



End User Workshop Report

Project Hotspot Phase 2 - December 2016

*Using citizen science to better protect coastal
threatened species in Taranaki*



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Purpose

On Tuesday 6 December 2016 the Project Hotspot team ran a workshop to provide an opportunity for 'end users' (iwi and hapū, decision makers, conservation groups, government authorities, scientists, educators and industry) to find out more about the Project. It is hoped that following the workshop everyone will be able to use the findings and recommendations resulting from the project to better protect coastal threatened species in Taranaki.

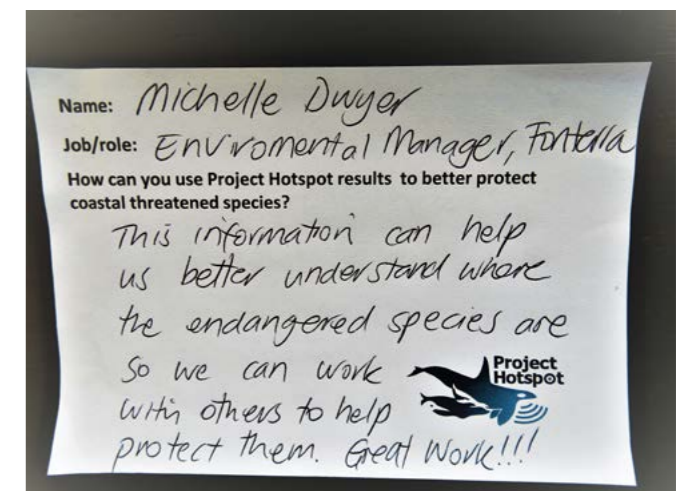
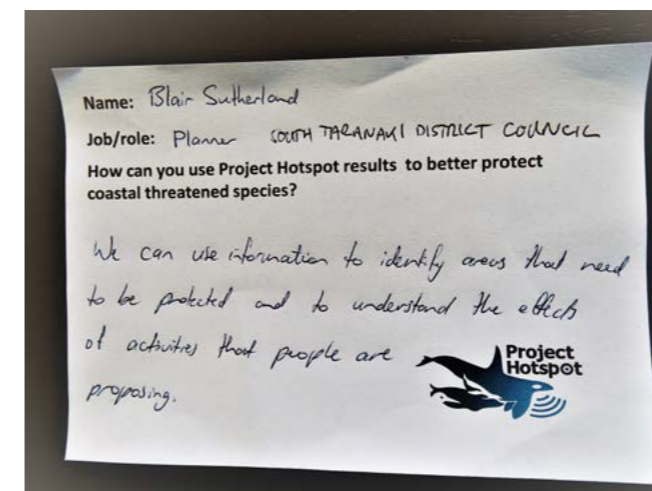
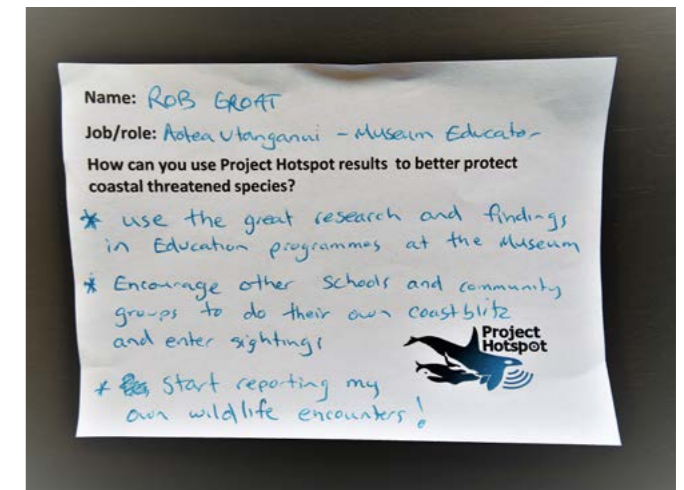
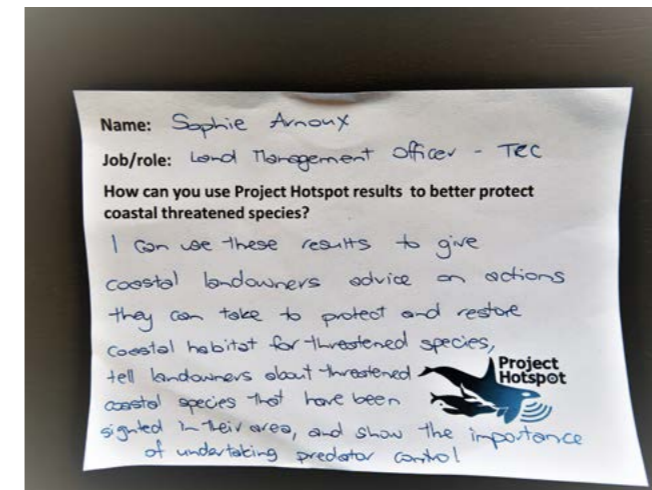
Task

At the workshop attendees were asked to complete the following task:

On the post-it notes provided write down your **name, job title/role** and **how you can use the Project Hotspot results** to help **better protect coastal threatened species** in Taranaki.

Ideally this might be an action specifically associated with your role. For ideas on how the findings might be relevant to you check the **'what can the results be used for'** sections under each species heading.

