

What difference will a couple of birds make?

So you catch a couple of birds in a year—what's the big deal? The major problem with just catching a couple of birds is the number of boats that there are fishing. For starters, in our waters alone there are around 200 surface and bottom longline vessels. Even if these boats catch (on average) only a couple of birds a year, this starts to become quite a large pile of dead birds! Not only this, but because our seabirds are such great travellers they can move to fisheries all over the world, so the actual number of fishing boats that our seabirds are exposed to becomes very large.

So the biggest problem with only catching a couple of birds is the fact that there are a lot of vessels out there fishing. Even if they only catch a couple each, this adds up to quite a number of birds caught every year.

When the numbers of some of the seabird species can be counted in tens (Macquarie Island Wandering Albatross has only seven breeding pairs), or thousands (e.g. New Zealand's Black Petrel), just a few can represent a significant number of the total population.

The problem is compounded by the way seabirds grow and breed. They are slow breeders, with some, like the Wandering Albatross producing only one egg every two years. Seabirds like albatrosses are slow to mature, reaching between 5 and 12 years before they can start breeding.

Often, breeding birds are the ones that are caught. They follow the boats in search of an easy feed for their young ones. Catching breeding birds can mean the death of two birds for every one caught, as there is often a dependent chick waiting for a feed, back at the nest. If mum doesn't turn up, dad can't feed the chick on his own, so the chances are quite high that the young one will die too.



CAPE PIGEON

CAPE PIGEON (*Daption capense*)

The cape pigeon is a medium-sized petrel with a distinctive black and white checkered pattern over the back and rump. The head, neck and mantle are black, the upper wings are black with two white patches each, and the tail is white with black blotches and a broad black tip. The underparts are white, except that the borders of the wings are black. The rather broad bill is black, as are the legs and feet. There are two subspecies: the southern cape pigeon (*D. c. capense*) which nests on Antarctica, its coastal islands (including the Balleny Islands and Scott Island of the Ross Dependency) and many subantarctic islands, and The Snares cape pigeon (*D. c. australe*) which nests on New Zealand subantarctic islands (The Snares, Bounty, Antipodes, Auckland, Campbell and Chatham Island groups). The latter subspecies is smaller and has less white over the upper wings than the southern subspecies. During autumn and winter, many southern cape pigeons move into New Zealand coastal waters resulting in an intermingling of the two subspecies. Cape pigeons feed on krill, amphipods, squid, fish and fishing boat offal. They feed mainly by floating on the sea and pecking rapidly, much like a pigeon, for small items. (40 cm)

NATIVE



AUSTRALASIAN GANNET (takepe)

AUSTRALASIAN GANNET (*Morus serrator*)

The gannet is a distinctive species because of its appearance and foraging habits. It is a streamlined bird with long narrow wings and a pointed tail. Adults are white with an orange-yellow head, most wing flight feathers are black, and the central four tail feathers are black. It has a conical grey bill, and its grey-black feet have blue-yellow lines along the legs and toes. Juveniles are grey-brown with white spots above, white with some brown streaks below, and have brown-black bills. Most juveniles quickly disperse to the eastern and southern coastal waters of Australia after flying from their colonies, and so sightings of juveniles about New Zealand are uncommon. They return to the coastal waters of the North and South Islands when three to seven years old. Australasian Gannets feed on fish and squid which they catch by diving into the sea from heights of up to thirty metres. Just before they enter the water, the wings are extended backwards, and air sacs in the lower neck and breast cushion the shock of entry. Large flocks of gannets are a spectacular sight diving into schools of fish forced to the surface by predatory fish or dolphins. (89 cm)

NATIVE



SOUTHERN GIANT PETREL

SOUTHERN GIANT PETREL

(*Macrocystes giganteus*)

Southern giant petrels occur in two colour phases, dark and white. Adults and juveniles of the dark phase are almost identical to northern giant petrels, except that the head, neck and mantle are paler, and the bill tip is greenish rather than brown. Adult and juvenile southern giant petrels of the white phase are white with a few brown feathers giving a speckled appearance. The eyes of most southern giant petrels are brown, but a few are greyish. This species has a circumpolar breeding distribution. In the New Zealand region, one pair has bred at Cape Crozier, Antarctica. However, the nearest colony to New Zealand is that of about 4000 pairs on Macquarie Island. Most southern giant petrels remain near Antarctica and in the subantarctic zone during summer and autumn. However, in winter and spring some adults and many immatures disperse into New Zealand waters. They are scavengers of dead seabirds and marine mammals, and are predators of penguins, albatrosses and other seabirds as well as crustaceans, squid and fish taken from the sea surface. (90 cm)

NATIVE



NORTHERN GIANT PETREL

NORTHERN GIANT PETREL

(*Macrocystes halli*)

