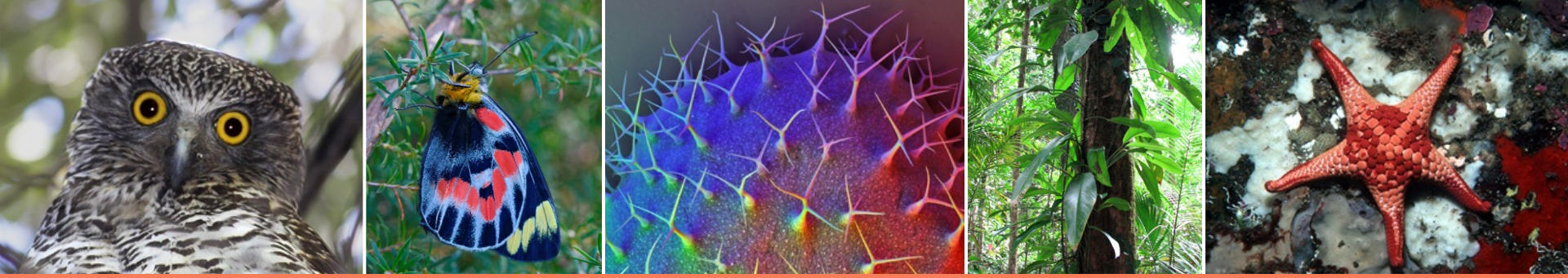


www.ala.org.au

The Atlas of Living Australia: informing our response to global change

ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge

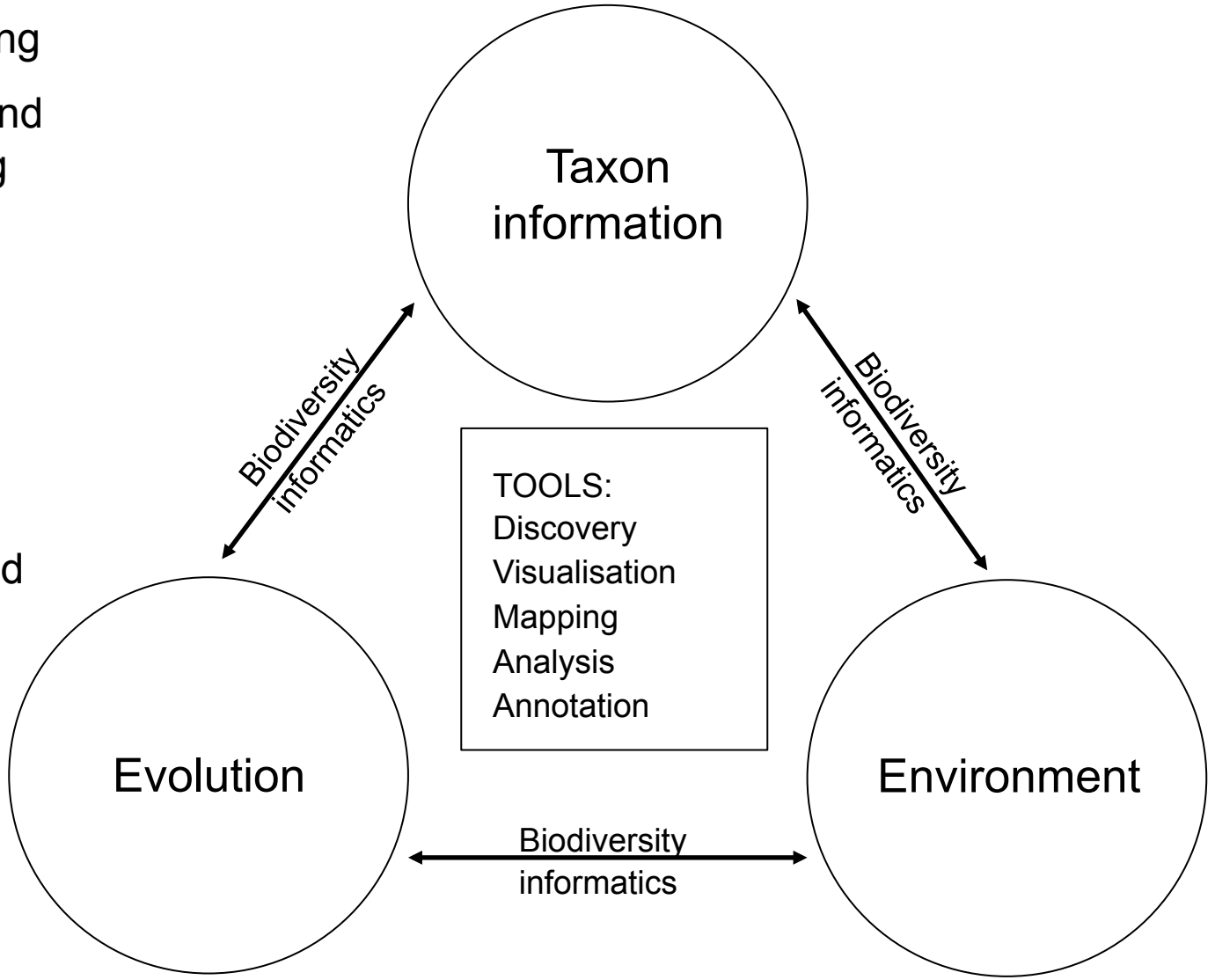
John La Salle

The Atlas is funded by the Australian Government under the National Collaborative Research Infrastructure Strategy and further supported by the Super Science Initiative of the Education Investment Fund

The future of biodiversity research and analysis

Enabling/informing

- Discovering and understanding biodiversity
- Incorporating evolutionary dynamics
- Protecting diversity in a changing world
- Sharing knowledge
- Rapid biodiversity analysis



Core principles around open data and infrastructure

The future of biodiversity research and analysis

Enabling/informing

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- Incorporating evolutionary dynamics
- Protecting diversity in a changing world
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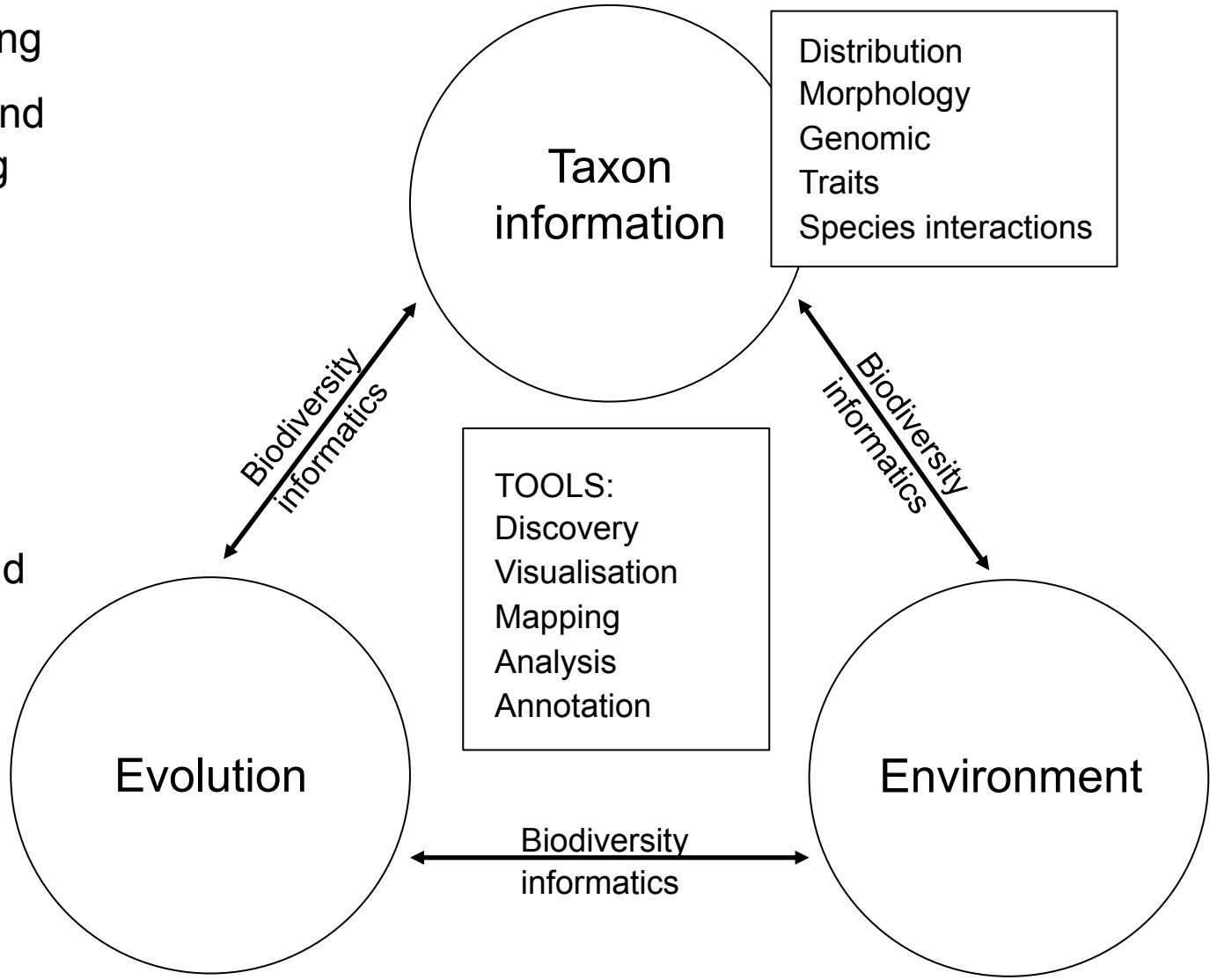
- Rapid biodiversity analysis



Core principles around open data and infrastructure

Search the Atlas ... Search

Explore the Atlas of Living Australia

Australia's species

Search for Australian flora and fauna species by common, scientific name or search by category.

Browse species

Species by location

Search by pre-defined region, or enter an address or location to find the recorded species nearby.

Browse locations

Collections

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Mapping & analysis

Visit the Atlas research portal

Data sets

Refine the list of all the data

ALA Community

Partner profiles, collaborations,

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Contributed by Australia's academic, scientific, environmental communities and you.

Get involved

Blog & News Updates

View all

- Phylolink to be launched at ASBS Conference 2015
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- Counting Koalas Across the Country: Citizen Science

ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge

Home | Dashboard | Save session | Lo

Add to Map | Tools | Import | Export | Help

Kakadu

(cl1050:"Kakadu") AND (State conservation:"Endangered")

Map options

(cl1050:"Kakadu") AND (State conservation:"Endangered")

Layer name: (cl1050:"Kakadu") AND (State conservatior | Rename

Display as: Density grid | Points

Facet: Scientific name

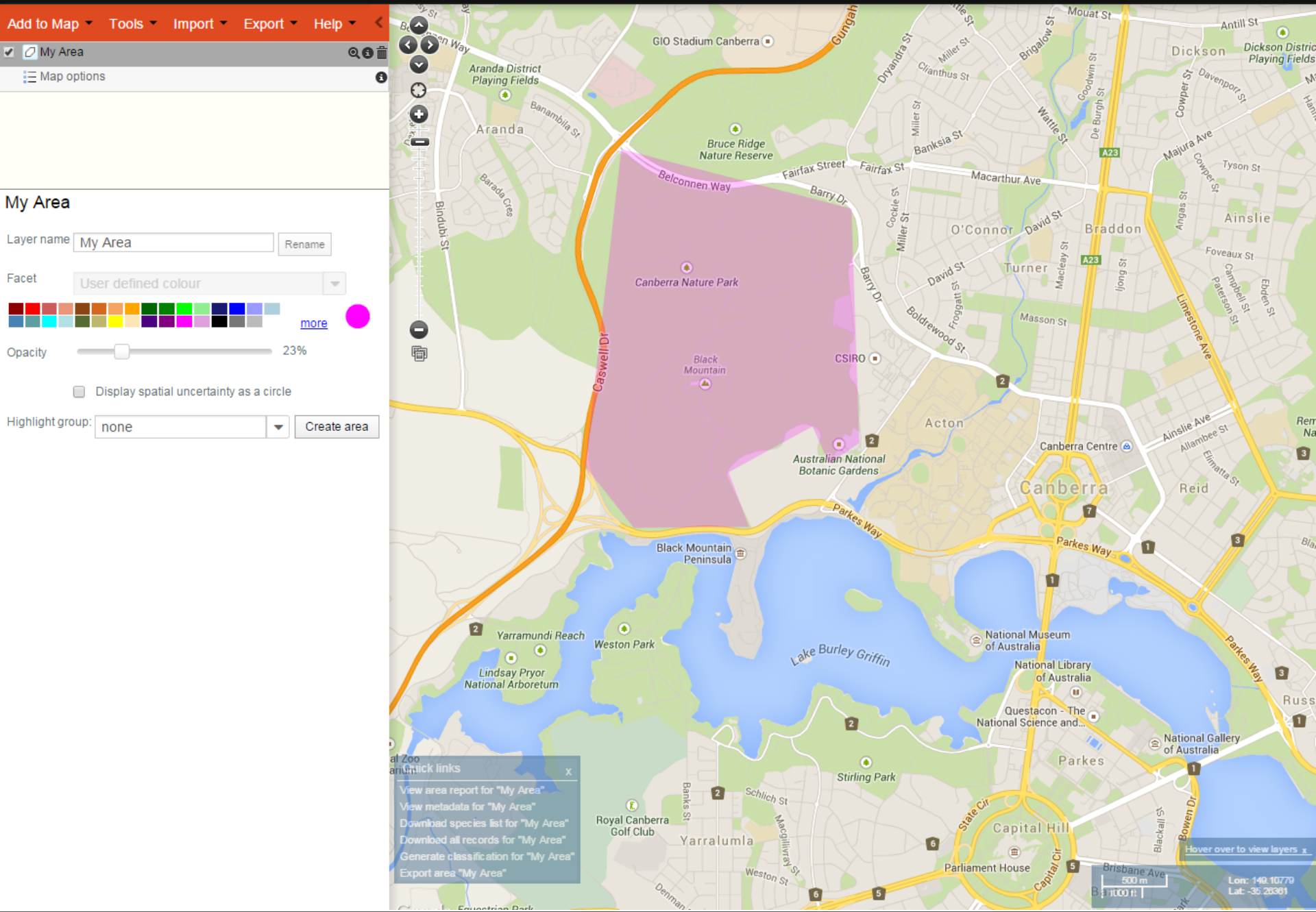
Opacity: 60%

Size: 4

class	colour	count
Dasyurus hallucatus		843
Geophaps (Geophaps) smithii		390
Zyzomys maini		189
Hibiscus brennanii		88
Monochoria hastata		81
Amytornis (Amytornis) woodwardi		64
Varanus panoptes		63
Varanus mertensi		62
Lithomyrtus linariifolia		60
Erythrura (Chloebia) gouldiae		56
Ardeotis australis		48
Dromaius novaehollandiae		44
Conilurus penicillatus		35
Erythrotriorchis radiatus		26
Epthianura (Aurepthianura) crocea tunneyi		19
Hipposideros inornata		12
Lucasium occultum		12
Morelia oenpelliensis		10
Tyto (Megastrix) novaehollandiae kimberli		9
Acacia sp. Graveside Gorge (V.J.Levitzke 806)		8
Ipomoea polpha subsp. latzii		7
Isoodon auratus		4
Malaxis latifolia		3
Freycinetia excelsa		2
Cycas armstrongii		1
Glyphis glyphis		1
Mesembriomys macrurus		1
Rattus sordidus		1
Rostratula australis		1
Utricularia dunstaniae		1

Select all | Create layer | Clear selection

East Alligator River
South Alligator River
Kakadu
Jabiru
Mary River National Park
Kakadu National Park
Umbrawarra Gorge Nature Park
Nitmiluk National Park


Add to Map
Tools
Import
Export
Help
My Area
Map options
My Area
Layer name
My Area
Rename
Facet
User defined colour
more
Opacity
23%
Display spatial uncertainty as a circle
Highlight group:
none
Create area
GIO Stadium Canberra
Aranda District Playing Fields
Aranda
Bruce Ridge Nature Reserve
Belconnen Way
Fairfax Street
Fairfax St
Macarthur Ave
Banksia St
Canberra Nature Park
Black Mountain
CSIRO
Caswell Dr
Barry Dr
Boldrewood St
Masson St
O'Connor
Braddon
Turner
Acton
Canberra Centre
Australian National Botanic Gardens
Canberra
Reid
Dickson
Ainslie
Limestone Ave
Parkes Way
Black Mountain Peninsula
Yarramundi Reach
Weston Park
Lindsay Pryor National Arboretum
Lake Burley Griffin
National Museum of Australia
National Library of Australia
Questacon - The National Science and...
National Gallery of Australia
Parkes
Stirling Park
Royal Canberra Golf Club
Yarralumla
Capital Hill
Parliament House
Quick links
View area report for "My Area"
View metadata for "My Area"
Download species list for "My Area"
Download all records for "My Area"
Generate classification for "My Area"
Export area "My Area"
Hover over to view layers
500 m
1000 ft
Lon: 149.10779
Lat: -35.28381

Add to Map | Tools | Import | Export | Help

My Area

Map options

- Area Report
- Detailed Area Report (PDF)
- Nearest locality
- Scatterplot
- Scatterplot List
- Tabulate
- Points to Grid
- Generate Points
- Classify
- Predict
- GDM
- Restore prior analysis

