



**Australian Government**

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

# **Gippsland Lakes Ramsar site**

## **Ecological Character Description**

March 2010

Appendices

Other chapters can be downloaded from:

[www.environment.gov.au/water/publications/environmental/wetlands/21-ecd.html](http://www.environment.gov.au/water/publications/environmental/wetlands/21-ecd.html)

## APPENDIX A: DETAILED METHODOLOGY

This ECD report has been prepared by a consultant study team led by BMT WBM Pty Ltd under contract with the Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC). This has occurred with input from a Project Steering Committee made up of officials from DSEWPaC, the Victorian Department of Sustainability and the Environment (DSE), Parks Victoria (Parks Victoria), the Gippsland Coastal Board (GCB), the Department of Defence (DoD) and the West Gippsland Catchment Management Authority (WGCMA).

This report updates and replaces an unpublished draft ECD document for the site prepared by the Ecos Consortium (Ecos 2008). However, the draft Ecos document was regarded as an important source of technical information about the site and where appropriate, figures, data analysis and conclusions drawn from the draft Ecos document have been referenced in this ECD report.

### **A1 Steering Committee**

A Steering Committee was created as part of the study and was chaired independently. The organisations represented on the Steering Committee were as follows:

Department or Organisation
Independent Chair
Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC)
Department of Sustainability and Environment (DSE)
Parks Victoria
Department of Defence
Gippsland Coastal Board
West Gippsland Catchment Management Authority

### **A2 Methodology – Information collation and review stage**

The first step in ECD preparation as outlined in the National ECD Framework is to identify the wetland services/benefits, wetland components and wetland processes present in the Ramsar site. These key terms are defined in Section 3 of the Report and the Glossary. This was initiated by undertaking a process of information collation and literature review.

As part of the information collation phase, literature and existing data relevant to the study area (site boundary and surrounds) were collated and reviewed. Relevant existing information was sourced from the following:

- published scientific papers
- database records (EPBC, DSE, etc.)
- quantitative data (Birds Australia, Victorian EPA, etc.)
- mapping products supplied by the DSE and Parks Victoria (vegetation and wetland mapping)

- management plans, strategies and other policy documents
- grey literature from internet searches and other sources of data.

Each article of information was collated to a cursory level sufficient to determine its relevance to the study. The collected information was then reviewed to prioritise and identify information of direct relevance to the ECD.

As part of the information collation phase, key information sources to be used in the study were presented to the project Steering Committee and gaps were identified on the basis of these reviews. In some cases, additional information was supplied directly by Steering Committee representatives.

### **A3 Selection of critical components, processes and services/benefits**

A wide range of ecosystem components, processes and services/benefits were seen as being represented within the Ramsar site. Following the method within the National ECD Framework, the assignment of a given wetland component, process or service/benefit as critical was determined with reference to the following criteria:

- The component, process or service/benefit is an important determinant of the uniqueness of the site, or is widely accepted as representing a particularly outstanding example of an environmental value supported by the site.
- The component, process or service/benefit is important for supporting one or more of the Ramsar Nomination Criteria under which the site was listed.
- A change in a component, process or service/benefit is reasonably likely to occur over short or medium times scales (less than 100 years).
- A change to the component, process or service/benefit would result in a fundamental change in ecological values of the site.

The views of the Steering Committee were also considered in the assignment of critical elements. Justification for inclusion of critical and supporting components, processes or services/benefits is provided in the body of this report.

In selecting key species/groups that underpin critical components, the following methods were considered:

#### **Flora species**

In nominating particular wetland flora species or communities for consideration under the critical components, the following considerations were applied:

- Species should generally occur in aquatic environments (for example, macrophytes) or are otherwise considered to be wetland-associated species or communities.
- Species or communities should be listed as threatened (that is, vulnerable or endangered) at the national (threatened under EPBC Act) and/or international (IUCN) level or are considered to be particularly noteworthy or critical from a regional biodiversity perspective (refer to Nomination

Criterion 3). This includes species or communities that are perceived by the authors to be iconic to the site, or are designated as threatened under Victorian legislation (endangered or vulnerable at a State/Territory scale).

#### Fauna species

In nominating particular fauna species/groups for consideration under the critical components, the following considerations were applied:

1. Species should generally occur in aquatic or marine environments or are otherwise considered to be wetland-dependent terrestrial species (refer Glossary for definitions of these terms and Appendix D for list of species).
2. Species should be either:
  - designated as threatened (for example, endangered or vulnerable) at a national scale (under the EPBC Act) or international scale (under IUCN Red List)
  - particularly noteworthy or critical from a regional biodiversity perspective. This includes species that are perceived by the authors to be iconic to the site, or are designated as threatened under Victorian legislation (endangered or vulnerable at a State/Territory scale).
3. Given the boundaries of the Ramsar site are largely confined to near-shore areas or internal waters, emphasis has been placed on inclusion of those species that use the site as core habitat, have significant population numbers and spend a large proportion of their life cycle within the site boundaries. This excludes vagrant species of conservation significance such as whales, sharks and migratory seabirds that may only occur in the Ramsar site infrequently but for which species records within the site exist.

#### **A4 Derivation of limits of acceptable change**

Limits of Acceptable Change (LAC) were derived using a staged approach as follows:

- determine values of the site. These represent the critical components and/or services/benefits
- identify critical processes underpinning site values
- describe patterns in natural variability in critical components, processes and services/benefits indicators
- define the relative magnitude of acceptable change. The relative magnitude of acceptable change was determined on the basis of (i) an assessment of criticality of the site to the maintenance of species populations or habitats, based on known or likely patterns in geographic distribution, abundance and criticality of the site to maintaining the survival of a species; (ii) patterns (short-term and long-term) in natural variability; and (iii) a qualitative assessment of the vulnerability of changes outside bounds of natural variability
- derive specific limits of acceptable change. The broad relative magnitude of acceptable change definitions was used to describe specific limits of acceptable change.

The specific values of the site was determined on the basis of (i) known or likely patterns in the distribution and abundance of species and habitats that comprise the critical components, processes and services/ benefits of the site, and (ii) expert opinion and or empirical data describing the criticality of the site to maintaining the survival of a species. Three levels of criticality were derived based on these factors (Least, Moderate and Highest Concern), as described in Table A-1 below.

**Table A-1 Categories describing importance of the site to maintaining habitats and species that underpin the critical services/benefits and components**

Distribution and criticality to populations	Abundant	Uncommon
Widespread globally and nationally, life-history functions supported in many areas elsewhere (species).	1a	2b
High diversity feature (habitat and community descriptor).	1b	2c
Habitat specialist with disjunct and very limited number of populations globally and nationally (species).	3a	3d
May be widespread nationally or regionally but is a critical breeding, staging or feeding site that is critical to survival of population (habitat and species).	3b	3e
Limited to bioregion but found in numerous basins, and is not known to be critical to survival of a species (habitat and species).	2a	3f
Limited to bioregion, found in a small number of basins and has limited distribution in the site (species).	3c	3g

Where least concern = 1 (green), of concern = 2 (yellow), most concern = 3 (orange)

The relative magnitude of acceptable change was then determined based on:

- The categories describing site values/importance described in Table A-1 above.
- Whether species/habitats that underpin the critical components or services/benefits are known or likely to be highly sensitive/intolerant to changes in environmental conditions.
- Known/likely patterns in natural temporal variability of indicators in the short-term (based on inter-annual cycles or episodic disturbance) and long-term (based on processes operating over time scales measured in decades).
- A high level qualitative assessment of the consequences associated with changes in parameters outside natural variability was undertaken. Five consequence categories were derived, and are based in part on general risk categories developed by the SCFA – FRDC Project Team (2001) for the Risk Assessment Process for Wild Capture Fisheries (Version 3.2) (refer Table A-2).
- Consideration of patterns in natural variability, site values/importance and the consequence ratings for assessing sensitivity to change were used to derive three relative magnitudes of acceptable change categories: (i) no change; (ii) small change; (iii) moderate to large change. These are shown in Table A-3.

**Table A-2 Defining impact magnitude**

Category	Habitat affected/modified	Key species	Ecosystem functioning
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Category	Habitat affected/modified	Key species	Ecosystem functioning
Major	greater than 60 per cent habitat	Mortality likely local extinction	Total ecosystem collapse
High	30 to 60 per cent	Mortality may affect recruitment and capacity to increase	Measurable impact to functions, and some functions are missing/ declining/ increasing outside historical range and/or facilitate new species to appear
Moderate	five to 30 per cent	Mortality within some spp. Levels of impact at the maximum acceptable level	Measurable changes to ecosystem components but no loss of functions (no loss of components)
Minor	less than five per cent	Affected but no impact on local population status (for example, stress or behavioural change to individuals)	Keystone species not affected, minor changes in relative abundance
Negligible	less than one per cent	No impact	Possible changes, but inside natural variation

**Table A-3 Relative magnitude of acceptable change categories for LAC indicators**

Impact Significance	Level 3 species or habitat	Level 2 species or its habitat		Level 1 species or its habitat			
		Short-term, localised	Long-term or multiple areas	Short-term, localised	Short-term, multiple areas	Long-term, localised	Long-term, multiple areas
Major	No change	No change	No change	No change	No change	No change	No change
High	No change	No change	No change	Moderate change	No change	No change	No change
Moderate	No change	Small change	No change	Moderate change	Small change	Small change	No change
Minor	No change	Moderate change	Small change	Moderate change	Moderate change	Moderate change	Small change

## APPENDIX B: WATER QUALITY INFORMATION

### SOURCE AND ANALYSIS OF WATER QUALITY DATA

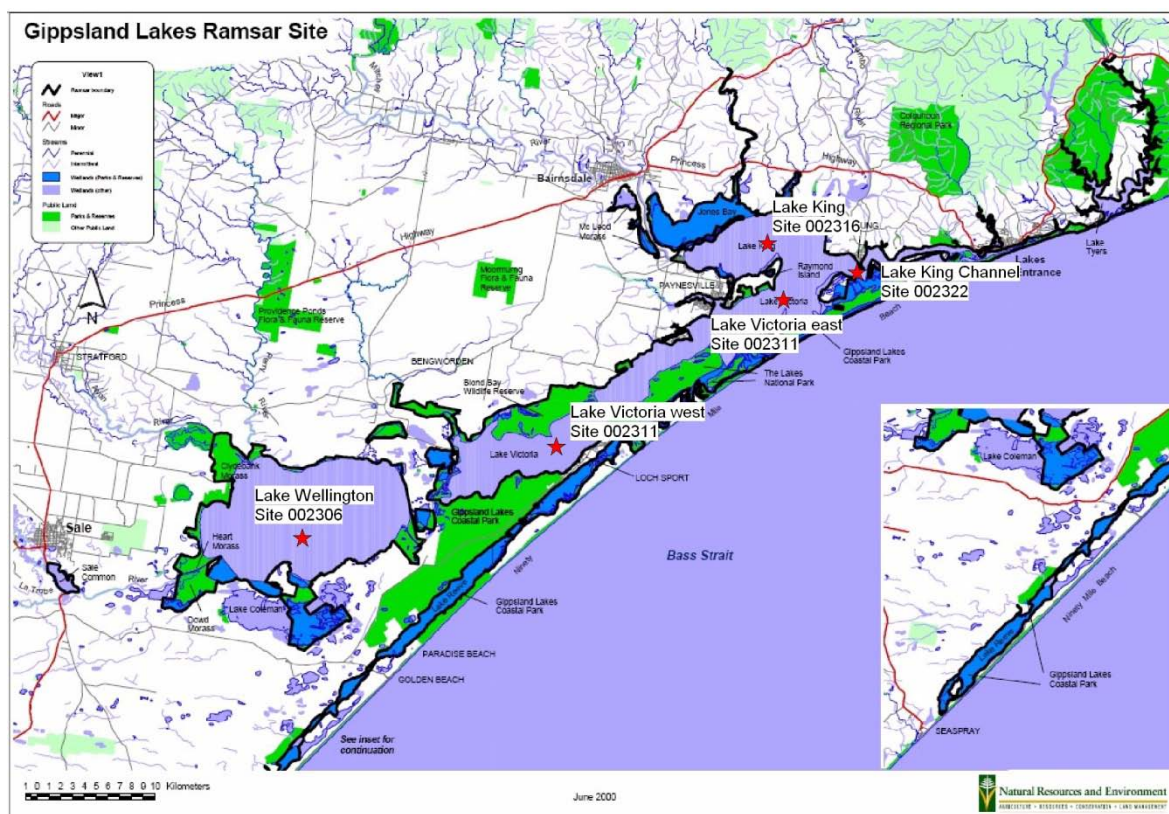
Water quality monitoring data was obtained from the EPA Victoria from five monitoring sites within Lakes Wellington, Victoria and King (refer Figure B-1). The dataset consists of two main monitoring periods, 1) data from 1976 to 1980 from the Victoria State Rivers and Waters Commission (not longer existing) and 2) data from 1986 to present from the Victoria EPA fixed monitoring sites. No data exists from these five sites between 1980 and 1986. Data for catchment flow into the Gippsland Lakes was sourced from the Gippsland Catchment Management Authorities.

The periods 1976-1980 (pre-Ramsar listing) and 1986-2008 (Ramsar period) were analysed separately by calculating the range, 10<sup>th</sup>, 20<sup>th</sup>, 50<sup>th</sup>, 80<sup>th</sup> and 90<sup>th</sup> percentiles. The analysed parameters represent surface water measurements (0.5 metre water depth) and include salinity, pH, dissolved oxygen concentration, per cent saturation of dissolved oxygen, total suspended solids, total nitrogen, total phosphorus and chlorophyll *a*.

Where applicable, the calculated values were compared to the guideline values listed in Water of Victoria Schedule F3 (Gippsland Lakes and Catchment, No. S13, Gazette 26/2/1988). The guideline values listed in Schedule F3 differ between Lake Wellington and the eastern Gippsland Lakes. Schedule F3 uses minimum values, 50<sup>th</sup> and 90<sup>th</sup> percentiles as water quality objectives.