Post-it Note Actions from the Workshop



About

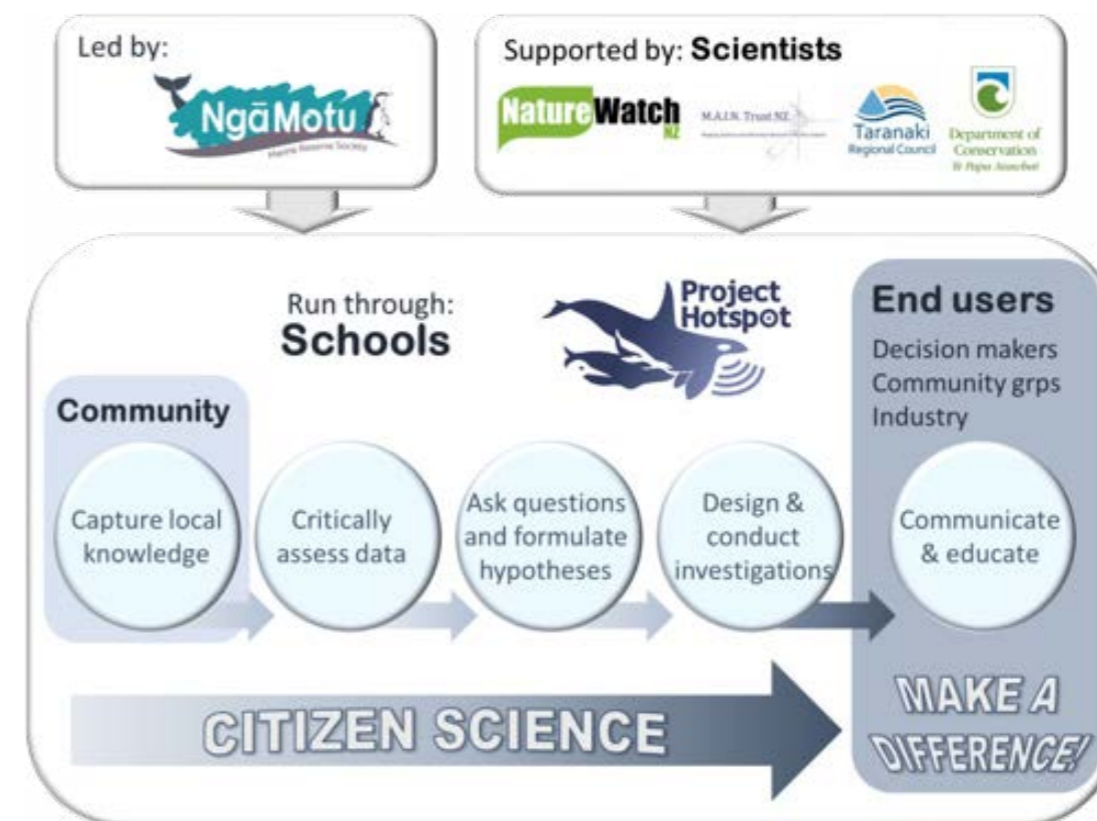
Project Hotspot is a Taranaki-based citizen science project driven by the [Ngā Motu Marine Reserve Society](#) and funded by the [Curious Minds](#) initiative. The project runs through schools and is supported by scientists and community groups.

Our Aim

To capture local knowledge on four coastal threatened species in Taranaki (orca/keka wēra, reef heron/matuku moana, little blue penguin/kororā and New Zealand fur seal/kekeno) and use this information to better protect these species and their habitats.

The Issue

The Taranaki coast provides valuable habitat for a number of threatened seabirds and marine mammals. In order to protect these vulnerable species from potential threats, including loss of habitat and pollution, it is important to know where they occur and when. Valuable information can be gained from locals who visit the coast on a regular basis. Unfortunately this community-sourced information has often been poorly documented in the past.



The Policy

In relation to indigenous biodiversity, Policy 11 of the New Zealand Coastal Policy Statement 2010 states:

To protect indigenous biological diversity in the coastal environment:

- a) **Avoid adverse effects** of activities on:
 - i) Indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;
 - ii) Taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;

For this policy to work reliable records of where 'threatened' and 'at risk' species occur and when are required. Through Project Hotspot we have been able to build more accurate mapped information on the abundance and distributions of the four selected species. These data are freely available to everybody through the [Project Hotspot website](#). It is hoped that the use of this information will lead to more informed decisions on how our coastal environment is managed.

