Enhancement and quality control of fungi distribution data from Fungimap in the Atlas of Living Australia

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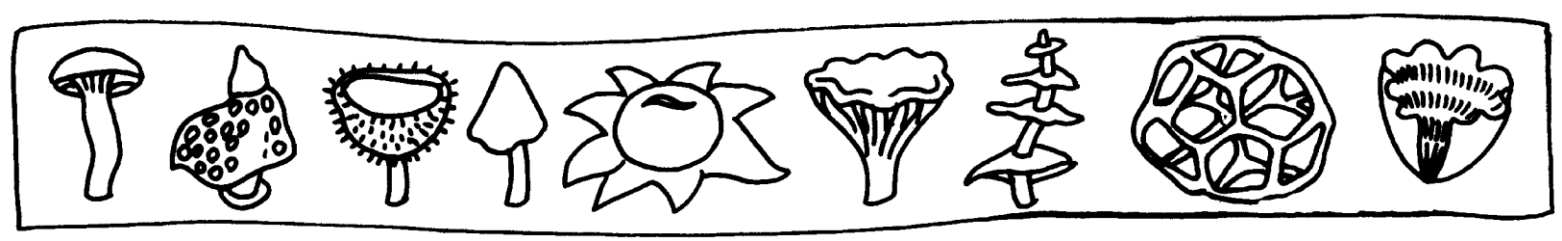
Fungi: the forgotten Kingdom

FUNGIMAP – Target species

- Readily recognisable in the field
- Some common, some rare, reps of most morphological groups
- Avoids difficult groups; *Cortinarius, Inocybe* and *Galerina*



The Fungimap Guide to Australian Fungi

Austral Dripping Bonnet *Mycena austrororida*

On decaying wood in wet forests. This tiny Bonnet has a short, white, very slimy stem which always has gluten accumulating in a thick layer at the base. The translucent-striate, convex cap can be white or brown, but characteristically has minute brownish dot-like scales in the centre.

Cap Diameter to 15 mm; convex or with depressed centre; white to brown with minute, brownish dot-like scales in the centre; dry; margin translucent-striate.

Gills Adnate to decurrent; widely spaced; white; various lengths.

Stem Central; length to 35 mm, diameter 2 mm; narrowing towards apex; white; slimy, thick gluten at base.

Spore print White.

Habit In groups and clusters; common, fairly widespread.

Substrate Decayed logs and branches; saprotrophic.

Habitat Wet forests.

Look-alikes The very rare, white, slimy Bonnet *Mycena yirukensis* is smaller and grows on the ground in leaf litter and bryophytes, not on wood.

89 records
Main fruiting period April–July

This variant of Austral Dripping Bonnet has white caps

Pixie's Parasol *Mycena interrupta*

On dead wood in wet areas. This tiny, fragile agaric with a translucent blue cap is usually found in small colonies on the sides of large fallen logs and branches. White gills show through the top of the cap as lines. A curved, translucent stem is attached to the substrate by a bluish tufted basal disc.

Cap Diameter to 15 mm; convex; blue, slightly darker at centre, fading to pale blue or white; sticky when wet; faintly translucent-striate.

Gills Adnate to almost free; widely spaced; white with a blue edge; various lengths.

Stem Central; length to 20 mm, diameter to 3 mm; translucent white; dry; basal disc blue, tufted.

Spore print White.

Habit In small colonies; fairly common.

Substrate Sheltered sides of dead, wet, fallen logs and branches of native wood; saprotrophic.

Habitat Wet areas of native forests in southern temperate Australia.

Look-alikes None; it is the only blue *Mycena*. Blue-coloured **Pinkgills** (*Entoloma* spp., p. 36) have a pink spore print and do not grow on dead wood.

Mature caps of Pixie's Parasols and young deep-blue 'buds'

515 records
Main fruiting period March–August

Pixie's Parasols usually grow on large fallen timber

FUNGIMAP – records transfer to ALA

- Fungimap as filter
- Feedback stimulates more records
- 1000/year unsolicited
- Aware of pitfalls in data collection by citizen scientists