The giant petrel, also known as the ashbird or nelly, is characterised by its robust form and massive bill with prominent nasal tubes. Adult northern giant petrels have brownish-grey plumage with much of the head greyish, and greyish-yellow eyes. The bill is a distinctive horn colour with a brownish tip. Juveniles have a dark brown plumage. Northern giant petrels breed on many subantarctic islands. In the New Zealand region they nest on islands in Port Pegasus of Stewart Island, and on the Chatham, Antipodes, Auckland and Campbell Islands, and number about 2000 pairs. Northern giant petrels lay a single white egg during August-September. The chick hatches after two months of incubation. It is brooded for about three weeks and then guarded for a further two before being left on its own while both parents forage. The chick flies off to sea when nearly four months old. (90 cm)

NATIVE

What are the other benefits of a tori line?

Okay, so we know that tori lines are good for the birds, but have you considered what a tori line can do for you? For starters, aren't you sick of hearing about how bad the fishing industry is for birds, and how little you are doing to prevent the slaughter of thousands of defenseless birds?

Is this the sort of image that is giving the industry a fair go?

No! Not at all, and the only way to change the public view of the situation is by showing that you as fishers are acting responsibly. Using a tori line is a pretty good defense against public criticism, and will certainly go a long way towards reducing the chances of catching birds.

What do you think when you see birds taking your baits? Do you ever think about how much bait you are losing, and wonder whether those baits that are taken off your line could be costing you valuable fish? The baiting in a longlining operation is the key to successful fishing; after all, how many fish would you catch if you didn't bait any hooks? Silly question, isn't it? Yet, by not protecting your baits from birds, some of the hooks you set are essentially going out unbaited; and while you are at it, you are throwing away the baits for those hooks. How much bait do you think you lose to seabirds over the space of a year? How many fish do you not catch as a result?

It is a tough equation to work out, because much is speculation. But the reality is, if you are not doing everything you can to ensure that baiting is as good as it could possibly be, then your fishing operation is not being run as efficiently as it could be.

It's pretty easy to get a tori line properly set up for your boat. Research has shown that an effective tori line can reduce bait loss by up to 69%; that translates to a substantial number of baits that remain on your line, fishing.

For free advice on how to set your vessel up with an effective tori line, contact the advisory officer.



Don Hadden

BLACK PETREL

BLACK PETREL (*Pterodroma parkinsoni*)

The plumage of this petrel is blackish-brown, and its legs and feet are black. Apart from the black bill tip, the bill plates are cream coloured, and the skin between the plates is black. Today black petrels nest only on Little Barrier Island (about 100 pairs) and Great Barrier Island (about 800 pairs), the total population numbering 3000-4000 birds. Formerly it nested on inland ranges of the North and South Islands. Black petrels are summer breeders, returning to their ridge-top burrows in October-December. Before egg-laying in November-January, the birds clean out their burrows and line the nest chamber with leaves. The single white egg hatches after nearly two months of incubation. The chick is left unguarded at about ten days old, with each parent returning once a week to feed it. Chicks fly to sea in April-June when about fifteen weeks old. Black petrels must scramble up sloping trees or on to cliff tops in order to get airborne from the nesting islands, some birds walking 100 metres or more from their burrows to reach suitable take-off sites. During the breeding season they forage mainly around the North Island and in the Tasman Sea, but spend winter and spring in the eastern tropical Pacific. (46 cm)

Don Hadden



ENDEMIC



Don Hadden

WHITE-CHINNED PETREL

WHITE-CHINNED PETREL

(*Pterodroma albigularis*)

The white-chinned petrel has an entirely black plumage, except for some white chin feathers. The legs and feet are black, and the bill is pale cream or horn coloured with black in front of the nostrils. It is the bill colouration and the white chin that distinguishes this species from the very similar Westland petrel (*P. westlandica*) and black petrel (*P. parkinsoni*). The white-chinned petrel has a circumpolar distribution over deep waters between 30°S and 65°S. It breeds on many subantarctic islands, including the Antipodes, Auckland and Campbell Islands in the New Zealand region. Some islands outside the New Zealand region have over a million pairs nesting on them. White-chinned petrels are summer breeders, with egg-laying in November-December. This is the largest burrow-nesting seabird. Because their burrows are dug in peaty soils they are sometimes wet, hence the nest is built on a short pedestal to keep the egg dry. The chick is brooded for about five days, but for the rest of its 14 week life in the burrow it is left unguarded, the adults returning at one to six day intervals to feed it. (55 cm)

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WESTLAND PETREL

WESTLAND PETREL (*Pterodroma westlandica*)

