BYCATCH BYLINES

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HEADLINE

Backing black

Black petrels are back in New Zealand waters and breeding over the summer. This is our seabird considered most at risk from commercial fishing, and it's all eyes astern to reduce captures. How are supporters coming together to back our feathered all-blacks?

It all comes down to fishing well on the water, and making sure everyone's working on being seabird-safe. Seabird Liaison Officers Dave and Jamie are back on deck for the summer. They will be working with longliners in FMA 1 to share knowledge and enhance seabird-friendly fishing practices. Seabird Management Plans describing how vessels manage seabird capture risks are a key part of this approach for bottom longline vessels fishing for snapper and bluenose. For surface longliners, resolving issues with implementing regulated seabird bycatch reduction measures for this fishery is a key area of interest.

Government fisheries observers are also getting out into the fisheries that black petrels can interact with. For example, this year there are 205 observer days planned for the Snapper 1 and Bluenose 1 fisheries. Finding out how fishers are going with Seabird Management Plans and monitoring any seabird captures that do occur are key parts of this observer work. Observer days on northern surface longliners are also underway.

Other efforts involving government, industry and stakeholder groups include black petrel-focussed action plans. These include working on continuous improvement of seabird-friendly fishing. One of the plans is backed by the Black Petrel Working Group members' pledge to support the recovery of the black petrel population. (Find out more in '*The Big Picture*').

Clearly, for commercial fishers, there is a lot going on. In addition, recreational fishers have a key part to play. With so many rec fishers in so many places, making contact can be hard. However, work is underway to spread the word. Brochures, fishing magazines, and radio are all covering the seabird story. The October edition of *NZ Fishing News* featured Rick Pollock – angler and charter operator – talking about seabird-safe recreational fishing. (If you missed that story, check the link in '*Want to know more?*') Keeping a clean vessel with scraps in lidded buckets and sinking baited hooks quickly are key ways that rec fishers can become part of the solution to seabird bycatch.

It could be lots of places in New Zealand but this is black petrel paradise – their breeding area on Great Barrier (Aotea) Island. *Photo: Ingolfson, Public Domain via Commons*

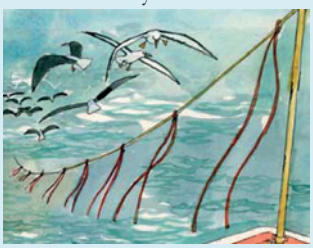
And for those who are not convinced that commercial fishing is such a risk for black petrels – the best proof is information. Fisheries observers and cameras on vessels can add to our knowledge of black petrel captures. With more confidence in the number of captures, uncertainty decreases and the real situation is better understood.

BEST PRACTICE BASELINES

Towing the line

Tori lines are a recognised part of global best practice for reducing seabird bycatch in longline fisheries. As a result, they feature in New Zealand regulations. What makes a tori line the best of best practice?

- The aerial extent of the tori line – how much of it is actually airborne. More is better.
- How well the streamers protect the baited hooks – can the streamer line's position be adjusted, using a bridle or other system?
- Two are better than one – paired streamer lines are the best of best practice, providing better hook protection than a single tori line.
- Bright is best – having bright coloured streamers such as fluorescent orange or pink helps make tori lines more effective in keeping seabirds away.



A tori line. Good for birds but hard to take photos of!
Illustration from www.acap.aq/

WHAT THE FAQ?!

Shagadelic, baby!

The spotted shag might give Austin Powers pause for thought. However, this seabird is one of 12 shag species that frequent New Zealand waters. With a name like that, how else do they get noticed?

- The spots they are named for occur on the shag's back feathers.
- Spotted shags are one of only two New Zealand shags with yellowish feet. Other shags can have black, pink, and pink and grey feet. Take a look next time you see one!
- Spotted shags live for about 10 years and travel up to around 300 km from home during their lives.
- They lay three to four blue eggs in basic nests on rocky ledges.
- Young spotted shags are cared for by both parents for 62 days after they hatch.

An adult spotted shag. *Photo: © M.P. Pierre*

THE BIG PICTURE

From plans to actions

Everyone knows the National Plan of Action – Seabirds. In one form or another, we've had one since the early 2000s. But for seabirds, it doesn't stop there. Black petrels, flesh-footed shearwaters and albatrosses all have their own action plans, and sometimes more than one. Clear as mud?