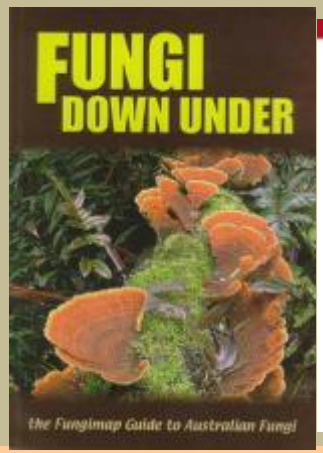
Unusual and rare species


Aseroe arachnoidea

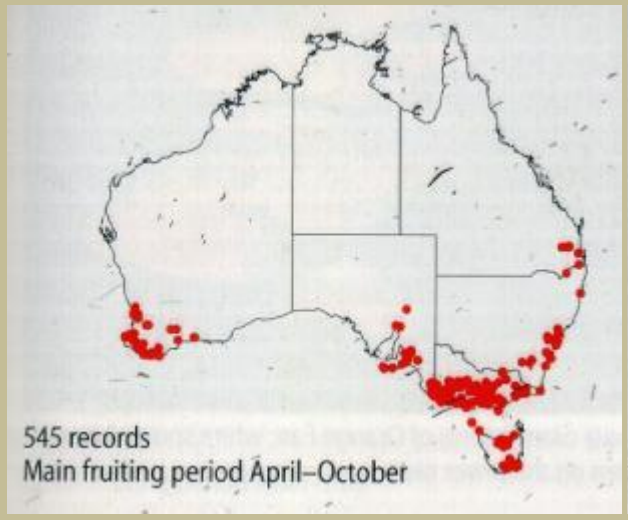

Cookeina tricholoma

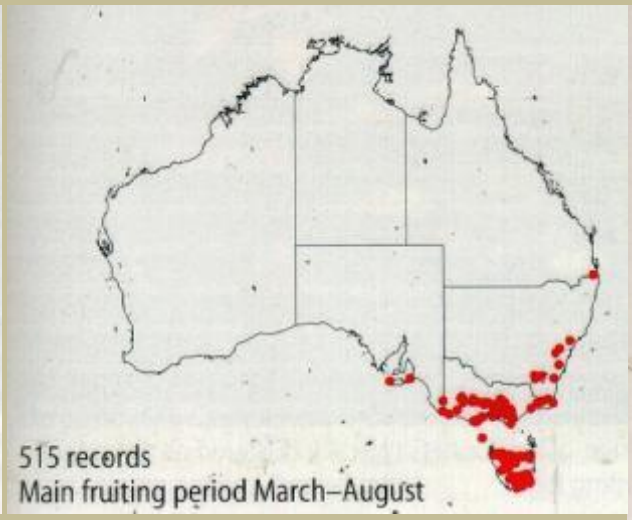
Distribution maps in fungi field guides

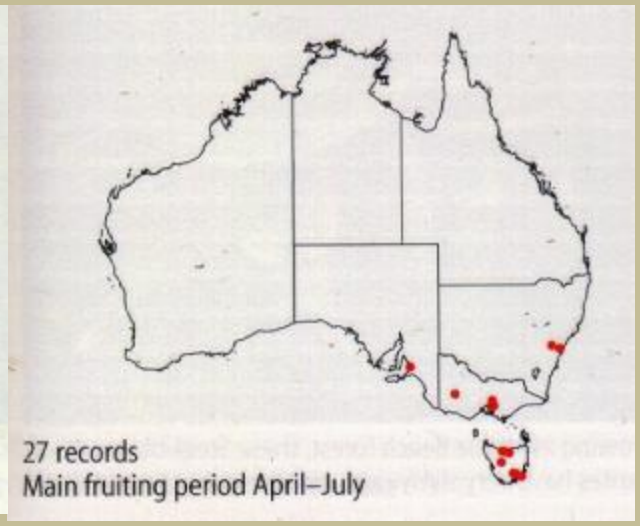
***Fungimap CD-ROM* (2001)**



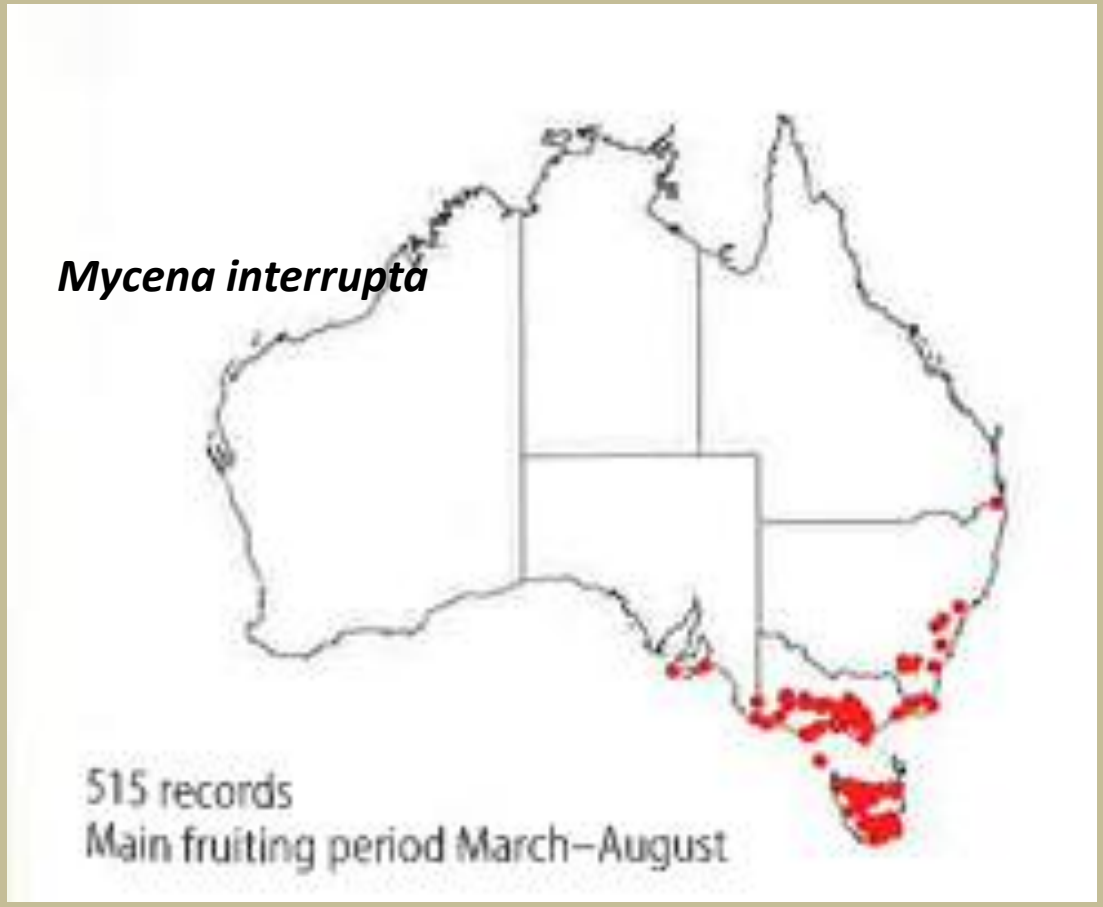
***Fungi Down Under* (2005)**







Maps show what we know



and inspire further observations

Unprecedented access to point distribution data

- Databasing of herbarium specimens – Australia's Virtual Herbarium: c. 160,000 records
- Fungimap: >120,000 records, mainly of target species
- **Atlas of Living Australia** – single portal

AVH
Australia's Virtual Herbarium

Log in

HERBARIUM RECORDS

Advanced search

fungi | Quick search

Specimen search results

159,881 results for Kingdom: Fungi : Fungus

Records | Map | Charts | Species images

Refine results

Taxon name (processed)
- Abrothallus (3)
- Abrothallus bertianus (4)
- Abrothallus caerulescens (1)

choose more...

Taxon name (provided)
- ? Toninia sp. (1)
- ? catenella (1)
- ? cladonia (1)

choose more...

Determination qualifier
- No issues (154,979)
- Matched to homonym (4,252)
- Species uncertain (398)

choose more...

Identified to rank
- genus (85,819)
- species (61,639)
- family (7,399)

choose more...

Kingdom
- Fungi (159,881)

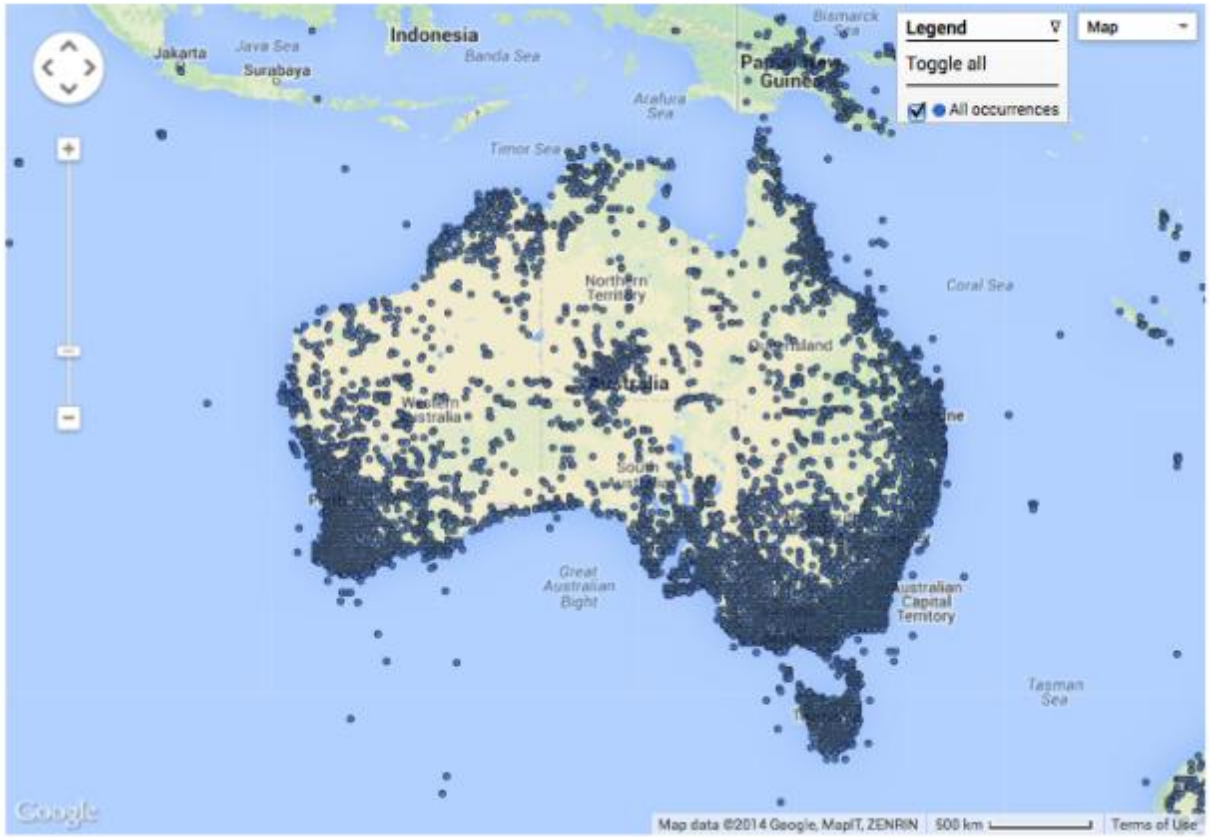
Phylum
- Ascomycota (118,578)
- Basidiomycota (38,299)
- Chytridiomycota (39)

choose more...

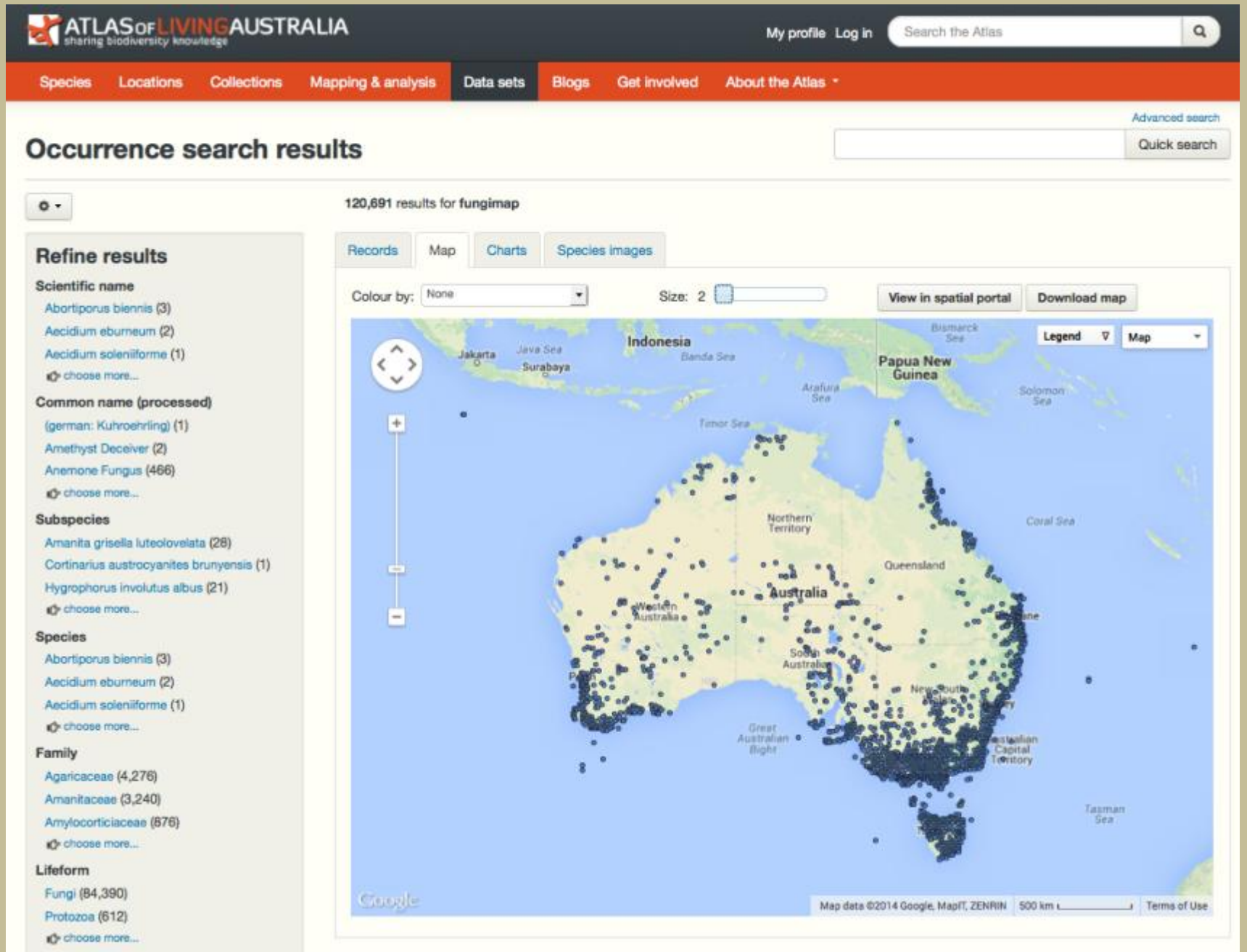
Class
- Agaricomycetes (34,896)
- Agaricostilbomycetes (4)

