

Black petrel project off to a flying start

Somewhere in the vastness of the South Pacific Ocean is a black petrel named Leah.

And when, or if, that bird returns from its perilous voyaging in two to three years, no one will be happier than nine-year-old Leah Clow.

The petrel is named after her in recognition of her work over the past two summers on the top of Great Barrier Island on the edge of the Hauraki Gulf.

Leah has been helping out a seabird research team in company with her dad Adam, a commercial fisherman from Whitianga.

Adam, who has featured on Country Calendar and is also prominent in the Seafood NZ Promise and Code of Conduct campaign, is a staunch advocate for seabirds.

This season Leah and Adam helped attach satellite tracking devices to 14 black petrel chicks just before they fledged in a Southern Seabird Solutions Trust project funded by the Auckland Zoo Charitable Trust and carried out by Wildlife Management International Ltd.

The one christened Leah and the other 13 youngsters all made it safely off the island and out to sea.

Four of the devices stopped sending signals during the crossing, either because the battery failed, the device fell off, or the young bird died. The other 10 devices kept transmitting, some well beyond the expected lifetime of the battery.

The young birds were tracked for two to three months and travelled an average of 12,329km.

It is amazing the black petrels, or taiko, have survived given the way they have evolved.

Raised in burrows, they are abandoned when their parents migrate to South America.

After about two weeks on their own, something triggers the newly fledged birds to attempt to make their own departure.

They are unable to take off from the ground and therefore climb a handy tree or rocks at night. Generations of scratch marks are visible on bark and rocks.

Then they launch into the air for their first flight.

Some immediately soar... and some crash.

Then it is a case of trying again.

Once airborne, they set off on a maiden 12,000-km flight to the Galapagos Islands and the western shores of south and central America.

The young birds will mature here for two or three years, never touching land in all that time.

If they survive, they will return to Great Barrier and in smaller numbers to Little Barrier Island to mate and breed.

Landing can be even more risky than take-off. The birds are too clumsy to elegantly alight. Instead they crash through the foliage to the forest floor below.

The species once bred in colonies through the North Island and top of the South but is now rarer than the kiwi, rated "nationally vulnerable" with the population reduced to only 10-15,000 birds.

The seafood industry is a key supporter of the Black Petrel Working Group, which brings together commercial and recreational fishers, environmental interests, government and iwi to promote seabird smart fishing practices on the Gulf.

These include widespread training in seabird mitigation, testing and refining existing methods to deter birds from hooks and nets, as well as introducing improved monitoring, including the use of cameras, to prove methods are in place and are working.

Southern Seabirds Solutions Trust, which the commercial seafood industry co-sponsors, works with professional skippers and crew and recreational anglers to reduce harm to seabirds through fishing and played an important role in bringing the relevant organisations together.

And here's hoping in a couple of years a brave little bird named Leah is reunited with her namesake.



Leah Clow with her black petrel.

Aquaculture barge brings benefits to Opotiki

New Zealand's largest offshore mussel farm, Te Whakatōhea Mussels, launched a custom-built aquaculture vessel, the *Kukutai*, in Mount Wellington this week.

McMullen and Wing, the creators of the 1995 America's Cup Boat *Black Magic*, designed the vessel and the Whakatōhea Maori Trust Board collaborated on the project as part of their long-term vision of creating more prosperous employment for the region.

The 24-metre-long and 8-metre-wide barge-vessel took 9 months to complete. It boasts a more comfortable interior, a lower environmental footprint and provides greater product quality. The barge forms part of the vessel's rear and was made as a high-stability platform to cope with the farm's exposed location.

Kukutai will work out at the offshore mussel farm, putting juvenile mussels (seed) onto the lines to grow and will help harvest them once they're mature.

The barge will also mean the company can spend more operating time at the farm. Previously, the shallowness of Opotiki Harbour has restricted the vessel's path out to the site.

McMullen and Wing, chief executive Michael Eaglen said maximising the social return of the project was also an important factor.

"We felt the best and most lasting way that we could contribute was to establish an employment programme that provides young people from Opotiki with skills that would set them up for life," he said.

The group made a collaborative decision to use the building of *Kukutai* as a platform that would provide students with training and a potential career pathway.

Three Opotiki school leavers received scholarships from the companies, providing metal work and construction skill training that they used to help construct the vessel.

Hamiora Kerr was one of the scholarship recipients.

"I've learnt a lot from these guys because there's a lot of experience behind them," said Kerr.

"At the start of the year it was just a big pile of steel and alloy and now it's a complete boat pretty much - so yeah I'm proud - it's a really proud moment for me."

Eaglen said the trainee programme gives young people the opportunity to explore a career pathway in a growing industry where demand for skilled workers is strong.

"We've set out to set these guys up with skills to do the job piece by piece and give them early wins and make them feel they can make a real contribution - as they have done," he said.

All three students are now considering formal trade apprenticeships.

Kukutai is now making its way to Opotiki and is expected to arrive by mid-November.