Total nitrogen, total phosphorus and chlorophyll *a* are not listed in Schedule F3 and therefore the ANZECC (2000) guideline values for southeast Australian estuarine systems were adopted for these parameters. The ANZECC guidelines use the 20<sup>th</sup> and 80<sup>th</sup> percentiles as lower and upper low-risk trigger values. It should be noted that the ANZECC guidelines are not specific to the Gippsland Lakes. It is recommended that trigger values for these parameters are developed, which are specific to the Gippsland Lakes ecosystem.

Water quality time series plots and the summed catchment flow discharging into the Gippsland Lakes is shown for Lake Wellington in Figure B-2 and for the eastern Lake Victoria in Figure B-3. Table B-1 and Table B-2 show the calculated percentiles and comparison to guideline values for Lake Wellington and the eastern Lake Victoria sites, respectively. Additional data plots were generated for monitoring data at the other eastern lakes sampling locations and are shown in Figures B-4, B-5 and B-6. Generally, these data plots show similar trends to those presented in Figure B-3.



**Figure B- 1 Locations of EPA water quality monitoring sites in the Gippsland Lakes. Figure modified from the Victorian Department of Sustainability and Environment.**

The water quality in Lake Wellington is strongly determined by flows entering the lake from the catchment (Figure B-2). About one third of river flows in to the Gippsland Lakes and over half of the total nutrient load is supplied to Lake Wellington from the western rivers (mainly the La Trobe, Thomson and Avon Rivers). Due to these high catchment inflows and its distance from the Lakes Entrance in the east, Lake Wellington is less saline than the eastern lakes. Salinities are generally higher during years of low flow compared to lower salinities observed during high flow years (Figure B-2). Correspondingly, increased input of sediments and nutrients during high flow years is reflected in higher concentrations of total suspended solids, total nitrogen and total phosphorus during these periods (Figure B-2). As expected, the higher nutrient availability during high flow years ensues in higher chlorophyll *a* concentrations in the water column. Dissolved oxygen concentrations vary seasonally with higher concentrations during the cold winter months and lower concentrations during the warm summer months due to increased oxygen solubility with decreasing temperatures.

**Notable events (refer to Figure B-2):**

- A) High catchment inflow during the hydrological year 1978-1979 results in freshwater salinities, the highest suspended solid concentration on record and very high total phosphorus concentrations. High flushing of Lake Wellington and high turbidity may explain why the increased nutrient input is not reflected in chlorophyll *a* concentrations.
- B) Several high catchment inflow events during the wetter years 1985 to 1995 lead to increased input of sediments, total nitrogen and total phosphorus from the catchment and corresponding



increases in chlorophyll a concentrations. Several blooms of *Nodularia*, dinoflagellates and *Microcystis* fall into this period (Stephens et al. 2004).

- C) Notable *Nodularia* bloom in 1998-1999 associated with high total nitrogen and phosphorus concentrations and high suspended solids concentration.
- D) The extended drought period during 1999-2007 and associated reduced catchment input results in decreasing total nutrient concentrations, very low suspended solid concentrations and low chlorophyll.
- E) Bushfires in 2006-2007 burning 32 per cent of Gippsland Lakes catchment followed by the 2007 flood period, resulted in the highest nutrient concentrations on record. A massive increase in nitrate loads likely resulted in an unprecedented *Synechococcus* bloom persisting to winter 2008 (Cook et al. 2008). The bloom is reflected in the high chlorophyll a concentrations during this period.

#### **Comparison to guideline values (refer to Table B-1)**

**Salinity** – Salinity ranged between 0.3 and 12.8 grams per litre in the period 1976-1980 and between 0.2 and 21.2 grams per litre in 1986-2008. The median salinity marginally exceeded the Waters of Victoria Schedule F3 (WV) guideline value in the period 1976-1980. During the period 1986-2008, the median salinity (6.1 grams per litre) was well below the WV guideline value.

**pH** – The maximum pH only marginally exceeded the maximum range specified in the WV guideline in the period 1986-2008. Over 90 per cent of all data was well within the range of the guideline values for 1976-1980 and 1986-2008. Median pH was 7.8 in 1976-1980 and 8.0 in 1986-2008.

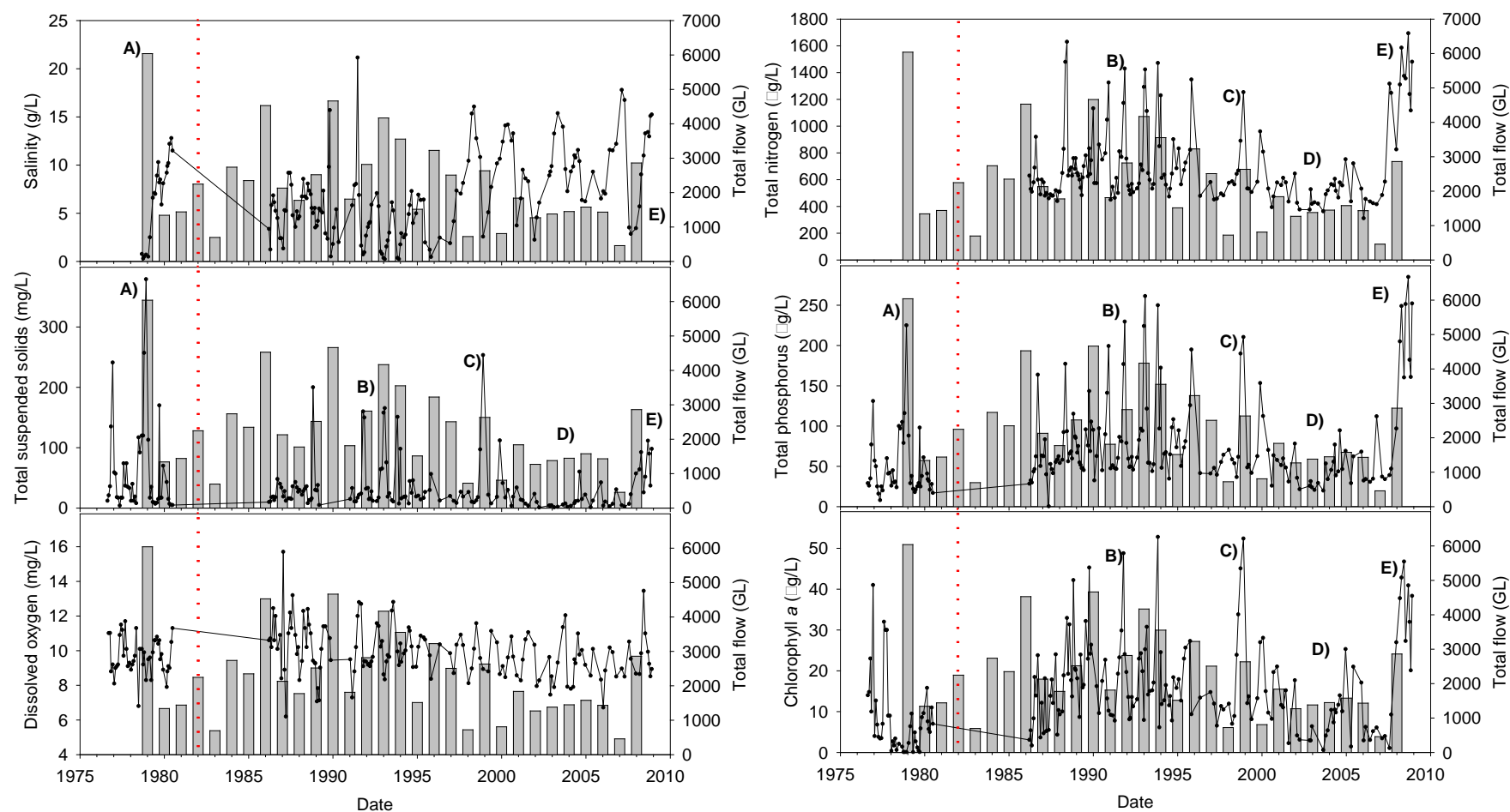
**Dissolved Oxygen** – Dissolved oxygen concentrations were always well over the minimum guideline value specified in the WV guideline. 10<sup>th</sup> percentile values of 8.5 milligrams per litre for 1976-1980 and 8.3 milligrams per litre for 1986-2008 indicates that the surface water was well oxygenised and close to saturation most of the time.

**Total suspended solids** – Median suspended solid concentrations were below the WV trigger limit for both periods. The 90<sup>th</sup> percentile of suspended solids exceeded the WV guideline value during the period 1976-1980, whereas the 90<sup>th</sup> percentile for 1986-2008 was below the guideline trigger value. Median suspended solids concentration was slightly lower for the period 1986-2008.

**Total nitrogen** – Total nitrogen ranged between 311 micrograms per litre and 1694 micrograms per litre during 1986-2008. No data exists for the period 1976-1980. The median and 80<sup>th</sup> percentile of total nitrogen exceeded the ANZECC guideline value. It should be noted, however, that the ANZECC guidelines cover the broad area of southeast Australian estuaries and are not specific to the Gippsland Lakes.

**Total phosphorus** – Total phosphorus ranged between 8.0 micrograms per litre and 225 micrograms per litre during 1976-1980 and between 0.4 micrograms per litre and 285 micrograms per litre in the period 1986-2008. Median total phosphorus was about two times higher in 1986-2008 compared to 1976-1980. The median and 80<sup>th</sup> percentile exceeded the ANZECC guideline value during both periods. It should be noted, however, that the ANZECC guidelines cover the broad area of southeast Australian estuaries and are not specific to the Gippsland Lakes.

**Chlorophyll a** – Chlorophyll *a* concentrations reached maximum values of 41 micrograms per litre and 53 micrograms per litre for the periods 1976-1980 and 1986-2008, respectively. Median Chlorophyll was more than two times higher in 1986-2008 compared to the pre-Ramsar period. The median and 80<sup>th</sup> percentile of Chlorophyll *a* exceeded the ANZECC guideline trigger value.



**Figure B-2 Lake Wellington surface water quality data (EPA monitoring site 002306). Total flow represents the summed flow recorded for all major catchment rivers and is given as hydrological year (June-May). Red dotted line denotes listing of Gippsland Lakes as Ramsar wetland in 1982. Refer to text for information on notable events A-E.**

**Table B- 1 Lake Wellington surface water quality parameters and guideline values from EPA site 002306. Orange and red colour represents slight and distinct exceedance of guideline trigger limits, respectively. Note that the ANZECC guideline values are representative of the broad southeast Australia estuaries and not specific to the Gippsland Lakes.**

	Minimum		Maximum		10th percentile		20th percentile		50th percentile		80th percentile		90th percentile		Guideline	Source
	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008		
Salinity (g/L)	0.3	0.2	12.8	21.2	0.5	1.8	0.8	2.9	8.1	6.1	10.2	10.4	11.5	13.2	8	Waters of Victoria
pH	6.8	6.8	8.6	9.1	7.1	7.4	7.2	7.6	7.8	8.0	8.1	8.3	8.2	8.5	6-9	Waters of Victoria
Dissolved oxygen (mg/L)	6.8	6.2	11.7	15.7	8.5	8.3	9.0	8.7	9.6	9.7	10.6	11.0	11.1	11.6	6	Waters of Victoria
Dissolved oxygen (% saturation)		71.0		149.6		92.9		95.7		102.3		110.4		117.0	60	Waters of Victoria
Total suspended solids (mg/L)	4.0	0.9	379.0	253.3	7.4	4.6	11.6	10.0	21.0	18.7	96.2	39.6	129.0	74.5	25/80	Waters of Victoria
Total nitrogen (µg/L)		311.3		1693.9		451.6		490.0		587.1		830.0		1248.0	300	ANZECC
Total phosphorus (µg/L)	8.0	0.4	225.0	285.0	20.3	32.5	24.6	41.8	33.0	60.4	77.8	96.9	99.4	172.4	30	ANZECC
Chlorophyll a (µg/L)	0.1	0.6	41.0	52.8	0.2	4.2	1.4	7.8	5.7	13.8	11.3	24.0	20.1	31.2	4	ANZECC

## Eastern Lakes water quality

Time series of water quality parameters for eastern Lake Victoria and total catchment inflow are shown in Figure B-3. Salinities are generally more saline in the eastern lakes compared to Lake Wellington due to their proximity to the Lakes Entrance. As observed for Lake Wellington, salinities in the surface water of the eastern lakes are generally higher during years of low flow and higher during high flow years. Concentrations of suspended solids, total nitrogen and total phosphorus are not as clearly related to flow compared to observations from Lake Wellington. Dissolved oxygen concentrations generally follow a seasonal pattern with higher concentrations during the colder months due to increased oxygen solubility. Relatively low oxygen concentrations during some occasions may have been caused by mixing events with hypoxic bottom water, while particularly high oxygen concentrations may in part be attributable to high oxygen production during periods of algal blooms (Figure B-3).

### Notable events (refer to Figure B-3):

- A) High catchment inflow during the hydrological year 1978-1979 resulted in relatively low salinities around seven grams per litre and high total suspended solids concentrations. While total phosphorus increased in the surface water, this increase was not as pronounced as observed in Lake Wellington during the same time. Chlorophyll *a* concentrations did not increase during that period, possibly due to high turbidity and flushing of the system.
- B) Very high concentrations of total nitrogen and total phosphorus were observed in 1988. During the same time, total suspended solid concentrations also increased markedly. Several algal blooms (*Nodularia* and dinoflagellates) were noted in 1988-1989 (Stephens et al. 2004), which is reflected in the high chlorophyll *a* concentrations during that time. During this period of relatively moderate catchment inflow the high total nitrogen/phosphorus and suspended solid concentrations may have been in part caused by the bloom itself (autochthonous algae production contribute to measured total nutrient and suspended solid concentrations). Photosynthetic activity of the algal bloom is reflected in increased oxygen concentrations.
- C) Another *Nodularia* bloom was observed in 2001-2002 (Cook et al. 2008), which is reflected in high total nitrogen and chlorophyll *a* concentrations and moderate increase in suspended solid and total phosphorus concentrations. Photosynthetic activity of the algal bloom manifests in a pronounced peak in oxygen concentration during that time.
- D) Bushfires in 2006/2007 burning 32 per cent of Gippsland Lakes catchment followed by the 2007 flood period, resulted in high total nitrogen and total phosphorus concentrations. A massive increase in nitrate loads likely resulted in an unprecedented *Synechococcus* bloom persisting to winter 2008 (Cook et al. 2008). The bloom is reflected in relatively high chlorophyll *a* concentrations as well as an increase in surface water oxygen concentrations during this period.