Colour by: None | Environmental layer: None

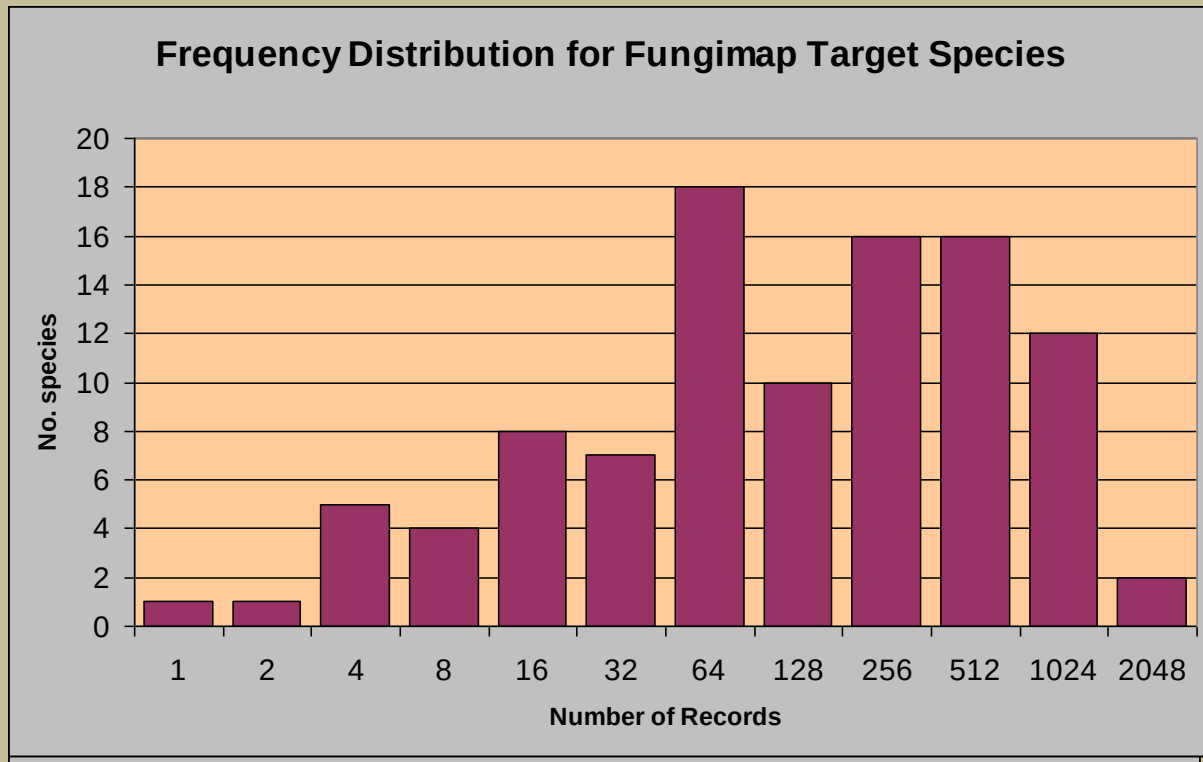
Size: 2 | View in spatial portal | Download map

