

Biodiversity, Biosecurity and Industry.

An example of them working
together on Barrow Island

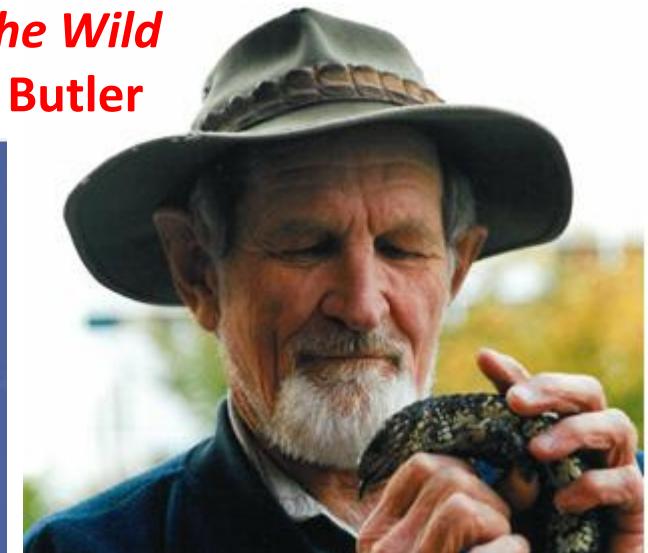
July 2010

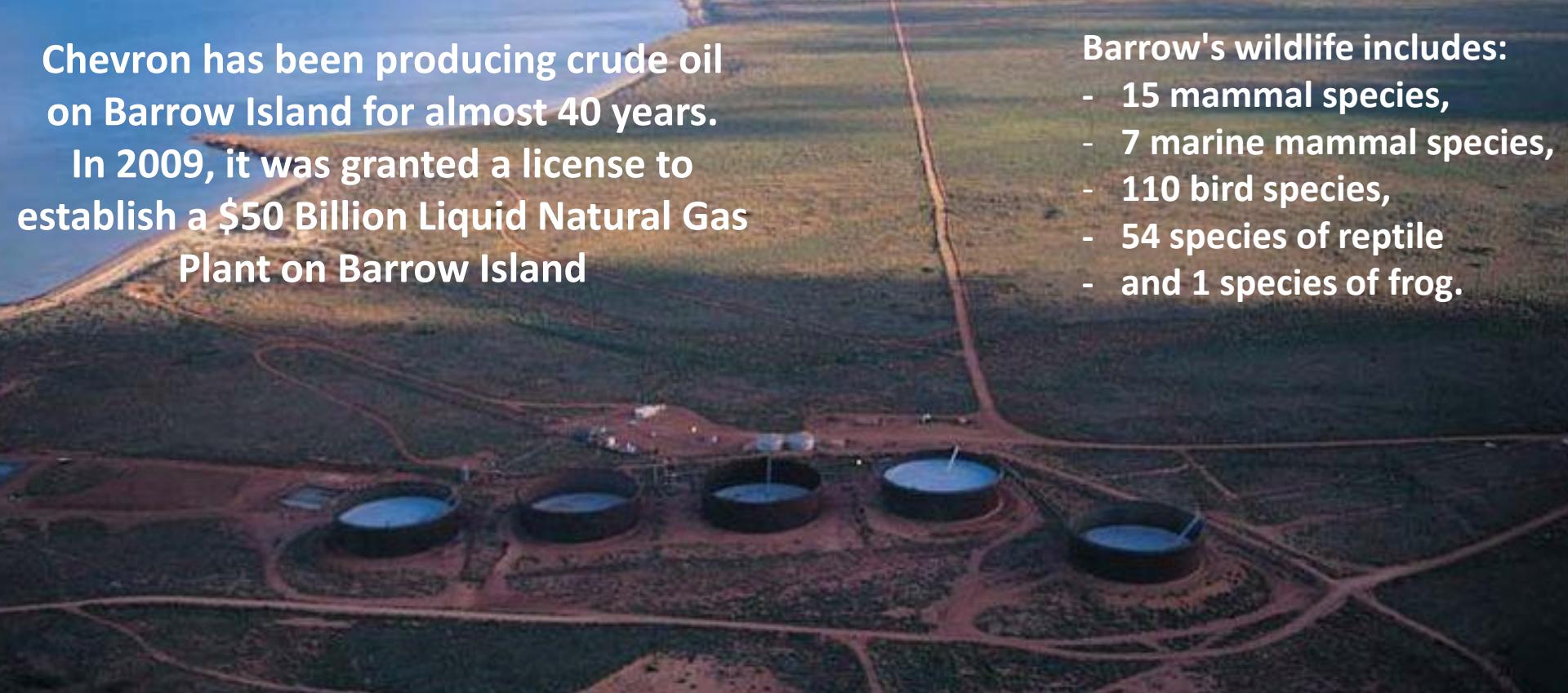
Ken Walker – kwalker@museum.vic.gov.au



Barrow Island, some 202 square kms,
is 90kms off the north Western Australian coastline
and is classified as a Class A Nature Reserve.

ABC TV Series: *In the Wild*
1976 – 1981 Harry Butler



An aerial photograph of Barrow Island, showing a large industrial facility. In the center, there is a cluster of several large, circular storage tanks with blue roofs, connected by a network of brown dirt roads. To the left and right of this central area, there are more industrial buildings and structures. The terrain is flat and appears to be a mix of brown earth and sparse green vegetation. The sky above is clear and blue.

Chevron has been producing crude oil on Barrow Island for almost 40 years.

In 2009, it was granted a license to establish a \$50 Billion Liquid Natural Gas Plant on Barrow Island

Barrow's wildlife includes:

- 15 mammal species,
- 7 marine mammal species,
- 110 bird species,
- 54 species of reptile
- and 1 species of frog.

Quarantine Incursion Management is a significant condition on this mining license.

Chevron must demonstrate that
Non Indigenous Species (NIS) Incursions
are minimised, quickly recognised and
strategies are in place to deal with them.

Vertebrates



Invertebrates!

Quarantine Incursion Management

The best way to implement a

Quarantine Incursion Management Program

is to know what animals you have on the island.

**We know the vertebrates but what about the
invertebrates?**

So what happened?

Quarantine Incursion Management



Extensive invertebrate faunal surveys were conducted on Barrow Island between 2005 and 2007.

Queensland University of Technology

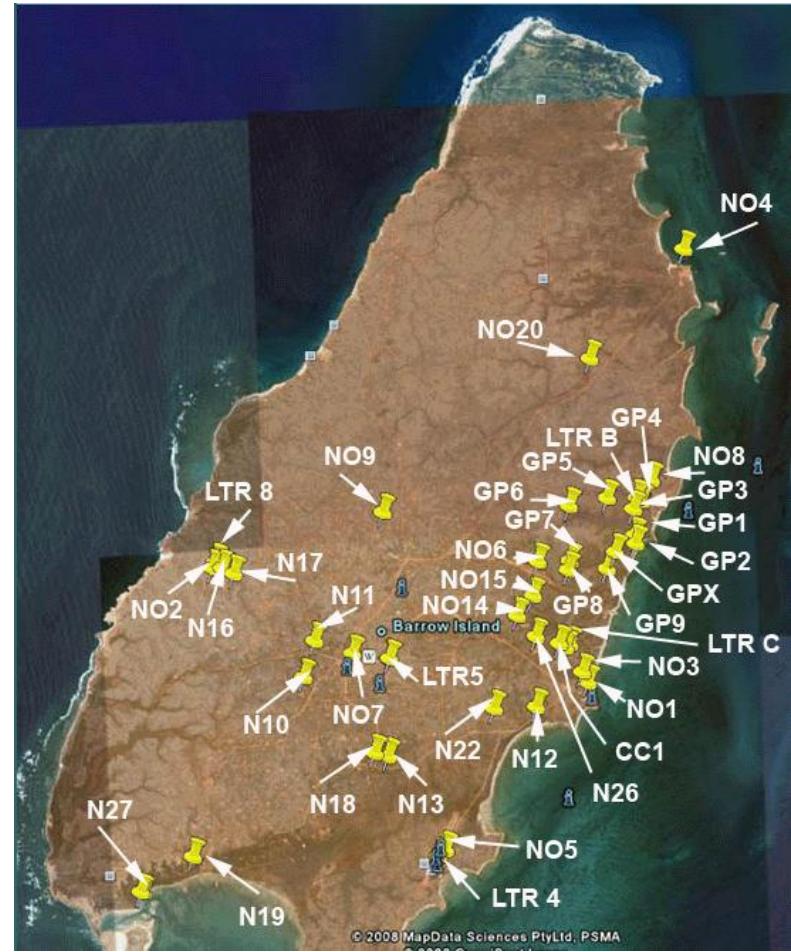
Maths Department developed a

trapping model for the Chevron

footprint on Barrow Island. It has

a theoretical capture success rate

of 95% or better.



Quarantine Incursion Management

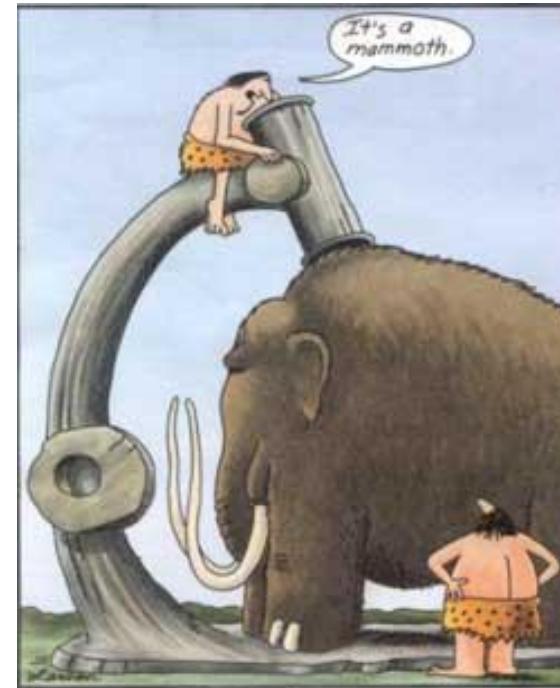
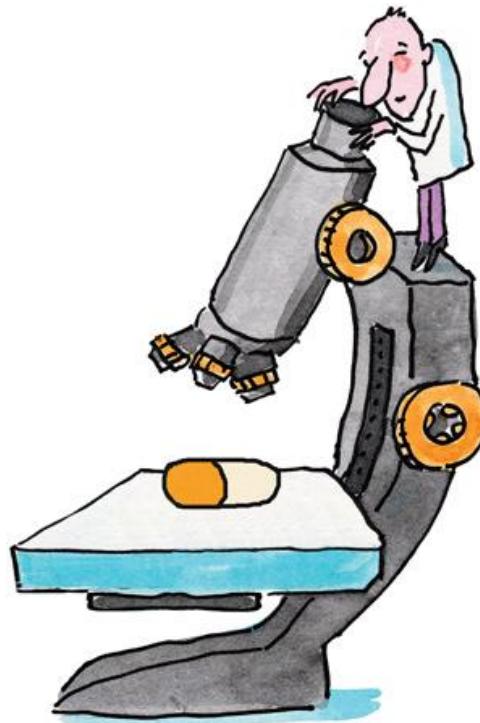


A wide range of collecting was done several times a year
And replicated between 2005 and 2007 -> 14,000 specimens.



