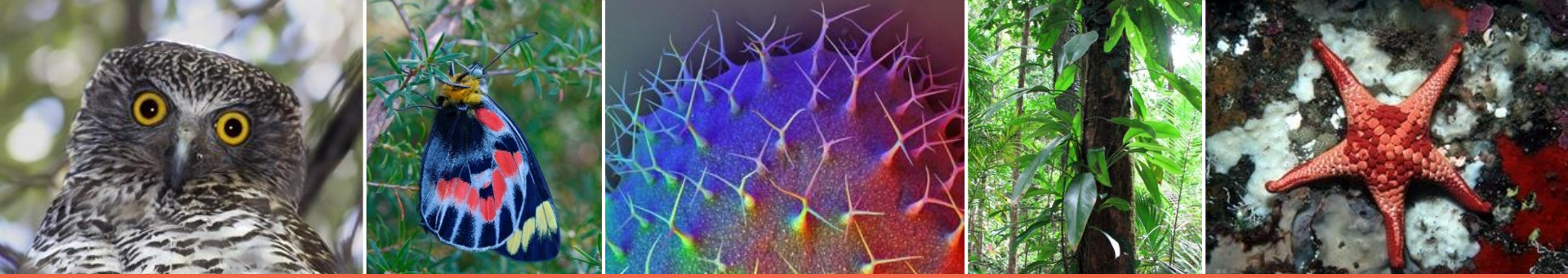


www.ala.org.au

Atlas of Living Australia

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

ALA - overview

- Mission
  - To develop an authoritative, freely accessible, distributed and federated biodiversity data management system

- $45M Australian Government investment
- A collaboration of Partners
- We don’t own data – we aggregate it
- All data open source and freely available
- Built entirely on open-source software
- Everything we’ve built freely available to others

Biodiversity information

Root rot
Phytophthora cinnamomi

Pathogen of

Banksia jewel beetle
Cyrioides imperialis

Larvae mine stems

Feeds upon nectar

Pollinates

New Holland Honeyeater
(Phylidonyris novaehollandiae)

Banksia serrata L.f.

= *Isostylis serrata* (L.f.) Britten

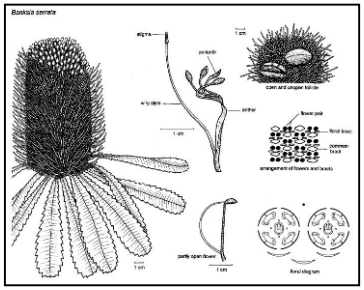
= *Sirmuellera serrata* (L.f.) Kuntze

Old Man Banksia

Saw Banksia

Identified as

Biology and ecology

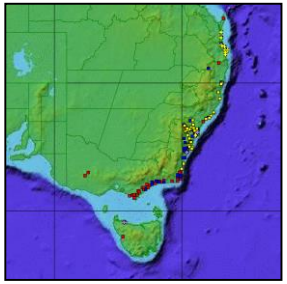


Kingdom: Plantae
Division: Magnoliophyta
Family: Proteaceae
Subfamily: Grevilleoideae
Tribe: Banksieae
Subtribe: Banksiinae
Genus: *Banksia* L.f.

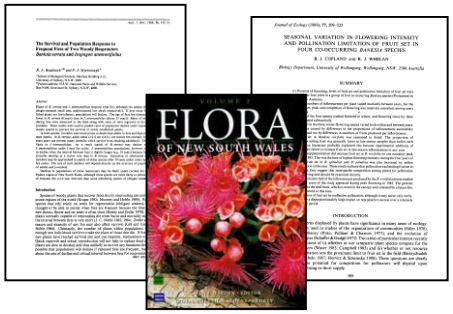
Molecular biology

NCBI

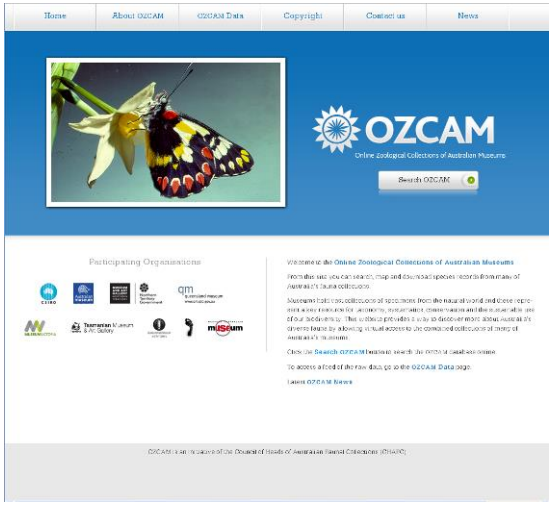
Distribution

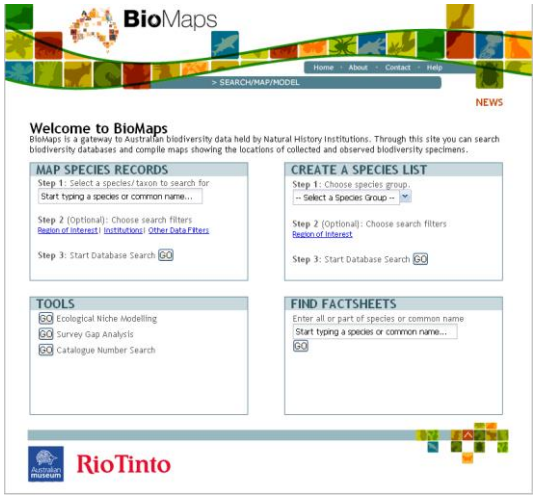


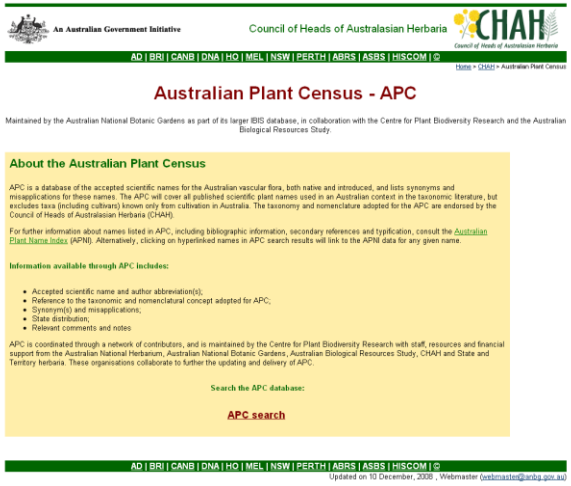
Literature

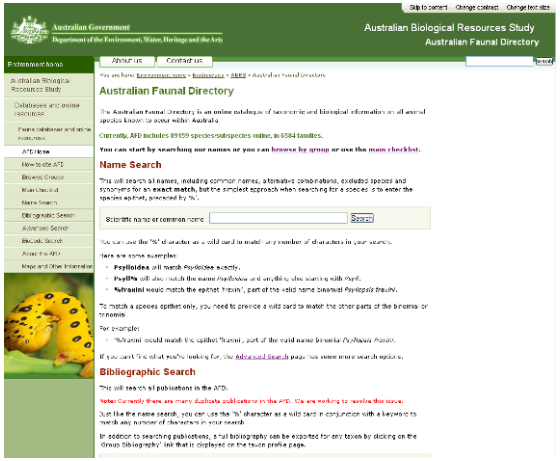


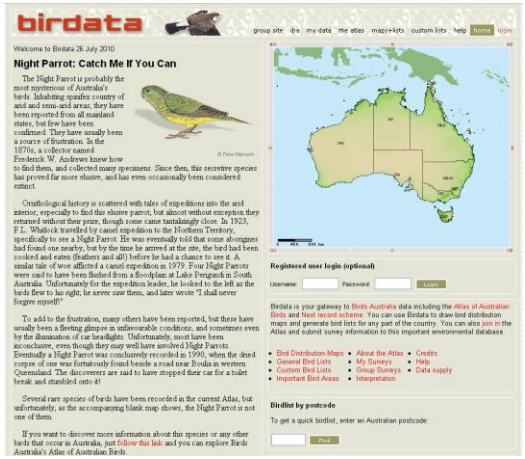
Building on the work of others



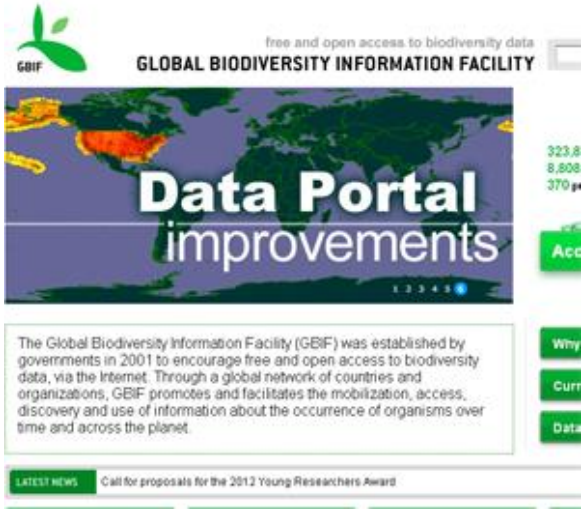


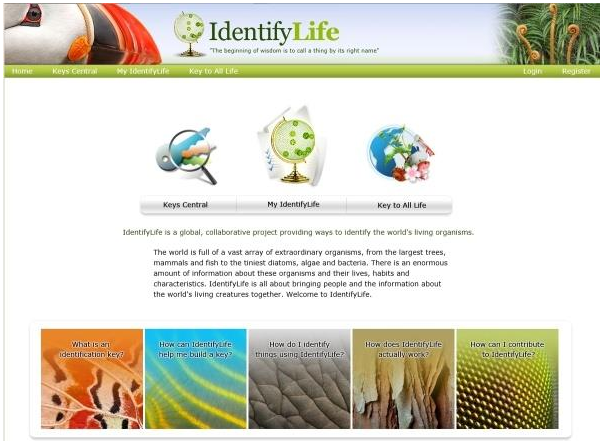


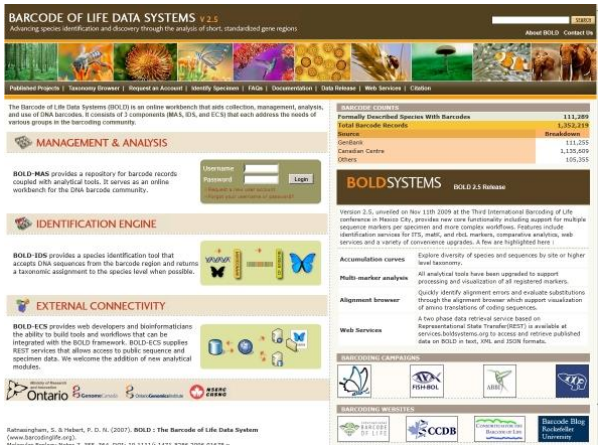




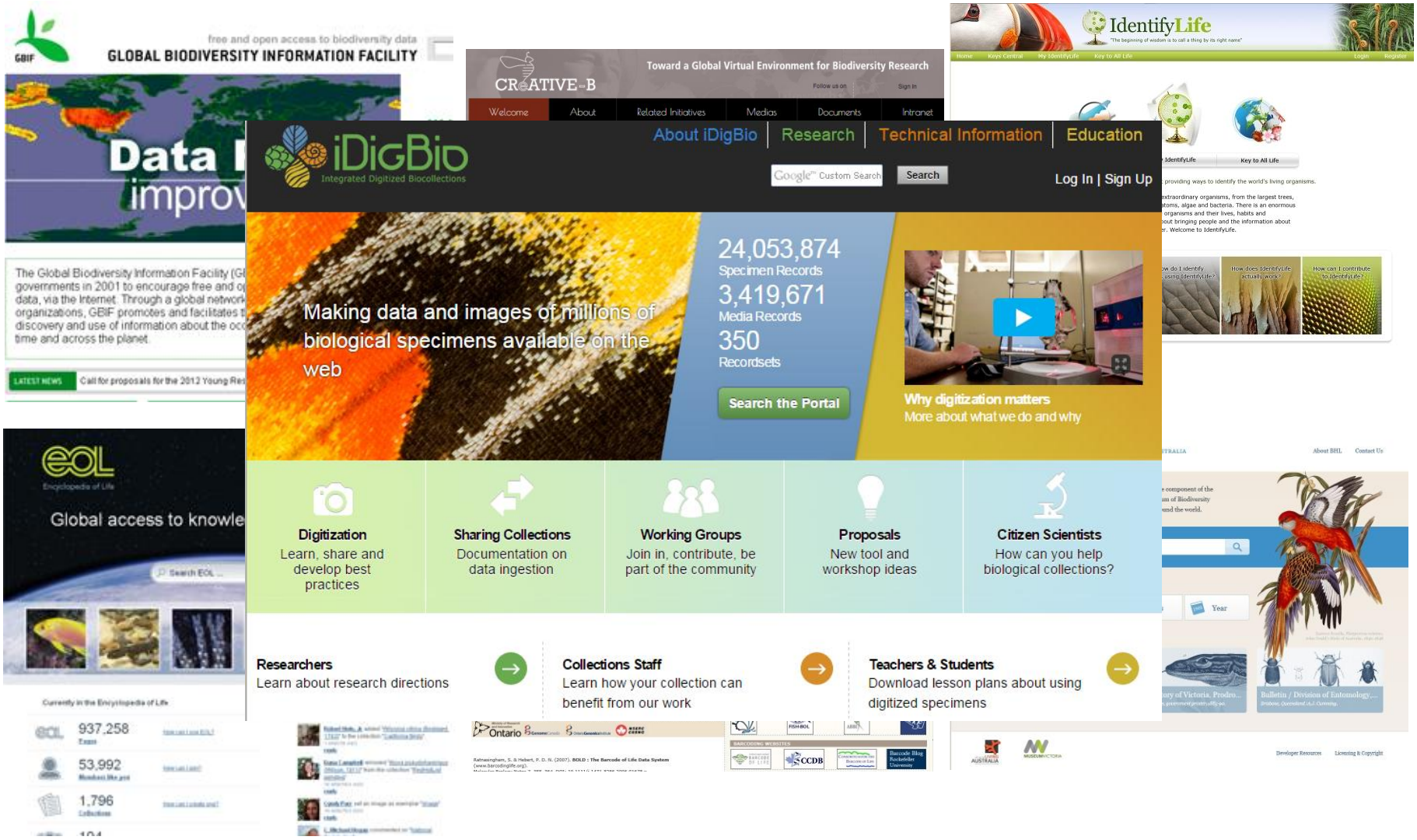
Global involvement







Global involvement



Atlas Tools

ATLAS OF LIVING AUSTRALIA

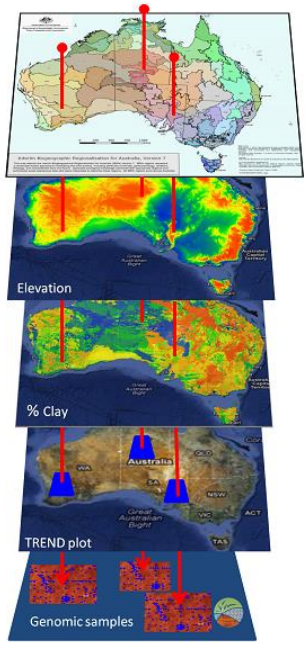
- **Data Capture** → Getting data into the system
- **Data Discovery** → Finding, navigating, & filtering data
- **Data Visualisation** → Viewing data in different ways
- **Data Analysis** → Combining data sets & applying tools & methods to interpret meaning & relationships in the data

Use

Outputs

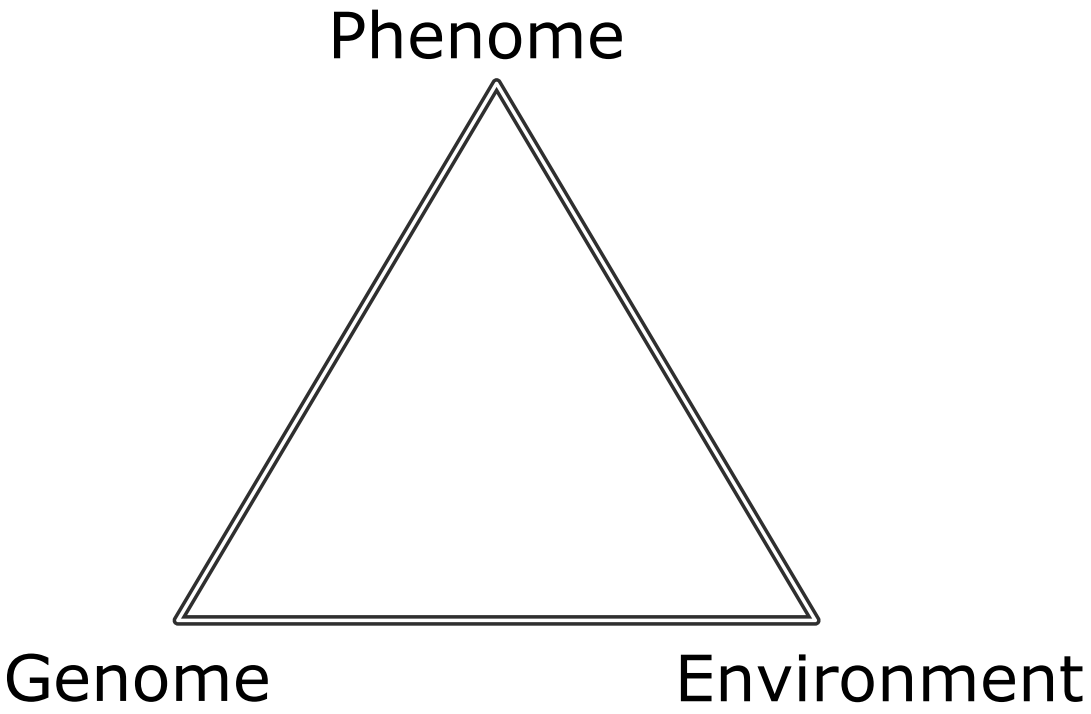
Adoption

Impact



Integrating Data

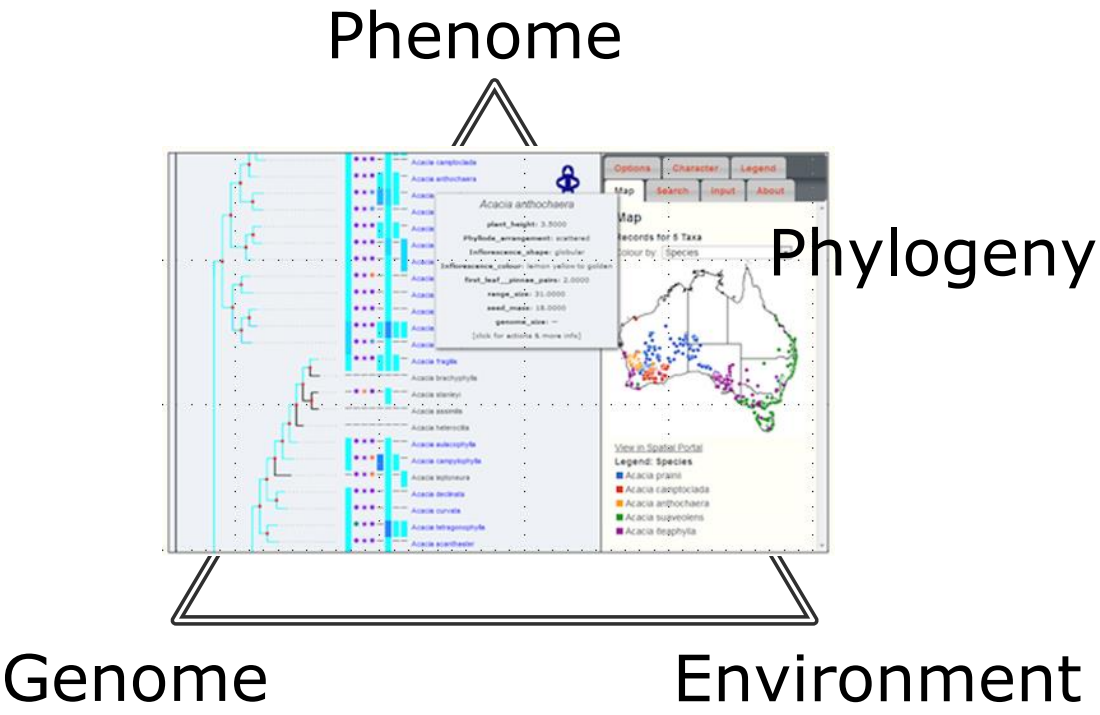
Value of Atlas it brings everything together into an environment which integrates data, supplies tools, etc



Allows you to address bigger questions in ecology, environmental biology, systematics, species delimitation, conservation biology …

Integrating Data

Adding phylogeny enables an evolutionary biology perspective



HINT: You can rearrange topics by clicking and dragging them.