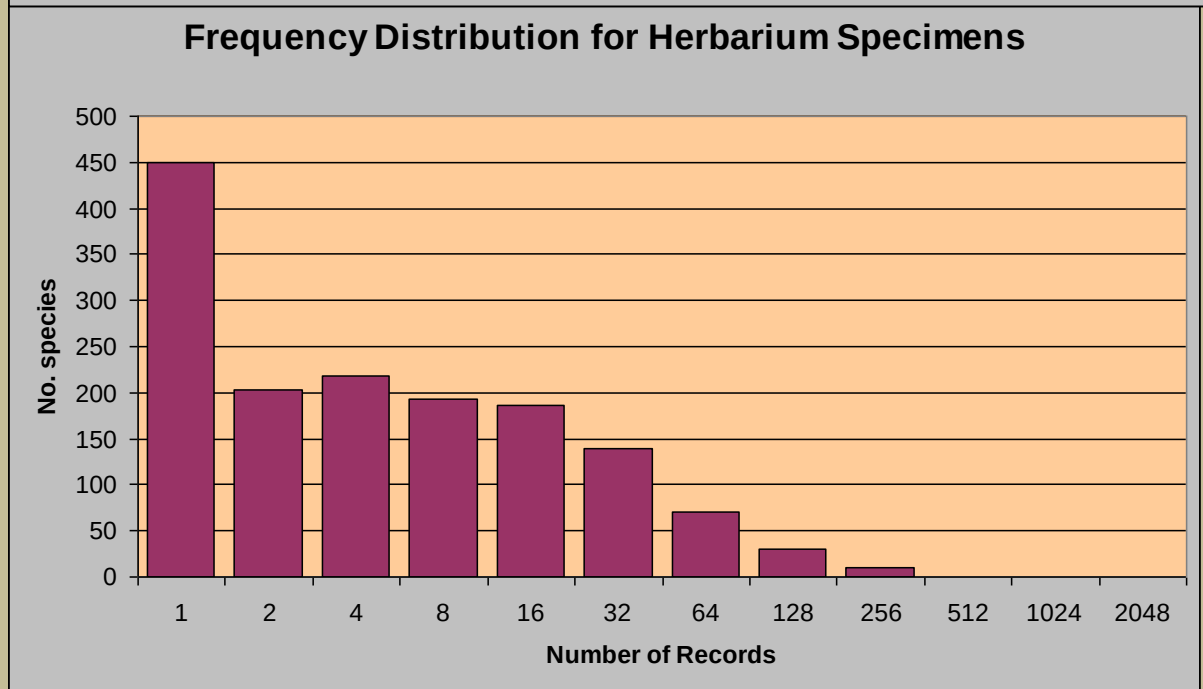


FUNGIMAP RECORDS

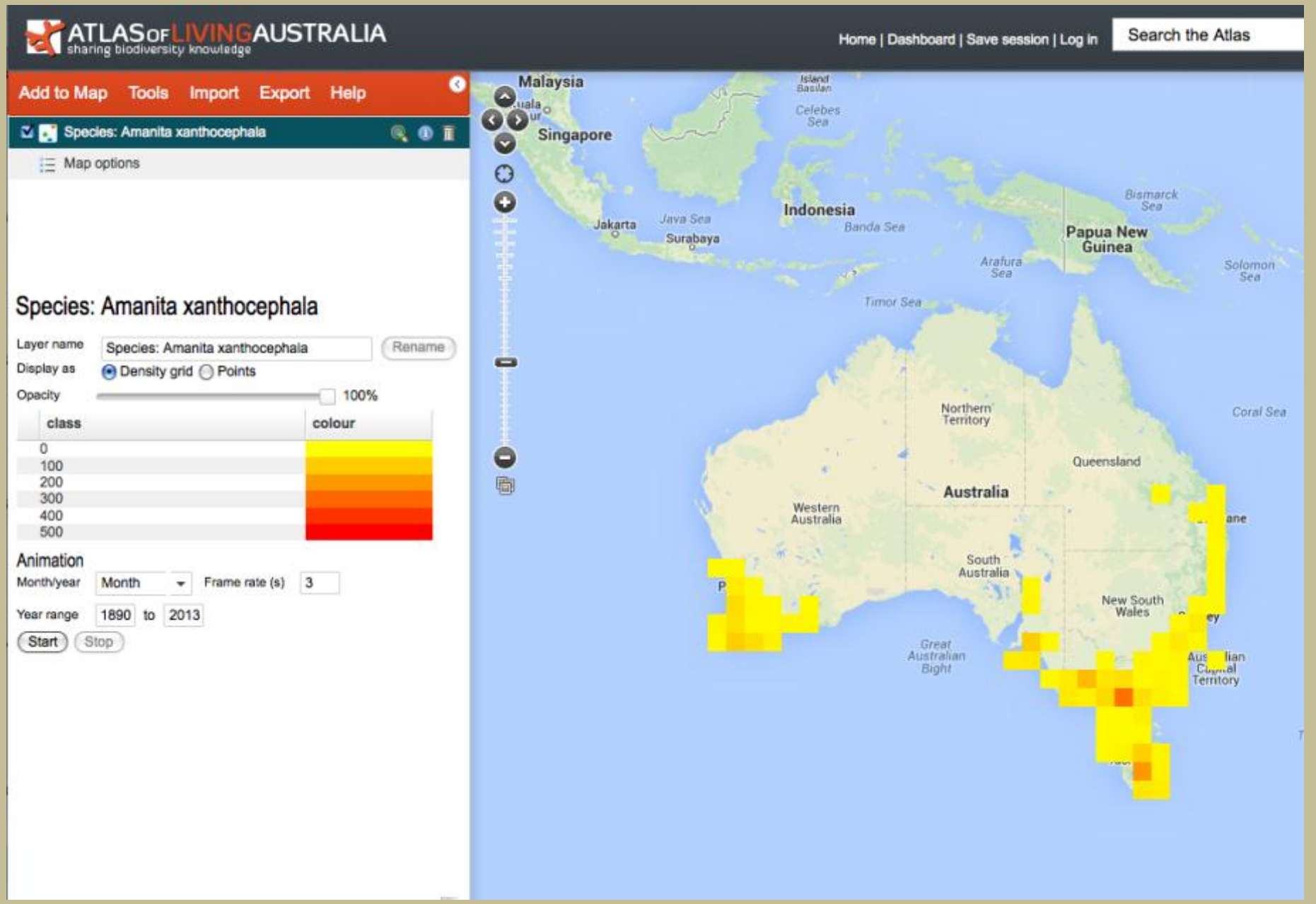


- **Fungimap target species** – most with numerous records
- Rare species can be identified with confidence
- **Herbarium specimens** – most species under-collected