**Comparison to guideline values eastern Lake Victoria (refer to Table B-2)**

The observed patterns described below for the eastern Lake Victoria were similar for the other three eastern Lakes monitoring sites, including Lake King. Refer to Figures B-4, B-5 and B-6 for these plots.

**Salinity** – Salinity ranged between 7.0 grams per litre and 27.6 grams per litre in 1976-1980 and between 4.2 grams per litre and 32.4 grams per litre in the period 1986-2008. Median salinity was slightly lower for the period 1986-2008 (21.2 grams per litre) compared to 1976-1980 (24.1 grams per litre). No guideline value for salinity is given in the Waters of Victoria Schedule F3 guidelines (WV) for the eastern Gippsland Lakes.

**pH** – The maximum pH exceeded the WV guideline value for the eastern Gippsland Lakes during the period 1986-2008. However, the 10<sup>th</sup> and 80<sup>th</sup> percentiles were within the range specified in the guidelines, indicating that pH was within guideline limits most of the time. Median pH was 8.2 in 1976-1980 and 8.3 in the period 1986-2008.

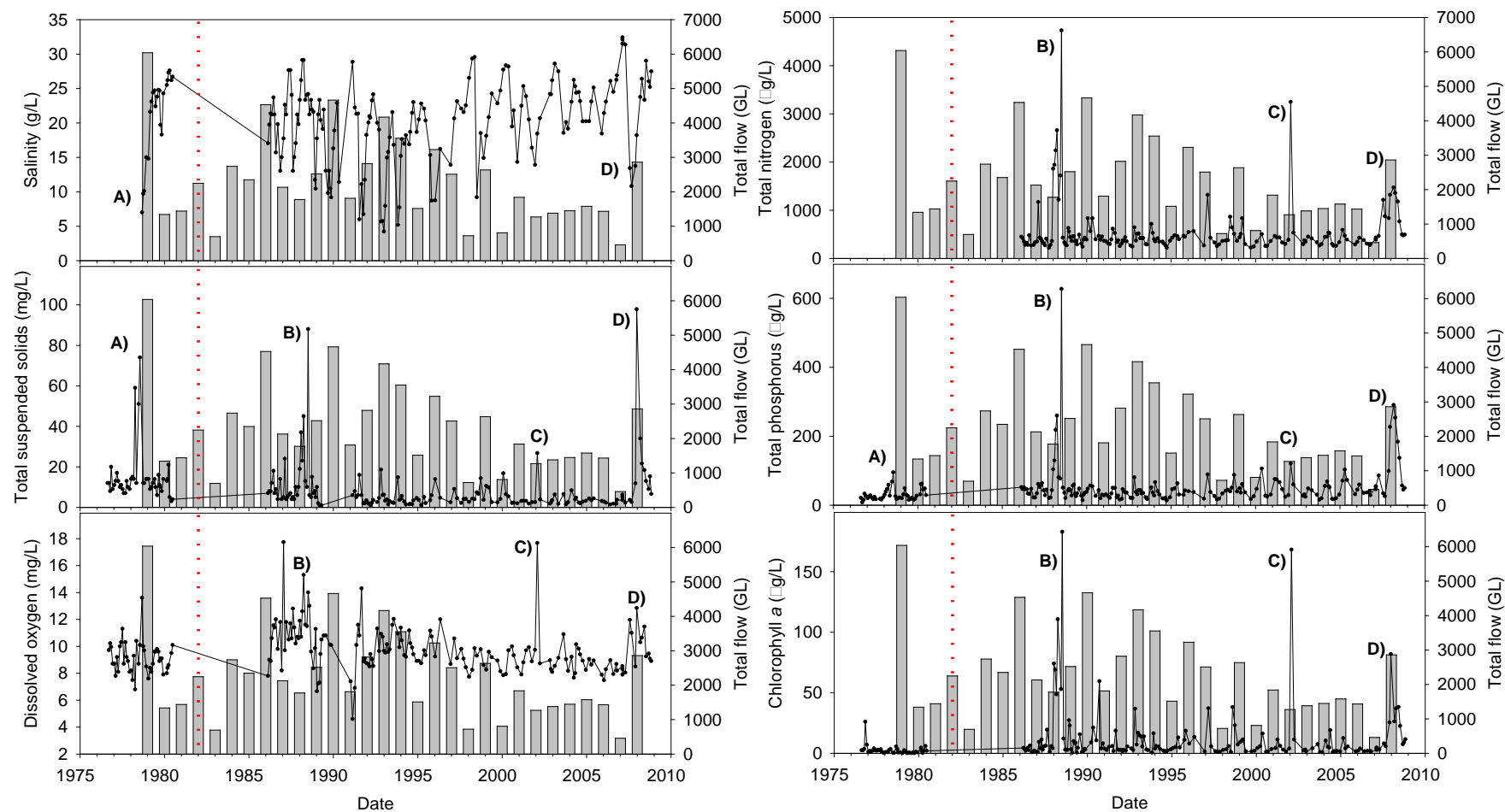
**Dissolved oxygen** – Minimum dissolved oxygen concentration was within guideline limits during 1976-1980. In contrast, minimum dissolved oxygen concentrations and per cent saturation of dissolved oxygen were distinctly below the WV trigger limits in the period 1986-2008. It should be noted, however, that the 10<sup>th</sup> percentile of dissolved oxygen was eight milligrams per litre and close to saturation during this period, indicating that the surface water of the eastern Lake Victoria was well oxygenised for over 90 per cent of the time. The particularly low oxygen concentrations may have been caused by transient mixing of the surface water with hypoxic bottom water.

**Total suspended solids** – The median and 90<sup>th</sup> percentile of total suspended sediment was well below the WV trigger limit for both periods. Median suspended solid concentration was three times lower during 1986-2008 compared to 1976-1980.

**Total nitrogen** – Total nitrogen ranged between 219 micrograms per litre and 4730 micrograms per litre for the period 1986-2008. No data exists for the period 1976-1980. The median and 80<sup>th</sup> percentile of total nitrogen exceeded the ANZECC guideline value. It should be noted, however, that the ANZECC guidelines cover the broad area of southeast Australian estuaries and are not specific to the Gippsland Lakes.

**Total phosphorus** – Total phosphorus ranged between 8.0 micrograms per litre and 95 micrograms per litre during 1976-1980 and between 13.8 micrograms per litre and 627 micrograms per litre in the period 1986-2008. Median total phosphorus concentration was about 1.5 times higher during 1986-2008 compared to 1976-1980. The median and 80<sup>th</sup> percentile exceeded the ANZECC guideline value during both periods. It should be noted, however, that the ANZECC guidelines cover the broad area of southeast Australian estuaries and are not specific to the Gippsland Lakes.

**Chlorophyll a** – Chlorophyll a concentrations reached maximum values of 26 micrograms per litre and 183 micrograms per litre for the periods 1976-1980 and 1986-2008, respectively. While the 80<sup>th</sup> percentile of chlorophyll was below the ANZECC trigger level for the period 1976-1980, the 80<sup>th</sup> percentile during 1986-2008 exceeded the guideline value about three-fold. However, median chlorophyll a concentrations were close to the guideline value for both periods.

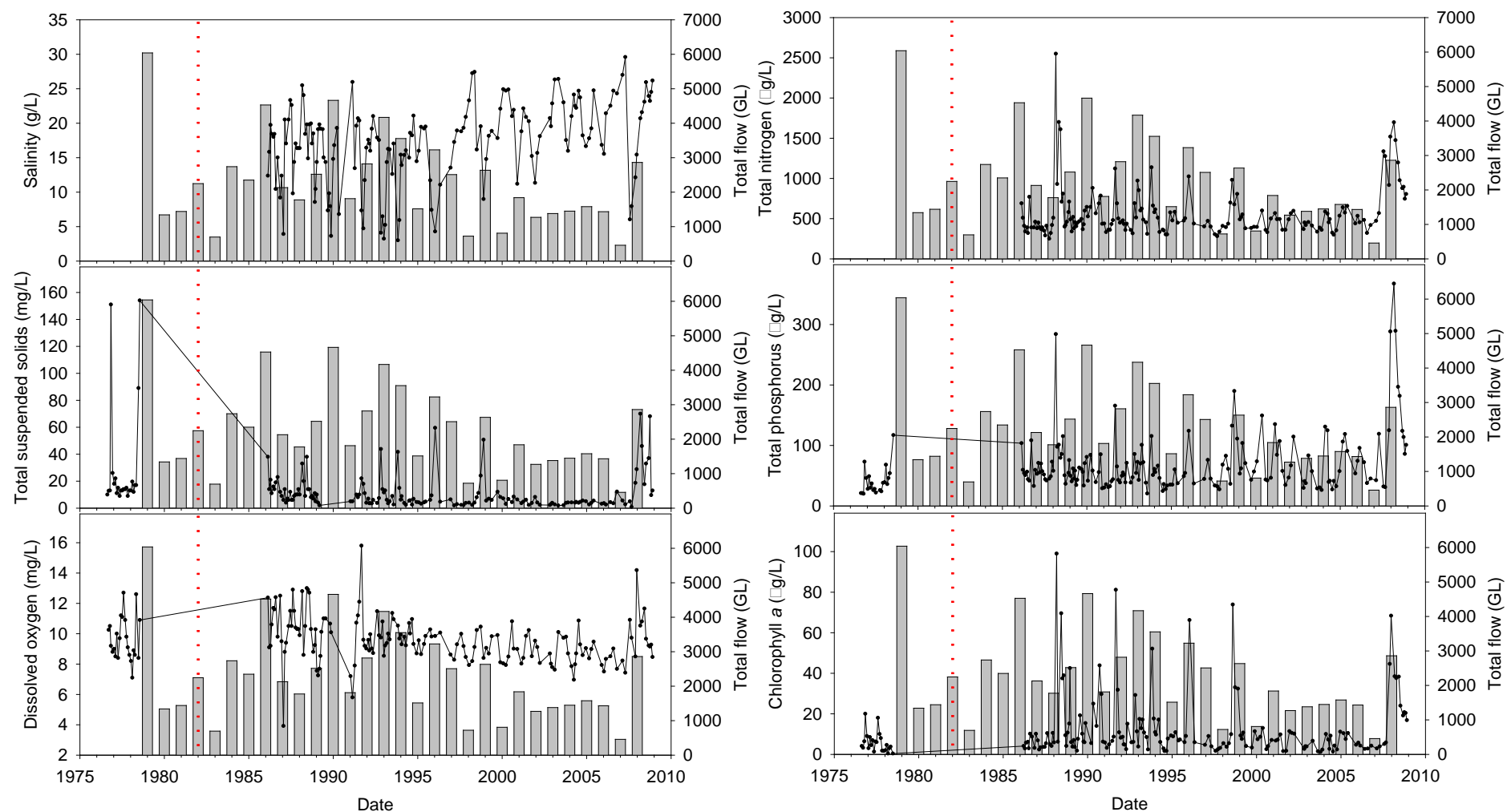


**Figure B-3 Eastern Lake Victoria surface water quality data (EPA monitoring site 002314). Total flow represents the summed flow recorded for all major catchment rivers and is given as hydrological year (June-May). Red dotted line denotes listing of Gippsland Lakes as Ramsar wetland in 1982. Refer to text for information on notable events A-D.**

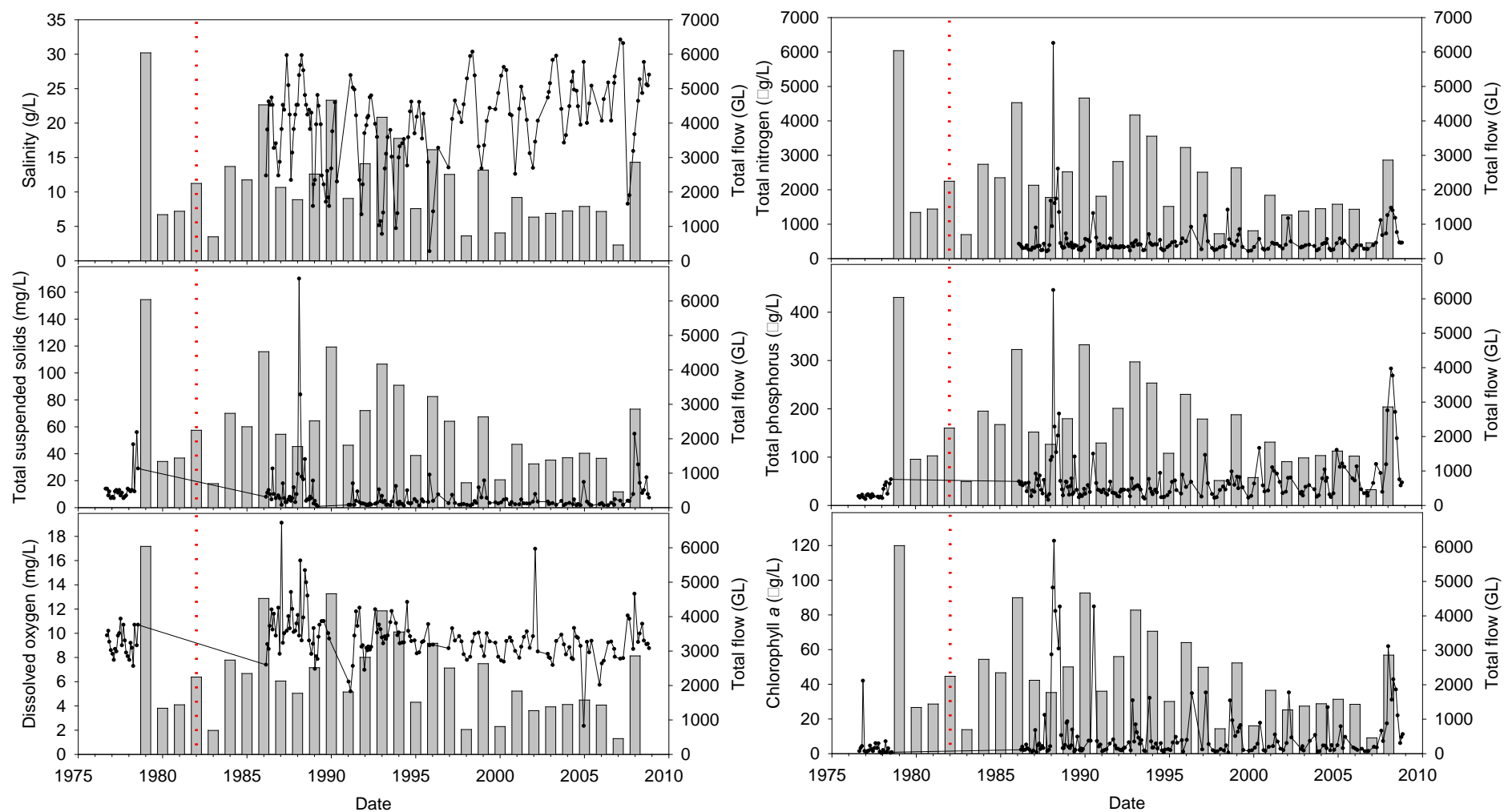
**Table B- 2 Eastern Lake Victoria surface water quality parameters and guideline values from EPA site 002314. Red colour represents exceedance of guideline trigger limits. Note that the ANZECC guideline values are representative of the broad southeast Australia estuaries and not specific to the Gippsland Lakes.**

