
Why Fungi?
Roz Hart

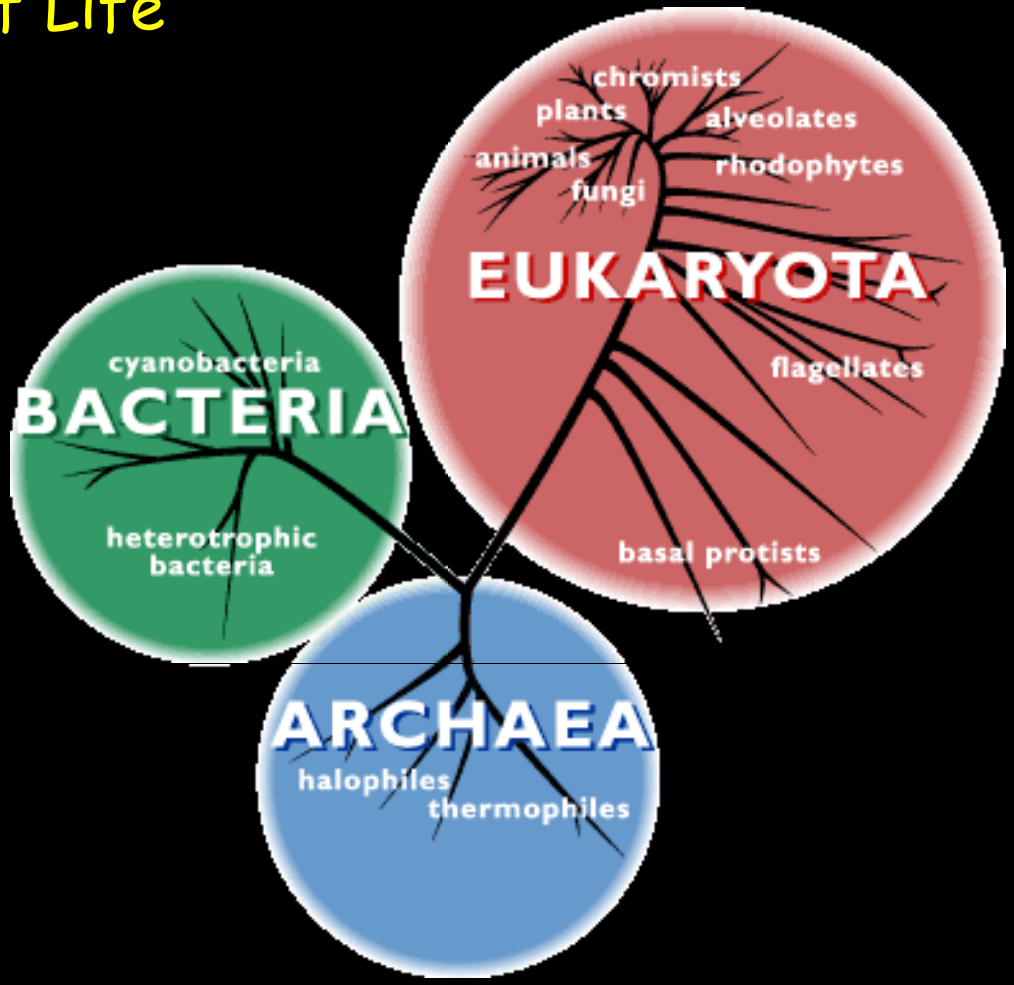
# Fungi occur everywhere

- Fungi occur everywhere, rainforest, lake shores, bushlands, grasslands, farms, beaches, arid areas.
- Each fungus is comprised of microscopic mycelium in the substrate.
- Some fungi are microscopic for all their life cycle, others produce visible fruiting bodies.
- Estimates range from ~15,000-250,000 macrofungi in Australia with only a small fraction described.

## How do Fungi fit into the Scheme of Life?

They are neither Animals nor Plants

They have their own separate Kingdom within the Tree of Life



The Fungi we are familiar with, the mushrooms we see in winter, are the fruiting bodies. The microscopic body of the fungus, the mycelium, lives and functions underground.

