

Tēnā koutou katoa

This edition of SITE focuses on an educational activity called a BioBlitz. The main aim of a BioBlitz is to identify as many species as possible in a defined location over a set period of time. You can think of it as a scientific race against time and it is heaps of fun! A number of Taranaki schools ran BioBlitzes (tinyurl.com/PFBioBlitz) last year in areas of local bush, parks and school grounds linking with Towards Predator-Free Taranaki. Over time, BioBlitzes provide an effective way to measure changes in biodiversity and species composition resulting from predator control.

BioBlitzes don't have to be restricted to dry land either. For example, this term Sacred Heart Girls College will be running an intertidal CoastBlitz on rocky reefs off New Plymouth and last year the Kaitiaki Group at Puketapu School ran a BioBlitz throughout the year investigating wetlands, streams and rocky reefs around Bell Block.

If you have time, there are many positive actions that can be taken following on from a BioBlitz, including removing pest species and creating improved habitat for valued native wildlife. I've included a few suggestions here but feel free to get in touch to discuss ideas further (education@trc.govt.nz). Either I can provide advice to help you run your own BioBlitz or I can organise and run a BioBlitz for your class with your support. Have fun!

Nāku noa nā,
Dr Emily Roberts



BioBlitz

Over the last two terms, schools in Taranaki have been BioBlitzing up a storm! A BioBlitz is a concentrated effort to discover and record as many living things as possible within a set location over a limited time period. It provides a fun way for students to learn about biodiversity, including how to identify native species that need protecting and pest species that need removing.

Before launching into a BioBlitz it's a good idea to:

- ✓ plan your objectives
- ✓ define the target area
- ✓ decide on how you will record information e.g. set up a project in iNaturalist
- ✓ organise equipment and field sheets
- ✓ start thinking about follow up activities and actions

This edition of SITE will help you plan a BioBlitz. If you need help and support don't hesitate to get in touch (education@trc.govt.nz).

'Bio' =  life

'Blitz' =  to do something quickly and intensively

'BioBlitz' = a race against the clock to discover as many species as possible, within a set location, over a defined time period

Leading to learning and action



BioBlitz

IDENTIFY SPECIES

Biodiversity

Identify native, endemic and introduced species.

Biosecurity

Identify pest plant and animal species.

Conservation

Identify threatened and at risk species.

FOLLOW UP INVESTIGATION

How do the species identified interact with each other?

What trapping methods can be used to remove the invasive predators identified? What is the best way to remove pest plant species?

What are the main threats to these species? How can they be better protected?

ACTION

Improve habitat for native species.

Remove pest animal and plant species. Get trapping.

Implement measures to better protect threatened and at risk species.



Using iNaturalist NZ

iNaturalist provides a great platform to upload photos to a BioBlitz project, identify species and visualise BioBlitz results. Get in touch (education@trc.govt.nz) if you need help setting up your own BioBlitz project in iNaturalist. It's always good if students can use guides and keys to identify organisms as far as possible themselves beforehand. Photographs of each species can then be uploaded to iNaturalist with their identification and additional details including time and location. The students' observations will then be independently identified by experts around the country and verified as research-quality data, contributing directly to scientific knowledge in New Zealand. iNaturalist will automatically tally a species count for your BioBlitz and provides many tools for visualising and communicating BioBlitz results.

Check out Towards Predator-Free Taranaki BioBlitz network for lots of awesome examples of BioBlitzes undertaken by schools in Taranaki (tinyurl.com/PFBioblitz). Other great examples include BioBlitz Pukeiti Rainforest, Biodiversity of Rotokare Scenic Reserve and BioBlitz Bell Block Kaitiaki:

tinyurl.com/PFBioblitz

<https://inaturalist.nz/projects/bioblitz-pukeiti-rainforest>

<https://inaturalist.nz/projects/biodiversity-of-rotokare-scenic-reserve>

<https://inaturalist.nz/projects/bioblitz-bell-block-kaitiaki>



- Unknown
- Protozoans
- Fungi
- Plants
- Chromista
- Mollusks
- Insects
- Arachnids
- Ray-Finned Fish
- Amphibians
- Reptiles
- Birds
- Mammals
- Other Animals



BioBlitz making a difference

After conducting a BioBlitz and analysing the results, it's well worth identifying activities and actions that your class can follow up on. Here are a few examples:

Bird food

In your BioBlitz area, is there a good supply of food for native birds all year round? What do different species of native birds identified in your BioBlitz feed on? Check out this calendar (pdf) of plants for native birds: <https://tinyurl.com/birdcalendar>











For the plant species identified in your BioBlitz draw up a calendar of when these species produce nectar, fruit and seeds. Are there any times of the year when tūī, korimako (bellbird) and kereru will be short of food? What species can you plant in the BioBlitz area to plug these gaps, providing food for birds all year around?

