



# Into Nature Citizen Science Toolkit

Explore nature  
Record species  
Support action!





A photograph of two young boys in a lush, mossy forest. One boy with red hair, wearing a teal shirt and grey shorts, is crouched on a large moss-covered rock on the left, looking down. The other boy, with dark hair, wearing a blue shirt and dark shorts, is sitting on a rock further up the stream on the right, looking towards the camera. The stream flows over rocks, creating small waterfalls. The forest is dense with green ferns and trees, with sunlight filtering through the canopy.

## Acknowledgement of Country

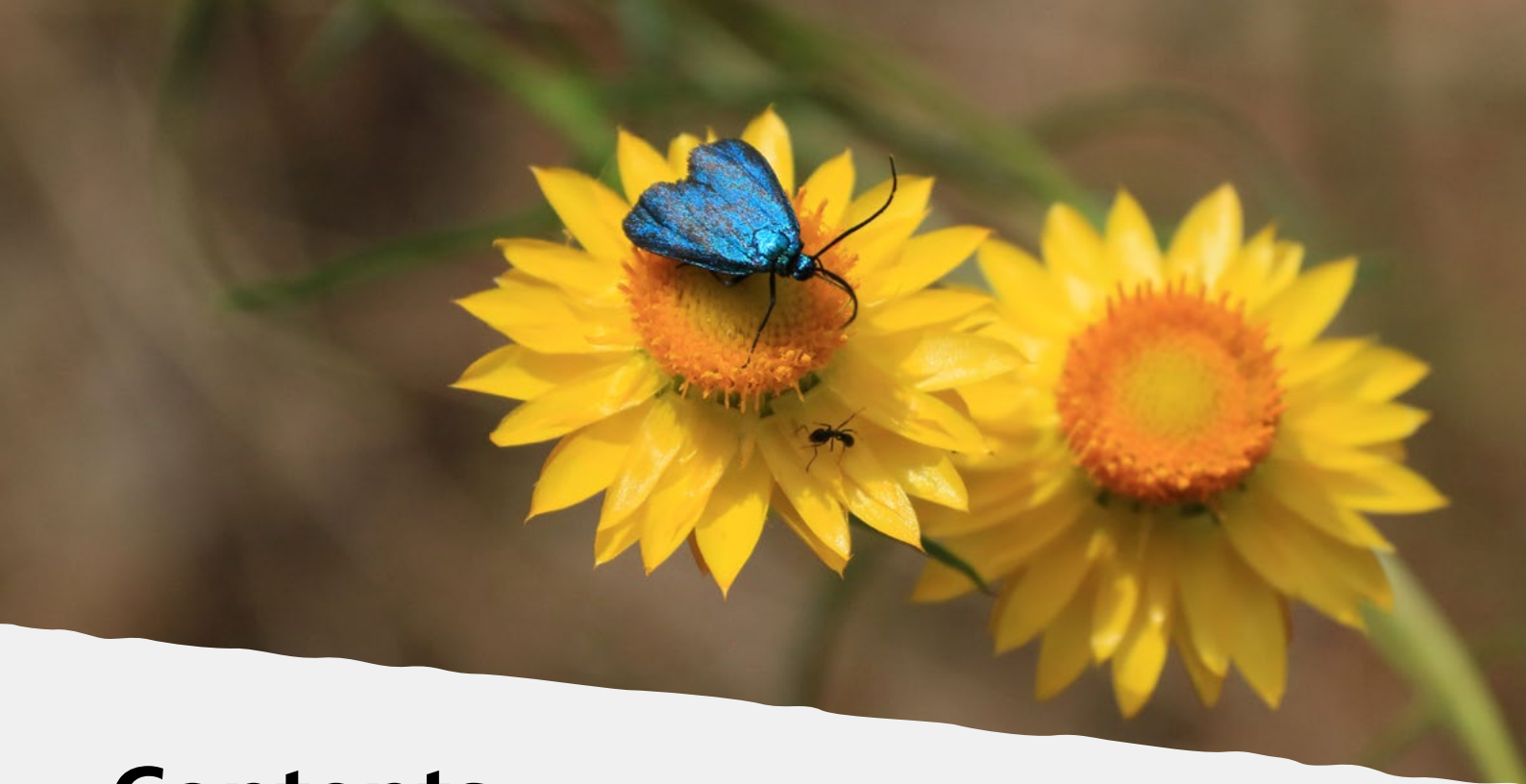
Victoria's network of parks and reserves form the core of Aboriginal cultural landscapes, which have been modified over many thousands of years of occupation. They are reflections of how Aboriginal people engaged with their world and experienced their surroundings and are the product of thousands of generations of economic activity, material culture and settlement patterns. The landscapes we see today are influenced by the skills, knowledge and activities of Aboriginal land managers. Parks Victoria and Scouts Victoria acknowledges the Traditional Owners of these cultural landscapes, recognising their continuing connection to Victoria's parks and reserves and their ongoing role in caring for Country.

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**Front cover image:** Mushroom Reef Marine Sanctuary

**Inside front cover image:** Dandenong Ranges National Park





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# Introduction

## What is Citizen Science?

There is so much to learn about our natural world, we are lucky to have many amazing scientific brains researching and asking questions to help our understanding, but often these techniques can take time especially when the information they are researching is so large and constantly changing. But every one can help, the science world is enlisting the help of the community to help plan, collect and analyze information and we know this as citizen science today.

This collaboration of professional researchers and citizens has made some important data discoveries, from playing video games to help fight diseases to discovering new galaxies, it's work that would not be possible without the community's help. One of the increasingly popular ways that citizen science has been used is through projects which help to protect nature and in particular its biodiversity.

Citizen Science is also an important way to contribute to environmental volunteering and take practical action to contribute to conservation. Citizen Science can inspire change and supports the Victorian Environmental Volunteering Plan (2018) to expand volunteering by providing opportunities for all Victorians to volunteer and act for the environment.

## How will citizen science connect Scouts with Parks Victoria scientists?

Victoria's parks and reserves system protects many of Victoria's most special places, rich in natural ecosystems that provide home to diverse and wonderful plant and animal species. The health of these ecosystems and the ability of our native plants and animals to thrive is intrinsically linked to our own health and wellbeing.

Parks Victoria needs your help as citizen scientists to investigate the health of our Parks and reserves by recording your observations. The more observations you record, the more knowledge about parks you provide Parks Victoria and other scientists to assist in protecting nature. Data collected helps the Parks Victoria scientists to better understand and track the health of the Parks including plants and animals of interest.

In addition to recording what you see in your favourite and nearby parks, Parks Victoria has also identified high interest nature reserves across Victoria in which there is currently data. You can be a pioneer at these sites and collect important new data about the plant and animal species that live there.