	Minimum		Maximum		10th percentile		20th percentile		50th percentile		80th percentile		90th percentile		Guideline	Source
	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008	1976-1980	1986-2008		
Salinity (g/L)	7.0	4.2	27.6	32.4	10.6	11.2	15.7	15.2	24.1	21.2	26.1	24.5	26.7	27.5	N/A	
pH	7.5	7.4	8.5	9.4	7.8	7.9	8.0	8.1	8.2	8.3	8.3	8.5	8.4	8.7	6.5-8.5	Waters of Victoria
Dissolved oxygen (mg/L)	6.8	4.6	13.6	17.7	7.9	8.0	8.2	8.5	9.1	9.4	10.0	10.9	10.3	11.6	6	Waters of Victoria
Dissolved oxygen (% saturation)		60.9		240.2		97.4		100.4		109.8		121.5		132.6	75	Waters of Victoria
Total suspended solids (mg/L)	3.0	1.0	74.0	97.8	7.0	1.8	9.0	2.3	12.0	4.2	14.0	9.2	18.8	15.2	25/80	Waters of Victoria
Total nitrogen (µg/L)		218.9		4730.0		270.0		295.7		393.7		526.7		834.4	300	ANZECC
Total phosphorus (µg/L)	8.0	13.8	95.0	627.2	16.3	20.5	18.0	26.0	25.5	40.0	41.4	57.7	56.0	80.5	30	ANZECC
Chlorophyll a (µg/L)	0.1	0.5	26.0	182.9	0.3	1.4	0.4	1.9	1.7	4.3	3.3	12.9	4.3	24.0	4	ANZECC

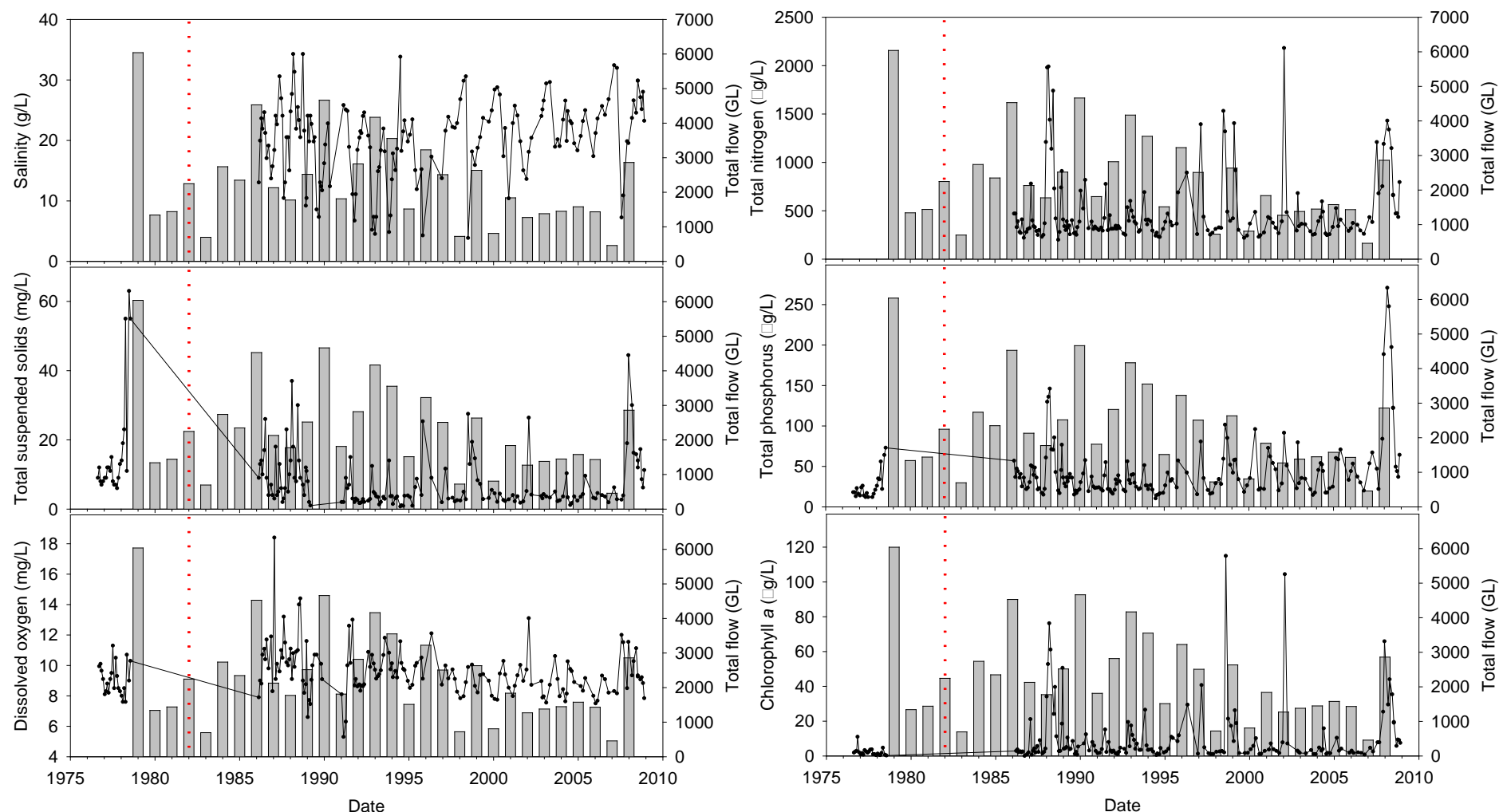




**Figure B- 4 Western Lake Victoria surface water quality data (EPA monitoring site 002311). Total flow represents the summed flow recorded for all major catchment rivers and is given as hydrological year (June-May). Red dotted line denotes listing of Gippsland Lakes as Ramsar wetland in 1982.**



**Figure B-5 Lake King surface water quality data (EPA monitoring site 002316). Total flow represents the summed flow recorded for all major catchment rivers and is given as hydrological year (June-May). Red dotted line denotes listing of Gippsland Lakes as Ramsar wetland in 1982.**



**Figure B-6 Lake King Channel surface water quality data (EPA monitoring site 002322). Total flow represents the summed flow recorded for all major catchment rivers and is given as hydrological year (June-May). Red dotted line denotes listing of Gippsland Lakes as Ramsar wetland in 1982.**

## APPENDIX C: ADDITIONAL BIRD COUNT DATA ANALYSIS

### Data sources

Two data-sets were considered in this assessment:

- DSE Fauna database records outlined in the file titled “fauna100\_gippslakes Ramsar\_dd94”. This database has count data for fauna species recorded at stations within the Gippsland Lakes Ramsar site.
- Birds Australia Atlas data. The Atlas contains counts and survey effort for numerous stations in the Ramsar site.

### Selected species

The following species were selected for analysis as they have been identified in this ECD as significant species in the context of meeting the one per cent of the flyway population criterion:

- black swan
- musk duck
- chestnut teal
- Eurasian coot
- fairy tern
- little tern

### DSE data

The DSE fauna database contains a comprehensive bird count dataset, although it is noted that counts are not standardised and therefore should be considered as indicative only.

For each species, the following is provided:

- Total numbers of individuals recorded in each year (stations pooled), together with total annual river inflows superimposed (Figure C-1).
- Descriptive statistics for count data for each year (shows number of records/episodes (not counts) per year), as well as average abundance per year (stations pooled) (Tables C-1 to C-6)).

It is apparent that there is great year to year variability in counts. The data shows:

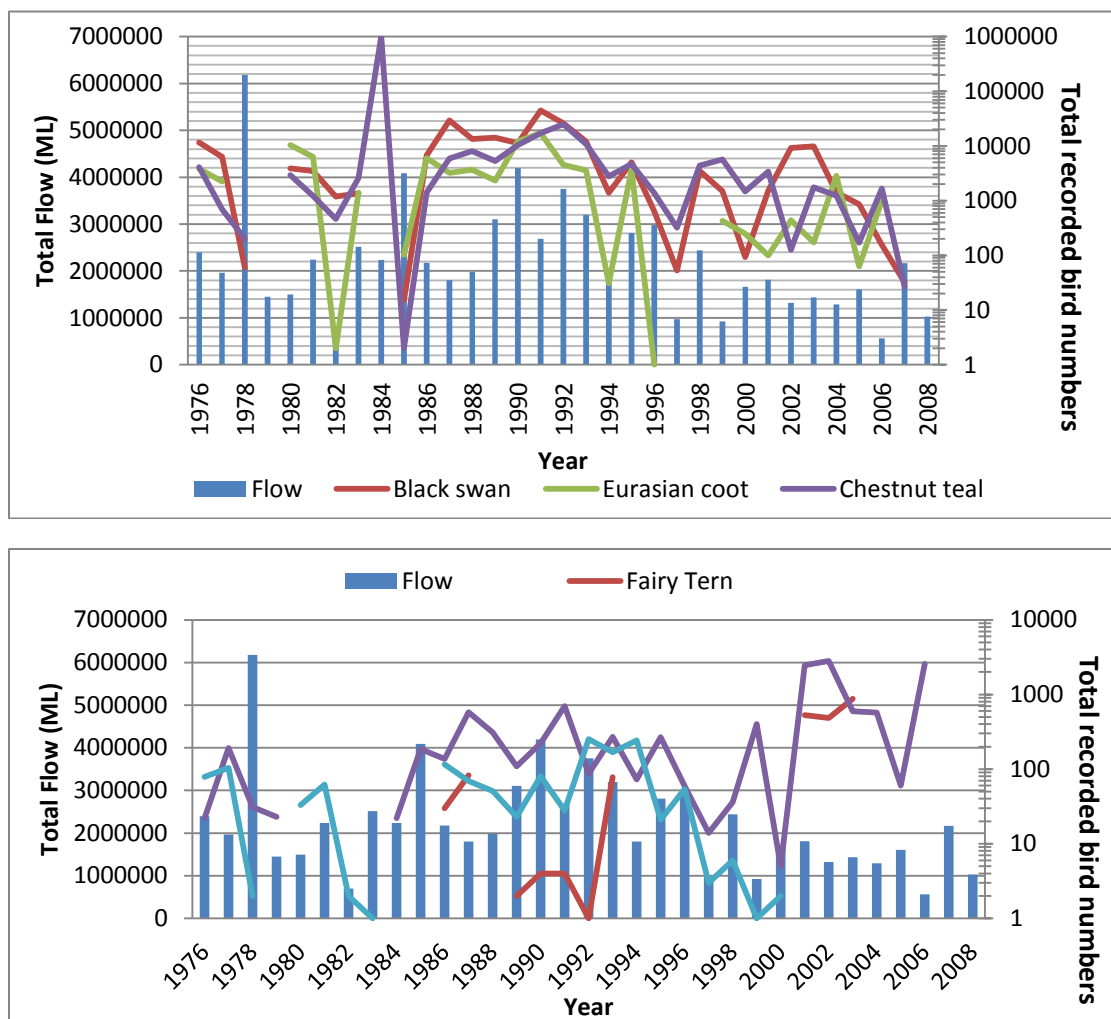
- More little tern were recorded in the last decade than in previous years. This could reflect actual increases in abundance or higher sampling effort for this species.
- Fairy tern – highest counts were recorded in two years in the last decade, however records/counts were very patchy over time.

- Musk duck counts have been consistently low since the late-1990s. In previous decades, numbers were relatively high (approximately 100 individuals counted), but variable between years.
- Black swan and Eurasian coot – It is unclear there is any clear temporal trend for these two species.
- Chestnut teal – numbers appear to have been relatively stable over time, the exception being a peak in 1984.

It is important to note the following when interpreting data:

- A variety of sampling methods have been used with varying levels of sampling effort applied.
- There are no metadata describing sampling effort at each station over time.
- Over time, there has been a change in species targeted in surveys. For example, there has been greater scientific interest and therefore survey effort given to fairy tern. While counts of this species have been higher in recent years compared to prior to listing, it is likely that this could relate to differences in sampling effort over time. Therefore, data cannot be scaled as counts per unit effort in its existing format.

For these reasons, it is not possible or meaningful to derive empirical indices describing changes in bird abundance over time or among stations. Systematic sampling using standardised count methods would be required to develop appropriate bird abundance metrics.