Is there a good supply of bugs for insect feeding birds like piwakawaka (New Zealand fantail)? Could you improve the diversity and abundance of bugs present by building a bug hotel and/or weta motel?

<https://predatorfrenz.org/tools-resources/school-resources/things-to-do/>

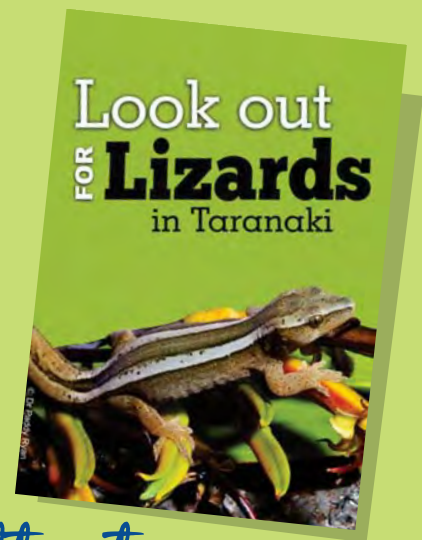
Have you seen the brilliant bug hotel at Hollard Gardens and wonderful weta motel at Pukeiti Rainforest?



 6 observations Mahoe <i>Melictyus ramiflorus</i>	 5 observations Tui <i>Prosthemadera novaeseelan...</i>	 5 observations Ship Rat <i>Rattus rattus</i>	 4 observations Song Thrush <i>Turdus philomelos</i>	 4 observations Karaka <i>Corynocarpus laevigatus</i>
 4 observations Hangehange <i>Geniostoma ligustrifolium</i>	 3 observations Blackbird <i>Turdus merula</i>	 3 observations Gorse <i>Ulex europaeus</i>	 3 observations Earthstars Genus <i>Geastrum</i>	 3 observations Fantail <i>Rhipidura fuliginosa</i>



Overview	242 OBSERVATIONS	87 SPECIES	57 IDENTIFIERS	5 OBSERVERS	Stats
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Attracting lizards

There are at least 11 species of lizard in Taranaki, with both the goldstripe gecko and copper skink occurring in urban Taranaki environments. What lizard-friendly plants did you identify in your BioBlitz? Were there any divaricating (many branched) native plants providing safe cover and fruit for lizards e.g. shrubby tororaro (*Muehlenbeckia astonii*)? Were there any harakeke (common flax) providing shelter and nectar? Could you improve lizard habitat by planting more of these lizard-friendly plants? Could you provide more safe shelter for lizards by building a lizard lounge? Are you trapping to remove invasive lizard predators including rats, weasels and stoats?

There are lots of top tips about how to provide lovely lizard habitat here: <https://www.doc.govt.nz/get-involved/conservation-activities/attract-lizards-to-your-garden/>

The 'Look out for lizards in Taranaki' leaflet is also a great resource. Get in touch if you'd like a copy (education@trc.govt.nz).



Plants: the good, the bad and the ugly



In the BioBlitz area, which are the goody native plants providing food for native wildlife and which are the baddy pest plants threatening native species? Hatch a plan to remove the baddies (<https://www.weedbusters.org.nz/>) and plant more goodies.

Towards Predator-Free Taranaki

If you and your school are involved with Towards Predator-Free Taranaki, a BioBlitz can be incorporated into your project as a powerful monitoring tool. Set up predator monitoring as part of your BioBlitz using tracking tunnels, chew cards and wax tags. Which predators are present within the BioBlitz area? What traps can be used to safely remove these pest species?

We can provide monitoring equipment and help you and your students to set up traps.



BioBlitz

With all of these examples it's worthwhile running a BioBlitz once or twice a year to monitor progress resulting from the student's actions. It is extremely rewarding to see an increase in native species and decrease in pest plants and animals over time.

For further guidance on how to run a BioBlitz see:

 tinyurl.com/trybioblitz

