Many appeared to be siblings with mostly two, sometimes three, huddled together waiting to

be fed. This species is a known Wet Season breeder (Draffan *et al.* 1983), so this large breeding event probably resulted following the first substantial Wet Season rains in January 2021 after an abnormally severe Dry Season during the latter half of 2020.

### Discussion

Throughout the Wet Tropics and CYP, the northern subspecies *vegetus* of Silvereye, in its northern range, seems to be strictly a mainland inhabitant while the Ashy-bellied White-eye is an island inhabitant (cf. Menkhorst *et al.* 2017). There appears to be no confirmed records of Silvereye from islands off mainland CYP. In the years in which the Cape York Bird Week operated from Bamaga, Silvereye was never recorded, unsurprising given that this was well north of its accepted range. However, Yellow White-eye (*Z. luteus*) was first recorded on Little Woody Island

on the west coast of CYP in 2002 when a single bird was seen. The species population increased to several birds over ensuing years (Nielsen 2013).

Longmore's (1991) statement that Green Island was "currently occupied by... Silvereye" without substantiation raises questions. While Silvereye is not known to occupy offshore islands about CYP it seems that, over a short space of two to three decades, Ashy-bellied White-eye may have completely replaced Silvereye, or alternatively, it was never there.

In December 2020, I spent three days on Fitzroy Island, 16°56' S, 146°01' E, located 22 km south of Green Island. Fitzroy Island is a continental island of 340 ha, 8 km from the mainland and 24 km east of Cairns. Most of the island is National Park and the highest point is 269 m above sea level. It is the next closed-forested island south of Green Island. Much of the island is covered with rainforest similar to coastal rainforest on the mainland which appears very suitable habitat for white-eyes. During my three days on Fitzroy Island, I recorded no white-eyes. Queensland National Parks (Queensland Government 2021a,b) lists two sightings of "Silvereye" from Fitzroy Island in their bird list, both without substantiation. By the same token, "Silvereye" is listed as common for Green Island but Ashy-bellied White-eye is not.

## Conclusion

After extensive experience over many years with Ashy-bellied White-eye on several islands off northern CYP, I believe that the white-eye population on Green Island is entirely of Ashy-bellied. Birds on Green Island appear, in the field, morphologically identical to those on the scrubby islands of Little Woody and Greater Woody off the western coast of northern CYP. No sign of Silvereye, nor any indication of hybridisation was seen. A genetic study may be required to show otherwise. This represents an extension of range southward by approximately 220 km, from Rocky Islets. Considering that white-eyes are absent from Fitzroy Island, Green Island appears to be the most southerly point of this species' range on the east coast of CYP.

It would be interesting to determine if white-eyes exist on the few islands with suitable habitat between Rocky Islets and Green Island, e.g. Double, Low Isles and Snapper. When residing in Cooktown, John McLean made many trips to

several islands and cays lying off Cooktown, e.g. Three Isles (McLean 1993), Hope Island (McLean 1996) and Low Wooded Island (McLean 1997) but never recorded a white-eye.

Without doubt, Little Woody is the most southerly point of distribution of Ashy-bellied White-eye on the west coast of CYP, there being few offshore islands down the western side of CYP. The next and only offshore island south of Little Woody is Crab (Moent) Island, 10°14' S, 142°06' E, of 280 ha, a highly significant Flatback Sea Turtle (*Natator depressus*) breeding rookery located 38 km south of Little Woody and 2 km off the mainland at Slade Point. It has an area of mangrove forest of roughly 200 ha. It appears that a bird list has never been compiled for the island but the probability of a population of Ashy-bellied White-eye being present would seem low. From there south to Karumba, in the southeast of the Gulf of Carpentaria (850 km), there are no islands.

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