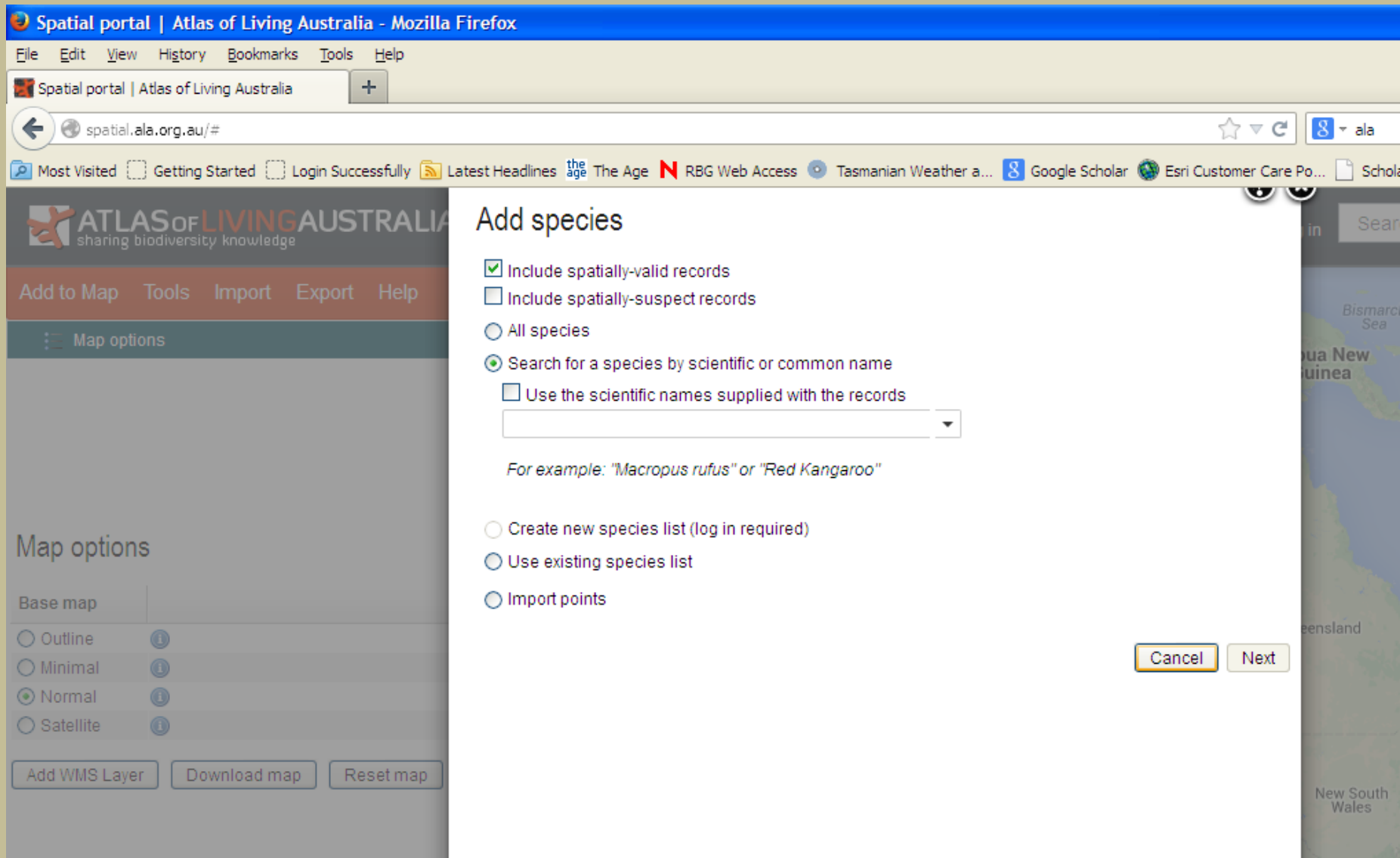
Amanita xanthocephala – 1793 records

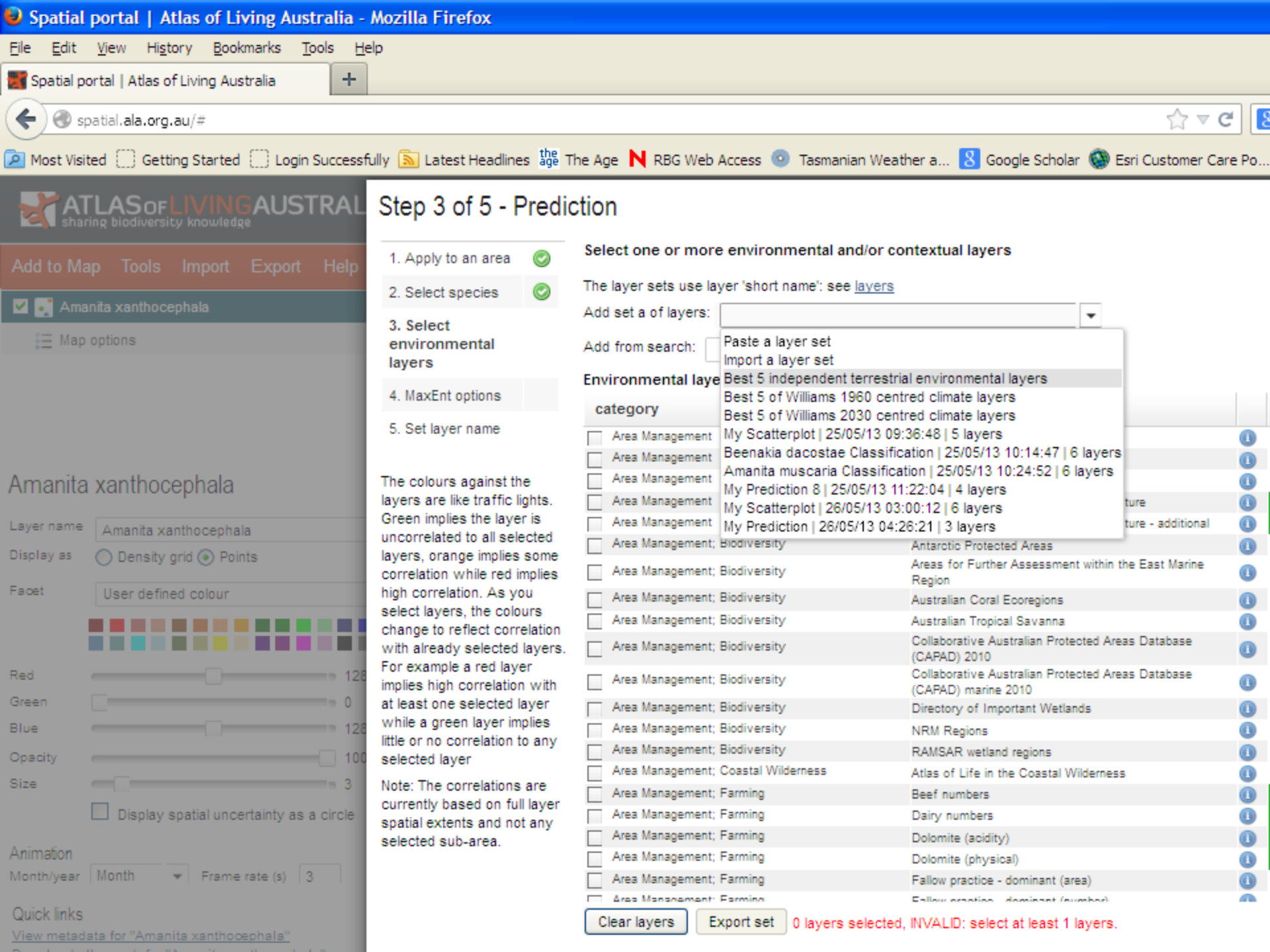


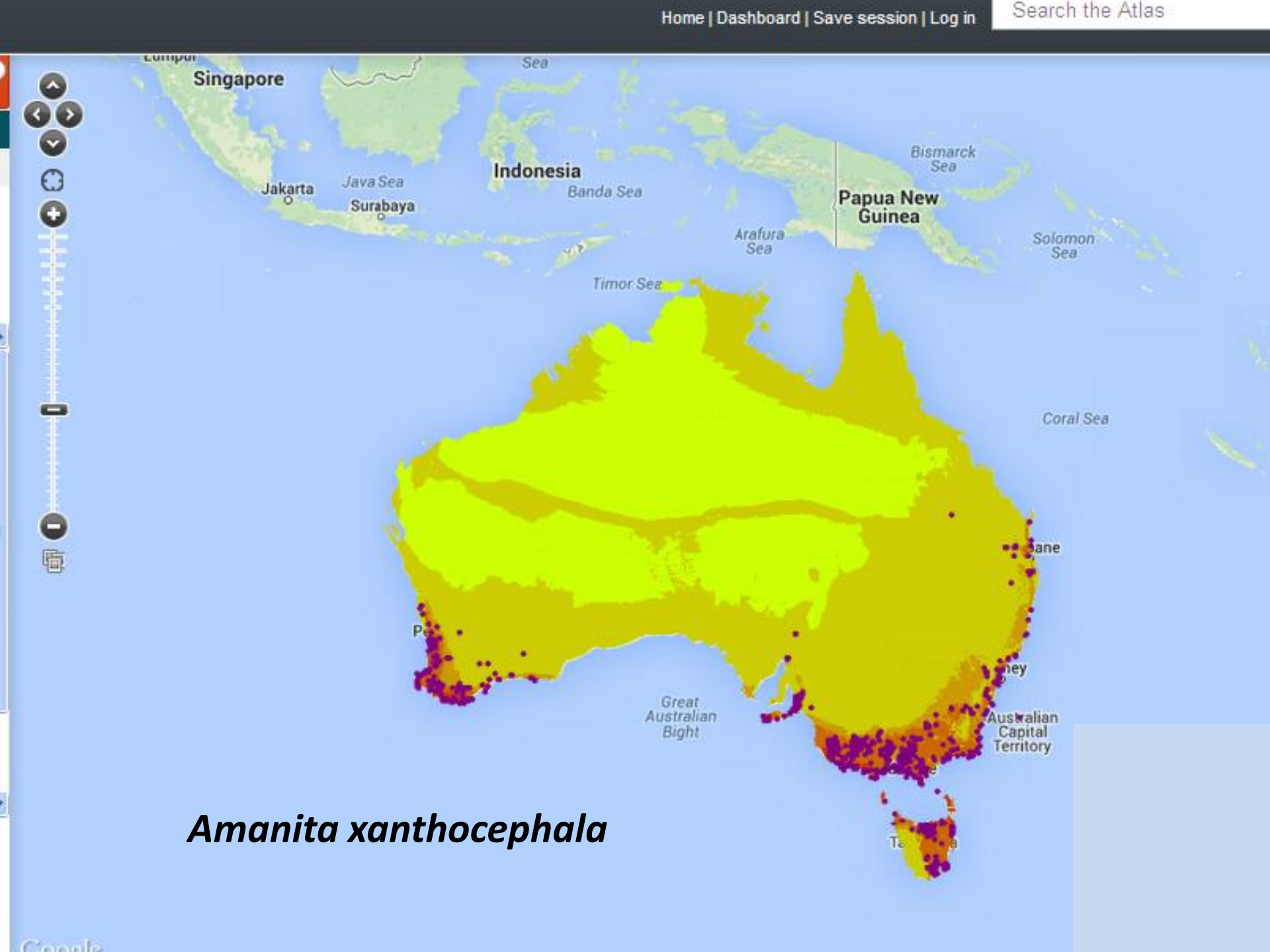
ENVIRONMENTAL NICHE MODELLING
BIOCLIMATIC MODELLING