# Fungi are made up of microscopic threads

Fruit body

Mycelium



Fungi propagate by their spores and mycelium

# What Roles do Fungi Play?

- Plant Partners :Mycorrhizal fungi
- Decomposers : the recycling fungi
- Disease fungi

# Many different types of fungi

Mushrooms

Truffles

Earthstars

Puffballs

Toadstools

Stalked Puffballs

Brackets

# Some have fun and intriguing names

Earth Tongues

Jelly Fungi


Birds Nest Fungi

Earthstars

# Many fungi are hard to see


# Fungi fruiting bodies are very common after rain in arid and semi-arid regions


# Biodiversity Harmony

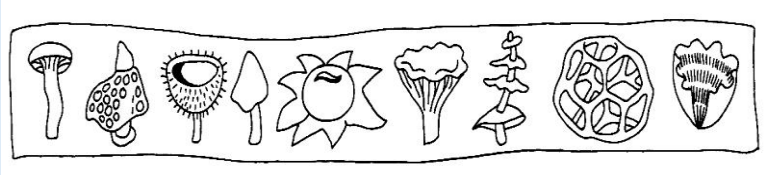
- It's **how all** the living components of an ecosystem interact sustainably with each other
- Our super biodiverse WA ecosystems are full of wonderful and unexpected interactions enabled by evolution over extraordinary lengths of time
- Quenda, potoroos, small mammals sifting though the soil for their food, truffles
- Pathogens like Armillaria killing plants and making gaps for regeneration

# Fungimap

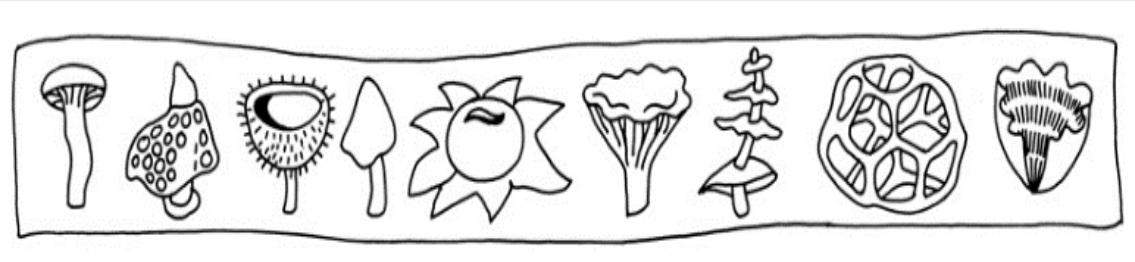
National NGO/Not-for-Profit:

- Aim of improving awareness, knowledge and conservation of Australian macrofungi
- Mapping scheme – more than 400,000 fungi records gathered 1995-2018, extra 50,000 added to ALA in 3 years since partnering with iNaturalist in 2019
- Bookshop, Website, Publications, Conservation and policy development



**www.fungimap.org.au**



# *Fungimap and iNaturalist: working together to put Australia's fungal biodiversity on the map*

iNaturalist

Upload

Shared!