Orca, Kera Wēra

NZ Threat Classification: **Nationally critical**

NZ Population: **Less than 200**

Main Threats: **Boat strikes and pollution (including noise)**

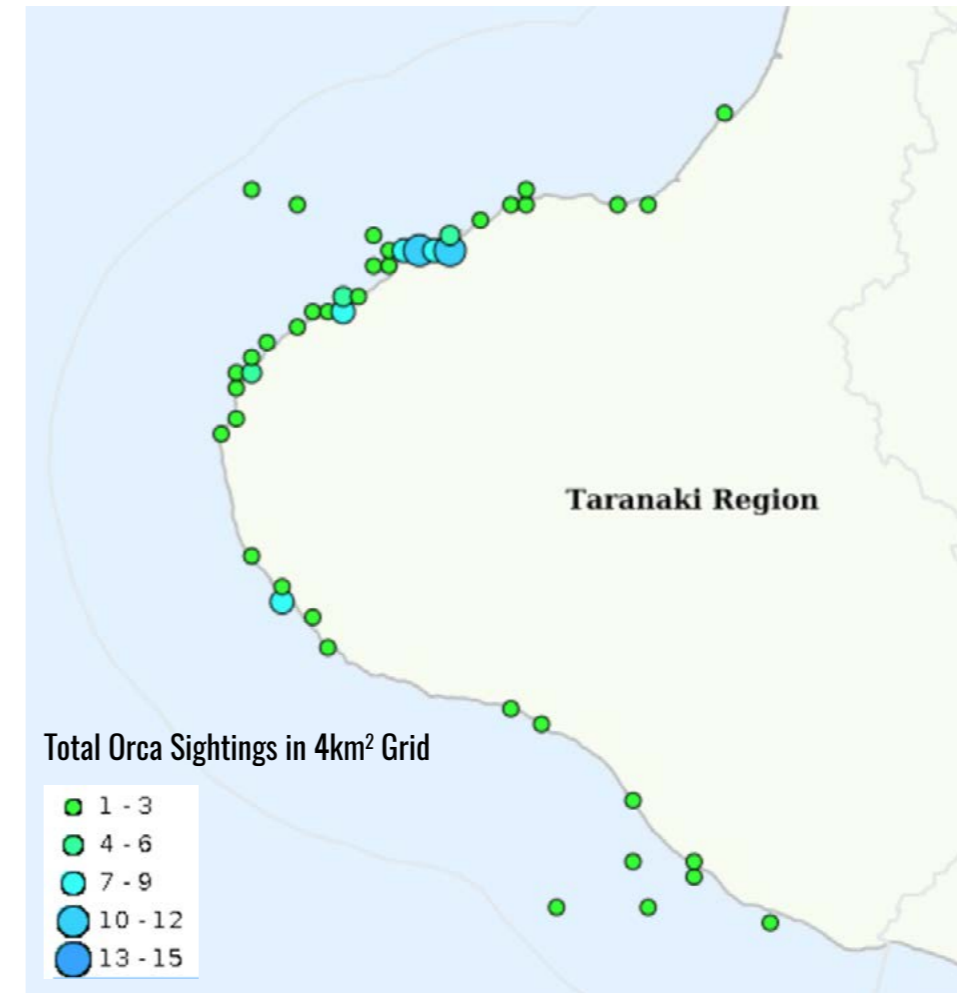
Sightings

The Project Hotspot team have worked with the Department of Conservation (DOC) to ensure that all orca sightings recorded to date in Taranaki coastal waters can be viewed on one map.

As part of the project we have recorded both recent and historic sightings. Through Project Hotspot we have recorded 96 sightings and have obtained a further 40 sightings from the national DOC database. **In total** there have been **136 orca sightings** reported to Project Hotspot and/or DOC in Taranaki to date, with the majority of sightings being made since 2014.

Since the **beginning of November 2015** (i.e. the start of the project) there have been **84 orca sightings** reported on **29 different days** in Taranaki coastal waters.

The mapped sighting results, including an interactive map showing orca behaviour, are available on the [Project Hotspot website](#). For more information about how the sightings are recorded (including quality control) and how to use the interactive maps on the website please refer to the **'How To'** section.



What can the results be used for?

- To raise awareness of the potential presence of orca amongst those who operate vessels (boats, ships, yachts, jet skis) in Taranaki coastal waters.
- To raise awareness of the importance of the rules around marine mammals: <http://www.doc.govt.nz/nature/native-animals/marine-mammals/sharing-our-coasts-with-marine-mammals/>
- For inclusion in Assessment of Environmental Effects (AEE) and/or submissions relating to proposed offshore and inshore activities.
- To inform marine spatial planning i.e. marine protected areas.
- To help assess the NZ Threat Classification status for orca.
- To gain a better scientific understanding of the movements of orca around the New Zealand coastline.
- For school projects.



Individual orca can often be distinguished by unique features on their dorsal fin.

Photo Credit: Chaddy

Photo Credit: Ian Steele

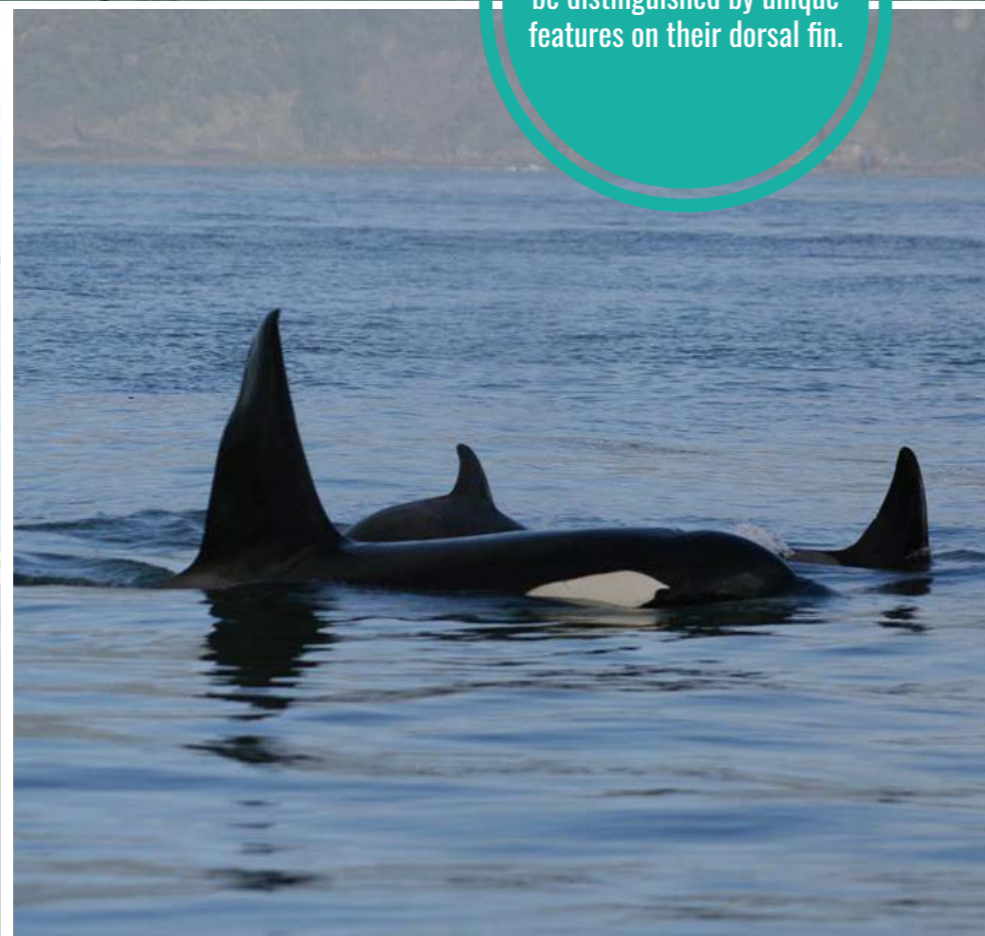


Photo Credit: Phillipa Berry-Smith

Other Taranaki Orca

Flexi-fin

This male orca gets around! Using the distinctive flexi-looking shape in this dude's dorsal fin we have been able to identify him on a number of different occasions.

