



# Biodiversity Summary for NRM Regions

## Guide to Users

### *Background*

#### **What is the summary for and where does it come from?**

This summary has been produced by the Department of Sustainability, Environment, Water, Population and Communities (SEWPC) for the Natural Resource Management Spatial Information System.

It highlights important elements of the biodiversity of the region in two ways:

- Listing species which may be significant for management because they are found only in the region, mainly in the region, or they have a conservation status such as endangered or vulnerable.
- Comparing the region to other parts of Australia in terms of the composition and distribution of its species, to suggest components of its biodiversity which may be nationally significant.

The summary was produced using the **Australian Natural Heritage Assessment Tool (ANHAT)**, which analyses data from a range of plant and animal surveys and collections from across Australia to automatically generate a report for each NRM region. Data sources (Appendix 2) include national and state herbaria, museums, state governments, CSIRO, Birds Australia and a range of surveys conducted by or for DEWHA.

#### **Limitations**

- ANHAT currently contains information on the distribution of over 30,000 Australian taxa. This includes all mammals, birds, reptiles, frogs and fish, 137 families of vascular plants (over 15,000 species) and a range of invertebrate groups. The list of families covered in ANHAT is shown in Appendix 1. **Groups not yet covered in ANHAT are not included in the summary.**
- The data used for this summary come from authoritative sources, but they are not perfect. All species names have been confirmed as valid species names, but it is not possible to confirm all species locations. The summary summarises the input data, so errors found in the original data would also be reflected in this summary.
- The scientific names and taxonomic concepts used in this report reflect an ANHAT view of the data and not necessarily that found in government censuses, databases or other authoritative lists.



## ***Reading the Biodiversity Summary***

The summary is divided into two sections: **Highlights** and **Species List**.

### **Highlights section**

This section draws attention to species of special interest, or characteristics of the biodiversity in the region which rate very highly compared to the rest of Australia.

It contains the following:

- Total number of nationally rare and threatened species found in the region and listed under the Environment Protection and Biodiversity Conservation (EPBC) Act.
- A list of families which have a very high level of species richness or endemism compared to the rest of Australia.
  - Species richness counts the number of different species found in a given area.
  - Endemism estimates the degree to which species found in a given area have small geographic ranges. The smaller the range of a species, the more it contributes to the endemism score.

In this summary, a threshold value of 2% was used. This means that compared to the rest of the country, the families listed in the summary may have a significant focus of diversity here, because all or part of the region has richness or endemism scores within the top 2% of areas in Australia.

- A count of the number of species which have more than 50% of their recorded range within the region. If a species shows a value of 100% it indicates its distribution is restricted to that particular region as all the available records are in that region.



## Species List section

This section shows species which may be significant for biodiversity management in the region because:

- they are listed in the EPBC Act as critically endangered, endangered, vulnerable, or conservation dependent;
- their distribution lies entirely or primarily within the region.

For each plant or animal family listed, this section also gives the total number of species in the country, and how many of them are found in the region.

Note that this list covers species in the families listed in Appendix 1.

Many species found in the region will not be listed because they don't meet either of the two criteria above. The aim of providing a selected species list is to narrow the view from a very large number of species, to those which may be a focus of conservation activity in the region. Species which are largely restricted to the region may not have any conservation concerns, but may deserve attention because their future lies with the region and those who manage it.

A list of all species in the region belonging to the families listed in Appendix 1 is also available. For more information please see: [www.environment.gov.au/heritage/anhat/index.html](http://www.environment.gov.au/heritage/anhat/index.html)



## Biodiversity Summary for NRM Region Mackay Whitsunday, Queensland

This summary was produced by the Department of Sustainability, Environment, Water, Population and Communities using the Australian Natural Heritage Assessment Tool (ANHAT). ANHAT is a database and decision support tool which uses over 33 million specimen and survey records for vertebrates, selected invertebrates and 137 vascular plant families (over 15,000 species). This Biodiversity Summary does not include exotic or extinct species.

### Highlights

#### Species Restricted to this Region

The proportion of sampled range (%) as shown in the Species List is an indication of the distribution of the species in the region in relation to other parts of Australia.

There are 120 species with greater than 50% of their recorded range in the region.  
Of these species, 50 species have 100% of their recorded range in the region.

See the Species List for details.

#### Threatened species (Environment Protection and Biodiversity Conservation Act)

Total number of threatened species (Environment Protection and Biodiversity Conservation Act) in this region which belong to the families covered by this Biodiversity Summary (Appendix 1)

5 species declared as endangered  
19 species declared as vulnerable  
1 species declared as conservation dependent

#### Species Richness

Compared to the rest of Australia parts of this region show a high level of richness for the following families. This means that the number of species in these families is in the top 2% compared to the rest of the country.

##### Vertebrate fauna

- Family Artamidae - Butcherbirds, Currawongs and Woodswallows
- Family Campephagidae - Cuckoo-shrikes, Trillers and Minivets
- Family Dicruridae - Fan-tails, Drongos and Monarchs
- Family Gerreidae - Mojarras, Silver Biddies, Silver-bellies, Silverbellies, Silv
- Family Hylidae - Tree-Frogs
- Family Lutjanidae - Fusilers, Hussars, Snappers, Tropical Snappers
- Family Macropodidae - Wallabies, Kangaroos and Tree-kangaroos



- Family Pomacentridae - Damselfishes
- Family Scatophagidae - Butterfishes, Scats
- Family Scincidae - Skinks
- Family Sylviidae - Old World Warblers
- Family Typhlopidae - Worm-snakes and Blind-Snakes

#### **Invertebrate fauna**

- Family Aradidae - Flat bugs, Bark bugs
- Family Barychelidae - Brush-footed Trapdoor Spiders
- Family Camaenidae - Camaenid Land Snails
- Family Carabidae - Ground Beetles
- Family Charopidae - Flattened and Turbinate Land Snails
- Family Ctenizidae - Trapdoor Spiders
- Family Cydnidae - Burrower Bugs
- Family Ellobiidae - Primitive Supralittoral Pulmonate Snails
- Family Formicidae - Ants
- Family Gerridae - Water-striders
- Family Helicarionidae - Helicarionid Land Snails
- Family Helicinidae - Top-shaped Operculate Land Snails
- Family Hesperidae - Skippers, flats, awls & darts
- Family Lycaenidae - Blues, Coppers, Hairstreaks and Metalmarks
- Family Megaspiridae - Coelocion Land Snail
- Family Mesoveliidae -
- Family Nymphalidae - Browns, Nymphs, Danaines
- Family Papilionidae - Swallowtails
- Family Pentatomidae - Stinkbugs
- Family Pieridae - Whites and Yellows
- Family Planorbidae - Freshwater Snails
- Family Protoneuridae - Threadtail Damselflies
- Family Pupinidae - Glossy and Porcellaneous Operculate Land Snails
- Family Scutelleridae -
- Family Subulinidae - Elongate Land Snails

#### **Vascular flora**

- Family Cycadaceae - Native Cycads
- Family Cyperaceae - Sedges
- Family Elaeagnaceae - Oleaster
- Family Euphorbiaceae - Spurges
- Family Hernandiaceae - Hernandias and Valvantheras
- Family Hydrocharitaceae - Swamp Lily, Eel Weed, Frogbit and Water Thym
- Family Lauraceae - Laurels, Camphorwood and Australian Walnuts
- Family Meliaceae - Rosewoods and Mahoganies
- Family Menispermaceae - Snake, Round-leaf and Pearl Vines
- Family Phyllanthaceae -
- Family Phytolaccaceae - Introduced Monococcus
- Family Picrodendraceae -
- Family Sapindaceae - Tamarind, Whitewood, Tuckeroo, Hop Bushes
- Family Simaroubaceae - Native Plum and Allies
- Family Smilacaceae - Lawyer Vines, Supplejack, Wombat Berry and Scram
- Family Sterculiaceae - Kurrajongs and Bottletrees



**Australian Government**

**Department of Sustainability, Environment, Water, Population and Communities**

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## Endemism

Compared to the rest of Australia parts of this region show a high level of endemism for the following families, placing them in the top 2% compared to the rest of the country.

