

# A fisher's guide: New Zealand Seabirds

New Zealand is considered the seabird capital of the world due to the high diversity of seabirds on our waters. Most of the birds in this guide breed in New Zealand and many breed nowhere else in the world. New Zealand's seabirds include penguins, albatrosses, petrels, shags, gannets, terns and skuas.

Because most seabirds travel long distances, they face an array of threats while at sea including interactions with various fisheries, pollution and depletion of prey. This quick-reference guide includes seabirds that are considered at risk of being bycaught in fisheries.

There are numerous individuals, organisations and governments working to protect seabirds. Populations for many of the seabirds in this guide are low and every individual is important. In other words, all efforts to reduce bycatch are critical. Some of New Zealand's fisheries now have mitigation measures in place to reduce seabird bycatch. Many of these mitigation measures are also being used in other parts of the world.



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Species Group: XGA  
Great albatrosses

## Antipodean (wandering) albatross XAN and Gibson's albatross XAU *Diomedea antipodensis antipodensis* and *D. a. gibsoni* (Combined code XAG)



Image: Kath Walker



Image: © M. P. Pierre

### Distinguishing characteristics

**Head:** White faces and throat with brownish crowns.

**Body:** Large albatrosses that become whiter as they mature, but some dark tail feathers. Adult males often have white bodies with some mottled brown patches. Females frequently have dark bodies.

**Wings:** Average wingspan of around three metres. Upperwings can be dark through to almost all white. White underwings with dark tips.

**Bill:** Pink.

**Juvenile features:** Dark brown plumage with a white face, throat and underwings.

### Feeding and range



**Eats:** Forages on squid and sometimes fish.

**Range:** South Pacific Ocean from Australia to Chile. Gibson's known to forage in the Southern Ocean. Tracking studies on Antipodean albatrosses indicate incubating birds mainly forage east of New Zealand, but some non-breeding males fly east to the waters off Chile. During early incubation, Gibson's are believed to mainly feed in the Tasman Sea and east of New Zealand.

### Interesting Facts



Although genetically similar, Gibson's albatrosses usually have paler plumage than Antipodean albatrosses.

## Breeding and ecology



**Breeding sites:** Antipodean albatrosses breed at Antipodes Island, with a few pairs at Campbell Island and the Chatham Islands (Chatham, Pitt). Gibson's albatrosses breed only at the Auckland Islands (Adams, Auckland, Disappointment).

**Breeding period:** Egg laying begins in December for Gibson's and January/February for Antipodean albatrosses. Chicks usually fledge the following January through March.

**Frequency of breeding:** Every two years for successful breeders or annually for failed breeders.

**Number of eggs:** One.

**Type of nests:** Nest in loose colonies with nests widely spaced apart. Nest is a raised cup of soil that is built among tussock and megaherbs.

## Threats



### At sea

- In New Zealand, these albatrosses are reported caught in trawl and longline fisheries.
- Because Antipodean and Gibson's albatrosses forage widely across the South Pacific Ocean and Tasman Sea they are at risk from fishing outside New Zealand's Exclusive Economic Zone, and in international waters.
- Outside New Zealand waters, these albatrosses are caught in longline fisheries targeting tuna and tuna-like species, e.g. off Australia and Chile, and southern hemisphere longline fisheries operated by Japan. Further, while information is still poor in some cases, these albatrosses overlap with Asian distant-water pelagic longline fleets operating in the central Pacific.

### On land

- There are currently few land-based threats to Antipodean and Gibson's albatrosses.
- Mammalian predators may take eggs and kill unguarded chicks at some colonies. Adams, Disappointment and Campbell islands are free of introduced mammals.
- Visitor impacts on this species are currently minimal because access is restricted to Antipodes, Adams and Disappointment islands, and very few people visit the nests of birds breeding at Campbell and Auckland islands.

Species Group: XGA  
Great albatrosses

# Northern royal albatross XNR

## *Diomedea sanfordi*



Image: Tui De Roy



Image: blog.doc.govt.nz/?s=taiaroa+500

### Distinguishing characteristics

**Head:** White, sometimes with dark spots on their crown.

**Body:** Very large. Body and back white.

**Wings:** Upperwings are completely dark.

**Feet:** Pink.

**Bill:** Light pink with a thin black line on the cutting edge.

**Juvenile features:** Immature birds look similar to adults, but may have some dark spots on their crown and back.

### Feeding and range



**Eats:** Mainly feed on squid, but also eat some fish.

**Range:** Forage widely over the Tasman Sea, Pacific Ocean and South Atlantic Ocean.

### Interesting Facts



The northern royal albatross colony at Taiaroa Head on the Otago Peninsula is the only albatross colony on New Zealand's main islands.

Since the colony established in the 1930s, more than 650 chicks have hatched at Taiaroa Head.

## Breeding and ecology



**Breeding sites:** Chatham Islands (Forty-Fours, Big Sister and Little Sister), South Island (Tairaroa Head) and Auckland Islands (Enderby where some have hybridised with southern royal albatrosses).

**Breeding period:** Egg laying begins in late October and chicks depart the following year from August to October.

**Frequency of breeding:** Every two years for successful breeders.

**Number of eggs:** One.

**Nesting:** Northern royal albatrosses have denser colonies than other great albatrosses. They build nesting mounds out of soil and vegetation.

## Threats



### At sea

- In New Zealand, northern royal albatrosses have been reported caught in trawl and longline fisheries.
- They have also been reported bycaught in longline fisheries around Australia, Brazil, and Uruguay.
- Where information exists, the relatively high survival rates of adults and juveniles suggest that fisheries-related mortality is not a major threat to this species.

### On land

- Monitoring at the colony at Tairaroa Head started in 1937. Land-based threats are actively managed at the colony. Managing fly strike and heat stress has increased egg and chick survival significantly. Extensive trapping for mammalian predators (cats, stoats, and ferrets) has reduced predation risks.
- Nesting habitat on the Chatham Islands can be vulnerable to severe storms, which remove vegetation and soil from nesting areas.
- There are no mammalian predators where these albatrosses breed on the Chatham Islands.

Species Group: XGA  
Great albatrosses

## Southern royal albatross XRA

### *Diomedea epomophora*



Image: © M. P. Pierre



Image: © M. P. Pierre

### Distinguishing characteristics

**Head:** Usually white, some may have dark spots on their crown.

**Body:** Very large albatrosses with a white body. Tail all white in adults. When fully mature they are the whitest of all the albatrosses.

**Wings:** White upperwings with some black barring. As they age their upperwings become whiter.

**Feet:** Light pink.

**Bill:** Pink with a thin black line on the cutting edge.

### Feeding and range



**Eats:** Mainly feed on squid, but also eat some fish.

**Range:** During breeding season they forage over the Tasman Sea and South Pacific Ocean. Birds migrate after breeding to the South Atlantic Ocean and have a circumpolar distribution in the Southern Ocean.

### Interesting Facts



Southern royal albatrosses and wandering albatrosses are the largest of all albatrosses.

Like many other seabirds, southern royal albatross chicks vomit a foul-smelling stomach oil as a defence against predators.

## Breeding and ecology



**Breeding sites:** Mainly on Campbell Island, with a few on the Auckland Islands (Adams, Enderby, Auckland) and the South Island (Taiaroa Head – where they have hybridised with northern royal albatrosses).

**Breeding period:** Eggs are laid from late November to late December. After the egg is laid both parents take turns on the nest. The egg takes about 79 days to hatch. The chick is brooded for a month and fledges after about 240 days.

**Frequency of breeding:** Every two years for successful breeders.

**Number of eggs:** One.

**Type of nests:** A mound of soil and vegetation.

## Threats



### At sea

- In New Zealand, southern royal albatrosses have been reported caught in trawl and longline fisheries.
- Outside New Zealand, these albatrosses have been caught in longline fisheries around Argentina, Australia, Uruguay, and Chile, and by Japanese longliners on the high seas.
- Captures occurring in New Zealand commercial fisheries where observer coverage occurs are considered unlikely to significantly impact this species.

### On land

- Skuas are natural predators and take some eggs.
- Feral pigs may take eggs and kill unguarded chicks on Auckland Island.
- A potential threat to the breeding habitat of southern royal albatrosses is the encroachment of the scrub *Dracophyllum*, which may be caused by climate change.
- Tourist visits may have some impact on nesting albatrosses. Nervous birds are known to abandon nests when visited or handled. DOC has implemented a number of measures to control and limit the area where visitors can go on islands while southern royal albatrosses are breeding.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Southern and Northern Buller's (Pacific) albatross XBM/XNB

*Thalassarche bulleri bulleri and T. b. platei* (Combined code XPB)

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Image: JJ Harrison, CC-SA 3.0 Unported



Image: Sabine's Sunbird, CC-SA 3.0 Unported

### Distinguishing characteristics

**Head:** Grey head and neck with white crown.

**Body:** White body with a dark upper tail.

**Wings:** Upperwing is dark. Underwing is white with a black margin.

**Bill:** Dark with broad, bright-yellow stripes on the top and bottom.

**Subspecies:** Southern and northern Buller's albatross look very similar. The bill and head can help distinguish them. The sides of the bill of the Southern Buller's albatross are about 70% black. The bill of the northern Buller's albatross is about 80% black on its sides, as well as longer and deeper than its southern counterpart. The forehead of the northern Buller's albatross tends to be greyer than the southern subspecies.

