# Birds of Aotea

SUMMARY OF THE STATUS OF THE BIRDS OF AOTEA GREAT BARRIER ISLAND

John Ogden

Aotea Great Barrier
ENVIRONMENTAL TRUST
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**COVER:** *Tākoketai / Black Petrel on Hirakimatā / Mt Hobson. Photo by Shaun Lee.*
**ABOVE:** *Okiwi Estuary. Photo by Chris Morton.*

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# FOREWORD

This foreword is firstly a mihi to Ngāti Rehua Ngātiwai ki Aotea. It is impossible to describe here the cultural significance of the birds of these islands to tangata whenua. But actions speak clearly, and many readers may know that it is the goal of Ngāti Rehua Ngātiwai ki Aotea to return kōkako and other lost taonga species to Te Paparahi, the still-forested northern third of the island. The Tū Mai Taonga project began operations in November 2022, laying a pathway to enable this to happen. As Opo Ngawaka puts it:

*"Our vision is to bring back the birdsong these tupuna once heard, and we need to do this in a way that acknowledges their presence and our connection to the living things of the ngāhere."*

The deep knowledge held by tangata whenua of the birds that were found on and around Aotea in the nine centuries of their occupation of these islands, is invaluable. Birds indicate changes to seasons or weather, were used for food, adornment and many other purposes. The local people's knowledge would have been a great help to the first European ornithologist to reach Aotea, Captain William Hutton. In 1867 he was assisted by them and made a now famous "list" of the birds he encountered on "the Barrier Islands". They gave him local names and no doubt, food, transport and safe passage. Hutton's list, reported to the New Zealand Institute the following year, stands in stark contrast to the deep connections of tangata whenua to birds such as the kōkako, manu ōi (grey-faced petrel), kererū; and not least, Tūkaiaia, the now extinct great white headed eagle. Te Tūkaiaia, Te Tuatara me Te Mauri (the shark) are the three kaitiaki of Ngāti Rehua-Ngātiwai ki Aotea.

*Kōkako. Photo by Halema Jamieson.*

*Te Tūkaiaia – The great sea eagle that once soared over Aotea and ensured protection for our people on land or sea. Tūkaiaia represents our connection to the sky and encompasses the entire expanse of Ngāti Rehua-Ngātiwai ki Aotea.*
– Kupu Whakataki, Tū Mai Taonga Feasibility Study

This report should be read in the context of the kōrero about Aotea's birds known to mana whenua. These stories are like citizen science on steroids— built up over centuries of observing, harvesting and living amongst birds, and reverence for them as both spirits and living beings.

This report does bring together data and observations from approximately the last 20 years, capturing most of the recent published and unpublished records of the birds of Aotea.  It is the embodiment of more than thirty years of work and life on Aotea by its author John Ogden, an eminent forest ecologist by training, and an extraordinary observer of birds. We offer John's report as an independent resource for iwi, agencies, land managers and the community, and we tautoko the kaupapa of Tū Mai Taonga, to restore what has been lost and protect it into the future.

Kate Waterhouse
*Chair, Aotea Great Barrier Environmental Trust*
*December 2022*

Moho pererū / banded rail on Mulberry Grove Beach. Photo by Shaun Lee.

# Purpose of this report

A key goal of the Aotea Great Barrier Environmental Trust is to provide in-depth knowledge of the state of the biodiversity and ecology of Aotea. Such information can support better decision making and encourage increased community engagement in efforts to conserve and restore Aotea's biodiversity. This report focuses on the birds of Aotea. It provides a detailed scientific analysis and overview of the status of Aotea's land and seabirds. It follows the 2010 State of Environment Report for Great Barrier Island, which covered all aspects of the natural environment of Aotea, including a section on land and sea birds.

The information in Birds of Aotea is essential to inform decision-making to mitigate and prevent further population declines of the island's birds, and to prevent further extinctions. This report captures a growing literature on the birds and ecosystems of Aotea, which will be invaluable in setting priorities for environmental initiatives designed to protect the biodiversity of the island.

The full report and technical references may be found at www.gbiet.org/birds-of-aotea

Increasingly, Aotea's value and significance for seabirds, freshwater, coastal and forest birds is being recognised globally, as the world's climate warms. We hope this report shows you, the reader, why this is the case.


*Map by Shaun Lee using data captured for Auckland Council by AAM NZ Ltd*

# About Aotea / Great Barrier Island

One hundred thousand years ago at the start of the last glacial phase, Aotea was connected to the rest of the North Island, carrying forest, wetland, and other habitats. When sea-level rose about 7,500 years ago, Aotea would have had an avifauna similar to the mainland. This may once have included kiwi, flightless rails, and moa. As the sea level rose Aotea was re-isolated as an island and marine and coastal bird species acquired additional productive habitat, and may have increased in abundance, but some larger species may never have established.

The first human arrivals came by sea from Polynesia around 750 years ago and Aotea was visited by four of the founding waka. Māori bought both kuri and kiore with them to Aotea and the surrounding islands, and these animals had important roles in hunting, food gathering, clothing and ritual. Archaeological records suggest people were hunting birds at Harataonga sometime between 1280 and 1410. Some forest was burned, and people, dogs and kiore would have impacted the numbers of many birds. The island was occupied by a large population, but habitation was mainly coastal. Some areas were burnt seasonally, and people moved often between Aotea and other islands, where seabirds and forest birds formed part of their diet. Coastal wetlands, lagoons and estuaries were used for food, and increased siltation rates followed forest fires. These processes accelerated greatly following colonisation of Aotea by European settlers.