### Vertebrate fauna

- Family Campephagidae - Cuckoo-shrikes, Trillers and Minivets
- Family Emballonuridae - Sheath-tailed Bats
- Family Gekkonidae - Geckos
- Family Gerreidae - Mojarras, Silver Biddies, Silver-bellies, Silverbellies, Silv
- Family Lutjanidae - Fusilers, Hussars, Snappers, Tropical Snappers
- Family Macropodidae - Wallabies, Kangaroos and Tree-kangaroos
- Family Meliphagidae - Honeyeaters and Australian Chats
- Family Myobatrachidae - Myobatrachid or Southern Frogs
- Family Pomacentridae - Damselfishes
- Family Scatophagidae - Butterfishes, Scats
- Family Sylviidae - Old World Warblers
- Family Tetraodontidae - Blowfishes, Pufferfishes, Puffers, Toadfishes, Toby

### Invertebrate fauna

- Family Aradidae - Flat bugs, Bark bugs
- Family Barychelidae - Brush-footed Trapdoor Spiders
- Family Bithyniidae - Operculate Freshwater Snails
- Family Camaenidae - Camaenid Land Snails
- Family Carabidae - Ground Beetles
- Family Caryodidae - Giant Land Snails
- Family Ctenizidae - Trapdoor Spiders
- Family Diphlebiidae - Rockmaster Damselflies
- Family Ellobiidae - Primitive Supralittoral Pulmonate Snails
- Family Formicidae - Ants
- Family Geocoridae -
- Family Gerridae - Water-striders
- Family Helicarionidae - Helicarionid Land Snails
- Family Helicinidae - Top-shaped Operculate Land Snails
- Family Hesperidae - Skippers, flats, awls & darts
- Family Lycaenidae - Blues, Coppers, Hairstreaks and Metalmarks
- Family Lycosidae - Wolf Spiders
- Family Lygaeidae -
- Family Lymnaeidae - Eutrophic Freshwater Snails
- Family Megapodagrionidae - Flatwing Damselflies
- Family Megaspiridae - Coelocion Land Snail
- Family Nymphalidae - Browns, Nymphs, Danaines
- Family Papilionidae - Swallowtails
- Family Pentatomidae - Stinkbugs
- Family Pieridae - Whites and Yellows
- Family Punctidae - Translucent Frosted Land Snails
- Family Pupinidae - Glossy and Porcellaneous Operculate Land Snails
- Family Pyrrhocoridae -
- Family Rhytididae - Carnivorous Land Snails



- Family Schizopteridae -
- Family Scutelleridae -
- Family Subulinidae - Elongate Land Snails
- Family Synlestidae - Whitetip and Needle Damselflies
- Family Talitridae - sandfleas, sandhoppers, landhoppers
- Family Telephlebiidae - Darner Dragonflies
- Family Veliidae - Small Water Striders, Riffle Bugs

#### Vascular flora

- Family Amaryllidaceae -
- Family Arecaceae - Palms
- Family Atherospermataceae -
- Family Casuarinaceae - She-oaks
- Family Elaeagnaceae - Oleaster
- Family Euphorbiaceae - Spurges
- Family Hernandiaceae - Hernandias and Valvantheras
- Family Hydrocharitaceae - Swamp Lily, Eel Weed, Frogbit and Water Thym
- Family Lauraceae - Laurels, Camphorwood and Australian Walnuts
- Family Meliaceae - Rosewoods and Mahoganies
- Family Monimiaceae - Sassafras, Beech
- Family Nyctaginaceae - Tarvine, Pisonia and Birdlime Trees
- Family Orchidaceae - Orchids
- Family Phytolaccaceae - Introduced Monococcus
- Family Picrodendraceae -
- Family Poaceae - Grasses
- Family Rhizophoraceae - Mangroves
- Family Rutaceae - Boronia, Correa, Citrus, Phebalium, Philotheca, Zieria an
- Family Sapindaceae - Tamarind, Whitewood, Tuckeroo, Hop Bushes
- Family Simaroubaceae - Native Plum and Allies
- Family Smilacaceae - Lawyer Vines, Supplejack, Wombat Berry and Scram
- Family Solanaceae - Native Gooseberries, Wild Tomatos and Boxthorns
- Family Sterculiaceae - Kurrajongs and Bottletrees
- Family Winteraceae - Pepper Trees





## Species List

Species are shown only if:

- listed as Vulnerable, Critically Endangered, Endangered, or Conservation dependent under the EPBC Act;
- the proportion of the sampled range in the region is above 50%.

	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Vertebrate fauna</b>				
<b>Amphibia</b>				
<b>Myobatrachidae</b>				
	<b>Myobatrachid or Southern Frogs</b>		<b>(15 out of 121 species in Australia)</b>	
<i>Taudactylus eungellensis</i>	<b>Eungella Torrent Frog</b>	Endangered	56	2005
<i>Taudactylus liemi</i>	Eungella Tinker Frog		50	2005
<b>This region rates highly for endemism of Myobatrachidae.</b>				
<b>Aves</b>				
<b>Accipitridae</b>				
	<b>Eagles, Hawks and Kites</b>		<b>(17 out of 19 species in Australia)</b>	
<i>Erythrotriorchis radiatus</i>	<b>Red Goshawk</b>	Vulnerable	2	1995
<b>Meliphagidae</b>				
	<b>Honeyeaters and Australian Chats</b>		<b>(32 out of 72 species in Australia)</b>	
<i>Xanthomyza phrygia</i>	<b>Regent Honeyeater</b>	Endangered	<1	1963
<b>This region rates highly for endemism of Meliphagidae.</b>				
<b>Procellariidae</b>				
	<b>Fulmars, Petrels, Prions and Shearwaters</b>		<b>(5 out of 22 species in Australia)</b>	
<i>Macronectes giganteus</i>	<b>Southern Giant-Petrel</b>	Endangered	<1	1971
<b>Rostratulidae</b>				
	<b>Painted Snipe</b>		<b>(1 out of 1 species in Australia)</b>	
<i>Rostratula benghalensis</i>	<b>Painted Snipe</b>	Vulnerable	<1	1994



	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Mammalia</b>				
<b>Dasyuridae</b>	<b>Dasyurids (Quolls, Antechinus, Dunnarts and Allies)</b>	<b>(6 out of 55 species in Australia)</b>		
<i>Dasyurus hallucatus</i>	Northern quoll	Endangered	5	1996
<b>Macropodidae</b>				
	<b>Wallabies, Kangaroos and Tree-kangaroos</b>	<b>(12 out of 41 species in Australia)</b>		
<i>Petrogale persephone</i>	Prosperpine rock-wallaby	Endangered	88	2003
<b>This region rates highly for richness and endemism of Macropodidae.</b>				
<b>Megadermatidae</b>				
	<b>False Vampire (Ghost) Bats</b>	<b>(1 out of 1 species in Australia)</b>		
<i>Macroderma gigas</i>	Ghost bat	Vulnerable	1	2006
<b>Muridae</b>				
	<b>Rats and Mice</b>	<b>(10 out of 60 species in Australia)</b>		
<i>Xeromys myoides</i>	False water-rat	Vulnerable	13	1999
<b>Pteropodidae</b>				
	<b>Fruit-bats and Allies</b>	<b>(5 out of 11 species in Australia)</b>		
<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	Vulnerable	<1	1990
<b>Vespertilionidae</b>				
	<b>Vespertilionid Bats</b>	<b>(13 out of 37 species in Australia)</b>		
<i>Miniopterus schreibersii</i>	Bent-wing Bat	Conservation dependent	<1	2006

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	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Reptilia</b>				
<b>Gekkonidae</b>	<b>Geckos</b>		<b>(11 out of 114 species in Australia)</b>	
<i>Phyllurus isis</i>	Mackay Leaf-tailed Gecko		100	1992
<i>Phyllurus nepthys</i>	Clarke Range Leaf-tailed Gecko		55	2002
<i>Phyllurus ossa</i>	Proserpine Leaf-tailed Gecko		100	2006
<b>This region rates highly for endemism of Gekkonidae.</b>				
<b>Pygopodidae</b>	<b>Legless lizards</b>		<b>(4 out of 38 species in Australia)</b>	
<i>Delma labialis</i>	Legless-lizard	Vulnerable	31	2001
<b>Scincidae</b>	<b>Skinks</b>		<b>(44 out of 393 species in Australia)</b>	
<i>Eulamprus amplus</i>	Water-skink		79	2004
<i>Saproscincus hannahae</i>	Hannahs Shade-skink		68	2002
<b>This region rates highly for richness of Scincidae.</b>				

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- the proportion of the sampled range in the region is above 50%.



Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Invertebrate fauna</b>			
<b>Araneae</b>			
<b>Barychelidae</b>			
<b>Brush-footed Trapdoor Spiders (6 out of 134 species in Australia)</b>			
<i>Mandjelia thorelli</i>		100	1975
<i>Ozicrypta clyneae</i>		100	1992
<i>Ozicrypta eungella</i>		67	1975
<i>Trittame gracilis</i>		53	1992
<b>This region rates highly for richness and endemism of Barychelidae.</b>			
<b>Ctenizidae</b>			
<b>Trapdoor Spiders (1 out of 12 species in Australia)</b>			
<i>Conothele 2</i>		100	1979
<b>This region rates highly for richness and endemism of Ctenizidae.</b>			
<b>Idiopidae</b>			
<b>Trapdoor Spiders (3 out of 153 species in Australia)</b>			
<i>Cataxia dietrichae</i>		50	1993
<b>Lycosidae</b>			
<b>Wolf Spiders (12 out of 149 species in Australia)</b>			
<i>Allocosa excusor</i>		50	
<i>Venatrix palau</i>		50	1983
<b>This region rates highly for endemism of Lycosidae.</b>			
<b>Nemesiidae</b>			
<b>Funnel-web Spiders (3 out of 227 species in Australia)</b>			
<i>Ixamatus varius</i>		67	1993
<i>Namea capricornia</i>		71	1992
<b>Theraphosidae</b>			
<b>Bird-eating Trapdoor Spiders (1 out of 20 species in Australia)</b>			
<i>Selenocosmia crassipes</i>		62	1997

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 - the proportion of the sampled range in the region is above 50%.



Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Caenogastropoda</b>			
<b>Pupinidae</b>			
		<b>(10 out of 61 species in Australia)</b>	
<b>Glossy and Porcellaneous Operculate Land Snails</b>			
Pupina macgillivrayi		60	1977
Pupinidae bl 1		75	1975
Pupinidae mq 3		56	1990
Pupinidae mq 5		100	1994
Pupinidae mq 6		100	1998
Pupinidae mq 7		100	2000
Signepupina coxeni		100	1998
Signepupina meridionalis		64	2001

This region rates highly for richness and endemism of Pupinidae.

Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Coleoptera</b>			
<b>Carabidae</b>			
		<b>(59 out of 2305 species in Australia)</b>	
<b>Ground Beetles</b>			
Carenum submetallicum		100	
Castelnaudia eungella		50	1993
Cratogaster cq1		100	1992
Demetrida nigricincta		50	
Holeleius ceylanicus		100	
Homethes velutinus		100	
Lebia melanonota		100	
Microferonia anchomenoides		100	
Sphallomorpha eungellae		100	

This region rates highly for richness and endemism of Carabidae.

Species are shown only if:  
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 - the proportion of the sampled range in the region is above 50%.



Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Eupulmonata</b>			
<b>Camaenidae</b>			
<b>Camaenid Land Snails (42 out of 929 species in Australia)</b>			
Bentosites coxi		69	2002
Camaenidae bl 41		50	
Camaenidae bl 46		50	1994
Camaenidae bl 47		63	2000
<b>Camaenidae bl 48</b>		<b>100</b>	<b>2001</b>
Camaenidae bl 61		75	2000
<b>Camaenidae mq 1</b>		<b>100</b>	<b>1983</b>
Camaenidae mq 2		71	1998
Camaenidae mq 3		73	1994
Gloreugenia blackalli	Blackalls Land Snail	85	2002
Gloreugenia coxeni	Coxens Land Snail	74	2001
Marilynessa yulei	Land Snail	76	2002
<b>Offachloritis dryanderensis</b>	<b>Dryander Land Snail</b>	<b>100</b>	<b>1995</b>
<b>Sphaerospira arthuriana</b>	<b>Arthurs Land Snail</b>	<b>100</b>	<b>2001</b>
Sphaerospira etheridgei	Etheridges Land Snail	84	2001
Sphaerospira informis	Land Snail	51	2001
Sphaerospira macleayi	Macleays Land Snail	82	1999
Sphaerospira oconnellensis	Oconnells Land Snail	74	1999
Trachygenia praecursoris		65	1998

This region rates highly for richness and endemism of Camaenidae.

<b>Caryodidae</b>			
<b>Giant Land Snails (4 out of 18 species in Australia)</b>			
<b>Hedleyella whitei</b>	<b>Whites Land Snail</b>	<b>100</b>	<b>1958</b>
Pedinogyra effosa	Land Snail	76	2001

This region rates highly for endemism of Caryodidae.

Species are shown only if:  
 - listed as Vulnerable, Critically Endangered, Endangered, or Conservation dependent under the EPBC Act;  
 - the proportion of the sampled range in the region is above 50%.



Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Charopidae</b>			
<b>Flattened and Turbinate (21 out of 642 species in Australia)</b>			
<b>Land Snails</b>			
Charopidae mq 11		56	1990
Charopidae mq 12		75	1999
Charopidae mq 14		100	1998
Charopidae mq 16		100	1990
Charopidae mq 18		50	1957
Charopidae mq 2		67	1982
Charopidae mq 5		60	1993
Charopidae mq 6		83	1993
Charopidae mq 7	Land Snail	73	1999
Charopidae mq 8	Land Snail	83	1998
Charopidae mq 9		50	1993
Gyrocochlea iuloidea		68	1999
Setomedea janae	Janas Land Snail	67	1990

This region rates highly for richness of Charopidae.

<b>Helicarionidae</b>			
<b>Helicarionid Land Snails (29 out of 300 species in Australia)</b>			
Eungarion mcdonaldi	McDonalds Helicarionid Land Snail	57	1993
Fastosarion aquavitae		75	1990
Fastosarion superba	Superb Helicarionid Land Snail	50	1998
Helicarion strangei	Strange Helicarionid Land Snail	50	1958
Helicarionidae mq 1		86	1990
Helicarionidae mq 10		100	1990
Helicarionidae mq 11		75	1993
Helicarionidae mq 12		50	1987
Helicarionidae mq 13		100	1991
Helicarionidae mq 14		100	1990
Helicarionidae mq 2		100	1990
Helicarionidae mq 3		85	1999
Helicarionidae mq 4		75	1996
Helicarionidae mq 5		100	1990
Helicarionidae mq 6		100	1990
Helicarionidae mq 7		79	1998
Helicarionidae mq 8		82	1999
Helicarionidae mq 9		79	2001

This region rates highly for richness and endemism of Helicarionidae.

<b>Punctidae</b>			
<b>Translucent Frosted (1 out of 107 species in Australia)</b>			
<b>Land Snails</b>			
Punctidae mq 2	Punctid Land Snail	67	1993

This region rates highly for endemism of Punctidae.

Species are shown only if:

- listed as Vulnerable, Critically Endangered, Endangered, or Conservation dependent under the EPBC Act;
- the proportion of the sampled range in the region is above 50%.



	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Rhytididae</b>	<b>Carnivorous Land Snails (8 out of 107 species in Australia)</b>			
Rhytididae mq 1	Carnivorous Land Snail		50	1983
Rhytididae mq 2	Carnivorous Land Snail		75	1990
<b>Rhytididae mq 3</b>	<b>Carnivorous Land Snail</b>		<b>100</b>	<b>1975</b>
Saladelos bensa	Carnivorous Land Snail		80	2001
Strangesta confusa	Carnivorous Land Snail		54	2001

This region rates highly for endemism of Rhytididae.

## Hemiptera

	Common Name	(X out of Y species in Australia)	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Aradidae</b>	<b>Flat bugs, Bark bugs</b>	<b>(9 out of 166 species in Australia)</b>			
<b>Drakiessa sybilae</b>				<b>100</b>	<b>1965</b>
<b>Glyptoaptera eungellae</b>				<b>100</b>	
<b>Neophloeobia incisa</b>				<b>100</b>	

This region rates highly for richness and endemism of Aradidae.