## How can we get involved?

**The Big Scouting Bioblitz** has been organised to take place over four days in November and will involve Scouts from across Victoria with the aim of collecting and recording data from parks and public spaces around where you live. If you want an adventure a little further a field, Groups might like to visit a nature reserve with little known species data and potentially be the first to find a species, and increase the knowledge of plant and animals in these area.

On your investigations you may also identify threats to the parks such as rubbish, vandalism or pest species which may be impacting the health of the local ecosystem. These are important to record and could be critical in saving local plants or animals.

## Why should we get involved?

Nature is all around us, but do we really know all of the plants and animals which exist in the places where we live? Australia has important databases including The Victorian Biodiversity Atlas and the Atlas of Living Australia which are building a picture of the biodiversity across Victoria and Australia, but there are lots of gaps in data which we need your help to fill. This will help us to both ask some important questions and also consider suitable solutions. More recently, the need for this data has been even greater as we tackle big global issues such as climate change and species loss. The more we know, the better we can understand the challenges contributing to decline in health of our ecosystems and gives us the opportunity to take critical action to protect our habitats and begin to reverse any damage to our biodiversity. **This is where we need your help.**

## What can I expect to learn?

- ☒ I can learn about my local environments and ecosystems.
- ☒ I can learn how technology including smartphones and tablets and social media such as iNaturalist can be used when learning about nature.
- ☒ I can learn about nature photography.
- ☒ I can learn about the different techniques used to collect data.
- ☒ I can learn about the conservation value of species and where different species can be found across Victoria.
- ☒ I can join Scout Groups across Victoria and work together to make a difference.
- ☒ I can get involved in local projects and help make decisions around important issues such as climate change and biodiversity.





# Part One: EXPLORE nature



## Getting started

You can answer the questions in the toolkit directly and email them back to [Laurence.Williams@scoutsvictoria.com.au](mailto:Laurence.Williams@scoutsvictoria.com.au) or click on the link [here](#) and complete your two minute survey online.

### Five things that interest you about the Big Scouting Bioblitz:

- |   |  |
|---|--|
| I can get out into nature   | I get to try something new                           |
| I can be active   | I get to help Parks Victoria scientists find species |
| I get to hang out with friends  | It might help me get a job                           |
| I get to visit some new places/parks                                  | It will help me get a Scout badge                    |
| I can learn about the different plants and animals                    | I might win a prize                                  |
| I might find a plant or animal I haven't seen before                  | My Scout Group being top of the leaderboard          |
| I am contributing towards something important which could help nature | The Bioblitz doesn't interest me                     |
| I can use my phone/social media to observe wildlife                   | Other (please state)                                 |

### What new skills would you like to gain from doing the Bioblitz?

- |  |   |
|--|---|
| I want to learn more about how to find wildlife in parks                         | I want to learn about the different ways we can record species on iNaturalist               |
| I want to learn how to use iNaturalist   | I want to learn about the wildlife in my parks so I can teach others                        |
| I want to learn how to photograph wildlife                                       | I want to learn why the plants and animals are important to scientists in protecting nature |
| I want to learn how to record animal sounds                                      |   |
| I want to learn about the different techniques used to collect different species |   |

### What are you most excited about learning? (Choose your **top three**)

- |  |  |
|--|--|
| Potentially discovering new species that no-one has ever recorded before   | How the different species recorded compare with Scout Groups across Victoria   |
| How technology including smartphones and social media such as iNaturalist can be used when learning about nature | Helping the science community to record species and increase our knowledge of what plants and animals live in Victoria           |
| How to photograph wildlife and tips for finding and recording different species                                  | Getting involved in local projects and helping to make decisions around important issues such as climate change and biodiversity |
| How the conservation status is different between species   | Other (please state)   |



## Explore your backyard

Let's think about what we already know about our ecosystems by discussing some of these key words and questions. Discuss with your group what you know about the following:

Biodiversity

Habitats

Species

Climate  
change

Conservation



Go out into the area around your Scout hall, make some sketches or take some pictures of plants and animals and discuss some of your findings.

When you're back together, have a chat about some of the questions below to help you think about what you might expect to see during the bioblitz.

What sort of habitats are around where I live?

What are some of the threats that might cause an ecosystem to be unhealthy?

Are the habitats healthy or unhealthy?  
How can I tell?

What different species might I expect to see based on my observations around the Scout hall?

What do I hope to discover whilst doing the Bioblitz?



## Preparing for your bioblitz

Now that we have discussed some key ideas and made some predictions, take some time before you go out to make a plan using the toolkit. This will help you consider all the things that you need, to have the best chance of getting some great scientific data which can be shared with your Groups and with the science community. You will also be able to compare data between Scout Groups and compete on a leader board for prizes.



### Observations

All recordings are important so you can choose to go big and record anything you see or focus on one type of plant or animal group instead.

Choose from the options on the right and decide what you are going to record (you can tick more than one)

Flora and Fauna

Flora

Fauna

An animal class (e.g. reptiles, birds or insects)

Write your notes here:



### Locations



Download a map of the area which includes your Scout hall or use the Parks Victoria Protected Places Map provided as a guide ([p.22-23](#)). Go to the list of reserves and their locations in this toolkit ([p.27-30](#)) and try to visit one reserve to carry out your bioblitz. If there isn't a reserve close to you, go to a local park or reserve instead. Every observation counts, no matter where you go.

- Is there a Parks Victoria nature reserve on the list that is close to my Scout hall and easy to access?
- Is there a local park or reserve that is easy to access?

Add your locations in here:





## Collection

There are many ways you can collect data. Some techniques will need more equipment than others and some may need to you to revisit the site at different times of the day or on a different day altogether.

**Group exploration** – You may want to split into smaller groups and cover a larger area or one group could look for plants and fungi and the other group look for animals.

**Transect walks** – Get two people to hold some string and stand 5m – 10m apart to make a transect line and then make observations at intervals along it.

**Photo points** – Take a photo at a fixed point and then repeat from the same point each time you go back.

**Species Image library** – Decide on some specific species that you're going to look for and take a tick sheet with their images on.

**Pond dipping** – Use a net, some white trays and spoons to discover what's in your wetland area but remember to put them all back. (Make sure you stay safe around the water.)

**Bird watching** – Bring some binoculars and remember to look up as well as on the ground.



**Light trapping insects** –

If you're doing some night spotting, find a spot to hang up a white sheet and shine a torch behind it to observe some light-loving nocturnal wildlife.

**Footprint tracking** – Needs a keen eye unless you're at the beach.

**Scat hunt** – Look for animal poos to see who might have passed through or is marking their territory.

**Animal skins, cases, shells and bones** – Look for evidence of animal life stages, growth or even past life by searching for animal existence.