When the brig *Mermaid* arrived in Port Fitzroy in 1796, the ship's log describes kauri growing to the shore and dozens of canoes meeting the ship. Shortly afterwards, inter-tribal battles greatly reduced the number of Ngātiwai people left on Aotea and most of the island was sold to the Crown in a series of disputed transactions (Tatton, 1994). As a result, the forest equivalent to a gold-rush began in the 1840s. European companies logged the kauri (*Agathis australis*) and settlers burnt and cleared much of the lowland forest cover from the 1860s onwards, with coastal wetlands drained for pasture.

It is thought ship rats and feral cats began to spread through the remaining forest and cleared lowlands from the 1840s. Ship rats proved far more destructive to birds than the smaller kiore had been. Fortunately, other introduced mammals, including Norway rats, possums, stoats, ferrets, weasels and deer, did not reach the main island, and feral goats, have since been eliminated. This is why the bird life of Aotea is what it is today.

Bittern at Medlands. Photo by Mike Scott.

# Major findings use an ecosystems approach

An ecosystem-based approach is used to assess the current status of the birds of Aotea. We describe the birds of the oceanic temperate forests (and the forest types within it, from the cloud forest to mature and successional), the wetlands, the coastal habitats, and finally, the highly modified farmlands. Within this, we use the list of birds observed by Hutton when he visited the island during the summer of 1867-68 as a baseline from which to determine which species have become extinct, are threatened, are stable, have established since, or are flourishing.

Illustration of Frederick Hutton in 1867 on Aotea by Shaun Lee.

Ngāti Rehua Ngātiwai ki Aotea

We acknowledge the mātauranga of mana whenua Ngāti Rehua Ngātiwai ki Aotea, who name Tūkaiaia, the great eagle as one of their kaitiaki. Their knowledge will enrich understanding of the pre-European avifauna, but it could not be included here. Further, there are technical challenges in determining precise numbers of birds. Thus, relative abundance based on frequency of occurrence from scientific and community bird surveys is the predominant metric used throughout this report to ascertain the current status of the birds.

Kākā on Aotea. Photo by Stuart Farquhar.

## Oceanic Temperate Forest

The original forest on Aotea is described as Oceanic Temperate Forest, but it has been extensively modified since the arrival of humans around 750 years ago. The term 'Oceanic' is important as it highlights that there were once large breeding colonies of oceanic seabirds in these forests. This close connection between the ocean and the land is crucial for general health and nutrient cycling in the ngāhere (forest). Destruction of these forests, first by fire and then logging, and the introduction of mammalian predators has had a huge and ongoing impact on the bird life in these ecosystems.

Of the original 52 species described by Hutton, eleven have become locally extinct, including: kōkako, hihi/stitchbird, pōpokotea/whitehead, kākāriki/yellow-crowned parakeet, and tīeke/saddleback. Others are rare and close to extinction: titipounamu/rifleman and miromiro/tomtit; occasional visitors: korimako/bellbird and kārearea/New Zealand falcon; or became locally extinct and have been reintroduced: toutouwai/North Island robin.

The current native forest on Aotea can be subdivided into three broad types:

*Photo by John Ogden*

**Mature forest.** A tall, relatively undisturbed forest comprised of canopy species such as pūriri, kohekohe, northern rātā, tawa and taraire with a diverse understorey of smaller trees and nīkau palms.

*Photo by Shaun Lee*

**Successional forest**. Dominated by mānuka and kānuka it is less diverse and simpler in structure than mature forest, with a dynamic composition as one assemblage of species succeeds another.

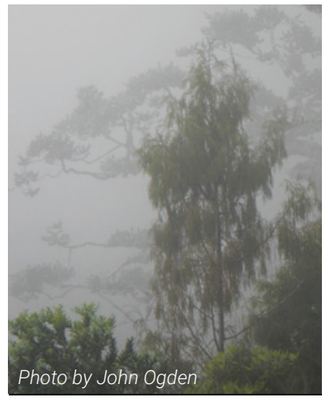
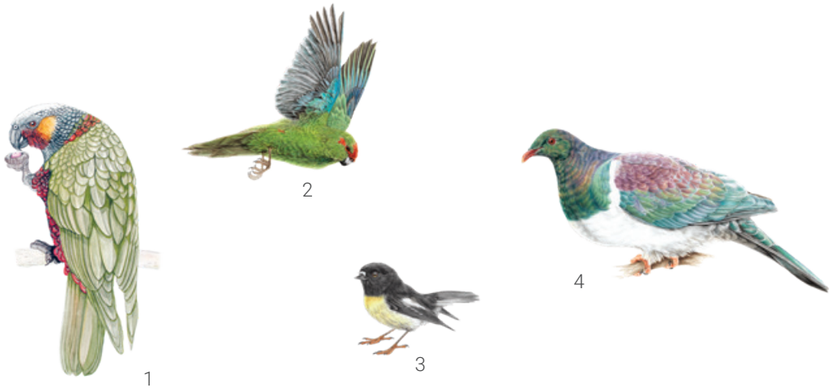


*Photo by John Ogden*

**The cloud forest of Hirakimatā**. An ancient mature forest which is floristically distinct from the mature forest at lower elevations due to abundant conifers, including kauri.