The National Plan of Action – Seabirds (2013) (NPOA) is the 'mother' of all government policies that address seabird interactions with fisheries. This plan covers all protected seabirds in New Zealand and commercial, recreational, and customary non-commercial fisheries are included. The NPOA's long-term objective is:

"New Zealand seabirds thrive without pressure from fishing-related mortalities, New Zealand fishers avoid or mitigate against seabird captures and New Zealand fisheries are globally recognised as seabird friendly."

Obviously, that's a very broad objective and there are many different ways to achieve it. The NPOA considers these but does not look at how to address particular issues for individual seabird species. Instead, MPI and DOC have started preparing action plans that are focused on addressing specific issues for our at-risk seabirds. For example, actions identified in the black petrel and flesh-footed shearwater plan include optimising tori line designs and line-weighting regimes to reduce bycatch, supporting industry training on seabird capture risks, deploying liaison officers to work with fishers, and updating regulations with measures appropriate to both seabird bycatch reduction and the practicalities of fishing vessel operations.

The Salvin's albatross: one of the species in-scope for the albatross action plan in preparation by MPI/DOC. *Photo: © M. P. Pierre*

Similar to MPI/DOC's action plan for black petrel and flesh-footed shearwater, a species-specific action plan for albatross is also being prepared. Again, this will support the achievement of the NPOA's objective, but state more specifically what will actually need to be done.

With all the attention on black petrels, it might not be surprising that there is yet another action plan in the mix for them. The Black Petrel Working Group has its own action plan. This group includes government, industry and other stakeholders, who have all committed to do their bit for black petrels. Actions in their plan build on the MPI/DOC plan, and identify particular ways for people to get involved.

Of course, the rubber hits the road when actions get underway. With detailed actions described and roles identified, how everyone can contribute to resolving seabird issues is a whole lot clearer.

WANT TO KNOW MORE?

- *Headline:* Rick Pollock's article from *NZ Fishing News* is at: *http://tinyurl.com/z6cgalz*
- *World Watch:* To read more about the US research, go to: *http://tinyurl.com/j6rkzml*

DOC HOTline
0800 362 468
Report any safety hazards or conservation emergencies
For Fire and Search and Rescue Call 111

If you see an entangled whale, call the 24-hour DOC emergency hotline 0800 362 468 (0800 DOC HOT) to report its location.

WORLD WATCH

The end of their rope

Occasionally both in New Zealand waters and internationally, whales get tangled in the ropes associated with fishing gear. Cray pot entanglements are one example. Newly published research in the US looks at how fishing gear made of ropes with lower breaking strains could help save whales.

The entanglement of whales in fishing gear can lead to their death, as well as having non-lethal impacts including injuries, reduced feeding ability, stress, and less successful breeding. In New Zealand, we might think of entanglements as rare events. However, in the US it's a different story. For example, in the northwest Atlantic, 83% of the right whale population shows scars consistent with encountering the nets or ropes of fishing gear.

With entanglement being a significant global issue for the management of whale populations, mitigation measures are similarly important. Measures reducing the risk of whale entanglement include setting pots with the shortest possible lines attached and avoiding setting gear in 'high traffic areas' – for example, routes used by migrating whales. However, exploring rope-breaking strain could be another valuable contribution to the mitigation tool box.

To investigate this, researchers have looked at information on the injuries and ropes associated with live and dead whales encountered over 15 years on the east coast of the US and Canada. 132 ropes retrieved from entangled whales were tested for breaking strain, and rope material and diameter were also considered.

Amongst the entangled whales, right whales were associated with ropes of the highest breaking strain. Humpback whales carried the next strongest ropes, and minke whales were entangled in ropes with the lowest breaking strains. Adult right whales were found entangled in stronger ropes than the ropes caught around juveniles. These results appeal to our common sense– different ages and types of whales appear to have different strengths for escaping entanglement.

It's early days looking at the potential benefits of using lower breaking strain rope in fishing gear to reduce whale entanglement. Clearly, there are operational fishing considerations as well as issues of whale conservation. However, working with rope of lower breaking strain may be a practical way to reduce entanglement risk.

Untangling whales from fishing gear is a technically skilled and risky business. To assist entangled whales in New Zealand waters, DOC has a specialist team on call. If you see an entangled whale, note its location, time, and direction of travel and call the DOC experts (see '*Want to know more?*').

A humpback whale entangled in a craypot line off the Kaikoura coast. *Photo: http://blog.doc.govt.nz/2014/11/17/whale-rescue-kaikoura/*

FEEDBACK

To submit feedback or questions, please email: jpecnz@gmail.com

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