The Westland petrel has an entirely blackish-brown plumage, and black feet and legs. The bill plates are cream coloured, except that the bill tip is black, as is the skin between the plates. Thus, apart from being slightly larger, this species looks the same as the black petrel (*P. parkinsoni*). The Westland petrel is endemic to New Zealand, breeding only in the coastal forest between Barrytown and Purakaki of the West Coast. The population is estimated at about 14,000 birds. This species is a winter breeder, with each pair nesting in a one to two metre long burrow situated in the steep side of a valley. The single white egg is usually laid in May and hatches after two months of incubation. The chick is guarded for its first fortnight, after which both parents are away by day foraging, and it is fed about every third night. The chick leaves the burrow when about four months old, and must then forage and fend for itself. Although the diet of the Westland petrel includes squid, fish and crustacea, the bulk of its food during the breeding season is offal from fishing boats. (48 cm)

ENDEMIC



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GREY PETREL

GREY PETREL (*Pterodroma cinerea*)

This species is a robust-bodied petrel. Its crown, sides of the head, mantle, back, rump, tail and wings are varying shades of grey, with the chin, chest and belly being white. The bill is greyish-green, with the nostrils and skin between the plates being black. The legs and feet are greyish-pink, and their webs are yellowish-pink. The grey petrel's flight consists of glides interspersed with rapid, shallow flaps. It has a circumpolar distribution, nesting on many subantarctic islands, including Campbell and Antipodes Islands in the New Zealand region. Most nest at the Antipodes because feral cats and Norway rats on Campbell Island have virtually exterminated the species there by killing almost all chicks. Grey petrels nest in winter, the single egg laid in April-June and the chicks fledge in September-December. Birds from the Antipodes Islands forage to the east of New Zealand, particularly off the east coast of the North Island during the nesting season. Grey petrels are attracted to the offal discarded from boats working in this rich fishery, and many drown after being accidentally hooked on longlines. At present it is not known what impact this mortality is having on the population. (48 cm)

NATIVE

PAGES 47, 20, 42 AND 41 FROM: NEW ZEALAND'S NATIVE SEABIRDS. PENGUIN POCKET GUIDES, 1998. TEXT BY RALPH POWLESLAND (REPRODUCED WITH PERMISSION).

The muttonbirds

For many of us, the term “muttonbirds” just refers to that group of little brown or black birds that sometimes appear in large numbers around boats. The clowns of the seabird world, sometimes they put on a great show, squabbling and carrying on, or diving down to pinch baits before we can even see them on the haul, and generally bludging baits and scraps. But muttonbirds are actually a complex group of 15 species known as “petrels” and “shearwaters”. Some of these species are extremely common, and some are not, but look common because they always hang out around fishing boats. The purpose of this next section is to let you know a little more about our wee mates, the mutton-ducks.

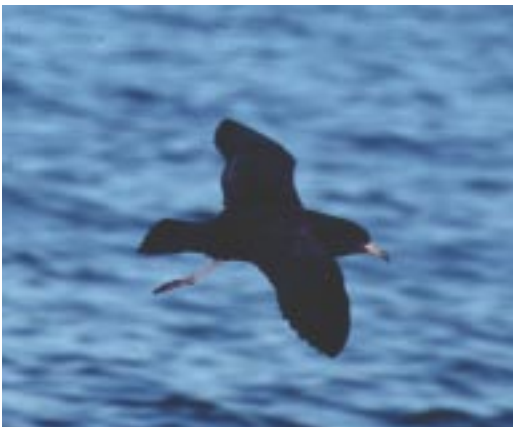
The reason that they all look the same is that they are all closely related, and all live very similar lifestyles. Most of their lives are spent at sea, generally only going to land in order to breed. Look at the seven separate species of muttonbird on these pages, and you may start to realise that despite how similar they all are, there are more than just a couple of kinds.

New Zealand’s “real” muttonbird is the Sooty Shearwater. This bird breeds all through our outlying islands, except for the Kermadecs and the Bounty Islands. This is the species on which the muttonbird industry is based. The adults are not taken as a part of this industry, but rather the young chicks, who can eat as much food as is provided to them, and when there is plenty around they can become extremely fat.

Sooty Shearwater Photo:P.Reese



Flesh-footed shearwater
Photo: P.Reese



The species we most often see around are Flesh-footed Shearwaters. They can be identified by their pale pink beak with a dark tip (see photo), and their pinkish legs (the name “flesh-footed” refers to the fact that the colour of the legs is similar to a European’s skin). Some flesh-foots breed on offshore islands around northeastern New Zealand such as the Hen and Chicken Islands, but mostly they breed on Lord Howe Island. These little birds migrate up to Korea and Japan during our winter



Fluttering Shearwater
(Photo:P.Reese)

every year. So if you ever thought that muttonbirds were more common in summer, and seem to mostly disappear in the winter, you are right! The only muttonbirds left once the Flesh-footed shearwaters disappear are less common, or more shy around fishing boats, like Black Petrels, Fluttering Shearwaters and Little Shearwaters.