Show raw data | Download as CSV | Reset layout

Occurrence records

50,515,600

records in total.

We estimate the number of potential duplicate records to be *7,745,200*.

Data sets 977

Harvested websites	108
Occurrence record sets	413
Document sets	19
Uploaded record sets	20

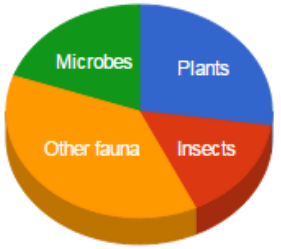
Most recently added dataset is *Sarah's Banksias*

Basis of records

Human observation	37.18M
Preserved specimen	9.86M
Machine observation	325,981
Genomic DNA	154,529
Image	103,152
Living specimen	52,432
Fossil specimen	22,114

more..

Collections 147



Records by date

Latest record	27 October 2014
Last image added	24 May 2012
1600s	28
1700s	8,369
1800s	364,665
1900s	24.52M
2000s	20.62M

National Species Lists

Accepted names	195,424
Synonyms	146,974
Species names	152,080
Species with records	111,566

Spatial layers 417

Contextual layers	91
Environmental/grided layers	326
Terrestrial layers	381
Marine layers	25

more..

Records by state and territory

Identify Life

Most recorded species

Occurrence downloads by reason

Scientific research	**52,054 events**	961.61M records
Ecological research	**19,232 events**	330.10M records
Conservation management/planning	**4,028 events**	533.44M records
Education	**3,217 events**	291.31M records
Environmental impact, site assessment	**1,941 events**	111.06M records
Systematic research	**1,297 events**	55.09M records
Collection management	**471 events**	17.88M records
Other scientific research	**393 events**	52.77M records
Biosecurity management, planning	**370 events**	312.56M records
Other	**42,826 events**	184.50M records
TOTAL	**125,829 events**	2.85B records
more/less...		

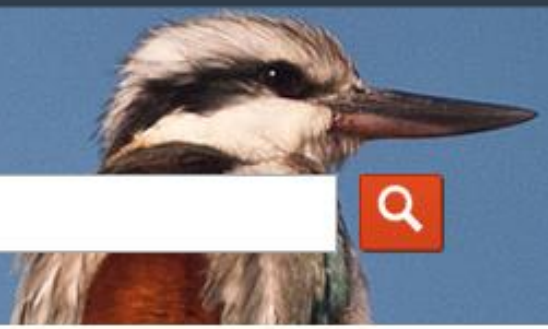
Occurrence tree

- Kingdoms
  - ANIMALIA - 36794105
  - Plantae - 11564036
  - Fungi - 346018
  - Protozoa - 151958
  - Chromista - 63968
  - PROTISTA - 56052
  - Bacteria - 37726
  - Animalia - 8379
  - Viruses - 98

Species images 44,249

Taxa with images	**55068**
Species with images	**44249**
Subspecies with images	**2417**
Taxa with images from DigiVol	**2705**
Taxa with images from citizen science	**13320**
Total number of images	**498384**

Search the Atlas



Search the Atlas

Sharing biodiversity knowledge

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

Get involved

Explore

Blogs & news

COMMUNICATIONS

ALA helps bring CSIRO's new biodiversity book to life

26 August, 2014

RSS Twitter My alerts

Callocephalon fimbriatum (Grant, 1803)

Record a sighting Alerts

Gang-gang Cockatoo

Name source
Australian Faunal Directory

Rank
Species

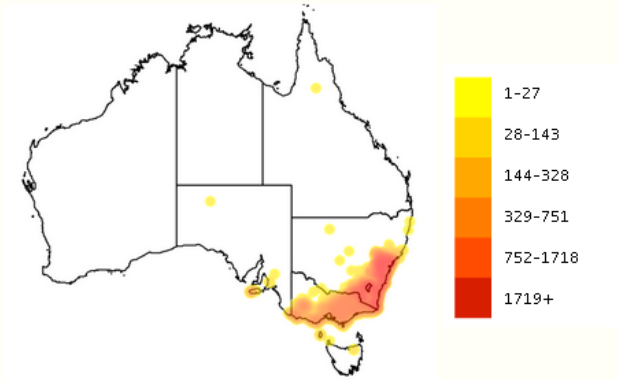
Data links
LSID JSON / WMS /RDF

Species presence
Recorded In Australia
Terrestrial Habitats

Conservation status
IUCN Least Concern
NSW Endangered Populations
NSW Vulnerable

Overview Gallery Names Classification Records Literature Sequences

Occurrence records map



View records list Map & analyse records

Source: Flickr EOL
Image by: Leo

Sounds

Source: Australian National Wildlife Collection
View more details of this audio

Description

The Gang-Gang Cockatoo is a dark grey cockatoo. It has prominent crest. The male has a red head and grey body. The female has grey head and body. Immature birds look like the hen except for some red in the head feathers in young males source: OZ Animals

Explore Your Area

Enter your location or address:

18 Marcus Clarke St., Canberra | Search

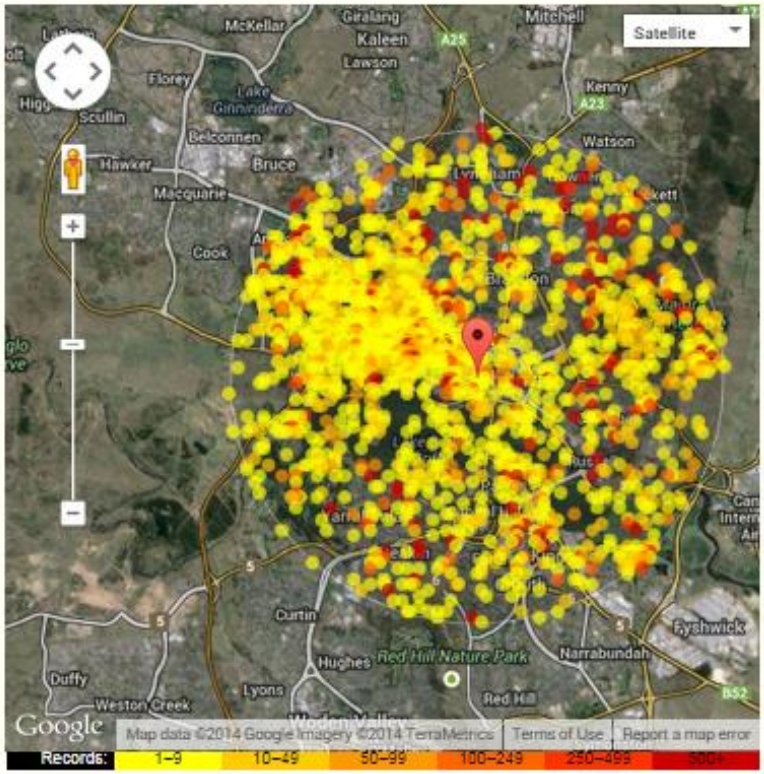
E.g. a street address, place name, postcode or GPS coordinates (as lat, long)

Showing records for: **18 Marcus Clarke Street, Canberra ACT 2601, Australia**

Display records in a 5 km radius | View all records | Downloads

Group	Species
All Species	**6608**
Animals	2019
Mammals	31
Birds	351
Reptiles	28
Amphibians	8
Fish	1
Molluscs	9
Arthropods	1588
Crustaceans	1
Insects	1538
Plants	4089
Bryophytes	49
Gymnosperms	40
FernsAndAllies	102
Angiosperms	3795
Monocots	758
Dicots	3037
Fungi	151
Chromista	2
Protozoa	19
Bacteria	0
Algae	0

	Species : Common Name	Records
1.	*ARCTIINAE*	1
2.	*Abelia x grandiflora*	1
3.	*Abelmoschus ficulneus* : Native Rosella	1
4.	*Abelmoschus moschatus subsp. tuberosus* : Native Rosella	2
5.	*Abutilon theophrasti* : Chigma Lantern	1
6.	*Acacia acinacea* : Gold-dust Acacia	4
7.	*Acacia acuminata* : Jam Wattle	2
8.	*Acacia adsurgens* : Whipstick Wattle	1
9.	*Acacia adunca* : Cascade Wattle	6
10.	*Acacia aestivalis*	1
11.	*Acacia alcockii* : Alcock's Wattle	1
12.	*Acacia amblyophylla*	1
13.	*Acacia amoena* : Boomerang Wattle	1
14.	*Acacia ampliceps* : Jila Jila Bush	1
15.	*Acacia anceps*	1
16.	*Acacia andrewsii*	1
17.	*Acacia aneura var. microcarpa* : Mulga	1
18.	*Acacia aneura* : Mulga	1
19.	*Acacia anthochaera* : Kimberly's Wattle	1
20.	*Acacia aphylla* : Leafless Rock Wattle	1
21.	*Acacia argyrophylla* : Silver Mulga	1
22.	*Acacia ashbyae*	1
23.	*Acacia aspera subsp. aspera*	3
24.	*Acacia assimilis subsp. atroviridis*	1
25.	*Acacia auriculiformis* : Black Wattle	1
26.	*Acacia ausfeldii* : Ausfeld's Wattle	2



Tips: you can fine-tune the location of the area by dragging the red marker icon

Explore Your Area

Enter your location or address:

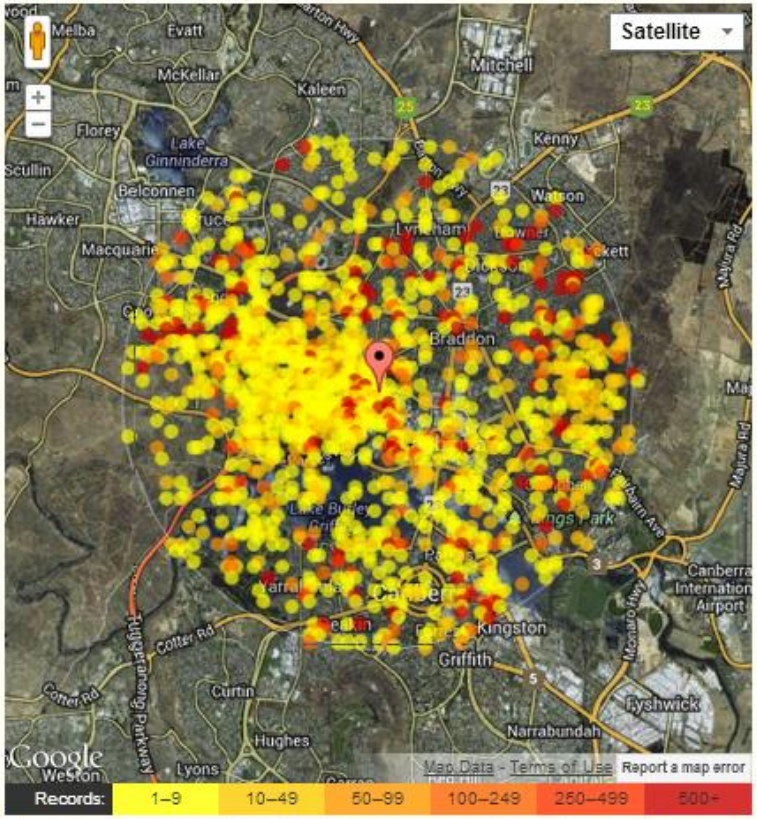
CSIRO Discovery Centre Search E.g. a street address, place name, postcode or GPS coordinates (as lat, long)

Showing records for: **North-Science Road, Acton ACT 2601, Australia**

Display records in a 5 km radius View all records Download

Group	Species
All Species	**6467**
Animals	1761
Mammals	31
Birds	294
Reptiles	26
Amphibians	4
Fish	1
Molluscs	7
Arthropods	1396
Crustaceans	1
Insects	1352
Plants	4191
Bryophytes	48
Gymnosperms	42
FernsAndAllies	110
Angiosperms	3991
Monocots	813
Dicots	3178
Fungi	230
Chromista	2
Protozoa	24
Bacteria	0
Algae	0

	Species : Common Name	Records
1.	*Abelia x grandiflora*	1
2.	*Abelmoschus ficulneus* : Native Rosella	1
3.	*Abelmoschus moschatus subsp. tuberosus* : Native Rosella	2
4.	*Abutilon theophrasti* : Chigma Lantern	1
5.	*Acacia abbreviata*	1
6.	*Acacia acinacea* : Gold-dust Acacia	7
7.	*Acacia acradenia* : Silky Wattle	3
8.	*Acacia acuminata* : Jam Wattle	8
9.	*Acacia adsurgens* : Whipstick Wattle	1
10.	*Acacia adunca* : Cascade Wattle	7
11.	*Acacia aestivalis*	1
12.	*Acacia alcockii* : Alcock's Wattle	1
13.	*Acacia amblyophylla*	1
14.	*Acacia amoena* : Boomerang Wattle	1
15.	*Acacia ampliceps* : Jila Jila Bush	9
16.	*Acacia anceps*	7
17.	*Acacia ancistrocarpa* : Fish-hook Wattle	1
18.	*Acacia andrewsii*	1
19.	*Acacia aneura var. conifera* : Mulga	1
20.	*Acacia aneura var. intermedia* : Mulga	5
21.	*Acacia aneura var. major*	2
22.	*Acacia aneura var. microcarpa* : Mulga	3



Tip: you can fine-tune the location of the area by dragging the red marker icon

Occurrence search results

Quick search

Refine results

Scientific name
AMORPHOSCELIDAE (2)
ANTHOZOA (33)
APHIDIDAE (1)
choose more...

Common name (processed)
"Common raspwort" (36)
"Creeping raspwort" (34)
"Greco-Latin name of the sow-thistle." (1)
choose more...

Subspecies
Abelmoschus moschatus subsp. tuberosus (2)
Acacia aneura var. conifera (1)
Acacia aneura var. intermedia (5)
choose more...

Species
Abelia x grandiflora (1)
Abelmoschus ficulneus (1)
Abutilon theophrasti (1)
choose more...

Family
ACANTHIZIDAE (35,211)
ACCIPITRIDAE (1,597)
ACRIDIDAE (25)
choose more...

Lifeform
Algae (4)
Amphibians (38)
Angiosperms (22,270)
choose more...

558,527 results for [all records] - within 5.0 km of point(-35.273193,149.11497)

Records | Map | Charts | Species images | Record images

Downloads | Alerts | Results per page: 20 | Sort by: Date added | Sort order: Descending

Species: ***Hydromys chrysogaster*** | **Water-rat** Date: 2013-06-08 State: ACT
Data Resource: Individual Sightings Basis Of Record: HumanObservation View record

Species: ***Platycercus (Platycercus) elegans*** | **Crimson Rosella** Date: 2013-05-31 State: ACT
Data Resource: Individual Sightings Basis Of Record: HumanObservation View record

Species: ***Acacia buxifolia*** | **Box Leaf Wattle** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acacia dealbata*** | **Silver Wattle** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acacia genistifolia*** | **Early Wattle** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acacia gunnii*** | **Dog's Tooth Wattle** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acacia implexa*** | **Bastard Myall** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acacia parramattensis*** | **Parramatta Green Wattle** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Acaena ovina*** | **Sheep's Burr** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Aristida ramosa*** | **Cane Speargrass** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Austrostipa densiflora*** | **Foxtail Spear-grass** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Subspecies: ***Austrostipa scabra subsp. falcata*** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Species: ***Billardiera scandens*** | **Apple Berry** Date: 2009-08-12 State: ACT
Data Resource: Australian Native Plants Society, Canberra Region Basis Of Record: HumanObservation View record

Acacia aneura var. conifera (1)
Acacia aneura var. intermedia (5)
choose more...

Species
Abelia x grandiflora (1)
Abelmoschus ficulneus (1)
Abutilon theophrasti (1)
choose more...

