

# Fur seals: new tracking technology



Photo: Bernard Spragg

The back of a fur seal is a tough environment for an electronic device, but the effort is worth it. Valuable information can be gathered as long as the device can survive dives to more than 200 metres, regular battering against rocks, the odd fight, and plenty of hot sunshine.

DOC scientists are researching smaller, more accurate and less expensive monitoring techniques for marine species. Devices that are quick to fit and remove and have a low impact on the mammal, bird or fish are also preferred.

New GPS phone tags were trialled on New Zealand fur seals/kekeno as an alternative to satellite trackers at Ohau Point, north of Kaikoura. Phone tags send location data, including dive depth, via a text message whenever they reach areas with cell phone coverage. Satellite trackers must be physically retrieved from the seals to recover all their data.

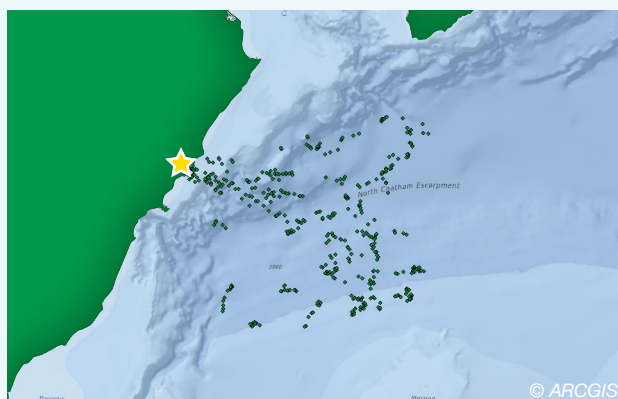
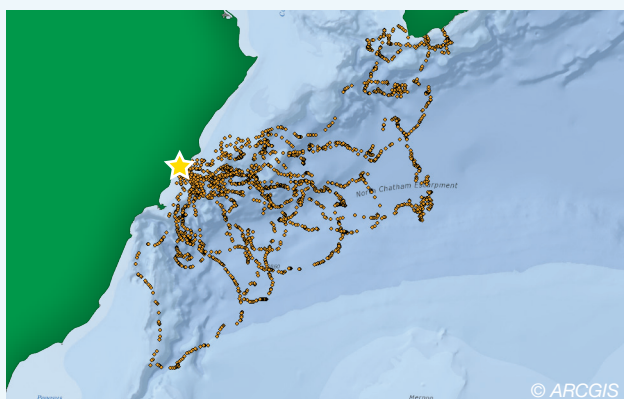
## Study sites



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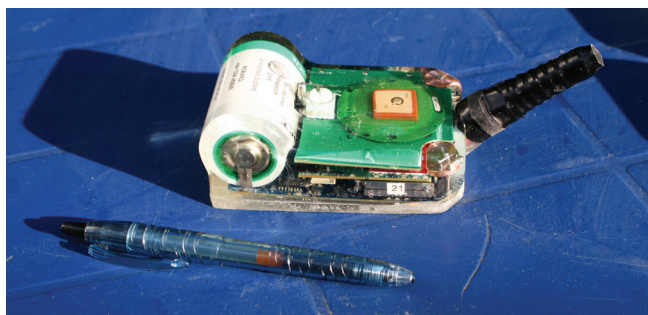


Tracking data from seals at Ohau Point (marked with a yellow star) recorded with a GPS phone tag for 3 months (left) and with a satellite tag for 2 months (right). Note the greater number of tracking points obtained with the GPS phone tag.



## How many seals? More or fewer?

This trial was part of a larger tracking study of seals at two South Island locations. While seal numbers are increasing on the east coast, they are declining on the west coast. The study tracked the movements and diets of seals from breeding colonies at Cape Foulwind (west coast) and Ohau Point (east coast) to research the population changes.



This GPS phone tag collects detailed location, temperature, dive and haul-out data. A large battery (at left) enables the device to be used in the field for up to 6 months. This tag was made by the Sea Mammal Research Unit, University of St Andrew, Scotland.

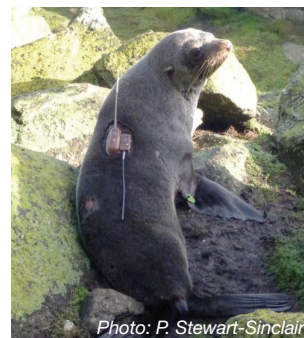
## What's next?

GPS phone tags could be used for monitoring other species, although their range is limited to places with cell phone coverage.

## First catch your fur seal

It takes a team of six people to safely catch a seal. Once a suitable female has been spotted, she is caught in a hoop net and restrained by members of the team. Other team members stand by with wooden shields to block any aggressive male seals that might rush to her defence.

The tags (already glued onto a small piece of neoprene), are cemented to the seal's fur with fast-setting epoxy resin. When it's time for the tag to be removed, researchers can cut through the neoprene without cutting the animal's hair. Tracking tags can be attached to a seal in a few minutes—the time it takes for the glue to set.



Fur seal with a satellite transmitter glued onto its back. The transmitter will fall off when the seal moults if it is not removed earlier.

## Find out more

Please email us at [enquiries@doc.govt.nz](mailto:enquiries@doc.govt.nz) for more information about this study.

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