1. Kākā / *Nestor meridionalis* 2. Kākāriki / Red-crowned parakeet / *Cyanoramphus novaezelandiae*
3. Miromiro / Tomtit / *Petroica macrocephala* 4. Kererū / Kūkupa / Wood pigeon / *Hemiphaga novaeseelandiae.*

## Birds of the mature forest

The canopy and sub-canopy of the mature forest is composed predominantly of fruiting or nectar-bearing flowering plants, which produce abundant food for native birds. Eleven of the terrestrial birds originally listed by Hutton still occur in these remnant forests, including kākā, tūī, kererū, red-crowned kākāriki, shining cuckoo, tomtit, fantail, riroriro/grey warbler, koekoeā/long-tailed cuckoo and ruru. The annual Aotea Bird Count (www.gbiet.org/bird-count) suggests that tūī, kākā and riroriro/grey warbler are probably the most abundant of these 11 species still present in this forest type. While very conspicuous because of their raucous song, total kākā numbers are in the range of just 300-400 birds. Long-tailed cuckoo no longer breed on the island as the host species, the whitehead/pōpokotea, is now extinct, so they are transitory visitors. The future of red-crowned kākāriki is precarious, with fewer than 20 breeding pairs. There is an extensive community rodent and feral cat trapping programme in the Okiwi valley that is assisting survival of this small population. The kererū is considered a 'keystone species' of the oceanic temperate forest ecosystem. This is because of its importance in dispersing the seeds of large-fruited tree species, including miro, tawa, taraire, pūriri and karaka. Its status on Aotea is hard to assess, but as is the case on the mainland it is probably in decline because of the low fecundity of the species and vulnerability of its single egg and chick to predation during a long incubation period. Ruru, by contrast, is one of the few New Zealand birds to benefit from the presence of mice and rats.

1. Pīwakawaka / Fantail 2. Ruru / Morepork / *Ninox novaeseelandiae* 3. Pīpīwharauroa / Shining cuckoo.

## Successional forest has lower diversity

The successional forest is by far the dominant forest type on the island. Areas burned or cleared for farming in the 19th and 20th centuries are now often dominated by mānuka and introduced 'weed' tree species such as pines. Forests originating from earlier fires, are now dominated by kānuka and small broad-leaved trees. The lower diversity and simpler structure of these forests results in lower bird diversity, favouring insectivorous species such as grey warbler, fantail, silver eye, the migratory pīpīwharauroa/ shining cuckoo, and several introduced bird species. Kōtare/kingfisher are also common and widespread in these forests.

1. Toutouwai / North Island robin 2. Tākoketai / Black petrel 3. Tītī / Cook's petrel.

## The cloud forest of Hirakimatā

This very distinctive forest type of low canopy conifers is limited to an area of c. 110 ha above 400 m in altitude on Hirakimatā. The unique structure and composition of this forest and the bird species found there identify this area as one of the most significant ecosystems on Aotea, in the Auckland region, and probably nationally. A few bird species – miromiro/tomtit, toutouwai/North Island robin and kākāriki – which were formerly found throughout Aotea, are almost entirely restricted to this small area and nearby mature forests. The cloud forest of Hirakimatā, and the nearby predator free island of Hauturu, support the remaining population of black petrels in New Zealand, along with smaller numbers of Cook's petrels. Predation by feral cats and rats remain a significant threat to the survival of these two species on the island. Many species of burrow-nesting seabirds were once found throughout Aotea, but because of the loss of much of the forest cover, and the impact of mammalian predators, only a few seabird species continue to breed on the island.


1. Moho pererū / Banded rail / *Gallirallus philippensis* 2. Mātātā / Fernbird / *Bowdleria punctata* 3. Matuku hūrepo / Australasian bittern / *Botaurus poiciloptilus* 4. Pāteke / Brown teal / *Anas chlorotis.*

## The Wetlands, under siege

Like most of New Zealand, wetlands once covered large areas of the coastal flatlands around Aotea but many have been drained for conversion to farming. Two significant wetlands remain on the island: (i) Whangapoua Estuary and (ii) Kaitoke Swamp, with both classified as of 'outstanding' wildlife value. Many of the birds associated with wetlands are secretive and nocturnal, which makes it challenging to assess their status. Acoustic monitoring provides a valuable new tool for assessment. Key wetland species present include pāteke/brown teal, pārera/grey duck, matuku-hūrepo/Australasian bittern, pūweto/spotless crake, moho pererū/banded rail and mātātā/fernbird. With the exception of banded rail, the populations of most of these wetland species are in decline, with some at a critical level and destined for local extinction without major interventions, particularly in terms of predator control.

The decline in the population of pāteke from an estimated population of c. 1200 birds in 1996 to c. 400 in 2021 is alarming. Even in the Okiwi Basin where there is feral cat and pūkeko control and closer monitoring, they have seriously declined. The causes for pāteke decline are varied, but predation by rodents and feral cats is understudied and has likely been underestimated.

Grey ducks as a definitive species are close to extinction on Aotea through hybridisation and competition with mallard ducks. Australasian bittern is 'critically endangered' and symptomatic of the dire environmental condition of these wetlands. Community efforts to restore remnant wetlands in Oruawharo Bay will provide more protected habitat for these iconic New Zealand wetland birds on Aotea. Development of an integrated management plan for Aotea's wetlands, including greater predator control and acknowledgment of the fundamental importance of hydrological processes to these wetlands is urgently needed.