	Common Name	(X out of Y species in Australia)	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Cicadidae</b>		<b>(3 out of 233 species in Australia)</b>			
Cystosoma schmeltzi	Lesser Bladder Cicada			50	1969

	Common Name	(X out of Y species in Australia)	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Lygaeidae</b>		<b>(2 out of 80 species in Australia)</b>			
<b>Scopiasstella himertos</b>				<b>100</b>	

This region rates highly for endemism of Lygaeidae.

	Common Name	(X out of Y species in Australia)	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Schizopteridae</b>		<b>(1 out of 61 species in Australia)</b>			
<b>Pachyplagioides ambli</b>				<b>100</b>	

This region rates highly for endemism of Schizopteridae.

	Common Name	(X out of Y species in Australia)	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Tingidae</b>	<b>Lacebugs</b>	<b>(1 out of 145 species in Australia)</b>			
<b>Urentius sarinae</b>				<b>100</b>	

Species are shown only if:  
 - listed as Vulnerable, Critically Endangered, Endangered, or Conservation dependent under the EPBC Act;  
 - the proportion of the sampled range in the region is above 50%.





Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Hymenoptera</b>			
<b>Colletidae</b>			
<b>Short-tongued Bees (4 out of 878 species in Australia)</b>			
<i>Euryglossina proserpinensis</i>		100	1966

Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Formicidae</b>			
<b>Ants (90 out of 1944 species in Australia)</b>			
<i>Aenictus aratus</i>		50	1975
<i>Dolichoderus dentatus</i>		100	
<i>Dolichoderus turneri</i>		100	
<i>Myrmecia fabricii</i>		67	1976
<i>Myrmecina rugosa</i>		100	
<i>Orectognathus alligator</i>		50	1975
<i>Polyrhachis ornata</i>		50	
<i>Prenolepis braueri glabrior</i>		100	
<i>Rhytidoponera clarki</i>		90	1989
<i>Rhytidoponera eungellensis</i>		50	1972
<i>Strumigenys guttulata</i>		100	

This region rates highly for richness and endemism of Formicidae.

## Neritopsina

Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Helicinidae</b>			
<b>Top-shaped Operculate Land Snails (6 out of 24 species in Australia)</b>			
Helicinidae mq 1		76	1999
Helicinidae mq 2		57	1993
Pleuropoma mq 1		78	1996
Pleuropoma mq 2		50	1975

This region rates highly for richness and endemism of Helicinidae.

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 - the proportion of the sampled range in the region is above 50%.



	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Odonata</b>				
<b>Megapodagrionidae</b> <b>Flatwing Damselflies</b> (2 out of 22 species in Australia)				
<i>Austroargiolestes elke</i>	<i>Azure Flatwing</i>		100	1982
This region rates highly for endemism of Megapodagrionidae.				
<b>Synlestidae</b> <b>Whitetip and Needle Damselflies</b> (1 out of 6 species in Australia)				
<i>Episynlestes intermedius</i>	<i>Intermediate Whitetip</i>		100	1992
This region rates highly for endemism of Synlestidae.				
<b>Telephlebiidae</b> <b>Darner Dragonflies</b> (4 out of 36 species in Australia)				
<i>Austroaeschna christine</i>	<i>S-spot Darner</i>		50	1982
<i>Austroaeschna eungella</i>	<i>Eungella Darner</i>		67	1982
This region rates highly for endemism of Telephlebiidae.				

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- the proportion of the sampled range in the region is above 50%.



	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Vascular flora</b>				
<b>Asparagales</b>				
<b>Asparagaceae</b> (7 out of 177 species in Australia)				
Cordyline murchisoniae	Palm-lily		56	2004
<b>Orchidaceae</b> (67 out of 1248 species in Australia)				
Australorchis eungellensis	Eungella Moon Orchid		100	1985
Taeniophyllum muelleri	Chain Ribbonroot	Vulnerable	1	1993
This region rates highly for endemism of Orchidaceae.				
<b>Asterales</b>				
<b>Asteraceae</b> (37 out of 1019 species in Australia)				
Ozothamnus eriocephalus	Native Daisy	Vulnerable	20	1996
<b>Ericales</b>				
<b>Epacridaceae</b> (7 out of 458 species in Australia)				
Leucopogon cuspidatus	Beard-heath	Vulnerable	17	1994
<b>Fabales</b>				
<b>Fabaceae</b> (163 out of 2583 species in Australia)				
Acacia ramiflora	Wattle	Vulnerable	4	1984
Acacia spirorbis	Wattle		71	2005
Albizia sp. south percy island	Native Silk Tree		60	1990
Dalbergia sissoo	Sissoo		57	2005
Pultenaea setulosa	Bacon and Eggs	Vulnerable	<1	
<b>Fagales</b>				
<b>Casuarinaceae</b> (8 out of 69 species in Australia)				
Allocasuarina sp. shaw island	She-oak		83	1986
This region rates highly for endemism of Casuarinaceae.				

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- the proportion of the sampled range in the region is above 50%.



Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Malpighiales</b>			
<b>Euphorbiaceae</b> (54 out of 315 species in Australia)			
Actephila championiae		60	1996
Claoxylon angustifolium		52	2004
Cleistanthus dallachyanus		56	2005
Croton magneticus	Vulnerable	13	1994
Trigonostemon inopinatus	Vulnerable	80	2004
This region rates highly for richness and endemism of Euphorbiaceae.			
<b>Picrodendraceae</b> (7 out of 29 species in Australia)			
Dissiliaria indistincta		50	1997
This region rates highly for richness and endemism of Picrodendraceae.			
<b>Malvales</b>			
<b>Sterculiaceae</b> (18 out of 273 species in Australia)			
<b>Kurrajongs and Bottle-trees</b>			
Argyrodendron sp. whitsundays		100	1994
Brachychiton compactus		83	2001
This region rates highly for richness and endemism of Sterculiaceae.			
<b>Thymelaeaceae</b> (7 out of 110 species in Australia)			
Pimelea leptospermoides	Rice Flower	Vulnerable	3
<b>Myrtales</b>			
<b>Myrtaceae</b> (77 out of 2211 species in Australia)			
Eucalyptus raveretiana	Black Ironbox	Vulnerable	14
Gossia pubiflora	Myrtle		92
<b>Poales</b>			
<b>Poaceae</b> (182 out of 1057 species in Australia)			
Dichanthium setosum		Vulnerable	2
This region rates highly for endemism of Poaceae.			

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 - the proportion of the sampled range in the region is above 50%.



	Common Name	EPBC Status	Proportion of sampled range in the region (%)	Most recent record
<b>Sapindales</b>				
<b>Rutaceae</b>				
<b>Boronia, Correa, Citrus, Phebalium, Philotheca, Zieria and Allies</b>		<b>(28 out of 496 species in Australia)</b>		
Bosistoa transversa	Three-leaved Bosistoa	Vulnerable	1	2002
Medicosma obovata	Medicosma	Vulnerable	100	1999
Zieria eungellaensis	Zieria		50	1992

This region rates highly for endemism of Rutaceae.

<b>Sapindaceae</b>				
<b>Tamarind, Whitewood, Tuckeroo, Hop Bushes</b>		<b>(45 out of 222 species in Australia)</b>		
Arytera sp. dryander creek	Arytera		100	1997
Diploglottis obovata	Tamarind		83	2002
Elattostachys megalantha	Tamarind		52	2005
Lepiderema punctulata	Fine Leaved Tuckeroo		64	2005
Lepiderema sp. impulse creek	Lepiderema		100	1994
Sarcotoechia heterophylla	Tamarind		50	2001

This region rates highly for richness and endemism of Sapindaceae.

<b>Simaroubaceae</b>				
<b>Native Plum and Allies</b>		<b>(3 out of 14 species in Australia)</b>		
Quassia bidwillii	Quassia	Vulnerable	5	1986

This region rates highly for richness and endemism of Simaroubaceae.

<b>Solanales</b>				
<b>Solanaceae</b>				
<b>Native Gooseberries, Wild Tomatos and Boxthorns</b>		<b>(11 out of 210 species in Australia)</b>		
Solanum dryanderense	Nightshade		100	1992
Solanum graniticum	Nightshade		50	1999

This region rates highly for endemism of Solanaceae.