Above anti-clockwise from top: Flexi-fin is spotted around the Sugar-Loaf Islands by Ian Steele on 15 August 2015; once again he is sighted by Jasmine Newsome in Port Taranaki on 8 February 2016; amazingly Flexi-fin is then seen by Andrew Wright in the Manukau Harbour on 12 February 2016 (just four days after being spotted in New Plymouth!!)



Photo Credit: Domi Z



Reef Heron, Matuku Moana

NZ Threat Classification: **Nationally endangered**

NZ Population: **Only 300 to 500 birds**

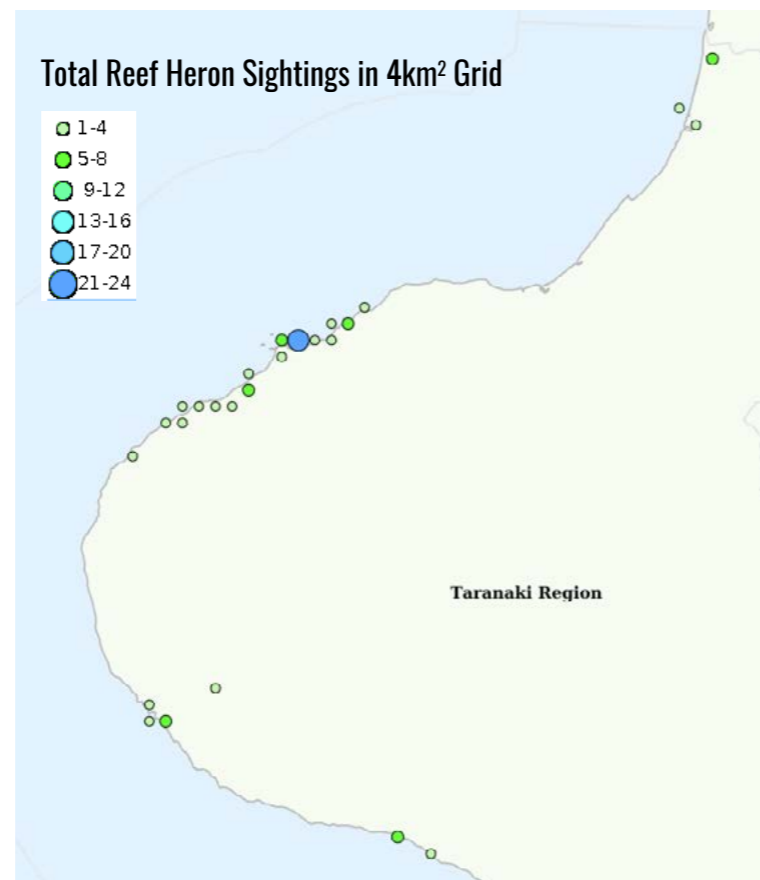
Main Threats: **Coastal development and disturbance by people/dogs**



Sightings

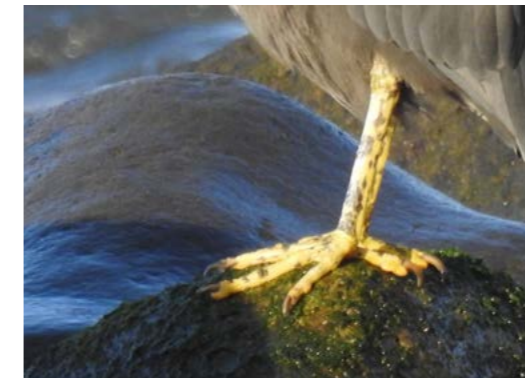
As part of Project Hotspot **92 reef heron sightings** have been reported around the Taranaki coastline to date. The majority of sightings have been reported from North Taranaki at boulder reefs, estuaries and/or river mouths.

As the project continues to develop we will attempt to establish whether there are fewer reef herons in South Taranaki or whether there are less sightings due to fewer people to report sightings and coastline which is less accessible.



Leg Tattoos

The Project Hotspot team has discovered that individual reef herons can be identified by their distinctive **leg markings**. As a result, **ten different reef herons** have been identified in Taranaki to date and we have been able to track their movements around the Taranaki coastline.



What can the results be used for?

- For inclusion in AEE and/or submissions relating to proposed activities in reef heron habitat (intertidal reefs, estuaries, river/stream mouths, nesting areas).
- For inclusion in oil spill response plans.
- To help assess the NZ Threat Classification status for reef heron.
- As baseline information for further scientific research on reef herons.
- For school projects.



Kelpie
Kelpie is a young Reef Heron named by students from Oakura school.



Jagger
Jagger was first spotted at the Waiwhakaiho River mouth but has since been seen as far south as Ohawe!



Photo Credit: Karen Pratt



Alfred
This grumpy looking Reef Heron was named by students at Oakura school. Alfred likes to hang out down at the Waiwhakaiho River mouth.



Smart
Smart was named after Hotspot Hero Sharyn Smart and has been spotted multiple times near Okato.



Tidy
Spotted multiple times at Tapuae, Tidy was named after Hotspot Hero Francois Husillos (High Tide Cafe)

The New Recruits

Hillary

Best mate to Bob, Hillary enjoys long walks on Mangahume Beach. Named by Manaia school via popular vote.



Jeffrey

Jeff is our newest recruit, being spotted at Komene Maori Reservation on 28 October. He was named by Coastal Taranaki School.



Bob

A Mangahume local, Bob was named by Auroa School. Like many Taranaki punters, Bob is pictured here enjoying the whitebait run.



Charlie

Named by Hawera Intermediate School, Charlie enjoys the quiet life at Ohawe with best mate Jagger.