*Hirakimatā from Kaitoke. Photo by Chris Morton.*

## Coastal birds and habitats

Hutton's list of birds of Aotea includes 20 oceanic birds, four waders, and nine coastal species. Several of the oceanic species nest in burrows in mature forest and were probably once abundant on Aotea. Currently only two species of petrel (black and Cook's; tākoketai and tītī) nest in inland forest and one petrel (grey-faced; ōi), one shearwater (fluttering; pakahā) and common diving petrel (kuaka) breed in small numbers in the coastal forest and/or on some offshore sea stacks. Little penguins/kororā, shags, and reef herons also nest in coastal forest or on the adjacent coast, highlighting the oceanic connection to the Aotea ecosystems.

The extensive coastal zone of Aotea can be readily divided into: (i) steep areas with rocky outcrops and cliffs, and (ii) sandy beaches, dunes, and estuaries. The cliffs of Aotea provide few opportunities for nesting seabirds, but the steep, crumbling sandy soil beneath the pōhutukawa (*Metrosideros excelsa*) trees above them is used by a few burrowing petrels and shearwaters. Rocky coastlines, islets, headlands and sandspits provide feeding, and occasionally, nesting sites for shags, matuku moana/reef heron, tarāpunga/red-billed gull and tara/white-fronted tern. The status of the wading birds of sandy beaches and estuaries is based mainly on data from Okiwi Spit and the Whangapoua estuary, which is the most ecologically significant estuarine wetland in the entire Auckland region. This large area of intertidal sand and mudflats, mangroves, saltmarshes and dunes comprise by far the most significant habitat for shorebirds on Aotea.

Stony Bay. Photo by Chris Morton.

Harataonga coastal walkway. Photo by Shaun Lee.

Rangiwhakaea Bay. Photo by Chris Morton.

*Tōrea pango / Variable oystercatcher inspecting a kūtai / green-lipped mussel on Medlands Beach. Photo by Shaun Lee.*


1. Kororā / Little blue penguin / *Eudyptula minor* 2. Ōi / Grey-faced petrel / *Pterodroma macroptera*
3. Kāruhiruhi / Pied shag / *Phalacrocorax varius* 4. Tākapu / Australasian gannet / *Morus serrator*.

## The steep rocky fringe of Aotea

Most of the seabirds observed around the rocky shoreline of Aotea are part of a greater Northern New Zealand populations, so their numbers fluctuate in space and time. However, there are small resident populations of reef heron, red-billed and black-backed gulls, white fronted and Caspian terns/ tara and kororā/little penguins. A 2021 survey of nesting burrows of kororā using a sniffer dog in accessible sites identified 105 active burrows. However, starvation from oceanic cycles that affect available food supplies are impacting this population and these events are likely to become more frequent with climate change.

Predation is limiting the establishment of petrel and shearwater breeding colonies. Two small but recovering grey faced/ ōi breeding colonies occur at Awana Bay and Windy Hill, where an estimated 58 and 11 active burrows were identified in 2020.

Fluttering shearwater is one of the most common birds in the Hauraki Gulf but only the occasional nest has been found on Aotea, likely due to their vulnerability to rats.

Of the five shag species found in the Gulf just one, the kāruhiruhi/pied shag breeds on Aotea. They usually nest in pōhutukawa or other large trees growing beside tidal creeks near the sea. At least 10 pied shag colonies are known on Aotea but their overall numbers are likely to be declining. One of the largest breeding colonies of seabirds is the gannet colony on Mahuki in the Broken Islands where there are c. 2500 breeding pairs, making it the largest in the Auckland region. Despite appearing to be common the red billed gull is listed 'At Risk Declining' where competition from fisheries is impacting on available food supplies.

*Tākapu / Australasian gannet over Cape Barrier. Photo by Shaun Lee.*


1. Taranui / Caspian tern / *Hydroprogne caspia* 2. Tōrea pango / Variable oystercatcher / *Haematopus unicolor* 3. Tūturiwhatu / NZ dotterel / *Charadrius obscurus.*

## Beaches and estuaries

While there are resident populations of tūturiwhatu /New Zealand dotterel and tōrea pango/variable oyster catcher on Aotea, many of the birds that frequent the beaches and estuaries are migratory. The most significant site on Aotea for these birds is the Okiwi spit where kuaka/bar-tailed godwit, kuriri/ Pacific golden plover, pohowera/banded dotterel and ngutu pare/wrybill can be found in relatively small numbers from Spring through to Autumn. While numbers of banded dotterel, bar-tailed godwit and Pacific golden plover appear to have changed little over the 22-year period of this report, pied stilts and wrybills, which have always been present in small numbers, have clearly declined, and the wrybill is now an infrequent visitor. For those birds that breed on the island, protection from predation and human disturbance at breeding sites is critical. With increased tourism and visitors to Aotea, more pressure is occurring at breeding sites, especially where there are uncontrolled dogs and vehicle access. Feral cats are also a major threat to breeding birds.

Whangapoua Beach. Photo by Shaun Lee.