Family
ACANTHIZIDAE (35,252)
ACCIPITRIDAE (1,598)
ACRIDIDAE (25)
choose more...

Lifeform
Algae (4)
Amphibians (38)
Angiosperms (22,271)
choose more...

Species habitats
Non-marine (533,282)
Marine and Non-marine (645)
Marine (93)
choose more...

Sensitive
Generalised (14)

State conservation
Endangered (1,311)

Local Gov. Area
Unincorporated ACT (556,106)

State/Territory
Australian Capital Territory (557,802)

Country
Australia (557,801)

IBRA

Subspecies: *Ninox (Ninox) novaeseelandiae boobook* | **Southern Boobook** Date: 2011-05-01 State: ACT
Institution: Commonwealth Scientific And Industrial Research Organisation Collection: Australian National Wildlife Collection Basis Of Record: Preserve
Catalog number: Birds:B53259 View record

Subspecies: *Sturnus (Sturnus) vulgaris vulgaris* | **Common Starling** Date: 2013-05-07 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3285341 View record

Subspecies: *Sturnus (Sturnus) vulgaris vulgaris* | **Common Starling** Date: 2013-05-27 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3331648 View record

Species: *Passer (Passer) domesticus* | **House Sparrow** Date: 2013-05-03 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3268965 View record

Species: *Neochmia (Aegintha) temporalis* | **Red-browed Finch** Date: 2013-05-08 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3323147 View record

Species: *Neochmia (Aegintha) temporalis* | **Red-browed Finch** Date: 2013-05-02 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3323123 View record

Species: *Neochmia (Aegintha) temporalis* | **Red-browed Finch** Date: 2013-05-25 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3327565 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-05 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3285355 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-05 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3285374 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-09 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3287889 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-01 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3287908 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-09 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3288359 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-14 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3300253 View record

Subspecies: *Rhipidura (Rhipidura) albiscapa albiscapa* | **Grey Fantail** Date: 2013-05-23 State: ACT
Data Resource: Eremaea Basis Of Record: HumanObservation Catalog number: :3322927 View record

Occurrence search results

Quick search

Refine results

1,309 results for [all records] - within 5.0 km of point(-35.273193,149.11497)

Records | Map | Charts | Species images | Record images

Downloads | Alerts | Results per page: 20 | Sort by: Date added | Sort order: Descending

Species: *Caladenia actensis* | Canberra Spider Orchid Date: 2006-09-24 State: ACT
Data Resource: Plants Of The NSW South Coast & ACT - Don And Betty Wood Basis Of Record: HumanObservation View record

Species: *Rutidosis leptorrhynchoides* | Button Wrinklewort Date: 2001-12-12 State: ACT
Data Resource: Plants Of The NSW South Coast & ACT - Don And Betty Wood Basis Of Record: HumanObservation View record

Species: *Muehlenbeckia tuggeranong* | Tuggeranong Lignum Date: 2001-11-23 State: ACT
Data Resource: Plants Of The NSW South Coast & ACT - Don And Betty Wood Basis Of Record: HumanObservation View record

Current filters

State conservation:Endangered [X]

Scientific name

Anthochaera (Xanthomyza) phrygia (13)
Caladenia actensis (10)
Climacteris (Climacteris) picumnus picumnus (22)
choose more...

Common name (processed)

Brown Treecreeper (22)
Button Wrinklewort (105)
Canberra Spider Orchid (10)
choose more...

Subspecies

Climacteris (Climacteris) picumnus picumnus (22)

Species

Anthochaera (Xanthomyza) phrygia (13)
Caladenia actensis (10)
Climacteris (Climacteris) picumnus (22)
choose more...

Family

ACCIPITRIDAE (149)
AGAMIDAE (1)
Asteraceae (105)
choose more...

Lifeform

Angiosperms (130)
Animals (1,179)
Arthropods (37)
choose more...

Species habitats

Non-marine (1,188)

Sensitive

Refine your search

	Common name (processed)	Count
☐	Brown Treecreeper	22
☐	Button Wrinklewort	105
☐	Canberra Spider Orchid	10
☐	Ginniderra Peppercress	1
☐	Golden Sun Moth	37
☐	Grassland Earless Dragon	1
☐	Hooded Robin	18
☐	Little Eagle	149
☐	Many-lined Delma	2
☐	Mountain Swainson-pea	9
☐	Painted Honeyeater	5
☐	Regent Honeyeater	13
☐	Spotted-tailed Quoll	1
☐	Superb Parrot	161
☐	Swift Parrot	19
☐	Tuggeranong Lignum	5
☐	Varied Sittella	536

INCLUDE selected items in search | EXCLUDE selected items from search

Select a region to explore

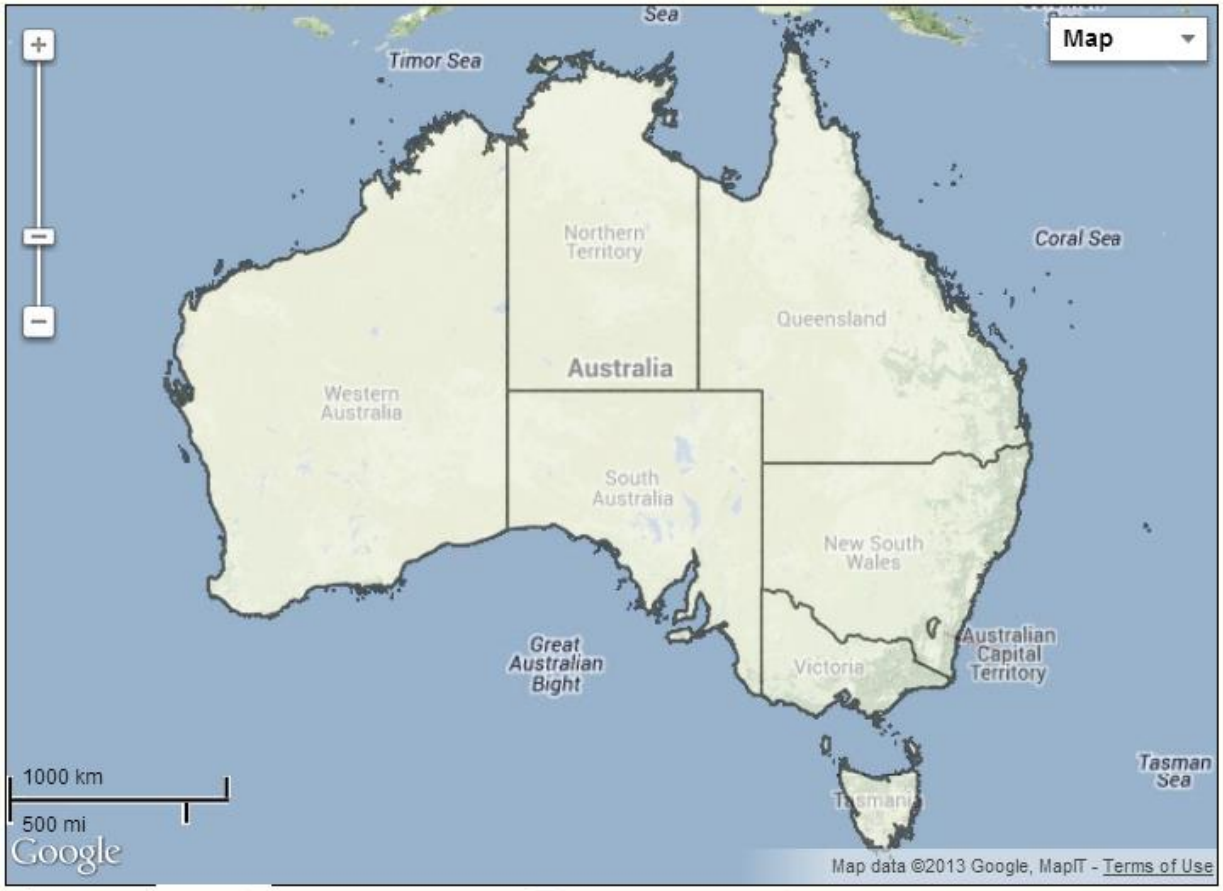
Select the type of region on the left. Click a name or click on the map to select a region. Use map controls or shift-drag with your mouse to zoom the map. Click the region link to explore occurrence records, images and documents associated with the region.

Click on a region name to select an area.

- States and territories
  - Australian Capital Territory
  - New South Wales
  - Northern Territory
  - Queensland
  - South Australia
  - Tasmania
  - Victoria
  - Western Australia
- Local Government
- Biogeographic Regions
- Marine Regions
- Management Regions
- Other Regions

Click on the map to select an area.

Reset map



Select a region to explore

Select the type of region on the left. Click a name or click on the map to select a region. Use map controls or shift-drag with your mouse to zoom the map. Click the region link to explore occurrence records, images and documents associated with the region.

Click on a region name to select an area.

- States and territories
- Local Government

Adelaide (C)
Adelaide Hills (DC)
Albany (C)
Albury (C)
Alexandrina (DC)
Alice Springs (T)
Alpine (S)
Anangu Pitjantjatjara (AC)
Ararat (RC)
Armadale (C)
Armidale Dumaresq (A)
Ashburton (S)
Ashfield (A)
Auburn (C)
Augusta-Margaret River (S)
Aurukun (S)

- Biogeographic Regions
- Marine Regions
- Management Regions
- Other Regions

Click on the map to select an area.

Reset map

Select a region to explore

Select the type of region on the left. Click a name or click on the map to select a region. Use map controls or shift-drag with your mouse to zoom the map. Click the region link to explore occurrence records, images and documents associated with the region.

Click on a region name to select an area.

- States and territories
- Local Government
- Biogeographic Regions

Arnhem Coast
Arnhem Plateau
Australian Alps
Avon Wheatbelt
Ben Lomond
Brigalow Belt North
Brigalow Belt South
Broken Hill Complex
Burt Plain
Cape York Peninsula
Carnarvon
Central Arnhem
Central Kimberley
Central Mackay Coast
Central Ranges
Channel Country

- Marine Regions
- Management Regions
- Other Regions

Click on the map to select an area.

Reset map

Select a region to explore

Select the type of region on the left. Click a name or click on the map to select a region. Use map controls or shift-drag with your mouse to zoom the map. Click the region link to explore occurrence records, images and documents associated with the region.

Click on a region name to select an area.

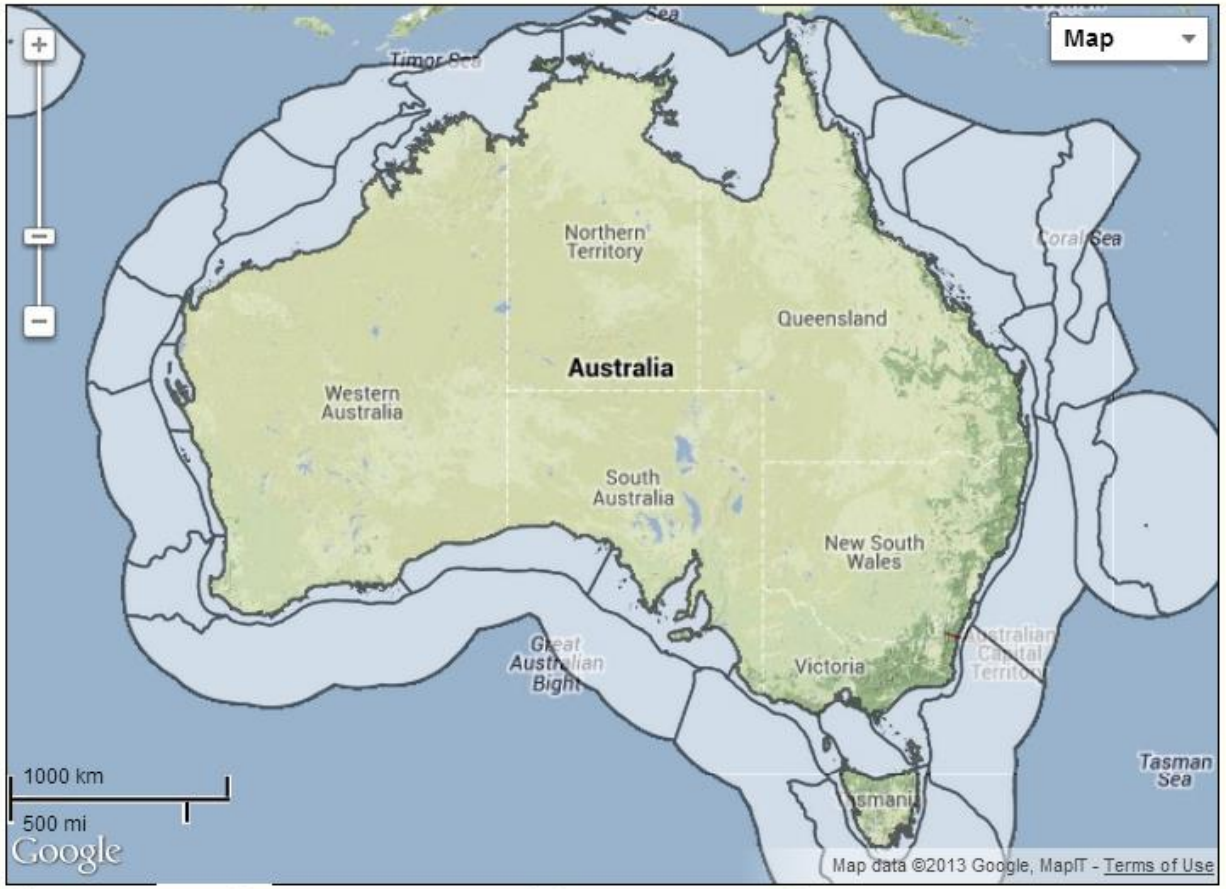
- States and territories
- Local Government
- Biogeographic Regions
- Marine Regions

Bass Strait Shelf Province
Cape Province
Central Eastern Province
Central Eastern Shelf Province
Central Eastern Shelf Transition
Central Eastern Transition
Central Western Province
Central Western Shelf Province
Central Western Shelf Transition
Central Western Transition
Christmas Island Province
Cocos (Keeling) Island Province
Great Australian Bight Shelf Transition
Kenn Province
Kenn Transition
Lord Howe Province

- Management Regions
- Other Regions

Click on the map to select an area.

Reset map



Northeast Shelf Province

Occurrence records (267,745)

Explore by species | Explore by taxonomy | Reset all

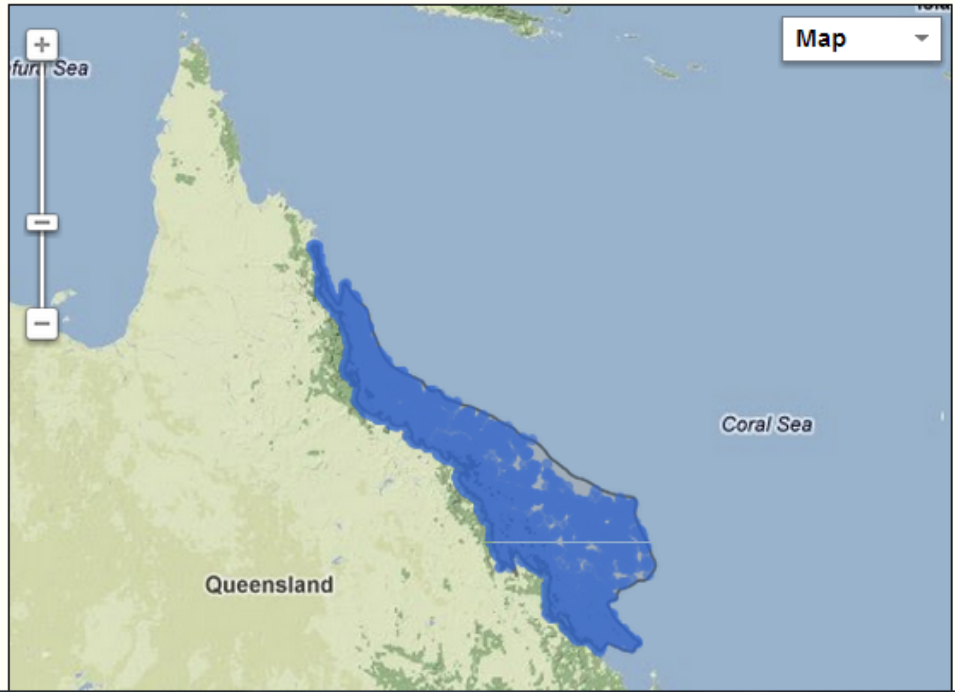
Group	Species
All Species	**11206**
Animals	6929
Mammals	59
Birds	611
Reptiles	105
Amphibians	24
Fish	1726
Molluscs	1657
Arthropods	1850
Crustaceans	337
Insects	1439
Plants	3803
Bryophytes	107
Gymnosperms	15
FernsAndAllies	167
Angiosperms	3018
Monocots	804
Dicots	2214
Fungi	200
Chromista	76
Protozoa	1
Bacteria	47
Algae	477

	Species	Records
1.	*Aaaba nodosus*	1
2.	*Aaptos aaptos*	1
3.	*Abalistes stellatus* : Starry Triggerfish	451
4.	*Abelmoschus ficulneus* : Native Rosella	3
5.	*Abelmoschus manihot subsp. tetraphyllus*	1
6.	*Abelmoschus moschatus subsp. tuberosus*	6
7.	*Abildgaardia ovata*	13
8.	*Abildgaardia vaginata*	14
9.	*Ablennes hians* : Barred Longtom	4
10.	*Aborolobatea insidiosa*	9
11.	*Abra (Syndosmya) truncata*	2
12.	*Abriesa derna*	2
13.	*Abroma fastuosa*	5
14.	*Abroma mollis*	1
15.	*Abrophyllum ornans var. ornans*	1
16.	*Abrus precatorius subsp. precatorius* : Crabs Eye	13
17.	*Abrus precatorius* : Crab's eye	4
18.	*Abudefduf bengalensis* : Bengal Sergeant	71
19.	*Abudefduf hoefleri* : African Sergeant	6
20.	*Abudefduf saxatilis* : Damsel Fish	2
21.	*Abudefduf septemfasciatus* : Banded	3