Little Blue Penguin, Kororā

NZ Threat Classification: **At risk, declining**

NZ Population: **50,000 to 100,000 birds**

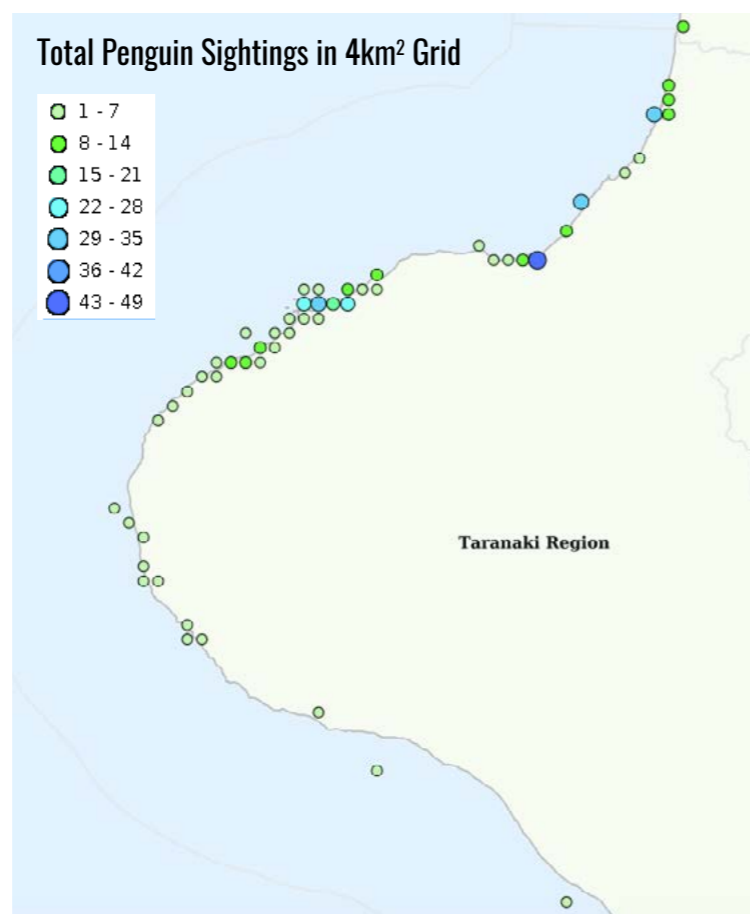
Main Threats: **Predators (dogs, cats, stoats) and coastal development and marine litter (entanglement and ingestion)**



Sightings

As part of Project Hotspot and previous investigations by the Ngā Motu Marine Reserve Society **227 little blue penguin sightings** have been reported around the Taranaki coastline to date. These reports include sightings of live birds, dead birds and footprints. The majority of sightings have been reported from sheltered North Taranaki sites, where suitable habitat is available. Penguins at these sites are often at risk from coastal development and attack by predators (dogs, cats and stoats).

There are fewer recorded penguin sightings in South Taranaki which is likely due to a combination of scarcity of suitable nesting habitat, less people to report sightings and coastline which is less accessible to humans. Interestingly research by **scientists at Te Papa** has shown that little



blue penguins nesting on Motuara Island, Marlborough travel to waters off South Taranaki to feed (approximately 170 km). Fishermen have also reported little blue penguins feeding in coastal waters off South Taranaki. This is clearly an area of further investigation for the Project Hotspot team.

Live Webcam

Local groups have long held concerns for the loss of habitat impacting on penguin roosting and nesting sites. Starting in the 1990s they installed artificial burrows in several places. The earliest artificial burrows were constructed of concrete, and more recently, projects used the wooden box design. By installing dataloggers with a wireless transmission, data on temperature and penguin movement was **collected and analysed**. It was discovered that the burrow design had a significant effect on the daily temperature range experienced inside the burrow, and this appeared to put penguins off using the wooden models. Concrete burrows were preferred. Some burrows in the Port area have been modified to make them more natural and thermally stable, and now with a surveillance camera system inside one burrow, a better understanding of the behaviour patterns of the resident penguins is obtained. Videos and images show the number of penguins and their activities, and it means that assumptions made using remote monitoring (dataloggers) will be more accurate.

What can the results be used for?

- For inclusion in AEE and/or submissions relating to proposed activities in penguin habitat (offshore and nearshore feeding areas, inland coastal environments with suitable shelter).
- For inclusion in oil spill response plans.
- To help assess the NZ Threat Classification status for little blue penguin.
- To help inform how best to protect penguins in Taranaki, providing guidance on where best to focus predator control to improve the health of existing colonies.
- As baseline information for further scientific research on little blue penguins.
- For school projects.



Photo Credit: Sharyn Smart



Photo Credit: Sharyn Smart



Photo Credit: Sharyn Smart

Penguin or Gull?

Sometimes it can be tricky to distinguish penguin footprints from those of other birds but in general little blue penguins: leave footprints heading in a direct line between sea and shore; have a distinctive waddle-like gait which show up in the footprint pattern like that pictured below.



Little blue penguin are out at sea feeding during the day so most daytime observations are of their footprints!



This penguin was initially found injured at the port 6 Jan, nursed back to health at Wildbase Hospital, and rereleased fighting fit on 12 March.