*Tūturiwhatu on Kaitoke Beach. Photo by Shaun Lee.*

1. Pakahā / Fluttering shearwater / *Puffinus gavia* 2. Matuku moana / Reef heron / *Egretta sacra* 3. Korimako / Bellbird / *Anthornis melanura.*

## Rakitū

Rakitū was declared ‘predator free’ in 2020 following two aerial bait drops across the island in 2018 to remove rodents. This significant area of predator-free habitat provides a new safe haven for nesting and breeding of many seabirds found around the shores of Aotea. These are likely to include fluttering shearwater, grey faced petrel and diving petrel and possibly Cook’s petrel and others. Hutton met a party of mutton birders there in 1867 and it was a very significant place for mana whenua for this and other reasons.

There is opportunity for both the reintroduction and natural recolonisation of forest birds which were once common on the island, such as whitehead/pōpokotea, bellbird/korimako, and kākāriki. There is also an area of wetland probably suitable for the reintroduction of fernbird (pāteke are already present). However, the decision by DoC to return 60 North Island weka to the island removed before the aerial drops puts at risk the future recovery of these seabirds (and lizards and invertebrates) because weka are known predators of their eggs. There is an urgent need to develop a restoration and management plan for Rakitū in partnership with Ngāti Rehua Ngātiwai ki Aotea.

Rakitū Island. Photo by Chris Morton.

Rakitū Island. Photo by Christine Scott.


*Ōi / Grey-faced petrel. Photo by Neil Fitzgerald.*

## Farmlands, a diverse bird life

The farmed and settlement areas of Aotea are where most of the introduced bird species occur, with up to 37 species recorded in annual bird counts. This high level of diversity reflects the diversity of habitat with a mixture of trees, paddocks, wetland or seasonally flooded areas, and human settlements. Most of the species are relatively recent arrivals having been introduced to New Zealand intentionally during the nineteenth century.  The populations of the smaller birds, finches in particular, have increased since they reached Aotea, and now appear to be stable or increasing. These species aggregate during the winter months, when mixed flocks are notable. However, the most conspicuous birds in summer are pūkeko, kōtare/kingfisher and spur-winged plover. In the damp eastern paddocks paradise shelducks form noisy flocks after breeding. Endemic and native species are relatively infrequent, but the ubiquitous tūī, kākā, grey warbler, fantail, and silvereye are often present where there is scrub or trees.

Two species (the harrier/kāhu and pūkeko) are periodically culled by the Department of Conservation because it is thought they prey on pāteke. Other species (myna, magpie and spur-winged plover) are generally regarded as pests because of their aggressive behaviour towards other birds. The skylark, although conspicuous when singing, and the pipit/pīhoihoi may be declining. The house sparrow, myna and possibly starling, appear to be increasing as the human population on the island grows.


1. Kōtare / Kingfisher / *Todiramphus sanctus*
2. Tūī / *Prosthemadera novaeseelandiae*

Photo by Chris Morton.

*Pīhoihoi / New Zealand pipit. Photo by Shaun Lee.*

# Conclusions and recommendations

**Species loss may have slowed but predators, vegetation transition, and climate warming threaten some with extinction**

Since Hutton's observations in 1868, Aotea has lost 11 species and gained 18 new species. However, there is an asymmetry around this statistic as the lost and endangered birds are predominantly endemic species with an ancient lineage in New Zealand—and are therefore of much greater cultural, scientific, and conservation value.

The two significant factors that drove the loss of these species have been the loss of habitat from destruction of forests and wetlands and the severe impact of introduced mammalian predators. Looking ahead, three factors will be key drivers of current and future bird abundance and richness on Aotea.  They are predators, vegetation transition, and climate change. Unless rats and feral cats are eliminated the many remaining small populations of birds will dwindle to extinction within 50 years.

The transition from successional to mature forest will be important in providing crucial habitat for Aotea's forest-dwelling species. While this transition is underway there is the need to assist and promote it through protection of seed from being taken by rats, removal of highly invasive and flammable species such as pine, and avoiding, at all costs, major fires on the island. Fire is a significant risk and will only increase with the extreme events associated with climate warming. While the impact of climate change is mostly out of our control, we must do all we can to monitor and mitigate against its impacts. While more events such as sea level surges and heavy rainfall are predictable, much is uncertain, including the arrival of new species from elsewhere. This makes for a challenging future environment in which to work. What is certain is the avifauna of Aotea will change because of it.

This report highlights the absence of knowledge and data about many of our threatened birds and how we can better protect them. More research on some of these species is urgently needed to better inform how we might protect these species in future.

Kākā on Aotea. Photo by Stuart Farquhar.

*Tiakina ngā manu, ka ora te ngahere*
*Look after the birds and the forest flourishes*
*Ka ora te ngahere, ka ora ngā manu*
*If the forest flourishes, the birds flourish*

– Māori values and native forest (Ngahere)
by Harsworth et al. Maanaki Whenua Landcare Research

*Kererū on Aotea. Photo by Emma Waterhouse.*

## Recommendations for the birds of Aotea

*The Māhuki takāpu / gannet colony . Photo by Halema Jamieson.*

*Ship rat eating birds egg. Illustration by Shaun Lee.*

### **Recommendation 1:** Recognise Aotea as a connected set of ecosystems of national significance

That the highest conservation priority, be given to Aotea as a connected whole, ki uta ki tai, and in particular, the nationally significant ecosystems of the:

- Whangapoua Estuary and Okiwi Spit: a nationally significant estuary with many rare and endangered wading and migratory seabirds.
- Kaitoke wetland: a nationally significant swamp that provides habitat for the endangered Australasian bittern, spotless crake, and fernbird.
- Cloud forest of Hirakimatā: a unique, unmodified forest that is the largest remaining breeding and nesting site for tākoketai/black petrel and one of two for titi/Cook's petrels.
- Islets and islands of the Aotea group, including Rakitū and the numerous mana whenua-owned islands around the coast.
- Te Paparahi: the largest tract of forest in Aotearoa that is free of mustelids, possums and ungulates.