Quarantine Incursion Management

Australian and International taxonomists examined the 14,000 specimens and identified almost 2,100 species.



Early microscopes

Quarantine Incursion Management

The statistics are interesting:

14,000 specimens collected

2,100 species identified

Only
268
species
known

Quarantine Incursion Management

These specimens are now stored at
Curtin University and the WA Museum.



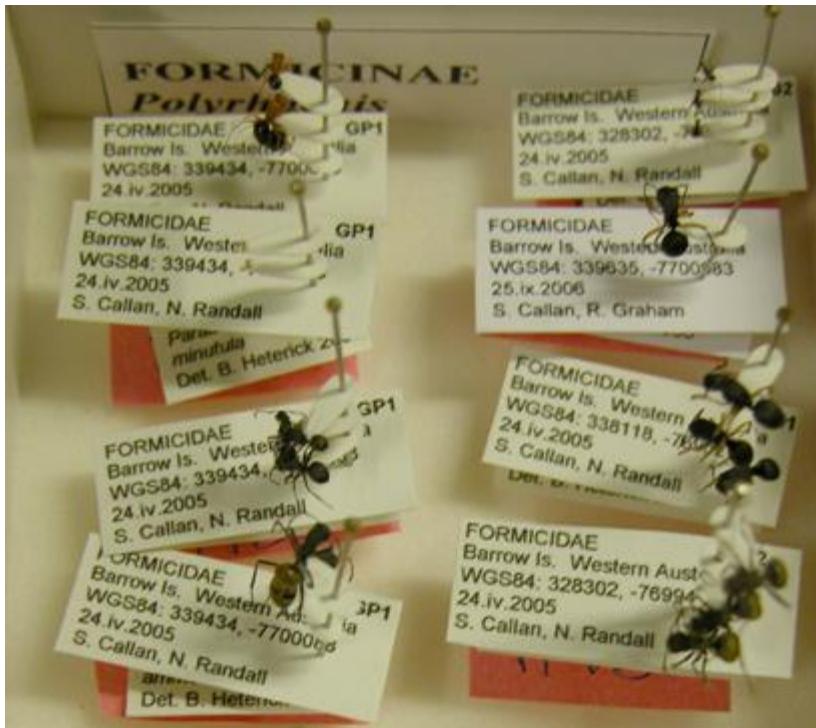
But how accessible
is this information
to assist with
Quarantine Management
on
Barrow Island?



And what about
its biodiversity value?

Quarantine Incursion Management

So, a few specimens of each species
and their full collection datasets were sent to the
Museum Victoria's



	A	B	C	D	E	F	G	H	I
1	SP. CODE	Aenicti ceyl	Ambl s.m.	Anoc rect	Arno J 433	Camp capi	Camp cf.e	Camp disc	Camp doni
2	GENUS:	Aenictus	Amblyopor	Anochetus	Arnoldius	Camponoti	Camponoti	Camponoti	Camponoti
3	SP./SUBSP./VAR.:	sp. male	rectangula	sp. JD	43 capito	cf. evae	(s) discors	donnellani	et
4	SUBGENUS:								
5	008-Apr05	0	0	0	0	1	0	0	0
6	008-May05	0	0	0	0	0	0	1	0
7	017-Apr05	0	0	0	0	0	0	0	1
8	017-May05	0	0	0	0	0	0	0	0
9	022-Apr05	0	0	1	0	1	0	1	1
10	022-May05	0	0	0	0	1	0	0	0
11	045-Apr05	0	0	0	0	0	0	1	0
12	045-May05	0	0	0	0	1	0	0	0
13	105-Apr05	0	0	1	0	0	0	1	1
14	105-May05	0	0	0	0	0	0	1	1
15	ADM-May0	0	0	0	0	0	0	0	0
16	AIR-Apr05	0	0	0	0	0	0	0	0
17	AIR-May05	0	0	0	0	1	0	0	0
18	CC1-Mar06	0	0	1	0	1	0	0	0
19	CC1-Sep06	0	0	0	0	0	1	0	0
20	CC2-Mar06	0	0	0	0	1	0	0	0
21	CC2-Sep06	0	0	0	0	0	1	0	0
22	CON-May0	0	0	0	0	1	0	1	0
23	CTC-Apr05	0	0	0	0	0	0	1	1
24	CTC-May0	0	0	0	0	0	0	0	0
25	DMP-Apr0	0	0	0	0	0	0	0	0
26	DMP-May0	0	0	0	1	0	0	0	0
27	GP1-Mar0	0	0	0	0	0	0	1	0
28	GP1-Sep0	0	0	0	0	0	0	1	0
29	GP2-Mar0	0	0	1	0	0	0	0	1
30	GP2-Sep0	0	0	0	0	0	0	0	0
31	GP3-Mar0	0	0	0	0	0	0	1	0
32	GP3-Sep0	0	0	0	0	1	0	0	0

Quarantine Incursion Management

Biosecurity Diagnostic Image Capture Centre.

Our external collaborators

- Industry (Chevron)
- CRC National Plant Biosecurity

Have provided:

- 3 Leica motorised microscopes
- 2 Leica digital cameras
- Image management software
- Montaging software
- 2 fulltime staff x 3 years

Museum Victoria has provided:

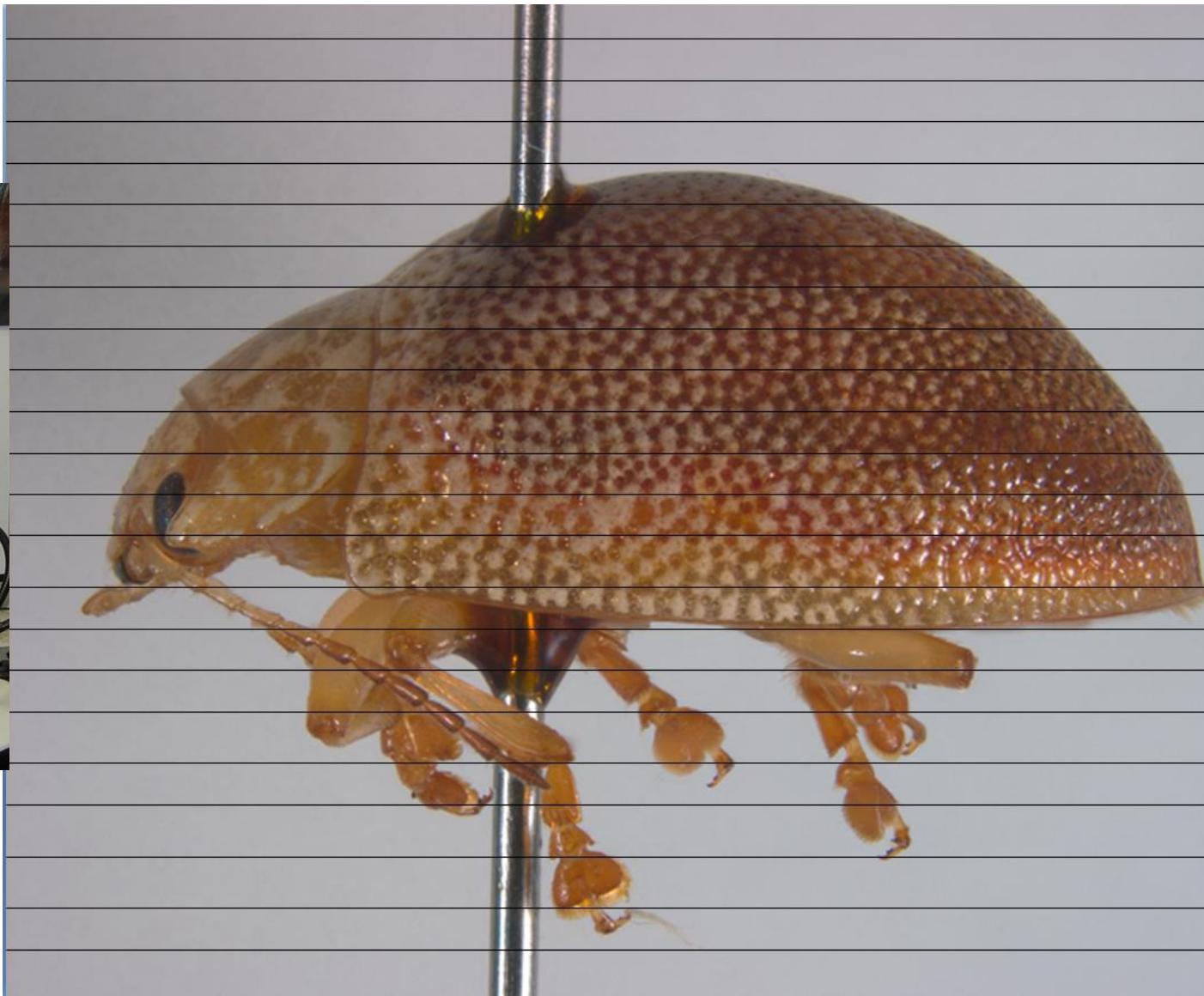
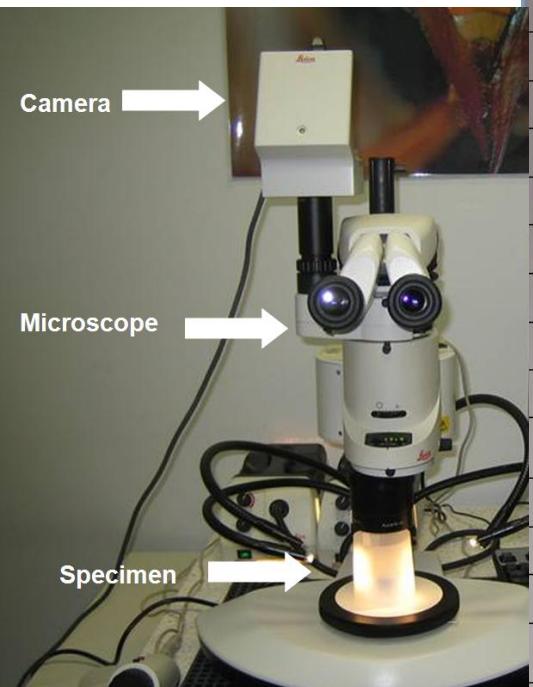
- Taxonomic expertise
- Access to collections
- World wide Museum Networks
- Built the website