Species are shown only if:  
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 - the proportion of the sampled range in the region is above 50%.



## Appendix 1

### List of all families covered by the Australian Natural Heritage Assessment Tool

These families of plants and animals are included in NRM region summaries where they occur in the region.

The groups covered across Australia include:

- all vertebrates
  - i.e. mammals, birds, reptiles, frogs and fish (4,200 species)
- 137 families of vascular plants (> 15,000 species) comprising the majority of Australia's named plant species
- A range of invertebrate groups including:
  - numerous insect families (> 16,600 species)
  - all land snails (> 2,300 species)
  - selected spider families (> 1,100 species)
  - rotifers – aquatic wheel animals (> 700 species)

### Vertebrate fauna

#### Actinopterygii

Ambassidae  
 Apogonidae  
 Ariidae  
 Atherinidae  
 Batrachoididae  
 Belontiidae  
 Blenniidae  
 Brachionichthyidae  
 Carangidae  
 Cepolidae  
 Chanidae  
 Clinidae  
 Clupeidae  
 Cynoglossidae  
 Diodontidae  
 Eleotridae  
 Elopidae  
 Engraulidae  
 Enoplosidae  
 Ephippidae  
 Galaxiidae  
 Gerreidae  
 Gobiidae  
 Gonorynchidae  
 Hemiramphidae

#### Ray-finned fish

Chanda Perches, Glassfishes, Perchlets  
 Big Eyes, Cardinal Fishes, Cardinalfishes, Gobbleguts, Soldier  
 Fork-tailed Catfishes  
 Hardyheads, Silversides, Whitebait  
 Bastard Stonefish, Frogfishes, Toadfishes  
 Long Toms, Longtoms, Needle Fishes, Needlefishes  
 Blennies, Fangblennies, Rockshippers  
 Handfishes  
 Amberjacks, Jacks, Pilotfishes, Pompanos, Queenfishes, Run  
 Bandfishes  
 Milkfish  
 Snake Blennies, Weedfishes  
 Herrings, Menhadens, Pilchards, Sardines, Shads, Sprats  
 Tongue Soles  
 Burrfishes, Porcupinefishes  
 Gudgeons, Sleepers  
 Ladyfish  
 Anchovies  
 Oldwife  
 Batfishes, Spadefishes  
 Galaxias, Salamanderfish  
 Mojarras, Silver Biddies, Silver-bellies, Silverbellies, Silverbiddi  
 Gobies  
 Beaked Salmon, Beaked Sandfish, Ratfish  
 Garfishes, Halfbeaks



## Vertebrate fauna

Kuhliidae	Flagtails
Kurtidae	Nurseryfishes
Kyphosidae	Drummers, Halfmoons, Knifefishes, Microcanthids, Nibblers, S
Labridae	Wrasses, Parrotfishes, Rockwhittings
Leiognathidae	Pony Fishes, Ponyfishes, Slipmouths
Lutjanidae	Fusilers, Hussars, Snappers, Tropical Snappers
Megalopidae	Tarpons
Melanotaeniidae	Rainbowfishes
Microdesmidae	Dartfishes, Wormfishes
Monacanthidae	Leatherjackets
Mugilidae	Mulletts
Muraenidae	Moray Eels
Ophichthidae	Snake Eels, Worm Eels
Osteoglossidae	Saratoga
Ostraciidae	Boxfishes, Coffe Fishes, Cowfishes, Trunkfishes, Turretfishes
Paralichthyidae	Sand Flounders
Percichthyidae	Australian Freshwater Basses, Australian Freshwater Blackfish
Platycephalidae	Flatheads
Pleuronectidae	Right Handed Flatfishes, Righteye Flounders
Plotosidae	Eel-Tailed Catfishes
Polynemidae	Tassel-fishes, Threadfin Salmons, Threadfins
Pomacentridae	Damsel-fishes
Pomatomidae	Bluefish, Tailor
Pristigasteridae	Ilishas, Pellonas, Pristigasterids
Pseudomugilidae	Blue Eyes, Blue-eyes
Retropinnidae	Southern Graylings, Southern Smelts
Scatophagidae	Butterfishes, Scats
Sciaenidae	Croakers, Drums, Jewfishes
Serranidae	Basslets, Perchlets, Rockcods, Wirrahs
Siganidae	Mi Mi, Rabbit Fish, Rabbitfishes, Spinefoot
Sillaginidae	Sillagos, Whittings
Soleidae	Soles
Sparidae	Breams, Porgies, Seabreams
Synbranchidae	One-gilled Eel, Swamp Eels
Syngnathidae	Pipefishes, Seahorses
Synodontidae	Lizardfishes
Terapontidae	Grunters
Tetraodontidae	Blowfishes, Pufferfishes, Puffers, Toadfishes, Tobys
Tetrarogidae	Fortesques, Sailback Scorpionfishes, Waspfish
Toxotidae	Archerfishes, Rifle Fish
Zanclidae	Moorish Idol

### Amphibia

Hylidae	Tree-Frogs
Microhylidae	Micro Tree-Frogs
Myobatrachidae	Myobatrachid or Southern Frogs
Ranidae	True Frogs

### Aves

Acanthizidae	Scrubwrens, Thornbills and Allies
Accipitridae	Eagles, Hawks and Kites

### Amphibians

Hylidae	Tree-Frogs
Microhylidae	Micro Tree-Frogs
Myobatrachidae	Myobatrachid or Southern Frogs
Ranidae	True Frogs

### Birds

Acanthizidae	Scrubwrens, Thornbills and Allies
Accipitridae	Eagles, Hawks and Kites



## Vertebrate fauna

Aegothelidae	Owlet Nightjars
Alaudidae	Larks
Alcedinidae	Kingfishers and Kookaburras
Anatidae	Swans, Ducks and Geese
Anhingidae	Darter
Anseranatidae	Magpie Goose
Apodidae	Swifts and Swiftlets
Ardeidae	Hérons, Egrets and Bitterns
Artamidae	Butcherbirds, Currawongs and Woodswallows
Atrichornithidae	Scrub-birds
Burhinidae	Thicknees (Stone-Curlews)
Cacatuidae	Cockatoos
Campephagidae	Cuckoo-shrikes, Trillers and Minivets
Caprimulgidae	Nightjars
Casuariidae	Cassowary and Emus
Centropodidae	Pheasant Coucal
Charadriidae	Plovers, Dotterels and Lapwings
Ciconiidae	Black-necked Stork
Climacteridae	Treecreepers
Columbidae	Pigeons and Doves
Coraciidae	Dollarbird
Corcoracidae	Australasian Mud-nesters
Corvidae	Crows and Jays
Cuculidae	Cuckoos
Dicaeidae	Flower-peckers
Dicruridae	Fan-tails, Drongos and Monarchs
Diomedidae	Albatrosses
Estrildidae	Grass Finches
Eupetidae	Whipbirds, Quail-thrushes and Jewel-babblers
Falconidae	Falcons and Kestrels
Fregatidae	Frigatebirds
Glareolidae	Pratincoles
Gruidae	Cranes
Haematopodidae	Oystercatchers
Hirundinidae	Swallows and Martins
Hydrobatidae	Storm-petrels
Jacaniidae	Jacanas
Laridae	Gulls, Terns, Skuas and Jaegers
Maluridae	Fairy-wrens and Grasswrens
Megapodiidae	Mound-builders
Meliphagidae	Honeyeaters and Australian Chats
Menuridae	Lyrebirds
Meropidae	Rainbow Bee-eater
Motacillidae	Pipits and Wagtails
Muscicapidae	Old World Flycatchers and Thrushes
Nectariniidae	Sunbirds and Spiderhunters
Neosittidae	Australian Sitella
Oriolidae	Old World Orioles and Figbirds
Orthonychidae	Logrunners
Otididae	Australian Bustard
Pachycephalidae	Whistlers, Shrike-thrushes and Allies





