

# The Science Observer

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## Albatrosses, Pirates & Patagonian Toothfish

Fishing fleets over-fished most of the world's oceans then turned to the fish stocks of the Southern Ocean. Macquarie Island's albatross and petrels have been serious casualties of longline fishing, practised by many fishing fleets.

### *Fishing out the oceans*



Patagonian Toothfish. Photo courtesy of Greenpeace.

After over-fishing most of the world's oceans by 1969, many fishing fleets headed for the Southern Ocean. They drove the marbled rock cod and icefish to the edge of extinction, before turning their attentions to the Patagonian Toothfish. This species (*Dissostichus eleginoides*) is found around Macquarie Island and other subantarctic islands. It is also known as sea bass, Chilean grouper and black hake.

The toothfish is remarkable in that it can live for 50 years. It does not breed until it is 10 years old and can grow to more than two metres long. This fish inhabits deep waters (300-3,500metres) and is found on seamounts and continental shelves.

Scientists know little about Patagonian Toothfish except that it makes up nearly all the elephant seal's and part of the sperm whale's diet. That means that if the Patagonian Toothfish becomes extinct, populations of whales and elephant seals could also suffer. Greenpeace estimates that in some areas of the world, up to 90% of the Patagonian Toothfish catch is taken by pirate ships that do not obey fishing regulations and poach fish using nets and longlines.



An albatross caught and drowned on a longline. Photo courtesy Greenpeace.

Populations of albatrosses and giant petrels on Macquarie Island and other subantarctic islands have declined

alarmingly as a result of the birds' encounters with fishing operations. These long lines can be up to 130 kilometres long and baited with thousands of fish hooks. Albatrosses and petrels hover above the longlines and dive for bits of fish, swallowing both bait and hook.

*Hundreds of thousands of albatrosses and petrels around the world have been pulled underwater and drowned on these longlines.*



Wandering Albatross and chick on Macquarie Island. Photo Geof Copson.

Albatrosses are the world's largest flying birds, with wingspans of up to 3.5 metres. They can live for more than 60 years and mate for life. Like the Patagonian toothfish, albatrosses may be ten old before they reproduce. Albatrosses are very vulnerable because they produce only one chick every three years. The parents spend at least nine months looking after each chick. Once the young birds leave the nest, they

spend between five and eight years at sea, rarely coming ashore except to lay eggs and rear their young on remote islands.

*When an adult dies on a longline, its chick is also likely to die.*

In 1989, about 44,000 albatrosses drowned on long-lines. Changes to fishing techniques have helped reduce the deaths of seabirds in recent years, but fishing has taken a heavy toll on Macquarie Island's albatrosses.

*There are now only about 20 breeding pairs of wandering albatrosses on Macquarie Island.*



Captain Arne Sorensen. Photo courtesy the Mercury

Captain Arne Sorensen is master of the Greenpeace ship, *Arctic Sunrise*. He has a deep love of Macquarie Island, and was master of the *Nella Dan* it was shipwrecked in Buckles Bay in 1987.

### References

Greenpeace, 1999, 'There are only a few places left in the world where nature hasn't been over exploited.' Pamphlet.

Greenpeace, n.d., 'Southern Ocean in Crisis', pamphlet.

'Patagonian Toothfish, Pirates Plunder Southern Ocean',

[http://www.greenpeace.org.au/campaigns/oceans/toothfish\\_021199.html](http://www.greenpeace.org.au/campaigns/oceans/toothfish_021199.html)

Antarctic Adventure website:

<http://www.antarctic.com.au/encyclopaedia/bio/Albatross.html>

### Further Reading

You can read about the *Nella Dan* shipwreck in:

'A True Viking Funeral'