Photo Credit: Sharyn Smart

New Zealand Fur Seal, Kekeno

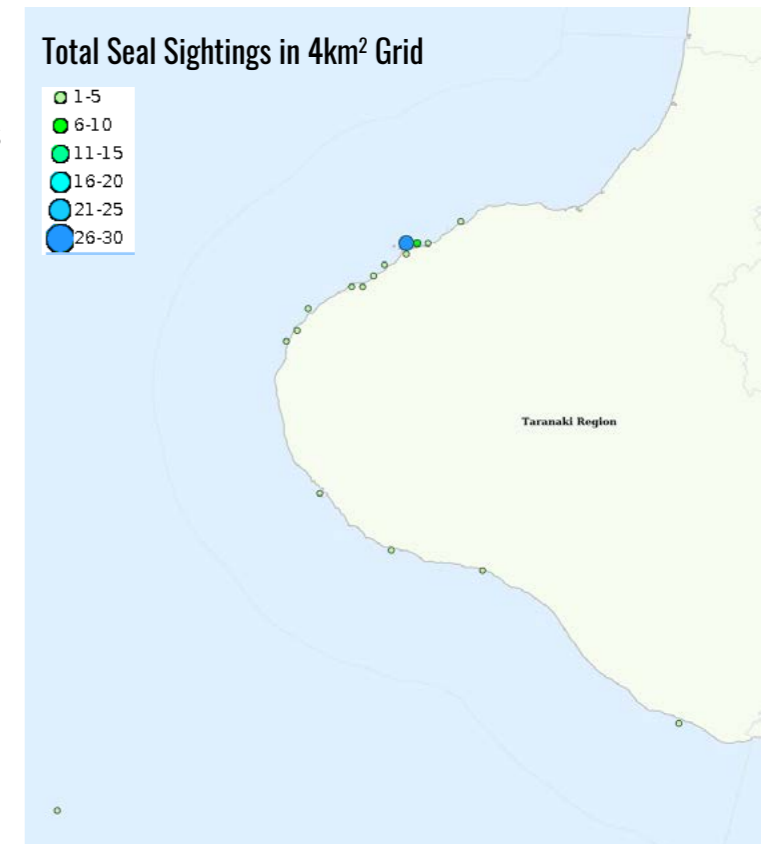


NZ Threat Classification: Not threatened (regionally distinctive)
NZ Population: Approximately 100,000
Main Threats: Human activities including entanglement

Sightings

New Zealand fur seal numbers are thought to be increasing nationally. However, prior to the start of Project Hotspot, local data was scarce.

As part of Project Hotspot **96 New Zealand fur seal sightings** have been reported around the Taranaki coastline to date. The majority of sightings have been reported from around the New Plymouth area due to the close proximity to the Ngā Motu/Sugarloaf Islands where there is an important breeding colony and haul out areas.



What can the results be used for?

- To raise awareness of the potential presence of seals amongst those who operate vessels (boats, ships, yachts, jet skis) in Taranaki coastal waters.
- To raise awareness of the importance of the rules around marine mammals: <http://www.doc.govt.nz/nature/native-animals/marine-mammals/sharing-our-coasts-with-marine-mammals/>
- For inclusion in AEE and/or submissions relating to proposed offshore and inshore activities.
- To inform marine spatial planning i.e. marine protected areas
- As baseline information for further scientific research on New Zealand fur seals.
- For school projects.

A New Zealand fur seal is the central focus, sitting on a large, dark, wet rock in shallow, rippling water. The seal has a dark, sleek coat and prominent whiskers. The background shows a rocky coastline with several other seals resting on rocks. The water is clear and blue, reflecting the sunlight. The overall scene is a natural, coastal environment.

Students from Auroa School were lucky enough to spot this NZ fur seal during their field trip to Mangahume on 9 November 2016.

Other Threatened Species

The Taranaki coastline provides valuable habitat for a number of other threatened species. The Project Hotspot team have been photographing and reporting sightings of these species on NatureWatch NZ. For more information about threatened species found around the Taranaki coastline, including their threat status, check the [Other Threatened Species](#) page on the Project Hotspot website.

Species



White Heron



NZ Dotterel



Caspian Tern



Banded Dotterel



Pied Shag



Red Billed Gull



White Fronted Tern



Pied Stilt



NZ Pipit



South Island Pied Oystercatcher



Variable Oystercatcher



Black Shag



Little Black Shag



Royal Spoonbill

Threatened:

- Nationally Critical
- Nationally Endangered
- Nationally Vulnerable

At Risk:

- Declining
- Recovering
- Naturally Uncommon

CoastBlitzing Taranaki

In this second phase of Project Hotspot we have focussed on working with schools in South Taranaki (Manaia, Auroa, Hawera Intermediate). **Kaupokonui**, **Mangahume**, and **Ohawe** beaches have provided ideal locations for the students to undertake their action projects and learn more about local biodiversity and potential risks to threatened species.

The Project Hotspot team have set up **CoastBlitz projects** for each of these locations in NatureWatch NZ, building a record of biodiversity over time. All three schools have provided important contributions to the species sightings recorded within these projects.

In addition to **CoastBlitz Kaupokonui**, **Mangahume**, and **Ohawe**, **CoastBlitz Komene** (Coastal Taranaki School's project area), **CoastBlitz Tapuae**, and **CoastBlitz Port Taranaki** have also been set up as part of Project Hotspot (see map opposite). Two other Curious Minds funded projects have also set up CoastBlitz projects including; **CoastBlitz Waitara** (The Waitara Kaimoana Survey), and **CoastBlitz Patea** (South Taranaki Reef Life Project).

What can the CoastBlitz results be used for

- To highlight the biodiversity values of the Taranaki coastline
- As an educational resource.
- To raise awareness of the presence of threatened bird species amongst dog owners.
- To enable the sharing of knowledge.



Action Projects

With guidance from scientists and teachers, students from Manaia, Auroa and Highlands Intermediate School have been undertaking their own research investigating potential threats to species at several locations along the Taranaki coastline.



Action Projects: Manaia School

Field location: Kaupokonui

Action Project: Do dogs and other predators pose a problem to threatened bird species at Kaupokonui?

Findings: On their field trip to Kaupokonui Manaia School students found an alarming number of predator and other pest footprints. There were also dog footprints. This coincided with obvious nesting areas particularly in the dunes above the beach. The students found a Variable Oystercatcher nest with three eggs in it. Two weeks later the nest only had two eggs.

Recommended Actions: To instigate a trapping programme in the dunes at Kaupokonui. This would need to be done in conjunction with land owners. Manaia School have also designed some signs which they want to put up at the beach to inform dog owners of the nesting birds in the area.



Action Projects: Auroa School

Field location: Mangahume

Action Project: Is litter a potential threat to coastal species at Mangahume?

Findings: On their field trip to Mangahume, Auroa School found a large amount of litter along the beach. Some of the litter on beaches can be difficult to identify.

