



# Southern Seabird Solutions

## *Conservation Through Cooperation*

October 2006

Newsletter Eight

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**Southern Seabird Solutions promotes the adoption of fishing practices that avoid the mortality of Southern hemisphere seabirds.**

### A word from Janice

It has been a productive year for Southern Seabird Solutions. From hosting the first international trawl workshop devoted to searching for ways to reduce seabird bycatch to extending our work internationally it's been a busy time. You can read about some of our work in this newsletter.

As an organisation we've known how important our international outreach is, but over the past year we've been able to take that outreach to a new level. Beyond Dave Kellian's successful trip to Peru, we've also been involved in a number of international initiatives, including assisting in organising the upcoming South America's first fisher's forum for the reduction of seabird bycatch.

You'll also notice that there are quite a few thank yous and congratulations in this edition of our newsletter. A reminder that solutions can be found and that there are a number of dedicated individuals and groups working on this issue at both the local and international level.

There is still much to be done, but it is an exciting time. Thanks for being part of the solution.

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### Peregrine Adventures on board for seabirds

In February 2006 Peregrine Adventures, an Australian-based company that specialises in Antarctic travel, donated USD \$20,000 as seed money to develop a Pelagic Underwater Bait Setting Capsule (BSC).

The brainchild of Dave Kellian, a New Zealand fisherman, inventor and Southern Seabird Solutions Management Committee Member, the research and development of this invention will be through Ashworth Marine Engineering in Australia.

Because the baited hooks are set under water out of sight of seabirds, this invention has the potential to reduce seabird deaths significantly in longline fisheries.

Another USD \$86,000 will be necessary to fully develop the bait-setting device, but Peregrine Adventures' generous donation means that work can get underway.



Chris Carey and other WWF Smart Gear competition winners. Photo courtesy of WWF.

## Southern Seabird Solutions

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## NZ fisherman and seabirds win big in the WWF Smart Gear competition

Congratulations to Southern Seabird Solutions Management Committee Member Chris Carey for being a runner-up with WWF's International Smart Gear Competition. Chris, who works for Independent Fisheries Ltd, won the USD \$5,000 prize for his contraption designed to scare birds away from the warp line of a trawler.

Called the 'flying bottlebrush' or 'carefree's cunning contraption', the device was made using material that can be found on board any large fishing vessel. The contraption consists of a rope that's clipped on to the warp line with purse seine clips and has strapping tape streamers that bristle out and make the rope look like a bottlebrush. The streamers help create a visible and safe 'no fly zone' for the seabirds.

The judges voted for Chris' invention because of its simplicity and because it could be readily made and used by fishermen to reduce seabird bycatch.

The device is currently being trialled in New Zealand by government and industry in cooperation with WWF-NZ.

"Smart fishing practices pay off for both fishers and our Southern Ocean albatross. WWF-NZ is involved in advising on the scientific trial of the device, which has been a rewarding experience," says Caren Schröder, WWF-NZ's Marine Programme Leader and Southern Seabird Solutions Management Committee Member.

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## NZ to host ACAP

The second Meeting of the Parties for the Agreement on the Conservation of Albatrosses and Petrels (ACAP) will be held 13-17 November in Christchurch.

ACAP is the first multilateral agreement which seeks an integrated approach to albatross and petrel conservation throughout the Southern hemisphere. The Agreement encourages international cooperation in the conservation of these declining seabirds.

During the five-day meeting delegates will make decisions on a number of administrative matters along with work programmes, changes in the conservation status of albatrosses and petrels, and proposed indicators to measure the success of ACAP.

ACAP was opened for signature in June 2001 in Canberra, Australia. To date there are 11 signatories - Argentina, Australia, Brazil, Chile, Ecuador, France, New Zealand, Peru, South Africa, Spain and the United Kingdom.

The Agreement has been ratified by Australia, Chile, Ecuador, France, New Zealand, Peru, South Africa, Spain and the United Kingdom.



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## South American Fisher's Forum update

This December, Projeto Albatroz will host South America's first fisher's forum to reduce the incidental capture of seabirds. The event, which is being held in Brazil, is an opportunity for fishermen, researchers, government officials and others to meet and discuss ways to reduce the incidental capture of seabirds in oceanic fisheries, especially longline and trawl fisheries.

The forum will provide fishermen with the latest information about mitigation measures. Other purposes for the forum include identifying regional priorities for the development of fishing techniques and discussing the creation of incentive measures for the adoption of mitigation measures in South American countries.

Southern Seabird Solutions has assisted Projeto Albatroz in organising this inaugural event. The forum is being sponsored by Care for the Wild International.

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## SSS hosts international trawl fishery workshop

Fishermen, fishing industry representatives, scientists, government officials, observers, environmentalists and others gathered for a workshop in Nelson, New Zealand to look at ways to reduce seabird bycatch in trawl fisheries.