My Area

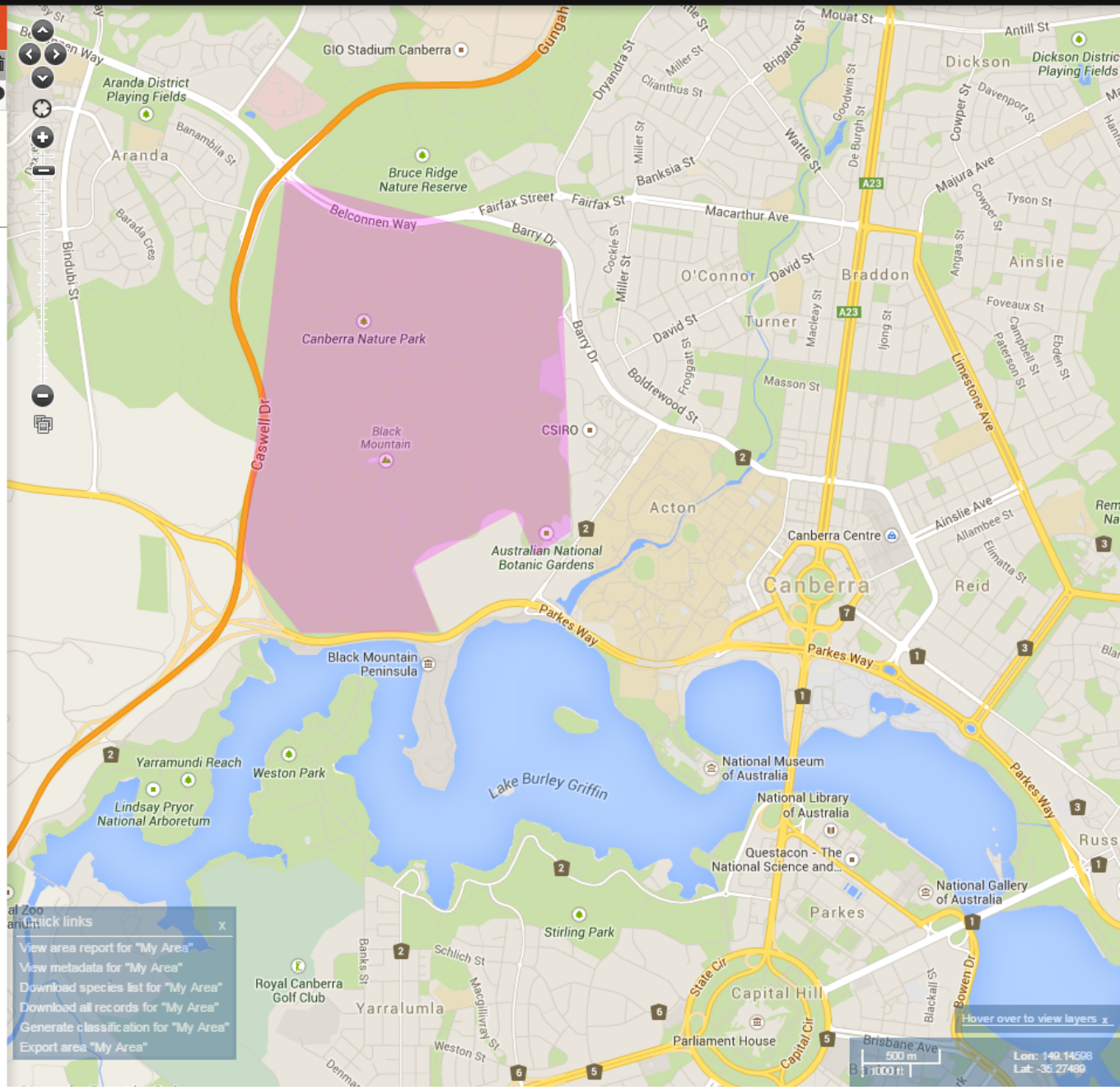
Layer name: My

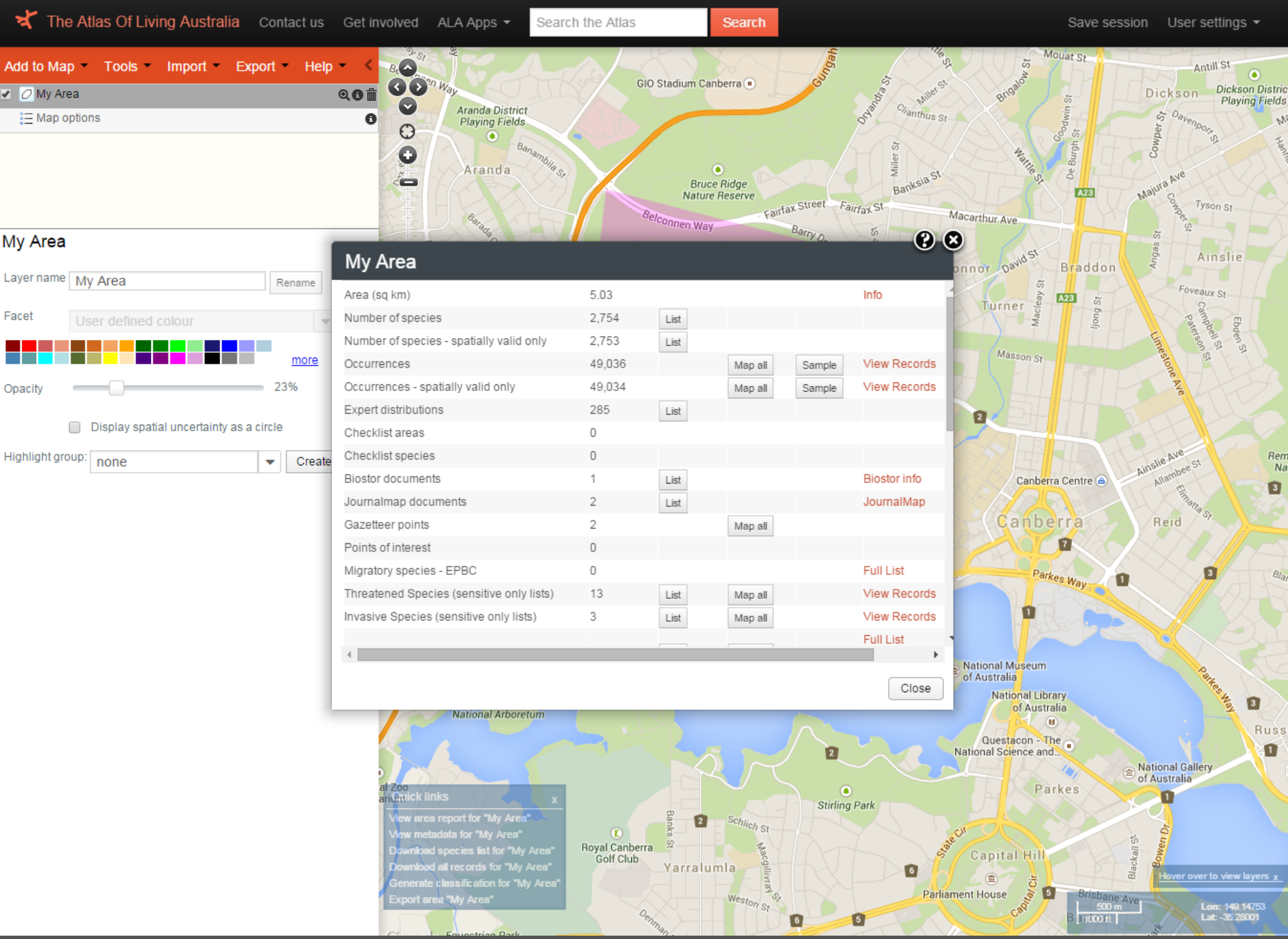
Facet

Opacity

Display spatial uncertainty as a circle

Highlight group: none | Create area

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Add to Map
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Export
Help
My Area
Map options
My Area
Layer name
My Area
Rename
Facet
User defined colour
more
Opacity
23%
Display spatial uncertainty as a circle
Highlight group:
none
Create
My Area
Area (sq km) 5.03 Info
Number of species 2,754 List
Number of species - spatially valid only 2,753 List
Occurrences 49,036 Map all Sample View Records
Occurrences - spatially valid only 49,034 Map all Sample View Records
Expert distributions 285 List
Checklist areas 0
Checklist species 0
Biostor documents 1 List Biostor info
Journalmap documents 2 List JournalMap
Gazetteer points 2 Map all
Points of interest 0
Migratory species - EPBC 0 Full List
Threatened Species (sensitive only lists) 13 List Map all View Records
Invasive Species (sensitive only lists) 3 List Map all View Records
Full List
Close
Quick links
View area report for "My Area"
View metadata for "My Area"
Download species list for "My Area"
Download all records for "My Area"
Generate classification for "My Area"
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GIO Stadium Canberra
Aranda District Playing Fields
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Bruce Ridge Nature Reserve
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Fairfax Street
Fairfax St
Macarthur Ave
Banksia St
Dryandra St
Miller St
Clianthus St
Brigalow St
Wattle St
Goodwin St
De Burgh St
Cowper St
Davenport St
Majura Ave
Tyson St
Dickson
Dickson District Playing Fields
Antill St
Mouat St
Braddon
Ainslie
Turner
Foveaux St
Limestone Ave
Masson St
Ainslie Ave
Allambee St
Elmatta St
Canberra Centre
Canberra
Reid
Parkes Way
National Museum of Australia
National Library of Australia
Questacon - The National Science and...
National Gallery of Australia
Parkes
National Arboretum
Stirling Park
Royal Canberra Golf Club
Yarralumla
Schlich St
Weston St
Capital Hill
Parliament House
State Cir
Capital Cir
Brisbane Ave
Hover over to view layers
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Eucalyptus camaldulensis Dehnh.

River Red Gum

Record a sighting Alerts

Name source
Australian Plant Census

Rank
Species

Data links
LSID JSON / WMS /RDF

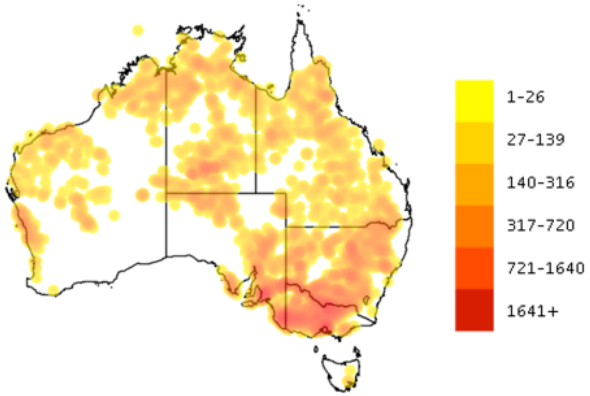
Species presence
Recorded In Australia

Terrestrial Habitats

Conservation status
NSW Endangered Populations

Overview Gallery Names Classification Records Literature Sequences

Occurrence records map



View records list Map & analyse records

Description

Tree, commonly up to 20 m tall, occasionally reaching 50 m with a trunk diameter of 1(source: Prosea

The river red gum is one of the best known of all eucalypts. It is common along the Murray-Darling river system and along watercourses in much of semi-arid Australia. It is a medium sized tree usually branching not far above the ground. It may reach 30 - 40 metres in height.

The bark is smooth and white or greyish in colour except near the base of the trunk where it is often rough. ... source: Australian Native Plants Society (Australia)

The tree can grow to 45 metres tall; it has smooth bark, ranging in colour from white and grey to red-brown, which is shed in long ribbons. The tree has a large, dense crown of leaves. The base of the bole can be covered with rough, reddish-brown bark. The juvenile and adult leaves are stalked, with the adult leaves broad at the base, tapering to the tip. ... source: Wikipedia

Online resources

Eucalyptus camaldulensis Dehnh.

River Red Gum

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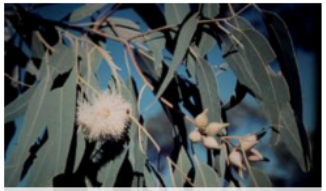
Images


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis


Eucalyptus camaldulensis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Names and sources

Accepted name	Source
Eucalyptus camaldulensis	• Australian Plant Census

Common Names

Common name	Source
River Red Gum	• Office of Environment and Heritage • Customary Medicinal Knowledgebase • Australian Native Plants Society (Australia)
Biall	• Australian Plant Names Index
Blue Gum	• Customary Medicinal Knowledgebase
Creek Gum	• Australian Plant Names Index
Flooded Gum	• Australian Plant Names Index
Forest Gum	• Australian Plant Names Index
Murray Red Gum	• Customary Medicinal Knowledgebase
Red Gum	• Customary Medicinal Knowledgebase
River Gum	• Australian Plant Names Index
River Red-gum	• Australian Plant Names Index
Yarrah	• Australian Plant Names Index
Yarrow	• Customary Medicinal Knowledgebase
River Redgum	• Encyclopedia of Life
River Gum, River Red Gum	• Plant NET Flora Online
Eucalyptus Camaldulensis Population In The Hunter Catchment	• Office of Environment and Heritage

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NSW Endangered Populations

Overview | Gallery | Names | Classification | Records | Literature | Sequences

Working classification

kingdom Plantae
phylum Charophyta
class Equisetopsida
subclass Magnoliidae
superorder Rosanae
order Myrtales
family Myrtaceae
genus Eucalyptus
species Eucalyptus camaldulensis
subspecies *Eucalyptus camaldulensis subsp. Torrumbarry*
subspecies *Eucalyptus camaldulensis subsp. acuta*
subspecies *Eucalyptus camaldulensis subsp. arida*
subspecies *Eucalyptus camaldulensis subsp. camaldulensis* : River Red Gum
subspecies *Eucalyptus camaldulensis subsp. minima*
subspecies *Eucalyptus camaldulensis subsp. obtusa* : Red River Gum
subspecies *Eucalyptus camaldulensis subsp. refulgens*
subspecies *Eucalyptus camaldulensis subsp. simulata* : Red gum

Eucalyptus camaldulensis Dehnh.

River Red Gum

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Overview Gallery Names Classification Records Literature Sequences

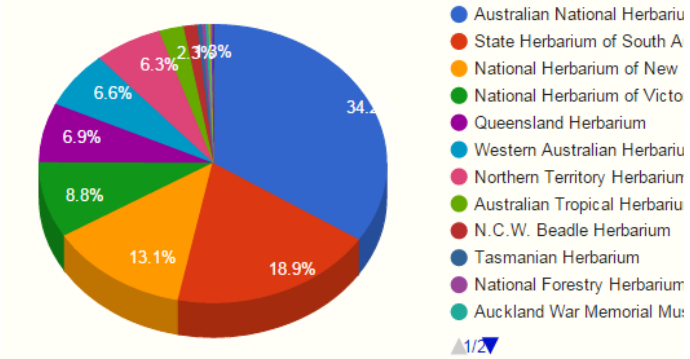
Occurrence records

View list of all 17,617 occurrence records for this taxon

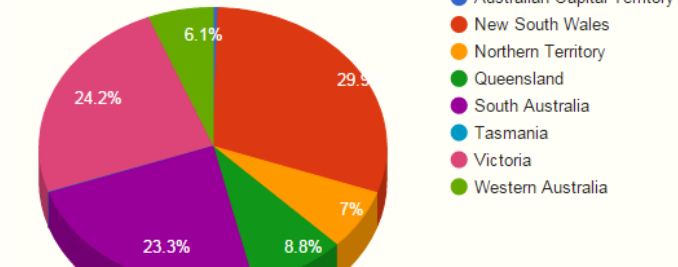
Charts showing breakdown of occurrence records

Hint: click on chart elements to view that subset of records

By collection



By state & territory



Eucalyptus camaldulensis Dehnh.

River Red Gum

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Australian Plant Census

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Species

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LSID JSON / WMS /RDF

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Terrestrial Habitats

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NSW Endangered Populations

Name references found in the Biodiversity Heritage Library

Showing 1 to 10 of 92 results for the query

"Eucalyptus camaldulensis"

1. Proceedings of the Linnean Society of New South Wales. (2 matching pages)


2. Transactions of the Royal Society of South Australia, Incorporated. (1 matching page)

3. The victorian naturalist. (2 matching pages)

4. Proceedings of the Linnean Society of New South Wales. (1 matching page)

Eucalyptus camaldulensis Dehnh.

River Red Gum

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Overview Gallery Names Classification Records Literature Sequences

Genbank - view all results - Items: 1 to 20 of 42455

Eucalyptus camaldulensis ascorbate peroxidase mRNA, partial cds
684 bp linear mRNA
Accession: DQ839645.1 GI: 111434272

Eucalyptus camaldulensis Cu/Zn superoxide dismutase mRNA, partial cds
390 bp linear mRNA
Accession: DQ839644.1 GI: 111434270

Eucalyptus camaldulensis alpha-glucan phosphorylase-like mRNA, partial sequence
353 bp linear mRNA
Accession: EF374118.1 GI: 134142851

Eucalyptus camaldulensis DNA, scaffold: EcC000710, isolate: CPT-1, whole genome shotgun sequence
22,785 bp linear DNA
Accession: DF098129.1 GI: 373838699

Eucalyptus camaldulensis DNA, scaffold: EcC000709, isolate: CPT-1, whole genome shotgun sequence
6,019 bp linear DNA
Accession: DF098128.1 GI: 373838698

Eucalyptus camaldulensis DNA, scaffold: EcC000706, isolate: CPT-1, whole genome shotgun sequence
3,605 bp linear DNA
Accession: DF098127.1 GI: 373838697

Eucalyptus camaldulensis DNA, scaffold: EcC000705, isolate: CPT-1, whole genome shotgun sequence
5,377 bp linear DNA
Accession: DF098126.1 GI: 373838696

Eucalyptus camaldulensis DNA, scaffold: EcC000703, isolate: CPT-1, whole genome shotgun sequence
8,569 bp linear DNA
Accession: DF098125.1 GI: 373838695

Eucalyptus camaldulensis DNA, scaffold: EcC000701, isolate: CPT-1, whole genome shotgun sequence
3,210 bp linear DNA
Accession: DF098124.1 GI: 373838694

Eucalyptus camaldulensis Dehnh.

River Red Gum

Record a sighting Alerts

Name source
Australian Plant Census

Rank
Species

Data links
LSID JSON / WMS /RDF

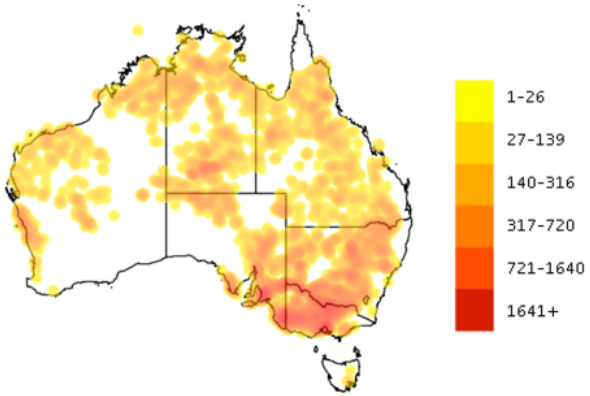
Species presence
Recorded In Australia

Terrestrial Habitats

Conservation status
NSW Endangered Populations

Overview Gallery Names Classification Records Literature Sequences

Occurrence records map



View records list Map & analyse records

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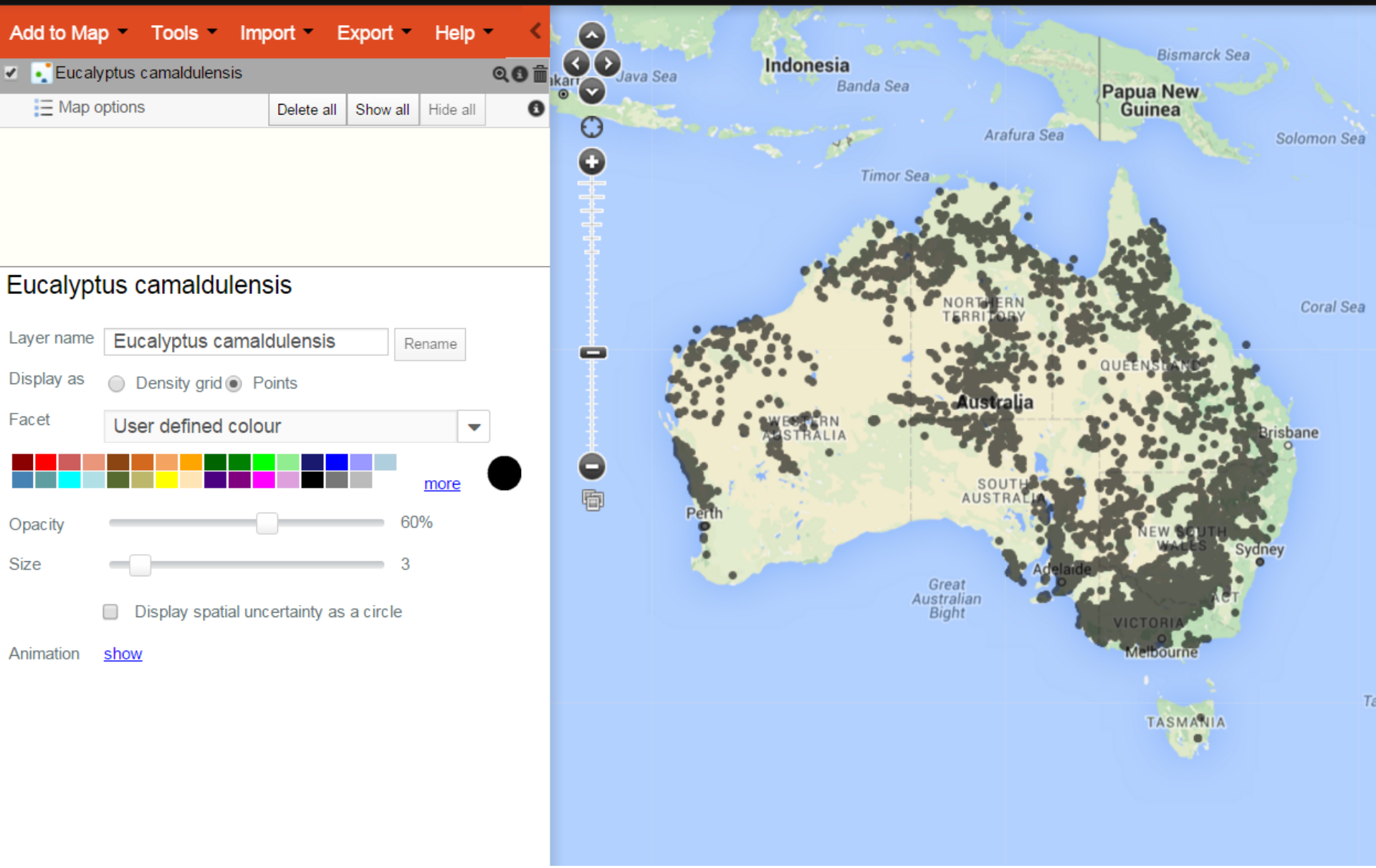
Add to Map
Tools
Import
Export
Help
Eucalyptus camaldulensis
Map options
Delete all
Show all
Hide all
Eucalyptus camaldulensis
Layer name
Eucalyptus camaldulensis
Rename
Display as
Density grid
Points
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User defined colour
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Opacity
60%
Size
3
Display spatial uncertainty as a circle
Animation
show
Indonesia
Java Sea
Banda Sea
Bismarck Sea
Papua New Guinea
Arafura Sea
Solomon Sea
Timor Sea
Coral Sea
NORTHERN TERRITORY
QUEENSLAND
Australia
WESTERN AUSTRALIA
SOUTH AUSTRALIA
NEW SOUTH WALES
Brisbane
Sydney
Perth
Adelaide
Great Australian Bight
VICTORIA
Melbourne
ACT
TASMANIA