Our Motto: *If it's not Digital, then it's Invisible!*



Quarantine Incursion Management

Image Montaging



Quarantine Incursion Management

Image Montaging

Single image

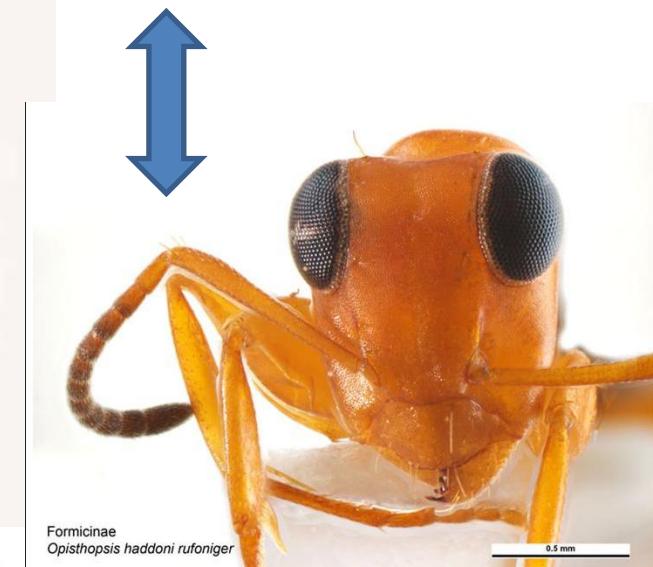


A Montaged Image from 40 single images



Quarantine Incursion Management

We have now over 10,000 BWI montaged images



Quarantine Incursion Management

We have now over 10,000 BWI montaged images



Lycidas sp. 6 Jumping Spider - Lycidas sp. 6



Salticidae
Lycidas sp. 3



Salticidae
Lycidas sp. 6



Zodarion minusculum
Ground Spider - Minasteron minusculum



Zodarion minusculum
Ground Spider - Minasteron minusculum



Zodarion minusculum
Ground Spider - Minasteron minusculum



Miturgidae Genus 1 sp. 1 Long-legged Spiders - Miturgid Genus 1 sp. 1



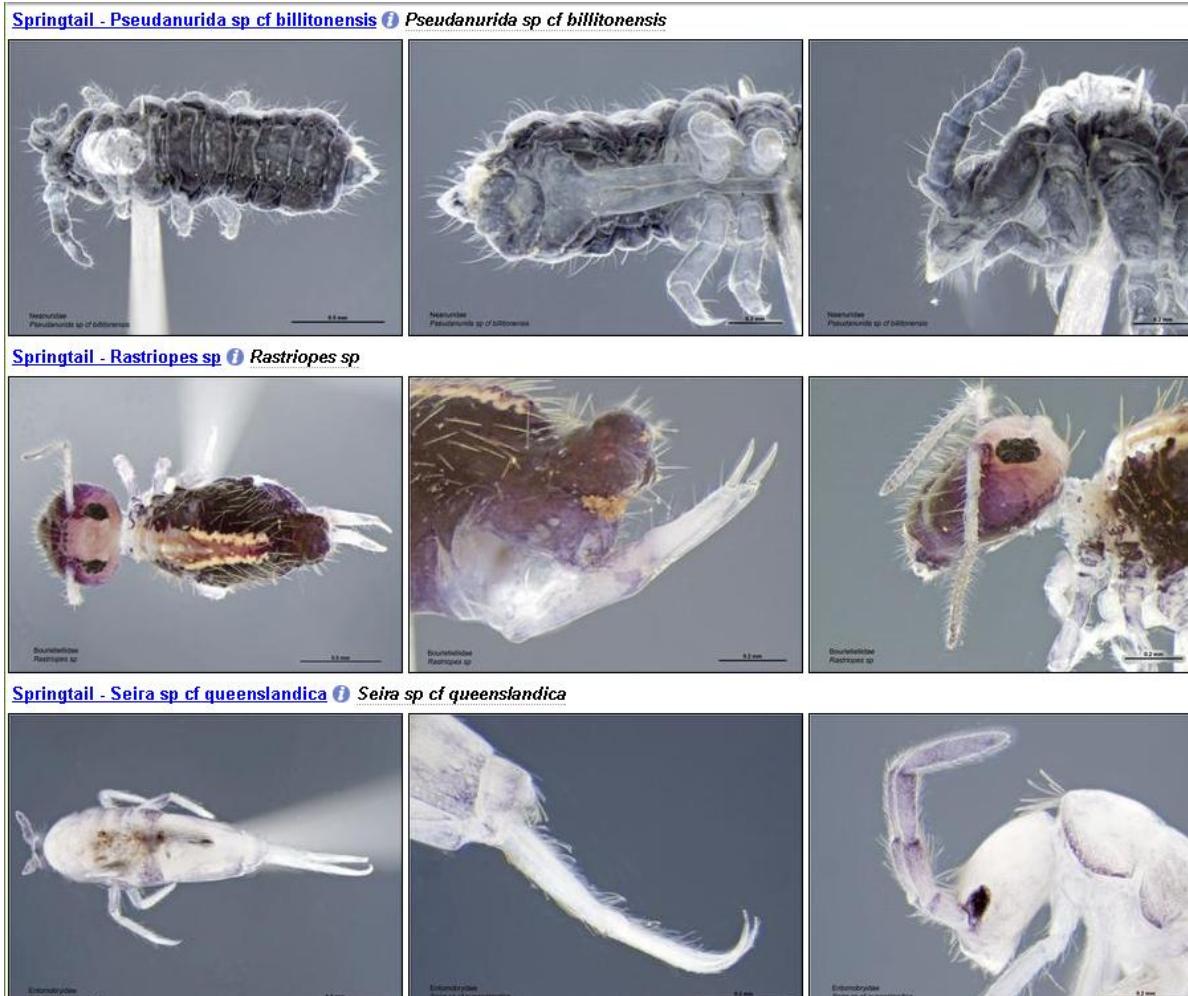
Miturgidae
Genus 1 sp. 1



Miturgidae
Genus 1 sp. 1

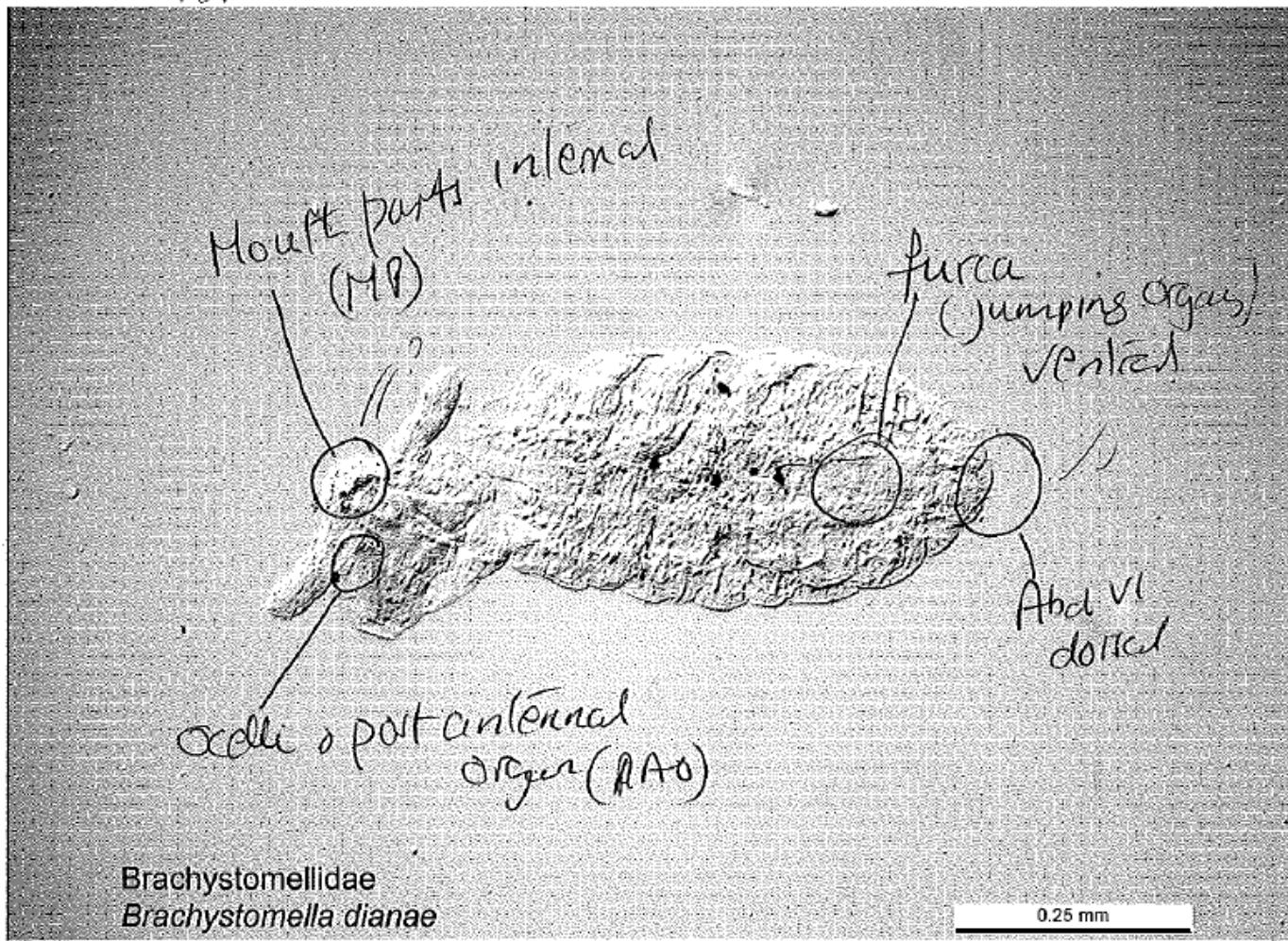
Quarantine Incursion Management

We have now over 10,000 BWI invertebrate images



Quarantine Incursion Management

A Collembola world expert marked diagnostic characters



Quarantine Incursion Management



Quarantine Incursion Management

Each species has its own web page
with a series of diagnostic images

Species Content Page

Print Friendly Fact Sheet
Email to a Friend

Ants - BI Giant pennant ant - *Tetramorium sjostedti*
Tetramorium sjostedti Forel (Hymenoptera: Formicidae: Myrmicinae)