**Human influence** – rubbish, vandalism and any man-made observations can be classed as homo-sapiens or added as additional information.

Make a list of the methods and tools you will need to collect your data:



## Resources

There are some important resources that you will need to make your recordings. These are split into people, time and tools.



### People

How many people can take part in the project? You may want to consider splitting into smaller groups so you can cover more area and not get repeat observations of the same species.

Consider inviting experts along by contacting park rangers, field naturalists and other interested groups who may be able to provide specialist knowledge and help with identifications.

(Scout Leaders, Scout Groups, families)



### Time

You will have only 4 days to make your observations, during the bioblitz. Think about which time of the day might be best to make your observations. Different times of day might show different types of species for a one off 'blitz', but the same time each day will help to compare species over a given time if you were to continue collecting data after the event. Discuss each question and write down your ideas.

- How often do you want to visit the location/s over the four days
- How much time do you want to spend at each location? (e.g. 30 mins)
- What time of day do we want to visit the location?

Make some notes here:



### Tools

List the tools you want to use for recording (e.g. paper and pencils, digital cameras, smart phone).





## Setting up your iNaturalist account

- 1 Go to <https://www.inaturalist.org/> or download the app and create an iNaturalist account for your Scout Group (eg 1stWindyValleyScoutGroup).
- 2 Enter the bioblitz by filling out the form on the [Scouts Victoria website](#) and include your group's iNaturalist username.
- 3 Scouts Victoria will add you to the correct project so that your records contribute to your place on the leaderboard!

## iNaturalist as a tool for recording

When you find the perfect specimen to record, you will need to add your observation to **iNaturalist**. **iNaturalist** is a social network of nature enthusiasts and experts who record and identify observations of biodiversity across, Victoria, Australia and the world.



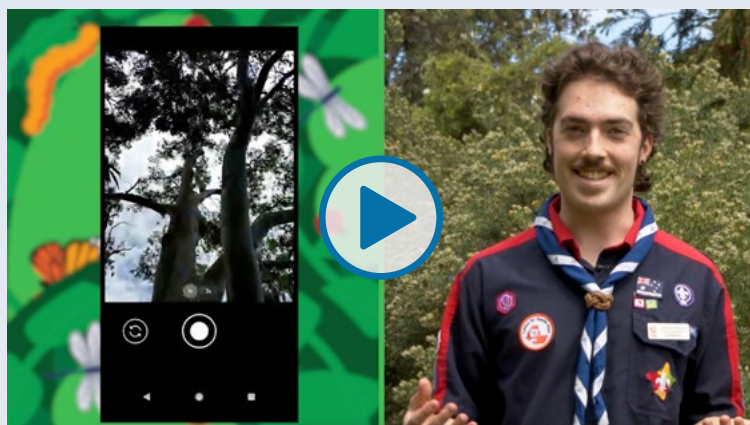
**Observations can be recorded using the following methods:**

**Image using smart phone or tablet** – This can be done out in the field at the time of observing. If there is limited phone network at the time, it will save the information for you to upload later.

**Image using digital camera** – A digital camera allows you to take an image and often records the date and time but some extra notes will be needed at the time to get an accurate observation before you upload it to iNaturalist later on.

**Sound recording using smart phone or tablet** – A sound recording allows you to record the animal if you are unable to see it. You can also add notes about location and habitat to help with identification.

- If you don't know the species, you could try and identify it as closely as possible, e.g. if you found what you thought was a beetle but didn't know what species you could classify using taxonomy, so '**order**' such as **beetle** or '**class**' such as **insect**. See taxonomy of living things in the appendix for more details ([p.20](#)).
- Any species which you photograph can be identified either by yourself or with the help of iNaturalist and the science community.



Here is a video to show you how to create an iNaturalist account and how to record species using images and sounds.

**More on video tutorials here:**

<https://inaturalist.ala.org.au/pages/video+tutorials>



# Part Two:

# RECORD

## species out in the field

### Tips for finding wildlife

- ✓ Find hiding places
- ✓ Locate food and water sources
- ✓ Look up and down
- ✓ Stay quiet and as still as possible
- ✓ Find sunny and shady spots
- ✓ Choose a warm, sunny day to observe rather than a wet and windy one



### Tips for photographing wildlife



- ✓ Try to focus on one species (without disturbing it) rather than a far-away shot with lots of species
- ✓ Use multiple angles if possible
- ✓ Move positions to get the best lighting
- ✓ Keep the camera as still as possible
- ✓ Be patient
- ✓ Photograph different parts of the plant to help identify it (e.g. flower and leaf)
- ✓ If you are photographing fungi, try to get the underside showing the gills as well as the cap and stalk
- ✓ Learn about some of the features on your camera and use the best function for the job



### Tips for recording sound

- ✓ Get as close as you can without altering its behaviour or putting yourself in danger
- ✓ Know where the mic is on your phone. Keep your hands and other obstructions away and keep it pointed at your target
- ✓ Rest the phone against a stable surface to stop your hand/arm getting tired
- ✓ Don't move or talk – even minor movements like shifting your weight or brushing away mosquitoes will create noise
- ✓ Minimise background noise – point your phone away from a road, running water, or other sources of background noise
- ✓ Take long recordings if you can in case the subject changes its behaviour.
- ✓ Make a voice announcement at the end stating what you recorded (to the best of your knowledge), and include the date, time and location before you forget







## Keeping safe whilst out recording species

**Read and write any notes you need for keeping safe when you're out visiting parks.**

More information about the park I'm visiting, including parking, toilets and how to get there:

Weather report and extra clothing needed:

Food, water to drink, and sun protection:

### I have read and understood the following...

- I will respect animals' homes by leaving plants, shells, logs and even rocks where I find them.
- Animals are healthiest eating their natural foods, so I will only share my food with other people.
- I will never walk up to wildlife because it might become frightened and try to protect itself.
- I will leave everything as I find it. The best souvenirs of my adventure are memories, so I will only take photos, drawings or write about my experiences in nature.
- I will respect any evidence of the past that you might find. Parks protect our history.
- I will keep myself safe and protect the park by staying on walking tracks and not damaging vegetation.
- I will take all food scraps and rubbish home to put in the bin or recycle.
- I will follow the Scout Law.
- I will contact [Wildlife Victoria](#) if I see a sick or injured animal.



Patrol and Group Leaders please read the following guides to help you manage your group's iNaturalist account and get the best out of your Bioblitz.