Recommended Actions: To develop a method for identifying the type of litter we are finding on our South Taranaki beaches to help determine potential sources.



Action Projects: Hawera Intermediate School

Field location: Ohawe

Action Project: How can we increase awareness about Project Hotspot and it's aims in South Taranaki.

Findings: Students at Hawera Intermediate School came up with the idea of creating a Project Hotspot information sign at Ohawe Beach. The sign would also have sighting sheets available for people to fill out if they observe one of the four key species. Ohawe Beach is an ideal location for this as many people use the beach for recreation and to launch their boats.

Recommended Actions: Design a sign that informs locals on the aim of Project Hotspot and some detail about our coastal threatened species. Come up with a method for providing and retrieving sighting forms. Contact local authorities to gain permission for the placement of this sign at Ohawe Beach.



Project Hotspot Team



Emily Roberts



Elise Smith



Shane Orchard



Pat Swanson



Josh Richardson



Hannah Hendriks



Callum Lilley



Halema Jamieson



Denise Rowland



Raewynne Niwa



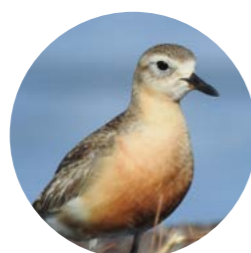
Gillian Mackay



Myles Webb



Karen Forsyth



Sarah Roberts



Craig Taylor

Project Hotspot Heroes

The success of Project Hotspot is entirely reliant on awesome support from the community. Here's a massive shout out to those who have gone beyond the call of duty providing sightings, photos, videos and other support.

Special thanks to Sharyn Smart, Allen Pidwell, Francois Husillos, Abbie Diggelman, Chaddy, Daisy Lean, Jade Butler, Ian Steele, Stefan Bienert, Nathan Crook, Craig Williamson, Nicole Sturgess, Damon Flett, Bridget Harrison, Fred King (Port Security), Karen Pratt, Andrew Tulloch, Jacqui Tulloch, Dominika Zielinska, Andrew Wright, Claire Hunn, Toni Corbett, Allen Stancliff, Teresa Hayston and Aidan Hayston.

New Zealand Government

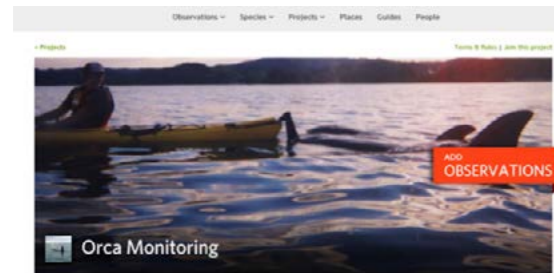
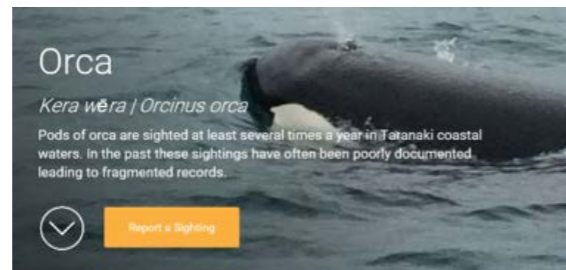


Appendices

Appendix 1: 'How to' Guides

How to Enter Sightings

1. On the Project Hotspot website click on the 'Report a Sighting' link for the species that you have seen.



2. This will take you to the monitoring project for that particular species in NatureWatch NZ. The project page includes useful statistics on the sightings recorded to date including maps and photos. To add a sighting select 'Add Observation' (you will need to sign up to NatureWatch NZ if you haven't already).

3. Select the species that you sighted under 'What did you see?'. Select the date from the drop down list and add the time in 24 h format e.g. 09:30. Type in the location under 'Where were you?' and press enter. Zoom in on the map and drag the red pin until it is in the correct position (you can switch between map and satellite view to help find the exact location). Use 'browse' to select photos from your computer/device.

4. Fill in the remaining fields.

5. DON'T FORGET TO CLICK ON 'SAVE OBSERVATION'

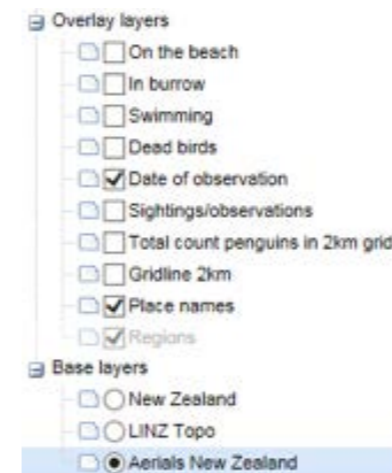
6. Once you've added your observation, NatureWatch NZ curators will provide feedback. If you have added a photograph and the NatureWatch NZ curators agree with your identification, your observation will be upgraded from 'Needs ID' to 'Research Grade'. This adds a level of quality control to the data collected for Project Hotspot.

How to Use Sightings Maps

1. On the Project Hotspot website click on the map for the species that you are interested in.



2. This will take you to an interactive map hosted on the MAIN Trust NZ site.



3. Select the overlay layer that you are interested in. Using these options you can investigate sightings records, sightings by date, behaviour and/or the total count per 2 km x 2 km grid square. TIP: If you can't see a layer, it might be because another layer is placed over the top of it: Deselect any layers that you are not interested in viewing.

4. Click on 'Legend' at the bottom left had of the screen to find out what the different symbols represent.



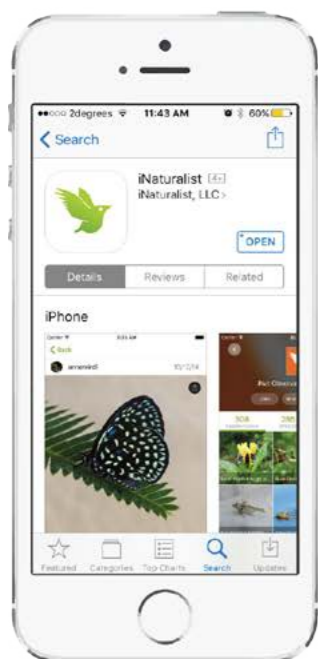
5. Zoom in on the map to the area you are interested in. You might want to change the base layer view at this stage. Select 'Aerials New Zealand' for a satellite view.