Kukutai's launch.

Larval fish database offers a look into marine health

Thirty years of larval fish data is helping Australian scientists assess what effect climate change is having on the health of fisheries.

The larval fish database contains 3178 samples and more than 490,000 identifications collected from 12 research voyages around Australia between 1983 and 2016.

In their [paper](#), researchers demonstrated that the data provides rich information on the seasonal dynamics of larval fish (*ichthyoplankton*) in temperate and subtropical Australian waters.

Because oceanographic and biological processes influence the distribution, abundance and survival of larval fish, the database could be a useful tool for measuring the health of marine ecosystems and identifying shifts caused by global warming.

Changes in the abundance of larval fish due to a change in seasons, for example, provides a marker of climate change in marine environments.

"Larvae are carried in ocean currents before they are large enough to swim, and therefore may be found in new areas due to changing ocean currents," said University of New South Wales professor Iain Suthers.

The study has also addressed the problem of comparing larval populations amongst studies. Identifying larvae taxa is challenging to do given their small size, however the study has identified 221 taxa from the sampled regions, which will help with future research.

"This benchmark dataset provides the first synthesis of Australia's considerable efforts in sampling the coastal ocean, and will guide management on the effects of climate change on our valuable fisheries," Suthers said.

Author of the paper James Smith said the database was a great achievement.

"It takes a substantial amount of effort and money to collect all these samples and the impact these datasets have go beyond the study that was initially set up to collect them," he said.

"Historical data that is openly available can serve as a benchmark to which to compare and understand the changes occurring in the marine environment and in particular the marine fish community."

Discussions are underway to determine how the information might be used next in the context of warming oceans.



Seafood Innovations welcomes new General Manager

Seafood Innovations Ltd (SIL), the body charged with providing research investment for the New Zealand seafood sector is welcoming a new General Manager.

Chairman Dave Sharp said they are delighted with the appointment of Anna Yallop to head the organisation.

"Anna comes to us from The Bioresource Processing Alliance where she has managed a \$15 million Ministry of Business, Innovation and Employment (MBIE) grant which funded

research and development on biological by-products from primary industries. She will be an asset to the organisation.”

Anna replaces Mike Mandeno who has been manager of SIL for five years and who is taking up the role of Mussel Farm Manager for Sanford in Marlborough.

Sharp said Mandeno had done an outstanding job in his role and they wished him well in his new role.

SIL encourages and provides funding support for innovative research and development within the seafood industry, with the aim of adding value to the sector by way of increasing the value of existing harvests; or reducing harvesting and processing costs; or enhancing consumer-driven product attributes.

SIL is a joint venture between Seafood New Zealand and Plant & Food Research. MBIE is a cornerstone funder in the company on behalf of the New Zealand government.

SIL is currently seeking new funding proposals for seafood research projects and more information is available at www.seafoodinnovations.co.nz



Anna Yallop, the new head of SIL.

News

Rakiura Māori met with Department of Conservation officials this week to discuss control of the protected kekeno seals, *Stuff* reports. The group is pushing for a targeted cull of the

seals or a management solution to prevent them from destroying muttonbird habitats on the Tītī Islands. Rakiura Tītī Islands administering body chairman Tane Davis wrote to DoC requesting an investigation of methods to control the seals on the islands after noticing the effects kekeno have had. A recent letter released under the Official Information Act said seal numbers have increased by 25 percent in a year and overwhelmed the islands. "Mass areas of tītī burrows are being lost from seals flattening the whenua. In my own case, like others, they inhabit under our whare areas. Caution has to be taken especially when we have the company of our mokopuna and tamariki," he said. Forest & Bird marine conservation advocate Anton van Helden said the proposal to control the seals was "ridiculous" and that the kekeno seal population was "nowhere near" the estimated 2 million that once lived around New Zealand in the 1800s. "We need to consider other ways to control a situation like this. If in fact they are impacting on tītī, we have to find other measures to protect tītī." Conservation Minister Eugenie Sage did not comment, however operations manager for Murihiku said Rakiura Māori's concerns have been acknowledged.

The Government is considering a paua-fishing ban on a stretch of beaches north of Dunedin to halt the decline of the abalone. Fisheries New Zealand is consulting on changes from south of Blueskin Bay to the north of Karitane, including halting recreational and commercial paua fishing and the prohibition of the harvesting of seven kelp species, set-netting and filleting fish at sea. The ban on taking recreational paua would be lifted once the species recovered. The move has been sought for years by the East Otago Taiapure Committee based on the decline of paua in the area. University of Otago researchers examined the percentage of paua within the 1m depth range above minimum harvestable size outside the closure areas. They found a decline from 15 percent in 2008-09 to 4 percent in 2016. Committee chairman Brendan Flack said commercial fisheries had agreed to leave the area temporarily, but the group wanted this to be set in legislation. Paua Industry Council chairman Storm Stanley said there were several gaps in information in the consultation document, including no information on the level of recreational paua take in the area.

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