Status Present on Barrow Island

Lateral image [Zoomify](#) [VIEW LARGER IMAGE](#)



Myrmicinae
Tetramorium sjostedti

Caption: Western Australia: Barrow Island
Source: Lucinda Gibson [Museum Victoria](#)

Citation: Gibson, L. (2010) Giant pennant ant - *Tetramorium sjostedti* (*Tetramorium sjostedti*) Pest and Diseases Image Library. Updated on 6/4/2010 8:44:09 AM. Available online: <http://www.padil.gov.au>

Created Date: 10/20/2008 2:43:49 PM
Last Updated: 6/4/2010 8:44:09 AM

Distribution | Hosts | Linkouts | Diagnostic Images | Google Maps

Diagnostic Images



Quarantine Incursion Management

Each image can be enlarged

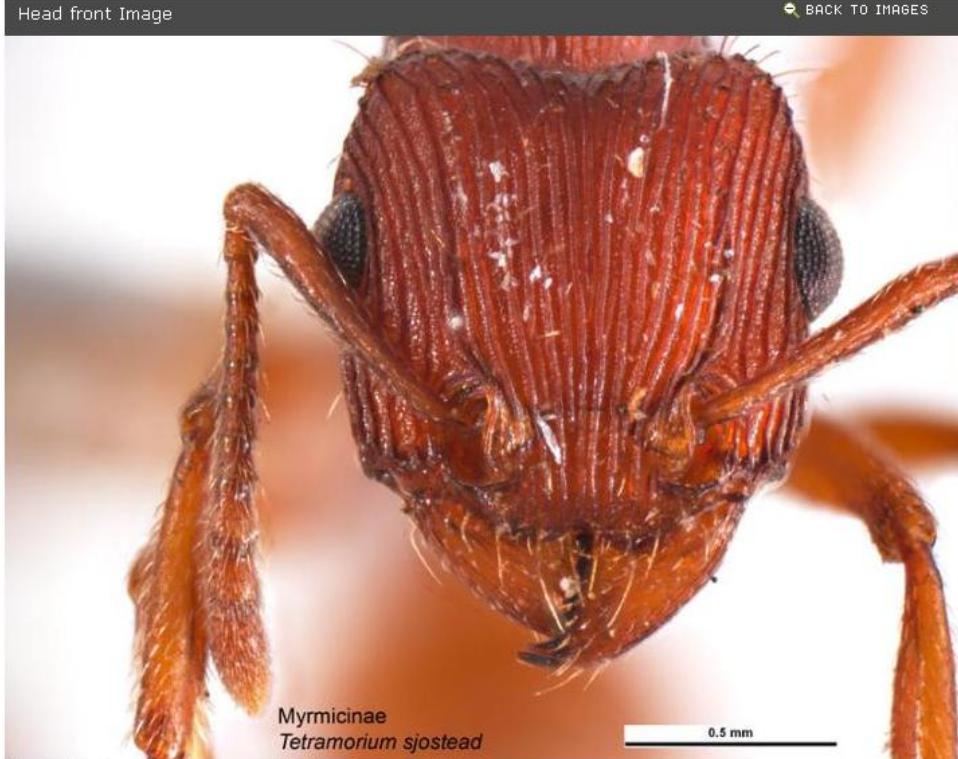
Species Diagnostic Images

Print Friendly Fact Sheet
 Email to a Friend

Ants - BI Giant pennant ant - *Tetramorium sjostedti*
Tetramorium sjostedti Forel (Hymenoptera: Formicidae: Myrmicinae)

Status
Present on Barrow Island

Head front Image BACK TO IMAGES



Myrmicinae
Tetramorium sjostedti 0.5 mm

Caption: Western Australia: Barrow Island
Source: Lucinda Gibson Museum Victoria

Distribution | Hosts | Linkouts | Diagnostic Images | Google Maps

Quarantine Incursion Management

Each image can be zoomified!

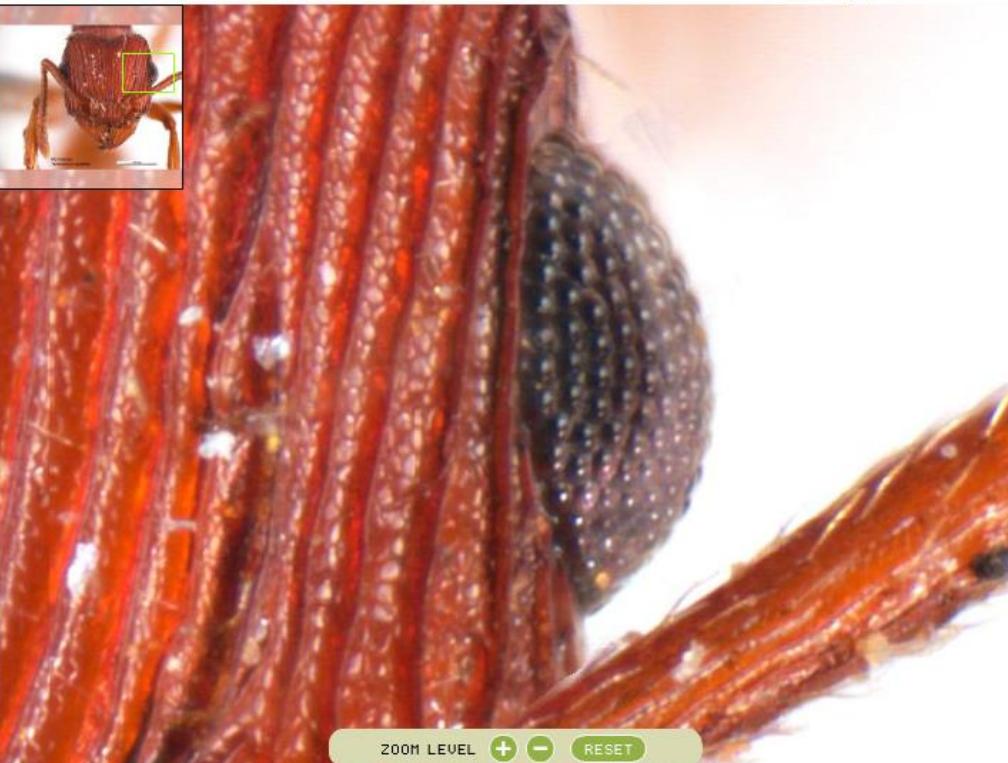
Zoomify

Ants - BI Giant pennant ant - *Tetramorium sjostedti*
Tetramorium sjostedti Forel (Hymenoptera: Formicidae: Myrmicinae)

Status Present on Barrow Island

[Print Fact Sheet](#)
[Email to a Friend](#)

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ZOOM LEVEL + - RESET

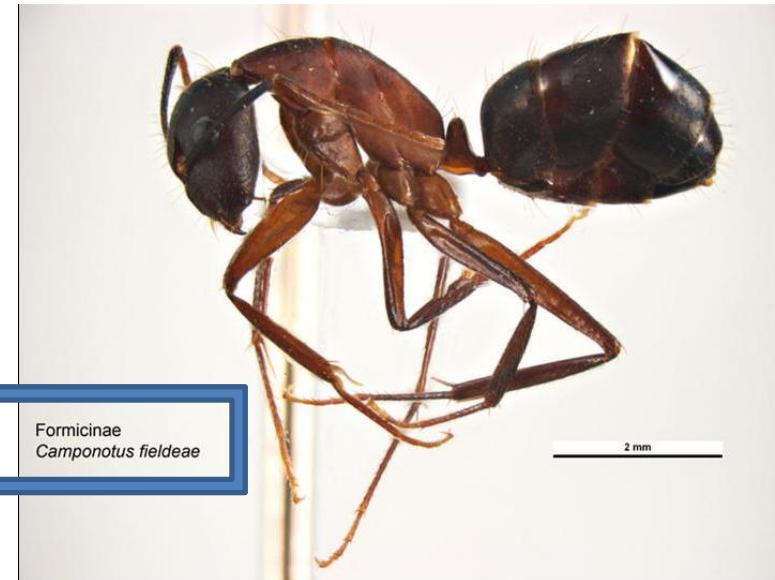
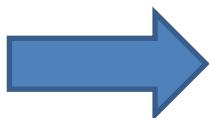
[Distribution](#) | [Hosts](#) | [Linkouts](#) | [Diagnostic Images](#) | [Google Maps](#)

What data do we have and how can we use it?

Every species provides:

Scientific Name
&
Taxonomic Hierarchy

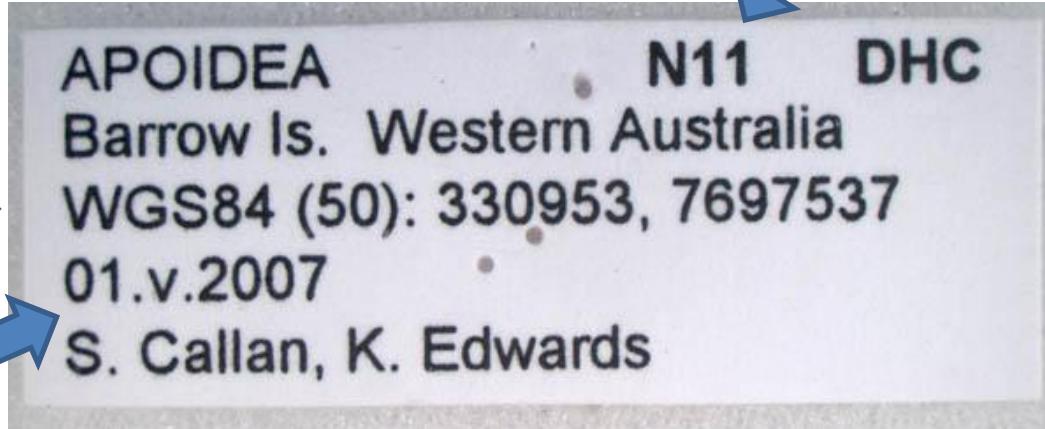
Order: Family: Subfamily
Hymenoptera: Formicidae: Formicinae



What data do we have and how can we use it?

Every data label provides:

Collection location code



Spatial coordinates

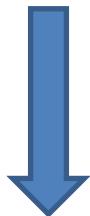
Temporal data

- Month
- Year

What data do we have an how can we use it?