### Feeding and range



**Eats:** Mostly fish, squid, octopuses, sea squirts and crustaceans.

**Range:** Breeding and non-breeding adults are known to forage in the Tasman Sea, the Pacific Ocean east of the South Island, and over the shelf areas south of Stewart Island. Juveniles and non-breeding adults disperse across the South Pacific Ocean, north of the Antarctic Convergence, reaching the Humboldt Current off Chile and Peru.

### Interesting Facts



After breeding, many adults and juveniles migrate to the waters of Peru and Chile. Here the immature birds may remain for up to five years.

## Breeding and ecology



**Breeding sites:** Breed only in New Zealand on the Snares Islands, Solander Islands, Chatham Islands, and Three Kings Islands.

**Breeding period:** On the Chatham Islands they breed from October to the following May. Other breeding colonies breed from December to September.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Build pedestal nests amongst shrubs on narrow terraces or in the forest.

## Threats



### At sea

- Buller's albatross is caught in trawl and longline fisheries in New Zealand.
- Bycatch in Australian and Chilean longline fisheries has also been recorded.
- While fisheries bycatch is ongoing, over the past 60 years, the risk to population viability resulting from fisheries has been small.

### On land

- Few threats to the species on land.
- Weka were introduced to Big Solander Island and may have some impact on breeding success there.
- Avian diseases may be a potential threat to species.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Campbell albatross XCM

### *Thalassarche impavida*



Image: Tui De Roy, Roving Tortoise Photos



Image: Tui De Roy, Roving Tortoise Photos

### Distinguishing characteristics

**Head:** White. Black eyebrows. Irises are honey-coloured.

**Body:** Medium-sized albatross with a white body.

**Wings:** Dark upperwings. Underwings white with black margins.

**Feet:** Bluish white.

**Bill:** Yellow with a red tip.

**Juvenile features:** Dark bill with blackish tip. Grey plumage on lower neck. Eye colour initially dark brown and therefore easily confused with juvenile black-browed albatross.

### Feeding and range



**Eats:** Mainly fish, squid and crustaceans.

**Range:** The species disperses widely around the Southern Ocean and into the temperate seas of the South Atlantic, Indian, and South Pacific oceans.

### Interesting Facts



Long considered a New Zealand subspecies of the black-browed albatross, the two species are now known to breed in mixed colonies on Campbell Island. While some hybrids have been found, the birds appear to prefer to mate with their own species.

## Breeding and ecology



**Breeding sites:** Breeds only on Campbell Island.

**Breeding period:** Begins August and ends the following April.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters that nest on cliffs and steep slopes. Build pedestal nests made of compacted soil.

## Threats



### At sea

- Campbell albatrosses are caught in longline and trawl fisheries in New Zealand.
- Captures have also been reported in longline fisheries in Australian waters.
- Bycatch is thought to have caused population declines for this albatross from the 1970s through the 1990s.

### On land

- Few land-based threats remain for the species.
- Human visitors may have some impact, but few people visit the colonies at the northern end of Campbell Island.
- Avian diseases are a possible threat to the species.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Southern black-browed albatross XSM

### *Thalassarche melanophris*



Image: Tui De Roy, Roving Tortoise Photos



Image: © M. P. Pierre

### Distinguishing characteristics

**Head:** White. Black patch around the eye and black irises.

**Body:** Body is white.

**Wings:** Dark upperwings and white on the underwings with black margins. Wingspan is 210-250 cm.

**Feet:** Yellowish-orange webbed feet.

**Bill:** Bright yellow with reddish tip.

**Juvenile features:** Immature birds have dark bills with blackish tips.

### Feeding and range



**Eats:** Mostly krill and fish. Also eat some squid, salps and jellyfish.

**Range:** During the summer, common over shelves around New Zealand and Australia. In the winter, birds from the Indian Ocean migrate to shelves off east Africa, Australia and New Zealand.

### Interesting Facts



About 70% of the global population of black-browed albatross breeds on the Falkland Islands.

Less than 150 pairs of this albatross breed in New Zealand.

## Breeding and ecology



**Breeding sites:** In New Zealand, black-browed albatrosses breed in low numbers on Campbell, Antipodes and Snares islands. Elsewhere the species breeds on Cape Horn, Falkland, South Georgia, Crozet, Kerguelen, Heard and Macquarie islands.

**Breeding period:** Begins in August with eggs laid in late September and ends in April.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters. Nest on terraces on top of coastal tussock-clad cliffs or steep slopes. Builds a pedestal nest of soil, guano and vegetation.

## Threats



### At sea

- Reported caught in trawl and longline fisheries in New Zealand.
- This species is also widely bycaught outside New Zealand waters, in southern hemisphere longline and trawl fisheries.

### On land

- There are few land-based threats globally that could cause population changes for this species.
- Almost 50% of the global population lives on islands free from introduced predators, including in New Zealand.
- Ticks and avian diseases.
- Numbers of visitors to some breeding colonies. This is not currently a threat in New Zealand.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

# Chatham Island albatross XCI

## *Thalassarche eremita*



Image: Tui De Roy



Image: Danmantle, CC-SA 3.0 Unported

### Distinguishing characteristics

**Head:** Mature birds have a grey crown, face and throat.

**Body:** Medium-sized with a white chest and belly, and a dark-grey tail.

**Wings:** Dark-grey upperwings. White underwings.

**Bill:** Yellow bill with a dark spot at the tip of the lower bill.

**Juvenile features:** Juveniles have more grey in their plumage and a blue-grey bill that has a black tip.

### Feeding and range



**Eats:** Squid and fish.

**Range:** South Pacific Ocean west to Tasmania and east to South America. In winter the species migrates to the territorial waters of Chile and Peru. Juveniles appear to remain in South American waters until they reach breeding age.

### Interesting Facts



Chatham albatross breed on one rock stack (The Pyramid) that is only 10 ha in size. Over five years from 2014, Chatham albatross chicks were translocated from The Pyramid to main Chatham Island to try to create a new breeding colony.

## Breeding and ecology



**Breeding sites:** Chatham albatrosses breed only on The Pyramid, which is a large rock stack in the Chatham Islands.

**Breeding period:** August-September to the following March-April.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial breeders that build pedestal nests out of guano and fish bones.

## Threats



### At sea

- Chatham albatross have been bycaught in New Zealand longline and trawl fisheries.
- Outside New Zealand, these albatrosses have been caught in longline fisheries operating off Australia, Chile and Peru.

### On land

- The habitat quality on The Pyramid deteriorated following a severe storm in 1985, but has since recovered.
- The Pyramid is privately owned and it is believed the illegal harvesting of Chatham albatross chicks still occasionally occurs.
- Could be affected by bird diseases including avian pox virus.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Salvin's albatross XSA

### *Thalassarche salvini*



Image: © M. P. Pierre



Image: © M. P. Pierre

### Distinguishing characteristics

**Head:** Light grey to brown with a white cap.

**Body:** Medium-sized albatross with a mostly white body.

**Wings:** Dark upperwings with some mottled white near neck. Underwings are mainly white with a narrow outline of black.

**Bill:** Dusky grey or pale brown, with yellow patches at the base, tip and sides.

### Feeding and range



**Eats:** Squid and fish.

**Range:** Distributed widely over the Southern Ocean. They can be found in the South Pacific and Indian oceans. They often forage over shelves and seamounts.

### Interesting Facts



95% of the world population of Salvin's albatross breeds on the tiny, barren islets of the Bounty Islands.

## Breeding and ecology



**Breeding sites:** In New Zealand, Salvin's albatrosses breed annually at the Bounty Islands, the Snares and possibly The Pyramid and the Forty-Fours at the Chatham Islands. The species also breeds at the Crozet Islands in the Indian Ocean.

**Breeding period:** Begins in October and ends the following April.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Nest on barren islands and rock stacks.

## Threats



### At sea

- Commonly seen attending fishing vessels.
- Salvin's albatross have been reported caught from longline and trawl fisheries in New Zealand.
- Almost all of these captures have been reported from the east and south of New Zealand.
- Outside New Zealand waters, Salvin's albatross are reported caught in longline fisheries off Chile.