Representatives from Argentina, South Africa, New Zealand, Australia, the United States and the United Kingdom discussed the successes and challenges of current mitigation measures and considered additional ways to address this global issue.

One of the ways seabirds are killed in the trawl fisheries is when they are hit by the warp lines attached to the trawl nets. The birds are often so busy trying to feed on offal or fish that they are unaware of the large warps. A number of mitigation measures are emerging to reduce this problem including tori lines (streamer lines flown off the back of vessels to scare birds away) and other ways that deter seabirds from hitting the warps. As scientists and fishermen agreed at the workshop however, a longer term solution needs to be found for how offal is managed at sea.

"What Southern Seabird Solutions found in organising similar workshops for longlining fisheries is that getting everyone in the same room together means that some practical answers come out of the sessions, as well as a commitment to continue working together," says Janice Molloy, Convenor, Southern Seabird Solutions. "This international cooperation is very important for us here because New Zealand seabirds are global travellers and they're being killed in fisheries around the world."

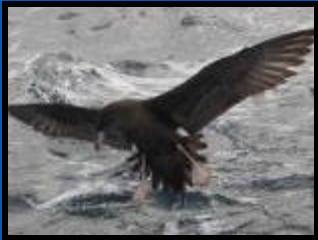
The trawl workshop was sponsored by WWF-US, Ministry of Fisheries, Deepwater Group Limited, Clement and Associates Ltd, the New Zealand Seafood Industry Council, and the Department of Conservation.

For a report of the workshop please email Shelly Biswell at [shelly@biswell.net](mailto:shelly@biswell.net).

## Well-oiled research



Black petrels and flesh-footed shearwaters near the experimental vessel. Photo courtesy of J. Pierre, DOC



Flesh-footed shearwater, Hauraki Gulf. Photo courtesy of J. Pierre, DOC



Shark liver oil dripping to the stern of the vessel. Photo courtesy of J. Pierre, DOC

In 2005, Johanna Pierre and Wendy Norden, New Zealand Department of Conservation, confirmed experimentally that dripping small amounts of shark liver oil from the stern reduced the numbers of seabirds following fishing vessels. Their first tests were done working with Alex Aitken, winner of the SEO/Birdlife competition to reduce seabird bycatch.

Preliminary tests were successful in the Hauraki Gulf, New Zealand, where seabird communities were dominated by flesh-footed shearwaters and black petrels. Follow-up testing showed that the home-brewed shark liver oil made by Alex and Dave Kellian was more effective at repelling seabirds than three other fish oils tried (including commercially produced shark oils or anchovy oil) and vegetable oil.

Encouraged by the strong results of their first experiments, Johanna and Wendy then tested shark liver oil on a seabird community that included five species of albatrosses and giant and cape petrels. These experiments were done in Kaikoura. If successful, these tests would show that shark liver oil could help reduce seabird bycatch in fisheries in other areas around the world.

Disappointingly, despite the strong initial results on flesh-footed shearwaters and black petrels in the Hauraki Gulf, shark liver oil did not deter albatrosses or giant and cape petrels from following vessels in Kaikoura. In fact, these species swam and flew right up to the vessel while the oil was being released. So, the fish oil method won't be useful in reducing bycatch of these species.

While it wasn't successful on the albatross group, Johanna and Wendy now want to try the oil on white-chinned and grey petrels, along with sooty shearwaters. These species are caught in high numbers globally. They can be aggressive feeders and tenacious vessel followers, which puts them at risk. These species are also closely related to flesh-footed shearwaters and black petrels, species for which shark liver oil was an effective deterrent.

To learn more you can review Johanna and Wendy's research: Pierre, J.P. and Norden, W.S. 2006. Reducing seabird bycatch in longline fisheries using a natural olfactory deterrent. *Biological Conservation* 130: 406-415.

Their next experiments are scheduled for March 2007. Watch this space to hear more!

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## Getting to the facts

Ever wonder why giant petrels have such a strange looking beak? Why toroa/albatross are of special significance to many iwi Māori? Want to learn where some of our New Zealand manu moana/seabirds migrate to?

You'll soon have a chance to learn all that and more when Southern Seabird Solutions unveils a series of fact sheets geared for children aged 7 to 11. This web-based resource will be available on Southern Seabird Solution's

## Offal smoothies

Based on observations that albatrosses don't eat bits of food smaller than 1 cm, trials in New Zealand have been carried out to see if mincing is an effective way of reducing the number of large seabirds killed in the trawl fishery. The effect on smaller seabirds (petrels and others) also needs to be ascertained to ensure that the risk to these birds is not increased.

Sanford Ltd and South East Resources have both been involved in testing mincers at sea. South East Resources Ltd commissioned ANDAR Holdings Ltd to develop a mincing machine specifically for the fishing industry. Early results have been promising and suggest that the mincer, dubbed the 'Offal Hogger', can mince 7 to 10 tonnes of offal per hour.