ENVIRONMENTAL NICHE MODELLING

BIOCLIMATIC MODELLING

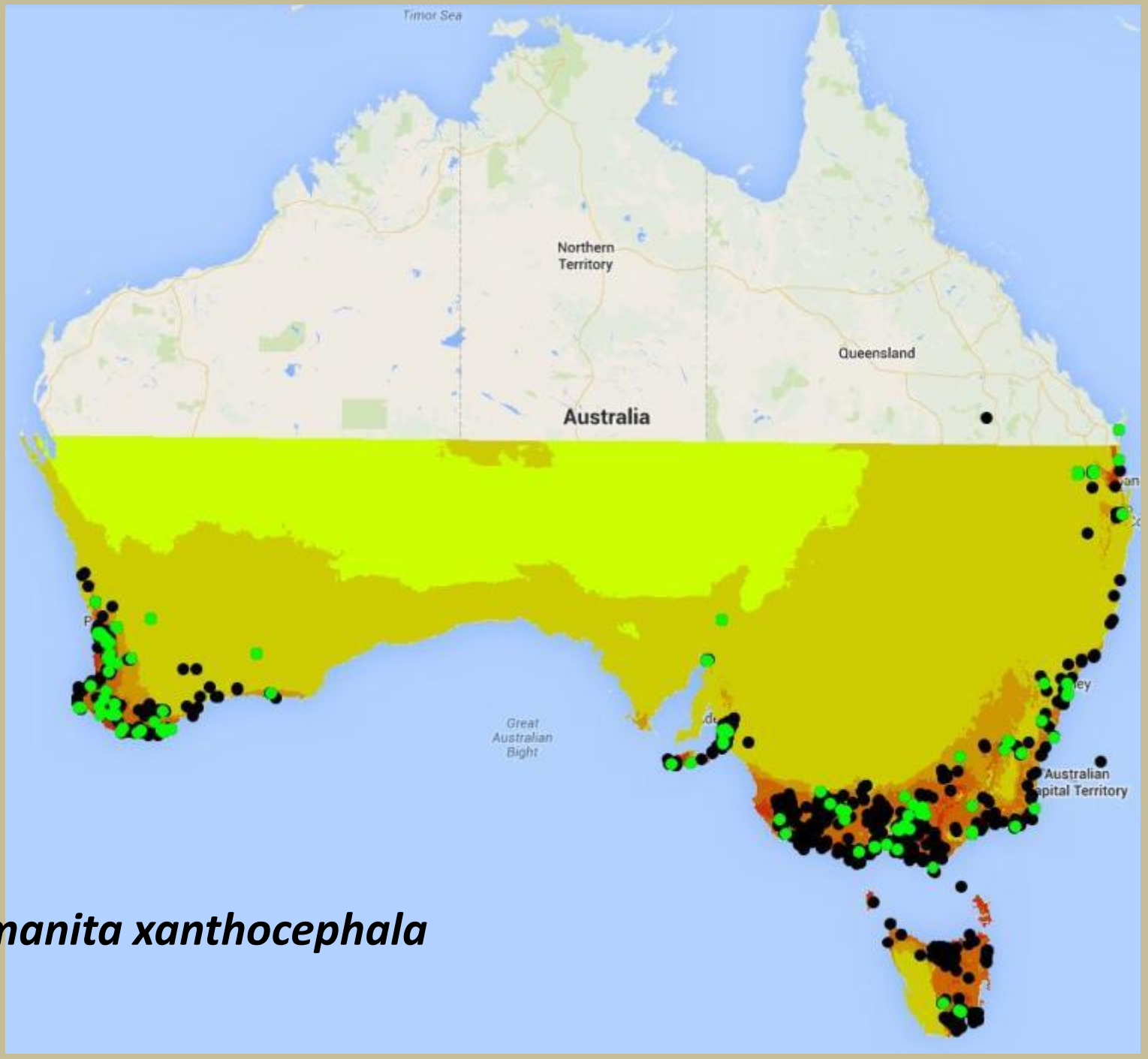



Spatial portal | Atlas of Living Australia - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Spatial portal | Atlas of Living Australia
spatial.ala.org.au/#
Most Visited Getting Started Login Successfully Latest Headlines The Age RBG Web Access Tasmanian Weather a... Google Scholar Esri Customer Care Po...
ATLAS OF LIVING AUSTRAL
sharing biodiversity knowledge
Add to Map Tools Import Export Help
Amanita xanthocephala
Map options
Amanita xanthocephala
Layer name Amanita xanthocephala
Display as Density grid Points
Facet User defined colour
Red 128
Green 0
Blue 128
Opacity 100
Size 3
Display spatial uncertainty as a circle
Animation
Month/year Month Frame rate (s) 3
Quick links
View metadata for "Amanita xanthocephala"
Step 3 of 5 - Prediction
1. Apply to an area
2. Select species
3. Select environmental layers
4. MaxEnt options
5. Set layer name
The colours against the layers are like traffic lights. Green implies the layer is uncorrelated to all selected layers, orange implies some correlation while red implies high correlation. As you select layers, the colours change to reflect correlation with already selected layers. For example a red layer implies high correlation with at least one selected layer while a green layer implies little or no correlation to any selected layer
Note: The correlations are currently based on full layer spatial extents and not any selected sub-area.
Select one or more environmental and/or contextual layers
The layer sets use layer 'short name': see layers
Add set a of layers:
Add from search:
Paste a layer set
Import a layer set
Best 5 independent terrestrial environmental layers
Best 5 of Williams 1960 centred climate layers
Best 5 of Williams 2030 centred climate layers
My Scatterplot | 25/05/13 09:36:48 | 5 layers
Beenakia dacostae Classification | 25/05/13 10:14:47 | 6 layers
Amanita muscaria Classification | 25/05/13 10:24:52 | 6 layers
My Prediction 8 | 25/05/13 11:22:04 | 4 layers
My Scatterplot | 26/05/13 03:00:12 | 6 layers
My Prediction | 26/05/13 04:26:21 | 3 layers
Environmental laye
category
Area Management
Area Management; Biodiversity
Antarctic Protected Areas
Areas for Further Assessment within the East Marine Region
Australian Coral Ecoregions
Australian Tropical Savanna
Collaborative Australian Protected Areas Database (CAPAD) 2010
Collaborative Australian Protected Areas Database (CAPAD) marine 2010
Directory of Important Wetlands
NRM Regions
RAMSAR wetland regions
Area Management; Coastal Wilderness
Atlas of Life in the Coastal Wilderness
Area Management; Farming
Beef numbers
Dairy numbers
Dolomite (acidity)
Dolomite (physical)
Fallow practice - dominant (area)
Clear layers
Export set
0 layers selected, INVALID: select at least 1 layers.

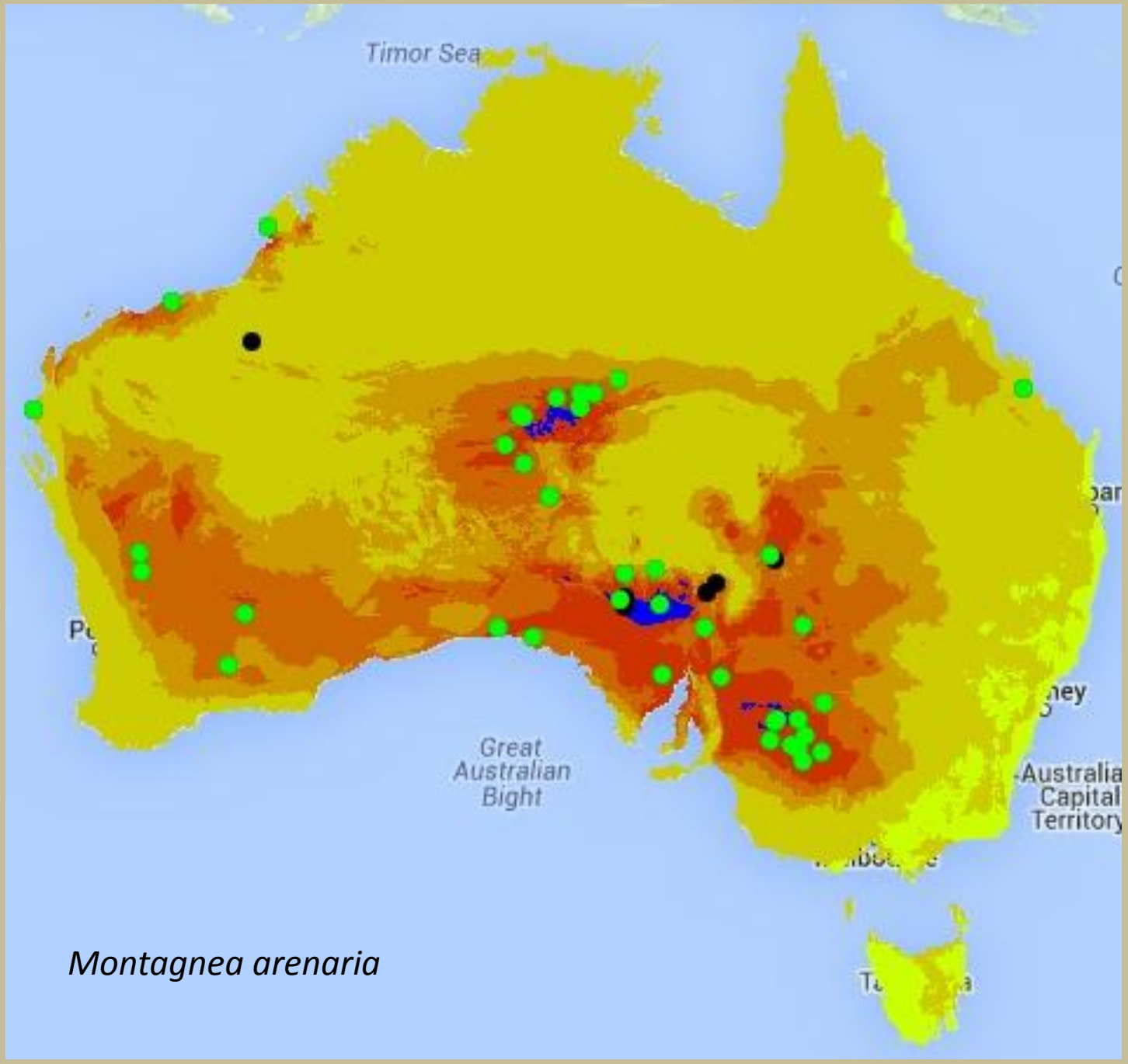

Home | Dashboard | Save session | Log in
Search the Atlas
Singapore
Sea
Indonesia
Jakarta
Java Sea
Surabaya
Banda Sea
Bismarck Sea
Papua New Guinea
Arafura Sea
Solomon Sea
Timor Sea
Coral Sea
Great Australian Bight
Australian Capital Territory
Amanita xanthocephala