**Figure C-1** Total number of individuals recorded in each year for black swan, Eurasian coot, chestnut teal, fairy tern, little tern and musk duck, together with total annual river inflows into the site (DSE Database)

**Table C- 1 Summary statistics describing patterns in musk duck abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

## Descriptive Statistics

Split By: Yr\_st

Inclusion criteria: Musk duck from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	11.394	31.865	2.444	170	0.000	233.000	0
Uppercount, 1931	0.000	•	•	1	0.000	0.000	0
Uppercount, 1975	33.063	51.319	12.830	16	1.000	156.000	0
Uppercount, 1976	15.800	19.357	8.657	5	1.000	44.000	0
Uppercount, 1977	17.333	40.515	16.540	6	0.000	100.000	0
Uppercount, 1978	2.000	•	•	1	2.000	2.000	0
Uppercount, 1979	0.000	•	•	1	0.000	0.000	0
Uppercount, 1980	3.667	3.428	1.143	9	0.000	9.000	0
Uppercount, 1981	3.647	3.639	.883	17	0.000	12.000	0
Uppercount, 1982	2.000	•	•	1	2.000	2.000	0
Uppercount, 1983	1.000	•	•	1	1.000	1.000	0
Uppercount, 1984	0.000	•	•	1	0.000	0.000	0
Uppercount, 1986	23.200	43.043	19.249	5	1.000	100.000	0
Uppercount, 1987	4.313	3.610	.902	16	2.000	12.000	0
Uppercount, 1988	4.636	5.316	1.603	11	1.000	16.000	0
Uppercount, 1989	4.600	3.647	1.631	5	1.000	9.000	0
Uppercount, 1990	5.714	4.906	1.311	14	1.000	19.000	0
Uppercount, 1991	3.111	1.537	.512	9	1.000	6.000	0
Uppercount, 1992	36.143	86.847	32.825	7	1.000	233.000	0
Uppercount, 1993	18.667	26.173	8.724	9	1.000	71.000	0
Uppercount, 1994	27.000	69.460	23.153	9	1.000	212.000	0
Uppercount, 1995	3.500	4.324	1.765	6	1.000	12.000	0
Uppercount, 1996	27.000	35.355	25.000	2	2.000	52.000	0
Uppercount, 1997	3.000	•	•	1	3.000	3.000	0
Uppercount, 1998	3.000	2.828	2.000	2	1.000	5.000	0
Uppercount, 1999	.500	.707	.500	2	0.000	1.000	0
Uppercount, 2000	.333	.816	.333	6	0.000	2.000	0
Uppercount, 2001	0.000	0.000	0.000	4	0.000	0.000	0
Uppercount, 2002	3.000	1.414	1.000	2	2.000	4.000	0
Uppercount, 2006	1.000	•	•	1	1.000	1.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The "Count" column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*

**Table C- 2 Summary statistics describing patterns in Eurasian coot abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

## Descriptive Statistics

Split By: Yr\_st

Inclusion criteria: Eurasian coot from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	185.627	507.386	21.499	557	0.000	8000.000	0
Uppercount, 1931	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1971	0.000	•	•	1	0.000	0.000	0
Uppercount, 1975	404.558	455.858	69.518	43	0.000	2000.000	0
Uppercount, 1976	547.000	633.135	239.302	7	9.000	1600.000	0
Uppercount, 1977	83.407	404.050	77.759	27	0.000	2100.000	0
Uppercount, 1978	0.000	0.000	0.000	17	0.000	0.000	0
Uppercount, 1979	0.000	0.000	0.000	8	0.000	0.000	0
Uppercount, 1980	221.745	358.059	52.228	47	0.000	1500.000	0
Uppercount, 1981	139.844	264.369	39.410	45	0.000	972.000	0
Uppercount, 1982	1.000	1.414	1.000	2	0.000	2.000	0
Uppercount, 1983	175.500	308.695	109.140	8	0.000	811.000	0
Uppercount, 1985	51.000	69.296	49.000	2	2.000	100.000	0
Uppercount, 1986	192.677	361.866	64.993	31	0.000	1000.000	0
Uppercount, 1987	55.569	96.478	12.668	58	1.000	455.000	0
Uppercount, 1988	78.766	125.286	18.275	47	1.000	500.000	0
Uppercount, 1989	155.867	237.814	61.403	15	1.000	823.000	0
Uppercount, 1990	471.423	1564.795	306.882	26	6.000	8000.000	0
Uppercount, 1991	450.158	634.814	102.980	38	4.000	2265.000	0
Uppercount, 1992	180.800	193.470	38.694	25	0.000	600.000	0
Uppercount, 1993	276.538	732.111	203.051	13	3.000	2700.000	0
Uppercount, 1994	10.333	6.658	3.844	3	6.000	18.000	0
Uppercount, 1995	737.800	1382.091	618.090	5	0.000	3180.000	0
Uppercount, 1996	1.000	•	•	1	1.000	1.000	0
Uppercount, 1998	0.000	•	•	1	0.000	0.000	0
Uppercount, 1999	16.960	49.839	9.968	25	0.000	200.000	0
Uppercount, 2000	15.625	50.724	12.681	16	0.000	200.000	0
Uppercount, 2001	14.286	37.796	14.286	7	0.000	100.000	0
Uppercount, 2002	146.667	46.188	26.667	3	120.000	200.000	0
Uppercount, 2003	34.800	34.666	15.503	5	0.000	73.000	0
Uppercount, 2004	177.125	620.569	155.142	16	0.000	2500.000	0
Uppercount, 2005	4.500	7.171	2.535	8	0.000	19.000	0
Uppercount, 2006	200.200	447.102	199.950	5	0.000	1000.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The “Count” column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*



**Table C- 3 Summary statistics describing patterns in black swan abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

## Descriptive Statistics

Split By: Yr\_st

Inclusion criteria: black swan from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	177.283	630.729	17.541	1293	0.000	11530.000	0
Uppercount, 0	120.000	•	•	1	120.000	120.000	0
Uppercount, 1931	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1969	75.000	•	•	1	75.000	75.000	0
Uppercount, 1972	0.000	•	•	1	0.000	0.000	0
Uppercount, 1974	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1975	131.633	226.369	29.224	60	0.000	1000.000	0
Uppercount, 1976	413.607	648.928	122.636	28	0.000	2460.000	0
Uppercount, 1977	233.852	890.372	171.352	27	0.000	4600.000	0
Uppercount, 1978	3.000	13.416	3.000	20	0.000	60.000	0
Uppercount, 1979	0.000	0.000	0.000	10	0.000	0.000	0
Uppercount, 1980	45.256	71.516	7.712	86	0.000	379.000	0
Uppercount, 1981	37.785	55.191	5.723	93	0.000	270.000	0
Uppercount, 1982	91.615	134.413	37.279	13	0.000	420.000	0
Uppercount, 1983	75.500	194.764	45.906	18	0.000	800.000	0
Uppercount, 1984	0.000	0.000	0.000	7	0.000	0.000	0
Uppercount, 1985	3.750	7.500	3.750	4	0.000	15.000	0
Uppercount, 1986	86.423	190.549	21.575	78	0.000	1000.000	0
Uppercount, 1987	219.142	1077.489	93.081	134	0.000	10000.000	0
Uppercount, 1988	157.233	349.785	37.718	86	0.000	2575.000	0
Uppercount, 1989	366.051	492.286	78.829	39	2.000	1670.000	0
Uppercount, 1990	405.179	808.685	152.827	28	0.000	4000.000	0
Uppercount, 1991	894.060	1861.076	263.196	50	6.000	11530.000	0
Uppercount, 1992	480.944	884.205	120.325	54	2.000	5251.000	0
Uppercount, 1993	335.222	379.091	63.182	36	0.000	1612.000	0
Uppercount, 1994	93.467	106.180	27.416	15	2.000	410.000	0
Uppercount, 1995	277.500	780.768	184.029	18	0.000	3383.000	0
Uppercount, 1996	29.000	32.969	7.029	22	0.000	100.000	0
Uppercount, 1997	5.889	4.859	1.620	9	2.000	17.000	0
Uppercount, 1998	83.167	250.715	38.686	42	0.000	1350.000	0
Uppercount, 1999	18.810	73.819	8.305	79	0.000	500.000	0
Uppercount, 2000	1.788	8.498	1.178	52	0.000	54.000	0
Uppercount, 2001	76.050	204.989	45.837	20	0.000	800.000	0
Uppercount, 2002	255.444	207.184	34.531	36	1.000	762.000	0
Uppercount, 2003	229.605	174.064	26.544	43	1.000	700.000	0
Uppercount, 2004	38.486	41.170	6.768	37	0.000	150.000	0
Uppercount, 2005	26.719	78.654	13.904	32	0.000	447.000	0
Uppercount, 2006	17.333	49.762	16.587	9	0.000	150.000	0
Uppercount, 2007	32.000	•	•	1	32.000	32.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The "Count" column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*

**Table C- 4 Summary statistics describing patterns in chestnut teal abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

## Descriptive Statistics

Split By: Yr\_st

Inclusion criteria: chestnut teal from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	124.079	416.525	13.068	1016	0.000	8050.000	0
Uppercount, 1931	0.000	•	•	1	0.000	0.000	0
Uppercount, 1961	0.000	•	•	1	0.000	0.000	0
Uppercount, 1969	1.000	0.000	0.000	2	1.000	1.000	0
Uppercount, 1974	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1975	34.889	66.739	12.844	27	0.000	300.000	0
Uppercount, 1976	242.471	294.967	71.540	17	3.000	1000.000	0
Uppercount, 1977	30.174	109.561	22.845	23	0.000	500.000	0
Uppercount, 1978	11.111	47.140	11.111	18	0.000	200.000	0
Uppercount, 1979	0.000	0.000	0.000	5	0.000	0.000	0
Uppercount, 1980	58.340	250.967	35.492	50	0.000	1765.000	0
Uppercount, 1981	20.593	39.187	5.102	59	0.000	230.000	0
Uppercount, 1982	115.500	127.220	63.610	4	26.000	302.000	0
Uppercount, 1983	136.000	289.584	66.435	19	0.000	1000.000	0
Uppercount, 1984	0.000	0.000	0.000	4	0.000	0.000	0
Uppercount, 1985	.500	1.000	.500	4	0.000	2.000	0
Uppercount, 1986	35.375	82.639	13.066	40	0.000	500.000	0
Uppercount, 1987	69.047	202.357	21.949	85	0.000	1800.000	0
Uppercount, 1988	90.044	224.532	23.668	90	0.000	1695.000	0
Uppercount, 1989	172.032	236.376	42.454	31	2.000	850.000	0
Uppercount, 1990	325.563	634.698	112.200	32	0.000	2740.000	0
Uppercount, 1991	380.600	1228.102	183.075	45	3.000	8050.000	0
Uppercount, 1992	381.677	629.457	78.075	65	2.000	3308.000	0
Uppercount, 1993	308.343	679.429	114.844	35	0.000	3730.000	0
Uppercount, 1994	198.429	304.419	81.360	14	0.000	1047.000	0
Uppercount, 1995	277.706	349.560	84.781	17	8.000	1200.000	0
Uppercount, 1996	98.286	210.214	56.182	14	0.000	806.000	0
Uppercount, 1997	53.500	74.115	30.258	6	0.000	150.000	0
Uppercount, 1998	107.146	349.463	54.577	41	0.000	1817.000	0
Uppercount, 1999	62.822	249.947	26.347	90	0.000	1500.000	0
Uppercount, 2000	23.661	110.741	14.064	62	0.000	700.000	0
Uppercount, 2001	153.636	597.180	127.319	22	0.000	2800.000	0
Uppercount, 2002	15.875	23.558	8.329	8	0.000	64.000	0
Uppercount, 2003	64.704	121.271	23.339	27	0.000	504.000	0
Uppercount, 2004	46.000	105.576	20.318	27	0.000	490.000	0
Uppercount, 2005	15.545	35.175	10.606	11	0.000	120.000	0
Uppercount, 2006	110.200	384.739	99.339	15	0.000	1500.000	0
Uppercount, 2007	9.000	6.245	3.606	3	2.000	14.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The "Count" column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*

**Table C- 5 Summary statistics describing patterns in fairy tern abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

**Descriptive Statistics**

Split By: Yr\_st

Inclusion criteria: Fairy tern from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	7.323	12.887	.763	285	0.000	80.000	0
Uppercount, 1976	0.000	•	•	1	0.000	0.000	0
Uppercount, 1977	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1981	0.000	•	•	1	0.000	0.000	0
Uppercount, 1986	15.000	7.071	5.000	2	10.000	20.000	0
Uppercount, 1987	20.750	15.945	7.973	4	2.000	40.000	0
Uppercount, 1988	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1989	2.000	•	•	1	2.000	2.000	0
Uppercount, 1991	4.000	•	•	1	4.000	4.000	0
Uppercount, 1992	1.000	•	•	1	1.000	1.000	0
Uppercount, 1993	78.000	•	•	1	78.000	78.000	0
Uppercount, 1995	1.000	•	•	1	1.000	1.000	0
Uppercount, 1998	0.000	0.000	0.000	3	0.000	0.000	0
Uppercount, 1999	0.000	0.000	0.000	10	0.000	0.000	0
Uppercount, 2000	0.000	0.000	0.000	12	0.000	0.000	0
Uppercount, 2001	9.138	11.157	1.465	58	0.000	49.000	0
Uppercount, 2002	8.083	14.075	1.817	60	0.000	68.000	0
Uppercount, 2003	6.984	12.609	1.128	125	0.000	80.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The "Count" column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*

**Table C- 6 Summary statistics describing patterns in little tern abundance (Uppercount) over time at the Gippsland Lake Ramsar site**

## Descriptive Statistics

Split By: Yr\_st

Inclusion criteria: Little tern from fauna100\_gippslakes\_ramsar\_dd94 (imported)