The effect of mincing offal to decrease seabird bycatch still needs to be assessed. To look at this issue more closely, the Department of Conservation, New Zealand Seafood Industry Council and the Deepwater Group Ltd and Sealord Group Ltd have joined forces to formally study seabird abundance and behaviour when offal is minced and pumped out under water. Testing is currently underway on a Sealord factory trawler and results are being measured by video cameras and a Ministry of Fishery observer.

new website when it's launched in 2007. The fact sheet project is being funded by the Department of Conservation's Marine Conservation Unit.

The fact sheets and lesson plans cover both seabird ecology and human interactions. One of the main aims of the project is to help people of all ages understand New Zealand's unique position as 'seabird capital of the world'. Beyond providing facts, the sheets also emphasise conservation efforts, the cultural importance of seabirds, and highlight actions each of us can take to benefit our seabirds and our oceans.

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## Trawling for answers

Spearheaded by Clement and Associates Ltd for the Deepwater Group Ltd, the New Zealand fishing industry has implemented a comprehensive offal management programme that began during the 2006 squid season and will be expanded upon for the 2007 season.

Industry has integrated with the Ministry of Fisheries measures to deploy warp-strike mitigation devices on trawlers and implemented an offal-management programme. This is funded by industry and, in 2007, will again initially focus on the squid fishery, since the fishery has the highest seabird strike rate and relatively small offal volumes when only squid is caught.

A number of trials have or will be undertaken by operators or through a Deepwater Group Ltd, Department of Conservation and New Zealand Seafood Industry Council partnership to determine the effectiveness of mincing offal (see sidebar) or releasing it at different times.

Again this year, the agreement of all vessel operators will be sought to implement agreed vessel management plans (VMPs). Last year a point system was developed that scored mitigation measures and offal management actions based on the likely effectiveness of each measure.

VMPs will be expanded to cover all fisheries that vessels operate in and will once again itemise the mitigation measures and offal management procedures that will be followed. Based on last year's experiences, Deepwater Group Ltd plans to lift the average VMP standard for each particular vessel type by identifying best practices.

The seabird liaison officer will again be assigned to the fleet to assist with and to check VMPs, audit vessels and to work with operators, skippers and crews to identify ways to reduce seabird bycatch. A weekly report from all vessels will be requested. The report provides detailed information about the seabirds caught and brought on board each vessel. Throughout the season the seabird liaison officer will collate these reports and distribute them to the vessel operators.

Awareness and training will continue to be an important component of the programme. The Deepwater Group Ltd is planning training sessions for industry observers so that reporting on seabird and sea lion interactions is consistent with Ministry of Fisheries information. Training for vessel operators to ensure their awareness of all the current issues around seabird and sea lion bycatch will also be held.

## Fisherman Dave Kellian visits Peru

In February 2006 the Instituto del Mar del Peru (IMARPE) hosted Dave Kellian for three weeks in Peru. The purpose of Dave's visit, as a representative of Southern Seabird Solutions, was to share experiences and knowledge with Peruvian fishermen about reducing seabird bycatch.

Dave's main contacts in Peru were IMPARPE, the Peruvian government's scientific research agency for living marine and inland water resources, and the non-profit organisation Pro Delphinos. During his visit Dave undertook a fishing trip and met with fishermen at ports up and down the country.

"It was really good to be in the fishermen's territory – it meant they were really open and I got to learn about the problem in the north and bird interactions. I can't give numbers, that would be hearsay, but they definitely do have a problem. Peru is currently getting observers on the vessels to get the real numbers of birds being caught and killed, to find out where the problem is and direct resources accordingly."

Even without solid scientific information or government directive however, Dave found that the longline fishermen in the south – who target mahi mahi in summer and mako and blue shark in winter – were already weighting their lines to reduce seabird bycatch. Dave believes that weighting the lines in the north as they do in the south would bring a reduction in the number of birds being caught.

Based on his conversations with fishermen and being out at sea it became apparent that some mitigation strategies which work well in New Zealand aren't as appropriate for Peru. The Peruvian longliners fish on the surface of the water which means that tori lines would tangle with their fishing lines. Night setting isn't an option because of the large number of giant squid that prey at night. And even though Dave believes there are ways to improve on some of the current offal management methods in Peru, the fact is most of the vessels are small and don't have room for big offal bins on deck.

Dave was encouraged by the number of fishermen, scientists and environmentalists looking for creative and inexpensive solutions to reduce seabird deaths. One part of the solution may come in the form of anchovy oil. The oil is a huge by-product of Peru's big anchovy industry. Given the calm sea conditions, Dave thinks there could be an opportunity to drizzle anchovy oil on the water to discourage the birds.

Dave's trip was made possible through funding from IMPARPE, Ministry of Foreign Affairs and Trade, Birds Australia, and the Department of Conservation.

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Thank you for your support