Add to Map | Tools | Import | Export | Help

Eucalyptus camaldulensis

Map options | Delete all | Show all | Hide all

Eucalyptus camaldulensis

Layer name: Eucalyptus camaldulensis | Rename

Display as: Density grid / Points

Facet: Scientific name

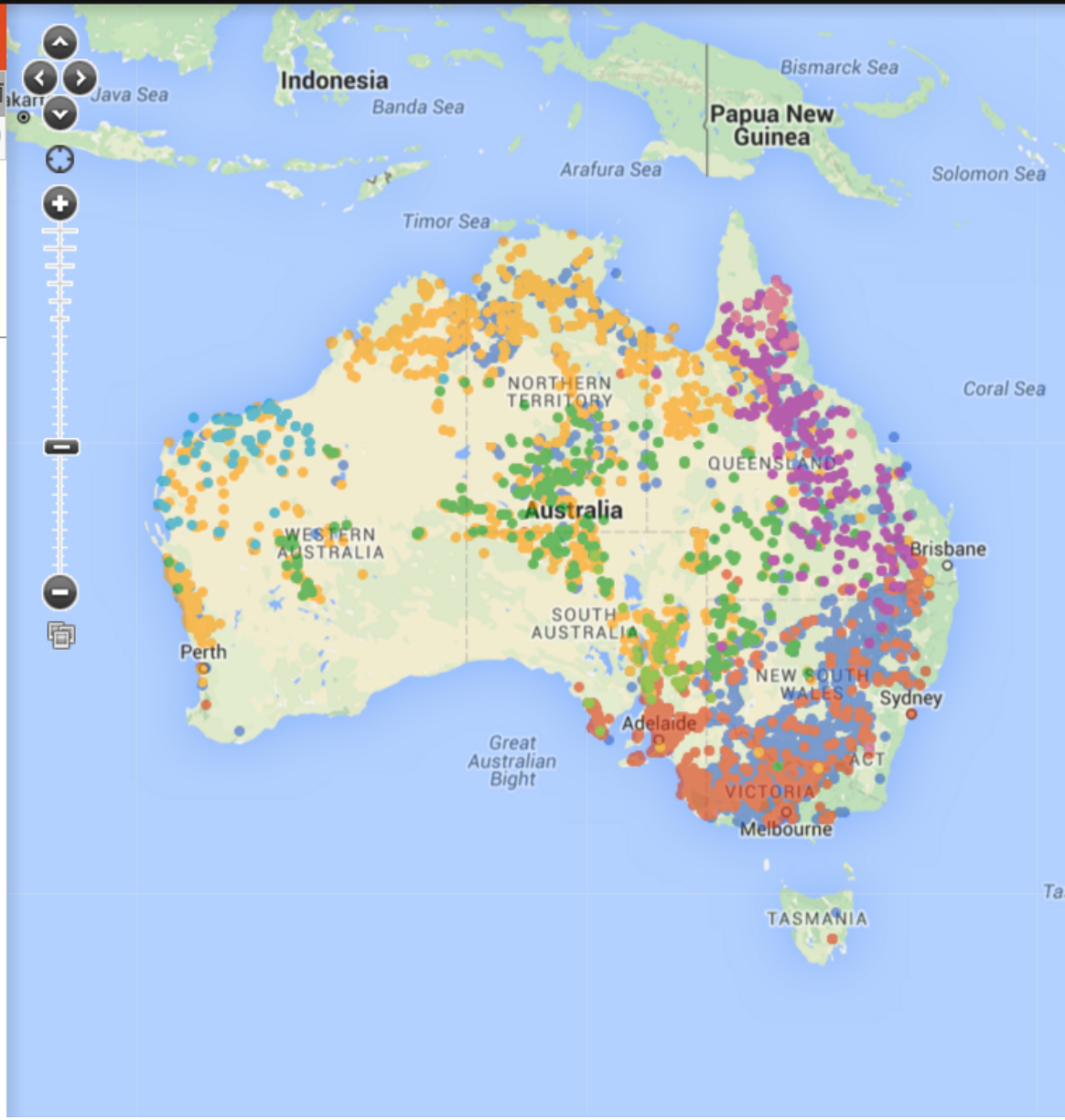
Opacity: 60%

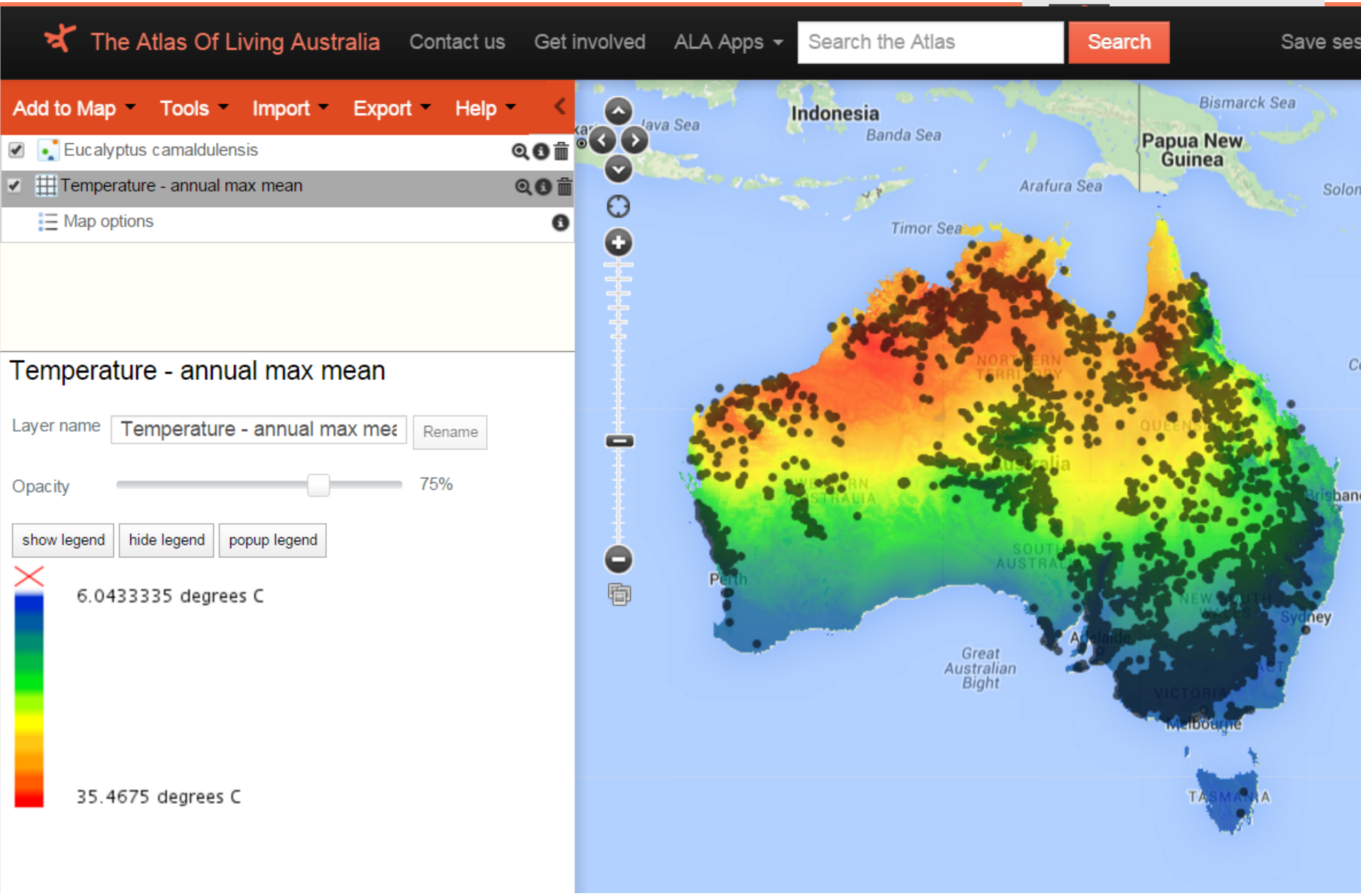
Size: 3

Filter | Clear Filter

class	colou	count
Eucalyptus camaldulensis		9726
Eucalyptus camaldulensis subsp. camaldulensis		3940
Eucalyptus camaldulensis subsp. obtusa		2210
Eucalyptus camaldulensis subsp. arida		494
Eucalyptus camaldulensis subsp. acuta		485
Eucalyptus camaldulensis subsp. refulgens		145
Eucalyptus camaldulensis subsp. simulata		107
Eucalyptus camaldulensis subsp. minima		85

0 selected | Select all

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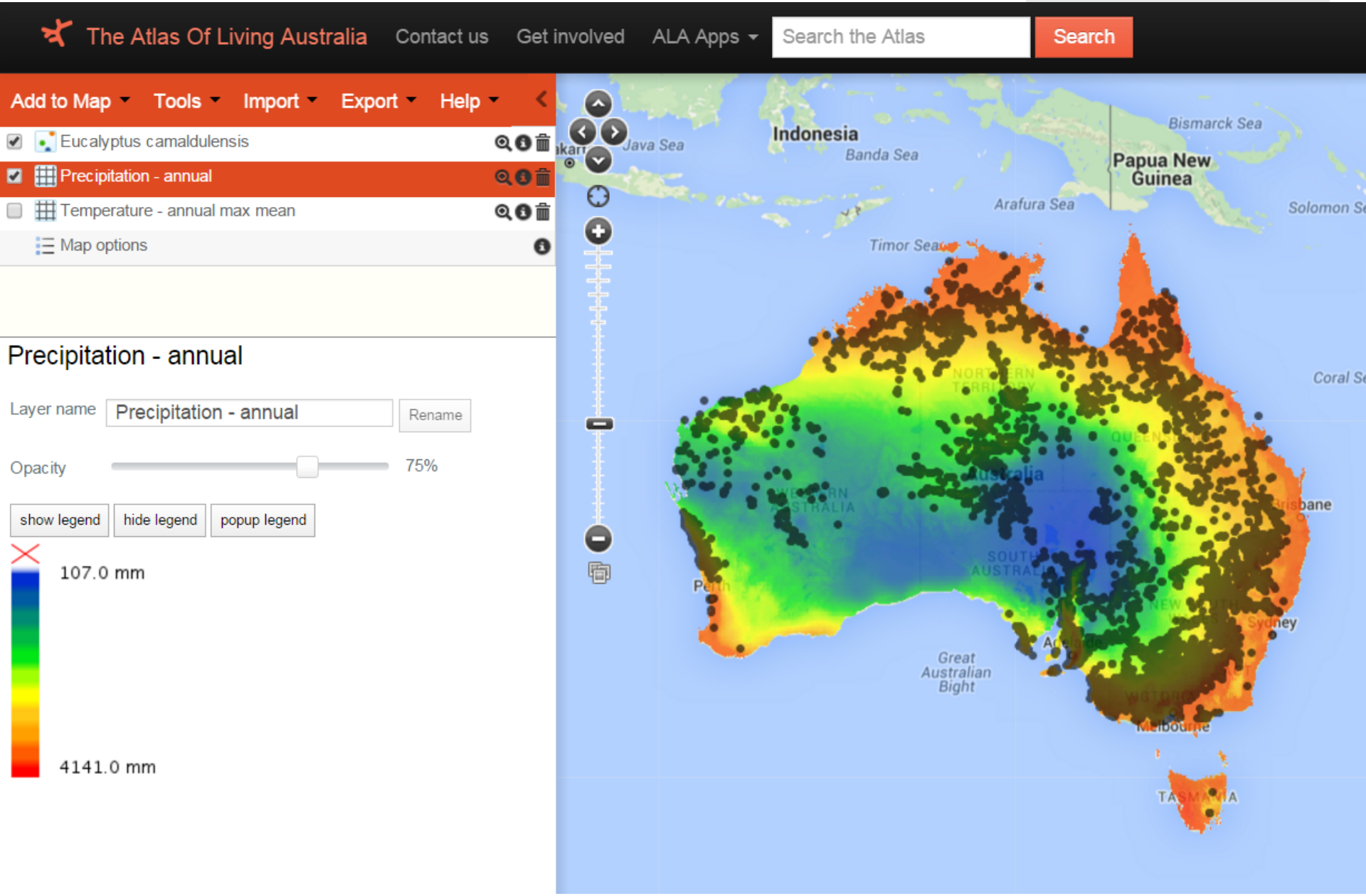
Help
Eucalyptus camaldulensis
Temperature - annual max mean
Map options
Temperature - annual max mean
Layer name
Temperature - annual max mea
Rename
Opacity
75%
show legend
hide legend
popup legend
6.0433335 degrees C
35.4675 degrees C
Indonesia
Banda Sea
Arafura Sea
Timor Sea
Bismarck Sea
Papua New Guinea
Perth
Great Australian Bight
Sydney
TASMANIA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Eucalyptus camaldulensis
Precipitation - annual
Temperature - annual max mean
Map options
Precipitation - annual
Layer name
Precipitation - annual
Rename
Opacity
75%
show legend
hide legend
popup legend
107.0 mm
4141.0 mm
Indonesia
Java Sea
Banda Sea
Bismarck Sea
Papua New Guinea
Arafura Sea
Timor Sea
Great Australian Bight
Perth
Brisbane
Sydney
Melbourne
TASMANIA

Add to Map | Tools | Import | Export | Help

- My Scatterplot
- Eucalyptus camaldulensis
- Precipitation - annual
- Temperature - annual max mean
- Map options | Delete all | Show all | Hide all

My Scatterplot

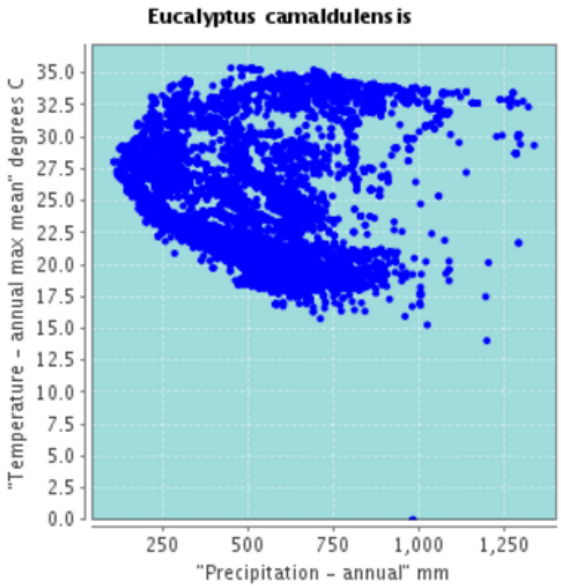
Species display settings | Download image | Download data

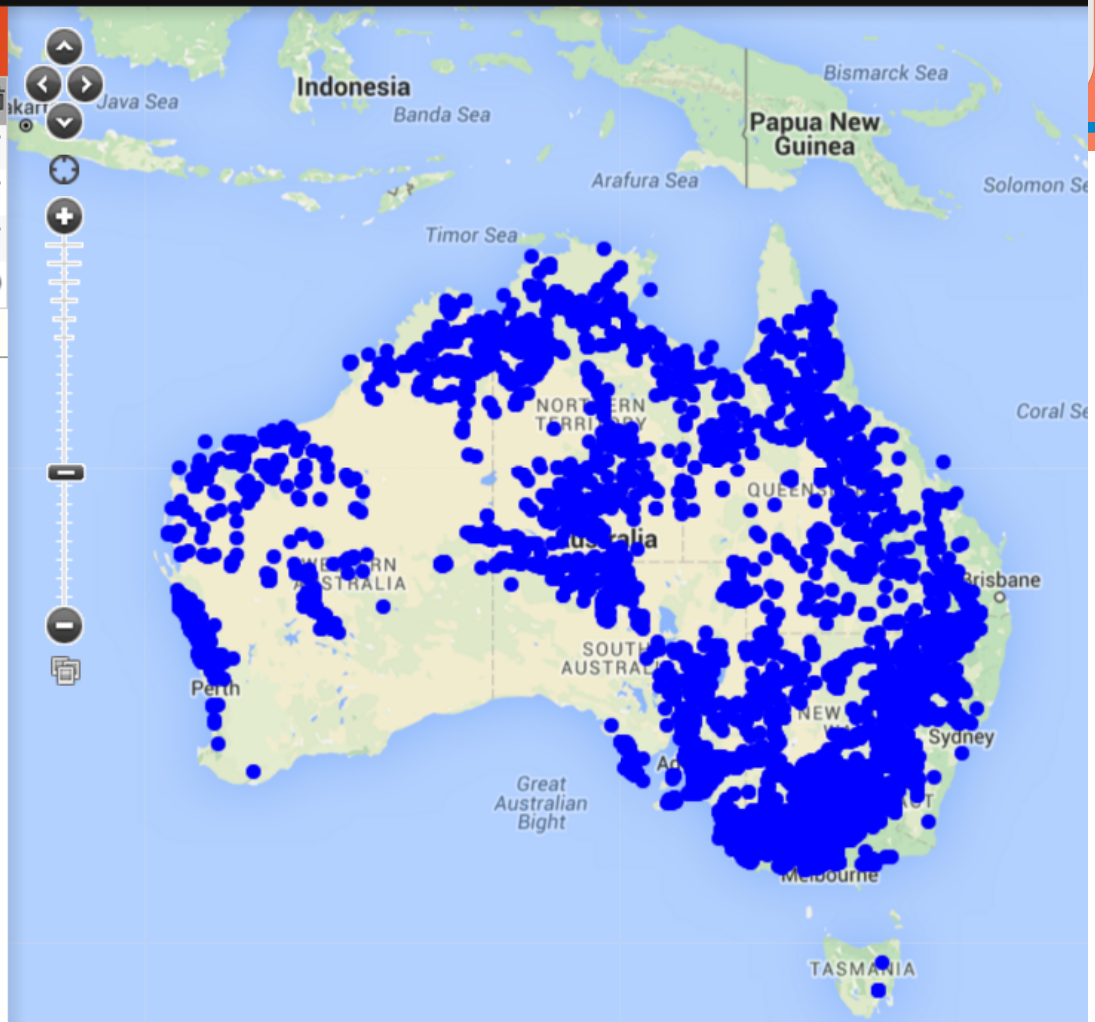
Records selected: 0

SELECT records with missing values (268)

Highlight occurrences on the scatterplot that are in an area

Clear





Quick links

View metadata for "Eucalyptus camaldulensis"

Download all records for "Eucalyptus camaldulensis"

The Atlas Of Living Australia | Contact us | Get involved | ALA Apps | Search the Atlas | Search

Add to Map | Tools | Import | Export | Help

- My Scatterplot
- Eucalyptus camaldulensis
- Precipitation - annual
- Temperature - annual max mean

Map options | Delete all | Show all | Hide all

My Scatterplot

Species display settings | Download image | Download data

Records selected: 49 | add in/out layers to map

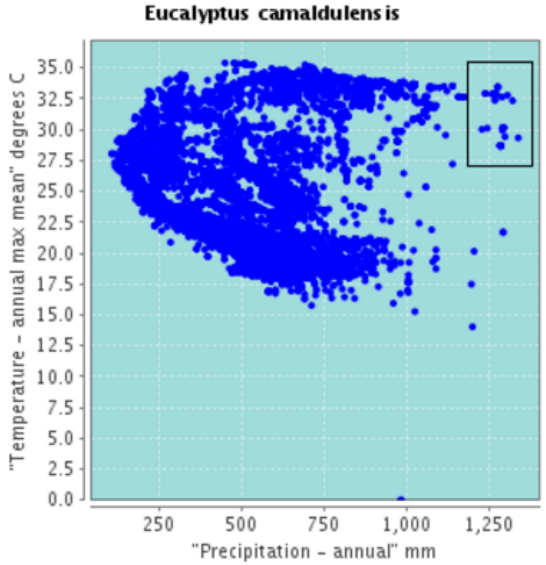
Precipitation - annual: 1183.34 - 1378.83

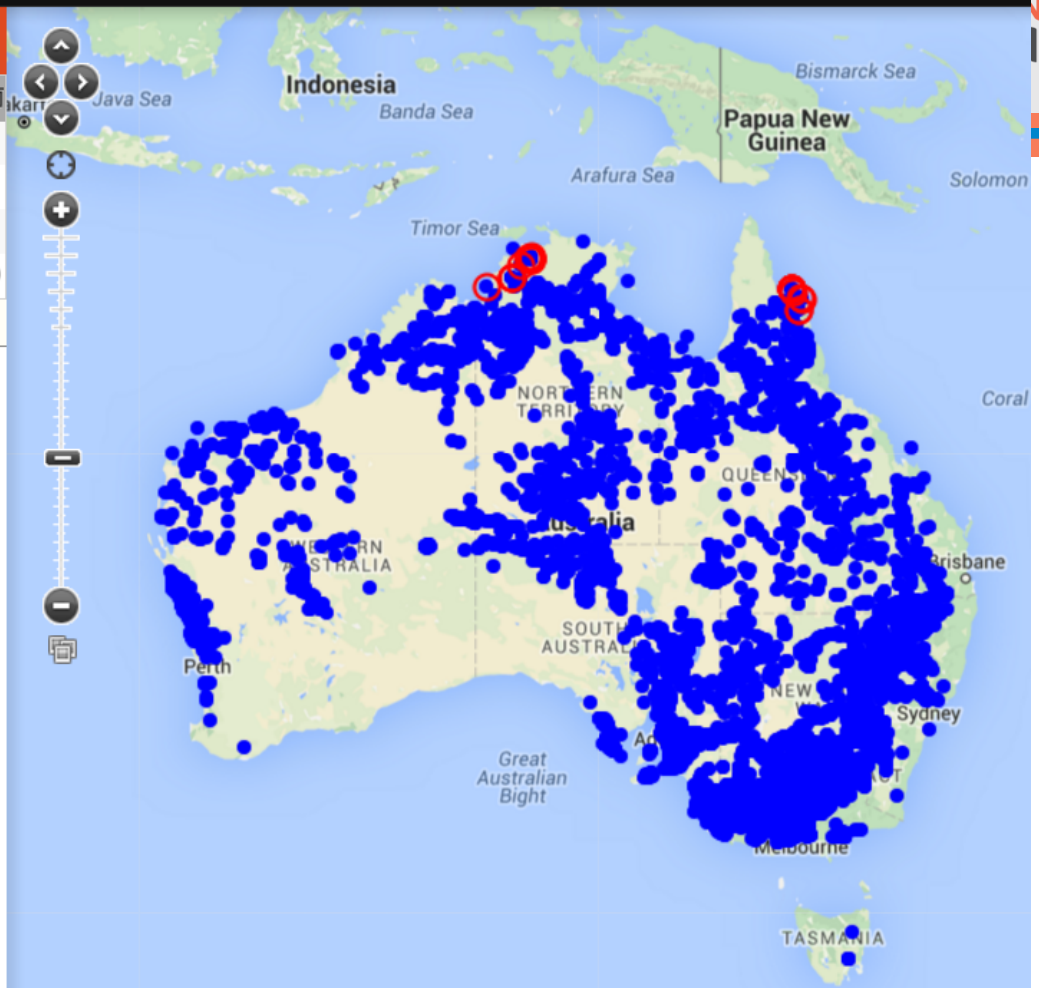
Temperature - annual max mean: 27.1237 - 35.5487

SELECT records with missing values (268)

Highlight occurrences on the scatterplot that are in an area

Clear





Quick links

- View metadata for "Eucalyptus camaldulensis"
- Download all records for "Eucalyptus camaldulensis"
- Produce scatterplot for "Eucalyptus camaldulensis"
- Generate prediction for "Eucalyptus camaldulensis"

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Add to Map | Tools | Import | Export | Help

- My Scatterplot
- Eucalyptus camaldulensis
- Precipitation - annual
- Temperature - annual max mean
- Map options | Delete all | Show all | Hide all

My Scatterplot

Species display settings | Download image | Download data

Records selected: 123 | add in/out layers to map

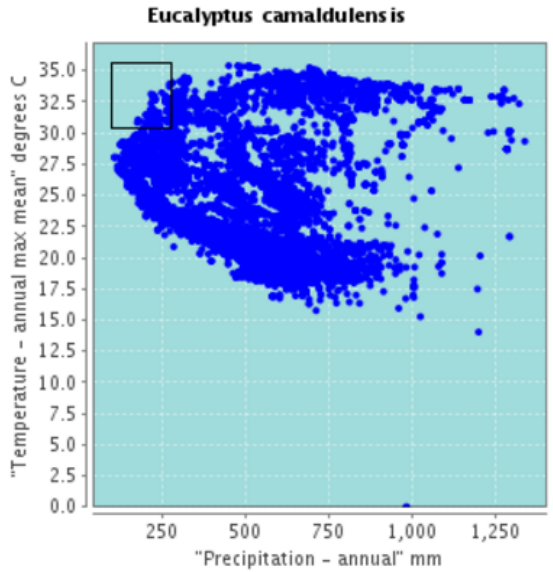
Precipitation - annual: 97.2999 - 276.497