Database the Raw available data

Collection
location
code



Scientific Name
Taxonomic Hierarchy

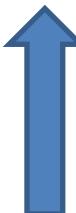
Order: Hymenoptera	Family: Hym - Formicidae Formicinae		
Genus: Camponotus	Subgenus:		
Species: fielei	Subspecies:		
Author Forel			
Storage Medium c	SRating 3		
Locality & Collector:	Uniq Locality Identifier:		
Western Australia: Barrow Island, N11, Former 'ODE' camp			
1 May 2007, S. Callan, K. Edwards			
Ranged Date items: Month (1-12): 5	Year: 2007	Ref	Site 20 48, 115 22
Place N11			
State No.	Latitude: 20 Deg 48 Min S	Longitude: 115 Deg 22 Min E	

Temporal
data

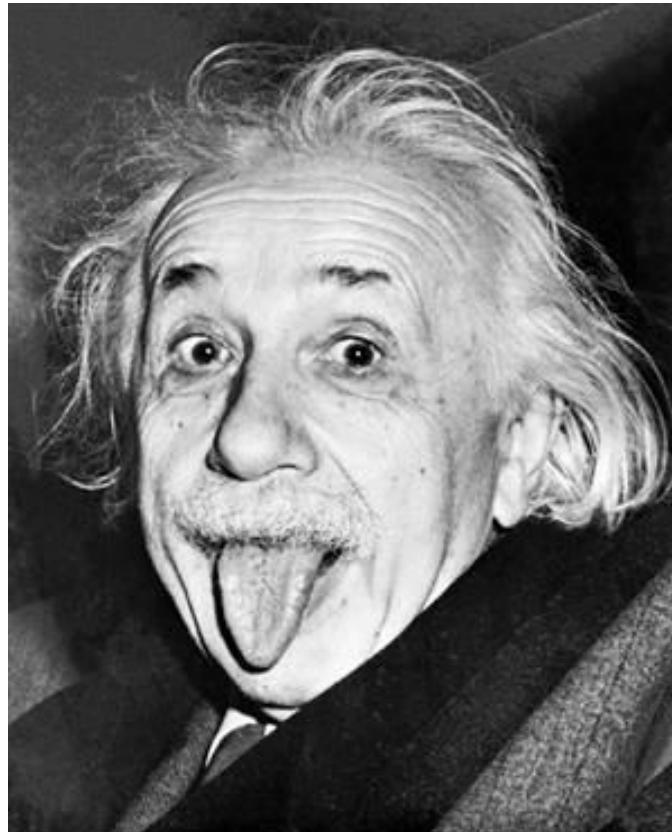
- Month
- Year



Spatial coordinates



“Imagination is more important than knowledge”
Albert Einstein.



“Knowledge is power.”
Sir Francis Bacon



Effective Web Searching?

The web world has offered two search paradigms:

- **Navigational or Hierarchical search (taxonomy)**

which enables users to browse
the information by narrowing
the scope of their query
in a predetermined order.

Arthropod/nematode/pathogen information:

Scientific name*

Order

Aggregate summary by **taxon** details

equals

Family

equals

Genus

equals

Species

equals

Infraspecific Taxa

equals

Common Name*

equals

- **Direct search** allows users to simply write their queries as a bag of words in a text box.
This approach has been made popular by Web search engines.



Advanced Search
Language Tools



“Knowledge is power.”

Uni-dimensional Searches

Select data sources

Click checkboxes to select data sources.

Arthropods

- ANIC ASCU BSES FCNI ICDB
 NTEIC QDPIF TFIC TPPD UQIC
 VAIC WACALM WINC
 APDD WAC

Microorganisms
[Select all sources](#) [Deselect all sources](#)
Arthropod/nematode/pathogen information:
Scientific name:

Aggregate summary by **taxon** details

Order	equals	<input type="text"/>
Family	equals	<input type="text"/>
Genus	equals	<input type="text"/> Bactrocera
Species	equals	<input type="text"/> papayae
Infraspecific Taxa	equals	<input type="text"/>
Common Name*	equals	<input type="text"/>

[Reset taxon details](#)
[Web](#) [Images](#) [Videos](#) [Maps](#) [News](#) [Books](#) [Mail](#) [more ▾](#)


"bactrocera papayae compositae"

 Everything
 More

 No results found for "bactrocera papayae compositae".

Direct text

Data source refresh status
Host Information
Scientific name:

Aggregate summary by **host** details

Family	equals	<input type="text"/> Compositae
Genus	equals	<input type="text"/>
Species	equals	<input type="text"/>
Infraspecific Taxa	equals	<input type="text"/>
Common Name*	equals	<input type="text"/>
Substrate*	equals	<input type="text"/>

[Reset host details](#)
Location

 State: All states Town: equals

Collection date:

 From: (yyyy) - To: (yyyy)

AUSTRALIAN PLANT PEST DATABASE

 Search databases: ANIC 0, ASCU 0, BSES 0, FCNI 0,
 Total records returned: 0.

Original query:

 Pest genus: *Bactrocera*
 Pest species: *papayae*
 Host family: *Compositae*
 Results ordered by: Pest genus, pest species

No.	Database	Count
Total count:		0

“Knowledge is power.”

Uni-dimensional Navigational Searches - Science websites

Department of Entomology



Smithsonian National Museum of Natural History

Search the Department of Entomology Collections

Detailed Search of the Department of Entomology Collections

Enter or select appropriate terms in the boxes below and click on the "Search" button. To return to the Basic Search screen search form.

Please be aware that searches on a single, broad term may produce very large result sets following long processing times. searches with additional terms is strongly advised. It is also possible to create searches that will produce no results, e.g. "C "Odonata" and "Apidae". Partial words may be entered using an asterisk (*) wildcard, however such searches may be quite you choose to enter more than one term in a field, only records including both terms will be returned.

Currently results lists are sorted by taxonomic group and limited to 2000 records.

Enter search term(s)...

List only items with images

USNM Number	<input type="text"/>	[e.g. 70791]
Barcode	<input type="text"/>	[e.g. 00391587]
Collection	<input type="text"/>	[Use to select primary types]
Class	<input type="text"/>	[Select from list]
Order	<input type="text"/>	[Select from list]
Family	<input type="text"/>	[Up to 3 leading characters narrows lookup]
Scientific Name	<input type="text"/>	[e.g.: Ceratina amabilis OR Ceratina OR amabilis]
Country	<input type="text"/>	[Select from list; e.g. United States]
Province/State/Territory	<input type="text"/>	[e.g. Arizona]
District/County	<input type="text"/>	[e.g. Pima]
Collector(s)	<input type="text"/>	[e.g. Jordan, D.S.]
Collection Date	<input type="text"/>	[e.g. 13-Aug-1953 or Aug-1953 or 1953]
Records per page	<input type="text" value="20 results"/>	<input type="checkbox"/>
<input type="button" value="Search"/> <input type="button" value="Clear"/> <input type="checkbox"/> List only items with images		

NATIONAL HISTORY MUSEUM

Research and curation | Business centre | About us | Search | 

NaturePlus | Login | Register | Browse

Home | Visit us | Nature online | Kids only | Education | Take part | Buy online | Tring |

You are here: Home > Research and curation > Collections > Departmental collections > Entomology collections > Search database

Entomology collection database

Collections

- [Collections management](#)
- [Online collections](#)
- Departmental collections**
- [Botany collections](#)
- Entomology collections**
- [Search database](#)
- [Mineralogy collections](#)
- [Palaeontology collections](#)
- [Zoology collections](#)
- [Library collections](#)
- [Museum treasures](#)
- [Collections management seminars](#)
- [Scientific enquiries](#)
- [Museum Lives](#)

Index Lot search Specimen search

Enter your search criteria into the form below and select search.

Taxon:	<input type="text"/>
Type status:	<input type="text"/>
Specimen number:	<input type="text"/>
Preservation:	<input type="text"/>
Sex:	<input type="text"/>
Stage:	<input type="text"/>
Collection locality:	<input type="text"/>
Records per page:	<input type="text" value="10"/>

Toolbox Print version Email a friend

Lessons from e-commerce – Faceted Searching



Whenever the customer puts in a query term:

- Only show categories relevant to that query term
- Only display available stock for the query term

amazon.com

Hello. Sign in to get personalized recommendations. New customer? Start here.

Your Amazon.com | Today's Deals | Gifts & Wish Lists | Gift Cards

Shop All Departments Search All Departments car

Find the Best Selection of Car Elect

- Car Electronics Store
- Car AV
- Car Secu

> Shop all car electronics

Department
Toys & Games
2 to 4 Years
Baby to 2 Years
Toy Vehicle Playsets
Ride-On Toys
Kids' Push Ride-Ons

Music
Rock Music
Pop Music
Alternative Rock
New Wave & Post-Punk
Classic Rock

Books
Ages 4 to 8
Children's Books
Children's Literature
Transportation
Car Repair

+ See All 30 Departments

Shipping Option (What's this?)
Any Shipping Option
Prime Eligible
Free Super Saver Shipping

ADVERTISEMENT

"car"

Related Searches: car accessories, gps, tv.

Showing 1 - 16 of 1,385,221 Results

Looking for auto parts? Enter your year, make, and model to find your parts.

1. Little Tikes Cozy Coupe 30th Anniversary Car by I
Buy new: \$64.99 \$52.99
13 new from \$47.41
In stock but may require an extra 1-2 days to process.
Eligible for FREE Super Saver Shipping.
★★★★☆ (59)
Toys & Games: See all 60,749 items

2. Cars (Full Screen Edition) ~ Owen Wilson, Bonnie H
Buy new: \$29.99 \$15.99
54 new from \$11.95 32 used from \$5.95
Get it by Wednesday, July 28 if you order in the next 19 hr
Eligible for FREE Super Saver Shipping.
★★★★☆ (802)
Movies & TV: See all 2,768 items

3. Hot Wheels 10 Car Pack (Styles May Vary) by Ma
Buy new: \$46.99 \$13.44
35 new from \$5.00
Get it by Wednesday, July 28 if you order in the next 19 hr
Eligible for FREE Super Saver Shipping.
★★★★☆ (18)
Toys & Games: See all 60,749 items



Shopping Cart

Display product



eBay.com.au G'day! Sign in or register

CATEGORIES MOTORS REAL ESTATE PETS THE BIG DEAL STOR

Query term

car

Related Searches: ute, boat, holden, motorbike, cars, caravan, used cars

Home > Buy > Search results for "car"

Refine search

Categories

Cars, Bikes, Boats (49,926)
Cars (19,851)
Car Parts, Accessories (27,026)
Clothing, Merchandise, Media (1,812)
Boat Parts, Accessories (466)
Trailers (144)
More ▾

Toys, Hobbies (24,996)
Diecast Vehicles (12,371)
Radio Control (6,402)
Character Toys (1,835)
Slot Cars (1,204)
Model Building (1,121)
More ▾

121,981 results found for car [Save this search]

All items Auctions only Buy It Now only

@ Audi Stainless Steel Car K 3D
Feedback: 1,412 | 97.2%
Watch this item

2008 Lamborghini Gallardo M 6sp M
Drive Away Victoria ONLY
Feedback: 0
Watch this item

@ Nissan GTR 35 Stainless S ring 3D
Feedback: 1,412 | 97.2%
Watch this item

Lessons from e-commerce – Faceted Searching



PaDIL Beta

Your Dashboard Bowerbird Image Libraries PBT RMD

Barrow Island ▾ Explore ▾ Your Comparisons ▾ Search Barrow Island Search ▾

Home ▶ Barrow Island ▶ Search

Search

Save As Explore Item...