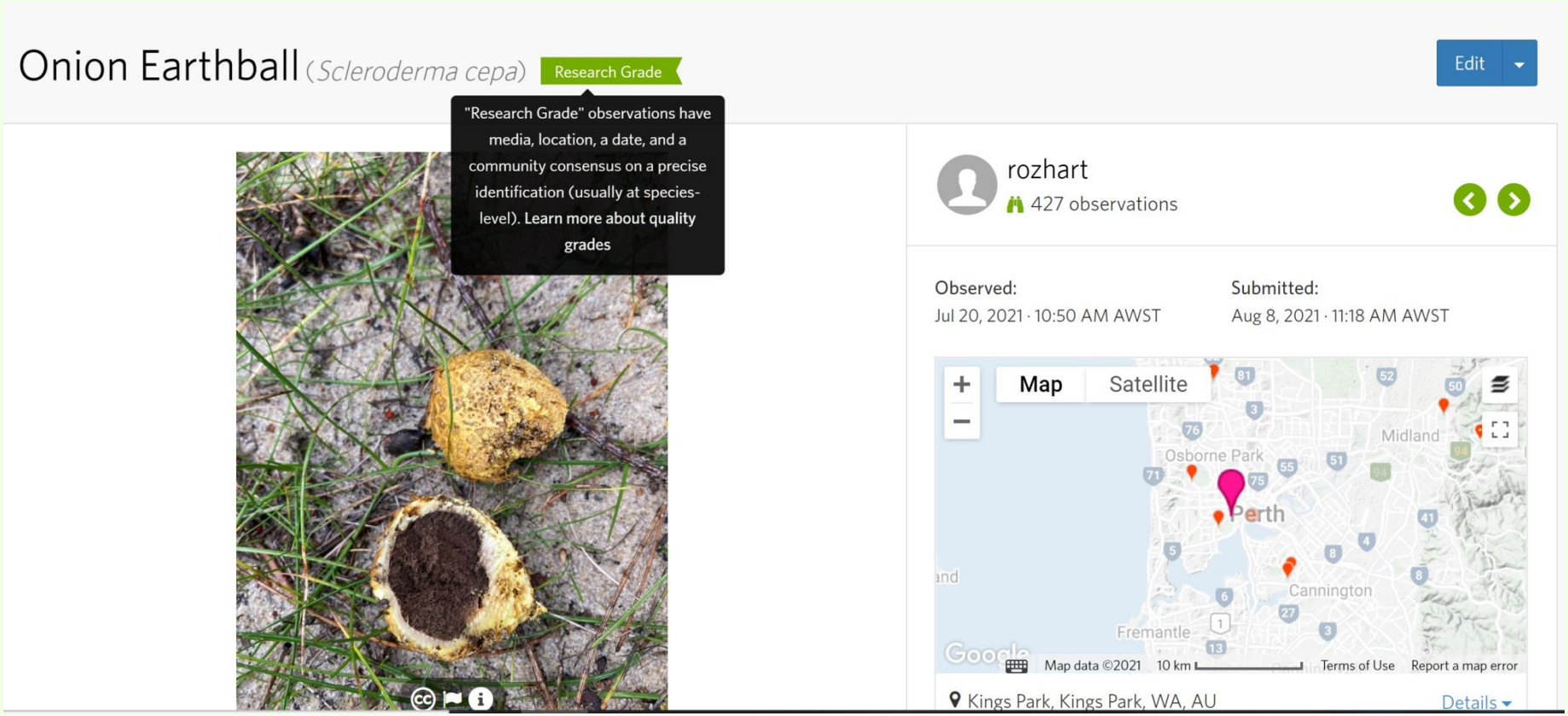
fungimap

We can:

- Photograph the fungi as they pop up!
- Comment on and /or sometimes identify from images
- Ask for help - Get clues
- The Atlas of Living Australia will record **Research Grade Data**
  - **Two confirmed identifications gets into**

Atlas of Living Australia
ala.org.au

# Observe




- **Add** to our iNaturalist project

Fungimap Australia

https://www.inaturalist.org/projects/fungimap-australia

# Recent Fungimap Project Stats on iNaturalist 29.8.2021

Fungimap Australia

Add Observations to This Project

## Stats

### Totals

**50137**
Observations »

**1310**
Species »

**527**
People »

### Most Observations


reiner
25196 observations


peterzuidland
1865 observations


blackangus
1569 observations


eileen64
1317 observations


franklinhermit
1289 observations

### Most Species


reiner
572 species


peterzuidland
416 species


eileen64
303 species


paul2george
276 species


blackangus
269 species

### Most Observed Species


Orange Pore Fungus
502 observations


Pixie's Parasol
453 observations


Snow Fungus
434 observations


Sulphur Tuft
336 observations


Tall Mycena
332 observations


» Members 885 members

# Share …. Why make a record?

- Records submitted to the Fungimap Database (NAFD) can be used by anyone via the Atlas of Living Australia.
  - Researchers and government agencies find the data very useful.
  - The data can be used to establish distribution and habitat preferences for species.
  - This data can contribute to conservation policy, or other outcomes such as greater understanding of the role of fungi in ecosystems, carbon capture, etc.
- Very few professional mycologists are employed in Australia, nor are fungi included in most biodiversity surveys, so citizen scientists are really important!