### On land

- There are very few land-based threats to Salvin's albatrosses.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## New Zealand white-capped albatross XWM

### *Thalassarche cauta steadi*



Image: © M. P. Pierre



Image: Ron Knight, CC by 2.0

### Distinguishing characteristics

**Head:** White with faint grey on cheeks.

**Body:** The large albatross has a white chest, belly and rump.

**Wings:** Dark upperwings. Underwings are white with narrow black margins.

**Bill:** Light greyish-white with yellow tip and a faint yellow patch near the base of the top mandible.

### Feeding and range



**Eats:** Squid and fish.

**Range:** During the breeding season they feed over the Snares Island Shelf and Auckland Island Shelf.

### Interesting Facts



Researchers monitor the white-capped albatross population with the help of counts made using photos taken from helicopters, of the birds at their breeding islands. This method disturbs nesting albatrosses significantly less than conducting counts from the ground.

## Breeding and ecology



**Breeding sites:** Breed only in New Zealand on Disappointment Island, Adams Island, Auckland Island, and Bollons Island. About 96% of the total population breeds on Disappointment Island.

**Breeding period:** Egg laying starts in mid-November and the chicks fledge in mid-August.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters that build large mound nests out of soil and vegetation.

## Threats



### At sea

- White-capped albatross are caught in trawl and longline fisheries in New Zealand.
- It has been estimated that more than 8,000 white-capped albatrosses are killed annually in trawl and longline fisheries around the southern hemisphere.
- Outside New Zealand waters, white-capped albatrosses have been reported caught in trawl and longline fisheries off South Africa, and in Uruguayan longline fisheries in the southwest Atlantic Ocean.
- Distinguishing white-capped and shy albatrosses is difficult. This leads to uncertainty about which albatross is being caught in some fisheries.

### On land

- There are few land-based threats to the species.
- Mammalian predators (especially feral pigs) on Auckland Island destroy nests and eat eggs and chicks.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Grey-headed albatross XGM

### *Thalassarche chrysostoma*



Image: A. Wright



Image: A. Wright

### Distinguishing characteristics

**Head:** Medium-sized albatross. When mature, the body is white and upper tail is dark grey.

**Wings:** Dark grey upperwings. Underwings are white with black margins. The species has a two-metre wingspan.

**Bill:** Dark bill has a yellow stripe on the top and on the bottom. The top stripe gradually tapers at the base of the bill.

### Feeding and range



**Eats:** Fish, squid and crustaceans. Lampreys appear to be important in the diet of young birds being fed by their parents.

**Range:** Circumpolar navigators that prefer to feed in the open oceans rather than over the continental shelves. Breeding birds are known to travel up to 2000 km away from their breeding areas to the Polar Front to forage.

### Interesting Facts



The grey-headed albatross has a variety of calls. These include a braying call and one that sounds like a chainsaw starting up.

## Breeding and ecology



**Breeding sites:** In New Zealand this albatross breeds only on Campbell Island. In other parts of the southern hemisphere it breeds on Diego Ramirez (Cape Horn), South Georgia, Prince Edward, Crozet, Kerguelen and Macquarie islands.

**Breeding period:** Season begins in August with eggs laid in late September and ends the following May.

**Frequency of breeding:** Every two years for successful breeders.

**Number of eggs:** One.

**Type of nests:** Cone nests are made of mud and lined with vegetation.

## Threats



### At sea

- While grey-headed albatrosses have been bycaught in New Zealand fisheries in the past, this albatross has not been reported caught in recent years.
- These albatrosses have been caught in longline fisheries off Kerguelen and Crozet islands, South Georgia, over the Patagonian Shelf, south of Africa, and around Australia.
- Grey-headed albatrosses often forage over deeper waters away from continental shelves. This reduces their exposure to some fisheries threats.

### On land

- Few land-based threats remain for the grey-headed albatross.
- The greatest land-based threat is from its natural predator, the brown skua, which takes some eggs and will kill weak chicks.
- The species is known to abandon nests if handled during incubation, but few humans visit its colonies on Campbell Island.
- Avian diseases are a possible threat.

Species Group: XMA  
Smaller albatrosses  
(mollymawks)

## Light-mantled sooty albatross XLM

### *Phoebastria palpebrata*



Image: DOC



Image: Don Merton

### Distinguishing characteristics

**Head:** Sooty brown with a white crescent behind its eye.

**Body:** Sooties are amongst the smallest of the albatrosses. Ash-grey with a darker grey belly.

**Wings:** Average wingspan 200 cm. Sooty brown in colour.

**Feet:** Grey.

**Bill:** Dark with a faint blue line on its cutting edge.

### Feeding and range



**Eats:** Fish and some squid.

**Range:** Prefers deep offshore waters and forages over cold Antarctic waters in summer as far south as the pack ice, but ranges north into temperate and subtropical seas in winter. While foraging, breeding birds may range thousands of kilometres from their breeding grounds.

### Interesting Facts



Unlike other albatrosses, sooties have a long stiff wedge-shaped tail which is believed to aid their agility during paired courtship flights.

## Breeding and ecology



**Breeding sites:** Auckland Islands (Adams, Disappointment, Auckland, Enderby, Rose), Campbell Island group (Campbell, Dent, Jacquemart, Folly, Monowai and other inshore stacks) and Antipodes Islands (Antipodes, Bollons, Archway, Leeward). Elsewhere breeds on Macquarie, Heard, Kerguelen, Crozet, Prince Edward, Marion and South Georgia islands.

**Breeding period:** Begins in late October and chicks depart the following May and June.

**Frequency of breeding:** Every two years for successful breeders.

**Number of eggs:** One.

**Type of nests:** Less colonial than other species of albatross, sometimes even nesting singly. Build cone-shaped nests, mainly on cliff ledges.

## Threats



### At sea

- Light-mantled sooty albatrosses appear to follow fishing vessels less than other albatross species.
- They appear most vulnerable to longline fisheries and have been reported caught in New Zealand, Australia, and in Japanese longline fisheries in the southern hemisphere.
- These albatrosses are better divers than most others, which means they can follow longline hooks deeper in the water.
- It is more than ten years since the last capture of a light-mantled sooty albatross was reported in New Zealand fisheries. That capture, in 2004, was reported from the southern bluefin tuna longline fishery, off the West Coast of the South Island.

### On land

- Mammalian predators may take a few eggs or kill chicks on Auckland Island although most birds nest on cliff ledges that are protected from these predators.
- The most significant predator on land is probably the brown skua. This natural predator takes some eggs and has been seen scaring adults off their nests.
- Human visitors to breeding areas may have some impact. The species is sensitive to disturbance during courtship. Some birds will abandon their nests if handled during early incubation. This is not a significant threat in New Zealand where few people visit breeding colonies.
- Ticks on Antipodes and Auckland islands may be potential vectors for avian diseases.

Species Group: XPM  
Mid-sized petrels

## Grey-faced petrel XGF

### *Pterodroma gouldi*



Image: Rod Morris



Image: Terry Greene

### Distinguishing characteristics

**Head:** Dark brown head with a grey face.

**Body:** Large with dark sooty brown plumage on its entire body.

**Wings:** Black or brown.

**Feet:** Black legs and feet.

**Bill:** Black.

### Feeding and range



**Eats:** Mainly squid, but also fish and crustaceans.

**Range:** At sea they forage widely over the south-west Pacific Ocean and Tasman Sea. Highly pelagic, grey-faced petrels forage beyond the continental shelf and are seldom seen in inshore waters except near their nesting areas during breeding season.

### Interesting Facts



Grey-faced petrels still breed on the mainland of New Zealand. Most of these remaining mainland colonies are small, with less than 500 breeding pairs.

## Breeding and ecology



**Breeding sites:** The grey-faced petrel breeds on islands, rock stacks and headlands from the Three Kings Islands down to Omata near New Plymouth. It also breeds on many islets in the Hauraki Gulf and Bay of Plenty, a number of islands and headlands west of Auckland, and at a number of locations in the Gisborne and East Cape regions.

**Breeding period:** Breeds June to January.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nester that nests in burrows.

## Threats



### At sea

- Grey-faced petrels have been caught in New Zealand's longline and trawl fisheries.
- Caught in Australia's southern bluefin tuna fishery.

### On land

- The greatest land-based threat to grey-faced petrels is introduced mammals at their breeding grounds. Feral rats and cats are particularly problematic.
- Human disturbance is an issue, with visitors unintentionally crushing burrows by walking over them.