Search Text Show

Search Taxonomic Classification Show

Search Facets Show

Search Nested Library Facets Show

Search By Map Show

Multi-dimensional search engine:

Text

Navigational Hierarchical Query
User defined facets

Spatial

Start Your Search

To perform a search:

- Enter some text to search for;
- Select a taxonomic classification;
- Select a facet option;
- Select an area on the map;
- or any combination of these options.

Other options:

- Explore Barrow Island

Shopping Cart

Selected Species

No Species Selected

Clear All

Click To Compare

“Imagination is more important than knowledge” PaDIL 
Albert Einstein.

I'm at the Barrow Is airport
and it's 11pm.

I've just found an ant nest
at the base of tree and
the ants are tending aphids.
I can clearly see that the
ants have 1 petiole segment
on the abdomen.

- (1. User defined Spatial area)
- (2. Temporal data)
- (3. Common /Classification)
- (4. Nesting Strategy)
- (5. Feeding strategy)
- (6. Morphological character)

Is this a new incursion record for Barrow Island? Show me
Barrow Island ant species with images for these variables.



“Imagination is more important than knowledge” PaDIL
Albert Einstein.

Search Taxonomic Classification Hide

All (111 species)
Hymenoptera (111 species)

All (111 species)
Dryinidae (1 species)
Formicidae (110 species)

All (110 species)
Aenictinae (1 species)
Cerapachyinae (5 species)
Dolichoderinae (21 species)

Group

Ants (111 species)
Bees (12 species)
Beetles (199 species)
Booklice (18 species)
Bugs (118 species)

(3. Common name Classification)

Search Text Show
Search Taxonomic Classification Show
Search Facets Show
Search Nested Library Facets Show
Search By Map Show

Search Nested Library Facets Hide

Nested Library Ant SubFamily Key (104 species) ▾

Antennae
Gaster shape
Head shape
Petiole

Sting

Basal attachments not obscured (42 species)
Second segment not strongly arched (69 species)
Basal attachments obscured by lobes (28 species)
Second segment strongly arched (1 species)
Absent (22 species)
Present (48 species)

(6. Morphological character)

(5. Feeding strategy)
(2. Temporal data)
(4. Nesting Strategy)

Nested Library Formicinae ant behaviours (35 species) ▾

Feeding strategies
Foraging times
Nest locations

Herbivores (23 species)
Omnivores (23 species)
Parasitic (1 species)
Predators (34 species)
Scavengers (10 species)

Seen during the day (24 species)
Seen during the night (19 species)

Arboreal (1 species)
Below ground (34 species)
Nest entrance exposed (32 species)
Nest entrance sheltered



“Imagination is more important than knowledge” PaDIL

Albert Einstein.

Multi-dimensional Query string

3 results found for **Formicinae ant behaviours**, **Ants**, **Seen during the night**,
Scavengers, **Below ground**, **Nest entrance sheltered**, **A single, distinct segment**,
Species Within -20.8471, 115.3952, -20.8724, 115.4232 (0.0658502 seconds)

[Start New Search](#)

RSS feed

Scientific Name Common Name Taxonomy Relevance Date Added 10 20 30 PDF CSV RSS

Select To Compare All

[Sugar ant - Camponotus capito](#)

Camponotus capito
Mayr
(Hymenoptera: Formicidae:
Formicinae)

High

[Sugar ant - Camponotus discors](#)

Camponotus discors
Forel
(Hymenoptera: Formicidae:
Formicinae)

High

[Sugar ant - Camponotus simpsoni](#)

Camponotus simpsoni
McArthur
(Hymenoptera: Formicidae:
Formicinae)

High

Selected Species

Camponotus capito

Camponotus discors

Camponotus simpsoni

Shopping Cart

“Imagination is more important than knowledge” PaDIL
Albert Einstein.

Subscribe to this feed using [Live Bookmarks](#)

Always use Live Bookmarks to subscribe to feeds.

PaDIL species matching Formicinae ant behaviours, Ants, Seen during the night, Scavengers, Below ground, Nest entrance sheltered, Species Within -20.8344, 115.3832, -20.8826, 115.4347

PaDIL species search within Barrow Island

Sugar ant - *Campenotus discors*
Friday, 26 December 2008 10:41 PM

Species Details

Common Name:
Sugar ant - *Campenotus discors*

Scientific Name:
Campenotus discors

Author:
Forel

Taxonomy:
(Hymenoptera: Formicidae: Formicinae)

Images



[View Species in PaDIL](#)

Sugar ant - *Campenotus capito*
Thursday, 25 September 2008 1:38 PM

Species Details

Common Name:
Sugar ant - *Campenotus capito*

Scientific Name:
Campenotus capito

Author:
Mayr

Taxonomy:
(Hymenoptera: Formicidae: Formicinae)

Images



[View Species in PaDIL](#)

Sugar ant - *Campenotus simpsoni*
Thursday, 25 September 2008 1:12 PM

An arrow points from the text above to the "View Species in PaDIL" link for the first ant species.



An RSS feed will alert you to any new additions that match your query string.

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Albert Einstein.

“Shopping Cart”

Selected Species

Camponotus capito



Remove

Camponotus discors



Remove

Camponotus simpsoni



Remove

Clear All

Click To Compare

You select what images you want to compare

Tool Dashboard Overview Image Library

▼ Search ...

Compare Selected Species

To compare your 3 species, select the images you want to use:

Images

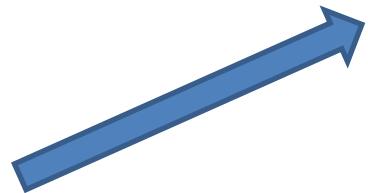
- Dorsal view
- Head front
- Head side
- Lateral view

Continue Cancel

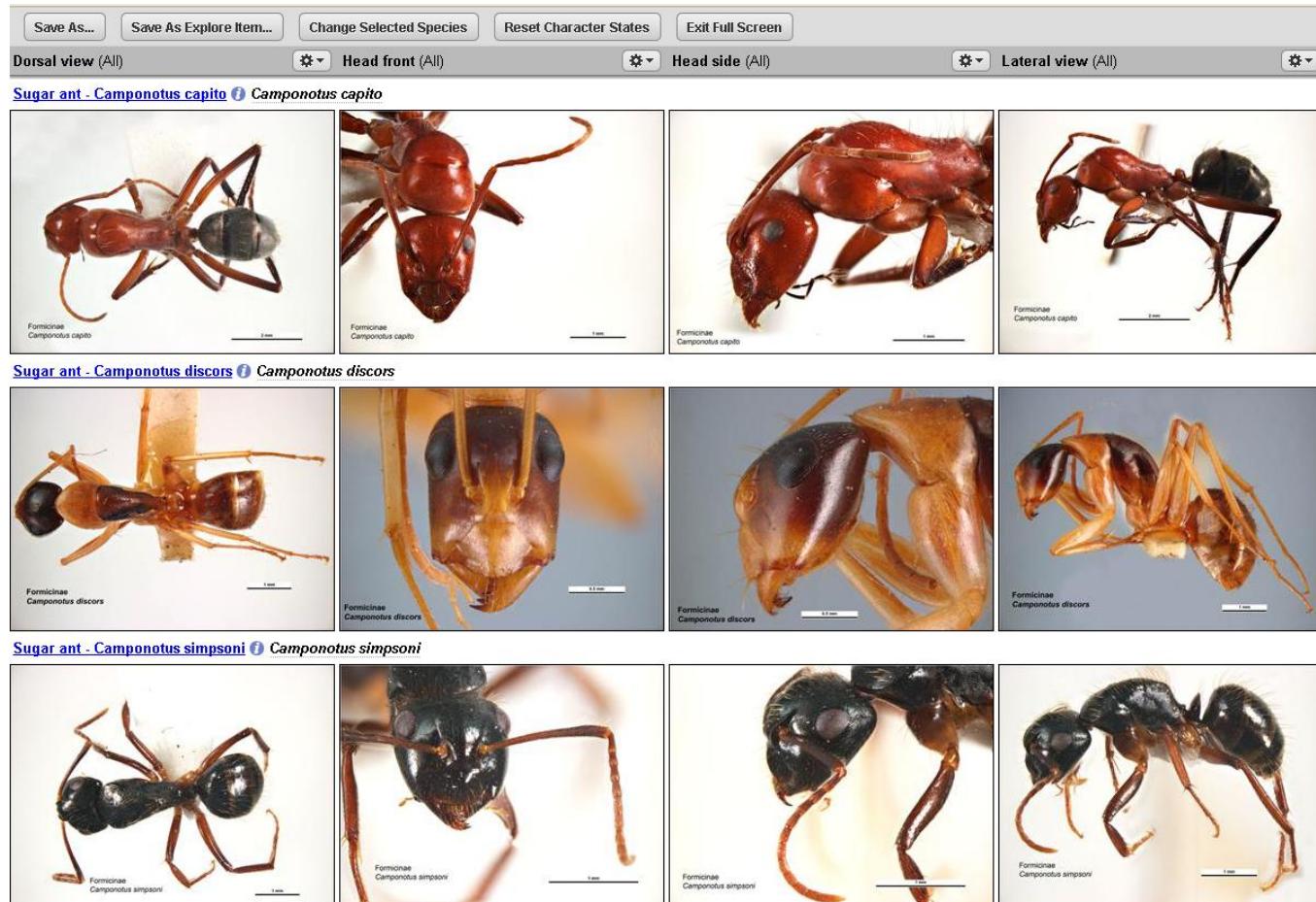
Classification Facets Hide

“Imagination is more important than knowledge” PaDIL 
Albert Einstein.

A Comparative Image table is built in real-time to your selections.



You can save
these results
to your
Personal
Dashboard.



“Imagination is more important than knowledge” PaDIL 
Albert Einstein.

Saved to your personal dashboard.