<https://inaturalist.ala.org.au/pages/teacher's+guide>

[Minimal Impact Guidelines Handbook – Parks Victoria](#)

[Minimising Our Impact | Scouts Victoria | Australia](#)



## Recordings using a digital camera or microphone (where applicable)

If you have a digital camera you can take photos and upload them to iNaturalist later. Record the details here so you can add those too. If you can't get a photo, record as much detail as you can including the name of the species or class e.g. bird, so it can still be added to your observations. If you can hear your animal but can't see it, take a sound recording instead. Remember to add lots of details to your sound observation too.

### Observation #1

**Date**

**Time**

**Location** (Add a number on the map where the observation was made)

**Species** or class e.g. birds (Leave blank if unknown)

**Habitat** (e.g. wetland, grassland, woodland)

Make a few notes to **identify the photo** including colour, patterns, texture and behaviour

**Describe its behaviour** (e.g. is it flying, eating, looking after its young)

### Observation #2

**Date**

**Time**

**Location** (Add a number on the map where the observation was made)

**Species** or class e.g. birds (Leave blank if unknown)

**Habitat** (e.g. wetland, grassland, woodland)

Make a few notes to **identify the photo** including colour, patterns, texture and behaviour

**Describe its behaviour** (e.g. is it flying, eating, looking after its young)





# Part Three:

# SUPPORT

## action back at base



## Analysing your results

It's not just about the amount of observations that you made, the individual species that you observed will tell you a lot about the health of an ecosystem and its biodiversity.

Talk to your Group about your findings using the questions below.

- Were there any observations that you were surprised about?
- Were there any species that you expected to find but didn't observe?
- Can you explain why that might have happened?
- What did you notice about the health of the ecosystems?
- How did your Group's data compare with the others?

Choose your top three most observed species and top three least observed. Do some extra research to find out more about their conservation status, i.e. how healthy their population and distribution is across Victoria and Australia.

Use this website to help:

<https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

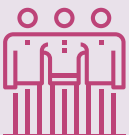
Add some discussion points here:



### What next?

There are lots of ways that you can continue to support this and other Citizen Science projects;

- Invite a local newspaper to your Bioblitz or report on your findings to them so that you can share your story with the local community.
- Organise some clean-up or planting projects in your community, particularly if you find specific species that require more habitat protection or planting as a result of your observations.
- Start a tree nursery and grow some local plants that are found in your area so you can fundraise and create healthy wildlife corridors at the same time.
- Engage some of younger Scouts with nature treasure hunts activities for specific species that you have found.
- Write to your local council telling them about the important species that you have found and ask how you can help support their work to look after local parks.
- Continue to monitor and record species in parks listed in this toolkit, so that you can continue to build up a picture of what species are there and how they might be changing over time. Arrange to go out once a month, or the first weekend of each new season to build up that picture and help collect more reliable data.
- Hold an annual Big Scouting Bioblitz every year and get Scouts, their families and the local community involved.
- Consider working towards a Special Interest Area project badge here: <https://scoutsvictoria.com.au/activities-events/activities/environment/badges/>



Make some notes about some of your ideas for **supporting action** in your community.



## Special interest Citizen Science projects at Parks Victoria

Parks Victoria has many ongoing citizen science projects. Here is how you can get involved:

1. Go to our [Citizen Science](#) webpage.
2. Talk to your group about who would like to be involved and which project interests you.
3. Complete your plan below.
4. Visit one of our parks and reserves and make your observations.
5. Contribute to science and make a difference in your community.



### Parks Victoria Data Discovery Program

Parks Victoria's Data Discovery Program focuses on specific reserves with little or no data. Recording species from these sites will increase our knowledge of Victoria's biodiversity and potentially identify species that haven't been recorded in those areas before.

#### Plan your visit

##### Planning Sheet



Observation

##### Resources



People



Location



Time



Collection



Tools





## 2 Parks Victoria Sea Search Program

Park Victoria's Sea Search program is one way in which citizen scientists can explore and learn about the marine environment while collecting important information on its ongoing health and condition.

### Plan your visit

#### Planning Sheet



Observation

#### Resources



People



Location



Time



Collection



Tools (Include any Biocollect instructions)



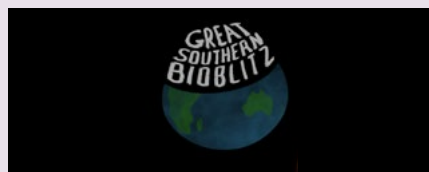
## Other popular citizen science projects



### Climate Watch

Download the Climate Watch app and monitor changes to your local environment throughout the year.

<https://www.climatewatch.org.au/>



### The Great Southern Bioblitz

Every October, Australia and 13 other countries take part to create one of the biggest Bioblitz's south of the equator.

<https://citizenscience.org.au/2021/08/13/great-southern-bioblitz-2021/>



### The Great Australian Platypus Search

Help map platypus populations across Victoria and discover how far and wide these elusive species can be found and how healthy their population is.

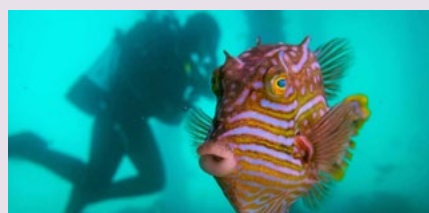
<https://www.thegreataustralianplatypussearch.org/project-overview>



### Frog ID

Find and record frogs to build a picture of what species might be living where.

<https://www.frogid.net.au>



### Great Victorian Fish Count

Go out with your snorkel in early summer and look for fish out a list of 35 species which have been spotted around our coasts. The annual event helps to monitor the health of our oceans and look for any changes which might be due to impacts such as pollution or invasive species.

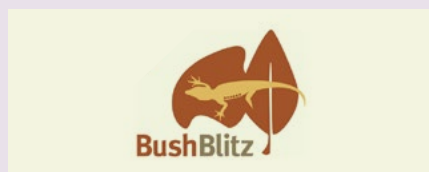
<https://vnpa.org.au/programs/great-victorian-fish-count/>



### Aussie Backyard Bird Count

Spring is a great time to observe birds and their behaviour. The bird count project takes place every October and can be done, just as it says, in your backyard.

<https://aussiebirdcount.org.au>



### Bush Blitz

Australia's largest nature discovery program that organises expeditions to document plants and animals across Australia.

<https://bushblitz.org.au/introducing-an-expedition-for-everyone/>



### Butterflies Australia

A citizen science project that aims to get everybody looking at butterflies and recording their sightings.