Species Group: XPM  
Mid-sized petrels

## Grey petrel XGP

### *Procellaria cinerea*



Image: Dennis Burman Photography



Image: Tui De Roy, Roving Tortoise Photos

### Distinguishing characteristics

**Head:** Grey with a darker grey crown.

**Body:** Large, grey with darker upper body. Under body is white. Tail is grey and wedge-shaped.

**Wings:** Upperwings are grey. Underwings are darker grey.

**Feet:** Greyish pink.

**Bill:** Pale white with yellow or green tinge and dark purplish patches.

### Feeding and range



**Eats:** Squid, fish and crustaceans.

**Range:** These circumpolar foragers prefer deep ocean basins. They avoid shelves except near breeding islands and off Argentina in autumn.

### Interesting Facts



Grey petrels are strong swimmers and can dive to depths of 10 m in search of food.

Other names for the grey petrel include grey shearwater, brown petrel, black-tailed shearwater, and black-tailed petrel.

## Breeding and ecology



**Breeding sites:** In New Zealand breeds at Campbell Island and Antipodes Islands. Grey petrels also breed at Kerguelen, Amsterdam, Crozet, Prince Edward, Tristan da Cunha and Gough islands.

**Breeding period:** March to November.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters.  
Nest in burrows.

## Threats



### At sea

- Grey petrels have been captured in longline and trawl fisheries in New Zealand.
- Grey petrels are capable divers and have been observed diving deeply to retrieve baits cast by longliners, especially tuna and ling fishing vessels.
- Grey petrels have been reported bycaught in many longline fisheries outside New Zealand, including around Australia, along the Patagonian shelf, and around Prince Edward Islands and Kerguelen Island.
- Fisheries bycatch of this species around Kerguelen Island has been identified as a serious threat for the population of this species in the southern Indian Ocean.

### On land

- Feral cats and rats have exterminated grey petrel populations on Macquarie Island and Crozet Islands (Hog). They have also reduced populations on Amsterdam, Marion, Possession and Campbell islands.

Species Group: XPM  
Mid-sized petrels

## Black petrel XBP

### *Procellaria parkinsoni*



Image: DOC



Image: Tony Morris, CC BY-NC 2.0

### Distinguishing characteristics

**Head:** Dark.

**Body:** Medium-sized, very dark brown or black.

**Wings:** Dark brown or black.

**Feet:** Black.

**Bill:** Pale yellow with a dark tip.

**Other notes:** The black petrel looks very similar to the Westland petrel, but is smaller. Its range is also further north and north-east of the North Island than the Westland petrel. Also known as Parkinson's petrel.

### Feeding and range



**Eats:** Fish and crustaceans.

**Range:** The black petrel forages mainly off the eastern North Island and in the Tasman Sea. Black petrels migrate after breeding to the eastern tropical Pacific, with birds frequently seen off the coast between southern Mexico and northern Peru and westwards to the Galapagos Islands.

### Interesting Facts



Black petrel colonies were once found on the mountains and hills on the North Island and north-western South Island, but most colonies were lost before the 1950s.

## Breeding and ecology



**Breeding sites:** The only remaining colonies of the species are found on Little Barrier Island and Great Barrier Island.

**Breeding period:** November to June.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters.  
Nest in burrows.

## Threats



### At sea

- Black petrels are the New Zealand seabird species assessed as most likely to be bycaught in excess of sustainability limits.
- This petrel has been reported caught in longline and trawl fisheries in New Zealand.
- Beyond New Zealand waters, black petrels interact with longline fisheries off Chile and Peru.

### On land

- The species was eradicated by feral cats and other mammalian predators from many of its former breeding colonies. The removal of feral cats from Little Barrier Island has helped to slow its decline.
- On Great Barrier Island, mammalian predators may take some eggs and kill some chicks and adults. DOC conducts predator trapping to reduce these impacts.

Species Group: XPM  
Mid-sized petrels

## White-chinned petrel XWC

### *Procellaria aequinoctialis*



Image: Darren Scott



Image: Mjobling, CC BY-SA 3.0

### Distinguishing characteristics

**Head:** Blackish-brown with a few white feathers under the bill (which are difficult to observe at sea).

**Body:** Large blackish-brown petrel that is similar looking to the Westland petrel.

**Wings:** Blackish-brown.

**Feet:** Legs and feet are black.

**Bill:** Light yellow. One of the visible differences between the Westland petrel and the white-chinned petrel is that the white-chinned petrel does not have a dark tip at the end of its bill.

### Feeding and range



**Eats:** Mainly krill and fish.

**Range:** Forage across the Southern Ocean between the tropics and Antarctica. One of the few species that is commonly seen foraging over both shelves and ocean basins.

### Interesting Facts



White-chinned petrels were called shoemakers by the early sealers because of the clacking and rattling sounds they make in their burrows.

## Breeding and ecology



**Breeding sites:** In New Zealand, the white-chinned petrel breeds annually in colonies at the Auckland Islands, Campbell Island group and Antipodes Islands. It also breeds at Kerguelen, Crozet, Prince Edward, Marion, South Georgia and Falkland islands.

**Breeding period:** November to May.

**Frequency of breeding:** Annual.

**Number of eggs incubated:** One.

**Type of nests:** Colonial nesters.  
Nest in burrows.

## Threats



### At sea

- The white-chinned petrel has been caught in longline, trawl, and setnet fisheries in New Zealand.
- White-chinned petrels are adept divers. They are often bycaught in trawl and longline fisheries around the southern hemisphere (including in the Pacific, Indian and Atlantic Oceans).
- The species is known to forage for bait both during the day and night.

### On land

- Introduced mammals are a threat at some colonies.
- Human disturbance is an issue, with visitors unintentionally crushing burrows by walking over them.

Species Group: XPM  
Mid-sized petrels

## Westland petrel XWP

### *Procellaria westlandica*



Image: Mark Jobling



Image: Peter Shearer, CC BY-NC 4.0

### Distinguishing characteristics

**Head:** Black.

**Body:** Large black petrel that is similar looking to the white-chinned petrel.

**Wings:** Black.

**Feet:** Legs and feet black.

**Bill:** Mature birds have bills that are pale yellow with a large black tip.

### Feeding and range



**Eats:** Mainly fish and squid. The species is also known to use offal for a significant part of its diet, especially when feeding chicks.

**Range:** A highly pelagic species, at sea the Westland petrel ranges from Tasmania to the territorial waters of Chile. While breeding (March-November) found in New Zealand shelf waters and Tasman Sea. From November to April migrates across the Pacific: adults travel south to Cape Horn while immature birds travel north to the Humboldt Current.

### Interesting Facts



The Westland petrel can often be seen from the Cook Strait ferry.

## Breeding and ecology



**Breeding sites:** The species breeds only in New Zealand in the coastal foothills near Punakaiki on the South Island's West Coast.

**Breeding period:** Breed each winter between May and November.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters that excavate burrows.

## Threats



### At sea

- Westland petrels have been recorded bycaught in longline, trawl, and setnet fisheries in New Zealand.
- Outside New Zealand, Westland petrel are reported as bycatch from longline fisheries off Chile and Australia.

### On land

- Introduced mammals sometimes prey on eggs, chicks and even adults.
- Mining and agricultural activities have destroyed some habitat adjacent to breeding colonies.
- Birds occasionally strike power lines when flying to and from the colony.

Species Group: XTP  
Giant petrels

## Northern giant petrel XNP

### *Macronectes halli*



Image: J.P. Pierre



Image: © M. P. Pierre

### Distinguishing characteristics

**Head:** Mottled white on their head and neck. White face and chin as they mature.

**Body:** Mottled white on their breast. Older birds become a mottled dark grey on their upper body.

**Wings:** Wingspan is 150-200 cm.

**Bill:** Light pink with a reddish-brown tip. One way to tell northern giant petrels apart from southern giant petrels is by the pinkish-brown tip on the bill of the northern giants (compared with greenish tips on southern giants).

**Juvenile features:** Entirely blackish-brown with a pale bill.

### Feeding and range



**Eats:** Feed on squid. Frequently seen scavenging around dead seals and whales. Also known to attack and eat smaller species of seabirds.

**Range:** Birds disperse widely over the Southern Ocean, mainly north of the Antarctic Convergence. The northern giant petrel is more restricted to foraging near shorelines than the southern giant petrel. Many mature northern giant petrels remain near their breeding colonies year-round, while immature birds appear to make circumpolar journeys.

### Interesting Facts



Giant petrels are the only petrel species that will feed on land.

## Breeding and ecology



**Breeding sites:** Auckland Islands (Enderby, Ewing, Ocean, Disappointment), Campbell Island group, Antipodes Island, and Chatham Islands (Forty-Fours, Big Sister, Little Sister). Elsewhere breeds at Macquarie, Kerguelen, Crozet, Prince Edward and South Georgia islands.

**Breeding period:** Seasons vary slightly based on colony, August/ October to February/March.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Loose colonial nesters, often breed in dispersed pairs. Build nests amongst vegetation on rugged terrain.