Your Dashboard

Manage Image Libraries ▾

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Global Settings

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Your Dashboard

Inbox

From	Subject	Sent
No Messages		

Task Shortcuts

Start New Comparison

Make New Identification Enquiry

Your latest comparisons

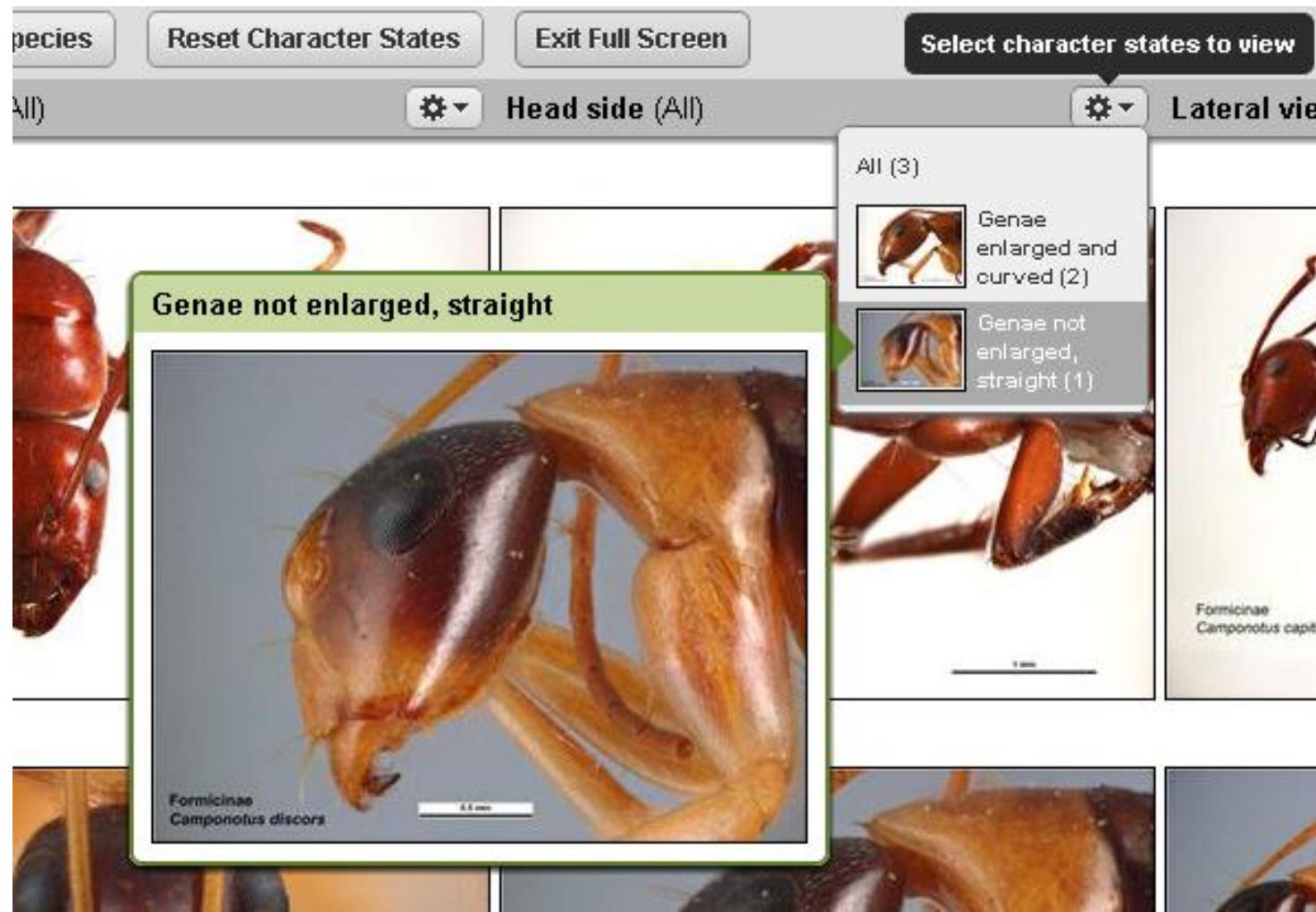
Name	Image Library	Details		
Airport Night Ants	Barrow Island	3 species, 4 characters	Edit Comparison	Edit Name
Cockroaches at Accommodation Centre	Barrow Island	20 species, 5 characters	Edit Comparison	Edit Name
NIS Barrow Checklist	Barrow Island	16 species, 15 characters	Edit Comparison	Edit Name

[View All Your Comparisons »](#)



“Imagination is more important than knowledge” PaDIL 
Albert Einstein.

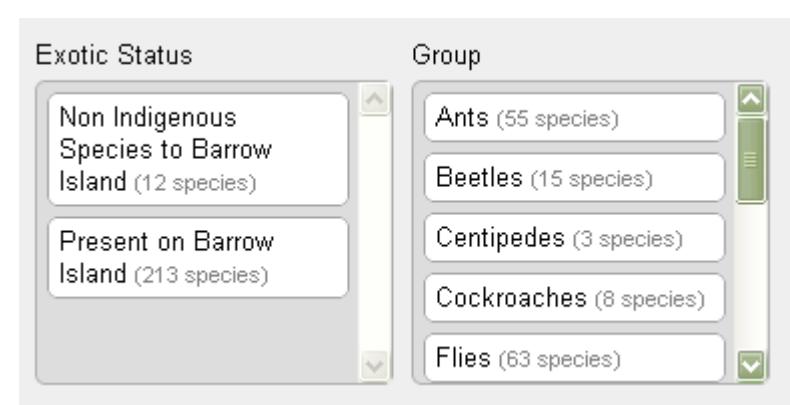
If you return with a specimen for examination under a microscope,
Character State analysis can be used to identify to species.



“Imagination is more important than knowledge” PaDIL 

Albert Einstein.

Think of the possibilities to play with the data!



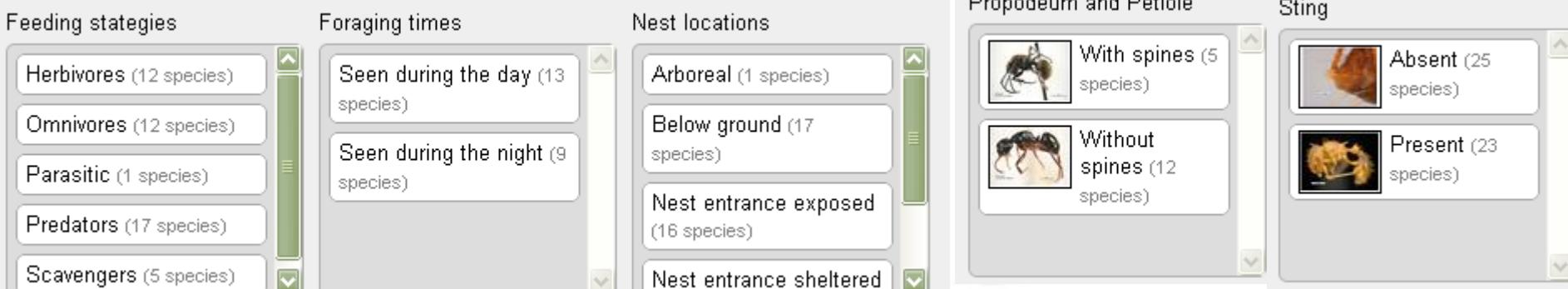
Exotic Status

- Non Indigenous Species to Barrow Island (12 species)
- Present on Barrow Island (213 species)

Group

- Ants (55 species)
- Beetles (15 species)
- Centipedes (3 species)
- Cockroaches (8 species)
- Flies (63 species)

Show me the fauna at the accommodation centre.



Feeding strategies

- Herbivores (12 species)
- Omnivores (12 species)
- Parasitic (1 species)
- Predators (17 species)
- Scavengers (5 species)

Foraging times

- Seen during the day (13 species)
- Seen during the night (9 species)

Nest locations

- Arboreal (1 species)
- Below ground (17 species)
- Nest entrance exposed (16 species)
- Nest entrance sheltered

Propodeum and Petiole

- With spines (5 species)
- Without spines (12 species)

Sting

- Absent (25 species)
- Present (23 species)

“Imagination is more important than knowledge” PaDIL 

Albert Einstein.

Think of the possibilities!

Show me the known native bee fauna on the Vic / SA border and their plant-host associations.

Search Taxonomic Classification [Hide](#)

- All (58 species)
- Hymenoptera (58 species)**
- Apidae (3 species)
- Colletidae (18 species)
- Halictidae (31 species)
- Megachilidae (6 species)

Search Facets [Hide](#)

Bio-Region	Host Family	Host Type	Status
Australasian - Oceanian (58 species)	Aizoaceae (10 species)	Cleptoparasitic (1 species)	Native Australian Beneficial Species (58 species)
	Amaranthaceae (6 species)	Fresh Flowers (57 species)	
	Anacardiaceae (11 species)		
	Asteraceae (4 species)		



The map displays the state border between Victoria (left) and South Australia (right). Numerous green rectangular labels indicate the presence of native bees, each containing a letter code such as 'A1', 'B1', 'C240', etc., corresponding to the facets listed above. Major cities like Melbourne, Adelaide, and Perth are visible. A scale bar shows 50 miles and 100 km. The map is powered by Google and includes copyright information: Imagery ©2010 TerraMetrics, Map data ©2010 MapData Sciences Pty Ltd, PSMA - Terms of Use.

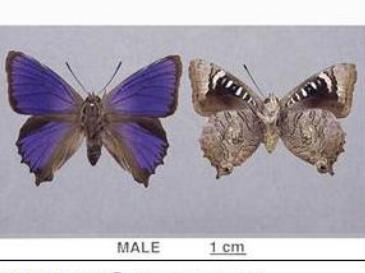
“Imagination is more important than knowledge” PaDIL 
Albert Einstein.

Think of the possibilities!

Show me Victorian butterflies with ant associations from some area.