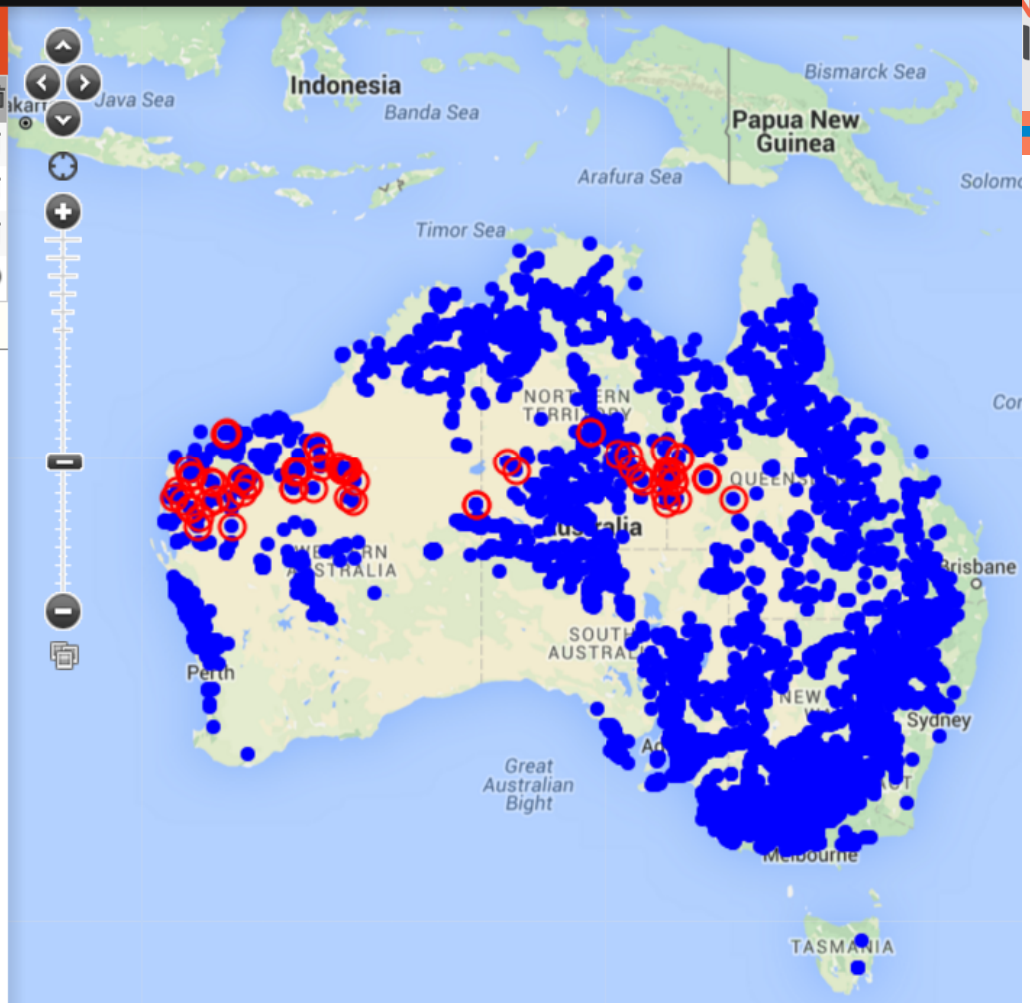
Temperature - annual max mean: 30.4647 - 35.6939

SELECT records with missing values (268)

Highlight occurrences on the scatterplot that are in an area

Clear





Quick links

View metadata for "Eucalyptus camaldulensis"

Download all records for "Eucalyptus camaldulensis"

Produce scatterplot for "Eucalyptus camaldulensis"

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Add to Map | Tools | Import | Export | Help

- My Area
- My Scatterplot
- Eucalyptus camaldulensis
- Precipitation - annual
- Temperature - annual max mean

Map options | Delete all | Show all | Hide all

My Scatterplot

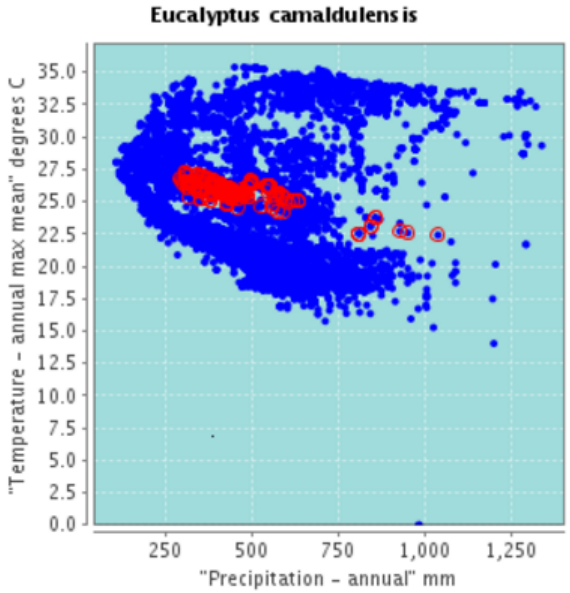
Species display settings | Download image | Download data

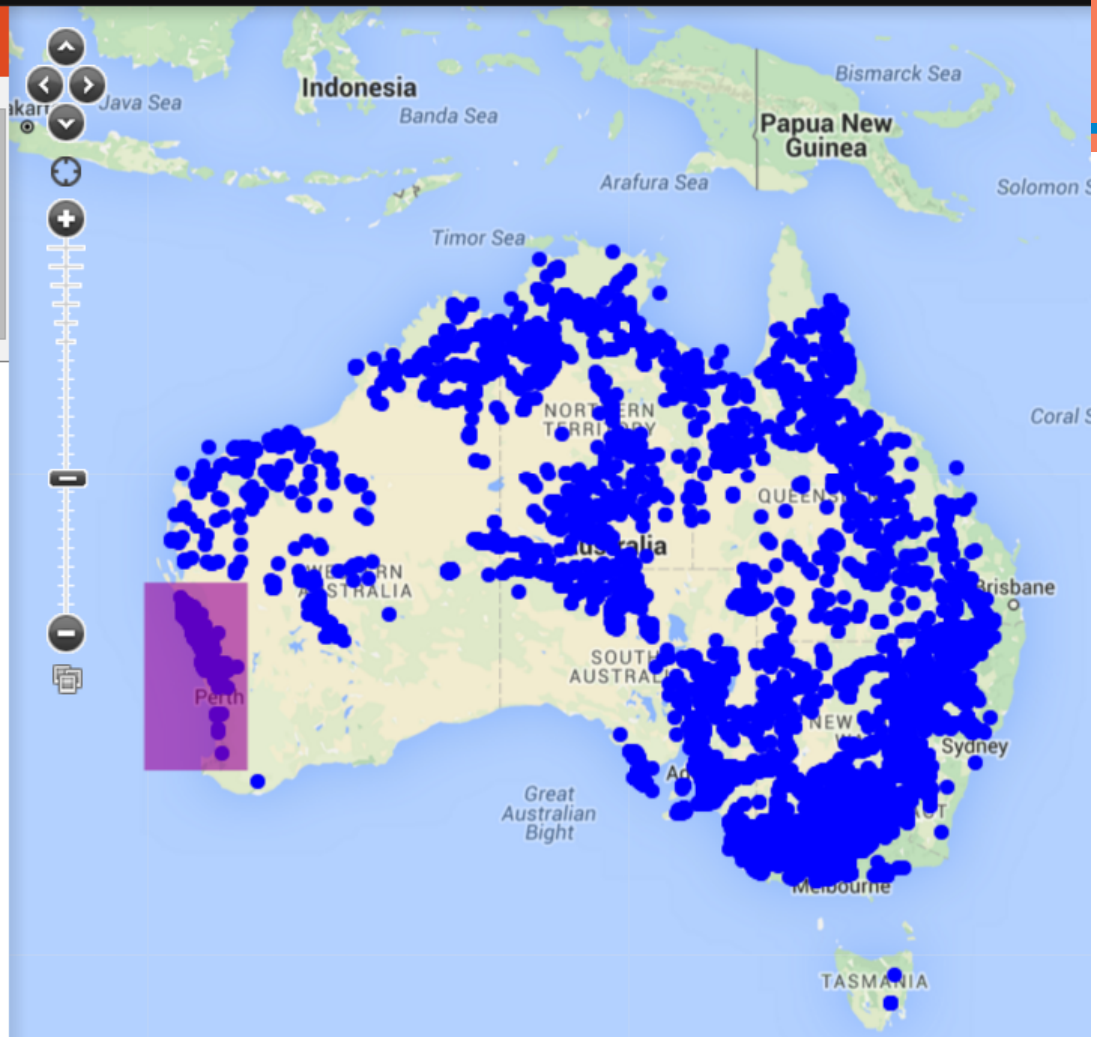
Records selected: 0

SELECT records with missing values (268)

Highlight occurrences on the scatterplot that are in an area

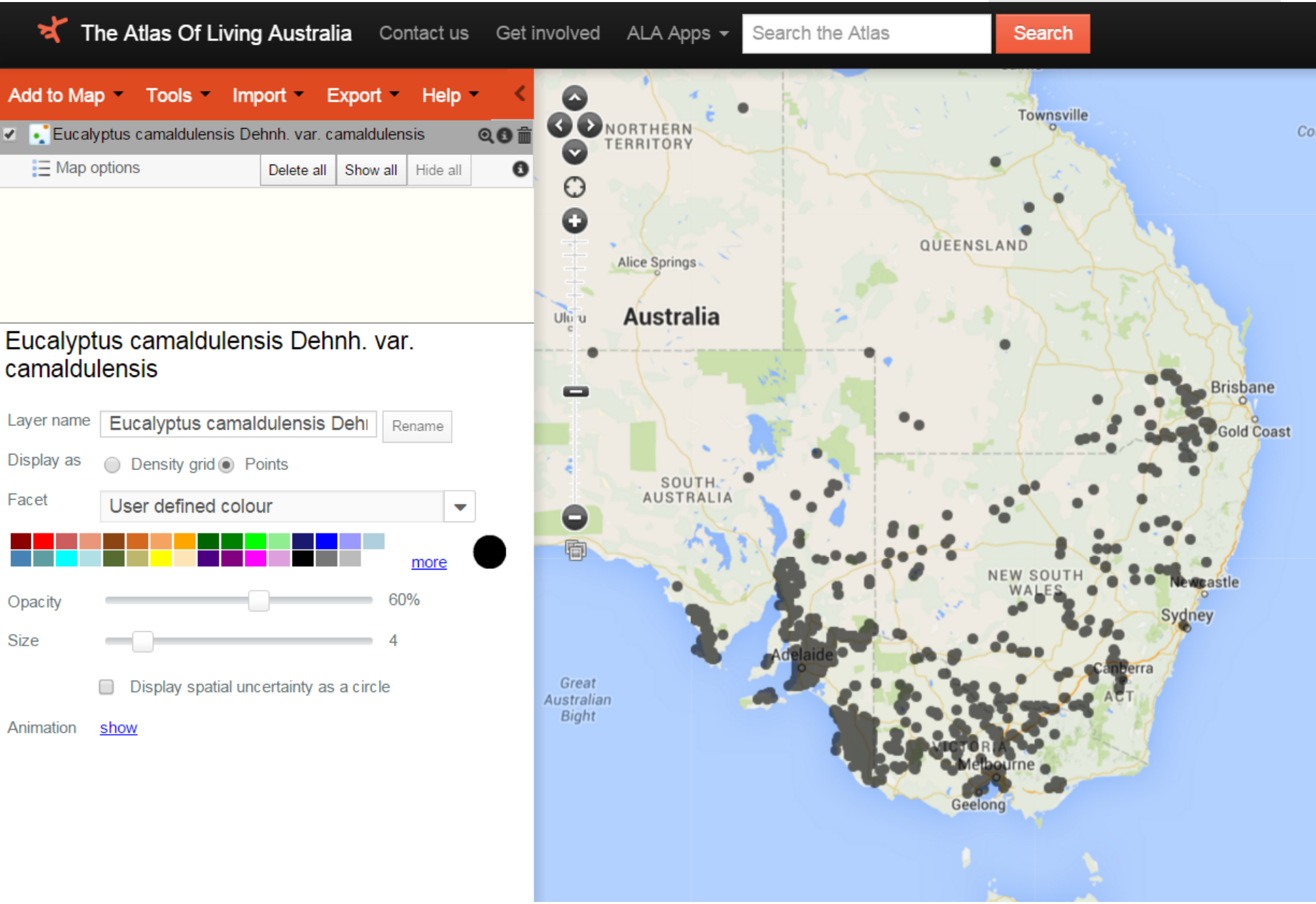
My Area | Clear





Quick links

- View area report for "My Area"
- View metadata for "My Area"
- Download species list for "My Area"
- Download all records for "Eucalyptus camaldulensis" in "My Area"
- Generate classification for "My Area"
- Produce scatterplot for "Eucalyptus camaldulensis" in "My Area"


The Atlas Of Living Australia
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Search the Atlas
Search
Add to Map
Tools
Import
Export
Help
Eucalyptus camaldulensis Dehnh. var. camaldulensis
Map options
Delete all
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Hide all
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Layer name
Eucalyptus camaldulensis Dehı
Rename
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Points
Facet
User defined colour
more
Opacity
60%
Size
4
Display spatial uncertainty as a circle
Animation
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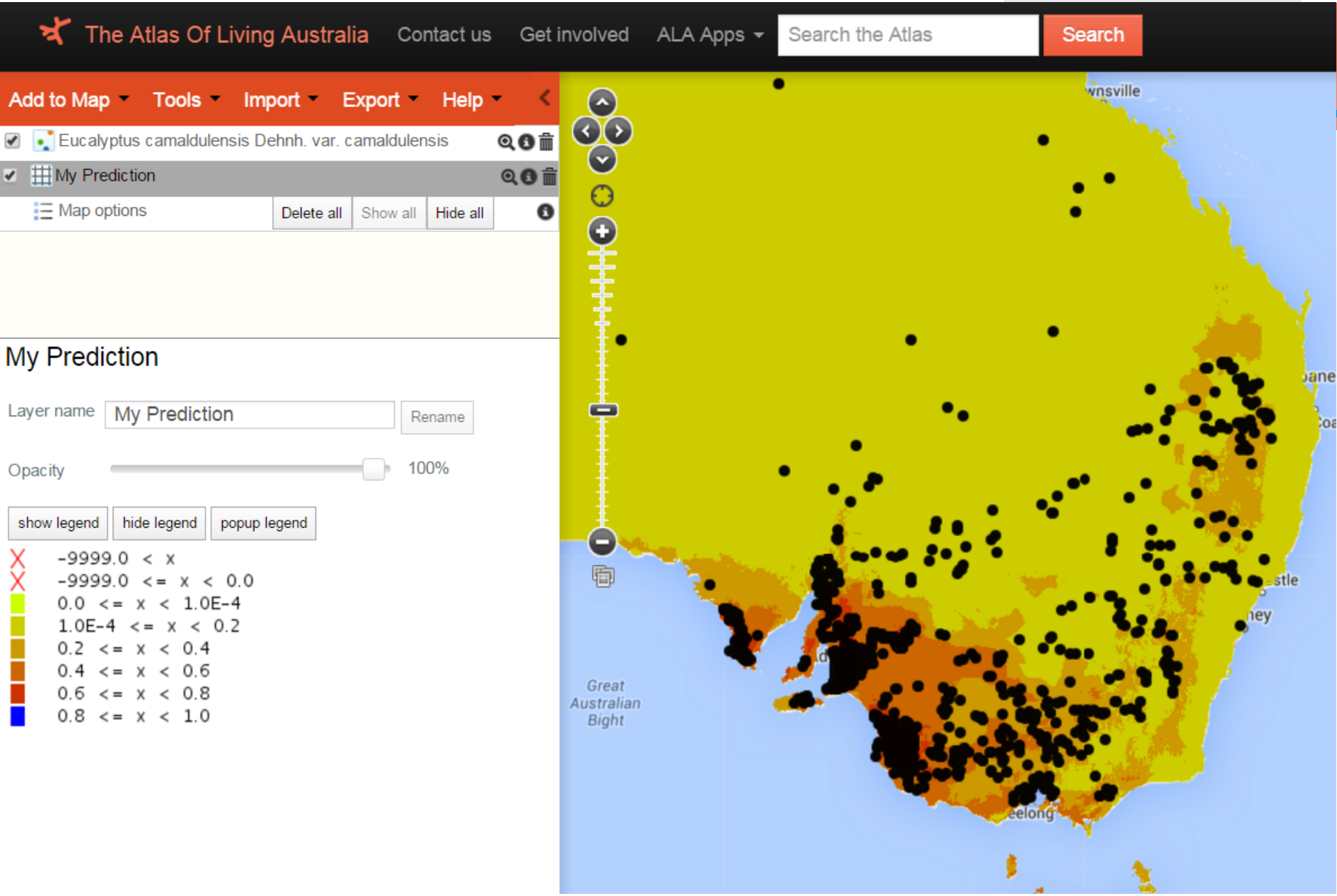
NORTHERN TERRITORY
QUEENSLAND
Townsville
Alice Springs
Australia
Brisbane
Gold Coast
SOUTH AUSTRALIA
NEW SOUTH WALES
Newcastle
Sydney
Adelaide
Canberra
ACT
Great Australian Bight
Melbourne
Geelong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Search the Atlas
Search
Add to Map
Tools
Import
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Help
Eucalyptus camaldulensis Dehnh. var. camaldulensis
My Prediction
Map options
Delete all
Show all
Hide all
My Prediction
Layer name
My Prediction
Rename
Opacity
100%
show legend
hide legend
popup legend
-9999.0 < x
-9999.0 <= x < 0.0
0.0 <= x < 1.0E-4
1.0E-4 <= x < 0.2
0.2 <= x < 0.4
0.4 <= x < 0.6
0.6 <= x < 0.8
0.8 <= x < 1.0
Great Australian Bight

doi: 10.1111/emr.12000

RESEARCH REPORT

Developing biodiverse plantings suitable for changing climatic conditions 2: Using the Atlas of Living Australia

By Trevor H. Booth, Kristen J. Williams and Lee Belbin

Trevor H. Booth and Kristen J. Williams are research scientists with CSIRO Ecosystem Sciences and CSIRO Climate Adaptation Flagship (GPO Box 1700, Canberra, ACT 2601, Australia; Tel: +61 02 6246 4217; Email: trevor.booth@csiro.au; kristen.williams@csiro.au). Lee Belbin carries out consultancy work for CSIRO Ecosystem Sciences as the Geospatial Team Leader for the Atlas of Living Australia (Bonnet Hill, Hobart, Tas 7000, Australia Email: leebelbin@gmail.com). This research was carried out as a strategic project of the 'Managing Species and Natural Ecosystems' theme of CSIRO's Climate Adaptation Flagship.

Summary There has been an increasing investment of taxpayer dollars in revegetation in Australia over the past 20 years, at both federal and state levels. The largest of these, the Australian Government's Biodiversity Fund, will invest A$946 million to revegetate, rehabilitate and restore landscapes to store carbon, enhance biodiversity and build environmental resilience under climate change. The universal challenge for restoration practitioners working within these programmes is species selection for both current and future environmental conditions at a given site. For policy makers, the challenge is to provide guidelines and tools for this process. The first paper in this series of two papers looked at scientific methods that could provide underpinning knowledge to improve the assessment of species vulnerability to climatic and atmospheric change. In this paper, the publically accessible Atlas of Living Australia is used to demonstrate how revegetation project leaders can assess whether the species and provenances used in their revegetation projects are likely to be suitable for changing environmental conditions. While using the Atlas can assist current selections, ways in which more reliable selections for changing climatic conditions could be made are also outlined.