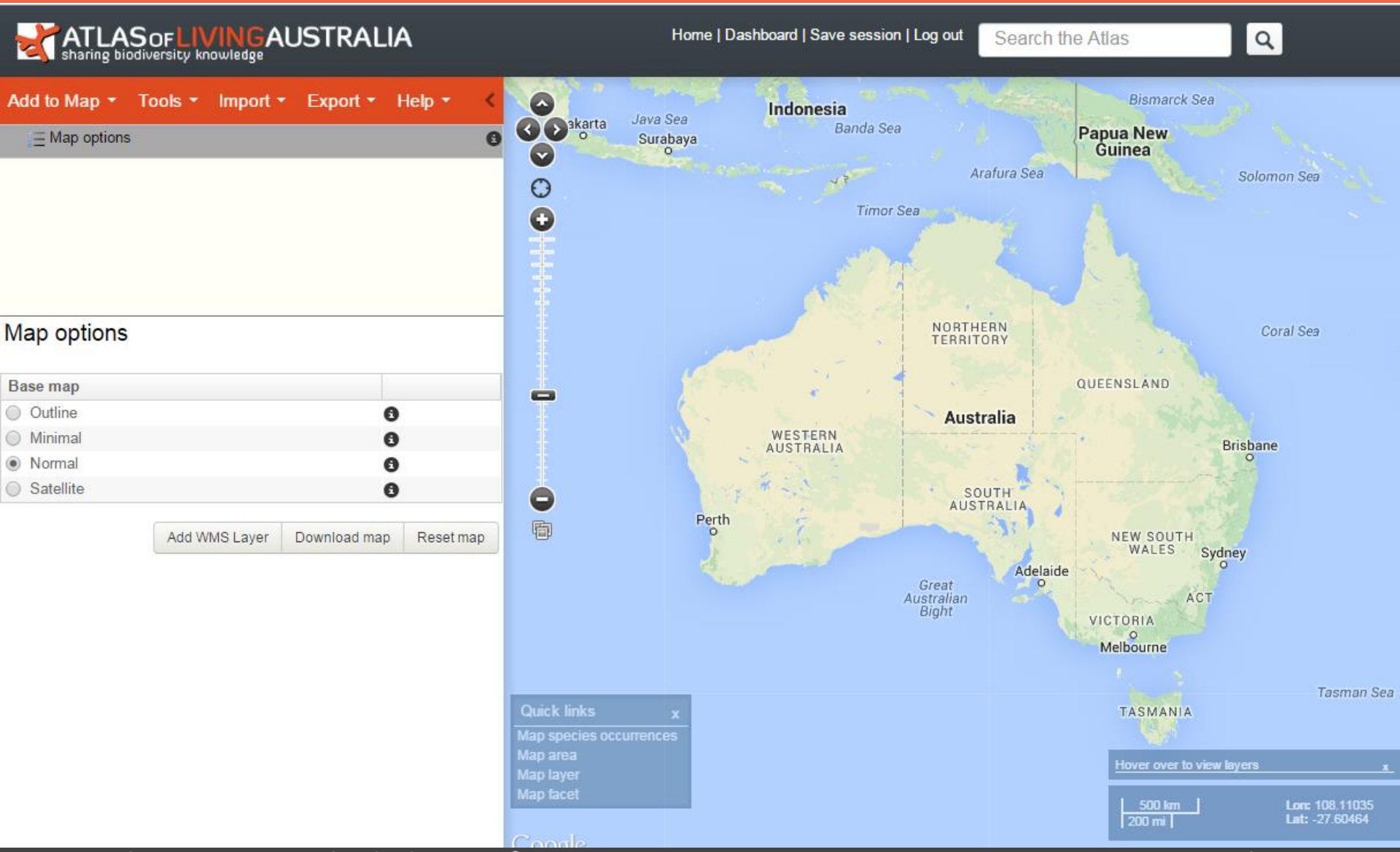
Explore by date Drag handles to restrict date or play by decade.

1850 2010

1860 1880 1900 1920 1940 1960 1980 2000



Spatial Portal




ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge
Home | Dashboard | Save session | Log out
Add to Map
Tools
Import
Export
Help
Species
Areas
Layers
Facet
Map options
Base map
Outline
Minimal
Normal
Satellite
Add WMS Layer
Download map
Reset map
Surabaya
Timor Sea
WESTERN AUSTRALIA
Perth
Quick links
Map species occurrences
Map area
Map layer
Map facet


ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge
Home | Dashboard | Save session | Log out
Add to Map
Tools
Import
Export
Help
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
Map options
Base map
Outline
Minimal
Normal
Satellite
Add WMS Layer
Download map
Reset map
Surabaya
Timor Sea
WESTERN AUSTRALIA
Perth
Quick links
Map species occurrences
Map area
Map layer
Map facet

Add to Map Tools Import Export Help

Genus: Dacelo

Map options

Genus: Dacelo

Layer name: Genus: Dacelo Rename

Display as: Density grid Points

Facet: Scientific name

Opacity: 60%

Size: 3

class	colour	count
Dacelo (Dacelo) novaeguineae		221415
Dacelo (Dacelo) leachii leachii		27167
Dacelo (Dacelo) novaeguineae novaeguineae		2234
Dacelo		190
Dacelo (Dacelo) leachii cervina		68
Dacelo (Dacelo) novaeguineae minor		18
Dacelo (Dacelo) leachii occidentalis		9
Dacelo (Dacelo) leachii		4

Select all

Display spatial uncertainty as a circle

Animation

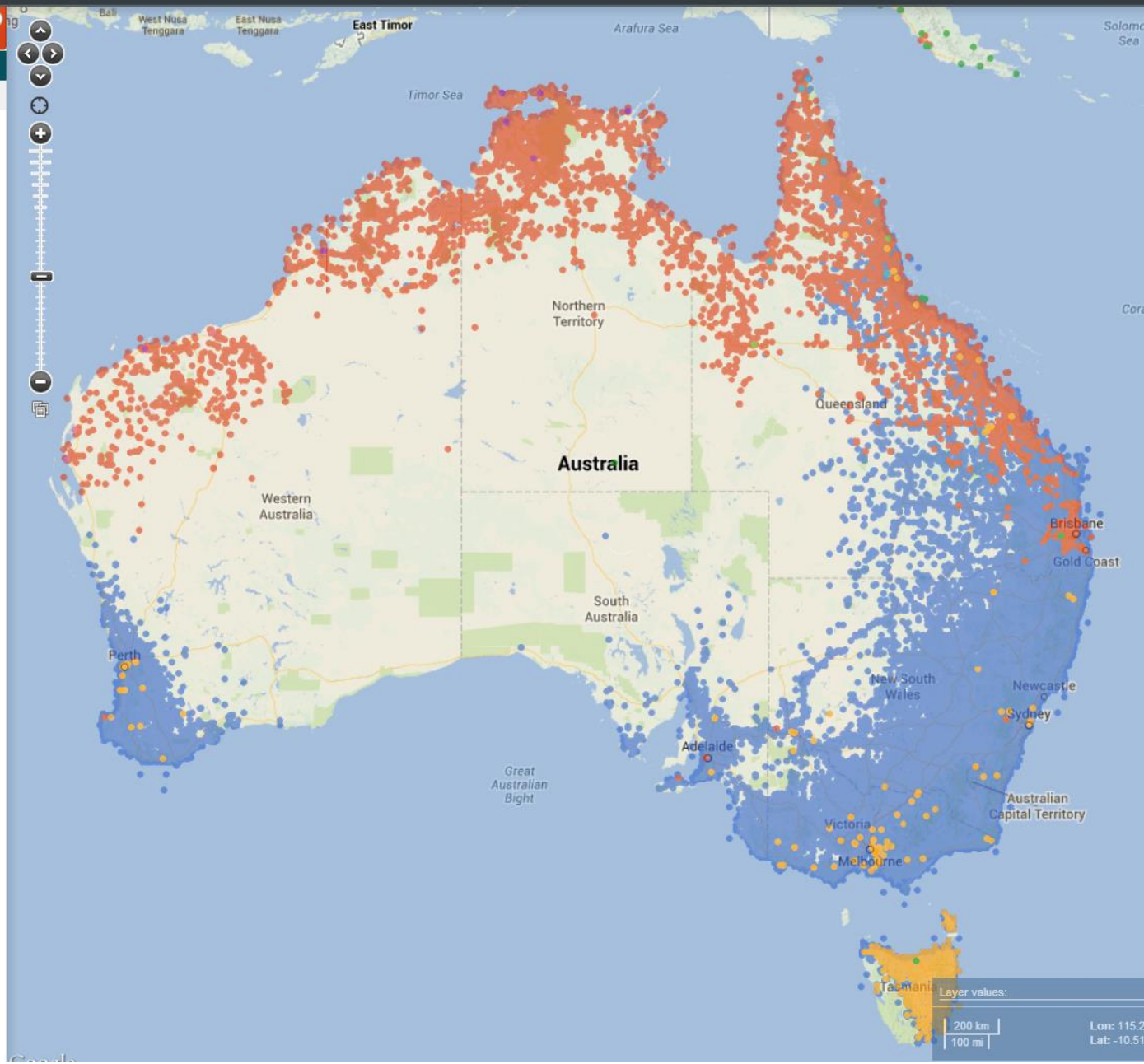
Month/year: Month Frame rate (s): 3

Year range: 1770 to 2013

Start Stop

Quick links

View metadata for "Genus: Dacelo"
Download all records for "Genus: Dacelo"
Produce scatterplot for "Genus: Dacelo"
Generate prediction for "Genus: Dacelo"
Produce points to grid for "Genus: Dacelo"



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

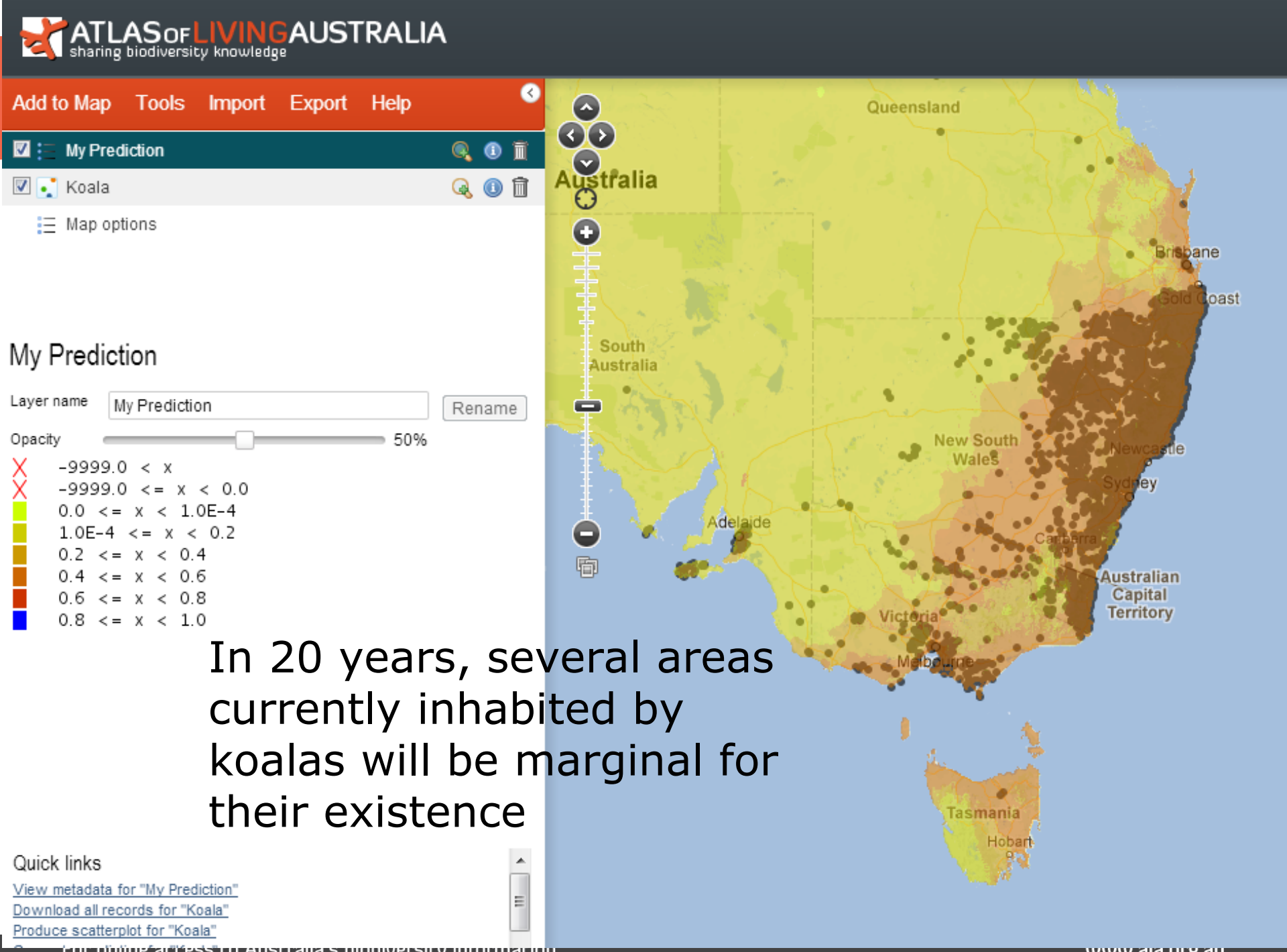
Opacity: 60%

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


ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge
Add to Map
Tools
Import
Export
Help
My Prediction
Koala
Map options
My Prediction
Layer name
My Prediction
Rename
Opacity
50%
-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
Quick links
View metadata for "My Prediction"
Download all records for "Koala"
Produce scatterplot for "Koala"
Queensland
Australia
Brisbane
Gold Coast
South Australia
New South Wales
Newcastle
Sydney
Adelaide
Canberra
Australian Capital Territory
Victoria
Melbourne
Tasmania
Hobart
In 20 years, several areas currently inhabited by koalas will be marginal for their existence
For online access to Australia's biodiversity information
www.ala.org.au

ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge

Add to Map | Tools | Import | Export | Help

My Scatterplot

SPECIES: Calyptorhynchus (Zanda) latirostris

Map options

My Scatterplot

Species display settings

Download image | Download data

Records selected: 32 add in/out layers to map

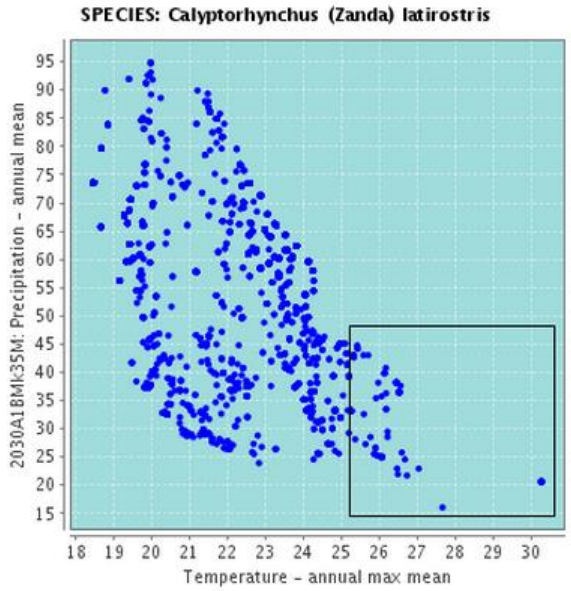
Temperature - annual max mean: 25.2025 - 30.6000

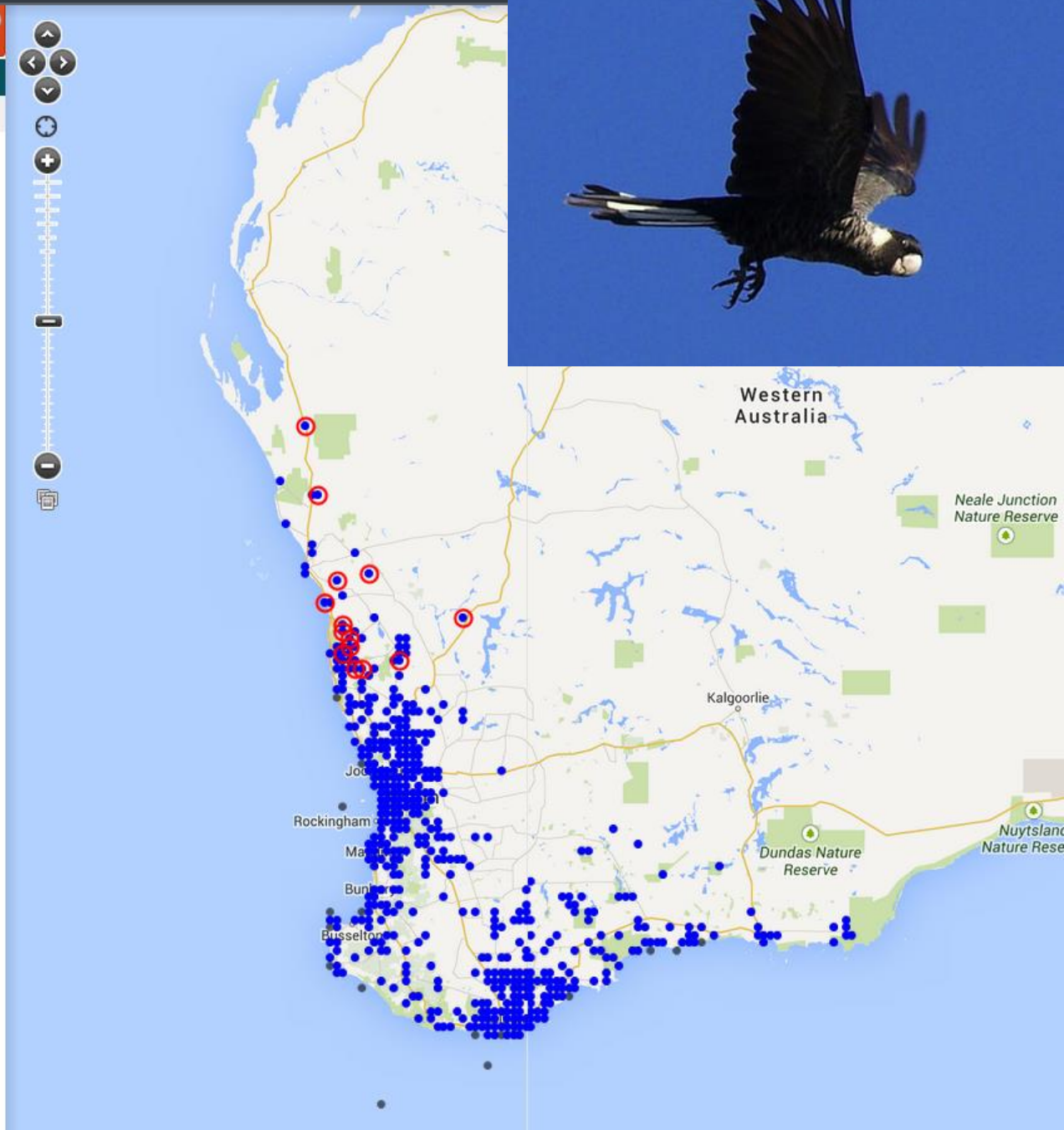
2030A1BMk35M: Precipitation - annual mean: 14.5198 - 48.2012

SELECT records with missing values (160)

Highlight occurrences on the scatterplot that are in an area

Clear





RESEARCH REPORT

doi: 10.1111/emr.12000

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.*

Ecological Management & Restoration *Linking science and practice*

phylojive.ala.org.au

ATLAS OF LIVING AUSTRALIA

ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge

My profile Log in Search the Atlas

Species Locations Collections Mapping & analysis Data sets Blogs Get involved About the Atlas

Home ➜ Phylojive

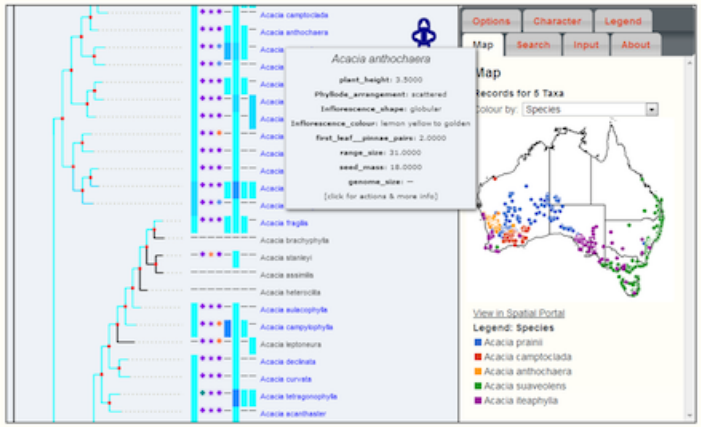
Phylojive

PhyloJive (Phylogeny Javascript Information Visualiser and Explorer) is a web based application that places biodiversity information aggregated from many sources onto compact phylogenetic trees.

