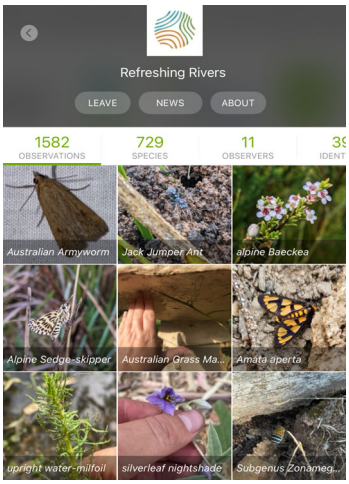
Refreshing Rivers iNaturalist Project

Refreshing Rivers is a collaborative 10-year program to improve catchment management and waterway health across the Murray-Riverina area.
The aim of the Refreshing Rivers iNaturalist groups is to engage with the community and encourage the exploration of waterways and discover the range of native species that live around us. For more information on the project please visit our website https://www.refreshingrivers.org.au/

iNaturalist is a free platform—both a website and app—to record observations of plants and animals in nature using photographs; share what you've found; and contribute to a global dataset of biodiversity information used for science and conservation. Making observations is as simple as exploring, being curious, and taking photos of organisms (or evidence of those organisms, like tracks, nests, shells, or skulls.) The iNaturalist Artificial Intelligence (AI) will suggest possible identifications, and when you upload those observations, the iNaturalist community works together to refine and confirm the identification. iNaturalist helps anyone explore their surroundings, improve their observation skills, and connect to a community that will help make them a better naturalist.



Getting Started

It is free and easy to join iNaturalist. Set up your account on the iNaturalist website or download the app from the Apple or Google Play store and create your login there. To join the Refreshing Rivers Project in the iNaturalist Mobile Apps:

1. Go the Projects section of the app. In Android, go to the side menu and tap on Projects. In iOS/iPadOS, tap on Projects in the navigation bar
2. Tap on the magnifying glass icon in the upper right-hand corner of the screen to open project search
3. Search for the project "Refreshing Rivers" and tap on it
4. Tap on "Join"

For more detailed instructions about using the iNaturalist iOS and Android apps, as well as for uploading observations via the iNaturalist website, see the iNaturalist Getting Started guide.

The Refreshing Rivers Program is a collaboration between government, industry, research, and community organisations, led by Local Land Services. This Program has been assisted by the New South Wales Government through its Environmental Trust.

Making Observations

This best way to get started with iNaturalist, is to make some observations. This will give you experience using the iNaturalist app, a feel for what organisms are easiest to photograph, and an understanding of what happens to observations after you upload them—all important things to know when using iNaturalist, or leading others at your bioblitz.

1. Make sure your phone's location services are turned on for your camera and for iNaturalist—usually accessed through the security settings on your phone.
2. Head outside, open the iNaturalist app and find an organism you'd like to make an observation of. Plants are a good place to start since they won't run away from you! While you can make observations of anything, try to look for organisms that are wild—so plants growing on their own without human help, or non-domesticated animals, like insects or birds.
3. Tap the button to make a new observation and choose "Take Photo" when the options pop up.
4. Take your first photo. After you take the photo, you'll have the option of retaking it if you'd like.
5. Once you have a photo you like, you'll be taken back to the observation screen. Notice that iNaturalist will have automatically populated the date and time, as well as your current location.
6. From the observation screen, you can add more photos to the observation, for example, a close-up of the flower of a plant, or the leaves.
7. Once you're satisfied with your photos, tap the box that says "What did you see? View suggestions." If you have a network or wi-fi connection, this will link you to the artificial intelligence on iNaturalist, which will try to suggest possible identifications based on your photograph.
8. The "Top Suggestions" should say that the species are "Visually Similar/Seen Nearby" – these are good choices to pick from. You can pick a suggestion from iNaturalist, or you can type in your own identification using the search bar, at any level of detail you know (e.g., "Eucalyptus" or "Plants" are both fine to use as an ID!). See Tips for Using the iNaturalist AI below for more details.
9. Once you've added an identification, you'll be taken back to the observation screen, where you should save the observation. Once you save it, it will be uploaded to iNaturalist, where the community will work to confirm or refine the identification. See the section below *After Making Observations* to learn more about the ID process.