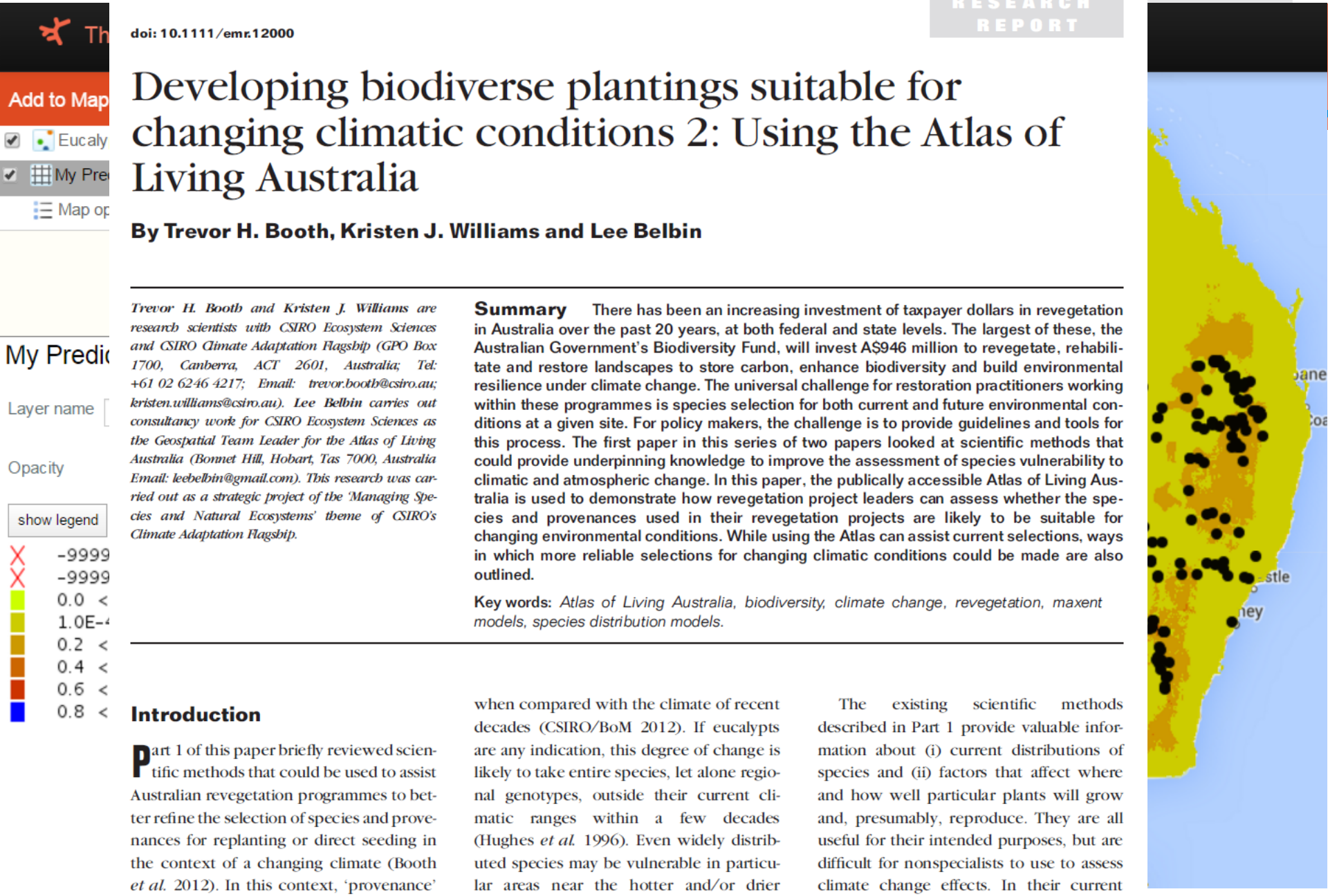
Key words: *Atlas of Living Australia, biodiversity, climate change, revegetation, maxent models, species distribution models.*

Introduction

Part 1 of this paper briefly reviewed scientific methods that could be used to assist Australian revegetation programmes to better refine the selection of species and provenances for replanting or direct seeding in the context of a changing climate (Booth *et al.* 2012). In this context, 'provenance' refers to genetic material (e.g. seed or seed-

when compared with the climate of recent decades (CSIRO/BoM 2012). If eucalypts are any indication, this degree of change is likely to take entire species, let alone regional genotypes, outside their current climatic ranges within a few decades (Hughes *et al.* 1996). Even widely distributed species may be vulnerable in particular areas near the hotter and/or drier extremes of their current distributions

The existing scientific methods described in Part 1 provide valuable information about (i) current distributions of species and (ii) factors that affect where and how well particular plants will grow and, presumably, reproduce. They are all useful for their intended purposes, but are difficult for nonspecialists to use to assess climate change effects. In their current form, most of the methods are too slow



doi: 10.1111/emr.12000

RESEARCH REPORT

Developing biodiverse plantings suitable for changing climatic conditions 2: Using the Atlas of Livi

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Contents lists available at ScienceDirect

Forest Ecology and Management

journal homepage: www.elsevier.com/locate/foreco

Using biodiversity databases to verify and improve descriptions of tree species climatic requirements

Trevor H. Booth *

CSIRO Ecosystem Sciences and CSIRO Climate Adaptation Flagship, GPO Box 1700, Canberra, ACT 2601, Australia

ARTICLE INFO

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Climate change
Adaptation
Species selection
Database
Management

ABSTRACT

Understanding tree species climatic adaptability, as well as climatic conditions within their natural distributions, is crucial for managing forests for both commercial and conservation objectives under climate change. Multi-million dollar investments in biodiversity databases are providing forestry professionals with freely accessible tools to carry out these kinds of analyses for many tree species. The climatic requirements of hundreds of tree species have been described in the commercially available Forestry Compendium developed by CAB International, but these descriptions have often relied on expert opinion where information is lacking. It is desirable that descriptions of tree species climatic requirements should, as far as possible, be explicit, quantitative and based on specific observations. This paper describes how the Atlas of Living Australia (ALA) and the Global Biodiversity Information Facility (GBIF) can provide specific observations to assist verifying and, where necessary, improving descriptions of tree species climatic requirements. It focuses mainly on Australian species as the ALA is one of the most sophisticated biodiversity databases currently available for a single country. However, the ALA also has international relevance as Australian eucalypts and acacias are important plantation species in many countries. Data in the GBIF complement the ALA data by providing very useful information on where Australian tree species are growing outside Australia. Analyses of a commercially important species (*Eucalyptus nitens*) and a lesser-known species (*E. botryoides*) demonstrate how descriptions of climatic requirements can be verified and, if necessary, improved. However, the general methods described have

Introdu

Part 1 of
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Add to Map | Tools | Import | Export | Help

Glycaspis (Glycaspis) brimblecombei

Eucalyptus camaldulensis

Map options | Delete all | Show all | Hide all

Glycaspis (Glycaspis) brimblecombei

Layer name: Glycaspis (Glycaspis) brimblec | Rename

Display as: Density grid | Points

Facet: User defined colour

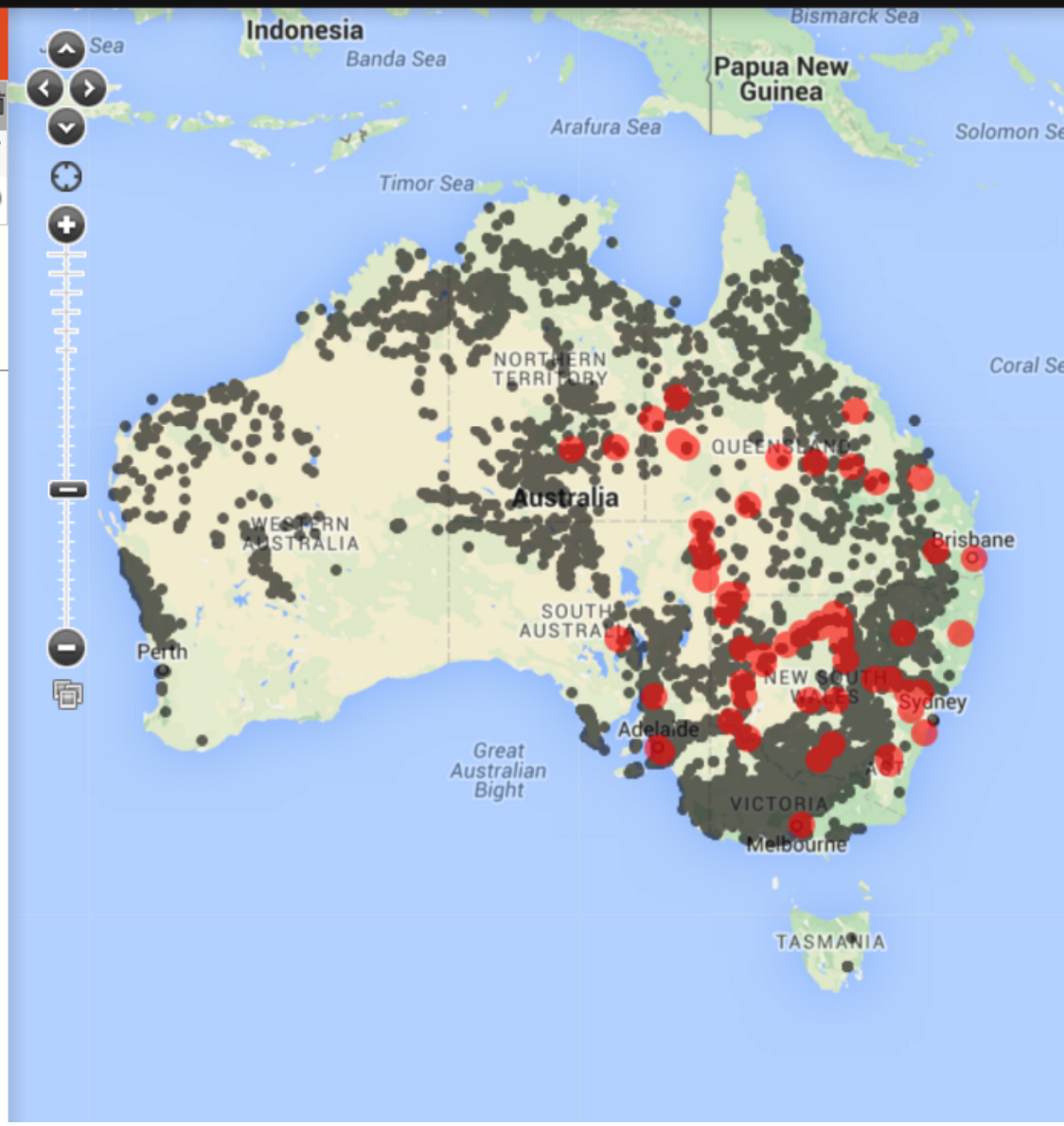
more

Opacity: 60%

Size: 7

Display spatial uncertainty as a circle

Animation: show



Phylolink

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Phylolink

Overview

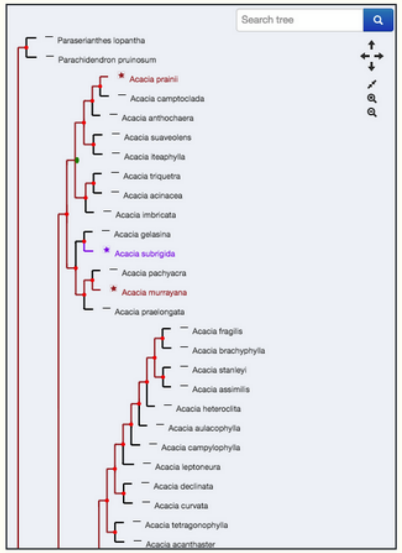
Phylolink is a collection of tools through which biodiversity can be explored from a phylogenetic (or tree of life) perspective.

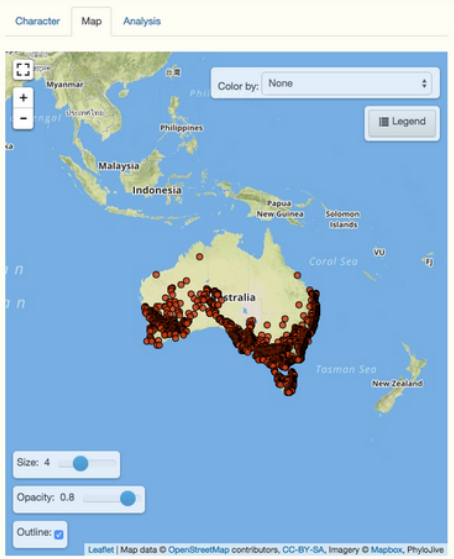
At the core of these tools is the ability to easily intersect a phylogenetic tree with species occurrence records, environmental data, and species character information.

The result is powerful ways of combining data to generate flexible and customisable visualisations, profiles and metrics for biodiversity.

Start Phylolink

Explore Phylogenetic Diversity





Collaborators and acknowledgement:

These tools are the result of a collaboration between scientists, the creators of PhyloJIVE and the Atlas of Living Australia. The tools have been developed by Temi Varghese, Rebecca Pirzl, Adam Collins, Nick dos Remedios and Dave Martin, with advice from Joe Miller, Craig Moritz, Dan Rosauer and Garry Jolley-Rogers.

Phylolink

Phylolink DOES

- Import trees
- Import characters
- Map taxa
- Select characters
- Map characters
- See environmental ranges for clades
- Look at Phylogenetic Diversity

Phylolink DOESN'T

- Create trees on the fly

Phylolink

Overview

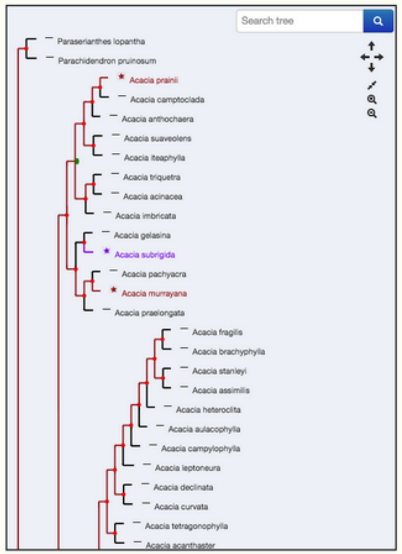
Phylolink is a collection of tools through which biodiversity can be explored from a phylogenetic (or tree of life) perspective.

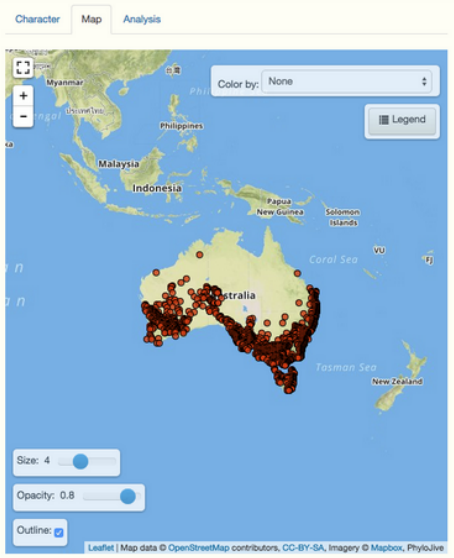
At the core of these tools is the ability to easily intersect a phylogenetic tree with species occurrence records, environmental data, and species character information.

The result is powerful ways of combining data to generate flexible and customisable visualisations, profiles and metrics for biodiversity.

Start Phylolink

Explore Phylogenetic Diversity





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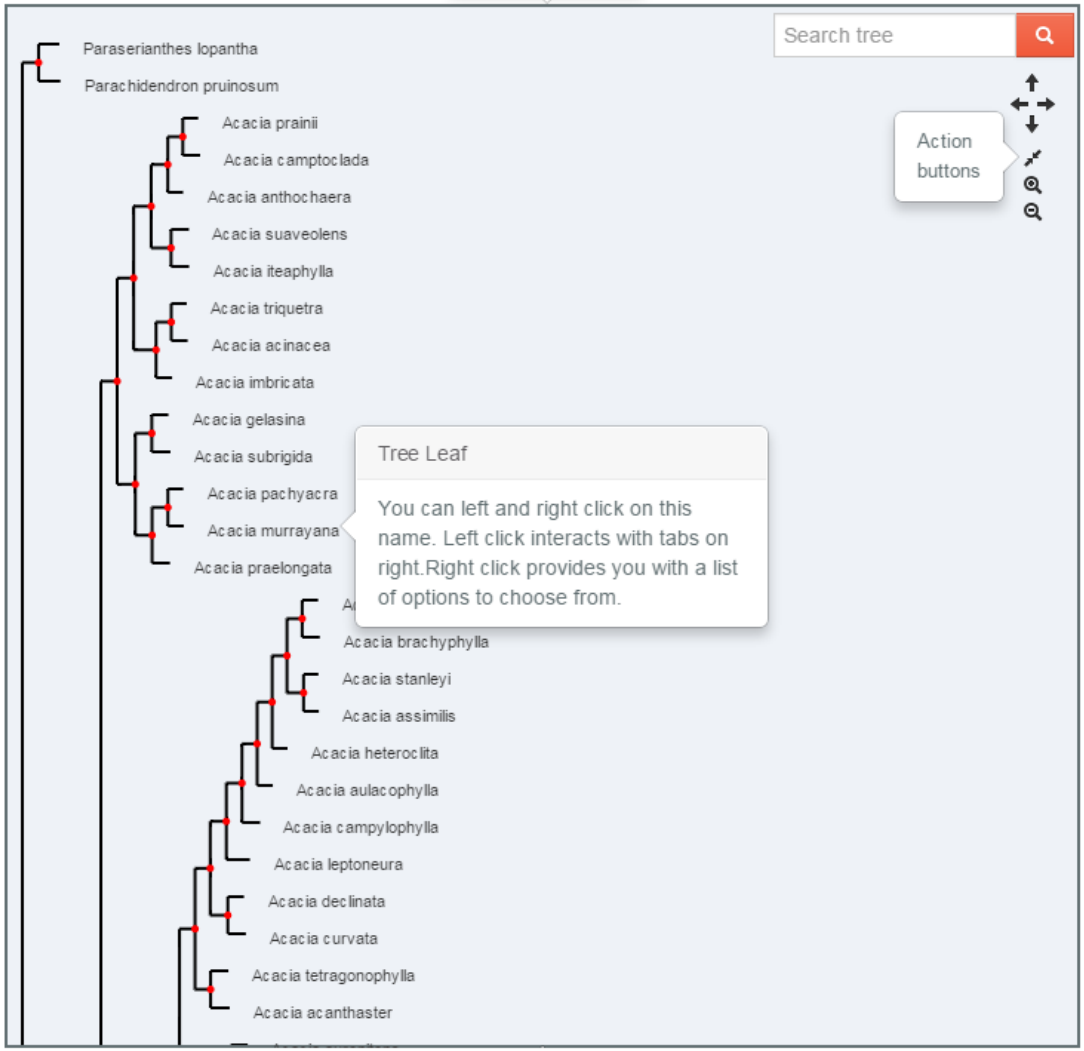
My viz #339

Okay, got it!



Okay, got it!

Character | Map | Analysis | Help

Upload your own character set.

Upload your character data

Select from a list of available character data. It could be a default list of characters , or character data uploaded by you.

Or, pick a character

List of characters available: Choose..

Note

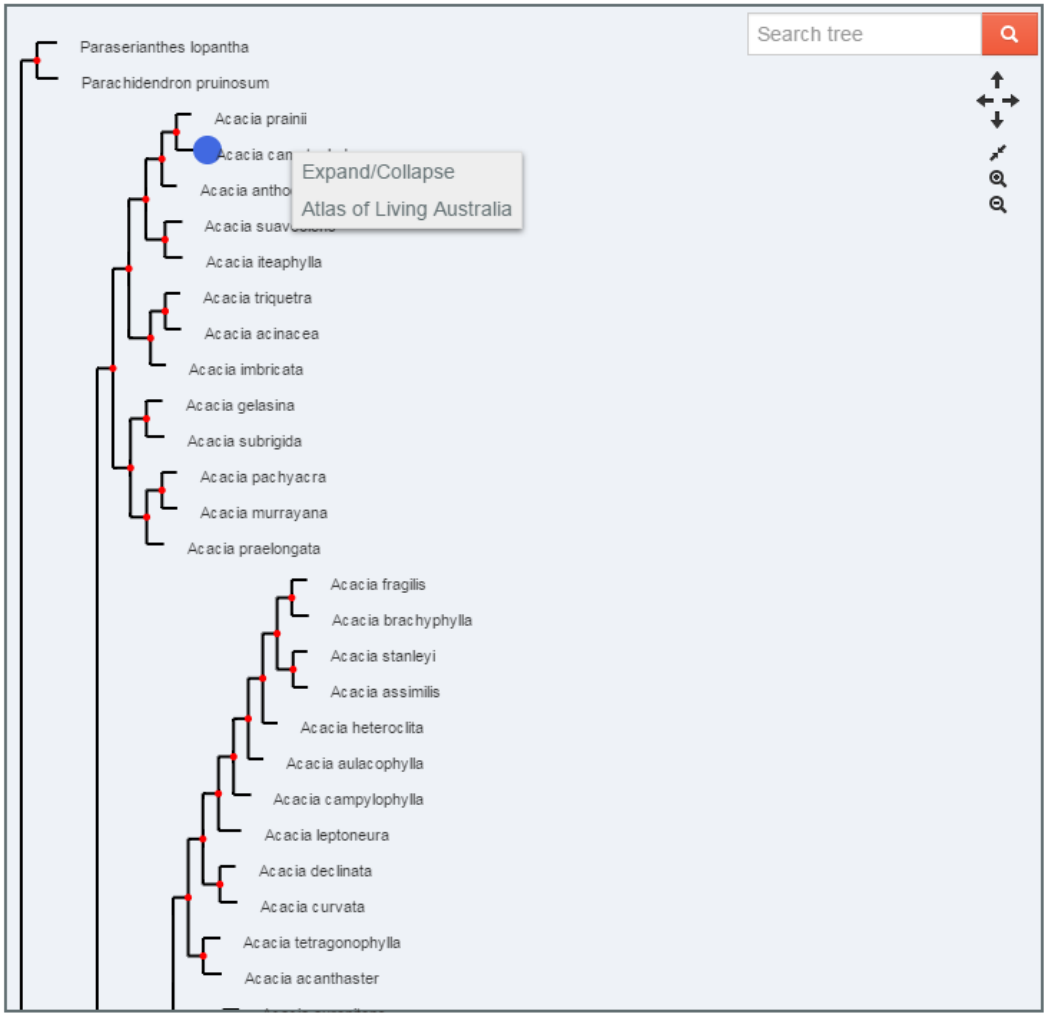
First, select a character dataset from the given list, or upload your character d

Character to Tree button. Tree branch color is determined by the first charact

using a character either drag that character to the top of the list, or edit the fir

character.