## Vertebrate fauna

Paradisaeidae	Birds-of-Paradise
Pardalotidae	Pardalotes
Pedionomidae	Plains-wanderer
Pelecanidae	Pelicans
Petroicidae	Australasian Robins
Phaethonitidae	Tropicbirds
Phalacrocoracidae	Cormorants and Shags
Phasianidae	Quail, Fowl and Allies
Pittidae	Pittas
Podargidae	Frogmouths
Podicipedidae	Grebes
Pomatostomidae	Australasian Babblers
Procellariidae	Fulmars, Petrels, Prions and Shearwaters
Psittacidae	Parrots
Ptilonorhynchidae	Bowerbirds
Rallidae	Crakes, Moorhens, Rails and Allies
Recurvirostridae	Stilts and Avocet
Rostratulidae	Painted Snipe
Scolopacidae	Waders (Snipe, Godwits, Curlew, Sandpipers and Allies)
Spheniscidae	Penguins
Strigidae	Hawk-type Owls
Sturnidae	Starlings and Mynas
Sulidae	Boobies and Gannets
Sylviidae	Old World Warblers
Threskiornithidae	Ibis and Spoonbills
Turcidae	Button-quail
Tytonidae	Barn-type Owls
Zosteropidae	White-eyes (Silvereyes)

## Chondrichthyes

Alopiidae	Thresher Sharks
Dasyatidae	Stingrays
Lamnidae	Mackerel, White Pointer, Mako and Porbeagle Sharks
Pristidae	Sawfishes

## Mammalia

Acrobatidae	Feathertailed Gliders
Burramyidae	Pygmy-possums
Dasyuridae	Dasyurids (Quolls, Antechinus, Dunnarts and Allies)
Delphinidae	Dolphins, Orcas, Pilot Whales and Melon-headed Whales
Emballonuridae	Sheath-tailed Bats
Hipposideridae	Leaf-nosed Bats
Kogiidae	Dwarf and Pygmy Sperm Whales
Macropodidae	Wallabies, Kangaroos and Tree-kangaroos
Megadermatidae	False Vampire (Ghost) Bats
Molossidae	Free-tailed Bats
Muridae	Rats and Mice
Myrmecobiidae	Numbat
Notoryctidae	Marsupial Mole
Ornithorhynchidae	Platypus
Otariidae	Eared Seals

## Mammals



## Vertebrate fauna

Peramelidae	Bandicoots and Spiny Bandicoot
Petauridae	Wrist-winged Gliders, Striped Possum and Leadbeaters Possum
Phalangeridae	Brush-tail Possums, Cuscuses and Scaly-tailed Possum
Phascolarctidae	
Phocidae	True Seals
Phocoenidae	Porpoises
Physeteridae	Sperm Whales
Potoroidae	Potoroos, Bettongs and the Musky Rat Kangaroo
Pseudocheiridae	Ring-tailed Possums and Greater Glider
Pteropodidae	Fruit-bats and Allies
Rhinolophidae	Horseshoe Bats
Tachyglossidae	Echidna
Tarsipedidae	Honey Possum
Thylacinidae	Thylacine
Thylacomyidae	Bilbies
Vespertilionidae	Vespertilionid Bats
Vombatidae	
Ziphiidae	Beaked Whales

## Petromyzontida

Petromyzontidae	Lampreys
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## Reptilia

Acrochordidae	File snakes
Agamidae	Dragon lizards
Boidae	Pythons
Carettochelydidae	Pitted-shelled turtle
Chelidae	Side-necked Tortoises
Colubridae	Rear fang snakes
Crocodylidae	Crocodiles
Elapidae	Front fang snakes
Gekkonidae	Geckos
Pygopodidae	Legless lizards
Scincidae	Skinks
Typhlopidae	Worm-snakes and Blind-Snakes
Varanidae	Monitors

## Reptiles

## Sarcopterygii

Ceratodontidae	Lobe-finned fish
	Lungfishes



## Invertebrate fauna

### Arachnida

Actinopodidae	Two-doored Trapdoor Spiders
Araneidae	Orb-weaving Spiders
Barychelidae	Brush-footed Trapdoor Spiders
Chthoniidae	
Ctenizidae	Trapdoor Spiders
Cyrtachenidiidae	Trapdoor Spiders
Dipluridae	Funnel-web-like Spiders
Garypidae	
Hexathelidae	Funnel-web Spiders
Idiopidae	Trapdoor Spiders
Lycosidae	Wolf Spiders
Migidae	Brushless-legged Trapdoor Spiders
Nemesiidae	Funnel-web Spiders
Sparassidae	Huntsmen Spiders (formerly Heteropodidae)
Theraphosidae	Bird-eating Trapdoor Spiders

### Bivalvia

Hyriidae	Freshwater Mussels
Sphaeriidae	Pea-shells

### Chilopoda

Scolopendridae

### Bivalves

### Centipedes

### Diplopoda

Dalodesmidae  
Metopidiotrichidae  
Pachybolidae  
Paradoxosomatidae

### Millipedes

### Eurotatoria

Adinetidae  
Asplanchnidae  
Atrochidae  
Brachionidae  
Collothecidae  
Conochilidae  
Dicranophoridae  
Epiphanidae  
Euchlanidae  
Flosculariidae  
Gastropodidae  
Habrotrichidae  
Hexarthridae  
Ituridae  
Lecanidae  
Lepadellidae  
Lindiidae  
Microcodonidae  
Mytilinidae  
Notommatidae

### Wheel Animals

Rotifers with Undifferentiated Cilia  
Sac-like Wheel Animals  
Sessile Wheel Animals  
Sac-like Wheel Animal  
Sessile Wheel Animals  
Six-"armed" Wheel Animals  
Tong-grabbing Wheel Animals  
Shell-less Wheel Animals  
Wheel Animals  
Sessile-footed Wheel Animals  
Shelled Wheel Animals  
Rotifers with Paired Trochi  
Gelatinous-colonial Wheel Animals  
Shelled Wheel Animals  
Shelled Wheel Animal  
Wheel Animals  
Wheel Animals  
Wheel Animals  
Wheel Animals  
Pseudo-segmented Wheel Animals



## Invertebrate fauna

Philodinavidae	Rotifers with Simplified Trochi
Philodinidae	Rotifers with Paired Trochi
Proalidae	Worm-like Wheel Animals
Scaridiidae	Wheel Animals
Synchaetidae	Sac-, Bell- or Cone-shaped Wheel Animals
Testudinellidae	Free-swimming Round-shelled Wheel Animals
Tetrasiphonidae	Wheel Animal
Trichocercidae	Comma-like Wheel Animals
Trichotriidae	Wheel Animals
Trochosphaeridae	Globular Wheel Animals

### Gastropoda

Achatinellidae  
 Amphibolidae  
 Ancyliidae  
 Assimineidae  
 Athoracophoridae  
 Bithyniidae  
 Bulimulidae  
 Camaenidae  
 Caryodidae  
 Cerastuidae  
 Charopidae  
 Corillidae  
 Cyclophoridae  
 Cystopeltidae  
 Diplommatinidae  
 Ellobiidae  
 Glacidorbidae  
 Helicarionidae  
 Helicinidae  
 Helicodiscidae  
 Hydrobiidae  
 Hydrocenidae  
 Hydrococcidae  
 Iravadiidae  
 Lymnaeidae  
 Megaspiridae  
 Neritidae  
 Planorbidae  
 Pomatiopsidae  
 Punctidae  
 Pupillidae  
 Pupinidae  
 Rathouisiidae  
 Rhytididae  
 Subulinidae  
 Succineidae  
 Thiaridae  
 Trochomorphidae  
 Truncatellidae

### Snails

Conical-shelled Land Snails  
 Supra-littoral Globose "Land" Snails  
 Freshwater Limpets  
 Freshwater, Land and Saltmarsh Snails  
 Triangular Mantled Slugs  
 Operculate Freshwater Snails  
 Elongate High-spined Land Snails  
 Camaenid Land Snails  
 Giant Land Snails  
 Land Snails  
 Flattened and Turbinate Land Snails  
 Land Snail  
 Horny Circular Operculate Land Snails  
 Australian "Half" Slugs  
 Circular Operculate Land Snails  
 Primitive Supralittoral Pulmonate Snails  
 Freshwater Snails  
 Helicarionid Land Snails  
 Top-shaped Operculate Land Snails  
 Stenopylis Land Snail  
 Freshwater Operculate Snails  
 Calcareous Operculate Land Snails  
 Paucispiral Operculate Saltmarsh Snails  
 Estuarine and Marine Operculate Snails  
 Eutrophic Freshwater Snails  
 Coelocion Land Snail  
 Calcareous Operculate Marine and Estuarine Snails  
 Freshwater Snails  
 Salt-lake Snails  
 Translucent Frosted Land Snails  
 Pupa-shaped Shelled Land Snails  
 Glossy and Porcellaneous Operculate Land Snails  
 Carnivorous Primitive Slugs  
 Carnivorous Land Snails  
 Elongate Land Snails  
 Amber Land Snails  
 Freshwater Horny Operculate Snails  
 Native Slug  
 Supralittoral Calcareous Operculate Snails