The project is the brainchild of Garry Jolley-Rogers and Joe Miller and was developed by Temi Varghese and Garry Jolley-Rogers as part of the Taxonomy Research & Information Network (TRIN) – see the original project page, original code repository and ALA code repository. The ALA has contributed to the PhyloJive codebase to integrate a number of web services: occurrence data, maps and character data from Identify Life. This work has been undertaken with help and advice from Joe Miller.

The getting started page outlines the steps for creating a new phylogenetic tree and contains demo data sets that can be used to get up and running.

Create a new tree



Trees with character data

- quantitative characters
- kimberley land snails3
- Joe's acacia
- Damien

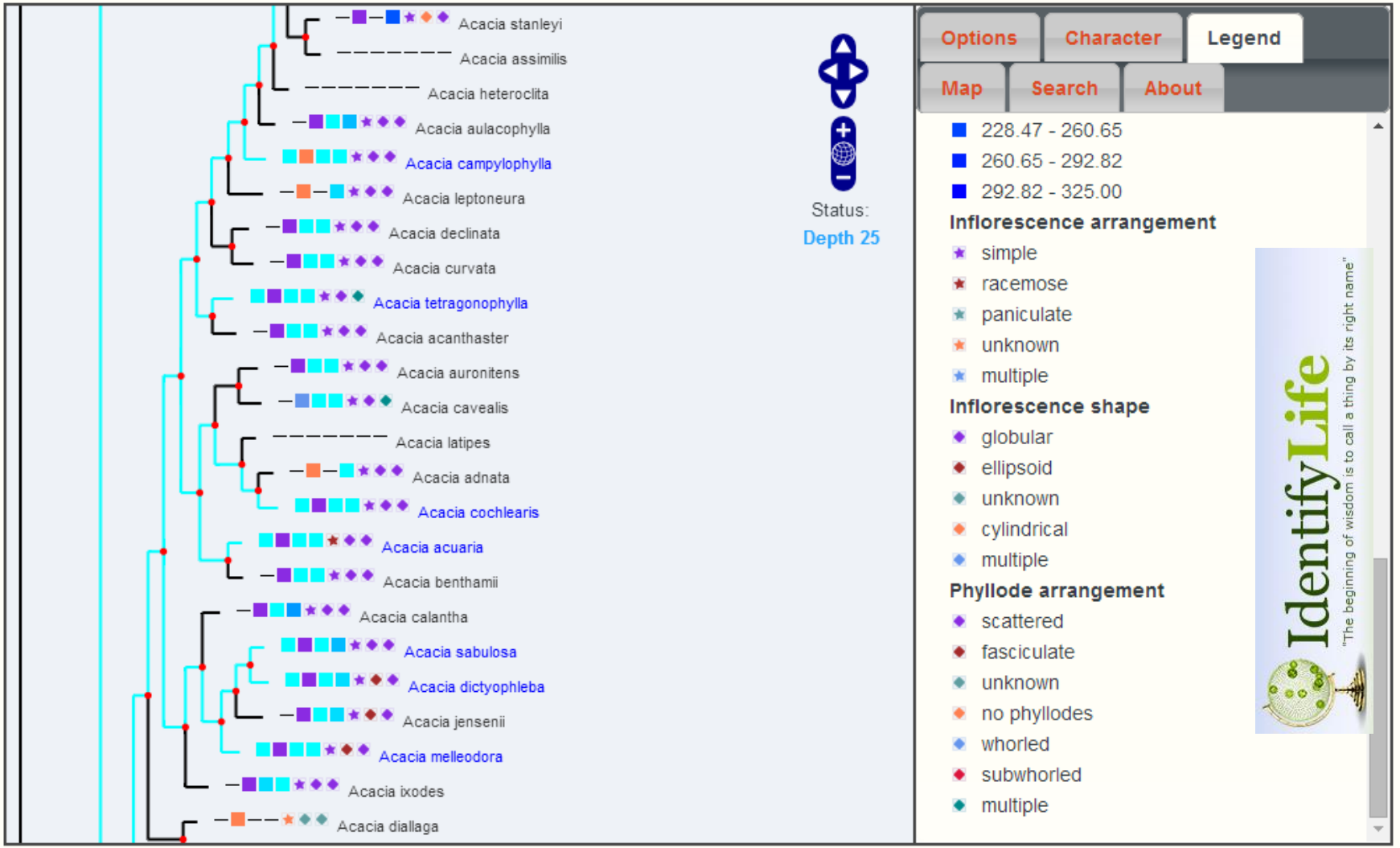
"Bare" Trees

- Molluscsa-tree of life
- amphibia - frogs, salamanders and caecilians
- Damien
- Bird super tree