### **Recommendation 2:** Enable the eradication of rodents and feral cats

With the successful establishment of the Ngāti Rehua Ngātiwai ki Aotea lead Tū Mai Taonga project, a pathway to eradication has begun. What is critical, is that long term funding is secured from the accountable local and central government entities to ensure that vision can be achieved. Aotea's biodiversity and ecosystem value in its entirety (see Recommendation 1), and its defendability as Aotearoa's largest predator free island, should be sufficient justification for Auckland Council and the Department of Conservation to partner with iwi and the community to securely fund intensive predator control and eventually, eradication.

*Kākāriki / Red-crowned parakeet. Photo by Sarah Matthews*

*Pāteke. Photo by Sarah Dwyer.*

### **Recommendation 3:** Support the restoration of Rakitū

That urgent attention be given to supporting the development a restoration plan for Rakitū island, under the leadership and kaitiakitanga of Ngāti Rehua Ngātiwai ki Aotea. The now predator-free status of this island provides an expanded area for nesting and breeding of up to nine seabirds that frequent the "Seabird Super-highway" of northern New Zealand waters and the Hauraki Gulf – at a time when seabird populations are in decline. Crucial for seabird recovery on Rakitū is removal of the introduced North Island weka, which are known to predate eggs of seabirds and limit island ecosystem recovery through predation of lizards and invertebrates.

### **Recommendation 4:** Accelerate Pāteke recovery action on Aotea

In order to avoid extinction of this species on Aotea, that the relative role of food availability, habitat health, and predation be urgently investigated and a management plan that is research-informed be developed and funded to ensure the long-term survival of pāteke. Aotea has been a bastion for pāteke and the source of translocations for the majority of mainland populations outside Northland. While many of these populations are currently thriving, on Aotea the parent population is in very serious decline and is symptomatic of the dire state of most other wetland bird species on the island.

**John Ogden (Author of full report).**
**George Perry, Barry Scott and Kate Waterhouse**
December 2022

# Species names and categories: Birds of Aotea

| English name | Māori name | Scientific name | Status |
|---|---|---|---|
| Albatross, royal | Toroa | *Diomedea epomophora* | EV |
| **Albatross, wandering** | **Toroa** | ***Diomedea exulans*** | **NV** |
| **Bellbird*** | **Korimako** | ***Anthornis melanura*** | **E*** |
| **Bittern, Australasian** | **Matuku-hūrepo** | ***Botaurus poiciloptilus*** | **NB** |
| Blackbird | Manu pango | *Turdus merula* | IB |
| **Cape pigeon** | **Tītore** | ***Daption capense*** | **NV** |
| Chaffinch | Pahirini | *Fringilla coelebs* | IB |
| Crake, marsh (?) | Koitareke | *Porzana pusilla* | N |
| Crake, spotless | Pūweto | *Porzana tabuensis* | NB |
| **Cuckoo, long-tailed*** | **Koekoeā** | ***Eudynamys taitensis*** | **EM*** |
| **Cuckoo, shining** | **Pīpīwharauroa** | ***Chrysococcyx lucidus*** | **NBM** |
| Domestic hen | | *Gallus gallus* | ID |
| Dotterel, banded | Pohowera | *Charadrius bicinctus* | EB |
| Dotterel, large sand | | *Charadrius leschenaultii* | V |
| Dotterel, Mongolian | | *Charadrius mongolus* | V |
| **Dotterel, New Zealand** | **Tūturiwhatu** | ***Charadrius obscurus*** | **EB** |
| Dove, Barbary | | *Streptopelia roseogrisea* | I |
| Dove, spotted | | *Streptopelia chinensis* | I |
| **Duck, grey*** | **Pārera** | ***Anas superciliosa*** | **N*?** |
| Dunnock | | *Prunella modularis* | IB |
| Egret, cattle | | *Bubulcus ibis* | V |
| **Falcon, New Zealand*** | **Kārearea** | ***Falco novaeseelandiae*** | **EV*** |
| **Fantail** | **Pīwakawaka** | ***Rhipidura fuliginosa*** | **NB** |
| **Fernbird** | **Mātātā** | ***Bowdleria punctata*** | **EB** |
| Frigatebird, lesser | | *Fregata ariel* | V |
| **Gannet** | **Tākapu** | ***Morus serrator*** | **NB** |
| **Godwit bar-tailed** | **Kuaka** | ***Limosa lapponica*** | **NM** |
| Goldfinch | | *Carduelis carduelis* | IB |
| Goose, Canada | | *Branta canadensis* | IV |
| Goose, domestic | | *Anser anser* | IDB |
| Greenfinch | | *Chloris chloris* | IB |
| **Grey warbler** | **Riroriro** | ***Gerygone igata*** | **EB** |
| Guineafowl, helmeted | | *Numida meleagris* | ID |
| **Gull, red-billed** | **Tarāpunga** | ***Larus novaehollandiae*** | **NB** |
| **Gull, southern black-backed** | **Karoro** | ***Larus dominicanus*** | **NB** |
| **Harrier, Australasian** | **Kāhu** | ***Circus approximans*** | **NB** |
| **Heron, reef** | **Matuku moana** | ***Egretta sacra*** | **NB** |
| Heron, white | Kōtuku | *Ardea alba* | NV |
| Heron, white-faced | Matuku moana | *Egretta novaehollandiae* | NB |
| **Kākā** | **Kākā** | ***Nestor meridionalis*** | **EB** |
| **Kingfisher** | **Kōtare** | ***Todiramphus sanctus*** | **NB** |
| Knot | Huahou | *Calidris canutus* | NM |
| **Kokako*** | **Kōkako** | ***Callaeas wilsoni*** | **E*** |
| Magpie, white-backed | Makipai | *Gymnorhina tibicen* | IB |