Black Petrel (Photo DOC)



Grey Petrel (Photo:P.Reese)



The most common muttonbird you will be seeing during the winter months will probably be the Grey-faced Petrel, which, as you can see in this photograph, has a distinctive grey face. These birds tend to be shyer than Flesh-footed Shearwaters, and will generally stay quite a way from the boat during setting or hauling, but they sometimes come in for a closer look.



White-chinned Petrel
(Photo:P.Reese)



Grey-faced Petrel
(Photo R.Slack)

Black Petrel—Seabird of concern

One of the seabirds reported caught in the northern domestic fishery is the black petrel. Like other “muttonbirds” the black petrel breeds in burrows in the ground. Before the spread of rats, cats, stoats and dogs, large populations of this seabird would return each year to breed under the forest canopy of many of the coastal and some inland ranges of the North and South Island. Because they nest in the ground, these seabirds are easy prey for such introduced predators. The mainland populations were gradually eaten out and have now disappeared. The black petrel now only breeds on Little Barrier and Great Barrier Islands, and there are about 4,500 breeding adults remaining. This is one of New Zealand’s most threatened seabirds, and has been rated as “vulnerable” using an international system which assesses the status of plants and animals.

The black petrel is often seen feeding in waters north of about East Cape between October and June. This is the breeding season. Once breeding is over the birds migrate across the Pacific Ocean and forage off Central and South America over our winter months. They begin to breed from six years of age, and live for about 20 years.

The black petrel looks quite similar to another muttonbird called the flesh-footed shearwater which is common in New Zealand waters. Both are blackish-brown birds, but the black petrel generally looks blacker and bulkier, has black legs and a yellowish beak. The flesh-footed shearwater has pink legs (its legs are the colour of a European’s legs thus the name) and a more pinkish white and narrower beak. Both have dark tips to the beak.

The black petrel is a very good diver, so it is important that baits sink quickly behind the vessel and a good quality tori line is used to protect the bait. They feed on jewel squid which live along the shelf break zone from East Cape to North Cape. Black petrels feed during both the day and night.

Black Petrel
(Photo: C.R. Veitch)



More information on the Black-browed Mollymawk

The Black-browed Mollymawk is quite a misunderstood bird. Despite being one of the most common sights around fishing vessels, many people don't know much about them. They are one of our smallest albatrosses (yes they are albatrosses, mollymawk is the name given to the smaller species) and this has led to some confusion between similar looking birds, such as Black-backed Gulls, and even Australian Gannets. What makes the situation even more complicated is the fact that the young ones and the old ones look different anyway!



Juvenile Black-browed Mollymawk

Young ones have darker beaks and may have some grey colouring around their neck and head, where the adults have a yellow beak with a pink or red tip, and no grey around their head or neck. On this page we have included pictures of a young blackbrow, an adult blackbrow and a Black-backed Gull for comparison. As you can see, young blackbrows can look quite different from their adults.

Compared to Black-backed Gulls they are larger, with much longer and narrower wings. In flight, the gulls flap almost constantly, whereas the albatross will glide most of the time.



Adult Black-browed Mollymawk



Black-backed Gull

Black-backed Gulls also look different when they are young, being a speckled grey-brown rather than their normal adult black and white.

Underwater Setting—Update

You may have heard that kiwi ingenuity has been put to use over the past few years to find a way to set baited hooks underwater. The idea was initially put forward by a group of skippers and fishing industry reps during the first year of the Conservation Services Levy programme. Since then there have been mixed reactions, from total rejection to enthusiastic support!! Here is an update on the two types of devices that have been developed.

UNDERWATER SETTING CHUTE

The chute is now fully developed and has been extensively sea tested for operational faults. The recent sea testing and refinement has been carried out on a vessel fishing around Tasmania and western Australia. The Australian government has made funding available to build 10 chutes and these are currently being fitted to vessels for a 6 month trial. Each vessel will carry an observer and detailed observations of seabird bycatch and seabird behaviour will be recorded. If the trials are successful, a chute will be tested in Hawaiian waters.

UNDERWATER SETTING CAPSULE

This device has undergone a re-design after a trial on the F.V. Daniel Solander found that the device was unsafe in heavy seas. The original inventor (Dave Kellian) and the skipper of the Daniel Solander have come up with a new way to deliver the capsule below the waterline. The capsule is now transported on a track attached to the stern. This means there are no flying parts that could endanger crew. A number of other improvements have been made to make the device easy to use. Limited sea testing of the new design has been carried out, but further sea time is needed to fully test the device.

For further information on either device, contact the Advisory Officer.

Continue to next file: [Tuna2001b.pdf](#)