	Mean	Std. Dev.	Std. Error	Count	Minimum	Maximum	# Missing
Uppercount, Total	21.332	59.766	2.422	609	0.000	610.000	0
Uppercount, 1931	0.000	•	•	1	0.000	0.000	0
Uppercount, 1953	0.000	•	•	1	0.000	0.000	0
Uppercount, 1970	0.000	•	•	1	0.000	0.000	0
Uppercount, 1971	0.000	•	•	1	0.000	0.000	0
Uppercount, 1975	53.333	53.780	31.050	3	3.000	110.000	0
Uppercount, 1976	11.000	12.728	9.000	2	2.000	20.000	0
Uppercount, 1977	24.000	39.174	13.850	8	0.000	109.000	0
Uppercount, 1978	6.200	11.756	5.257	5	0.000	27.000	0
Uppercount, 1979	5.750	7.588	3.794	4	0.000	16.000	0
Uppercount, 1980	0.000	•	•	1	0.000	0.000	0
Uppercount, 1981	0.000	0.000	0.000	6	0.000	0.000	0
Uppercount, 1982	6.500	9.192	6.500	2	0.000	13.000	0
Uppercount, 1983	0.000	0.000	0.000	2	0.000	0.000	0
Uppercount, 1984	4.400	6.066	2.713	5	0.000	12.000	0
Uppercount, 1985	62.000	10.583	6.110	3	50.000	70.000	0
Uppercount, 1986	27.400	30.964	13.848	5	0.000	75.000	0
Uppercount, 1987	82.857	91.738	34.674	7	7.000	220.000	0
Uppercount, 1988	44.286	97.522	36.860	7	1.000	265.000	0
Uppercount, 1989	109.000	•	•	1	109.000	109.000	0
Uppercount, 1990	36.833	25.365	10.355	6	20.000	72.000	0
Uppercount, 1991	99.429	91.887	34.730	7	4.000	218.000	0
Uppercount, 1992	12.429	10.179	3.847	7	2.000	30.000	0
Uppercount, 1993	45.000	77.979	31.835	6	0.000	194.000	0
Uppercount, 1994	73.000	•	•	1	73.000	73.000	0
Uppercount, 1995	38.143	45.242	17.100	7	7.000	130.000	0
Uppercount, 1996	7.375	6.632	2.345	8	0.000	19.000	0
Uppercount, 1997	3.500	4.509	2.255	4	0.000	10.000	0
Uppercount, 1998	3.273	9.045	2.727	11	0.000	30.000	0
Uppercount, 1999	11.457	22.568	3.815	35	0.000	109.000	0
Uppercount, 2000	.278	.826	.195	18	0.000	3.000	0
Uppercount, 2001	14.862	32.115	2.485	167	0.000	245.000	0
Uppercount, 2002	22.246	58.748	5.234	126	0.000	300.000	0
Uppercount, 2003	7.766	13.631	1.553	77	0.000	70.000	0
Uppercount, 2004	23.833	57.358	11.708	24	0.000	273.000	0
Uppercount, 2005	3.529	5.938	1.440	17	0.000	19.000	0
Uppercount, 2006	111.391	201.552	42.027	23	0.000	610.000	0

*Note: First column is the year of the surveys (referred to as Uppercount). Within each year, the mean (and standard deviation and standard error) number of birds recorded on each survey occasion was calculated. The “Count” column is the number of survey occasions within each year. The minimum and maximum values are the lowest and highest number of birds recorded during surveys.*

### Birds Australia Atlas data

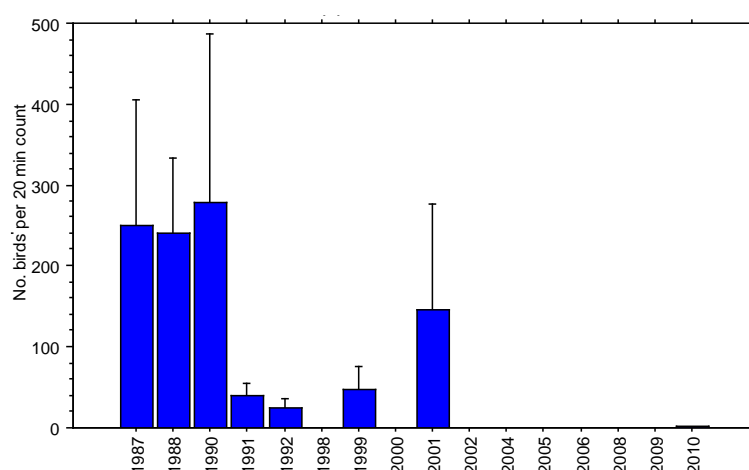
Table C-7 is a summary of trends in bird count data as determined from the Bird Australia Atlas data. Data were only assessed where counts were standardised to 20 minute counts. This reduces some of the sampling effort biases inherent in the DSE data noted above.

While broad trends in habitat use can be derived from the data, there are insufficient data to develop a robust baseline description of abundance for most of the target species. There are exceptions to this, as follows:

- Black swan - there is a good data set describing black swan abundance in the period 1987 to 1990, however very few count data post 2002 (see also Figure C-2). The reason/s for this difference over time is uncertain. Based on available data, counts greater than 100 individuals per 20 minute search occurred in 23 per cent of surveys.
- Chestnut teal – similar to black swan, most surveys containing 20 minute count data occurred in the period 1988 through the 1990's. There are few count data post 2000. Based on available data, counts greater than 50 individuals per 20 minute search occurred in 20 per cent of surveys.
- Eurasian coot – consistent with patterns in black swan and chestnut teal, most 20 minute count data were for the period 1988 to 1999. Based on available data, counts greater than 50 individuals per 20 minute search occurred in 23 per cent of surveys.

There was insufficient data to determine trends in fairy tern, little tern and musk duck abundance.

It is important to note that for all these surveys, while survey effort at a given station in time is standardised, the specific locations of surveys, timing of surveys (seasonality) and frequency of surveys is not inconsistent. This prevents meaningful interpretation of long-term trends in bird abundance. Nonetheless, the Bird Australia data provide a basis for establishing baseline waterbird abundance, focussing on key habitats used by these species.



**Figure C-2 Mean abundance (error bars  $\pm$  S.E.) of black swan per 20 minute search (Data source: Birds Australia unpublished)**

**Table C- 7 Summary of Trends in Birds Australia Atlas Count Data (based on standardised 20 minute search data only)**

Species	Number of surveys with 20 min. search count data	Spatial trend	Temporal trend
Black swan	97 surveys	<p>Of the 97 20-minute surveys containing count data:</p> <ul style="list-style-type: none"> <li>• eight surveys had counts <math>\geq 500</math> individuals per 20 minute search (eight per cent of surveys).</li> <li>• 23 surveys had counts <math>\geq 100</math> individuals per 20 minute search (23 per cent of surveys).</li> <li>• 28 surveys had counts <math>\geq 50</math> individuals per 20 minute search (29 per cent of surveys).</li> </ul> <p>Counts <math>\geq 100</math> individuals per 20 minute search recorded at: Bancroft Bay, Bosses Swamp, Bunga Arm, Cunningham Arm, Jones Bay, Lake Bunga and STP, Nicholson River Floodplain and Point Dawson (Lake King).</p> <p>The overall average count (all stations and times pooled) was <math>148 \pm 48.01</math> S.E. individuals/ 20 minute search.</p>	<p>All records with counts <math>\geq 100</math> individuals occurred pre-2002. In 1987 to 1990 mean bird counts exceeded 200 individuals per 20 minute search (Figure E2).</p> <p>Highest counts recorded Jan to Apr.</p>
Musk duck	19 surveys	<p>Almost all data with counts are located at Lake Bunga Sewage Treatment Plant.</p> <p>Insufficient data assess other trends.</p>	Insufficient data to assess trends.
Chestnut teal	111 surveys	<p>Of the 111 20-minute surveys containing count data:</p> <ul style="list-style-type: none"> <li>• three surveys had counts <math>\geq 500</math> individuals per 20 minute search (three per cent of surveys).</li> <li>• 12 surveys had counts <math>\geq 100</math> individuals per 20 minute search (11 per cent of</li> </ul>	<p>Highest counts recorded Feb to Apr inclusive.</p> <p>All records with counts greater than 20 individuals/20 minute search were recorded in the period 1988 to 1999 (n = 38 surveys).</p>

Species	Number of surveys with 20 min. search count data	Spatial trend	Temporal trend
		<p>surveys.</p> <ul style="list-style-type: none"> <li>22 surveys had counts <math>\geq 50</math> individuals per 20 minute search (20 per cent of surveys).</li> </ul> <p>Counts greater than 49 individuals per 20 minute search recorded at: Blue Horizons Main, Aqualand Estate, Jones Bay, Bunga Arm, Cunningham Arm, Lake Bunga &amp; Sewage Ponds, Nicholson floodplain, Picnic Arm, Lake King.</p> <p>The overall average count (all stations and times pooled, using only records with count data) was <math>58 \pm 18.3</math> S.E. individuals/ 20 minute search.</p>	
Eurasian coot	84 surveys	<p>Of the 84 20-minute surveys containing count data:</p> <ul style="list-style-type: none"> <li>three surveys had counts <math>\geq 500</math> individuals per 20 minute search (three per cent of surveys).</li> <li>13 surveys had counts <math>\geq 100</math> individuals per 20 min search (15 per cent of surveys).</li> <li>20 surveys had counts <math>\geq 50</math> individuals per 20 min search (23 per cent of surveys).</li> </ul> <p>Counts greater than 100 individuals per 20 minute search recorded at: Nicholson River floodplain, Blue Horizons Main, Aqualand Estate, Jones Bay, Bunga Arm, Lake Bunga &amp; Sewage Ponds.</p> <p>The overall average count (all stations and times pooled, using only records with count data) was <math>254 \pm 69.3</math> S.E. individuals/ 20 minute search.</p>	All records with counts greater than 100 individuals/20 minute search were recorded in the period 1988 to 1999 (n = 13 records).
Fairy tern	2 surveys	Both records from Jones Bay. Sitings at other locations but no count data.	Insufficient data to assess trends.

Species	Number of surveys with 20 min. search count data	Spatial trend	Temporal trend
Little tern	12 surveys	Most records from Lake Tyers, Tambo River mouth, Bunga Arm, Lake Bunga, and Jones Bay.	All records from 1988 to 1999. Insufficient data to assess long term trends. Only recorded in summer months, reflecting migratory nature.

### **Comparison of Data Sets**

Table C-8 is a summary of key temporal trends in the counts of key species based on DSE and birds Australia datasets, and findings of the Ecos (unpublished) analysis. In summary, the long-term temporal trends noted in the analysis of DSE data (that is, increase in little tern and fairy tern, decrease in musk duck) were not apparent in the Birds Australia data. As mentioned, inconsistencies in sampling effort in both data sets preclude meaningful analysis of long term trends.

Overall, Ecos (unpublished) suggests that the largest observed declines in waterbird abundance and reporting rate were observed for Eurasian coot and musk duck. While such changes may occurred, the absence of standardised surveys prevents a definitive assessment of changes in abundance of these species since site listing in 1982.

**Table C-8 Long-term trend analysis in the abundance of the key species**

Species	Ecos analysis	DSE Data (not standardised for effort)	Standardised Birds Australia Atlas count data	Summary
Black swan	Average annual count sizes have declined substantially since the mid 1990s. As common now as in the 1980s, when populations were at a low ebb. Reporting rate has halved since early 1980s but has remained stable since about 1988.	Average annual counts for black swan abundance has been relatively stable since listing.	Low reporting rate (and low average annual abundance) since 1990.	Insufficient information to quantify trends in time
Eurasian coot	Very substantial declines in average annual count size (75 per cent) and reporting rate (60 per cent) since early 1980s	Average annual counts highly variable over time with a peak in 1990 (mean equals 8000 birds). No apparent long term trend could be discerned.	Overall average count of $254 \pm 69.3$ S.E. individuals/ 20 minute search over monitoring period (1988-2008). Lowest counts occurred in the period after 1999.	Insufficient information to quantify trends in time
Musk duck	Average annual count size and reporting rate very similar.	Musk duck counts have been consistently low since the late-1990s. In previous decades, numbers were	Insufficient data to assess trends.	Insufficient information to quantify trends in time



Species	Ecos analysis	DSE Data (not standardised for effort)	Standardised Birds Australia Atlas count data	Summary
	Has substantially declined since the late 1970s, with some recovery in the 1990s but it currently in steep decline.	relatively high (approximately 100 individuals counted), but variable between years.		
Chestnut teal	Stable noting slight decrease in reporting rates but substantial increases in flock size since the 1980s.	Numbers appear to have been relatively stable over time, the exception being a peak in 1984.	Most surveys containing 20 minute count data occurred in the period 1988 through the 1990's. There are few count data post 2000.	Insufficient information to quantify trends in time
Fairy tern	Stable - No substantial variation reported since 1980s.	Highest counts were recorded in two years in the last decade, however records/counts were very patchy over time.	Insufficient data to assess trends.	Insufficient information to quantify trends in time
Little tern	Stable - May have increased since the 1980s.	More little tern were recorded in the last decade than in previous years. This could reflect actual increases in abundance or higher sampling effort for this species.	Insufficient data to assess trends.	Insufficient information to quantify trends in time