| English name | Māori name | Scientific name | Status |
|---|---|---|---|
| Mallard | | *Anas platyrhynchos* | IB |
| **Mollymawk, black-browed** | **Toroa** | ***Diomedeioa (Thalassarche) melanophrys*** | **NV** |
| Mollymawk, shy | Toroa | *Diomedia (Thalassarche) cauta steadi* | NV |
| **Mollymawk, yellow-nosed** | **Toroa** | ***Thalassarche carteri*** | **NV** |
| **Morepork** | **Ruru** | ***Ninox novaeseelandiae*** | **NB** |
| Myna, common | | *Acridotheres tristis* | IB |
| Needletail, white-throated | | *Hirundapus caudacutus* | V |
| Oystercatcher, South Island pied | Tōrea | *Haematopus finschi* | NM |
| **Oystercatcher, variable** | **Tōrea pango** | ***Haematopus unicolor*** | **EB** |
| **Parakeet, red-crowned** | **Kākāriki** | ***Cyanoramphus novaezelandiae*** | **EB** |
| **Parakeet, yellow-crowned*** | **Kākāriki** | ***Cyanoramphus auriceps*** | **E*** |
| **Penguin, little** | **Kororā** | ***Eudyptula minor*** | **NB** |
| **Petrel, black** | **Tākoketai** | ***Procellaria parkinsoni*** | **EB** |
| Petrel, black-winged | Tītī | *Pterodroma nigripennis* | NV |
| Petrel, blue | | *Halobaena caerulea* | NV |
| **Petrel, Cook's** | **Tītī** | ***Pterodroma cookii*** | **EB** |
| **Petrel, northern diving** | **Kuaka** | ***Pelecanoides urinatrix*** | **NB** |
| **Petrel, northern giant** | **Pāngurunguru** | ***Macronectes halli*** | **NV** |
| Petrel, grey | Kuia | *Procellaria cinerea* | NV |
| Petrel, grey-faced | Ōi | *Pterodroma gouldi* | EB |
| Petrel, mottled | Kōrure | *Pterodroma inexpectata* | EV |
| **Petrel, white-headed** | | ***Pterodroma lessonii*** | **NV** |
| Pheasant, ring-necked. | | *Phasianus colchicus* | IB |
| **Pigeon, New Zealand** | **Kererū** | ***Hemiphaga novaeseelandiae*** | **EB** |
| Pigeon, rock | | *Columba livia* | IB |
| **Pipit, New Zealand** | **Pīhoihoi** | ***Anthus novaeseelandiae*** | **NB** |
| Plover, Pacific golden | Kuriri | *Pluvialis fulva* | NM |
| **Plover, shore*** | **Tuturuatu** | ***Thinornis novaeseelandiae*** | **E*** |
| Plover, spur-winged | | *Vanellus miles* | NB |
| Prion, Antarctic | Whiroia | *Pachyptila desolata* | NV |
| Prion, broad-billed | Pararā | *Pachyptila vittata* | NV |
| **Prion, fairy** | **Tītī wainui** | ***Pachyptila turtur*** | **NV** |
| Prion, narrow-billed | | *Pachyptila belcheri* | NV |
| Pūkeko | Pūkeko | *Porphyrio melanotus* | NB |
| Quail, brown | | *Coturnix ypsilophora* | I° |
| Quail, California | | *Callipepla californica* | I° |
| **Quail, New Zealand*** | | ***Coturnix novaezelandiae*** | **E*** |
| Rail, banded | Moho pererū | *Gallirallus philippensis* | NB |
| Redpoll, lesser | | *Acanthis flammea* | IB |
| **Rifleman** | **Titipounamu** | ***Acanthisitta chloris*** | **E *** |
| **Robin, North Island**** | **Toutouwai** | ***Petroica longipes*** | **EB **** |
| Roller, broad-billed | | *Eurystomus orientalis* | V |
| **Saddleback, North Island*** | **Tīeke** | ***Philesturnus rufusater*** | **E*** |