6. To view the data associated with each sighting click on 'Info' and then click on the observation of interest.

7. If you have any further questions about how to use the maps or access data feel free to get in touch with the Project Hotspot team project@hotspot.org.nz

Acknowledgement: QGIS and Geoserver OSS

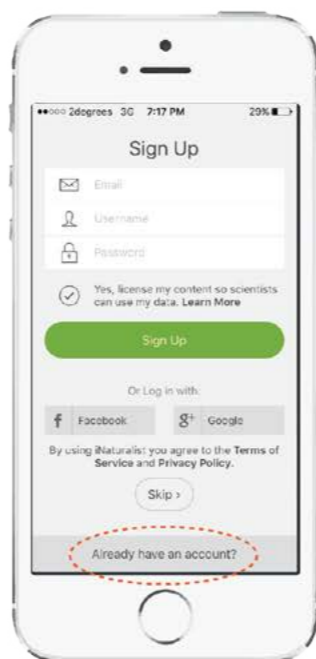
iNaturalist Quickstart Guide



Download the iNaturalist app (available for Apple and Android)



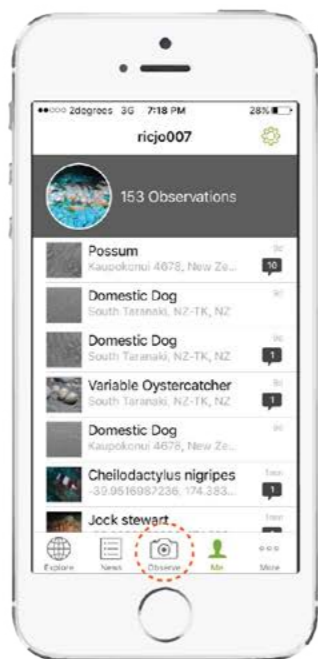
Open app and Select **OK** to use NatureWatch NZ



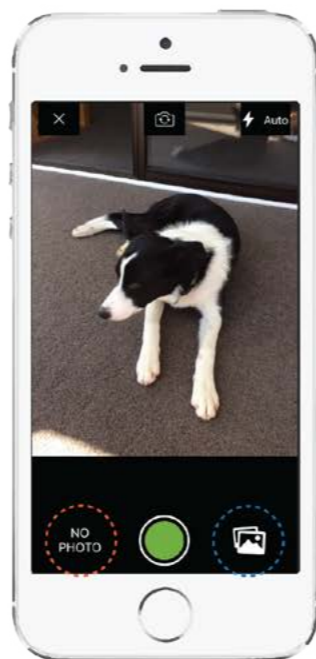
Select **Already have an account?**



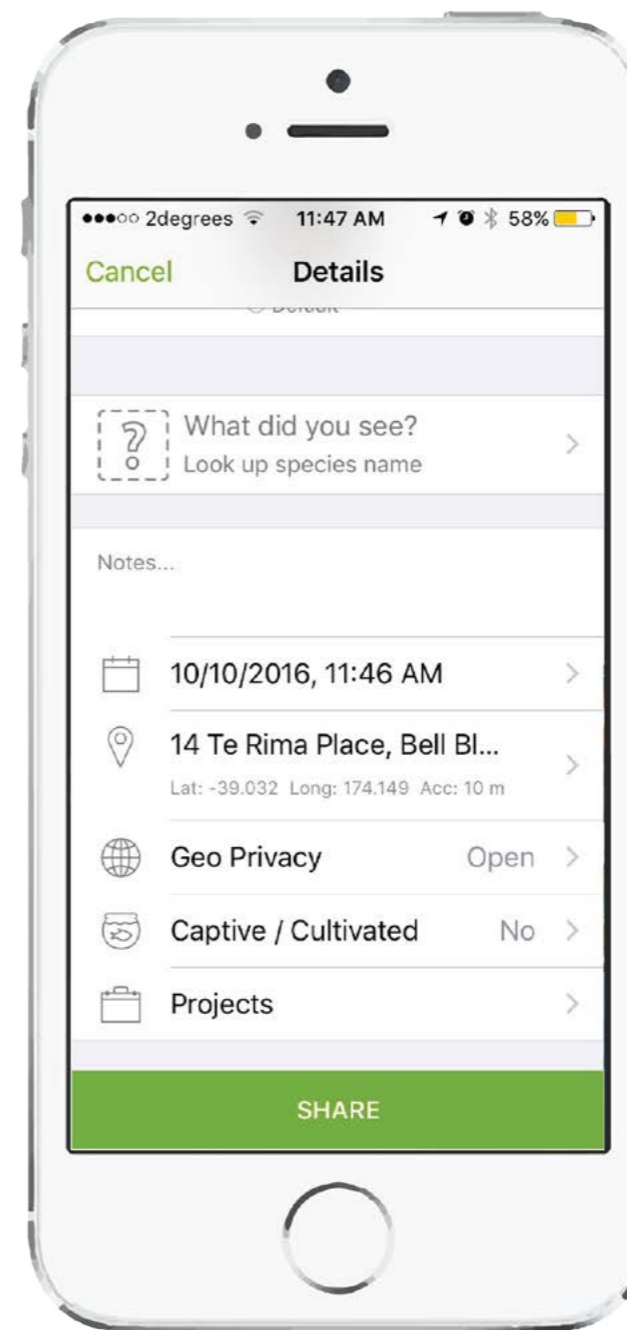
Use your NatureWatch NZ log in details



Select **Observe** to record a sighting



You can select **No Photo**, take a new photo, or choose existing



- Enter species name
- Date, Time, Location
- Set Privacy
- Assign Projects
- **SHARE**



www.hotspot.org.nz