## Threats



### At sea

- Northern giant petrels have been bycaught in longline and trawl fisheries in New Zealand.
- Outside New Zealand, bycatch of this petrel has been reported from longline fisheries, off Australia, Chile, South Africa and Prince Edward Island.
- Entanglement and ingestion of plastics are other marine threats.

### On land

- Currently there are not many threats to northern giant petrels on land.
- Northern giant petrels are quite sensitive to human disturbance and will sometimes abandon eggs or young chicks if approached too closely.

Species Group: XTP  
Giant petrels

## Southern giant petrel XSP

### *Macronectes giganteus*



Image: Dennis Buurman Photography



Image: Tui De Roy, Roving Tortoise Photos

### Distinguishing characteristics

**Head:** Two distinct colour phases. The dark phase has speckled white head and neck feathers. The white phase has a completely white head and neck except for a few dark feathers.

**Body:** Dark phase can be confused with the northern giant petrel, but southern giant petrel adults are much paler on the neck and underbody. White phase birds are white except for a few scattered dark feathers.

**Wings:** Wingspan 150-200 cm.

**Bill:** Pale peach with a greenish tip.

**Juvenile features:** Fledge black with their plumage slowly fading as they mature. Juveniles take about seven years to develop adult plumage.

### Feeding and range



**Eats:** Feed on squid. They are opportunists that can be found in mixed flocks with northern giant petrels and are often seen scavenging around dead seals and whales. They are also known to attack and eat smaller species of seabirds.

**Range:** Breeding adults spend summers near breeding colonies. In winter, some adults remain in Antarctic waters, while others move further north and disperse across the Southern Ocean.

### Interesting Facts



Southern giant petrels are sometimes known as stinkers because they can spit foul-smelling oil when threatened.

## Breeding and ecology



**Breeding sites:** Nests in small colonies on ice-free Antarctic and subantarctic islands. Visits New Zealand waters, but does not breed in New Zealand.

**Breeding period:** September–March at northern colonies and November–May in Antarctica.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Small breeding colonies are often close to penguin colonies.

## Threats



### At sea

- Southern giant petrels have been reported caught in longline and trawl fisheries in New Zealand.
- Outside New Zealand waters, captures have been reported from Argentinian longline fisheries along the Patagonian Shelf.
- Bycatch of this species also occurs in trawl fisheries off the Falkland Islands.
- Entanglement and ingestion of plastics are other marine threats.

### On land

- Highly sensitive to human disturbance. Known to abandon nests if close contact is made.

Species Group:  
XCP Cape petrels

## Cape pigeon/petrel XCC

### *Daption capense*



Image: © M.P. Pierre



Image: © M.P. Pierre

### Distinguishing characteristics

**Head:** Black head and neck.

**Body:** Medium-sized. Under body is mostly white with some black marking on chin and throat. Upper body has a distinctive black and white pattern.

**Wings:** Underwings are mostly white with black margins. Upperwings feature a distinctive black and white pattern. The two subspecies found in New Zealand's waters are easiest to tell apart by the amount of black on their upperwings. Snares Cape pigeon (*D.c. australe*) has dark upperwings with white patches. Southern Cape pigeon (*D.c. capense*) has whiter upperwings with black flecks.

**Bill:** Black.

### Feeding and range



**Eats:** Feed mainly on krill, but also eat fish and squid. They are also known to scavenge near fishing vessels and near marine mammal carcasses.

**Range:** Circumpolar, but during the summer feed close to their breeding colonies in Antarctica's waters especially shelf areas. Winter range extends from the ice edge to eastern tropical Pacific, especially off Argentina, south-west Africa, Australia and New Zealand. Most commonly found foraging on shelves.

### Interesting Facts



Cape pigeons earned their common name because of the way they peck at the water to capture prey and because of their presence around Cape of Good Hope, South Africa.

## Breeding and ecology



**Breeding sites:** Cape petrels breed on numerous islands surrounding Antarctica. The Snares Cape petrel breeds in many locations in the subantarctic islands and Chatham Islands.

**Breeding period:** November to March.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nesters. They build simple nests that are usually on cliffs or steep slopes with easy access to the sea.

## Threats



### At sea

- Cape petrels have been caught in trawl, longline and setnet fisheries in New Zealand.
- Outside New Zealand waters, this species is also bycaught, for example, in Argentinean and South African longline fisheries.

### On land

- Skuas are natural predators and will prey on eggs and chicks.

Species Group:  
XDU Diving petrels

## Common diving petrel XDP

Northern diving petrel, southern diving petrel and subantarctic diving petrel

*Pelecanoides urinatrix urinatrix*, *P. u. chathamensis* and *P. u. exsul*

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Image: Dick Veitch



Image: Dick Veitch

### Distinguishing characteristics

**Head:** Dark.

**Body:** Small, stocky bodies with dark plumage on upper body and light grey plumage on throat and chest.

**Wings:** Dark plumage on upperwings and light grey plumage on underwings. Wingspan 33–38 cm.

**Feet:** Legs and feet are a light blue.

**Bill:** Black, short and broad.

### Feeding and range



**Eats:** Mainly small crustaceans.

**Range:** Foraging habitats not well known. However, this small seabird can travel thousands of kilometres to oceanic areas in the non-breeding season.

### Interesting Facts



Common diving petrels are the most aquatic of all petrels and frequently dive and “fly” underwater to capture their prey.

This petrel has been recorded diving to depths of 11 m in New Zealand waters, and 64 m off the Kerguelen Islands.

## Breeding and ecology



**Breeding sites:** The subantarctic diving petrel breeds at Auckland Islands, Antipodes Islands and Campbell Island group.

The southern diving petrel breeds around Foveaux Strait, and on Stewart Island and surrounding islets and rock stacks. It also breeds at the Snares and at the Chatham Islands.

The northern diving petrel breeds on islands and small stacks around the North Island and Cook Strait, from Three Kings Islands to Brothers Island. The northern diving petrel also breeds on up to 20 islands off Australia.

**Breeding period:** August to February.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial. Nest in burrows and natural cavities.

## Threats



### At sea

- Common diving petrels have been reported bycaught in New Zealand trawl and longline fisheries.

### On land

- Introduced predators on breeding islands are the greatest threat. Diving petrel colonies can be destroyed within three to five years because fledglings return to natal colonies at one to two years of age and adults visit their nesting burrows eight to ten months of the year.
- Diving petrels breed in shallow burrows that are easily damaged.
- Diving petrels are attracted to bright lights. Birds have been reported crashing into brightly lit buildings near breeding colonies or onto ships at sea.

Species Group:  
XPN Prions

## Fairy prion XFP

### *Pachyptila turtur*



Image: Dave Crouchley



Image: Dave Crouchley

### Distinguishing characteristics

**Head:** Bluish-grey top with white around eyes and below bill.

**Body:** Underbody is white. Blue-grey back.

**Wings:** Blue-grey upperwings with a black M-shaped mark across them. Underwings are white. Feature a broad black tip on their tail.

**Feet:** Dark bluish-grey.

**Bill:** Short blue bill (approximately 22 mm long and 11 mm wide).

### Feeding and range



**Eats:** Krill.

**Range:** Found throughout oceans and coastal areas in the southern hemisphere.

### Interesting Facts



Fairy prions are the smallest of all prions. They are also one of New Zealand's most abundant petrels. Research indicates that New Zealand has more than 50% of the world population.

\* The classification category 'Relict' has been adopted in the New Zealand Threat Classification System to encompass species that have experienced very large historic range reductions and now exist as remnant populations.

## Breeding and ecology



**Breeding sites:** In New Zealand breeds in colonies on a number of offshore islands from the Poor Knights south, as well as the Chatham, Snares and Antipodes islands. Elsewhere breeds on 30 islands and rocks off Victoria and Tasmania (Australia), also Macquarie, Heard, Kerguelen, St. Paul, Crozet, Prince Edward, Marion, South Georgia and Falkland islands.

**Breeding period:** October to February.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Often form large colonies. Burrow nesters.

## Threats



### At sea

- Fairy prions are not frequent vessel followers, but they are sometimes attracted by the lights of stationary ships at night.
- Fairy prions have been bycaught in trawl fisheries in New Zealand.

### On land

- Introduced predators are the greatest threat to fairy prion populations. All remaining colonies in New Zealand are on rodent-free islands.
- Grazing animals can affect prion populations by crushing burrows.
- Visitors to colonies can unintentionally crush burrows by walking over them.
- Fire is a risk during breeding season because many colonies are in grassy habitats.