| English name | Māori name | Scientific name | Status |
|---|---|---|---|
| Sandpiper, sharp-tailed | | *Calidris acuminata* | V |
| Shag, black | Kawau | *Phalacrocorax carbo* | ?NB |
| Shag, little | Kawaupaka | *Phalacrocorax melanoleucos* | ?NB |
| Shag, little black | Kawau tūī | *Phalacrocorax sulcirostris* | ?NB |
| **Shag, pied** | **Kāruhiruhi** | ***Phalacrocorax varius*** | **NB** |
| Shag, spotted | Pārekareka | *Stictocarbo punctatus* | EV |
| Shearwater, Buller's | Rako | *Ardenna bulleri* | E |
| Shearwater, flesh-footed | Toanui | *Ardenna carneipes* | N |
| Shearwater, fluttering | Pakahā | *Puffinus gavia* | EB |
| Shearwater, Hutton's | Tītī Kaikōura | *Puffinus hutttoni* | EV |
| **Shearwater, little** | **Pakahā** | ***Puffinus assimilis*** | **N** |
| Shearwater, short-tailed | Koakoa | *Ardenna tenuirostris* | M |
| Shearwater, sooty | Tītī | *Ardenna grisea* | N |
| Shelduck, paradise | Pūtangitangi | *Tadorna variegata* | EB |
| **Silvereye** | **Tauhou** | ***Zosterops lateralis*** | **NB** |
| Skua, Arctic | | *Stercorarius parasiticus* | M |
| Skylark | Kaireka | *Alauda arvensis* | IB |
| Sparrow, house | Tiu | *Passer domesticus* | IB |
| Spoonbill, royal | Kōtuku ngutupapa | *Platalea regia* | N |
| Starling | | *Sturnus vulgaris* | IB |
| Stilt, pied | Poaka | *Himantopus leucocephalus* | NB |
| **Stitchbird*** | **Hihi** | ***Notiomystis cincta*** | **E*** |
| Stint, red-necked | | *Calidris ruficollis* | M |
| **Storm petrel, black- bellied** | **Takahikare** | ***Fregetta tropica*** | **NV** |
| **Storm petrel, grey- backed** | **Reoreo** | ***Garrodia nereis*** | **NV** |
| Storm petrel, New Zealand | Takahikare raro | *Fregetta maoriana* | E |
| Storm petrel, white- faced | Takahikare-moana | *Pelagodroma marina* | N |
| Swallow, welcome | Warou | *Hirundo neoxena* | NB |
| Swan, black | Karianau | *Cygnus atratus* | IV |
| Teal, brown | Pāteke | *Anas chlorotis* | EB |
| **Tern, Caspian** | **Taranui** | ***Hydroprogne caspia*** | **NB** |
| **Tern, white-fronted** | **Tara** | ***Sterna striata*** | **NB** |
| Thrush, song | | *Turdus philomelos* | IB |
| **Tomtit, North Island** | **Miromiro** | ***Petroica macrocephala*** | **EB** |
| **Tropicbird, white tailed** | | ***Phaethon lepturus*** | **V** |
| **Tūī** | **Tūī** | ***Prosthemadera novaeseelandiae*** | **EB** |
| Turkey | | *Meleagris gallopavo* | IDB |
| Turnstone | | *Arenaria interpres* | V |
| Weka | Weka | *Gallirallus australis greyi* | EB |
| Whimbrel | | *Numenius phaeopus* | V |
| **Whitehead*** | **Pōpokotea** | ***Mohoua albicilla*** | **E*** |
| Wrybill | Ngutu parore | *Anarhynchus frontalis* | EV |
| Yellowhammer | | *Emberiza citrinella* | IB |

# Species names and categories

## Key to status:

**Bold green indicates bird listed by Hutton 1868.**

E **Endemic.** Only found in New Zealand.

N **Native**. Reached New Zealand naturally and established.

I **Introduced**. Brought to New Zealand by man.

I° **Introduced** to Aotea since Hutton's list (1868) but no longer present.

B **Breeding** or probably breeding on Aotea.

M **Migrant** to Aotea, either from within New Zealand or from overseas.

V **Vagrant.** Occasional visitor or vagrant blown off course and not established.

D **Domestic** feral species.

* Indicates species lost as breeding bird on Aotea since Hutton's (1868) visit. Note that unasterisked species in green are still present as breeding birds, migrants or vagrants.

** Indicates species lost but reintroduced and now breeding.

## About John Ogden

John Ogden MSc., PhD., DSc., FRSNZ was formerly Associate Professor of Forest Ecology at the University of Auckland. His research include forest dynamics, and long-term change in climate and landscape. John taught in Australia and the United States, and published more than 100 scientific papers and articles on a diverse range of ecological topics, including community issues in pest control and the ecology of endangered N.Z. birds. He was the founding chairperson of the Aotea Great Barrier Environmental Trust. After living at Awana for more than 20 years, John now lives at Oruawharo Medlands with his wife Jenni, and itinerant offspring and visitors. This report is based on his records of Aotea's birds, historical records, recently published data from Windy Hill Sanctuary and the Aotea Bird Count, and the expert input of a wide range of students and ecologists working on Aotea, and Auckland Council and Department of Conservation staff.

## Dedication

Birds of Aotea is dedicated to the memory of Emma Waterhouse, who initiated this project, but died in 2021 at the age of 52. She is greatly missed. E rere wairua, e rere.

Published by the Aotea Great Barrier Environmental Trust on the 20th Anniversary of its incorporation. Written by John Ogden (MSc., PhD., DSc., FRSNZ), edited by Kate Waterhouse, Barry Scott and George Perry (Trustees, Aotea Great Barrier Environmental Trust).

The full report is available online at: www.gbiet.org/birds-of-aotea

Aotea Great Barrier Environmental Trust www.gbiet.org contact.gbiet@gmail.com

This report has been produced with funding assistance from Aotea Great Barrier Local Board and Foundation North, and the support of Auckland Council.
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