My viz #339



Character | Map | Analysis | Help

Upload your character data

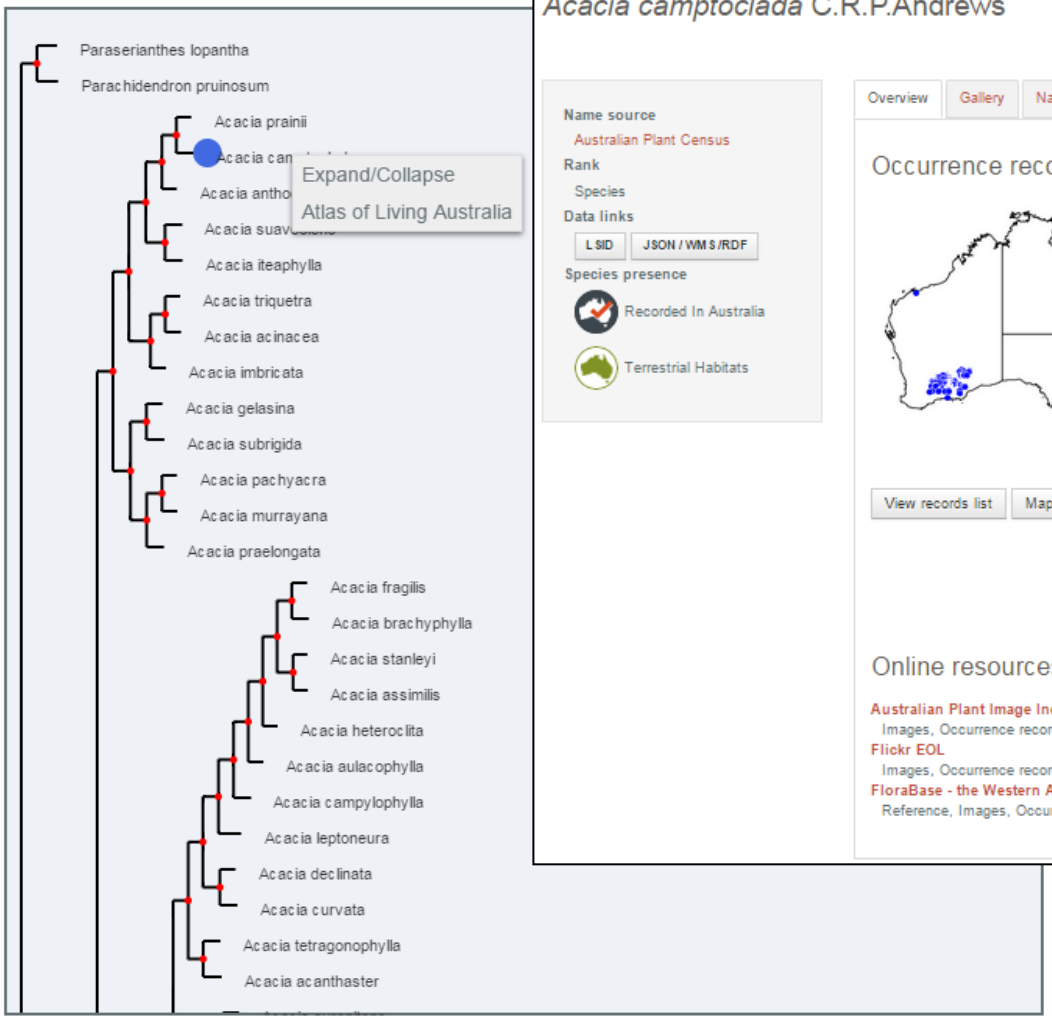
Or, pick a character dataset from the available list:

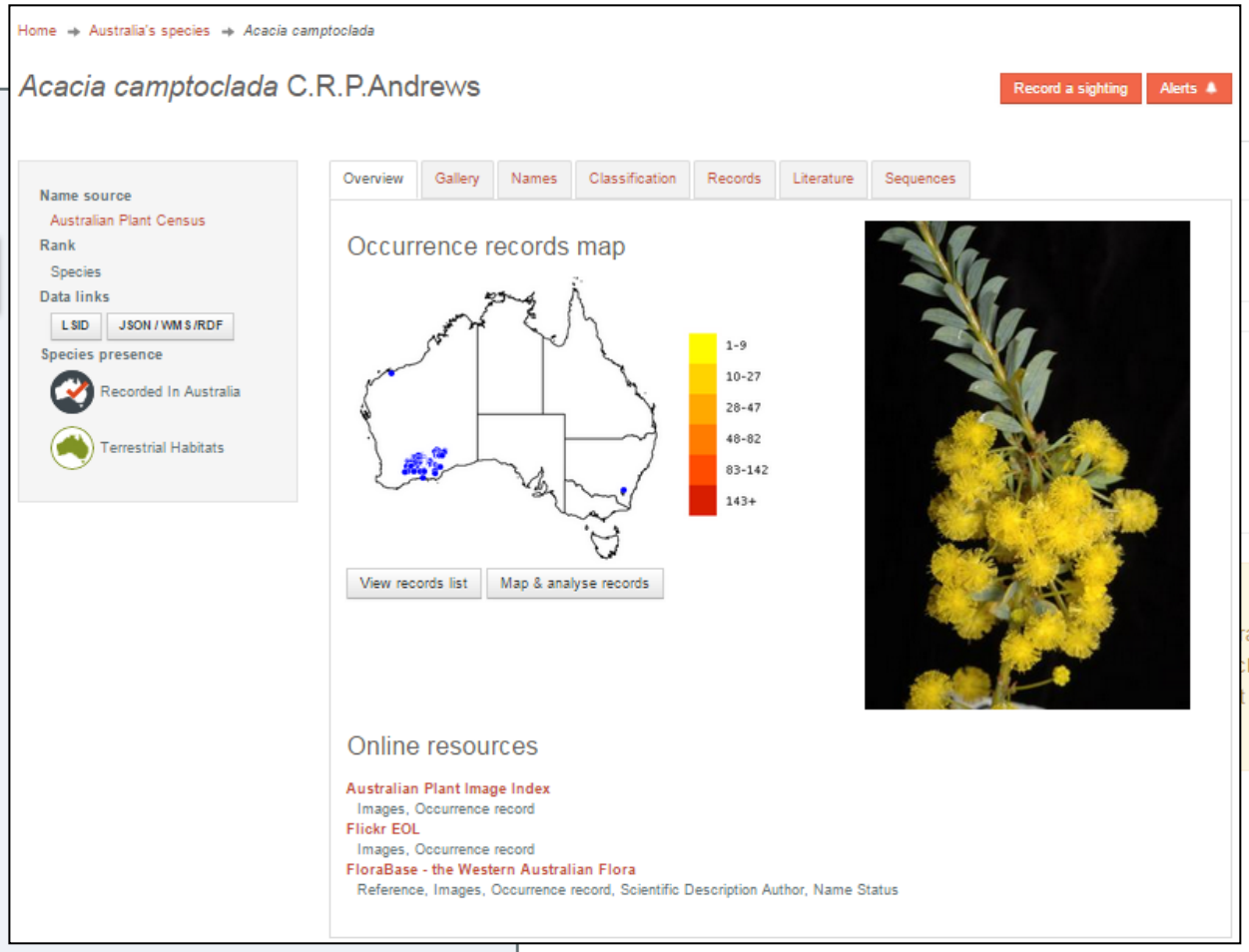
List of characters available: Choose..

Note

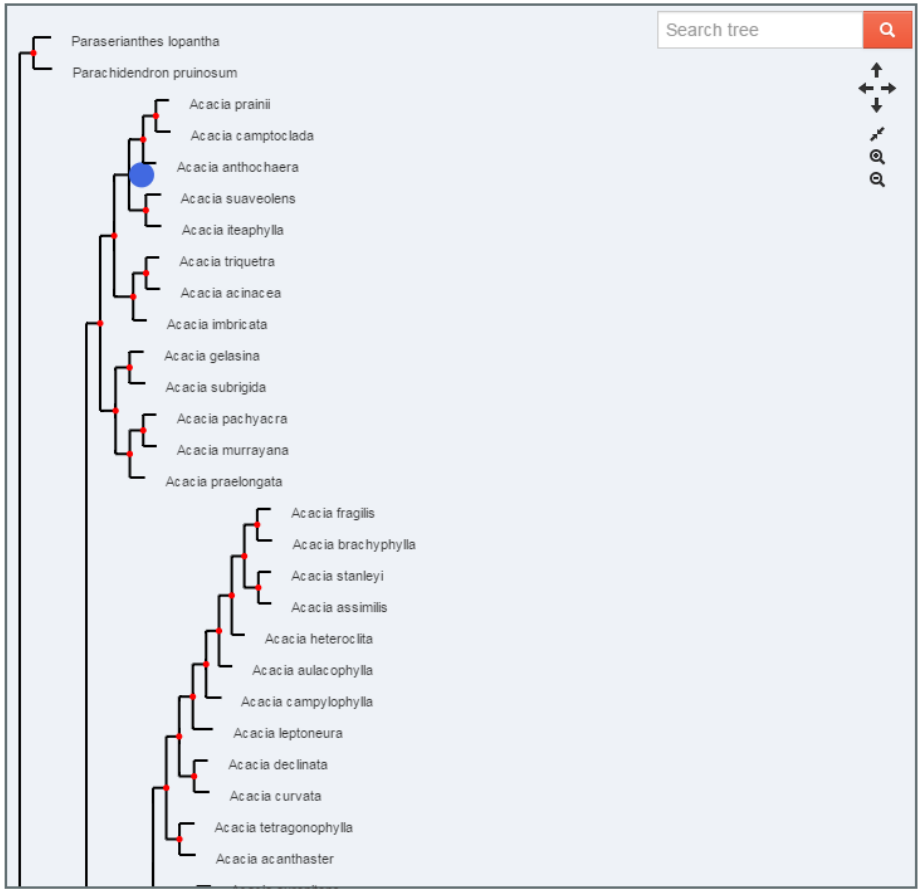
First, select a character dataset from the given list, or upload your character data. *Character to Tree* button. Tree branch color is determined by the first character on using a character either drag that character to the top of the list, or edit the first ch character.

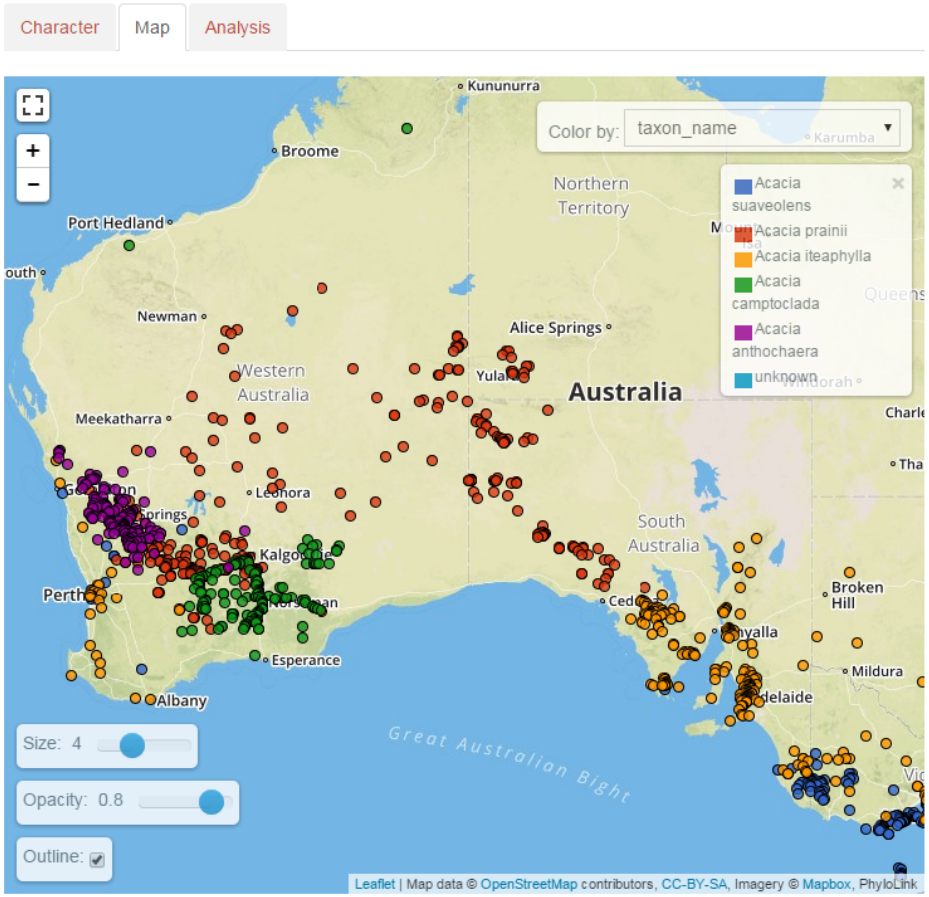
My viz #339


Paraserianthes lopantha
Parachidendron pruinosum
Acacia prainii
Acacia anthoc
Acacia suavc
Acacia iteaphylla
Acacia triquetra
Acacia acinacea
Acacia imbricata
Acacia gelasina
Acacia subrigida
Acacia pachyacra
Acacia murrayana
Acacia praelongata
Acacia fragilis
Acacia brachyphylla
Acacia stanleyi
Acacia assimilis
Acacia heteroclita
Acacia aulacophylla
Acacia campylophylla
Acacia leptoneura
Acacia declinata
Acacia curvata
Acacia tetragonophylla
Acacia acanthaster
Expand/Collapse
Atlas of Living Australia


Home → Australia's species → Acacia camptoclada
Acacia camptoclada C.R.P.Andrews
Record a sighting
Alerts
Name source
Australian Plant Census
Rank
Species
Data links
LSID
JSON / WMS / RDF
Species presence
Recorded In Australia
Terrestrial Habitats
Overview
Gallery
Names
Classification
Records
Literature
Sequences
Occurrence records map
1-9
10-27
28-47
48-82
83-142
143+
View records list
Map & analyse records
Online resources
Australian Plant Image Index
Images, Occurrence record
Flickr EOL
Images, Occurrence record
FloraBase - the Western Australian Flora
Reference, Images, Occurrence record, Scientific Description Author, Name Status

My viz #122





- ALA's new phylogenetic tools integrate phylogenetic trees and spatial mapping so that phylogenies can be represented spatially by, for example species occurrence or character. Here, the occurrence of Acacia species from the clade highlighted by the blue node is mapped and coloured by species.

My viz #122

Character | Map | Analysis

Upload your character data

Or, pick a character dataset from the available list:

List of characters available: Acacia Characters

Add Character to Tree

Inflorescence_shape ✖
Inflorescence_colour ✖
Phyllode_arrangement ✖
Inflorescence_arrangement ✖

Inflorescence_shape

My viz #122

Character | Map | Analysis

Upload your character data

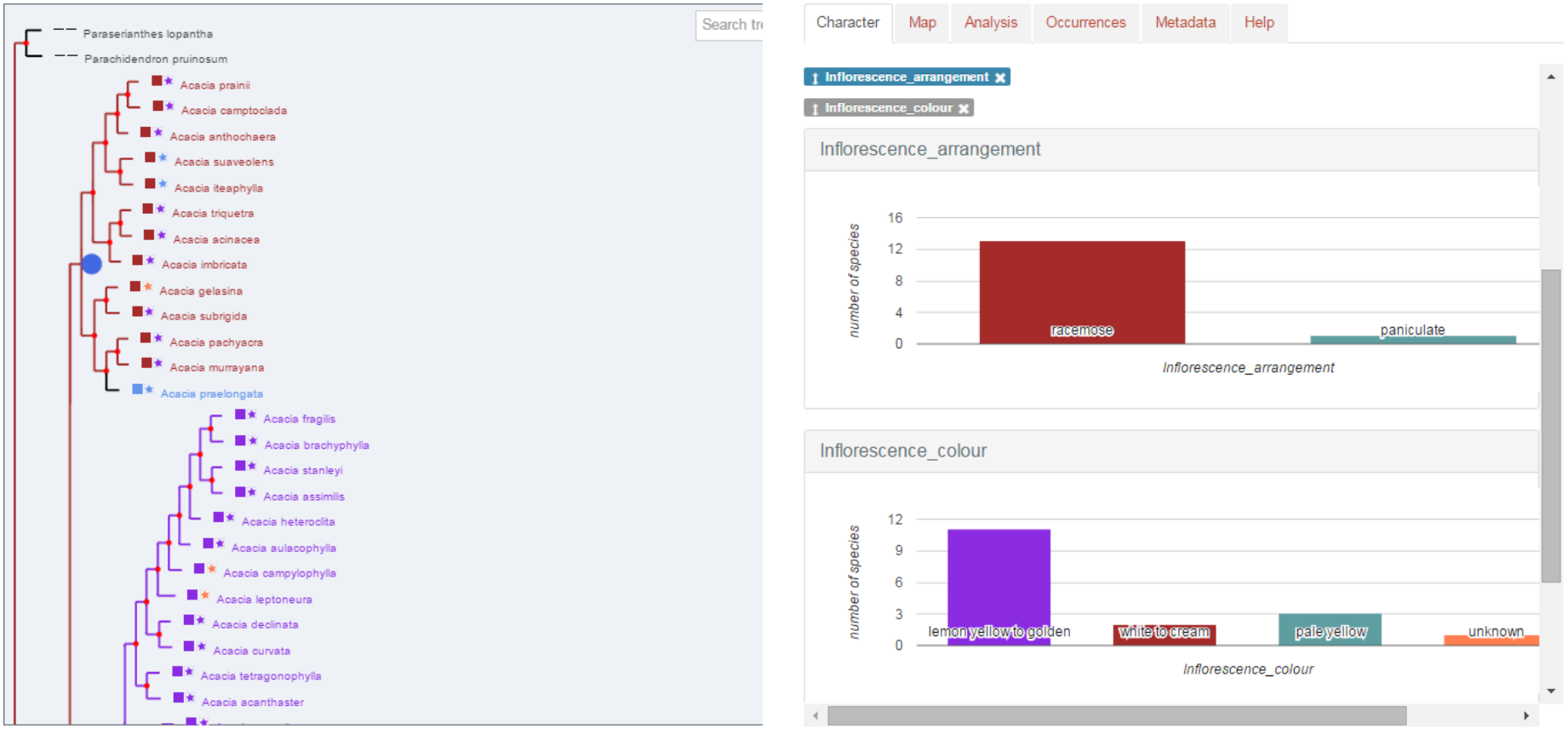
Or, pick a character dataset from the available list:

List of characters available: Acacia Characters

Add Character to Tree

Inflorescence_shape ✖
Inflorescence_colour ✖
Phyllode_arrangement ✖
Inflorescence_arrangement ✖

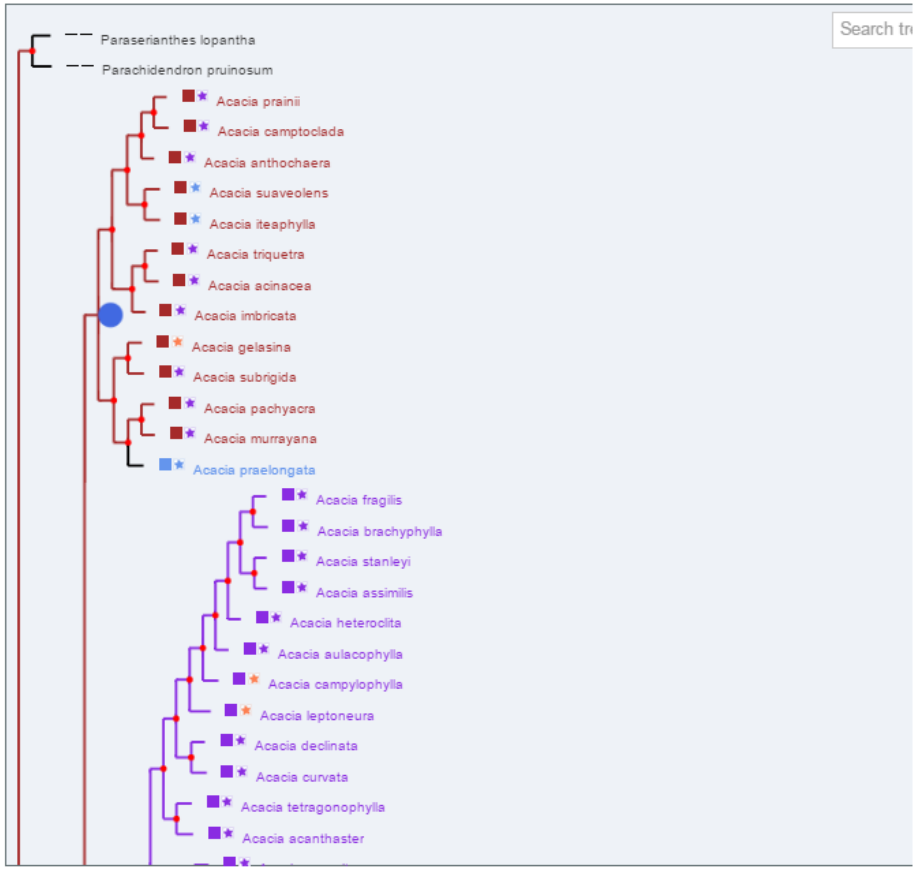
Inflorescence_shape

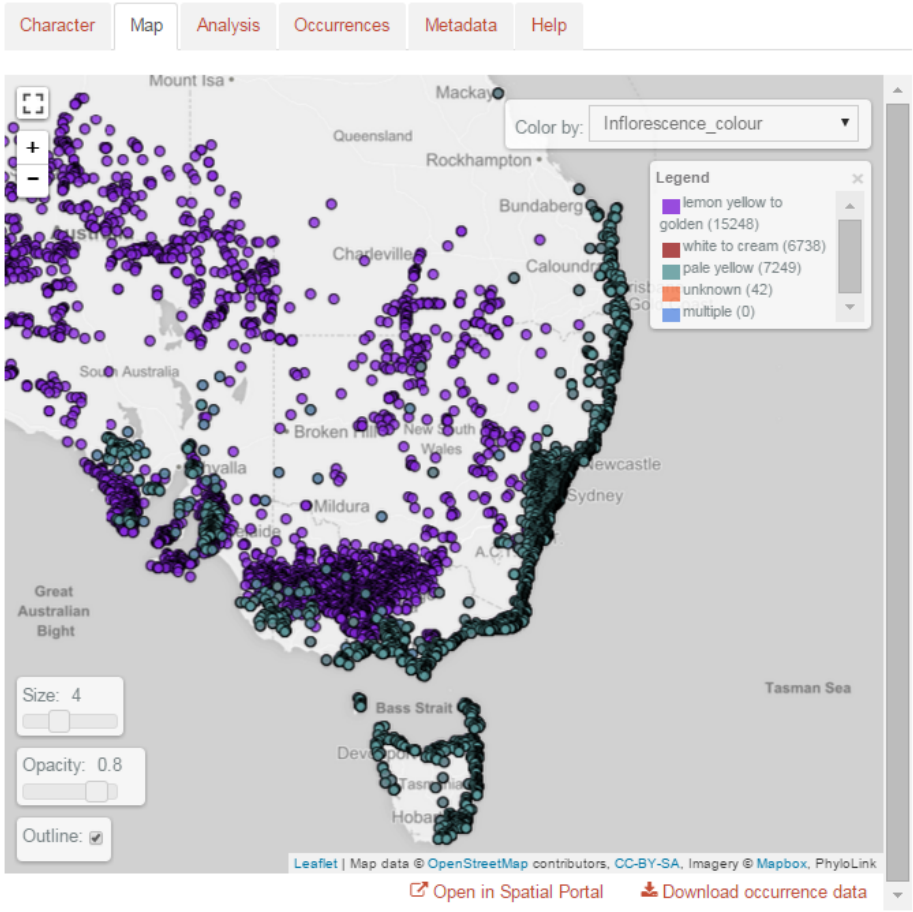


- Caption: A phylogenetic tree for *Acacia* is mapped with characters (inflorescence arrangement and colour), and the prevalence of those characters in the selected clade is plotted.