<https://www.butterflies.org.au/external/home>

More citizen science projects can be found here:

<https://citizenscience.org.au/ala-project-finder/>

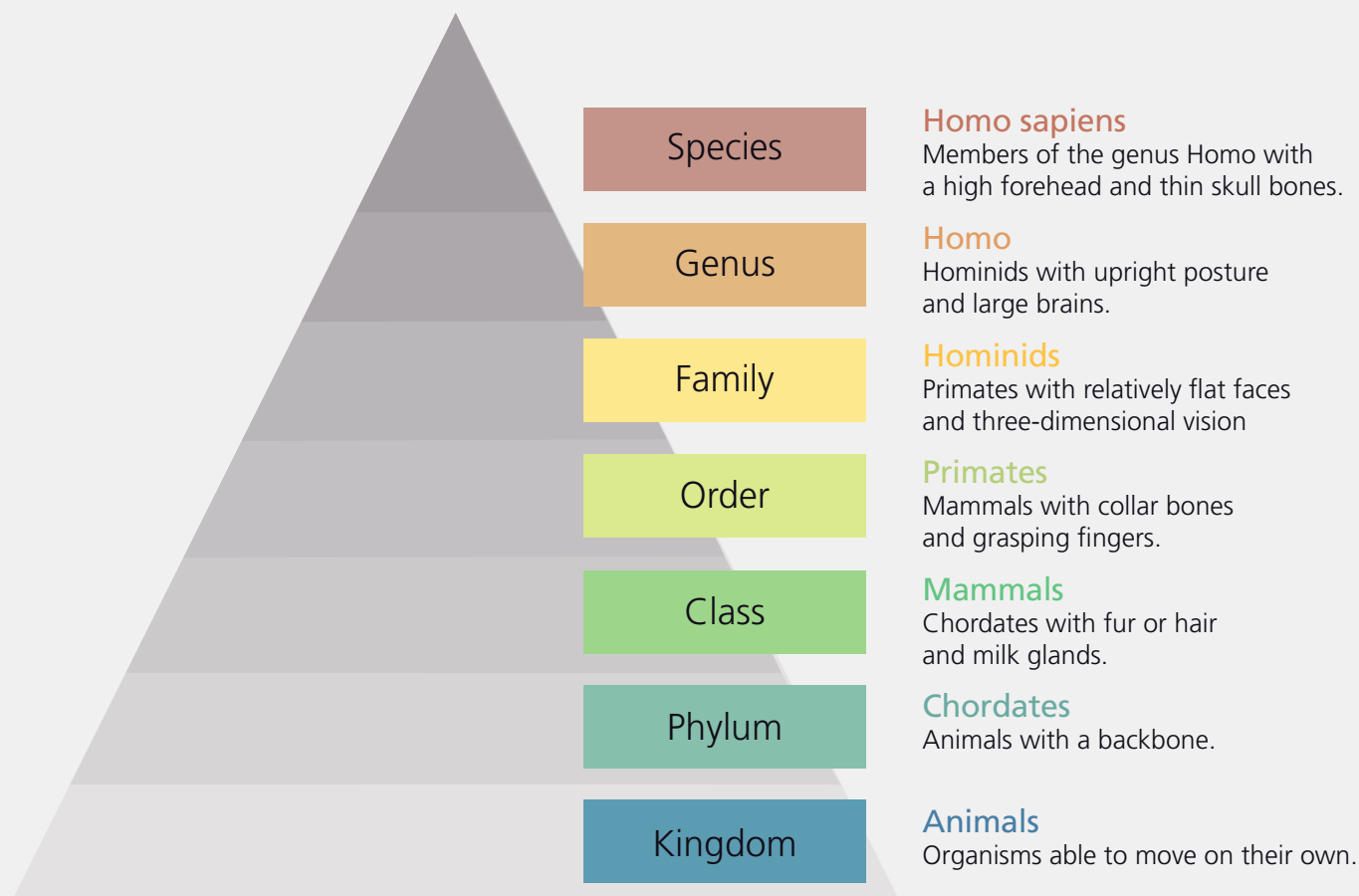
## Glossary of terms

Biodiversity	The variety of plants and animals in the world or in a particular habitat
Climate Change	Change/disruption in climate largely attributed to a rise in carbon dioxide from man-made processes
Conservation Status	How likely a species is to remain alive at present or in the near future
Ecosystem	An interacting community of organisms in their physical environment
Fauna	Animal life
Flora	Plant life
Habitat	The natural home or environment of a living organism that has all the resources it needs (food, water, shelter) to survive
Species	A living organism that can reproduce

## Appendix

### Taxonomy of living things

Taxonomy triangle with homo sapiens example.