phylojive.ala.org.au

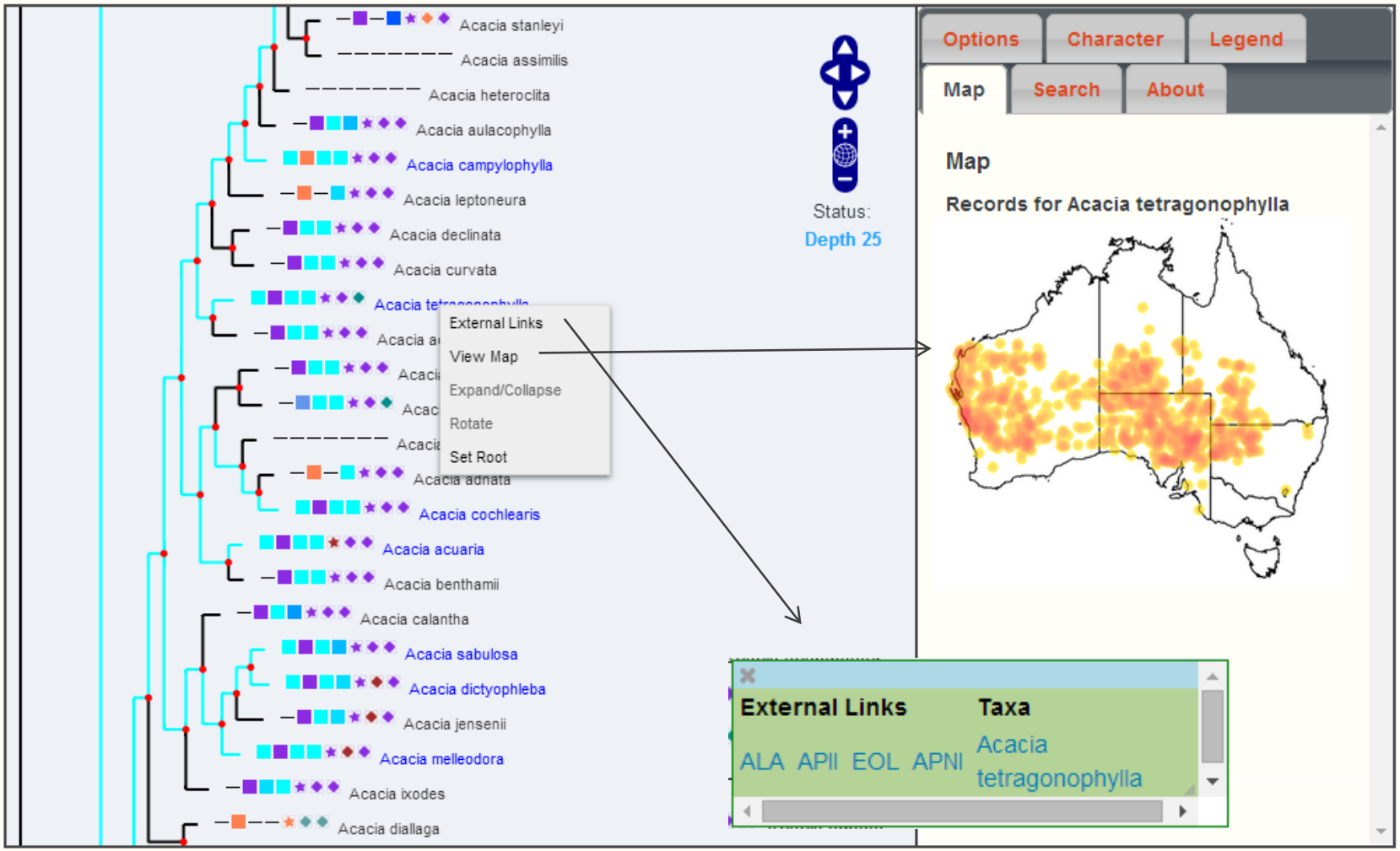
Map characters

Tree: Case Study 1: Acacia



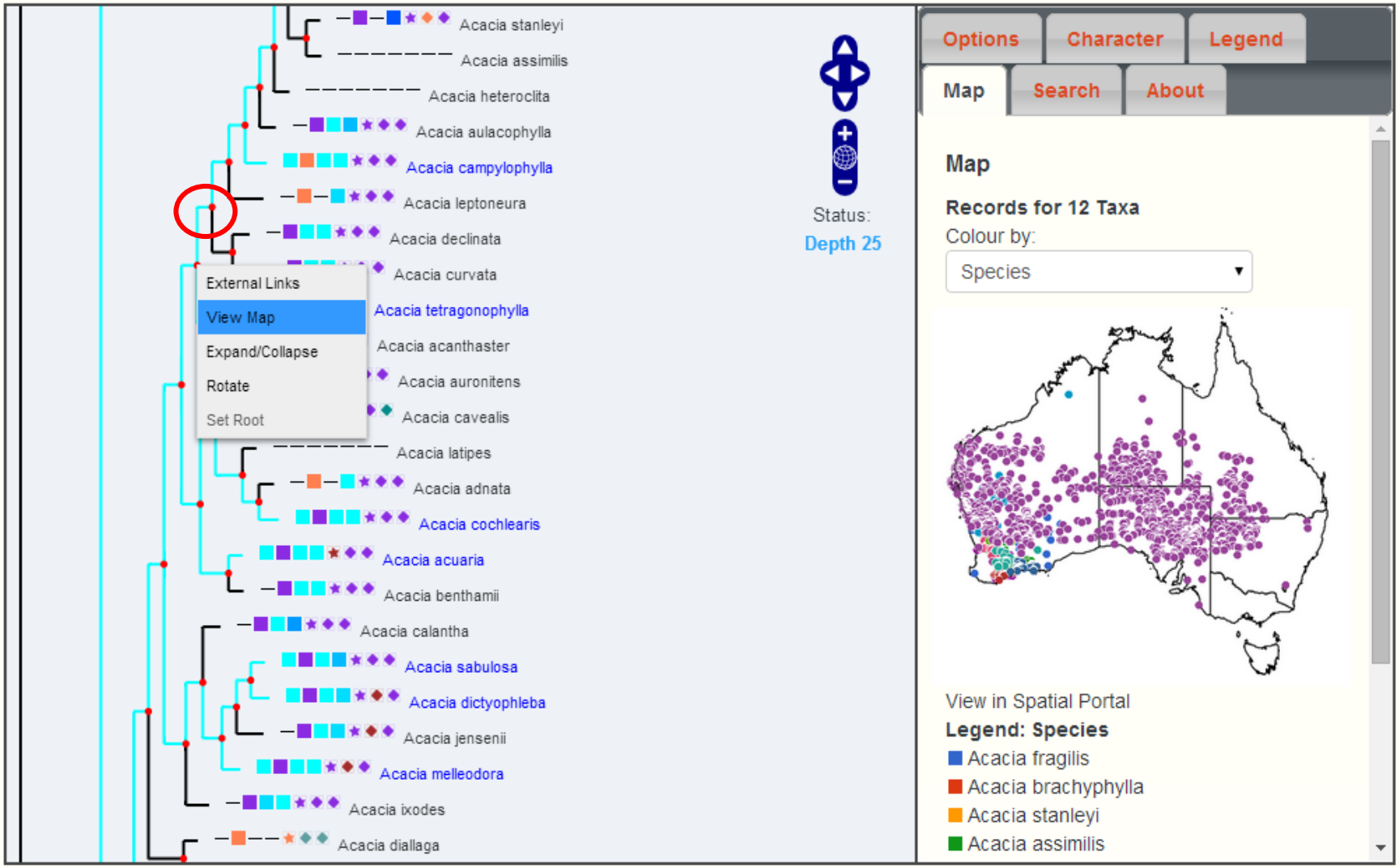
View maps and link externally

Tree: Case Study 1: Acacia



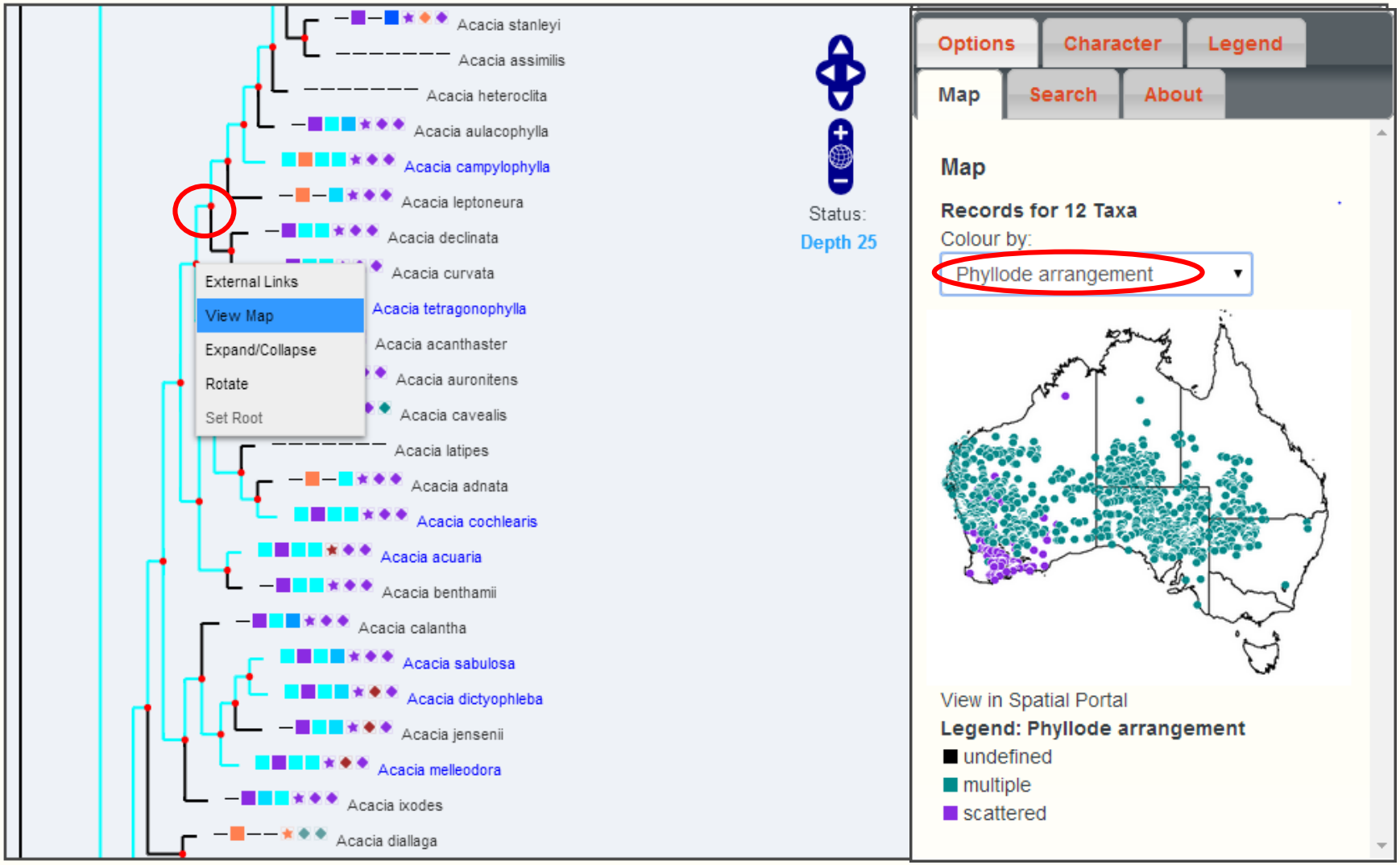
Map records – by taxon

Tree: Case Study 1: Acacia

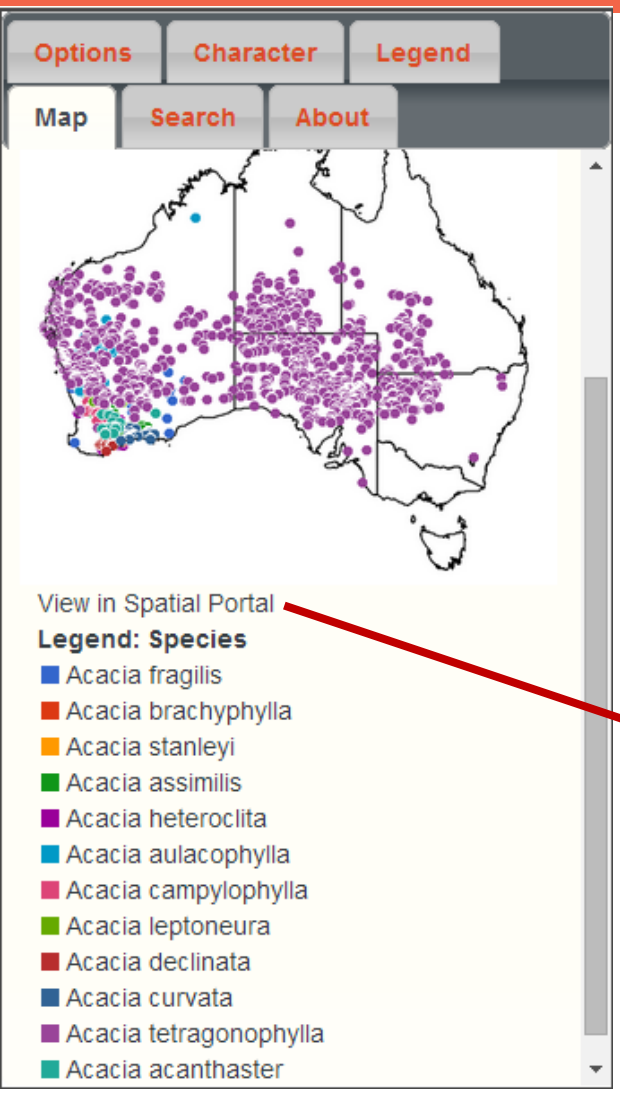


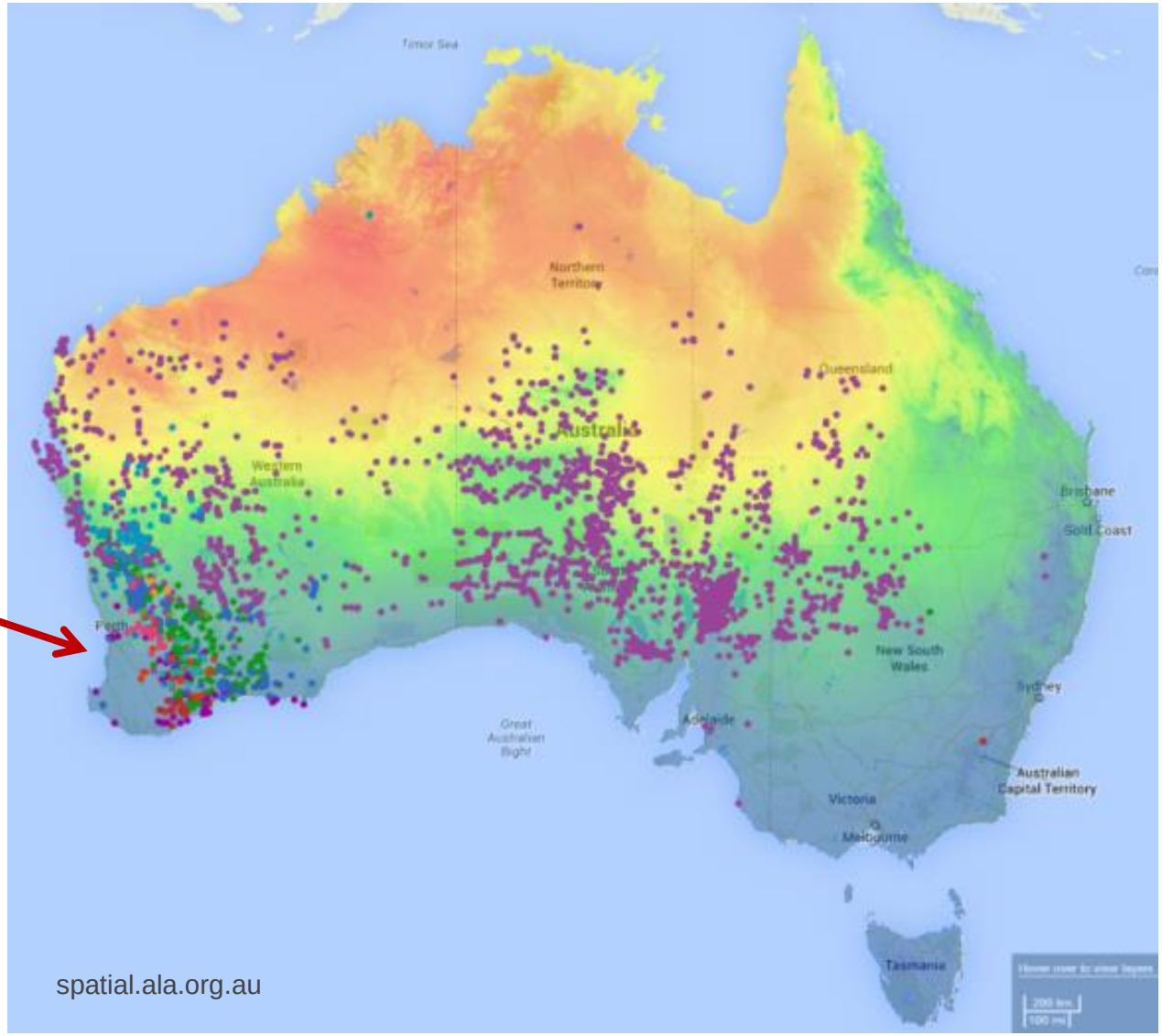
Map records – by character state

Tree: Case Study 1: Acacia



Integrate with ALA spatial portal

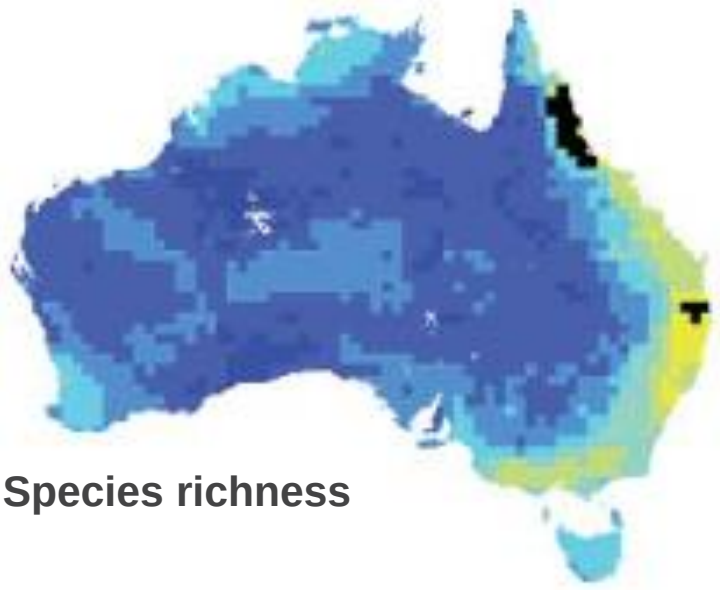




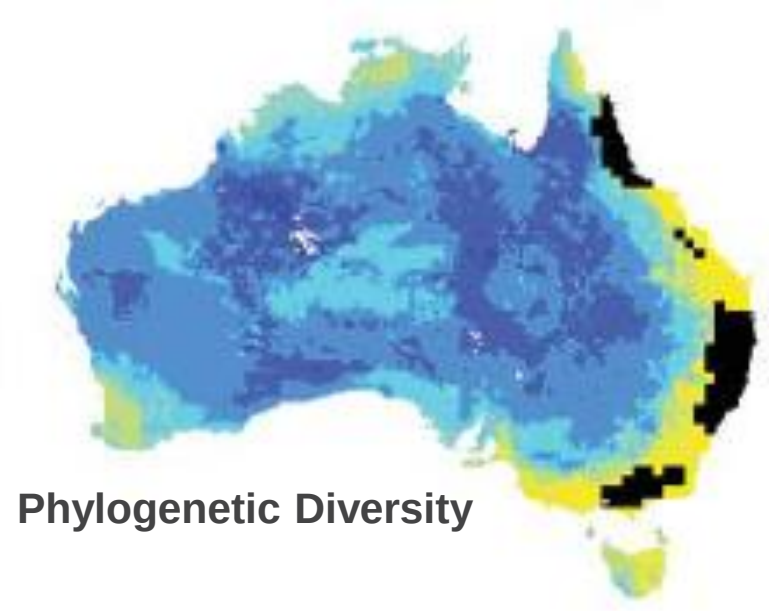
spatial.ala.org.au

Enabling phylogenetic views of ALA data

- calculate phylogenetic measures – e.g. phylogenetic diversity
    - compare to measures generated from non-phylogenetic approaches (e.g. PD and species richness)



Species richness



Phylogenetic Diversity

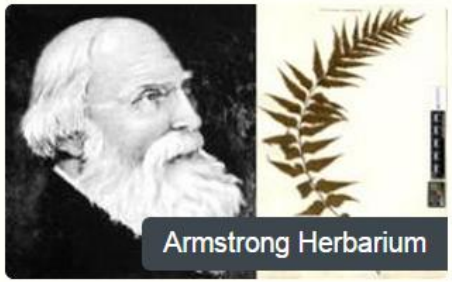
Marsupial diversity – black indicates hotspots

Amboni & Laffan 2010

DigiVol

Volunteers building knowledge and communities through digitising collections

Virtual expedition of the day



ALLAN HERBARIUM (CHR)

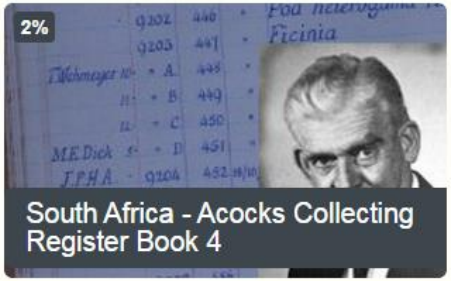
Armstrong Herbarium

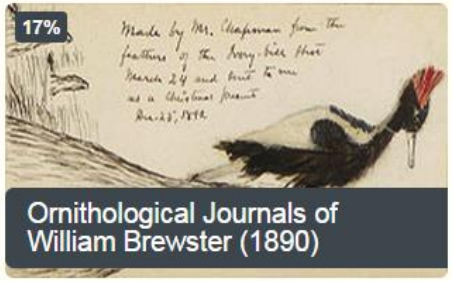
Armstrong Herbarium

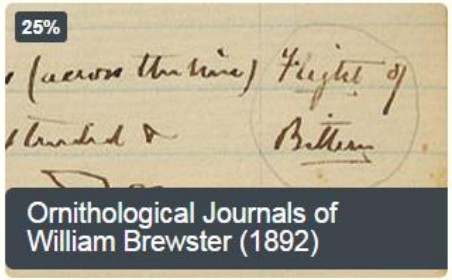
Start transcribing

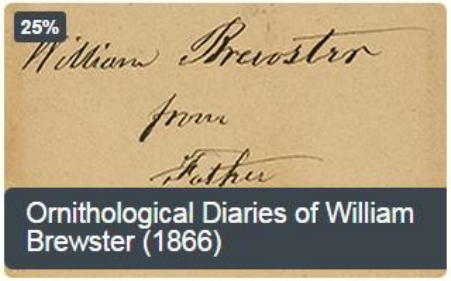
More expeditions

View all









Honour Board

Day Tripper	
Baz Walter	3
Weekly Wonder	
Baz Walter	3
Monthly Maestro	
Megan Edey	1
DigiVol Legend	
Megan Edey	2

View my tasks

Expedition stats

109507 tasks of **116409** compl
698 volunteer transcribers.

News

01 Sep 2014

DigiVol sets new records

August was the most productiv

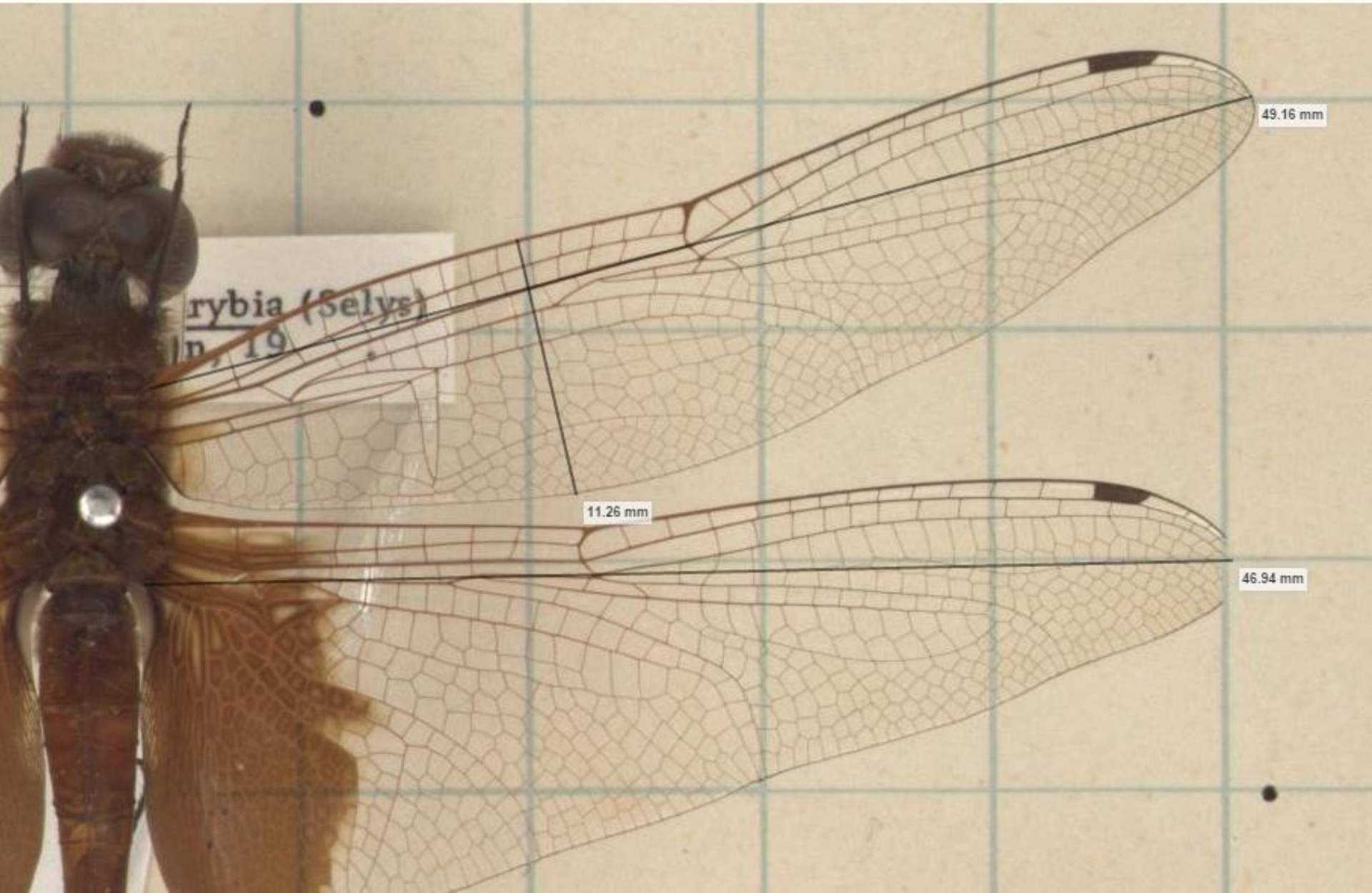
Institution: Australian Museum Entomology Collection

Project: Australian Museum Robber Fly Expedition - 5

Catalog Number: K.417976

Taxa: Cerdistus sp.