Now you're ready to make a new observation!

Tips for Taking Photos

The photos you take on iNaturalist provide evidence of the organism you saw, and help the AI and the iNaturalist community suggest, refine, and confirm the identification of that organism. Therefore, taking good photos is key to using iNaturalist! Here are some tips:

- Focus on one species in each photo: While a meadow full of wildflowers is beautiful, it's not the best photo for an iNaturalist observation, as there are probably many species represented.
- You can have more than one photograph for each observation you make in iNaturalist, allowing you to photograph different parts or angles of an organism. For example, one photograph of an entire tree, taken from far away, combined with other photos that show close ups of the leaves, the bark, and any flowers or fruits, will allow that tree to be identified.
- If the organism moved or there is low light, causing the photograph to be blurry, retake the picture but wait for the organism to be still or turn on your flash.
- Get close: For small organisms, like ants or aphids, getting a nice close-up shot is important for identification. There are inexpensive clip-on macro lenses you can use with your phone to take great, focused pictures of small organisms or close-ups of features of other organisms, like a plant that has tiny flowers or the eyes of a spider.

Tips for Using the iNaturalist AI

The Artificial Intelligence (AI) on iNaturalist is a fun and useful feature that can provide real-time feedback about the observations you're making. The iNaturalist AI will give you suggestions for ID, but they're just that—suggestions. Because of this, there are some things to keep in mind to make sure you're using the AI in the best and most responsible way:

- Check how confident iNaturalist is in the suggestions: The iNaturalist AI will never give you one single suggestion of one species. Instead, based on the photograph you provided and how much information it has about the species in your area, it will offer a list of suggestions, with some information about how confident it is in these suggestions. If it has confidence in the list of suggestions, it will always display a taxonomic level higher than species at the top of the list and say that it is pretty sure your organism is in that group. Then it will list species suggestions. If it is not confident in its suggestions, it won't display a higher taxonomic level and will state that it is not confident enough to make recommendation. It will still display species suggestions, but those suggestions will likely encompass a wide range of organisms that look somewhat similar to your photograph. We recommend only choosing a species suggestion if the iNaturalist AI is "pretty sure" about the ID.
- Look for suggestions that are visually similar and seen nearby: If the iNaturalist AI is "pretty sure," look through the suggested species. The first list that appears will offer species that are visually similar AND have been seen nearby. These suggestions are usually the best choices! If the first set of suggestions offered doesn't seem to have a match, you can expand the list, and you will get suggestions that only meet one of those criteria: either are visually similar or have been seen nearby. If you can't decide what species to pick, you can always choose that higher-level suggestion that the AI gives you at the top of the species list.
- Learn more about the suggested species: In the list of suggested species, you can see the name

of the species as well as a tiny thumbnail, which can make it difficult to tell if a suggested species seems like the correct ID to your observation. All of those suggestions, though, link to a species information page, where you can see larger photos, read about the species, and see a map of where others have observed it. If it seems like you've found a match to your organism, you can even select it as the ID from within the species page.

- Make your own ID: If, after going through all the tips above, you don't think you've found a likely suggestion for your observation, you can always enter your own ID by using the search bar. If you know the species, you can type in a species ID, but you're also welcome to make an ID at a much higher level, for example "plants" or "birds" or "beetles." By putting at least some level of identification on your observation, you make it much easier for other iNaturalist members who can help refine that ID to find your observation, rather than leaving it blank.

After Making Observations



Making observations is only half of the process on iNaturalist. Make sure you check back on your observations to see if anyone has added an identification, left a comment or asked you to provide a bit more information about what you saw!

To get an observation to "Research Grade" status:
(1) it must have a photo,
(2) it cannot be a captive or cultivated organism, and
(3) over two thirds of the people adding IDs to it must agree on the species it is.

You can see if anyone has left you an ID or comment by refreshing the screen showing your list of observations in the iNaturalist app and look for the notifications on your observations, or by logging into the website, where you'll have notifications highlighted in the upper right corner of the header bar. On the website, you can see how close your observation is to making it to the two thirds majority needed for Research Grade, and once it has made it there, you'll see a green Research Grade banner at the top of the observation.

Research Grade observations are not only part of the iNaturalist database, they are also shared with

other global biodiversity databases, increasing their use for science, management, and conservation!