## Invertebrate fauna

Viviparidae

Freshwater Subspirial Horny Operculate Snails

### Insecta

Acanthosomatidae

Shield Bugs

Achilidae

Aenictopecheidae

Aenictopecheidae

Aeshnidae

Hawker, Duskhawker and Emperor Damselflies

Aleyrodidae

Whiteflies

Anthocoridae

Aphididae

Aphids

Aphylidae

Apidae

Social Bees

Apioceridae

Flower-loving Flies

Aradidae

Flat bugs, Bark bugs

Archipetalidae

Tasmanian Redspot Dragonfly

Artheneidae

Asilidae

Robber Flies

Atriplectididae

Caddisflies

Austrocorduliidae

Hawk, Mosquitohawk and Swiftwing Dragonflies

Austropetalidae

Redspot Dragonflies

Baetidae

Blue-winged Olive Mayflies, Small Mayflies

Belostomatidae

Berytidae

Stilt bugs

Blissidae

Chinch Bugs

Bombyliidae

Bee Flies

Buprestidae

Jewel Beetles

Calocidae

Caddisflies

Carabidae

Ground Beetles

Ceratocombidae

Cercopidae

Chlorocyphidae

Jewel Damselflies

Chorismagrionidae

Pretty Relict Damselfly

Cicadidae

Cixiidae

Coccidae

Coenagrionidae

Bluetail and Thin Damselflies

Colletidae

Short-tongued Bees

Colobathristidae

Conoesucidae

Caddisflies

Cordulephyidae

Shutwing Dragonflies

Corduliidae

Tigerhawk and Emerald Dragonflies

Coreidae

Corixidae

Waterboatmen

Cryptorhamphidae

Cydnidae

Burrower Bugs

Cymidae

Delphacidae

Diaspididae

Armoured Scales, Diaspids

Dinidoridae

Diphlebiidae

Rockmaster Damselflies

Dipsocoridae



## Invertebrate fauna

Dytiscidae	Dytiscidine Water Beetles
Ecnomidae	Caseless Caddisflies
Enicocephalidae	
Eriococcidae	
Eurybrachyidae	
Flatidae	
Formicidae	Ants
Gelastocoridae	Toad Bugs
Geocoridae	
Gerridae	Water-striders
Glossosomatidae	Stone-case Caddisflies
Gomphidae	Dragon, Hunter and Vicetail Dragonflies
Gomphomacromiidae	Urly Dragonflies
Gyrinidae	Gyrinid Water Beetles
Halictidae	
Haliplidae	Haliplid Water Beetles
Helicophidae	Caddisflies
Helicopsychidae	Snail Case Caddisflies
Hemicorduliidae	Emerald and Swamp Emerald Dragonflies
Hemiphlebiidae	Ancient Greenling
Hesperiidae	Skippers, flats, awls & darts
Heterogastridae	
Hydrobiosidae	Caddisflies
Hydrometridae	Marsh Treaders, Water Measurers
Hydrophilidae	Water Beetle
Hydropsychidae	Net Spinning Caddisflies
Hydroptilidae	Micro Caddisflies
Hygrobiidae	Hygrobiid Water Beetles
Hyocephalidae	
Idiostolidae	
Isostictidae	Wiretail and Pin Damselflies
Kalotermitidae	Termite
Kokiriidae	Caddisflies
Largidae	
Leptoceridae	Long-horned Caddisflies
Leptophlebiidae	Prong Gilled Mayflies
Leptopodidae	Leptopodidae
Lestidae	Ringtail, Reedling and Dusky Spreadwing Damselflies
Lestoididae	Bluestreak Damselflies
Lestoniidae	
Libellulidae	Perchers, Archtails and other Dragonflies
Lindeniidae	Tiger Dragonflies
Lycaenidae	Blues, Coppers, Hairstreaks and Metalmarks
Lygaeidae	
Macromiidae	Cruiser Dragonflies
Mastotermitidae	Giant Northern Termite
Megachilidae	
Megapodagrionidae	Flatwing Damselflies
Membracidae	Horned Treehoppers
Mesoveliidae	
Miridae	Miridae



## Invertebrate fauna

Mydidae	Mydas Flies, Wasp-mimic Flies
Nabidae	
Naucoridae	
Nepidae	Water Scorpions
Nesameletidae	Mayflies
Ninidae	
Noteridae	Noterid Water Beetles
Notonectidae	Backswimmers
Nymphalidae	Browns, Nymphs, Danaines
Ochteridae	Velvety Shore Bugs
Oeconesidae	Caddisflies
Oniscigastridae	Mayflies
Oxycarenidae	
Oxygastridae	Orange Streamcruiser Dragonfly
Pachygronthidae	
Papilionidae	Swallowtails
Peloriidae	Moss Bugs
Pentatomidae	Stinkbugs
Petaluridae	Petaltail Dragonflies
Philopotamidae	Finger Net caddisflies, Silken Tube Spinners
Philorheithridae	Caddisflies
Pieridae	Whites and Yellows
Piesmatidae	
Plataspidae	
Plectrotarsidae	Caddisflies
Pleidae	Pygmy Backswimmers
Polycentropodidae	Caseless Caddisflies
Prosopistomatidae	Mayflies
Protoneuridae	Threadtail Damselflies
Pseudococcidae	Mealy Bugs
Pseudocorduliidae	Mistfly Dragonflies
Psyllidae	
Pyrrhocoridae	
Reduviidae	Assassin Bugs
Rhinotermitidae	Termite
Rhopalidae	
Rhyparochromidae	Seed Bugs
Schizopteridae	
Scutelleridae	
Stenopsychidae	Caddisflies
Stenotritidae	
Synlestidae	Whitetip and Needle Damselflies
Synthemistidae	Spottail and Tigertail Dragonflies
Tasimiidae	Tasimiidae
Telephlebiidae	Darner Dragonflies
Termitidae	Termite
Termopsidae	Termite
Tessaratomidae	
Tettigarctidae	
Thaumastocoridae	
Therevidae	Stiletto Flies



## Invertebrate fauna

Tingidae	Lacebugs
Triozidae	
Urothemistidae	Basker, Pennant and Baron Dragonflies
Veliidae	Small Water Striders, Riffle Bugs

### Malacostraca

Crabs, lobsters, shrimps and woodlice

Eusiridae	
Hadziidae	
Hyalidae	
Hypsimepodidae	Phreatoicidean Isopods
Melitidae	
Neoniphargidae	
Paracalliopiidae	
Paramelitidae	
Phreatoicidae	Phreatoicidean Isopods
Phreatoicopsinae	Phreatoicidean Isopods
Talitridae	sandfleas, sandhoppers, landhoppers

### Polychaeta

Bristleworms, Scale Worms, Fan Worms, Rag Worm

Aphroditidae	sea mice
Cirratulidae	Cirratulid worms
Sigalionidae	scale worm





## Vascular flora

### Cycadopsida

Cycadaceae  
Zamiaceae

### Cycads

Native Cycads  
Native Cycads

### Liliopsida

Alismataceae  
Amaryllidaceae  
Anarthriaceae  
Aponogetonaceae  
Araceae  
Arecaceae  
Asphodelaceae  
Asteliaceae  
Blandfordiaceae  
Boryaceae  
Burmanniaceae  
Campynemataceae  
Centrolepidaceae  
Colchicaceae  
Cyperaceae  
Dioscoreaceae  
Ecdeiocoleaceae  
Eriocaulaceae  
Flagellariaceae  
Haemodoraceae  
Hemerocallidaceae  
Hydrocharitaceae  
Hypoxidaceae  
Iridaceae  
Juncaceae  
Juncaginaceae  
Luzuriagaceae  
Musaceae  
Orchidaceae  
Pandanaeae  
Petermanniaceae  
Philesiaceae  
Philydraceae  
Poaceae  
Pontederiaceae  
Potamogetonaceae  
Restionaceae  
Ripogonaceae  
Ruppiaceae  
Smilacaceae  
Sparganiaceae  
Stemonaceae  
Taccaceae  
Thismiaceae  
Typhaceae  
Xanthorrhoeaceae