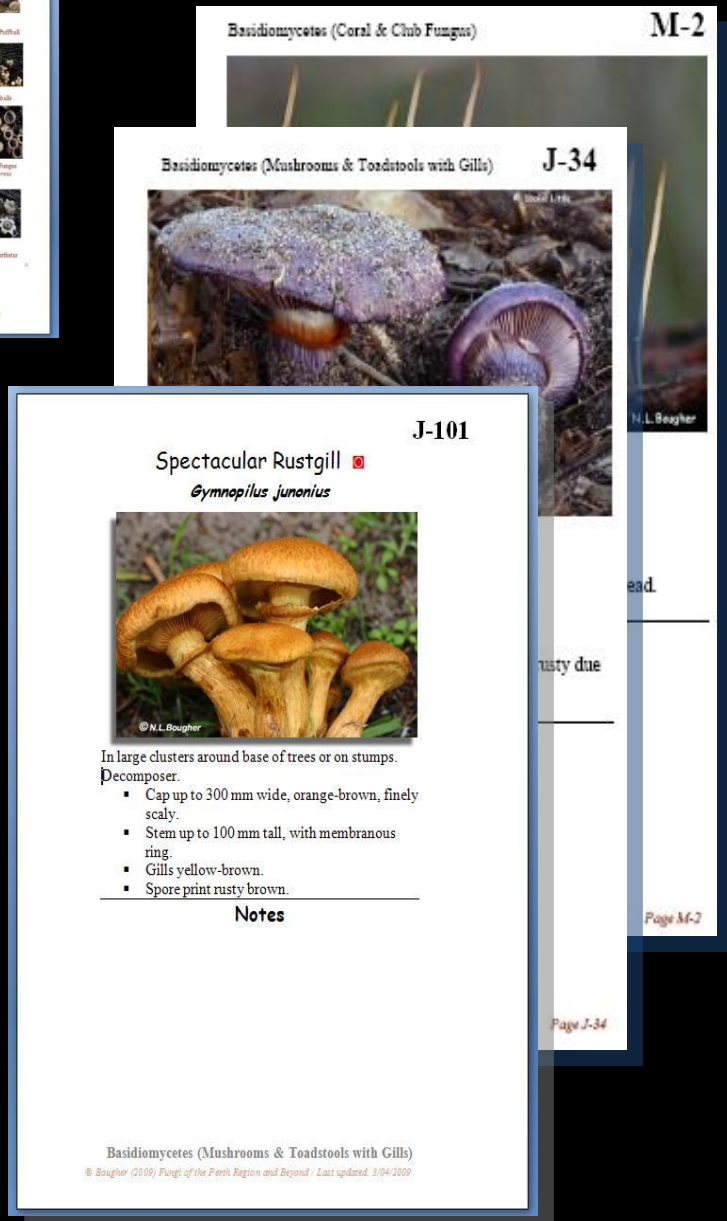



# Perth Fungi Field Book

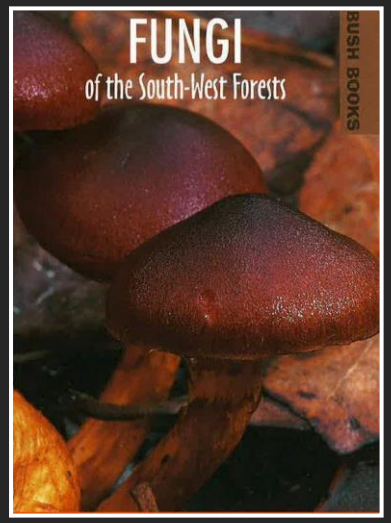


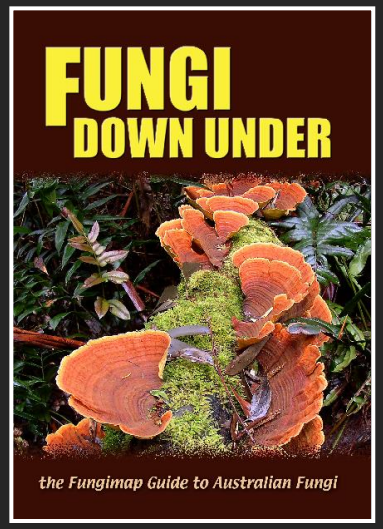
Now available on the web at the WA Naturalists' Club fungi page

There are no funds to continue the fungiperth website or to add the many new fungi found

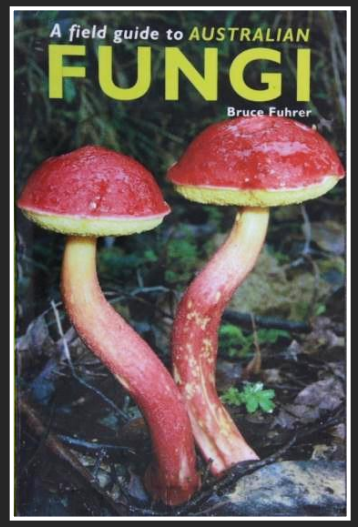


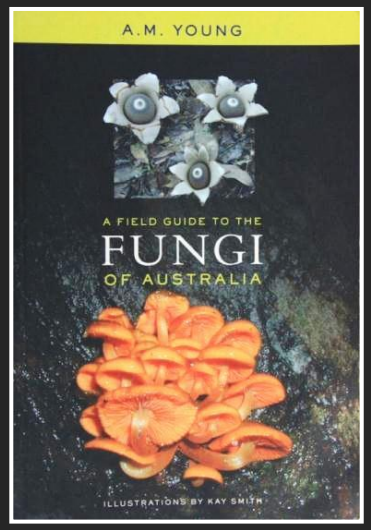
# The Fungimap Website shop has a range of books and field guides

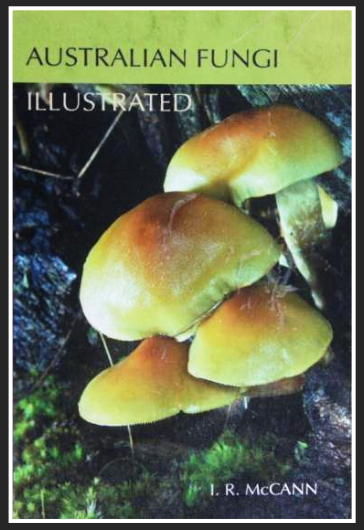







… and lots more

www.fungimap.org.au

fungimap

Fungi for Land - Practical knowledge for Australian land managers

**To follow or donate visit https://www.fungi4land.com**

**Hopes and Achievements**:

- Succeeded in raising funds via crowdfunding to start in 2018
- In 2019,raised public funds to engage professional illustrators to convert our own ideas into engaging drawings
- Now looking for funds to print and distribute the book in 2022
- Then we will go on the road to use the book for Fungi4Land workshops all over Australia.
- If you are interested in hosting a workshop, please talk to me.

# Our Book

We are producing a collaborative manual of how to integrate **Australian** fungi into Australian land management and restoration.

We are designing a book that integrates images and diagrams to clearly demonstrate the amazing interactions fungi have with all other life forms and how to encourage and harness these.

Many mycologists and land managers are contributing to the guide.

We really want to get this book published and into the hands of people who need it.

With this in mind we are continuing to raise funds hoping to have all the money we require by early 2022.

Please help us to provide this valuable resource for the Australian environment.

And now for the "The Question"
I'm sure you all want to ask

Can I eat them?

From the wild?
Really Bad Idea!
For many reasons


IT'S MAGIC
GROW YOUR OWN
Mushrooms


Enjoy the fun and grow your own!
It's easy these days