Species Group:  
XSW Shearwaters

## Buller's shearwater XBS

### *Puffinus bulleri*



Image: Dick Veitch



Image: DOC

### Distinguishing characteristics

**Head:** Dark grey upper half and white lower half.

**Body:** Large, white-bellied shearwater. Undersides are white.

**Wings:** Distinctive “M” pattern on its upperwings. Underwings are white with dark-grey margins.

**Bill:** Grey bill.

### Feeding and range



**Eats:** Fish, squid and crustaceans.

**Range:** During the breeding season they forage north of the Subtropical Convergence, usually staying over the continental shelf. The species is also found in the mid-Tasman Sea and off eastern Australia. Migrates to the North Pacific Ocean in winter and disperses widely from Japan and Alaska east to California. Some annually migrate to the territorial waters of Peru and Chile.

### Interesting Facts



By 1936 the population on Aorangi Island had been all but wiped out (c. 100 nests left) by feral pigs. Once the pigs were removed the population rapidly increased.

## Breeding and ecology



**Breeding sites:** The species breeds only on islands in the Poor Knights group.

**Breeding period:** November to May.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** They nest in burrows or crevices on cliffs and bush-clad slopes.

## Threats



### At sea

- Recorded caught in longline and trawl fisheries in New Zealand.
- There is a risk of the species being caught in setnets.
- May be caught on hand and reel lines.
- Reported bycaught in large-scale gillnet fisheries in the central north Pacific Ocean.
- Scavenge food behind trawlers and occasionally around recreational fishing boats.

### On land

- Fire is a threat because the Poor Knights are very dry in summer and fires could cause temporary losses in the population.
- Burrows are easily collapsed by people moving about on colonies. Visitor access is strictly limited to protect the birds and other threatened fauna on the islands.

Species Group:  
XSW Shearwaters

# Fluttering shearwater XFL

## *Puffinus gavia*



Image: Edin Whitehead



Image: Edin Whitehead

### Distinguishing characteristics

- Small shearwater (32–37 cm in length)
- Dark brown head
- Greyish-brown bill and feet
- White belly and throat, with partial dark collar
- Brown upperwings
- White underwings with brown borders
- Can be confused with the Hutton's shearwater, particularly around the Cook Strait, where the species overlap during breeding. Best separated by paler armpits and less prominent partial collar

### Feeding and range



**Eats:** Small fish and crustaceans, especially krill.

**Range:** Breeds only in New Zealand. Forages over the continental shelf and inshore waters including sheltered bays and harbours, throughout most of New Zealand.

Fledglings and some adults migrate to eastern and southern Australia in February. Large numbers of birds remain around the New Zealand coast year round.

### Interesting Facts



A new colony of fluttering shearwaters, or pakaha, has been established on Maud Island, Marlborough Sounds. Chicks translocated from Long Island to Maud Island in the 1990s have now returned to Maud as adults to breed.

\* The classification category 'Relict' has been adopted in the New Zealand Threat Classification System to encompass species that have experienced very large historic range reductions and now exist as remnant populations.

## Breeding and ecology



**Breeding sites:** Breeds on numerous offshore islands between the Three Kings group and the Marlborough Sounds. Colonies can be extremely dense and coexist with other species (e.g. common diving petrels and grey-faced petrels).

**Breeding period:** Between September and February with the eggs hatching in November and chicks fledging in January/February.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial nester that nests in burrows or between tree roots and rock crevices.

## Threats



### At sea

Frequently feeds close inshore and dive deeply for food. Consequently, birds have been bycaught by fishers using hand and reel-lines in inshore waters. The birds sometimes swallow hooks or get tangled in the lines.

Flocks of shearwaters are occasionally caught in set nets.

The species may be attracted to bright lighting, especially on foggy nights. This can lead to crash landings on fishing vessels.

Most of the large breeding colonies are situated near active shipping lanes and the main New Zealand oil refinery at Marsden Point. An oil spill near the breeding islands could have a major impact on this diving species.

### On land

All breeding colonies are on mammal-free islands or islands that only have Pacific rats present. The breeding populations are quite small on islands with Pacific rats. It is likely that these rats eat eggs and chicks of fluttering shearwaters.

Fires may cause temporary losses in the populations, especially during incubation (September–November).

Nesting colonies on small rodent-free islands are usually in very friable soil. The burrows on these islands are easily collapsed by people moving about the colonies. Visitor access to these sites needs to be strictly limited, especially during the courtship and incubation periods (August to November).

Species Group:  
XSW Shearwaters

## Flesh-footed shearwater XFS

### *Puffinus carneipes*



Image: G. Barry Baker



Image: Mike Double, SOSSA

### Distinguishing characteristics

**Head:** Black or dark brown.

**Body:** Small shearwater. Black or dark brown.

**Wings:** Black or dark brown.

**Feet:** Pink legs and feet. Similar looking to the black petrel, one of the visible differences between the two species are the distinctive pink feet that flesh-footed shearwaters have. Black petrels have black feet.

**Bill:** Pale pink with a dark tip.

### Feeding and range



**Eats:** Fish, squid and crustaceans.

**Range:** Forages over continental shelves north of the Subtropical Convergence during the summer and the New Zealand population migrates to the North Pacific Ocean between May and September.

### Interesting Facts



The calls that flesh-footed shearwaters make are a series of high-pitched moans. Their calls have been likened to the sound of cats fighting.

Although they voraciously eat whole livers, the species is effectively deterred from attending fishing vessels by spreading small quantities of shark liver oil on the sea surface.

\* The classification category 'Relict' has been adopted in the New Zealand Threat Classification System to encompass species that have experienced very large historic range reductions and now exist as remnant populations.

## Breeding and ecology



**Breeding sites:** In New Zealand breeds on islands around the North Island and Cook Strait, including Hen & Chickens Islands, Mercury Islands, Ohinau, Karewa, Kauwahaia, Motumahanga, Middle Trio and Titi. Elsewhere it breeds on Lord Howe Island, in South Australia, western Australia and on some islands in the Indian Ocean.

**Breeding period:** December to May.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Colonial. Nests in burrows.

## Threats



### At sea

- Reported caught from longline, trawl and setnet fisheries in New Zealand.
- Caught off eastern Australia by tuna longliners.
- Reported caught in high-seas driftnets in the north Pacific Ocean.
- Recreational fishers catch flesh-footed shearwaters on hand and reel lines.
- Plastic ingestion may be a problem for this species.

### On land

- Mammals are a potential threat to some flesh-footed shearwater colonies. The largest colonies in New Zealand occur on islands that are free of ship rats, Norway rats and mustelids.
- Visitors can unintentionally crush burrows when walking over them.

Species Group:  
XSW Shearwaters

## Sooty shearwater XSH (also known as tītī or muttonbird)

### *Puffinus griseus*



Image: Rod Morris



Image: Sabine's Sunbird, CC-SA 3.0

### Distinguishing characteristics

**Head:** Chocolate brown.

**Body:** Medium-sized shearwater that is dark-chocolate brown.

**Wings:** Chocolate brown upperwings with silver-white underwings. Wingspan is 95-110 cm.

**Feet:** Legs and feet are dark on the outer side and light mauve-pink on the inner side.

**Bill:** Dark, narrow and longer than short-tailed shearwaters.

### Feeding and range



**Eats:** Fish and squid.

**Range:** The sooty shearwater is one of the world's most widely distributed seabirds. Birds from New Zealand forage over the South Pacific Ocean and the Tasman Sea. They migrate to the North Pacific Ocean in the austral winter and spread over the entire central and eastern Pacific Ocean, with a few birds reaching the Arctic Ocean.

### Interesting Facts



Sooty shearwaters are amazing divers. They are known to dive to almost 70 m.

## Breeding and ecology



**Breeding sites:** Sooty shearwaters breed on numerous islands around New Zealand from Three Kings Islands to the Campbell Island group, including Stewart Island, the Snares, Auckland Islands, Campbell Island group, Antipodes Islands and Chatham Islands. A few are also present on coastal headlands on the South Island mainland. Elsewhere the species breeds on at least 17 islands off Australia, islands off Chile, and the Falkland Islands.

**Breeding period:** November to May.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Breeds in colonies.  
Nests in burrows.

## Threats



### At sea

- Sooty shearwaters have been reported caught in commercial trawl, longline and setnet fisheries in New Zealand.
- Recreational fishermen also catch these shearwaters, on hand or reel lines and in setnets in some locations.
- Elsewhere, sooty shearwaters are killed in longline, trawl and gillnet fisheries.

### On land

- Introduced mammals are the greatest threat to sooty shearwaters on land.
- Cattle, sheep and goats damage burrows on some islands. Rabbits may compete for burrows or disturb nesting birds on a few islands.
- Visitors can unintentionally crush burrows when walking over them.
- Sooty shearwaters are harvested in commercial operations at traditional sites around Stewart Island by descendants of Rakiura Maori. There are also reports of occasional small-scale illegal harvests in other locations.

