Australia's National Science Agency

Using the Wild Files in the Classroom

CSIRO National Science Experiment: CSIRO Wild Watch

What are the CSIRO Wild Files?

The CSIRO Wild Files are a series of short resources, each of which outlines a group of plants or animals that are a research priority. The Wild Files give a short introduction to the organisms being discussed, offer some interesting facts about each of the organisms, explain why they're of interest to CSIRO researchers and Australia more broadly. These plants and animals have been selected for their direct link to CSIRO research. By using the Wild Files to guide your collection for Wild Watch, you and your students are directly supporting CSIRO researchers and their research.

For groups undertaking CSIRO Wild Watch, the CSIRO Wild Files highlight organisms that are of interest to researchers and provide options that can be found nationwide during National Science Week. You can use these priority organisms to focus your searches for the Wild Watch activity, ensuring that organisms of interest are being captured.

The CSIRO Wild Files are a great opportunity to discuss why we track the spread of different kinds of plants and animals, and how it's important to record sightings. See below for additional classroom activities that can be undertaken using the CSIRO Wild Files as a focal point.

What do the CSIRO Wild Files cover?

There are six CSIRO Wild Files that have been created for National Science Week 2025. The CSIRO Wild Files include:

- Wattles
- Terrestrial snails
- Lichen
- Egg cases of sharks, skates, and chimaeras
- *Australian Ericaceae*
- *Riccia* plants

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Wild Files: Terrestrial Snails

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Terrestrial snails are snails that live on land. They can be found everywhere. In Australia, some species of snails cause a range of problems, damaging crops and harming the environment, while other species are beneficial and are indicators that a particular biome is thriving.

Snails are excellent at surviving long voyages. They can retreat into their shells and stick to all kinds of surfaces, including shipping containers, boxes, cars and plants. Snails also carry parasites which can be dangerous to a wide range of creatures, including humans. It is important to wear gloves when handling live snails

Because they are so good at travelling undetected, many species of snails that we find in Australia have arrived from overseas. Invasive snails can be a huge problem, contaminating and damaging crops, and costing the grain industry over $170 million a year in reduced harvests.[1]

Wild CSIRO Research

CSIRO Research is investigating ways we can keep snails from damaging crops without using harmful pesticides. This research includes identifying things that snails are attracted to or repelled by.

CSIRO scientists have tested snails in the laboratory to identify their colour preferences, placing the snails in an arena with different coloured strips, which revealed that snails are attracted to the colour red! Once these preferences were identified in the lab, they were tested again in the field and found that snails preferred red over black[1]

Close up of invasive snail species Theba pisana in the field. This species has a globular shell. They contaminate grain crops and can affect harvesters. © CSIRO

Wildfile | Terrestrial Snails 1

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Wild Files: Wattles

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Wattles, as they are more commonly known in Australia, belong to the Acacia genus. Wattles are the largest genus of vascular plants in Australia and include the national floral emblem.[6]

Some acacias are economically important for their timber and other wood products, such as firewood, plywood, and fodder, and in the perfume industry. Acacias are an extremely important plantation species in the tropics. They grow fast and can thrive on sites that have been degraded by other unsustainable activities.

Black wattle has fern-like true leaves, Spearwood (Acacia doratoxylon) has long narrow phyllodes and Flat Wattle (Acacia glaucoptera) has cladodes. © rachelduckhen4 (left), chrislindorff (centre) and arthur chapman (right) via iNaturalist

Wild CSIRO Research

Researchers at the Centre for Australian National Biodiversity Research (CANBR), a joint venture between the Australian Government and CSIRO are using the latest in DNA research and modern taxonomic tools to uncover the origins of acacias.[6] Researchers are tracing biogeographic (where species are located) trends within acacia, to find out why some closely related species may grow in one part of the country while close relatives grow in another part of the country. Knowing how different acacia species have evolved to live in certain areas can provide researchers with valuable insight into why certain species grow where and why.

Wildfile | Wattles 1

Classroom activities

In addition to being a way to start a conversation about the different organisms the CSIRO Wild Files have three optional activities that you can use to get students talking about the focus organisms in different ways. The different activities are suited for a wide variety of levels of understanding. While you're welcome to use whichever activities best suit the students you're working with and your situation, we recommend the wanted poster and map activities for Primary School students and the Map and Book Page activities for Secondary School students.

Sightings map

The map activity invites students to make a map of their local area, documenting organism sightings. This can be based on the Wild Files, if there are significant populations of those organisms in your area, or on wildlife sightings more broadly, including a range of organisms and species. The choice of map is up to you, but we recommend using a map of your school, street or local government area. You may choose to gather data over a short period of time, where participants go out and identify wildlife over the course of an hour, or over a longer period, with students recording sightings on weekends.

If delivering this activity with a large group of students, you may wish to combine all their maps/ sightings into one large group map and discuss the differences and commonalities in the locations of sightings.

AmAZed! bookpage

Students undertake some research to create a custom page in the style of Andrea Wild's AmAZed! Book, which provides an A-Z of Biodiversity. A sample page is provided to give participants an idea of the kind of information that is needed. Participants can then undertake research using sources of their choice to create a similar book page for a species of their choosing. The Atlas of Living Australia is a great starting point for their research, but students may need additional sources for more information.

Wanted poster

A Wanted Poster template has been provided for students to fill in with the details of their selected organism. Participants may want to narrow their wanted poster down to a single species of the described organism. Participants fill in the blanks and include a picture of the organism and some key details. Not all of the details for the Wanted Poster will be available from the CSIRO Wild Files and may require some research. Participants should be encouraged to share the Wanted Poster around their school or local area to share what they've learned about their organisms.

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AmAZed! Mini Book

CSIRO National Science Experiment: CSIRO Wild Watch

Activity Overview

AmAZed! CSIRO's A to Z Biodiversity book by Andrea Wild highlights a range of exciting plants and animals that contribute to Australia's biodiversity.

In this activity, your group will be creating a page for your very own AmAZed! mini book based on the plants and animals you've recorded while participating in CSIRO Wild Watch, in your neighbourhood park, on a hike, or any plant or animal that you would like to know more about. Use the book's layout as a guide when designing your page.

Instructions

1. Use the six options provided in the CSIRO Wild Files or choose an interesting plant or animal as your focus.
2. Each student or small group researches a different plant or animal.
3. If your Wild File covers many different species, select one species as the focus for your page.
   a. For example, if your Wild File is Terrestrial Snails, you might want to do your research on Cornu aspersum - the European Garden Snail.
4. Use information from the Wild Files to start your research, but for further information, you may need additional sources such as the Atlas of Living Australia.
5. Each student or small group will create a paper or digital version of their organism's page.
6. Suggested information to include:
   a. Name of the plant or animal (scientific name and common name)
   b. 3-5 interesting facts that make a reader intrigued to learn more
   c. 1-2 images.
7. Students present their page to the group.
8. For additional teacher resources related to AmAZed! CSIRO's A to Z Biodiversity by Andrea Wild Go to AmAZed!, Andrea Wild, 9781486313976 and check out the LOOK INSIDE section, which has an entire tab for teachers.

Activity | AmAZed! Mini Book 1

Get learning!

We hope you have as much fun with the Wild Files and Wild Watch as we did creating it! Enjoy getting out in nature and exploring all that Australia's unique biodiversity has to offer!

For additional resources check out CSIRO publications linked to CSIRO National Science Experiment: Wild Watch at

publish.csiro.au/catalogues/WildWatch