Atlas of Living Australia (All data)
13 taxa selected

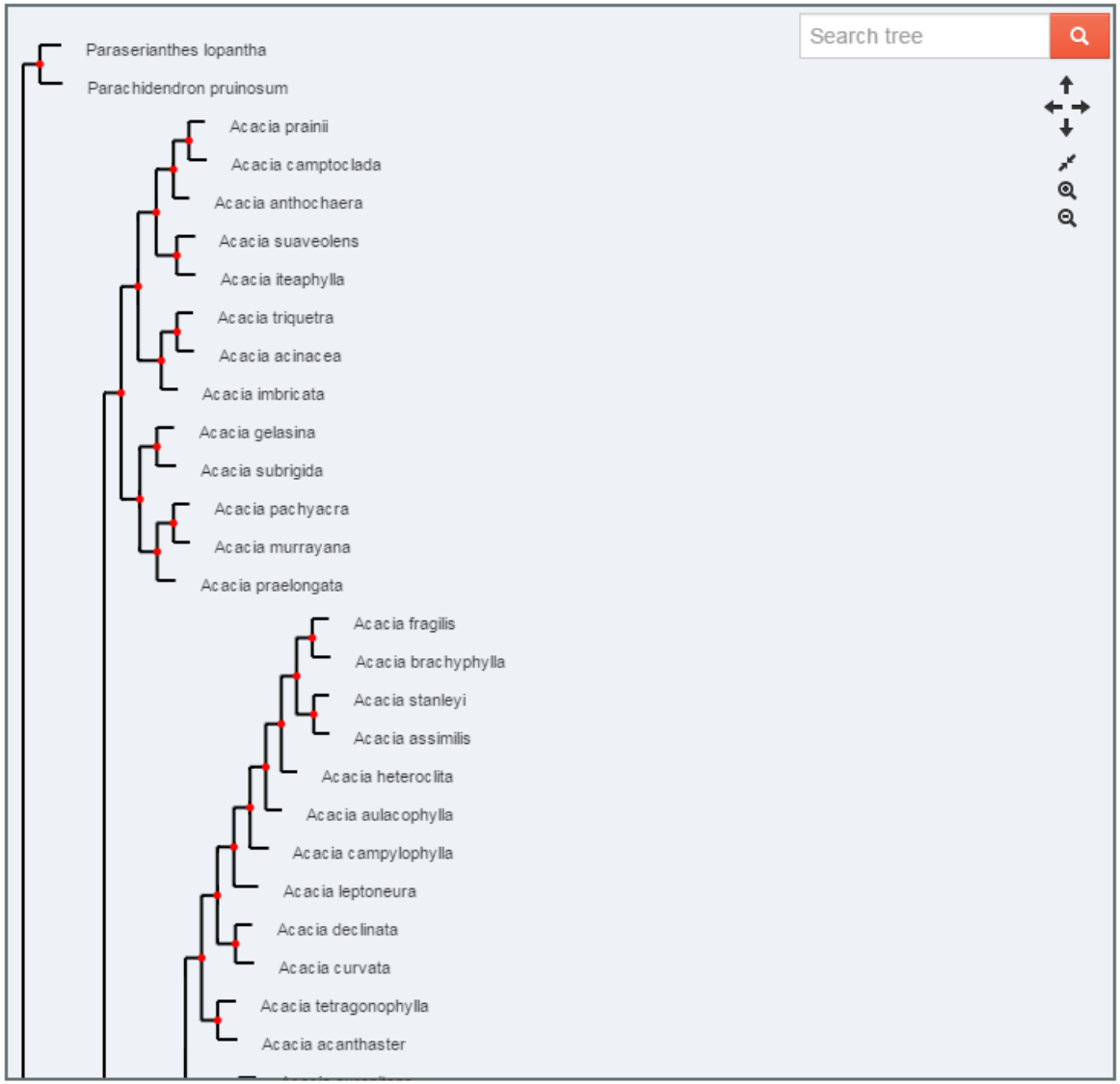
My viz #221





- ALA's new phylogenetic tools integrate phylogenetic trees and spatial mapping so that phylogenies can be represented spatially by, for example species occurrence or character. Here, the occurrence of Acacia species from the clade highlighted by the blue node is mapped and coloured by inflorescence colour.

My viz #329



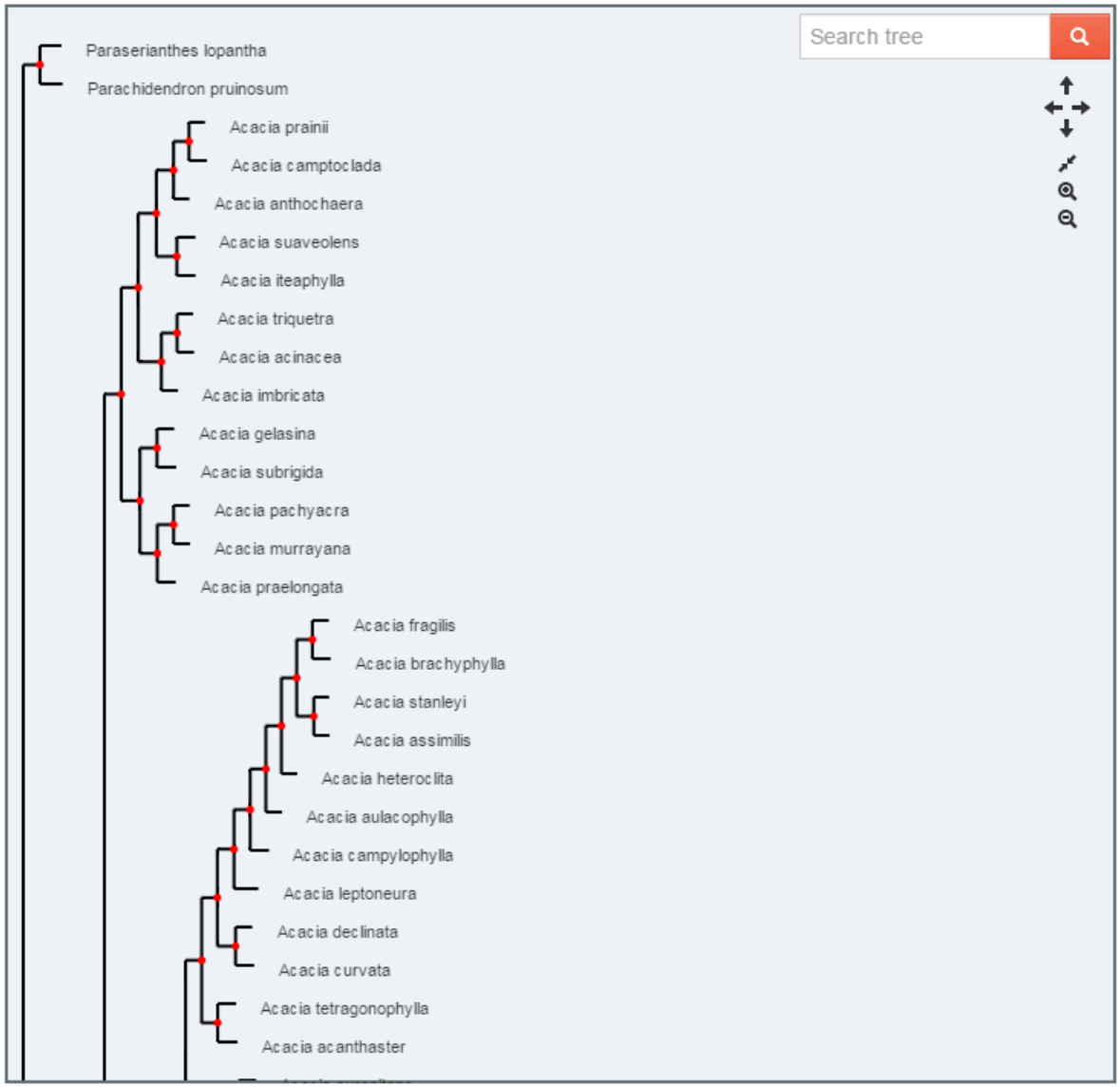
Character | Map | Analysis | Help

Plot profile

Note

You can click on *Plot profile* button to find out the enviro
temperature etc. of a clade. You can pick the environm
list by typing into the input box.

My viz #329



Character | Map | Analysis | Help

Plot profile

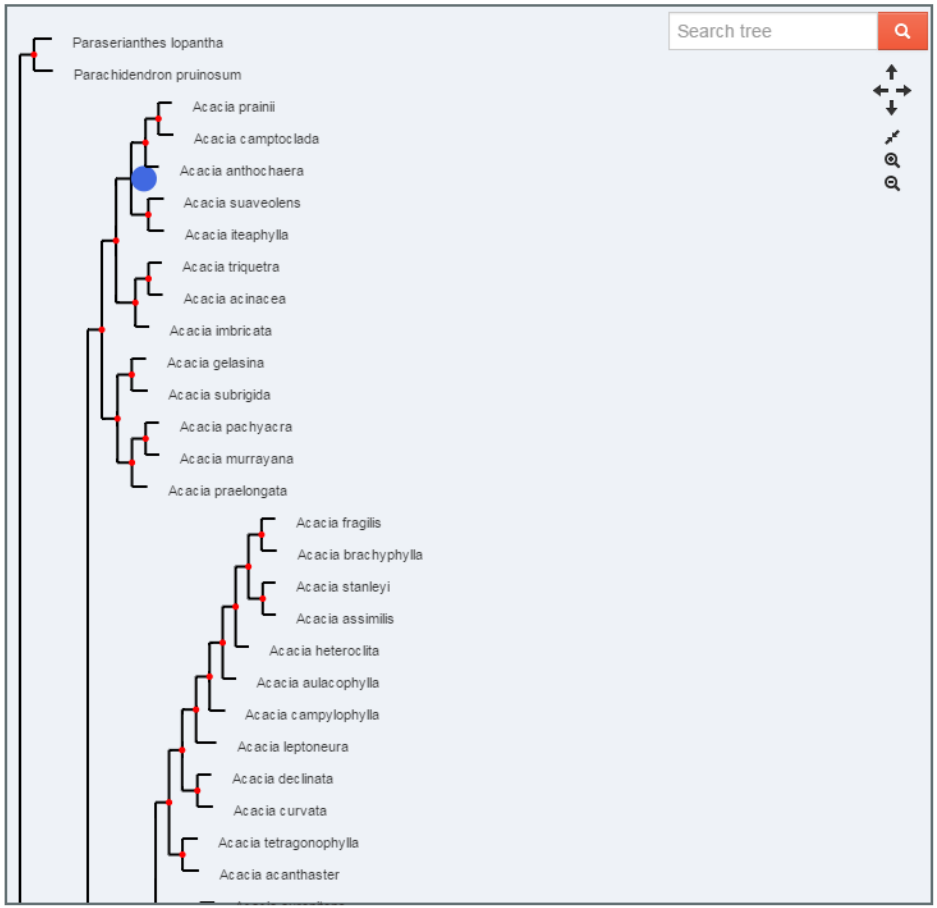
Precipitation - annual (Bio12)

Precipitation - annual (Bio12)

Note

You can click on *Plot profile* button to find out t
temperature etc. of a clade. You can pick the e
list by typing into the input box.

My viz #329

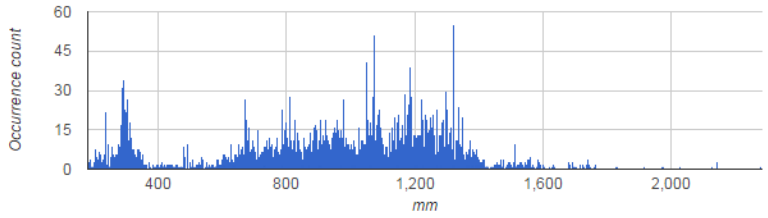


Character | Map | Analysis | Help

Plot profile

Precipitation - annual (Bio12)

Precipitation - annual (Bio12)



Note

You can click on *Plot profile* button to find out the environmental characteristics like precipitation, temperature etc. of a clade. You can pick the environmental parameter from the drop down list, or filter the list by typing into the input box.

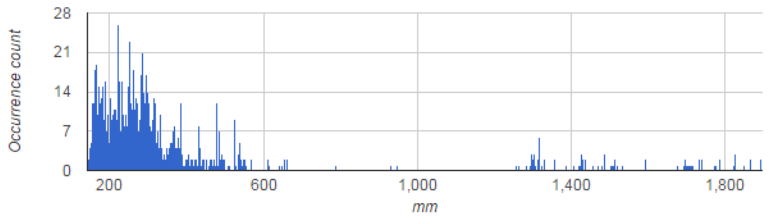
My viz #329

Character | Map | Analysis | Help

Plot profile

Precipitation - annual (Bio12)

Precipitation - annual (Bio12)



Note

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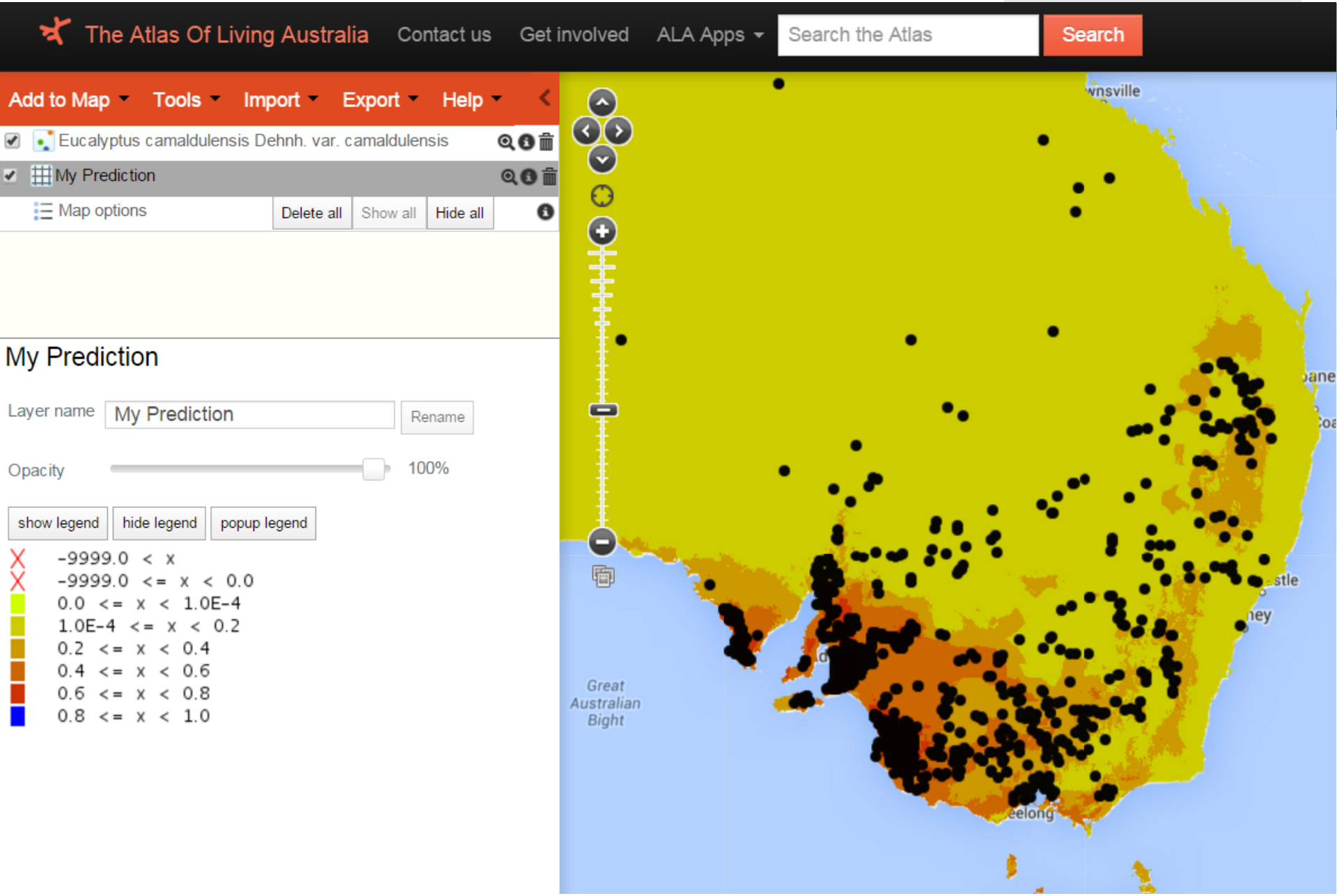
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Layer name
My Prediction
Rename
Opacity
100%
show legend
hide legend
popup legend
-9999.0 < x
-9999.0 <= x < 0.0
0.0 <= x < 1.0E-4
1.0E-4 <= x < 0.2
0.2 <= x < 0.4
0.4 <= x < 0.6
0.6 <= x < 0.8
0.8 <= x < 1.0
Great Australian Bight

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- My Scatterplot
- Eucalyptus camaldulensis
- Precipitation - annual
- Temperature - annual max mean
- Map options | Delete all | Show all | Hide all

My Scatterplot

Species display settings | Download image | Download data

Records selected: 123 | add in/out layers to map

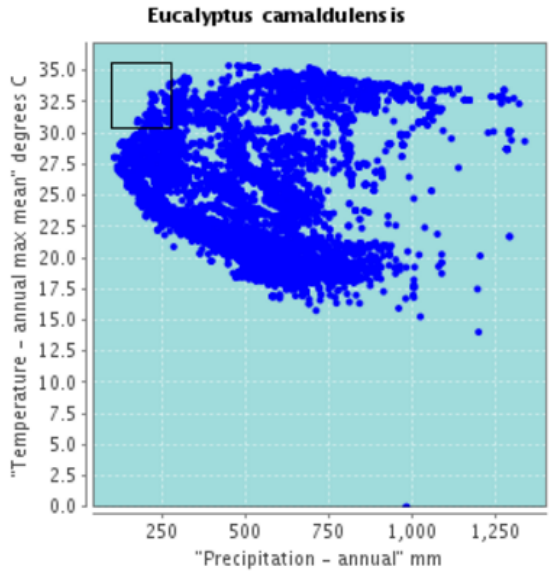
Precipitation - annual: 97.2999 - 276.497

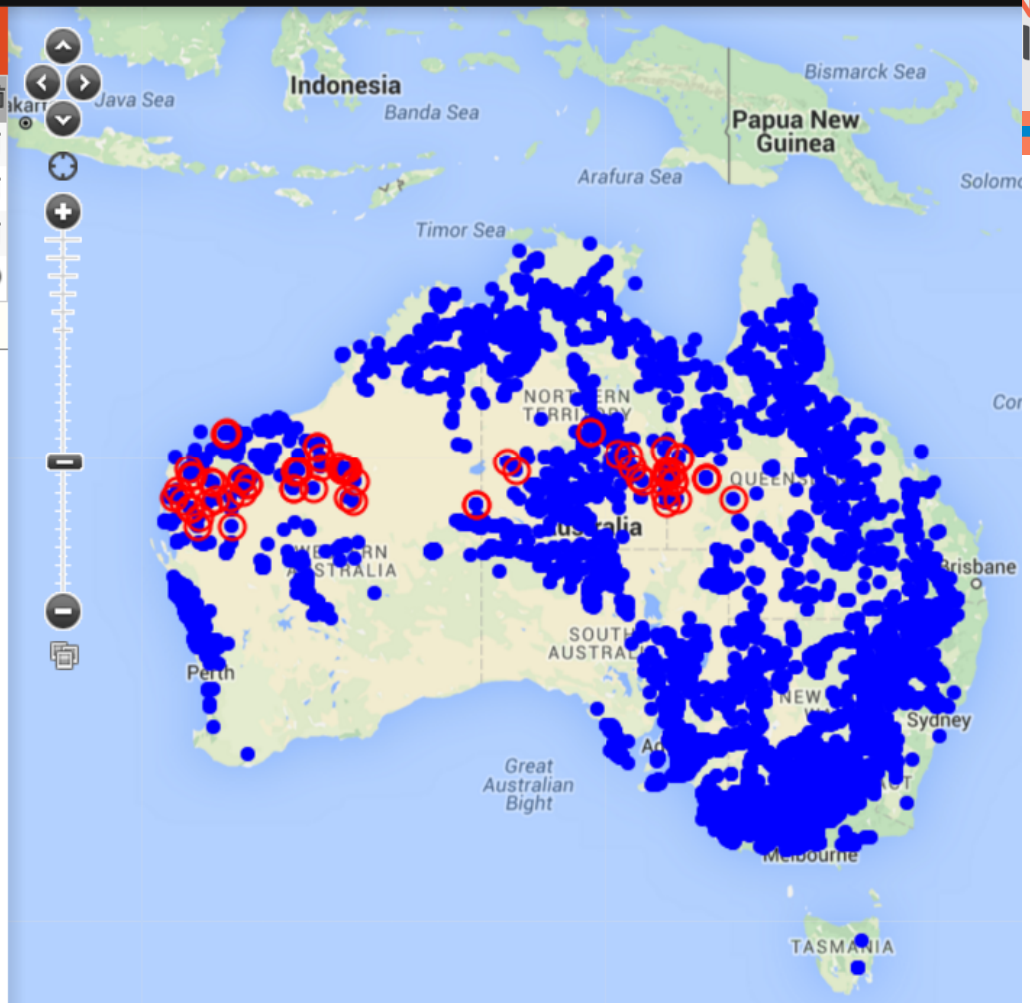
Temperature - annual max mean: 30.4647 - 35.6939