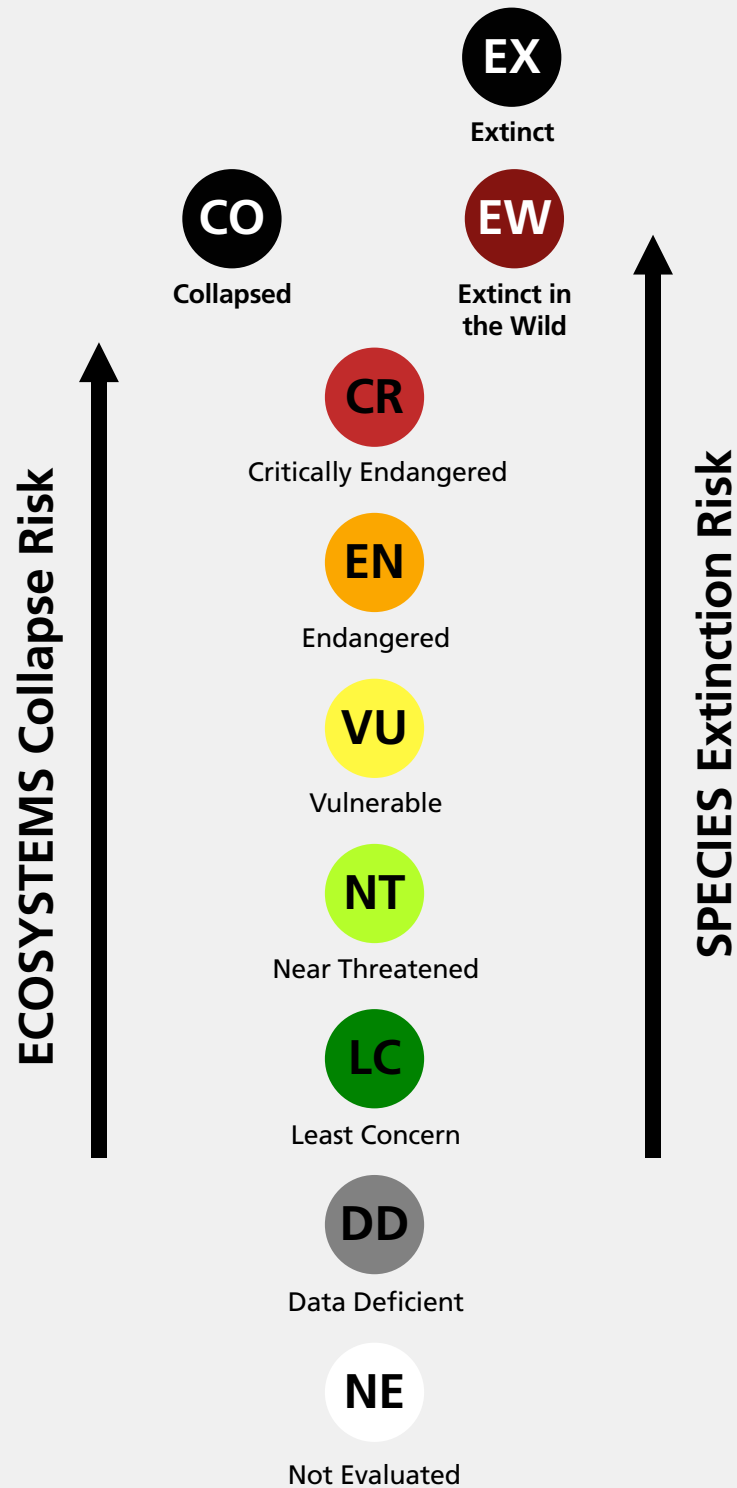




## Appendix (continued)

### Conservation Status Chart

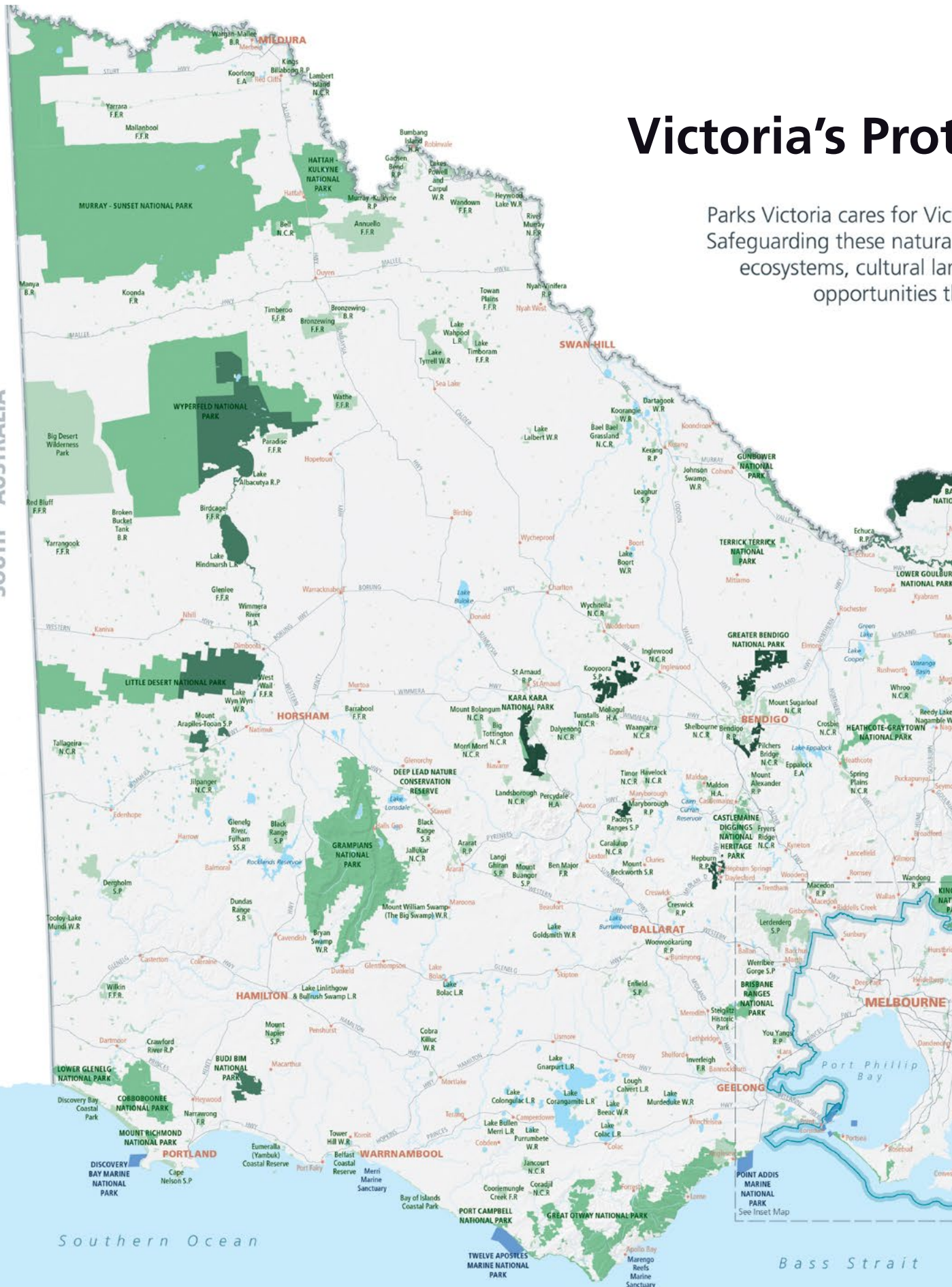
Credit: International Union for Conservation of Nature (IUCN)



# Victoria's Protected Areas

Parks Victoria cares for Victoria's natural and cultural heritage. Safeguarding these natural and cultural ecosystems, cultural landscapes and opportunities for recreation.