Black dots: Fungimap records

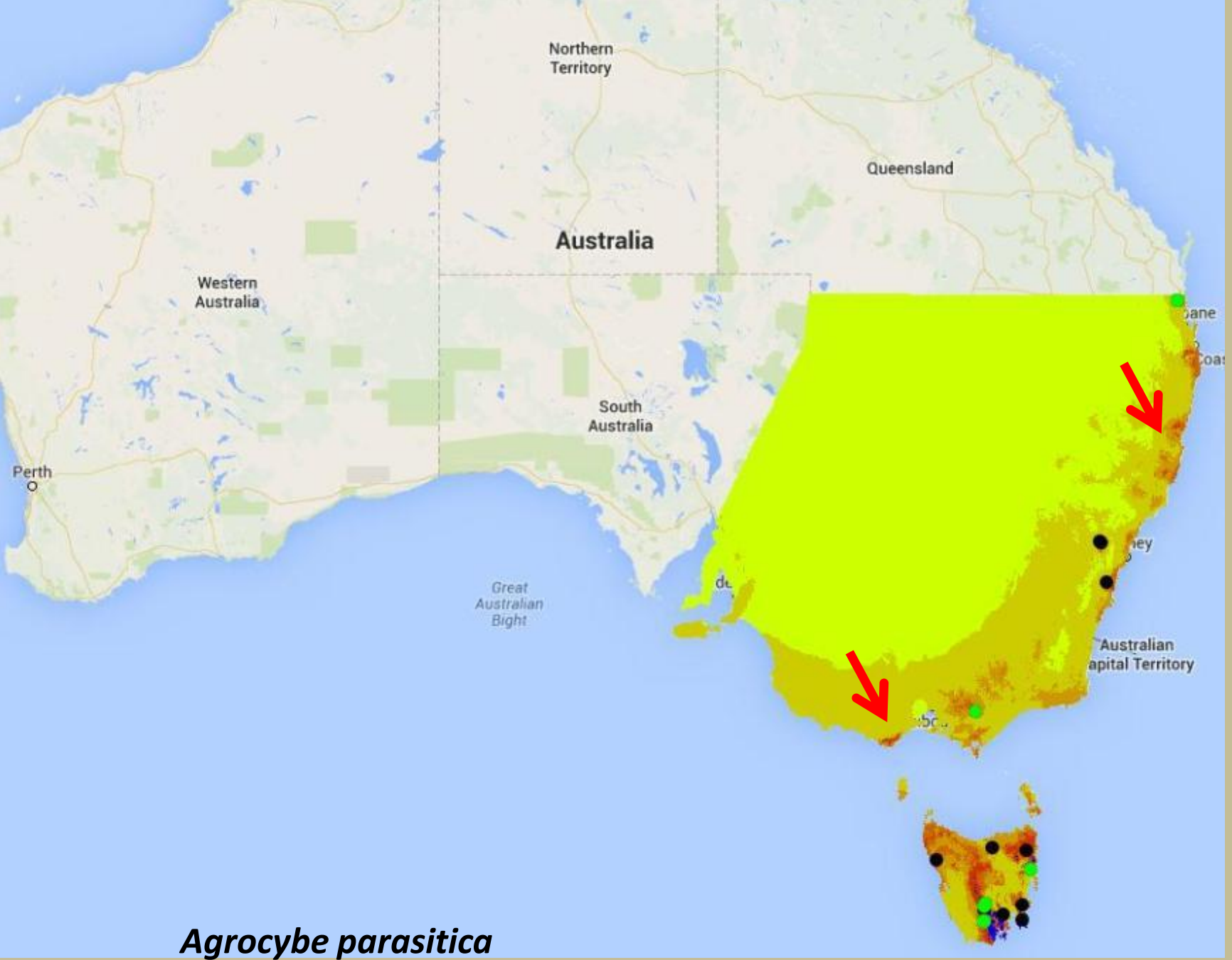
Green dots: herbarium specimens



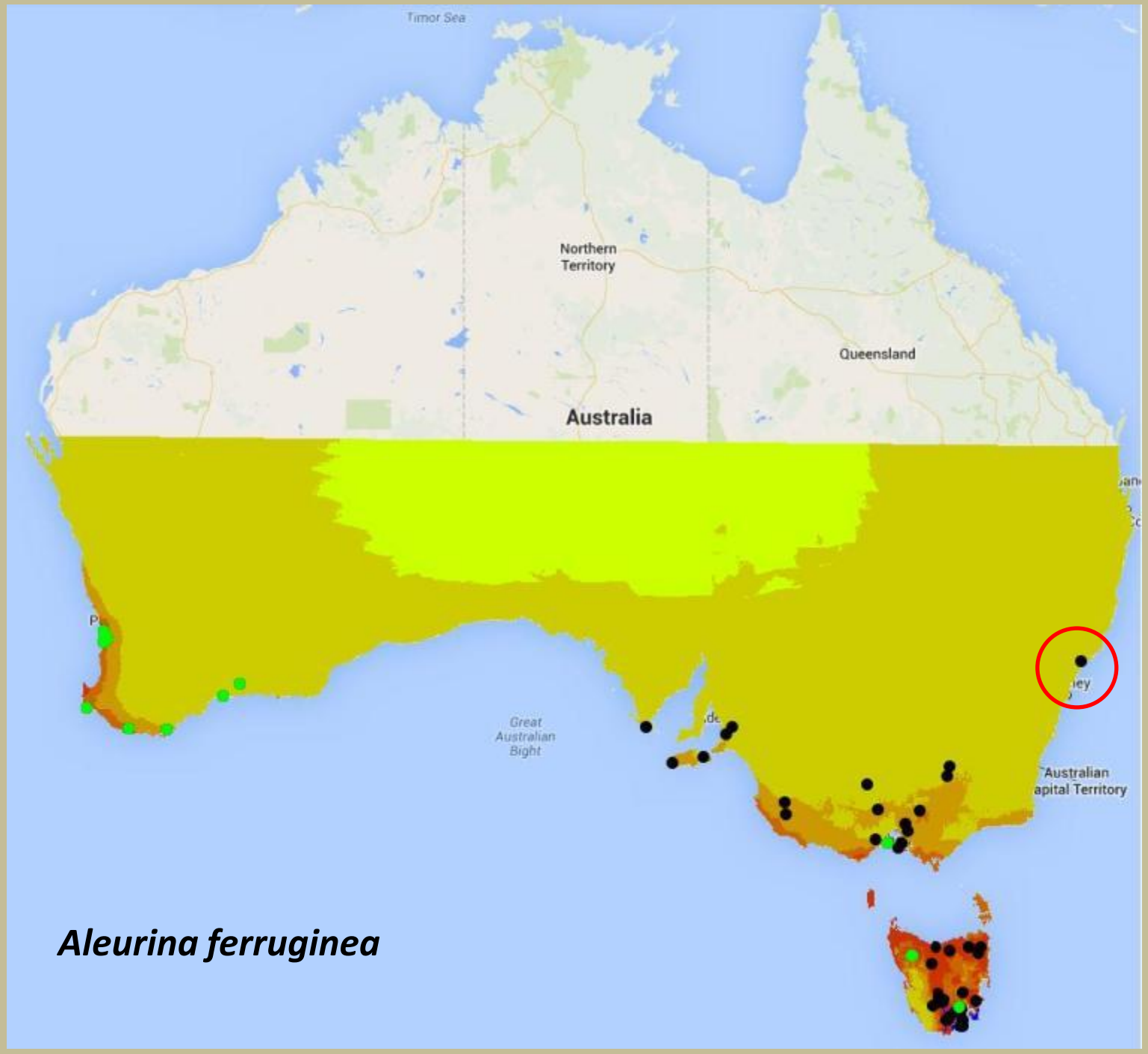
Amanita xanthocephala



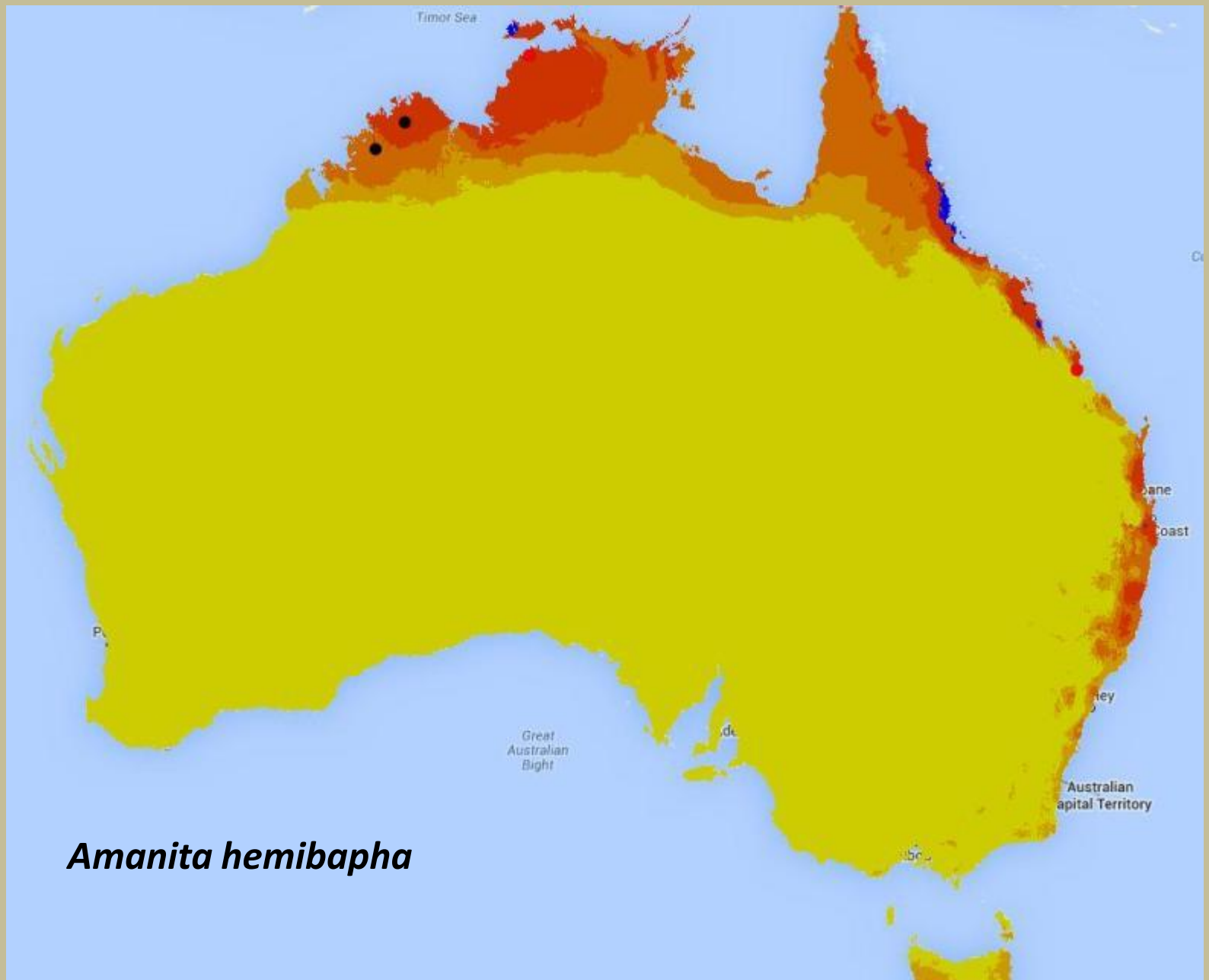
Montagnea arenaria



Agrocybe parasitica



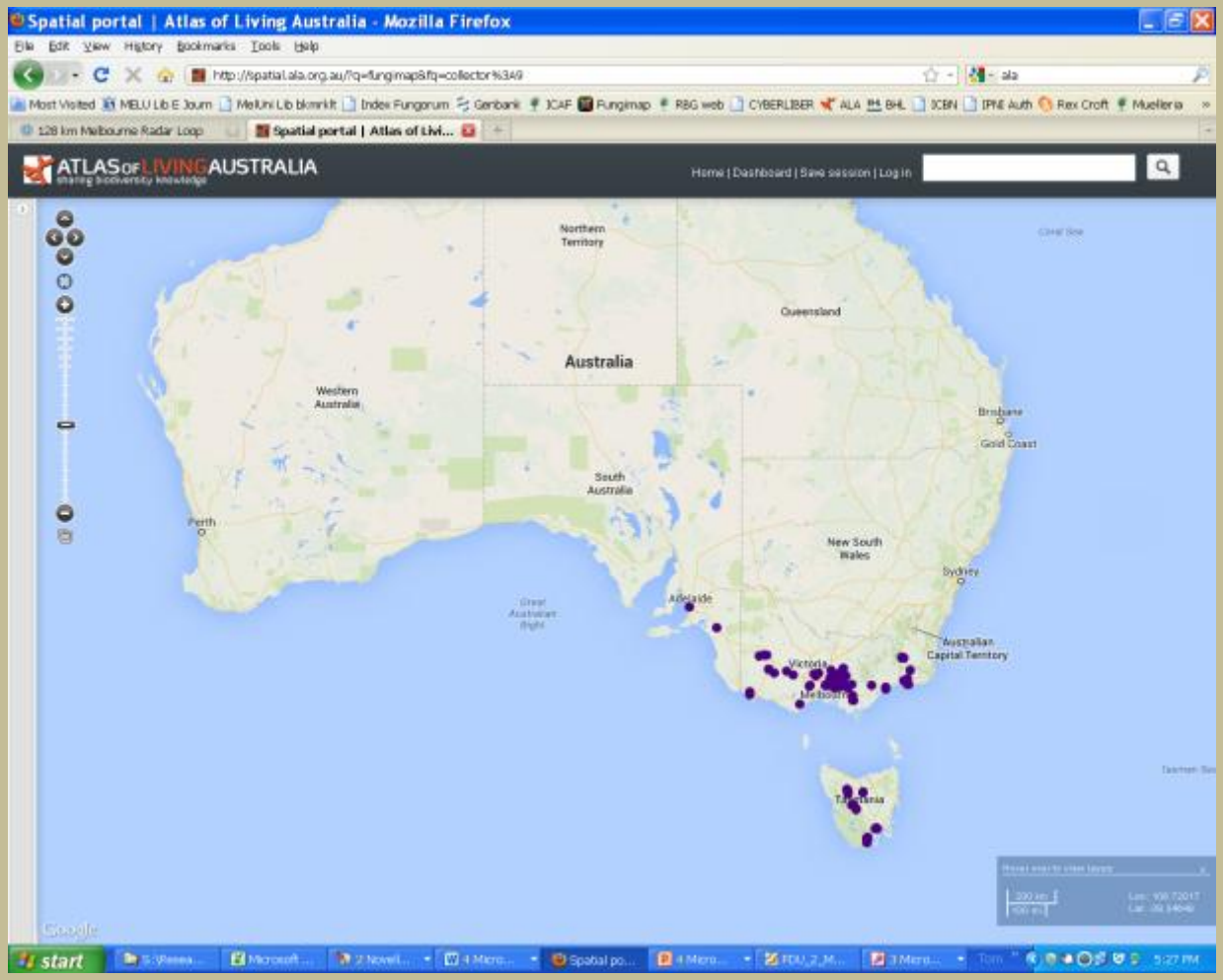
Aleurina ferruginea

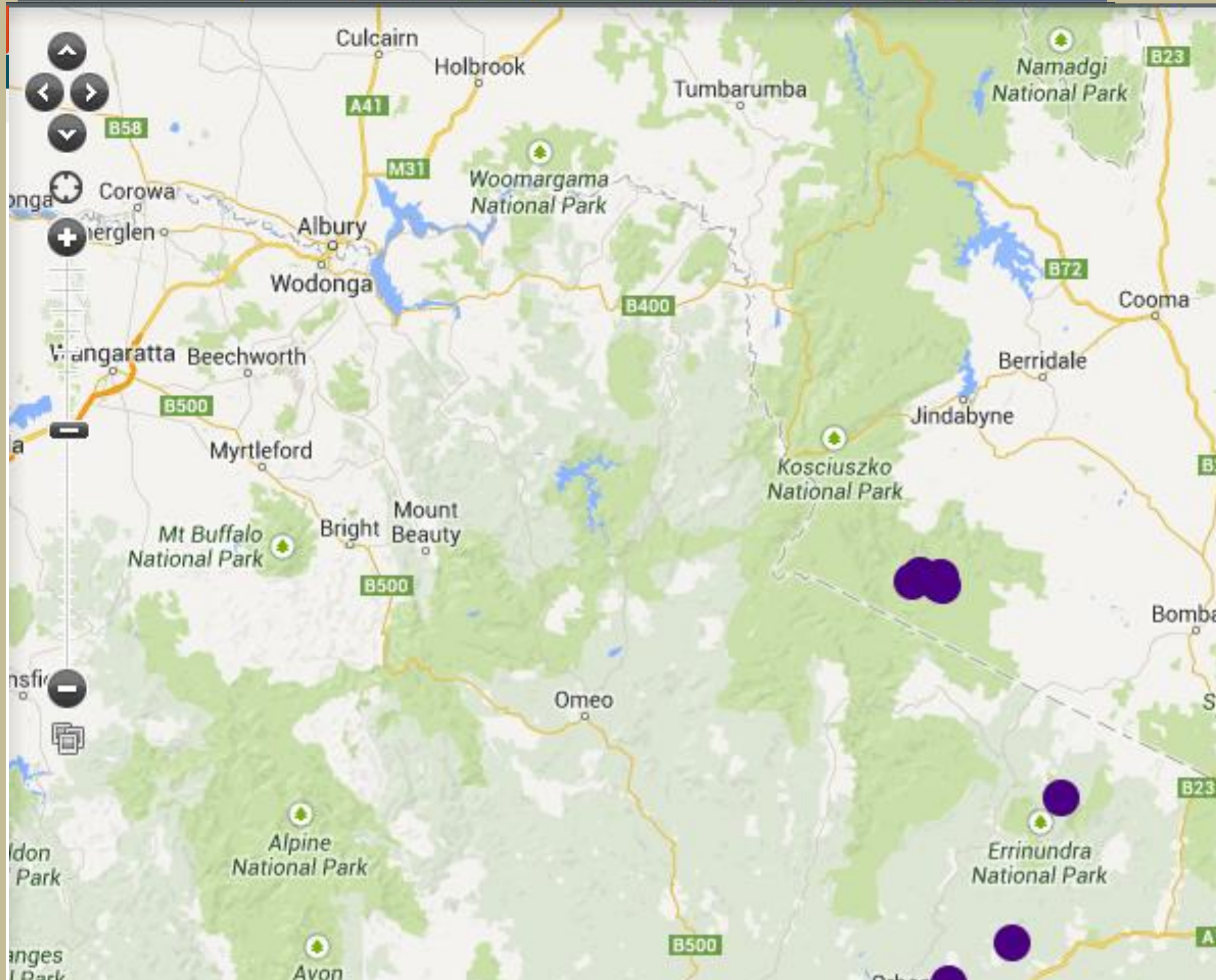


Amanita hemibapha

ALA – Data set: Fungimap

Refine results by: collector




Culcairn
Holbrook
Tumbarumba
Namadgi National Park
B23
A41
B58
M31
Woomargama National Park
Corowa
Albury
Wodonga
B72
Cooma
B400
Beechworth
Berridale
B500
Jindabyne
Myrtleford
Kosciuszko National Park
Mount Beauty
Bright
Mt Buffalo National Park
B500
Omeo
Alpine National Park
Errinundra National Park
B500
Park
Avon

Insights

- All records are valuable
- Precision of geocode is essential [e.g. +/- 100 m]
- Climate is a good predictor
- Good potential to build capacity with volunteers
- Mapping greatly increases capacity to check records and fill gaps