Specimen Label Tutorial


49.16 mm
11.26 mm
46.94 mm

Digitising Australian collections

4-Step Vision

- Increasing our capacity to generate images
  - Faster, smarter, better data capture, new types of images
- Manage, discover, view images
  - Annotation, tags, zooming, panning
- Extract information from image libraries
  - Annotation, measuring,
- Manage that information
  - Hold information extracted from image libraries

Demo of true-color 3D insect models

3D models provided by Chuong Nguyen of CSIRO Computational Informatics. The specimens were mostly from

This data set is provided to accompany the following paper:

Chuong Nguyen, David Lovell, Matt Adcock and John La Salle (2013) **Capture natural-colour 3D models of in**

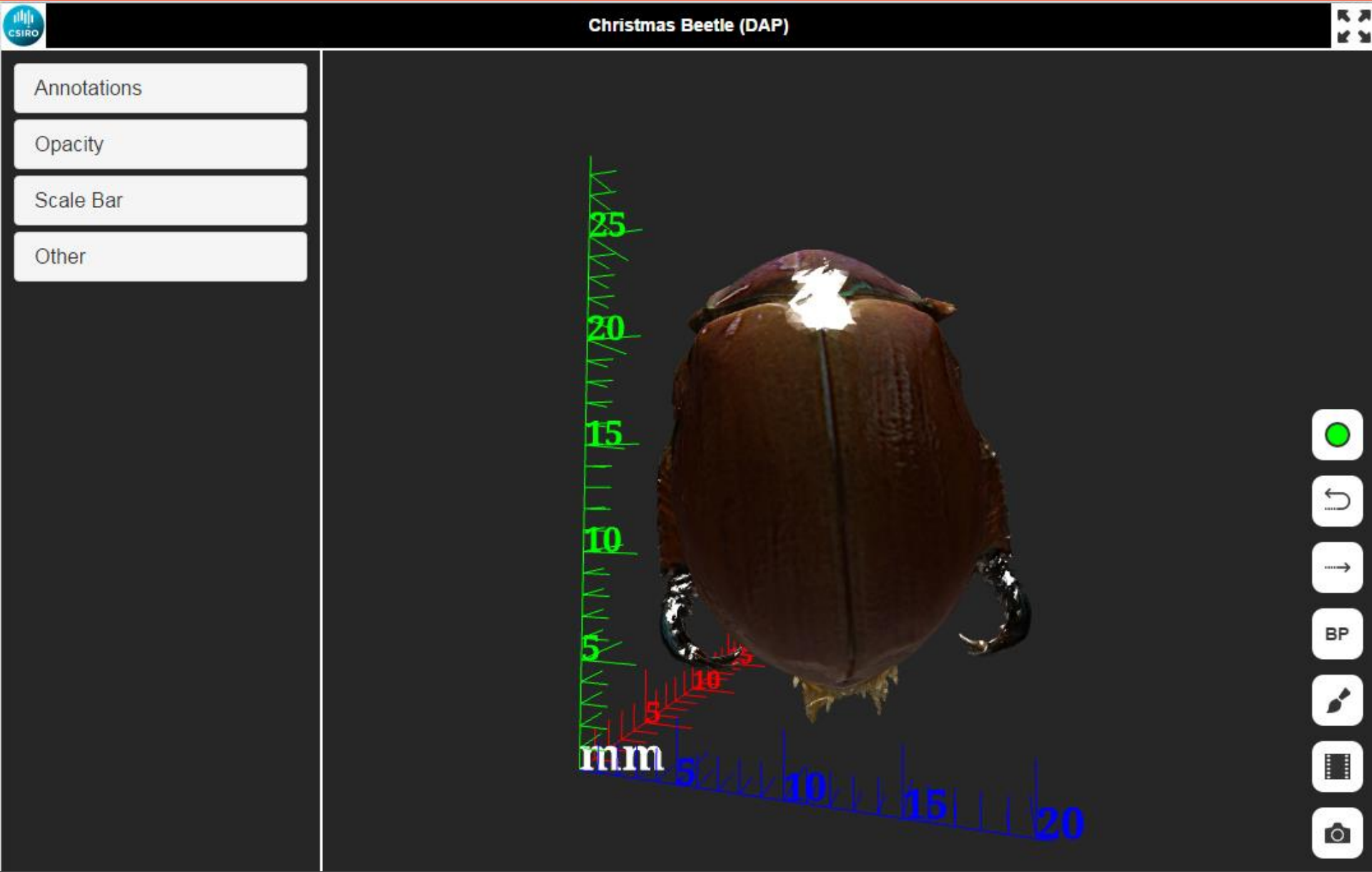
This YouTube video describes the 3D insect scanning systems that created these 3D models.

This work is supported by CSIRO Computational Informatics, CSIRO Ecosystem Sciences, Atlas of Living Austr

Contact: Chuong Nguyen of CSIRO Computational Informatics.

Note: 3D models were tested with Firefox 25.0 and Chrome 31.0. *Last update on 19 December 2013.*

Extracting and storing information



Christmas Beetle (DAP)

Annotations

Opacity

Scale Bar

Axes: X Y Z Ticks:

Small Big Tags:

Small Big Increments

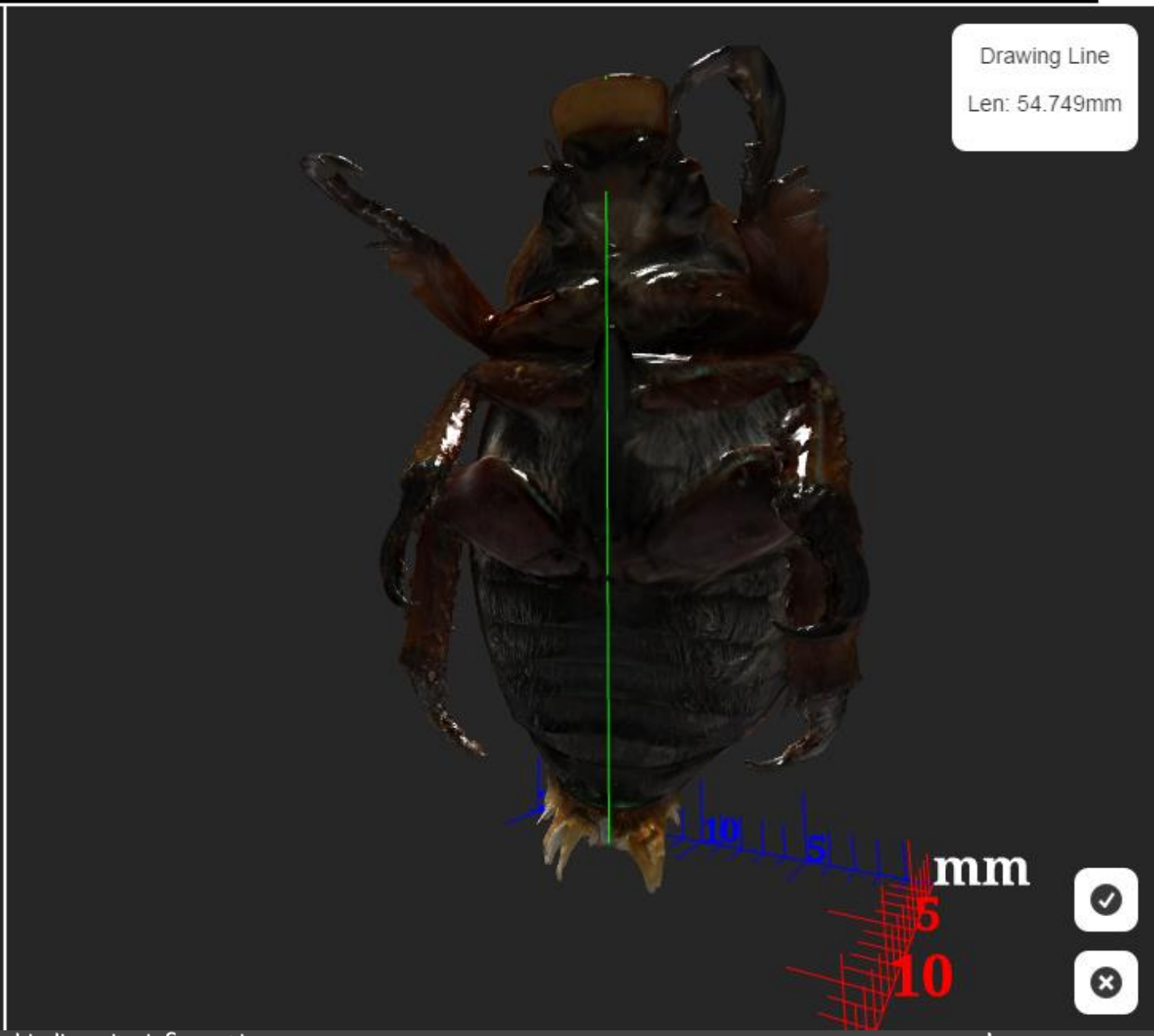
Small/Big:

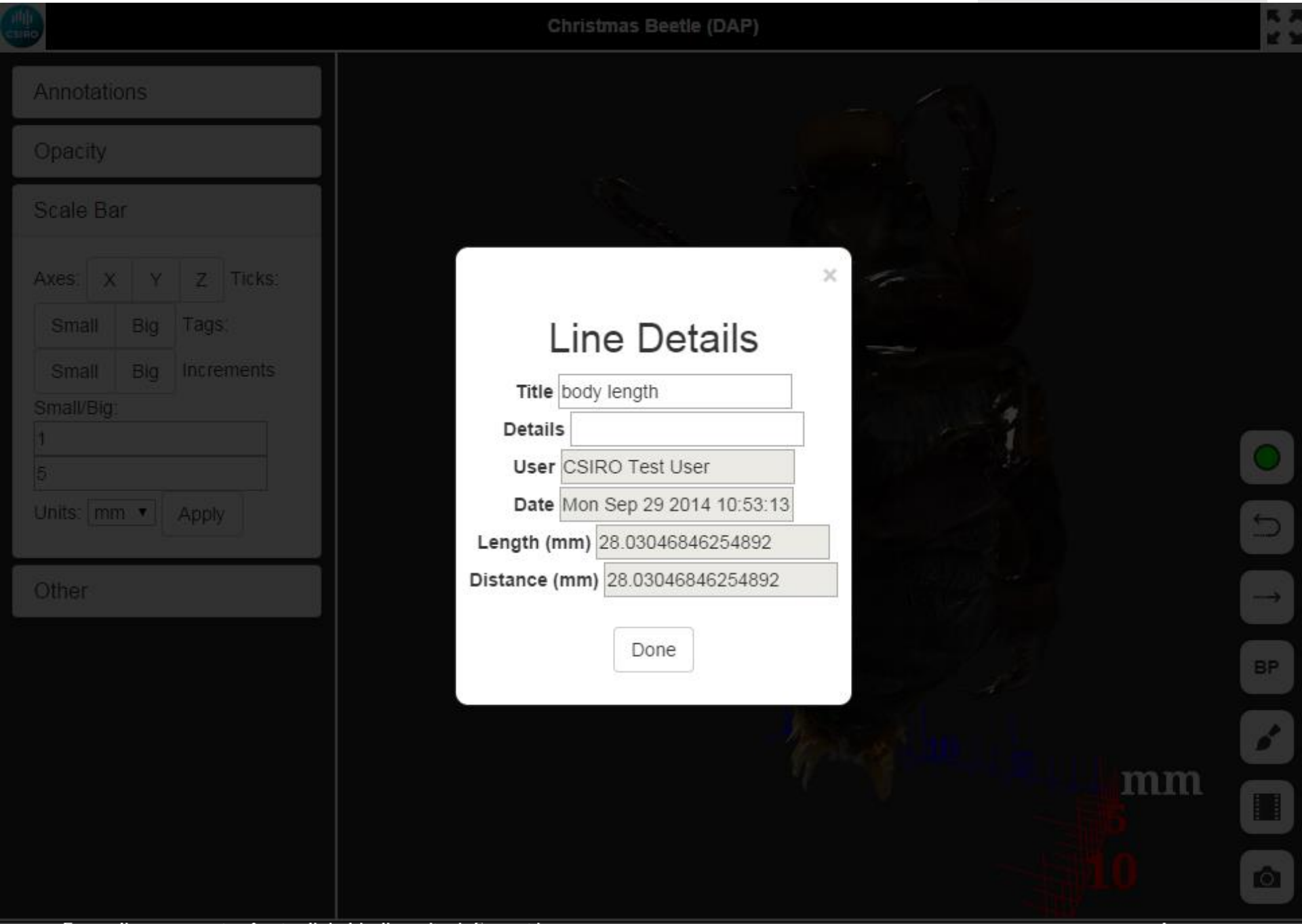
1

5

Units: mm Apply

Other




Christmas Beetle (DAP)
Annotations
Opacity
Scale Bar
Axes: X Y Z Ticks:
Small Big Tags:
Small Big Increments
Small/Big:
1
5
Units: mm
Apply
Other
Line Details
Title body length
Details
User CSIRO Test User
Date Mon Sep 29 2014 10:53:13
Length (mm) 28.03046846254892
Distance (mm) 28.03046846254892
Done
BP
mm

Christmas Beetle (DAP)

Annotations

- Default Set (2):
  - Use as active
  - Highlights (0):
  - Lines (2):
    - body length (1)
    - body width (1)
  - Body Parts (0):
  - Images (0):
  - Viewpoints (0):

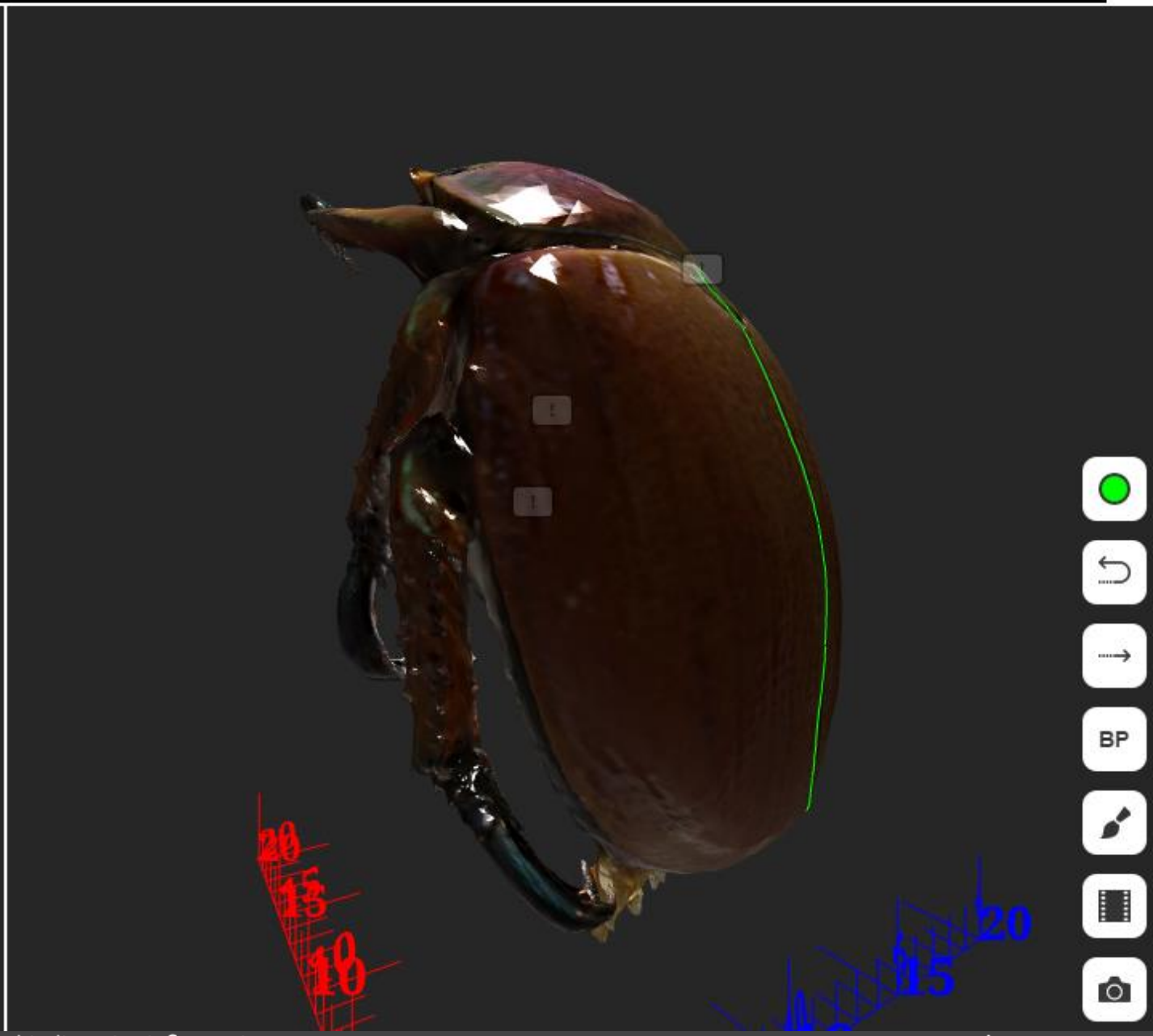
Create New Set...

Load Saved Set...

Opacity

Scale Bar

Other



Annotations

- Default Set (3):
  - Use as active
  - Highlights (0):
  - Lines (3):
    - body length (1)
    - body width (1)
    - length elytra (1)
  - Body Parts (0):
  - Images (0):
  - Viewpoints (0):

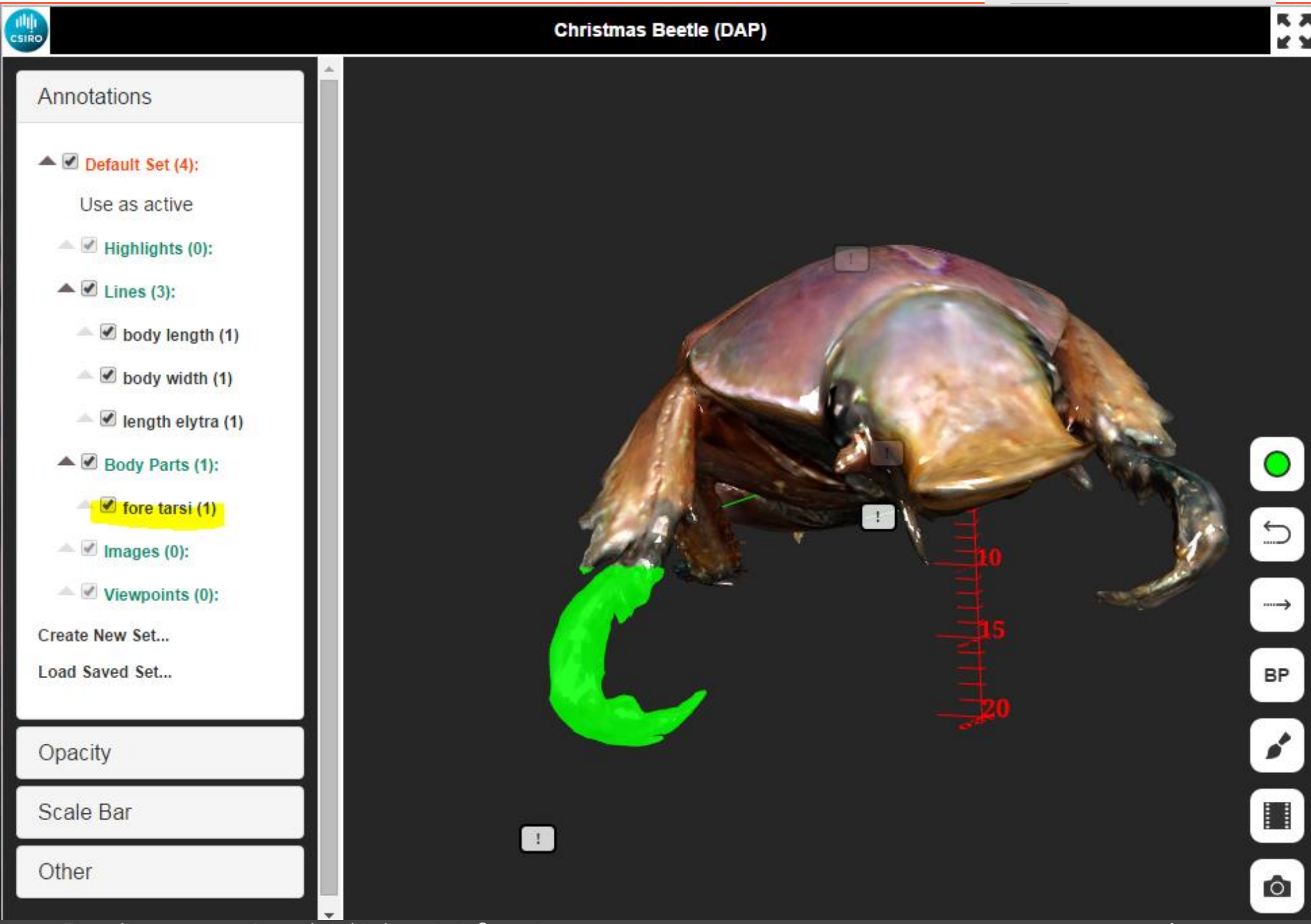
Create New Set...