SOUTH AUSTRALIA

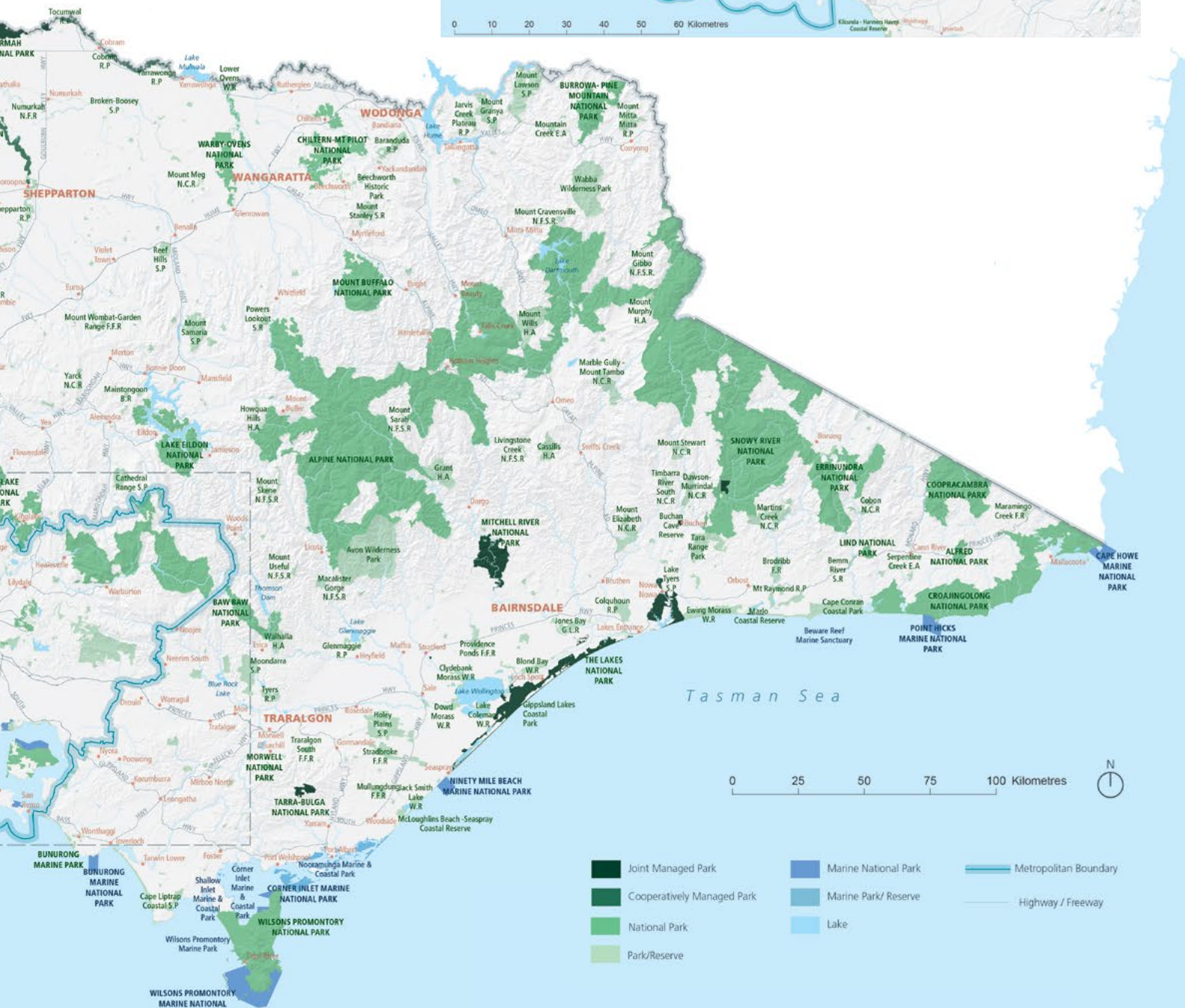


Victoria's network of parks and reserves are an integral part of our landscape. Parks Victoria respects the deep and continuing connection of Indigenous Australians to these landscapes and recognises their ongoing role in



# ected Places

Victoria's protected places;  
spaces and the unique  
landscapes and leisure  
they contain.



part of Aboriginal cultural landscapes.  
ction that Traditional Owners have to  
aring for Country.

**Parks**  
VICTORIA

**VICTORIA**  
State Government

Education  
and Training

[www.parks.vic.gov.au](http://www.parks.vic.gov.au)

Parks Victoria does not guarantee that this data is without flaw of any kind and therefore disclaims all liability  
which may arise from you relying on this information. Cartography by Parks Victoria August 2019.



## Self-reflection and program evaluation

Please tell us more about your experience by spending 5 minutes answering the following questions. Your feedback will help us to improve our toolkit and support our work to engage more young people in citizen science. You can answer the questions in the toolkit directly and email them back to [Laurence.Williams@scoutsvictoria.com.au](mailto:Laurence.Williams@scoutsvictoria.com.au) or click on the link [here](#) and complete your 5 minute survey online.

Please evaluate the program based on your own expected outcomes and what was achieved. Please rate between 1 and 5 (1 being strongly disagree and 5 being strongly agree).

1. Did you use the Into Nature Citizen Science Toolkit?

Yes (Go to question 2)

No (Go to question 5)

2. The toolkit is a good way to engage young people in planning and carrying out their own citizen science project.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

3. The toolkit was easy to use and helped my Scout Group to plan and carry out the Big Scouting Bioblitz.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

4. Do you have any feedback that could help us make the toolkit more user-friendly?

5. The Big Scouting Bioblitz (BSBB) was a great way to engage me and my peers in citizen science.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

6. A one-off event was too restricting. I would prefer to participate in a more flexible way that suited my schedule.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

7. I was interested in knowing what species had been found by mine and other groups.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

8. I was interested in the science community identifying and reporting on the data.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

9. Taking part in the Bioblitz has motivated me to want to do more citizen science.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

## Self-reflection and program evaluation (continued)

10. Taking part in the Bioblitz has motivated me to do other conservation activities.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

11. I found iNaturalist easy to use and a great reporting tool.

1	2	3	4	5
(Strongly disagree)				(Strongly agree)

12. Please explain your answer to question 11 below:

13. Please tick those skills which were achieved or improved as a result of the Bioblitz:

☐ I know how to find wildlife in parks.

☐ I know how to use iNaturalist.

☐ I know how to use different techniques to collect observations.

☐ I know how to take better photographs of wildlife.

☐ I know about the different ways I can record species on iNaturalist.

☐ I can use what I have learnt to teach others about the wildlife in my parks.

☐ Other (please explain):

14. What did you learn from taking part in the Big Scouting Bioblitz? Choose your **top three**.

☐ I learnt that I could discover new species that no-one has ever recorded before.

☐ I learnt how technology including smartphones and social media such as iNaturalist can be used when learning about nature.

☐ I learnt how to photograph wildlife and how to find and record different species.

☐ I learnt how the conservation status is different between species.

☐ I learnt how the different species recorded compare between Scout Groups across Victoria.

☐ I learnt how I could help the science community to record species and increase our knowledge of what plants and animals are living in Victoria.

☐ I learnt why the plants and animals are important to scientists in protecting nature.

☐ I learnt that I could get involved in local projects that focus on important issues such as climate change and biodiversity.

☐ Other (please explain):

## Self-reflection and program evaluation (continued)

15. Will you continue to participate in citizen science or other conservation activities?

Yes

No

Maybe

16. Please explain your answer to question 15 below:

17. Please rate your level of enjoyment in this outdoor citizen science project.

1  
(Not at all)

2

3

4

5  
(Very much)

18. Do you have any other feedback for how we could engage young people in citizen science?



## List of reserves with little or no observations and closest Scout Groups

If you want more of an adventure, why not visit one of the parks below and you could be the first to record a species there. The Scout Groups listed were thought to be the closest to those parks but there maybe more groups within a 2 hour drive. Please note: Coordinates have been taken from the central point of the reserve not the entrance to it.