Adult Male (All) Egg dorsal (All) Egg lateral (All) Larva (All) Pupa (All)

Imperial Hairstreak     

Southern Purple Azure     

Bright Copper     

Think of the possibilities!

species	institution	collectionCode	catalogueNumber	basisOfRecord	longitude	latitude
1 Araneus rhombocephalus	WAM	ARACH	88936	specimen	115.449	-20.7975
3 Ardea sacra	WAM	AVIF	31944	specimen	115.4	-20.7666
4 Ardea sacra	WAM	AVIF	31945	specimen	115.4	-20.7666
5 Ardea sacra	WAM	AVIF	31946	specimen	115.4	-20.7666
6 Argiope protensa	WAM	ARACH	89179	specimen	115.386	-20.8163
7 Argiope protensa	WAM	ARACH	89161	specimen	115.462	-20.7791
8 Argiope protensa	WAM	ARACH	88863	specimen	115.452	-20.7958
9 Argiope protensa	WAM	ARACH	57666	specimen	115.377	-20.8458
10 Carlia triacantha	WAM	REPT	119564	specimen	115.367	-20.75
11 Carlia triacantha	WAM	REPT	45413	specimen	115.467	-20.7833
12 Carlia triacantha	WAM	REPT	45731	specimen	115.467	-20.7833
13 Chelonia mydas	WAM	REPT	133184	specimen	115.4	-20.8
14 Chelonia mydas	WAM	REPT	133186	specimen	115.4	-20.8
15 Chelonia mydas	WAM	REPT	133185	specimen	115.4	-20.8
16 Chelonia mydas	WAM	REPT	112132	specimen	115.4	-20.7666
17 Chelonia mydas	WAM	REPT	112131	specimen	115.4	-20.7666

Normal Satellite Save image Reset map

Occurrence information

Scientific name: *Monomorium disetigerum*

Family: *Formicidae*

Longitude: 115.472 , Latitude: -20.7247

Occurrence date:

[Species Occurrence](#) [View details](#)

species in active area: 451 (first 200 listed)

family	species	common name	actions
Acanthuridae	Naso mcdadei	Squarenose Unicornfish	
Accipitridae	Circus assimilis	Spotted Harrier	
Accipitridae	Haliaeetus leucogaster	White-bellied Sea-eagle	
Accipitridae	Haliastur indus	Brahminy Kite	
Accipitridae	Haliastur sphenurus		
Acroporidae	Acropora aspera		
Acroporidae	Acropora cerealis		
Acroporidae	Acropora digitifera		
Acroporidae	Acropora hyacinthus		
Acroporidae	Acropora latistella		
Acroporidae	Acropora nasuta		



5 km
2 mi

Lon: 115.55351
Lat: -20.73171



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BowerBird



About

Identification Enquiries

Community Groups

Uploads

Secure

BowerBird answers the need in Biosecurity and Biodiversity for access to a shared, socially networked workspace.

The primary aim is to connect users with experts and act as an identification screening aid.





Ability for Biosecurity or Biodiversity or Citizen Science To request identification assistance.

BowerBird Your Identification Enquiries ▾

Home > BowerBird > Manage Identification Enquiries > Make Identification Enquiry

Make Identification Enquiry

[« Identification Enquiries](#)

Use the form below to send an identification enquiry.

Identification Enquiry Details

From **Ken Walker**

Specimen Details

Specimen Type Egg
 Larvae
 Pupa
 Adult

(Required): More than one option is allowed. Hold down the Ctrl key in Windows or Command key on Mac and click on the items to select.

Storage Method Dry
(Required)

Location Barrow Airport
(Required)

Latitude -20.8598

Longitude 115.4038

Enter latitude and longitude in decimal degrees or degrees, minutes and seconds.

Commodity Ant
(Required)

Priority Urgent
(Required)

Images

Please upload any images which may be of assistance in identification.

Image Upload head front.jpg
The image file must be in JPG or PNG format.

Requested Service

Service Type Identification Screening Aid
If you have a preferred expert, please include their name and details, as well as any other information in the message box below.

Remote Microscope Diagnostic Session
If you have a preferred date and time for the requested remote microscope diagnostic session, please specify your preference as well as any other information in the message box below.

Message

When checking the Barrow Is airport surrounds at about 11pm last night, I found an ant nest at the base of tree. The ants were tending aphids and I could see that the ants had 1 petiole segment on the abdomen. I have attached an image.

Please identify this ant as a matter of urgency as I believe it to be an new NIS incursion.

Bambi.

(Required). Please describe in detail why you need assistance and details about the problem.

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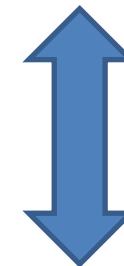
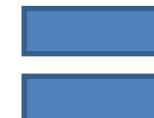
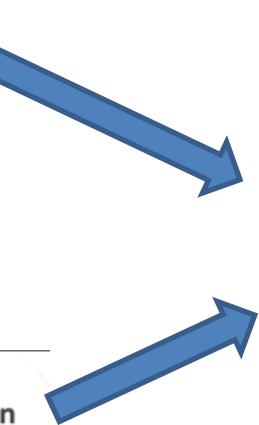


ATLAS OF **LIVING**
AUSTRALIA
sharing biodiversity knowledge

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- Identification Enquiries
- Community Groups
- Uploads
- Secure



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Network





Remote Microscope Diagnostics

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Remote Microscope Diagnostics

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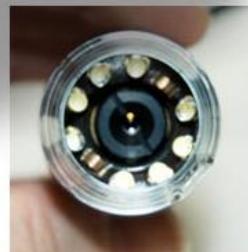


Remote Microscope Diagnostics or RMD facilitates pest identification by connecting microscopes with computers over the internet - users share live images with experts in real time around the world.

MECROSCOPE
REMOTE
DIAGNOSTICS



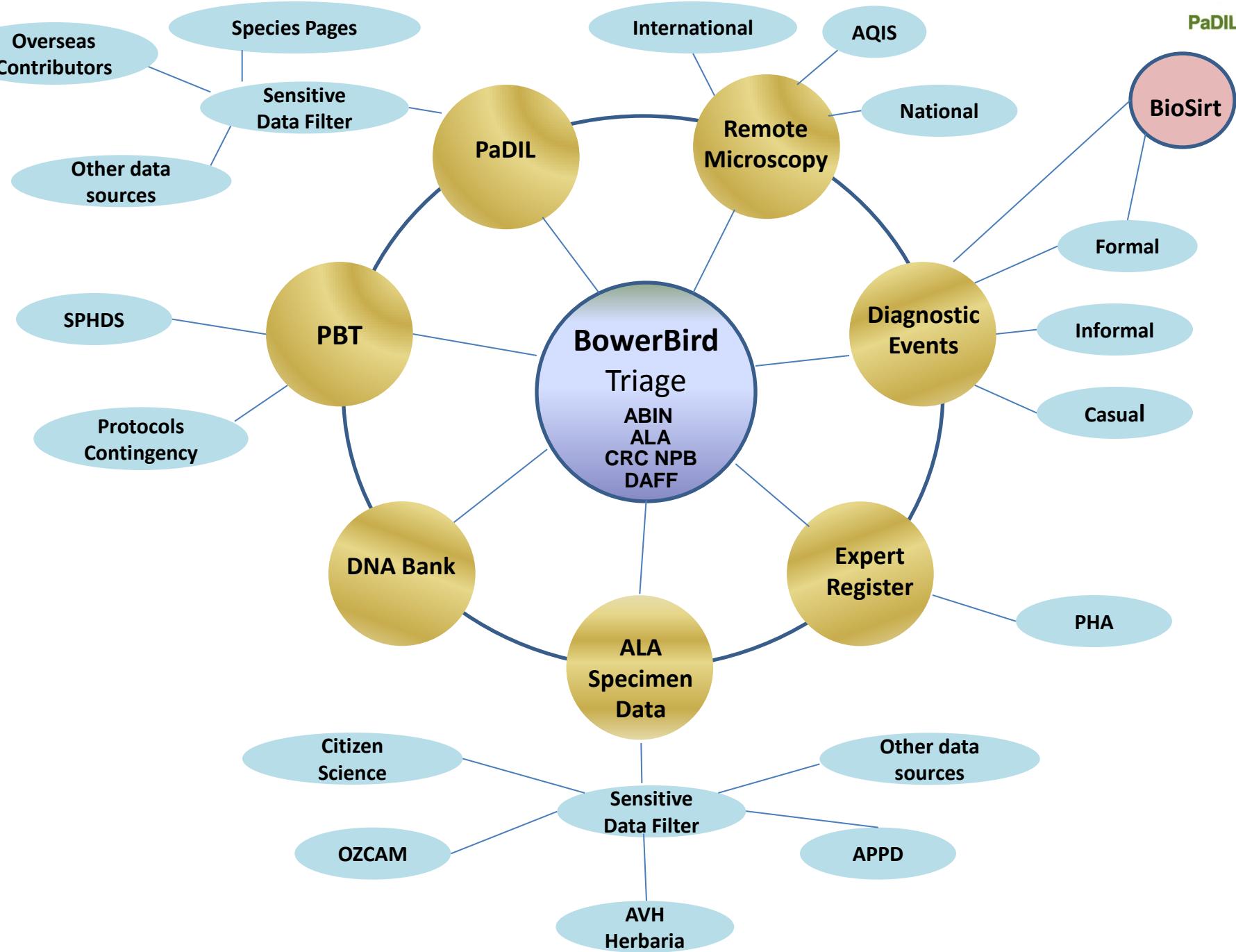
HI-SPEED
CERTIFIED **USB**™



REMOTE
MICROSCOPE
DIAGNOSTICS

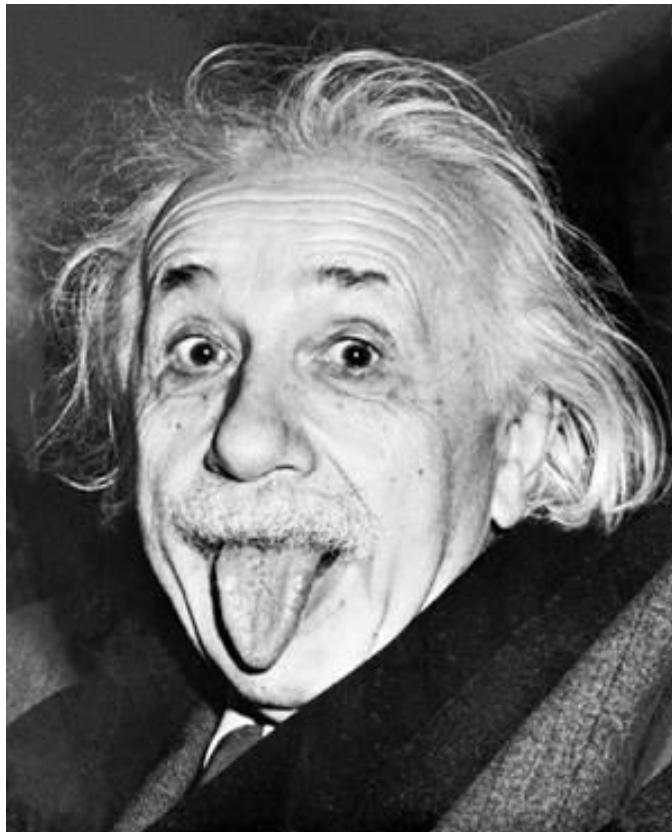
PaDIL





Biosecurity  **Industry**  **Biodiversity**

“Imagination is more important than knowledge”
Albert Einstein.



“Knowledge is power.”
Sir Francis Bacon