### Monocots

Water Plantains  
  
Pond Lilies  
Settlers Flax, Cunjevoi, Native Lilies  
Palms  
Native Leek  
Palm-Lilies and Allies  
Christmas Bells  
Pincushion Lillies  
Burmannias  
  
Centrolepid Sedges  
Nancies and Allies  
Sedges  
Native Yams  
  
Pipeworts  
Whip Vine  
Bloodroots, Conostyles, Kangaroo Paws and their Allies  
  
Swamp Lily, Eel Weed, Frogbit and Water Thyme  
Native Lilies  
Irises and Allies  
Rushes  
Water Ribbons  
Orange and Turquoise Berries  
Native Bananas  
Orchids  
Pandans and Allies  
  
Frogmouths and Stream Lilies  
Grasses  
Water Hyacinths and Allies  
Sea Grasses and Horned Pondweeds, Pondweed  
Restiona Sedges  
  
Lawyer Vines, Supplejack, Wombat Berry and Scrambling Lily  
Floating Bur Reed  
Stemona Climbers  
Arrowroot and Allies  
Fairy Lanterns  
Cumbungi and Allies  
Grass Trees, Lomandras and Allies



## Vascular flora

Xyridaceae  
Zingiberaceae

Xyris Herbs  
Native Ginger and Allies

### Magnoliopsida

Achariaceae  
Aizoaceae  
Akaniaceae  
Amaranthaceae  
Anacardiaceae  
Aphanopetalaceae  
Asteraceae  
Atherospermataceae  
Austrobaileyaceae  
Balanopaceae  
Balanophoraceae  
Bombacaceae  
Boraginaceae  
Burseraceae  
Calycanthaceae  
Cardiopteridaceae  
Caryophyllaceae  
Casuarinaceae  
Chenopodiaceae  
Combretaceae  
Connaraceae  
Convolvulaceae  
Cunoniaceae  
Dichapetalaceae  
Dilleniaceae  
Droseraceae  
Elaeagnaceae  
Epacridaceae  
Ericaceae  
Erythroxylaceae  
Euphorbiaceae  
Eupomatiaceae  
Fabaceae  
Haloragaceae  
Hernandiaceae  
Himantandraceae  
Hydatellaceae  
Lauraceae  
Leeaceae  
Lentibulariaceae  
Limeaceae  
Linderniaceae  
Lythraceae  
Melastomataceae  
Meliaceae  
Menispermaceae  
Menyanthaceae

### Dicots

Pigfaces  
Turnip Wood  
Pigweed  
Bollygum, Native Plum  
  
Daisies and Allies  
  
Austrobaileyas  
Pimplebark  
Balanophoras  
Baobabs  
Forget-me-not  
Canarium and Garuga  
  
Peripterygium Vines  
Pin Cushion, Wort  
She-oaks  
Saltbushes and Allies  
Plums, Bullwaddies, Mangroves and Bushwillow  
Connara Climbers  
Bindweed, Morning Glory  
Christmas Bushes and Mararas  
Dichapetals  
Guinea Flowers  
Sundews  
Oleaster  
Southern Heaths  
Heathers and Rhododendrons  
Erythroxylum  
Spurges  
Bolwarra  
Peas  
Raspworts and Milfoils  
Hernandias and Valvantheras  
Galbulimimas  
Hydatellid Herbs  
Laurels, Camphorwood and Australian Walnuts  
Leeas  
Bladderworts  
  
Loosestrifes  
Native Lasiandra and Allies  
Rosewoods and Mahoganies  
Snake, Round-leaf and Pearl Vines  
Marshwort



## Vascular flora

Molluginaceae	Carpet Weed, Herb
Monimiaceae	Sassafras, Beech
Myrtaceae	Native Myrtles
Nelumbonaceae	Waterlilies
Nepenthaceae	Nepenthes Pitcher Plants
Nitrariaceae	
Nyctaginaceae	Tarvine, Pisonia and Birdlime Trees
Ochnaceae	Brackenridgea
Onagraceae	Water Primrose and Willowherbs
Opiliaceae	Oplilia Climbers
Orobanchaceae	
Phrymaceae	
Phyllanthaceae	
Phytolaccaceae	Introduced Monococcus
Picrodendraceae	
Portulacaceae	Purslane
Proteaceae	Banksias, Grevilleas and Allies
Putranjivaceae	
Rhizophoraceae	Mangroves
Rutaceae	Boronia, Correa, Citrus, Phebalium, Philotheca, Zieria and Allie
Sapindaceae	Tamarind, Whitewood, Tuckeroo, Hop Bushes
Scrophulariaceae	Figworts
Simaroubaceae	Native Plum and Allies
Solanaceae	Native Gooseberries, Wild Tomatos and Boxthorns
Sphenocleaceae	
Sterculiaceae	Kurrajongs and Bottletrees
Stylidiaceae	Triggerplants and Allies
Thymelaeaceae	Pimeleas
Tiliaceae	
Trimeniaceae	Trimenia
Vitaceae	
Winteraceae	Pepper Trees
Zygophyllaceae	Zygophyllaceae
<b>Pinopsida</b>	<b>Pines and Allies</b>
Araucariaceae	Araucaria Pines
Cupressaceae	Native Cypress
Podocarpaceae	Podocarp Pines



## Appendix 2 Acknowledgements

Thank you to the following organisations and individuals for providing species location data used in the Australian Natural Heritage Assessment Tool (ANHAT) to generate this Biodiversity Summary.

### **Council of Heads of Australian Faunal Collections (CHAFC)**

ANHAT acknowledges the Council of Heads of Australian Fauna Collections (CHAFC) for supply of data from the following CHAFC member institutions:

- Australian Museum
- CSIRO Australian National Insect Collection
- Museum and Art Gallery of the Northern Territory
- Museum Victoria
- Queen Victoria Museum and Art Gallery (Launceston)
- Queensland Museum
- South Australian Museum
- Tasmanian Museum and Art Gallery (Hobart)
- Western Australian Museum

The taxonomic concepts used in this report reflect an ANHAT view of the data and not necessarily that of the CHAFC parent Museums.

### **Council of Heads of Australasian Herbaria (CHAH)**

ANHAT acknowledges the Council of Heads of Australasian Herbaria Inc. (CHAH Inc.) and partners in Australia's Virtual Herbarium (AVH) for the supply of data from the AVH. The AVH is a collaborative project of Australian State, Territory and Commonwealth herbaria through CHAH Inc. and includes:

- Australian National Herbarium (CANB)
- National Herbarium of New South Wales (NSW) Botanic Gardens Trust
- Herbarium of the Northern Territory (DNA, NT)
- Queensland Herbarium (BRI)
- State Herbarium of South Australia (AD)
- Tasmanian Herbarium (HO)
- National Herbarium of Victoria (MEL) Royal Botanic Gardens Melbourne
- Western Australian Herbarium (PERTH).

The taxonomic concepts used in this report reflect an ANHAT view of the data and not necessarily that of the AVH parent Herbaria.



### **Other Government Organisations**

- Commonwealth Department of Defence
- Commonwealth Department of Sustainability, Environment, Water, Population and Communities
- New South Wales - Department of Environment and Climate Change
- New South Wales - Department of Primary Industry, Forests NSW
- Northern Territory - Department of Natural Resources, Environment and the Arts
- Queensland - Environmental Protection Agency, WildNet
- South Australia - Department for Environment and Heritage (Biological Survey of South Australia Database)
- Tasmania - Department of Primary Industries and Water (Natural Values Atlas)
- Victoria - Department of Sustainability and Environment
- Western Australia - Department of Environment and Conservation

### **Non-government**

- Birds Australia
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