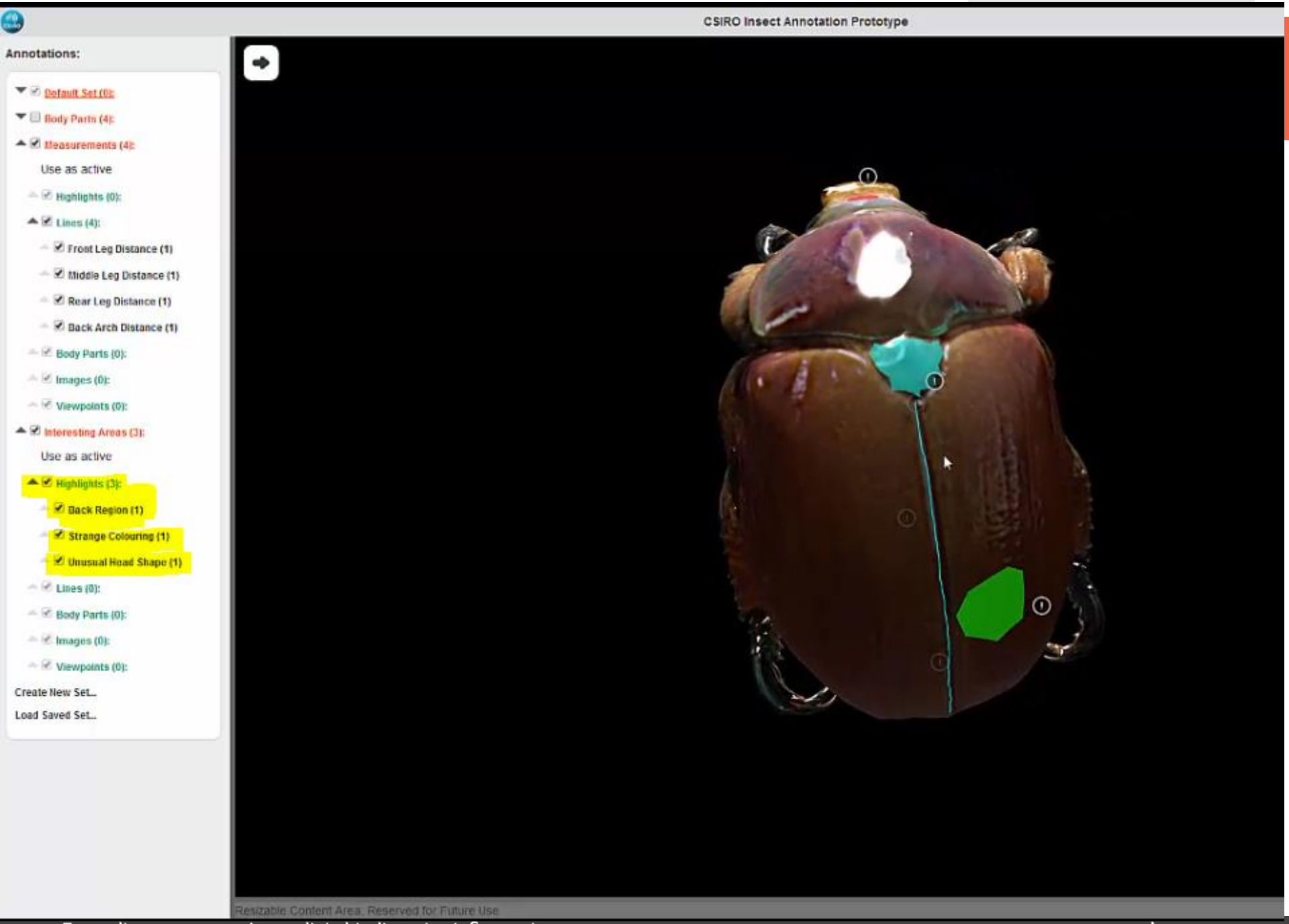
Load Saved Set...

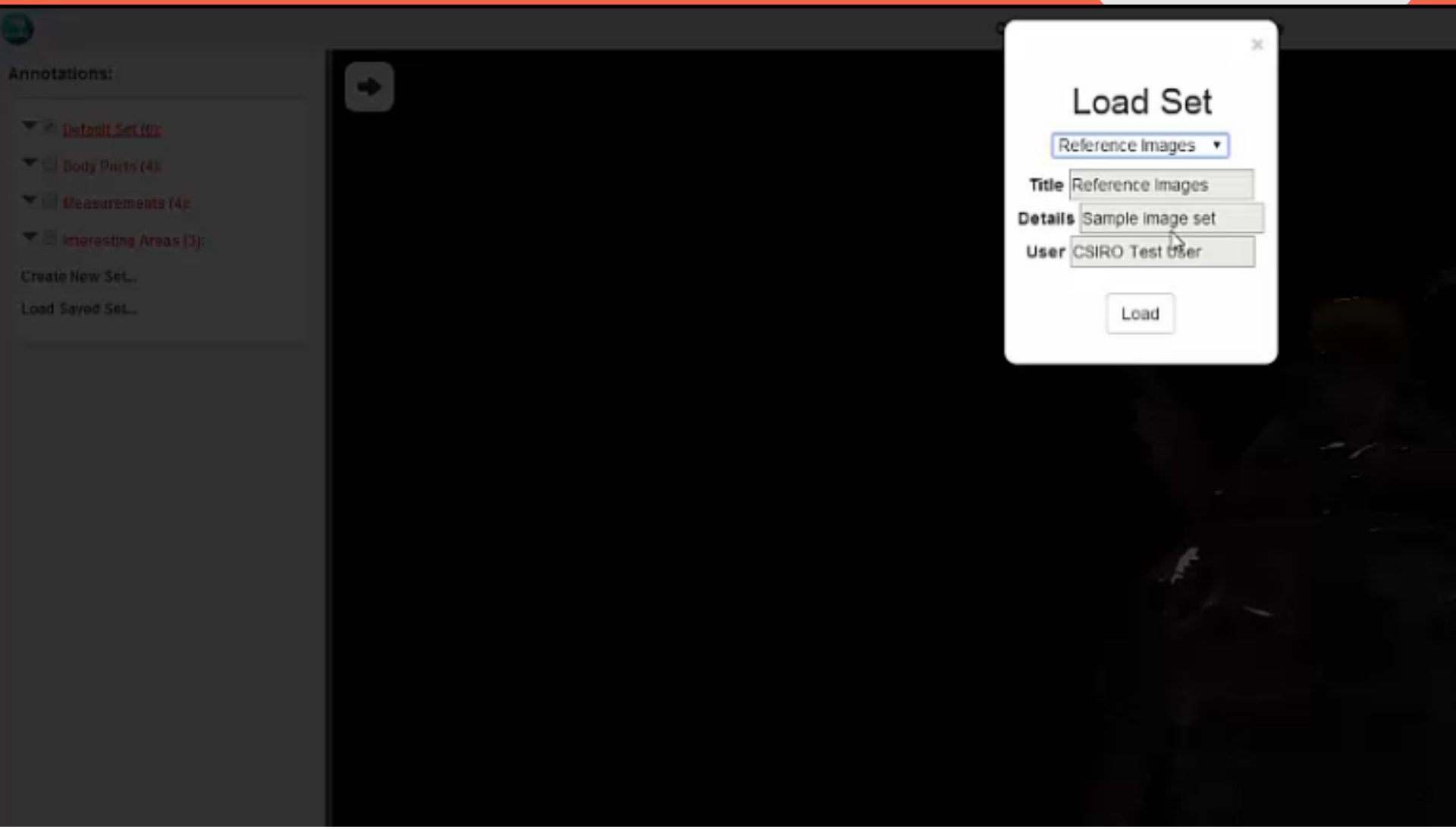
Opacity

Scale Bar

Other


Christmas Beetle (DAP)
Annotations
Default Set (4):
Use as active
Highlights (0):
Lines (3):
body length (1)
body width (1)
length elytra (1)
Body Parts (1):
fore tarsi (1)
Images (0):
Viewpoints (0):
Create New Set...
Load Saved Set...
Opacity
Scale Bar
Other
10
15
20
BP


CSIRO Insect Annotation Prototype
Annotations:
Default Set (0):
Body Parts (4):
Measurements (4):
Use as active
Highlights (0):
Lines (4):
Front Leg Distance (1)
Middle Leg Distance (1)
Rear Leg Distance (1)
Back Arch Distance (1)
Body Parts (0):
Images (0):
Viewpoints (0):
Interesting Areas (3):
Use as active
Highlights (3):
Back Region (1)
Strange Colouring (1)
Unusual Head Shape (1)
Lines (0):
Body Parts (0):
Images (0):
Viewpoints (0):
Create New Set...
Load Saved Set...
Resizable Content Area, Reserved for Future Use


Annotations:
Default Set (0)
Body Parts (4)
Measurements (4)
Interesting Areas (3):
Create New Set...
Load Saved Set...
Load Set
Reference Images
Title
Reference Images
Details
Sample image set
User
CSIRO Test User
Load

CSIRO Insect Annotation Prototype

Annotations:

- Default Set (0):
- Body Parts (4):
- Measurements (4):
- Interesting Areas (3):
- Reference Images (3):
  - Use as active
  - Highlights (0):
  - Lines (0):
  - Body Parts (0):
  - Images (3):
    - Top Right (1)
    - Head On (1)
    - Back View (1)
  - Viewpoints (0):
- Create New Set...
- Load Saved Set...

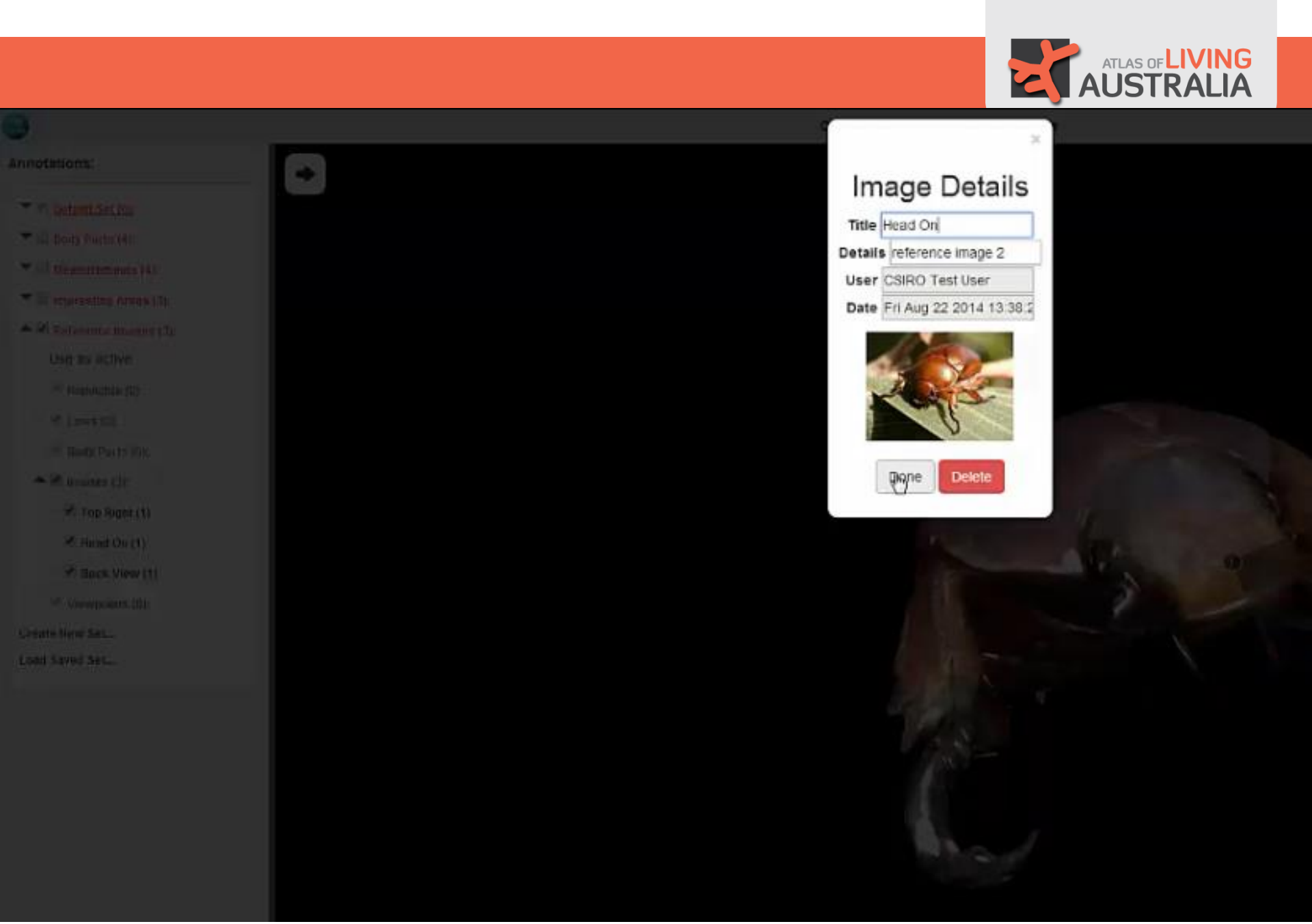


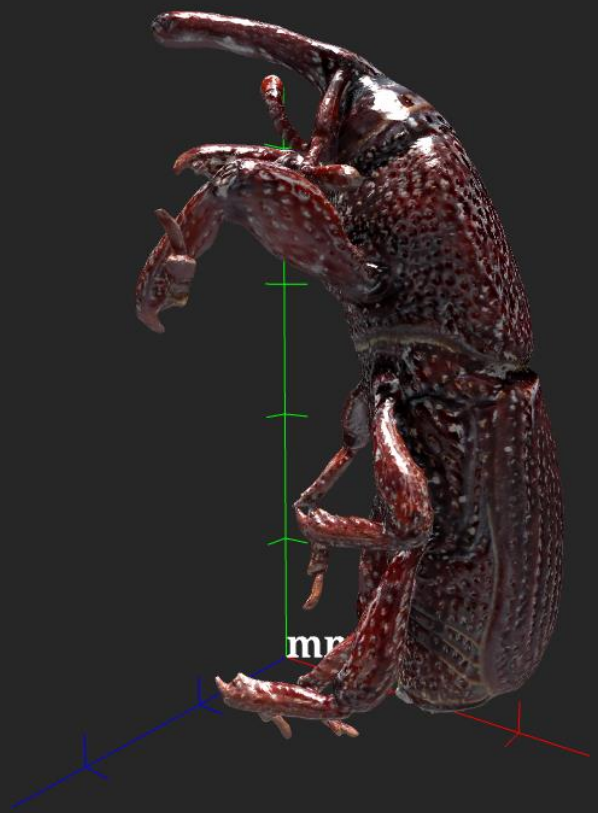
Image Details
Title Head On
Details reference image 2
User CSIRO Test User
Date Fri Aug 22 2014 13:38:2
Done
Delete

Annotations

Opacity

Scale Bar

Other



BP

Adding value to image libraries

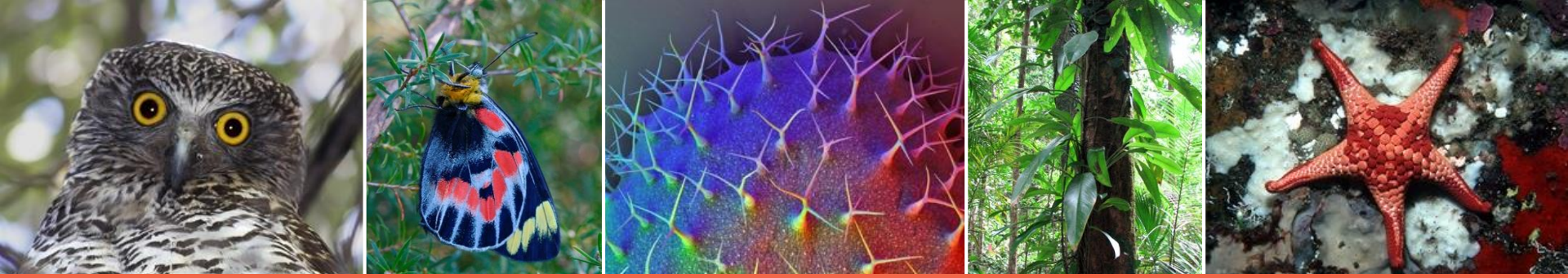
- Ability to extract information from 3D images
- Store that information

- Add relevant information
  - High resolution images
  - Highlight diagnostic characters

Future activities

- Better imaging tools
- Virtual taxonomy
- eFloras / eFaunas
- Trait bank
- Species interactions
- Indigenous knowledge
- Environmental monitoring
- Biosecurity
- Citizen Science

All Atlas software is open source



Thank you

www.ala.org.au

ATLAS OF LIVING AUSTRALIA
sharing biodiversity knowledge

CSIRO