Species Group:  
XSW Shearwaters

## Short-tailed shearwater XTS

### *Puffinus tenuirostris*



Image: Troy Guy, US Fish & Wildlife Service



Image: JJ Harrison, CC BY-SA 3.0

### Distinguishing characteristics

**Head:** Dark brown.

**Body:** Dark brown with lighter-coloured breast. Similar looking to sooty shearwaters, but short-tailed shearwaters are plumper in appearance.

**Wings:** Dark brown upperwings with paler underwings. Underwings are darker than the underwings of sooty shearwaters.

**Feet:** Legs and feet are dark on the outer parts and mauve-pink on the inside.

**Bill:** Dark, narrow bills are shorter than sooty shearwater bills.

### Feeding and range



**Eats:** Krill, squid and fish.

**Range:** Forage in summer and autumn south of Australia and to the South Indian Ocean. In winter most migrate to the North Pacific to the seas off the Aleutian Islands and Kamchatka.

### Interesting Facts



The short-tailed shearwater is thought to have a total population of about 23 million birds. Its numbers are stable or possibly increasing. It is one of the few Australian native birds to be commercially harvested. They are closely related to New Zealand's sooty shearwaters.

## Breeding and ecology



**Breeding sites:** Short-tailed shearwater colonies are present on many islands off the Australian coast. Visits New Zealand's waters, but does not breed in New Zealand.

**Breeding period:** November to April.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Breed in colonies. Nest in burrows.

## Threats



### At sea

- Reported caught in New Zealand trawl fisheries.
- Reported to interact with trawl warps and nets in Australian waters.
- Reported as frequent bycatch in gillnet fisheries in the north Pacific Ocean.
- Caught in longline and trawl fisheries in the Bering Sea.

### On land

- Habitat destruction is a major threat to short-tailed shearwater colonies.
- Trampling of burrows by pigs, sheep, and cows has destroyed entire colonies.
- Feral cats and uncontrolled dogs kill shearwater chicks.
- Burrows are easily collapsed by people moving about on colonies and erosion caused by recreational vehicles can destroy suitable sites for burrowing.
- Over-harvesting is another potential threat to short-tailed shearwater numbers.

Species Group:  
XSW Shearwaters

## Wedge-tailed shearwater XWT

### *Puffinus pacificus pacificus*



Image: Tony Palliser, courtesy of SOSSA



Image: Tony Palliser, courtesy of SOSSA

### Distinguishing characteristics

**Head:** Dark.

**Body:** Large with dark plumage covering entire body and wedge tail.

**Wings:** Dark upperwings and underwings.

**Feet:** Peach.

**Bill:** Grey.

### Feeding and range



**Eats:** Fish, squid and crustaceans.

**Range:** New Zealand birds are thought to migrate to the eastern Pacific between June and mid-October.

### Interesting Facts



Birds breeding in New Zealand and Norfolk Island colonies are larger than other populations of this species.

There is a wide variety in plumage for the species. The birds in Hawaiian and Indian Ocean colonies have white underparts. Birds on the Kermadec Islands, Norfolk Island, Lord Howe Island, and other islands off the coast of Australia are all dark.

\* The classification category 'Relict' has been adopted in the New Zealand Threat Classification System to encompass species that have experienced very large historic range reductions and now exist as remnant populations.

## Breeding and ecology



**Breeding sites:** Breeds in a number of locations, including the Kermadec Islands, islands off the Australian coast and many tropical and subtropical islands in the Indian and Pacific oceans.

**Breeding period:** Birds in southern hemisphere begin breeding each September but those at the Kermadec Islands do not lay until December.

**Frequency of breeding:** Annual.

**Number of eggs:** One.

**Type of nests:** Often form large colonies. Burrow nesters.

## Threats



### At sea

- There is some evidence that this species may be vulnerable to commercial fishing operations around the world, particularly during the non-breeding season.

### On land

- Norway rats and feral cats were two of the greatest threats to the species. Both have been eradicated from Raoul Island.
- Volcanic activity at Raoul and Curtis islands potentially threatens these breeding colonies.
- Visitors to colonies can unintentionally crush burrows by walking over them.

Species Group:  
XHG Shags

## Pied shag XPS

*Phalacrocorax varius varius*



Image: © M. P. Pierre



Image: © M. P. Pierre

### Distinguishing characteristics

- Large shag (65–85 cm in length)
- Dark green/black colouring on top of head, back and wings
- White belly, throat and lower half of head
- White extends higher up the neck and head than on Foveaux and Otago shags, king shag or Chatham Island shag
- Blue eye ring with yellow facial skin
- Mottled grey bill
- Black feet

### Feeding and range



**Eats:** Fish and eels.

**Range:** This subspecies breeds only in New Zealand. Mainly found in coastal environments on the northern part of the North Island and the southern part of the South Island. Birds disperse locally over inshore waters feeding mostly in bays, harbours, and estuaries but also in the open sea. Stragglers have reached the Snares Islands.

Elsewhere, a subspecies (*Phalacrocorax varius hypoleucus*) breeds in Australia.

### Interesting Facts



Shags do not have waterproof feathers. They are often seen sitting with their wings outstretched to dry after fishing.

## Breeding and ecology



**Breeding sites:** Breeds coastally around New Zealand's mainland and numerous close inshore islands. Also breeds at the Three Kings Islands. There are a few colonies found on freshwater lakes near the sea.

**Breeding period:** Year round, peaking in winter and summer.

**Frequency of breeding:** Annual.

**Number of eggs:** Usually three to four eggs, but can replace clutches if eggs are lost.

**Type of nests:** Nests in colonies in tall trees close to water.

## Threats



### At sea

Pied shags have been reported caught in set nets and by inshore longline fisheries.

Extreme weather conditions can impact the ability of shags to obtain sufficient food. For example, in 2008, after a long period of wet, cold weather and rough seas, a number of pied shags died of starvation at the Thames Coast pied shag colony at Tararu.

### On land

Pied shags are still persecuted by humans. Members of this species have occasionally been found dead on northern beaches with gunshot wounds. Nesting trees have been felled when guano from colonies creates a health risk near dwellings.

Mustelids, rats and possums may have some impact on mainland colonies but no information is available.

The species is sensitive to disturbance by humans but nest sites are usually in safe locations.

Species Group:  
XHG Shags

## Spotted shag XPP

### *Stictocarbo punctatus*



Image: © M. P. Pierre



Image: © M. P. Pierre

### Distinguishing characteristics

- Slim, medium-sized shag (64-74 cm in length)
- Dark grey head with prominent white stripe down side of neck
- Breeding plumage includes a double crest and bright green facial skin
- Lighter colouring on back than other shags
- Body light grey, with black spots on upper parts
- Yellow-orange feet (light pink in juveniles)

### Feeding and range



**Eats:** Mainly small fish.

**Range:** The spotted shag, or pārekareka, breeds only in New Zealand. There are two subspecies of spotted shag (*S. p. punctatus*) with breeding colonies scattered around the North Island and along the eastern coast of the South Island south to Otago Peninsula; and the blue shag (*S. p. steadi*) with breeding colonies scattered along the western coast of the South Island, in Foveaux Strait and around Stewart Island.

Spotted shags move extensively around coasts of both main islands although most birds are found near breeding colonies. The birds feed in open seas usually within 2-16 km of the coast but they also forage in bays, inlets and estuaries.

### Interesting Facts



Seabird scientists have constructed a 'shaggery' complete with fake birds and streaks of guano on the Noises, an island group off the coast of Auckland to try and entice more of these shags back to the Hauraki Gulf.

## Breeding and ecology



**Breeding sites:** Colonies are found around both the North and South Island, as well as in Foveaux Strait and around Stewart Island. Colonies in the Hauraki Gulf have declined considerably and are now only found on Waiheke and Tarahiki Islands.

**Breeding period:** Spring/summer.

**Frequency of breeding:** Annual.

**Number of eggs:** Up to four eggs, and can replace clutches if eggs are lost.

**Type of nests:** Most spotted shags nest in caves or on rocky ledges and cliffs.

## Threats



### At sea

Spotted shags have been reported caught in trawl nets (for example, 30 birds were caught in one trawl in 2009). They have also been recorded caught in set nets.

### On land

Spotted shags are still persecuted by humans. Birds with gunshot wounds are occasionally found dead on beaches.

Mustelids and rats may have some affect on mainland colonies, but no information is available.

The species is sensitive to disturbance by humans but nest sites are usually in safe locations.

Species Group:  
XSI Shags

## Foveaux shag XFO

### *Leucocarbo stewarti*



Image: DOC. Photographer Brian Bell



Image: DOC. Photographer Brian Bell

### Distinguishing characteristics

- Large shag (around 65 cm in length)
- Pink feet

The Foveaux shag has two very different colour patterns (called morphs). About 50-60% of the species population is pied. These birds are black above and white below, with a white wing bar. The rest of the population is entirely brownish black. The population is estimated at around 2,500.