**APPENDIX D: SPECIES LIST**

## Mammal List

Scientific Name	Common Name	EPBC Status
<i>Acrobates pygmaeus</i>	feathertail glider	
<i>Antechinus agilis</i>	agile antechinus	
<i>Antechinus swainsonii</i>	dusky antechinus	
<i>Cercartetus nanus</i>	Eastern pygmy-possum	
<i>Cervus porcinus</i>	hog deer	
<i>Cervus unicolor</i>	Sambar	
<i>Chalinolobus gouldii</i>	Gould's wattled bat	
<i>Chalinolobus morio</i>	chocolate wattled bat	
<i>Dasyurus maculatus</i>	spot-tailed quoll	Endangered
<i>Felis catus</i>	cat	
<i>Hydromys chrysogaster</i>	water rat	
<i>Isodon obesulus obesulus</i>	southern brown bandicoot	Endangered
<i>Lepus europeus</i>	European hare	
<i>Macropus giganteus</i>	eastern grey kangaroo	
<i>Macropus rufogriseus</i>	red-necked wallaby	
<i>Miniopterus schreibersii</i> (group)	common bent-wing bat	
<i>Mormopterus</i> sp. EG	freetail bat (eastern form)	
<i>Mus musculus</i>	house mouse	
<i>Myotis macropus</i>	southern myotis	
<i>Nyctophilus geoffroyi</i>	lesser long-eared bat	
<i>Nyctophilus gouldi</i>	Gould's long-eared bat	
<i>Ornithorhynchus anatinus</i>	platypus	
<i>Oryctolagus cuniculus</i>	European rabbit	
<i>Perameles nasuta</i>	long-nosed bandicoot	
<i>Petauroides volans</i>	greater glider	
<i>Petaurus australis</i>	yellow-bellied glider	
<i>Petaurus breviceps</i>	sugar glider	
<i>Phascolarctos cinereus</i>	koala	
<i>Potorous tridactylus</i>	long-nosed potoroo	Vulnerable
<i>Pseudocheirus peregrinus</i>	common ringtail possum	
<i>Pseudomys novaehollandiae</i>	New Holland mouse	Vulnerable
<i>Pteropus poliocephalus</i>	grey-headed flying-fox	Vulnerable
<i>Rattus fuscipes</i>	bush rat	
<i>Rattus lutreolus</i>	swamp rat	

Scientific Name	Common Name	EPBC Status
<i>Rattus rattus</i>	black rat	
<i>Rhinolophus megaphyllus</i>	eastern horseshoe bat	
<i>Saccolaimus flaviventris</i>	yellow-bellied sheath-tail bat	
<i>Scotorepens orion</i>	eastern broad-nosed bat	
<i>Sminthopsis leucopus</i>	white-footed dunnart	
<i>Sus scrofa</i>	pig (feral)	
<i>Tachyglossus aculeatus</i>	short-beaked echidna	
<i>Tadarida australis</i>	white-striped freetail bat	
<i>Trichosurus cunninghami</i>	mountain brushtail possum	
<i>Trichosurus vulpecula</i>	common brushtail possum	
<i>Vespadelus darlingtoni</i>	large forest bat	
<i>Vespadelus regulus</i>	southern forest bat	
<i>Vespadelus vulturnus</i>	little forest bat	
<i>Vombatus ursinus</i>	common wombat	
<i>Vulpes vulpes</i>	red fox	
<i>Wallabia bicolor</i>	black wallaby	

## Reptile List

Scientific Name	Common Name	EPBC Status
<i>Amphibolurus muricatus</i>	tree dragon	
<i>Austrelaps superbus</i>	lowland copperhead	
<i>Bassiana duperreyi</i>	eastern three-lined skink	
<i>Chelodina longicollis</i>	common long-necked turtle	
<i>Drysdalia coronoides</i>	white-lipped snake	
<i>Egernia coventryi</i>	swamp skink	
<i>Egernia saxatilis intermedia</i>	black rock skink	
<i>Eulamprus heatwolei</i>	yellow-bellied water skink	
<i>Lampropholis delicata</i>	delicate skink	
<i>Lampropholis guichenoti</i>	garden skink	
<i>Lerista bougainvillii</i>	Bougainville's skink	
<i>Nannoscincus maccayi</i>	McCoy's skink	
<i>Notechis scutatus</i>	tiger snake	
<i>Pseudechis porphyriacus</i>	red-bellied black snake	
<i>Pseudemoia entrecasteauxii</i>	southern grass skink	
<i>Pseudemoia rawlinsoni</i>	glossy grass skink	

<i>Rhinoplocephalus nigrescens</i>	eastern small-eyed snake	
<i>Saproscincus mustelinus</i>	weasel skink	
<i>Tiliqua nigrolutea</i>	blotched blue-tongued lizard	
<i>Tiliqua scincoides</i>	common blue-tongued lizard	
<i>Varanus varius</i>	lace goanna	

## Frog List

Scientific Name	Common Name	EPBC Status
<i>Crinia signifera</i>	common froglet	
<i>Geocrinia victoriana</i>	Victorian smooth froglet	
<i>Limnodynastes dumerilii</i>	southern bullfrog (ssp. unknown)	
<i>Limnodynastes dumerilii insularis</i>		
<i>Limnodynastes peronii</i>	striped marsh frog	
<i>Limnodynastes tasmaniensis</i>	spotted marsh frog (race unknown)	
<i>Litoria aurea</i>	green and golden bell frog	Vulnerable
<i>Litoria ewingii</i>	southern brown tree frog	
<i>Litoria lesueuri</i>	Lesueur's frog	
<i>Litoria peronii</i>	Peron's tree frog	
<i>Litoria raniformis</i>	growling grass frog	Vulnerable
<i>Litoria verreauxii verreauxii</i>	Verreaux's tree frog	
<i>Paracrinia haswelli</i>	Haswell's froglet	
<i>Pseudophryne dendyi</i>	Dendy's toadlet	
<i>Pseudophryne semimarmorata</i>	southern toadlet	

## Bird List

Scientific Name	Common Name	EPBC Status
<i>Acanthagenys rufogularis</i>	spiny-cheeked honeyeater	
<i>Acanthiza chrysorrhoa</i>	yellow-rumped thornbill	
<i>Acanthiza lineata</i>	striated thornbill	
<i>Acanthiza nana</i>	yellow thornbill	
<i>Acanthiza pusilla</i>	brown thornbill	
<i>Acanthiza reguloides</i>	buff-rumped thornbill	
<i>Acanthorhynchus tenuirostris</i>	eastern spinebill	
<i>Accipiter cirrhocephalus</i>	collared sparrowhawk	
<i>Accipiter fasciatus</i>	brown goshawk	
<i>Accipiter novaehollandiae</i>	grey goshawk	
<i>Acridotheres tristis</i>	common myna	
<i>Acrocephalus australis</i>	Australian reed warbler	
<i>Acrocephalus stentoreus</i>	clamorous reed warbler	
<i>Actitis hypoleucos</i>	common sandpiper	
<i>Aegotheles cristatus</i>	Australian owl-nightjar	
<i>Alauda arvensis</i>	European skylark	
<i>Alcedo azurea</i>	azure kingfisher	
<i>Alisterus scapularis</i>	Australian king-parrot	
<i>Anas castanea</i>	chestnut teal	
<i>Anas gracilis</i>	grey teal	
<i>Anas platyrhynchos</i>	northern mallard	
<i>Anas rhynchotis</i>	Australasian shoveler	
<i>Anas superciliosa</i>	Pacific black duck	
<i>Anhinga novaehollandiae</i>	Australasian darter	
<i>Anser anser</i>	domestic goose	
<i>Anseranas semipalmata</i>	magpie goose	
<i>Anthochaera carunculata</i>	red wattlebird	
<i>Anthochaera chrysoptera</i>	little wattlebird	
<i>Anthochaera phrygia</i>	regent honeyeater	Endangered
<i>Anthus novaeseelandiae</i>	Australasian pipit	
<i>Apus pacificus</i>	fork-tailed swift	Migratory, Listed
<i>Aquila audax</i>	wedge-tailed eagle	
<i>Ardea ibis</i>	cattle egret	Migratory, Listed

Scientific Name	Common Name	EPBC Status
<i>Ardea intermedia</i>	intermediate egret	
<i>Ardea modesta</i>	eastern great egret	
<i>Ardea pacifica</i>	white-necked heron	
<i>Ardenna carneipes</i>	flesh-footed shearwater	
<i>Ardenna grisea</i>	sooty shearwater	
<i>Ardenna tenuirostris</i>	short-tailed shearwater	
<i>Arenaria interpres</i>	ruddy turnstone	
<i>Artamus cyanopterus</i>	dusky woodswallow	
<i>Artamus personatus</i>	masked woodswallow	
<i>Artamus superciliosus</i>	white-browed woodswallow	
<i>Aythya australis</i>	hardhead	
<i>Biziura lobata</i>	musk duck	
<i>Botaurus poiciloptilus</i>	Australasian bittern	
<i>Cacatua galerita</i>	sulphur-crested cockatoo	
<i>Cacatua sanguinea</i>	little corella	
<i>Cacatua tenuirostris</i>	long-billed corella	
<i>Cacomantis flabelliformis</i>	fan-tailed cuckoo	
<i>Cacomantis variolosus</i>	brush cuckoo	
<i>Calamanthus pyrrhopygius</i>	chestnut-rumped heathwren	
<i>Calidris acuminata</i>	sharp-tailed sandpiper	Migratory, Listed
<i>Calidris alba</i>	sanderling	
<i>Calidris canutus</i>	red knot	Migratory, Listed
<i>Calidris ferruginea</i>	curlew sandpiper	Migratory, Listed
<i>Calidris melanotos</i>	pectoral sandpiper	
<i>Calidris ruficollis</i>	red-necked stint	Migratory, Listed
<i>Calidris tenuirostris</i>	great knot	
<i>Callocephalon fimbriatum</i>	gang-gang cockatoo	
<i>Calyptorhynchus funereus</i>	yellow-tailed black-cockatoo	
<i>Carduelis carduelis</i>	European goldfinch	
<i>Carduelis chloris</i>	European greenfinch	
<i>Cereopsis novaehollandiae</i>	Cape Barren goose	
<i>Charadrius bicinctus</i>	double-banded plover	
<i>Charadrius mongolus</i>	lesser sand plover	
<i>Charadrius ruficapillus</i>	red-capped plover	Listed
<i>Chenonetta jubata</i>	Australian wood duck	

Scientific Name	Common Name	EPBC Status
<i>Chlidonias hybridus</i>	whiskered tern	
<i>Chlidonias leucopterus</i>	white-winged black tern	
<i>Chroicocephalus novaehollandiae</i>	silver gull	
<i>Chrysococcyx basalis</i>	Horsfield's bronze-cuckoo	
<i>Chrysococcyx lucidus</i>	Shining bronze-cuckoo	
<i>Cincloramphus cruralis</i>	brown songlark	
<i>Cincloramphus mathewsi</i>	rufous songlark	
<i>Cinclosoma punctatum</i>	spotted quail-thrush	
<i>Circus approximans</i>	swamp harrier	
<i>Circus assimilis</i>	spotted harrier	
<i>Cisticola exilis</i>	golden-headed cisticola	
<i>Cladorhynchus leucocephalus</i>	banded stilt	
<i>Climacteris affinis</i>	white-browed treecreeper	
<i>Climacteris erythrops</i>	red-browed treecreeper	
<i>Climacteris picumnus victoriae</i>	brown treecreeper (south-eastern ssp.)	
<i>Colluricincla harmonica</i>	grey shrike-thrush	
<i>Columba leucomela</i>	white-headed pigeon	
<i>Columba livia</i>	rock dove	
<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike	
<i>Coracina papuensis</i>	white-bellied cuckoo-shrike	
<i>Coracina tenuirostris</i>	cicadabird	
<i>Coracina tenuirostris</i>	common cicadabird	
<i>Corcorax melanorhamphos</i>	white-winged chough	
<i>Cormobates leucophaeus</i>	white-throated treecreeper	
<i>Corvus coronoides</i>	Australian raven	
<i>Corvus mellori</i>	little raven	
<i>Corvus orru</i>	Torresian crow	
<i>Corvus tasmanicus</i>	forest raven	
<i>Coturnix pectoralis</i>	stubble quail	
<i>Coturnix ypsilophora</i>	brown quail	
<i>Cracticus nigrogularis</i>	pied butcherbird	
<i>Cracticus torquatus</i>	grey butcherbird	
<i>Cuculus pallidus</i>	pallid cuckoo	
<i>Cygnus atratus</i>	black swan	
<i>Dacelo novaeguineae</i>	laughing kookaburra	



Scientific Name	Common Name	EPBC Status
<i>Daphoenositta chrysoptera</i>	varied sittella	
<i>Daption capense</i>	cape petrel	
<i>Dasyornis brachypterus</i>	eastern bristlebird	
<i>Dicaeum hirundinaceum</i>	mistletoebird	
<i>Dicrurus bracteatus</i>	spangled drongo	
<i>Diomedea exulans</i>	wandering albatross	Vulnerable, Migratory, Listed
<i>Dromaius novaehollandiae</i>	emu	
<i>Egretta garzetta</i>	little egret	
<i>Egretta novaehollandiae</i>	white-faced heron	
<i>Elanus axillaris</i>	black-shouldered kite	
<i>Elseyornis melanops</i>	black-fronted dotterel	
<i>Eolophus roseicapillus</i>	galah	
<i>Eopsaltria australis</i>	eastern yellow robin	
<i>Epthianura albiglans</i>	white-fronted chat	
<i>Erythronyx cinctus</i>	red-kneed dotterel	
<i>Eudynamis orientalis</i>	eastern koel	
<i>Eudyptula minor</i>	little penguin	
<i>Eurostopodus mystacalis</i>	white-throated nightjar	
<i>Eurystomus orientalis</i>	dollarbird	
<i>Falco berigora</i>	brown falcon	
<i>Falco cenchroides</i>	nankeen kestrel	
<i>Falco hypoleucos</i>	grey falcon	
<i>Falco longipennis</i>	Australian hobby	
<i>Falco peregrinus</i>	peregrine falcon	
<i>Falco subniger</i>	black falcon	
<i>Falcunculus frontatus</i>	crested shrike-tit	
<i>Fulica atra</i>	Eurasian coot	
<i>Gallinago hardwickii</i>	Latham's snipe	Migratory, Listed
<i>Gallinula tenebrosa</i>	dusky moorhen	
<i>Gallinula ventralis</i>	black-tailed native-hen	
<i>Gallirallus philippensis</i>	buff-banded rail	
<i>Gelochelidon nilotica</i>	gull-billed tern	
<i>Geopelia striata</i>	peaceful dove	
<i>Gerygone mouki</i>	brown gerygone	
<i>Gerygone olivacea</i>	white-throated gerygone	