SELECT records with missing values (268)

Highlight occurrences on the scatterplot that are in an area

Clear





Quick links

View metadata for "Eucalyptus camaldulensis"

Download all records for "Eucalyptus camaldulensis"

Produce scatterplot for "Eucalyptus camaldulensis"

Temperature - annual max mean

Map options | Delete all | Show all | Hide all

My Scatterplot

Species display settings | Download image | Download data

Records selected: 123 | add in/out layers to map

Precipitation - annual: 97.2999 - 276.497

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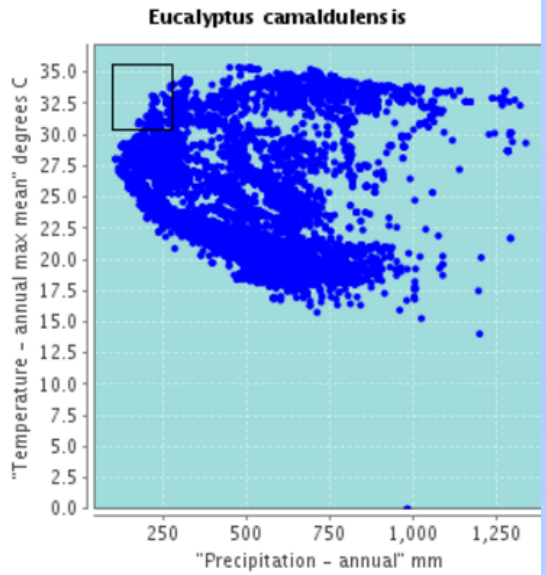

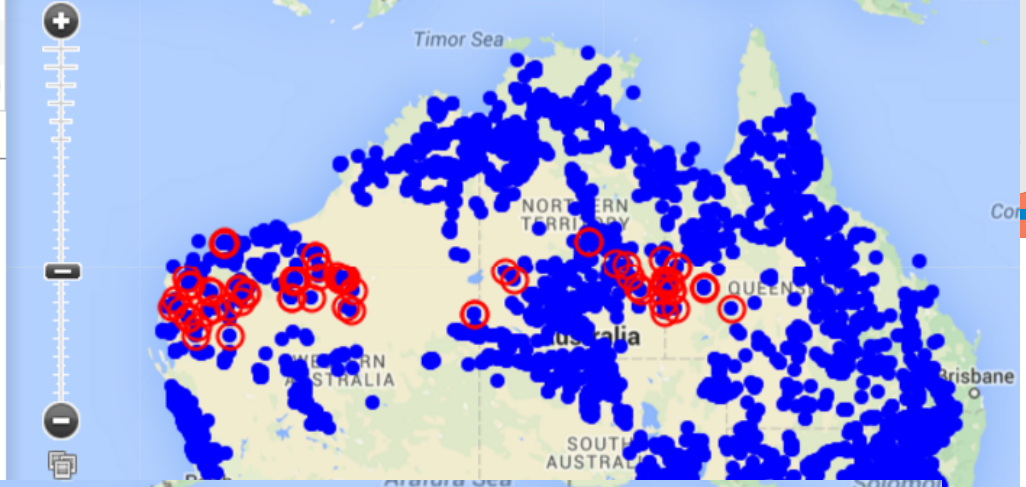

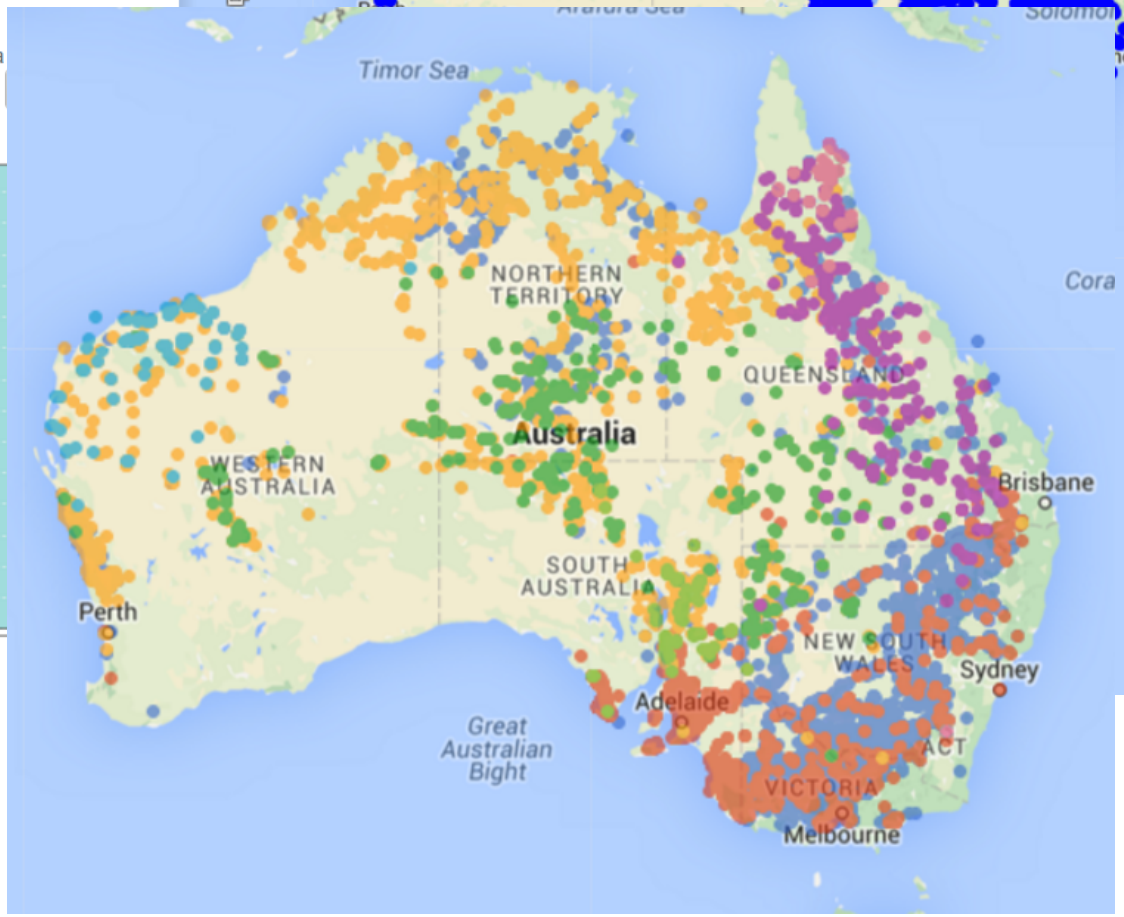

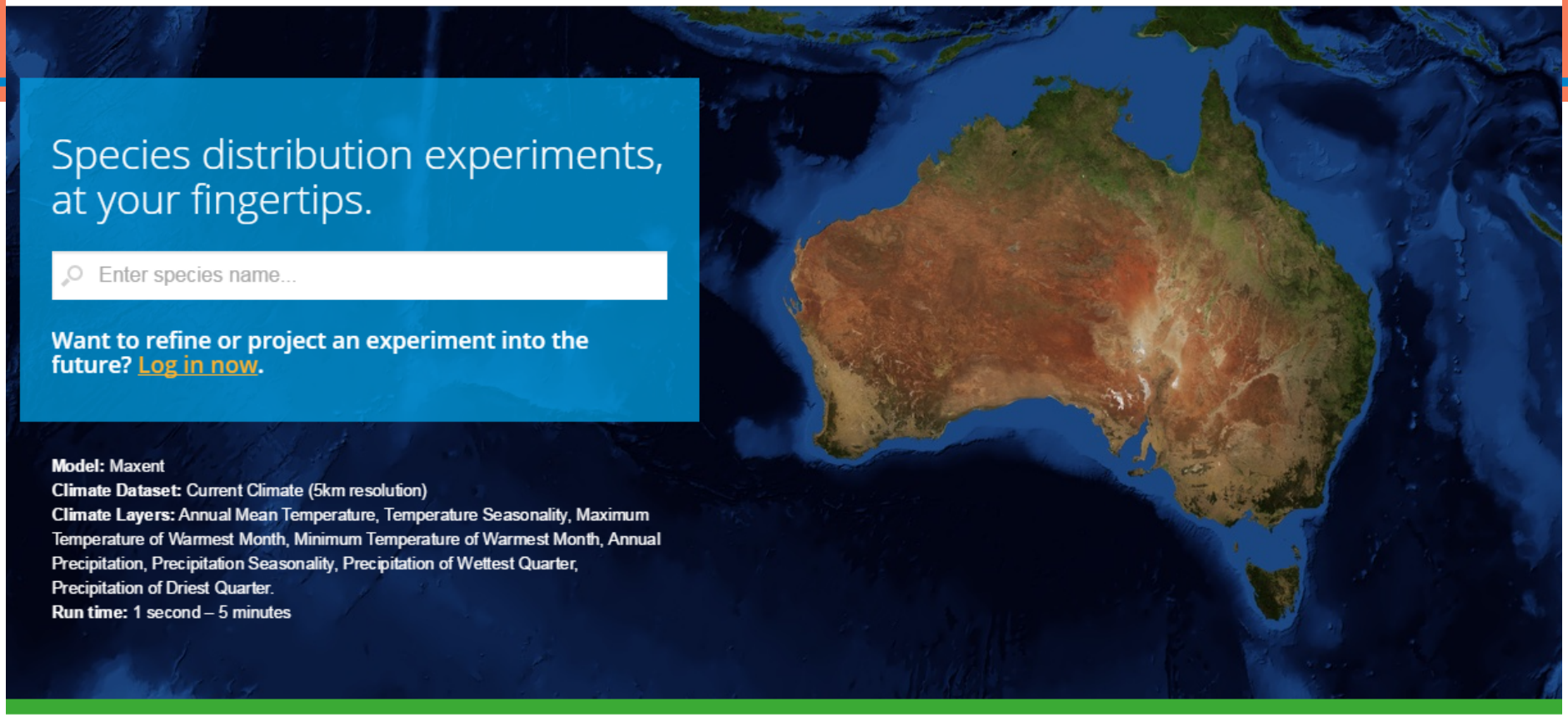

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Datasets

The BCCVL offers a number of data collections that can be utilised when conducting experiments within the BCCVL. Each of these collections has numerous layers and variables. In fact, the total number of datasets available through the BCCVL is over 4500. To keep this simple, below is a list of the data collections at your disposal. To visualise these datasets log in to the BCCVL!

Datasets

Biological

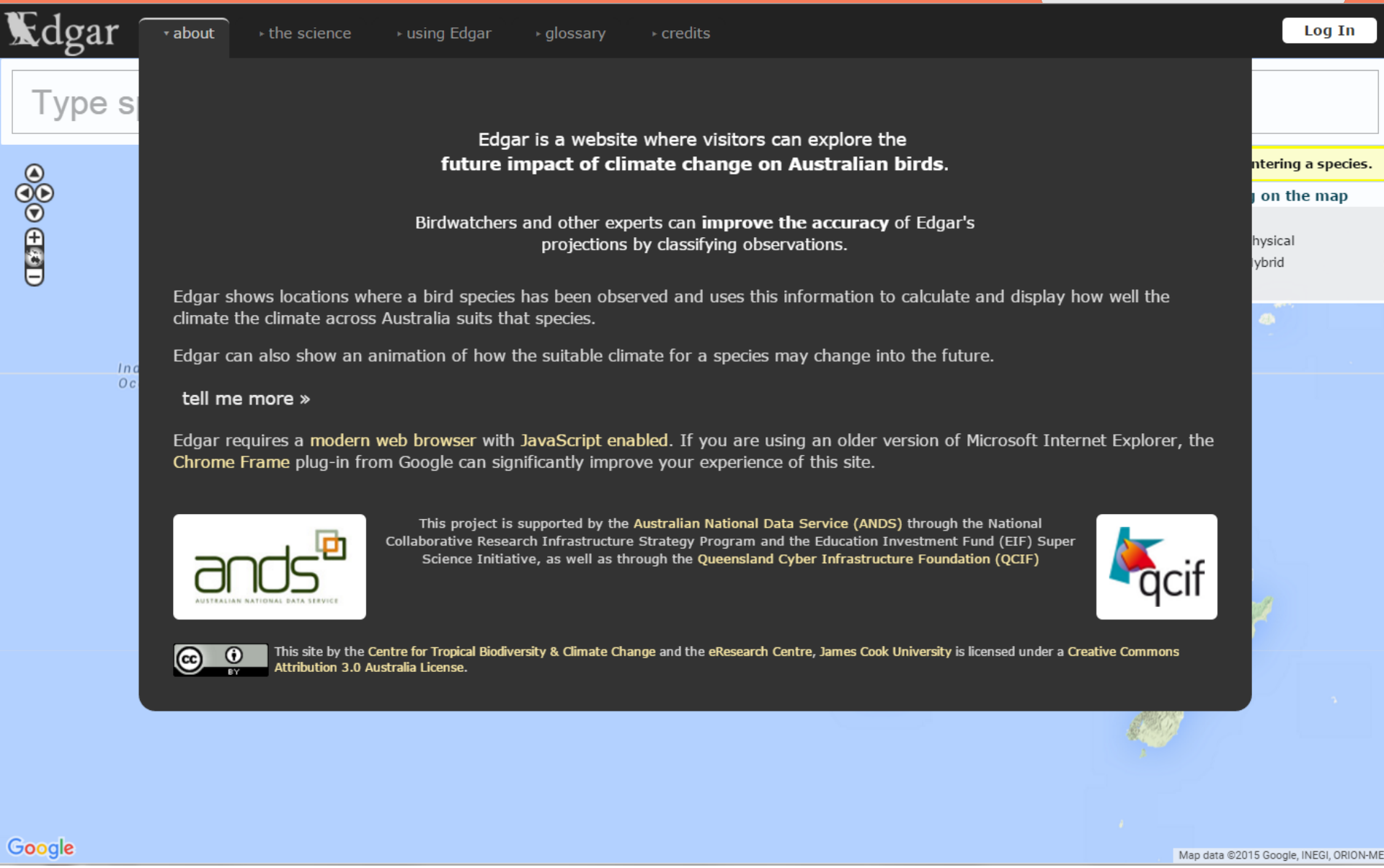
- Species Data from the Australian Living Atlas
- User uploaded species data

Climate

News Articles

A new look and feel for the BCCVL in our latest release

Accelerating research by removing



Edgar is a website where visitors can explore the
future impact of climate change on Australian birds.

Birdwatchers and other experts can **improve the accuracy** of Edgar's projections by classifying observations.

Edgar shows locations where a bird species has been observed and uses this information to calculate and display how well the climate the climate across Australia suits that species.

Edgar can also show an animation of how the suitable climate for a species may change into the future.

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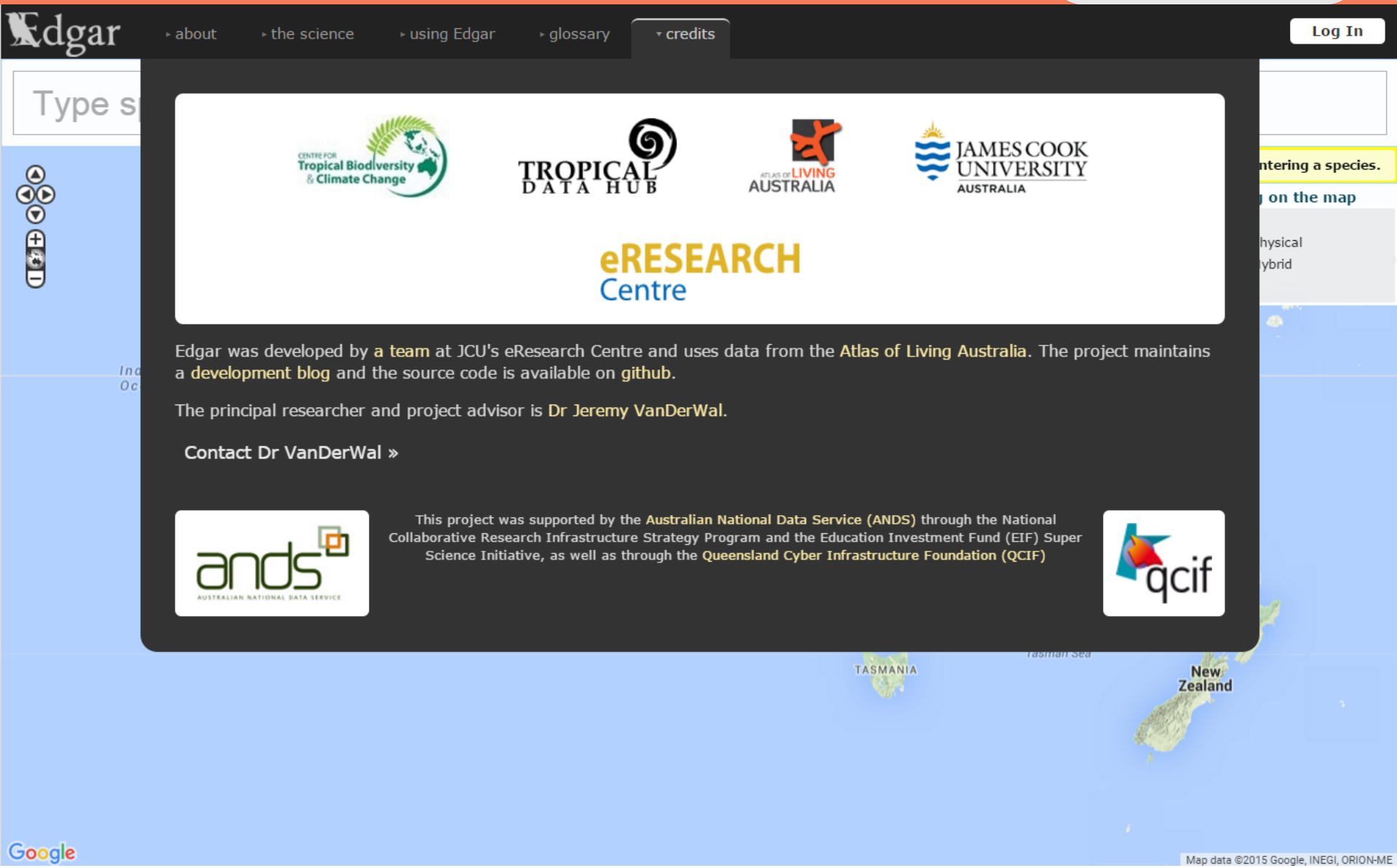
Edgar requires a modern web browser with JavaScript enabled. If you are using an older version of Microsoft Internet Explorer, the Chrome Frame plug-in from Google can significantly improve your experience of this site.

This project is supported by the Australian National Data Service (ANDS) through the National Collaborative Research Infrastructure Strategy Program and the Education Investment Fund (EIF) Super Science Initiative, as well as through the Queensland Cyber Infrastructure Foundation (QCIF)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Edgar was developed by a team at JCU's eResearch Centre and uses data from the Atlas of Living Australia. The project maintains a development blog and the source code is available on github.
The principal researcher and project advisor is Dr Jeremy VanDerWal.
Contact Dr VanDerWal »
ands
AUSTRALIAN NATIONAL DATA SERVICE
This project was supported by the Australian National Data Service (ANDS) through the National Collaborative Research Infrastructure Strategy Program and the Education Investment Fund (EIF) Super Science Initiative, as well as through the Queensland Cyber Infrastructure Foundation (QCIF)
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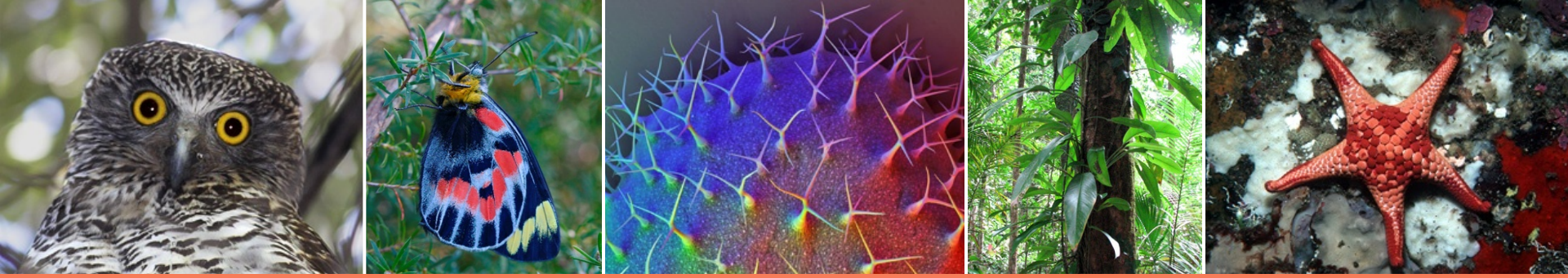

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