Distinguishing Foveaux and Otago shags is best done by their range, as some other features that separate them are difficult to observe.

### Feeding and range



**Eats:** Fish.

**Range:** This species occurs around Stewart Island and Foveaux Strait. Unlike its near relative the Otago shag, the Foveaux shag's distribution has not changed since prehistoric times. It is a coastal species, feeding in waters less than 30 m deep.

### Interesting Facts



The Foveaux shag, together with the Otago shag, used to be considered one species – the Stewart Island shag. The species were officially split in 2016.

## Breeding and ecology



**Breeding sites:** Nests on islands and sea cliffs. The same sites are used year to year.

**Breeding period:** Late winter through spring, late summer.

**Frequency of breeding:** Annual.

**Number of eggs:** One to three eggs.

**Type of nests:** Colonial nesters, with cup-shaped nest platforms made of organic material and droppings.

## Threats



### At sea

This species may be caught in set nets.

### On land

Some nesting areas may be at risk from land-based predators such as mustelids, cats and rodents. Birds are also sensitive to disturbance and will temporarily abandon their nests if disturbed.

Species Group:  
XSI Shags

## Otago shag XSO

### *Leucocarbo chalconotus*



Image: Courtesy Danilo Hegg



Image: Courtesy Danilo Hegg

### Distinguishing characteristics

- Large shag (around 70 cm in length)
- Pink feet

The Otago shag has two very different colour patterns (called morphs). About 20-30% of the species population is pied. These birds are black above and white below, with a white wing bar. The rest of the population is entirely brownish black. There may only be around 2,500 Otago shags remaining today.

Distinguishing Otago and Foveaux shags is best done by their range, as some other features that separate them are difficult to observe.

### Feeding and range



**Eats:** Fish.

**Range:** This species currently occurs around Otago Harbour, Taiaroa Head, Green Island, Aramoana, Oamaru and the Catlins. In pre-human times, this shag was found right along the east coast of the South Island, as far north as Marlborough. Otago shags are truly coastal seabirds. They feed close to shore in waters less than 30 m deep.

### Interesting Facts



The Otago shag, together with the Foveaux shag, used to be considered one species – the Stewart Island shag. The species were officially split in 2016.

## Breeding and ecology



**Breeding sites:** Nests on islands and sea cliffs. The same sites are used year to year.

**Breeding period:** Winter through spring, summer.

**Frequency of breeding:** Annual.

**Number of eggs:** One to three eggs.

**Type of nests:** Colonial nesters, with cup-shaped nest platforms made of organic material and droppings.

## Threats



### At sea

This species may be caught in set nets.

### On land

Nesting colonies may be at risk from land-based predators such as mustelids, cats and rodents. Birds are also sensitive to disturbance and will temporarily abandon their nests if disturbed.

In the past, humans killed around 99% of this species. Therefore, genetic diversity is low in the current population. This could be a threat to their longer term survival.

Species Group:  
XPG Penguins

## Yellow-eyed penguin XYP

### *Megadyptes antipodes*



Image: © M.P. Pierre



Image: © M.P. Pierre

### Distinguishing characteristics

- Large, reaching 56-78 cm in length
- Dark head with yellow eyes
- Yellow eye band that outlines the eyes and wraps around the head
- Top of head is sometimes flecked with yellow colouring
- Narrow, red-orange bill
- Charcoal-grey back with a white belly
- Flippers charcoal-grey on top with white edging and white underneath
- Light-pink feet

**Juvenile features:** Grey eyes and reduced yellow on head

### Feeding and range



**Eats:** Mainly fish and squid.

**Range:** Breeds only in New Zealand. This species is mainly found around the eastern South Island, Stewart Island and the subantarctic Auckland and Campbell islands. Birds forage over the continental shelf.

### Interesting Facts



One of the world's rarest penguin species.

The Māori name for yellow-eyed penguins is hoiho, which means 'noise shouter'.

## Breeding and ecology



**Breeding sites:** Breeds in eastern and southern South Island from Banks Peninsula to Bluff. Also breeds on Stewart Island and islands in Foveaux Strait, Whenua Hou, Auckland Islands and Campbell Island.

**Breeding period:** Begins in September, incubation is completed in 39-47 days and chicks fledge in 14-16 weeks.

**Frequency of breeding:** Annual.

**Number of eggs:** Often lay two eggs, but sometimes the parents are unable to rear both chicks.

**Type of nests:** Often nest in coastal forests or amongst vegetation near the shore.

## Threats



### At sea

Yellow-eyed penguins have been recorded bycaught in set nets. Penguins returning to breeding colonies or landing beaches at dusk are vulnerable to near-shore set nets.

Bottom trawling may alter benthic foraging habitat.

### On land

Predation by feral cats, ferrets and stoats is the major cause of chick mortality at mainland colonies and ferrets occasionally kill adult penguins at some mainland sites.

Uncontrolled dogs have killed adults and chicks and are a serious threat at some mainland colonies.

Grazing of coastal margins by domestic cattle and sheep has removed much of the available penguin nesting habitat. Cattle also trample nests on the mainland. Fencing of habitats to exclude stock has been beneficial in removing the problem of trampling of nests but the subsequent growth of rank grass has increased predator densities around nest sites.

Fires are a potential hazard. A fire in coastal scrub at Te Rere Reserve in Southland in 1995 killed over 60 adult penguins. The birds are at greatest risk during the moult (January to April) because they are unable to escape to sea.

Recently there have been records of various diseases impacting hoiho colonies (e.g. avian malaria).

Species Group:  
XCR Penguins

## Fiordland crested penguin XFC

### *Eudyptes pachyrhynchus*



Image: DOC. Photographer Andrew Walmsley



Image: DOC. Photographer Andrew Walmsley

### Distinguishing characteristics

- Mid-sized penguin – 55 cm in length
- Black head and throat with pronounced yellow eyebrow stripe (crest) and faint white cheek markings
- Thick, orange bill
- Typical ‘tuxedo-like’ appearance with a white belly and black back
- Light pink feet, blackish-brown underfoot

#### Juvenile features:

- Smaller in size
- Crest reduced to a pale ‘eyebrow’
- Darker bill

### Feeding and range



**Eats:** Squid, crustaceans and fish.

**Range:** Outside of the breeding season, Fiordland crested penguins, or tawaki, disperse mainly around the South Island and south to the subantarctic islands. This penguin is also a regular vagrant to south-eastern Australia. Except when breeding, Fiordland crested penguins spend most of their time at sea.

### Interesting Facts



Listed as nationally vulnerable. There has been a large historical decline in this species since European settlement. This decline is likely to be continuing at some nesting sites.

Like all other penguin species, both parents are involved in feeding and protecting their young.

## Breeding and ecology



**Breeding sites:** Breeds on the South Island mainland and adjacent offshore islands southwards from Bruce Bay. Also nests on Solander Island, Whenua Hou (Codfish Island), and islands off Stewart Island.

**Breeding period:** Begins in July, incubation is completed in 30-35 days and chicks fledge in 10-11 weeks.

**Frequency of breeding:** Annual.

**Number of eggs:** Often lays two eggs, but the parents are rarely able to feed two chicks, and the smaller one usually dies within a week of hatching.

**Type of nests:** Nests on the ground amongst rocks and vegetation. Less social than other crested penguin species. Fiordland crested penguins tend to nest in small groups within loose colonies.

## Threats



### At sea

Set netting presents a potential risk to this species. Penguins returning to breeding colonies or landing beaches at dusk are vulnerable to near-shore set nets.

### On land

Weka had a marked impact on penguin populations on Whenua Hou (Codfish Island) and still have an impact on penguins nesting on Solander Island and the Open Bay Islands.

Mustelids, especially stoats, are reported to take eggs and chicks on mainland colonies and may occasionally attack adult penguins.

Domestic dogs may kill adult penguins (especially moulting birds) and disturb colonies near human habitation.

Norway, ship and Pacific rats may also be predators of small chicks although there is no direct evidence of predation. Feral cats and pigs are potential predators but appear to be uncommon in areas where penguins currently nest.

There is concern that increased nature tourism in South Westland may disturb breeding birds at some accessible colonies, causing nests to fail. The species is also sensitive to handling and requires care when carrying out research.

This and other protected species identification guides published by DOC can be found at:

*[www.doc.govt.nz/our-work/conservation-services-programme/  
csp-resources-for-fishers/protected-species-identification-guides/](http://www.doc.govt.nz/our-work/conservation-services-programme/csp-resources-for-fishers/protected-species-identification-guides/)*