Park Reserve with little or no data	Longitude	Latitude	Scout Groups within 30 mins of driving	Scout Groups within 1 hour of driving	Scout Groups within 2 hours of driving
Bunurong Marine National Park	145.669127	-38.670326	Inverloch Leongatha	Phillip Island	Churchill Morwell Newborough Traralgon Glengarry
Carboor Upper Education Area	146.488122	-36.678181	Wangaratta Myrtleford	Beechworth Benalla	Mansfield
Charlton East Bushland Reserve	143.406810	-36.295674	No groups listed	No groups listed	Kerang Warracknabeal Bendigo
Churchill Island Marine National Park	145.312737	-38.509178	Phillip Island Inverloch	Lang lang Koo Wee Rup Devon Meadows	Please check to see if your group is within a 2 hour drive.
Coradjil Bushland Reserve	143.219328	-38.519292	Cobden	2nd Colac 3rd/4th Colac	Apollo Bay
Dabyminga Creek Bushland Reserve	145.113734	-37.163698	Broadford	Kilmore Seymour Wallan Wallan Alexandra	Please check to see if your group is within a 2 hour drive.
Delatite Education Area	146.335230	-37.121260	Mansfield	Alexandra Benalla	Healesville
Discovery Bay Marine National Park	141.394851	-38.342027	Portland	Port Fairy	Casterton Warrnambool Tooram Warrnambool Norfolk Allansford
Eagle Rock Marine Sanctuary	144.105046	-38.468455	Torquay	2nd Colac 3rd/4th Colac	Cobden
Fumina South Education Area	146.129465	-37.971947	Newborough	Warragul Drouin Morwell	Gembrook
Gellibrand Bushland Reserve	143.568579	-38.508014	2nd Colac 3rd/4th Colac	Cobden Camperdown	Apollo Bay

Park Reserve with little or no data	Longitude	Latitude	Scout Groups within 30 mins of driving	Scout Groups within 1 hour of driving	Scout Groups within 2 hours of driving
Glenmaggie Nature Conservation Reserve	146.740691	-37.926981	No groups listed	Sale Glengarry Traralgon West Traralgon Morwell Morwell East Newborough	Please check to see if your group is within a 2 hour drive.
Goldie Flora Reserve	144.847671	-37.213941	Riddells Creek Kilmore Wallan Wallan Broadford Woodend Macedon Woodend Macedon Gisborne New Gisborne	Please check to see if your group is within a 1 hour drive.	Please check to see if your group is within a 2 hour drive.
Hat Hill Flora and Fauna Reserve	146.137685	-36.914929	Mansfield	Benalla Alexandra	Myrtleford
Hughes Creek Flora Reserve	145.292268	-37.004066	Seymour	Broadford Kilmore	Alexandra
Inglewood Bushland Reserve	143.879317	-36.591380	No groups listed	Maryborough Bendigo Castlemaine Kangaroo Flat Strathfieldsaye Maiden Gully	Please check to see if your group is within a 2 hour drive.
Kadnook Bushland Reserve	141.312383	-37.226925	No groups listed	Casterton	2nd Horsham 4th Horsham
Marengo Reef Marine Sanctuary	143.666174	-38.775704	Apollo Bay (by boat)	No groups listed	Cobden 2nd Colac 3rd/4th Colac
Merri Marine Sanctuary	142.475101	-38.403524	Warrnambool Tooram Warrnambool Norfolk Allansford	Port Fairy	Portland Casterton
Molesworth Bushland Reserve	145.571821	-37.115711	Alexandra	Seymour Broadford Kilmore Mansfield	Please check to see if your group is within a 2 hour drive.
Morea Bushland Reserve	141.234127	-36.820727	No groups listed	No groups listed	2nd Horsham 4th Horsham Casterton

Park Reserve with little or no data	Longitude	Latitude	Scout Groups within 30 mins of driving	Scout Groups within 1 hour of driving	Scout Groups within 2 hours of driving
Mount Creek Education Area	146.971408	-36.664774	Bright	Myrtleford	1st Wodonga 3rd Wodonga Baranduda Beechworth Wangaratta Corryong
Mount Porepunkah Scenic Reserve	148.172264	-37.245466	Bright	Myrtleford Beechworth	Wangaratta
Mount Stewart Nature Conservation Reserve	147.560391	-36.168681	No groups listed	No groups listed	Colquhoun Paynesville Bairnsdale
Mudgeegonga Bushland Reserve	146.764482	-36.501482	Myrtleford Baranduda Beechworth	Wangaratta	Please check to see if your group is within a 2 hour drive.
Mushroom Reef Marine Sanctuary	145.016235	-38.481634	Dromana Red Hill Tyabb Hastings Balnarring	Sorrento	Phillip Island (by road)
Ninety Mile Beach Marine National Park	147.158953	-38.403033	Sale	Glengarry Traralgon	Churchill Morwell Newborough
Point Addis Marine National Park	144.253001	-38.395528	Torquay Modewarre	Barwon Heads Queenscliff Leopold Belmont Highton	Colac Cobden
Point Danger Marine Sanctuary	144.327384	-38.339813	Torquay Modewarre Barwon Heads	Queenscliff Leopold Belmont Highton Drysdale	Colac Cobden
Seaton Education Area	146.671064	-37.951528	Glengarry	Newborough Sale Traralgon West Traralgon Morwell Morwell East Churchill	Please check to see if your group is within a 2 hour drive.



Park Reserve with little or no data	Longitude	Latitude	Scout Groups within 30 mins of driving	Scout Groups within 1 hour of driving	Scout Groups within 2 hours of driving
St Arnaud Regional Park	143.235035	-36.616973	No groups listed	No groups listed	2nd Horsham 4th Horsham Warracknabeal Bendigo Maryborough
Stokes River Streamside Reserve [2]	141.324267	-37.846561	No groups listed	Casterton	Portland
Stokes River Streamside Reserve [5]	141.455152	-37.834545	No groups listed	Casterton	Portland
Towma (Lake Maribed) Flora and Fauna Reserve	142.886650	-35.847402	No groups listed	No groups listed	Kerang Warracknabeal
Wangle Wildlife Reserve	143.245686	-35.685931	No groups listed	No groups listed	Kerang Warracknabeal
Woonack Bushland Reserve	142.545755	-35.190222	No groups listed	No groups listed	2nd Mildura 5th Mildura Red cliffs Warracknabeal Kerang
Woorragee North Bushland Reserve	146.790748	-36.211106	Beechworth Baranduda Wodonga	Wangaratta Rutherglen	Please check to see if your group is within a 2 hour drive.
Yambuk Flora and Fauna Reserve	142.086005	-38.356810	Port Fairy	Warrnambool Allansford Portland	Please check to see if your group is within a 2 hour drive.