Scientific Name	Common Name	EPBC Status
<i>Glossopsitta concinna</i>	musk lorikeet	
<i>Glossopsitta porphyrocephala</i>	purple-crowned lorikeet	
<i>Glossopsitta pusilla</i>	little lorikeet	
<i>Grallina cyanoleuca</i>	magpie-lark	
<i>Grantiella picta</i>	painted honeyeater	
<i>Gymnorhina tibicen</i>	Australian magpie	
<i>Haematopus fuliginosus</i>	sooty oystercatcher	
<i>Haematopus longirostris</i>	pied oystercatcher	
<i>Haliaeetus leucogaster</i>	white-bellied sea-eagle	Migratory, Listed
<i>Haliastur sphenurus</i>	whistling kite	
<i>Hamirostra melanosternon</i>	black-breasted buzzard	
<i>Heteroscelus brevipes</i>	grey-tailed tattler	
<i>Hieraaetus morphnoides</i>	little eagle	
<i>Himantopus himantopus</i>	black-winged stilt	Listed
<i>Hirundapus caudacutus</i>	white-throated needletail	Migratory, Listed
<i>Hirundo ariel</i>	fairy martin	
<i>Hirundo neoxena</i>	welcome swallow	
<i>Hirundo nigricans</i>	tree martin	
<i>Hydroprogne caspia</i>	Caspian tern	
<i>Ixobrychus minutus</i>	little bittern	
<i>Lalage sueurii</i>	white-winged triller	
<i>Larus dominicanus</i>	kelp gull	
<i>Larus pacificus pacificus</i>	Pacific gull	
<i>Lathamus discolor</i>	swift parrot	Endangered, Listed
<i>Leucosarcia melanoleuca</i>	Wonga pigeon	
<i>Lewinia pectoralis</i>	Lewin's rail	
<i>Lichenostomus chrysops</i>	yellow-faced honeyeater	
<i>Lichenostomus fuscus</i>	fuscous honeyeater	
<i>Lichenostomus leucotis</i>	white-eared honeyeater	
<i>Lichenostomus melanops</i>	yellow-tufted honeyeater	
<i>Lichenostomus penicillatus</i>	white-plumed honeyeater	
<i>Limicola falcinellus</i>	broad-billed sandpiper	
<i>Limosa lapponica</i>	bar-tailed godwit	
<i>Limosa limosa</i>	black-tailed godwit	
<i>Lophoictinia isura</i>	square-tailed kite	

Scientific Name	Common Name	EPBC Status
<i>Lopholaimus antarcticus</i>	topknot pigeon	
<i>Macronectes giganteus</i>	southern giant-petrel	Endangered, Migratory, Listed
<i>Malacorhynchus membranaceus</i>	pink-eared duck	
<i>Malurus cyaneus</i>	superb fairy-wren	
<i>Manorina flavigula</i>	yellow-throated miner	
<i>Manorina melanocephala</i>	noisy miner	
<i>Manorina melanophrys</i>	bell miner	
<i>Megalurus gramineus</i>	little grassbird	
<i>Melanodryas cucullata</i>	hooded robin	
<i>Meliphaga lewinii</i>	Lewin's honeyeater	
<i>Melithreptus brevirostris</i>	brown-headed honeyeater	
<i>Melithreptus lunatus</i>	white-naped honeyeater	
<i>Menura novaehollandiae</i>	superb lyrebird	
<i>Merops ornatus</i>	rainbow bee-eater	Migratory, Listed
<i>Microcarbo melanoleucos</i>	little pied cormorant	
<i>Microeca fascinans</i>	jacky winter	
<i>Milvus migrans</i>	black kite	
<i>Mirafra javanica</i>	Horsfield's bushlark	
<i>Monarcha melanopsis</i>	black-faced monarch	Migratory, Listed
<i>Morus serrator</i>	Australasian gannet	
<i>Myiagra cyanoleuca</i>	satin flycatcher	Migratory, Listed
<i>Myiagra inquieta</i>	restless flycatcher	
<i>Myiagra rubecula</i>	leaden flycatcher	
<i>Myzomela sanguinolenta</i>	scarlet honeyeater	
<i>Neochmia temporalis</i>	red-browed finch	
<i>Neophema chrysostoma</i>	blue-winged parrot	
<i>Ninox connivens</i>	barking owl	
<i>Ninox novaeseelandiae</i>	southern boobook	
<i>Ninox strenua</i>	powerful owl	
<i>Numenius madagascariensis</i>	eastern curlew	
<i>Numenius phaeopus</i>	whimbrel	
<i>Nycticorax caledonicus</i>	nankeen night heron	
<i>Ocyphaps lophotes</i>	crested pigeon	
<i>Oriolus sagittatus</i>	olive-backed oriole	
<i>Oxyura australis</i>	blue-billed duck	

Scientific Name	Common Name	EPBC Status
<i>Pachycephala olivacea</i>	olive whistler	
<i>Pachycephala pectoralis</i>	golden whistler	
<i>Pachycephala rufiventris</i>	rufous whistler	
<i>Pachyptila turtur</i>	fairy prion	
<i>Pardalotus punctatus</i>	spotted pardalote	
<i>Pardalotus striatus</i>	striated pardalote	
<i>Passer domesticus</i>	house sparrow	
<i>Passer montanus</i>	Eurasian tree sparrow	
<i>Pavo cristatus</i>	Indian peafowl	
<i>Pelecanoides urinatrix</i>	common diving-petrel	
<i>Pelecanus conspicillatus</i>	Australian pelican	
<i>Petroica boodang</i>	scarlet robin	
<i>Petroica goodenovii</i>	red-capped robin	
<i>Petroica phoenicea</i>	flame robin	
<i>Petroica rodinogaster</i>	pink robin	
<i>Petroica rosea</i>	rose robin	
<i>Pezoporus wallicus</i>	ground parrot	
<i>Phalacrocorax carbo</i>	great cormorant	
<i>Phalacrocorax fuscescens</i>	black-faced cormorant	
<i>Phalacrocorax sulcirostris</i>	little black cormorant	
<i>Phalacrocorax varius</i>	pied cormorant	
<i>Phaps chalcoptera</i>	common bronzewing	
<i>Phaps elegans</i>	brush bronzewing	
<i>Philemon citreogularis</i>	little friarbird	
<i>Philemon corniculatus</i>	noisy friarbird	
<i>Phylidonyris melanops</i>	tawny-crowned honeyeater	
<i>Phylidonyris novaehollandiae</i>	New Holland honeyeater	
<i>Phylidonyris pyrrhoptera</i>	crescent honeyeater	
<i>Platalea flavipes</i>	yellow-billed spoonbill	
<i>Platalea regia</i>	royal spoonbill	
<i>Platycercus elegans</i>	crimson rosella	
<i>Platycercus eximius</i>	eastern rosella	
<i>Plegadis falcinellus</i>	glossy ibis	
<i>Pluvialis fulva</i>	Pacific golden plover	
<i>Pluvialis squatarola</i>	grey plover	

Scientific Name	Common Name	EPBC Status
<i>Podargus strigoides</i>	tawny frogmouth	
<i>Podiceps cristatus</i>	great crested grebe	
<i>Poliiocephalus poliocephalus</i>	hoary-headed grebe	
<i>Porphyrio porphyrio</i>	purple swamphen	
<i>Porzana fluminea</i>	Australian spotted crake	
<i>Porzana pusilla</i>	Baillon's crake	
<i>Porzana tabuensis</i>	spotless crake	
<i>Psophodes olivaceus</i>	eastern whipbird	
<i>Pterodroma inexpectata</i>	mottled petrel	
<i>Pterodroma macroptera</i>	great-winged petrel	
<i>Ptilonorhynchus violaceus</i>	satin bowerbird	
<i>Puffinus gavia</i>	fluttering shearwater	
<i>Pycnoptilus floccosus</i>	pilotbird	
<i>Recurvirostra novaehollandiae</i>	red-necked avocet	
<i>Rhipidura albiscarpa</i>	grey fantail	
<i>Rhipidura leucophrys</i>	willie wagtail	
<i>Rhipidura rufifrons</i>	rufous fantail	Migratory, Listed
<i>Rostratula australis</i>	Australian painted snipe	Vulnerable
<i>Scythrops novaehollandiae</i>	channel-billed cuckoo	
<i>Sericornis frontalis</i>	white-browed scrubwren	
<i>Sericornis magnirostris</i>	large-billed scrubwren	
<i>Smicromis brevirostris</i>	weebill	
<i>Stagonopleura bella</i>	beautiful firetail	
<i>Stagonopleura guttata</i>	diamond firetail	
<i>Stercorarius antarcticus</i>	brown skua	
<i>Stercorarius parasiticus</i>	Arctic Jaeger	
<i>Sterna hirundo</i>	common tern	
<i>Sterna paradisaea</i>	Arctic tern	
<i>Sterna striata</i>	white-fronted tern	
<i>Sternula albifrons</i>	little tern	Migratory, Listed
<i>Sternula nereis</i>	fairy tern	
<i>Stictonetta naevosa</i>	Freckled duck	
<i>Stipiturus malachurus</i>	southern emu-wren	
<i>Strepera graculina</i>	pied currawong	
<i>Strepera versicolor</i>	grey currawong	

Scientific Name	Common Name	EPBC Status
<i>Streptopelia chinensis</i>	spotted turtle-dove	
<i>Sturnus vulgaris</i>	common starling	
<i>Sula leucogaster</i>	brown booby	
<i>Tachybaptus novaehollandiae</i>	Australasian grebe	
<i>Tadorna tadornoides</i>	Australian shelduck	
<i>Taeniopygia bichenovii</i>	double-barred finch	
<i>Thalaseus bergii</i>	crested tern	
<i>Thalassarche cauta</i>	shy albatross	Vulnerable, Migratory, Listed
<i>Thalassarche chlororhynchos</i>	yellow-nosed albatross	
<i>Thalassarche chrysostoma</i>	grey-headed albatross	Endangered, Migratory
<i>Thinornis rubricollis</i>	hooded plover	Listed
<i>Threskiornis molucca</i>	Australian white ibis	
<i>Threskiornis spinicollis</i>	straw-necked ibis	
<i>Todiramphus sanctus</i>	sacred kingfisher	
<i>Trichoglossus haematodus</i>	rainbow lorikeet	
<i>Tringa nebularia</i>	common greenshank	
<i>Tringa stagnatilis</i>	marsh sandpiper	
<i>Turdus merula</i>	common blackbird	
<i>Turnix varia</i>	painted button-quail	
<i>Tyto javanica</i>	Pacific barn owl	
<i>Tyto novaehollandiae</i>	masked owl	
<i>Tyto tenebricosa</i>	sooty owl	
<i>Vanellus miles</i>	masked lapwing	
<i>Vanellus tricolor</i>	banded lapwing	
<i>Xenus cinereus</i>	terek sandpiper	
<i>Zoothera lunulata</i>	Bassian Thrush	
<i>Zosterops lateralis</i>	silveryeye	

## Waterbird List

Scientific Name	Common Name	EPBC Act
<i>Actitis hypoleucos</i>	common sandpiper	
<i>Anas castanea</i>	chestnut teal	
<i>Anas gracilis</i>	grey teal	
<i>Anas rhynchotis</i>	Australasian shoveler	
<i>Anas superciliosa</i>	Pacific black duck	
<i>Anhinga novaehollandiae</i>	Australasian darter	

Scientific Name	Common Name	EPBC Act
<i>Anseranas semipalmata</i>	magpie goose	
<i>Ardea intermedia</i>	intermediate egret	
<i>Ardea modesta</i>	eastern great egret	
<i>Ardea pacifica</i>	white-necked heron	
<i>Arenaria interpres</i>	ruddy turnstone	
<i>Aythya australis</i>	hardhead	
<i>Biziura lobata</i>	musk duck	
<i>Botaurus poiciloptilus</i>	Australasian bittern	
<i>Calidris acuminata</i>	sharp-tailed sandpiper	Migratory, Listed
<i>Calidris canutus</i>	red knot	Migratory, Listed
<i>Calidris ferruginea</i>	curlew sandpiper	Migratory, Listed
<i>Calidris ruficollis</i>	red-necked stint	Migratory, Listed
<i>Calidris tenuirostris</i>	great knot	
<i>Charadrius bicinctus</i>	double-banded plover	
<i>Charadrius mongolus</i>	lesser sand plover	
<i>Charadrius ruficapillus</i>	red-capped plover	
<i>Chenonetta jubata</i>	Australian wood duck	
<i>Chlidonias hybridus</i>	whiskered tern	
<i>Chlidonias leucopterus</i>	white-winged black tern	
<i>Chroicocephalus novaehollandiae</i>	silver gull	
<i>Cladorhynchus leucocephalus</i>	banded stilt	
<i>Cygnus atratus</i>	black swan	
<i>Egretta garzetta</i>	little egret	
<i>Egretta novaehollandiae</i>	white-faced heron	
<i>Eseyornis melanops</i>	black-fronted dotterel	
<i>Erythronyx cinctus</i>	red-kneed dotterel	
<i>Fulica atra</i>	Eurasian coot	
<i>Gallinago hardwickii</i>	Latham's snipe	Migratory, Listed
<i>Gallinula tenebrosa</i>	dusky moorhen	
<i>Gallinula ventralis</i>	black-tailed native-hen	
<i>Gallirallus philippensis</i>	buff-banded rail	
<i>Haematopus fuliginosus</i>	sooty oystercatcher	
<i>Haematopus longirostris</i>	pieb oystercatcher	
<i>Heteroscelus brevipes</i>	grey-tailed tattler	
<i>Himantopus himantopus</i>	black-winged stilt	
<i>Hydroprogne caspia</i>	Caspian tern	
<i>Larus dominicanus</i>	kelp gull	
<i>Larus pacificus pacificus</i>	Pacific gull	

Scientific Name	Common Name	EPBC Act
<i>Lewinia pectoralis</i>	Lewin's rail	
<i>Limosa lapponica</i>	bar-tailed godwit	
<i>Microcarbo melanoleucos</i>	little pied cormorant	
<i>Morus serrator</i>	Australasian gannet	
<i>Numenius madagascariensis</i>	eastern curlew	
<i>Numenius phaeopus</i>	whimbrel	
<i>Nycticorax caledonicus</i>	nankeen night heron	
<i>Oxyura australis</i>	blue-billed duck	
<i>Pelecanus conspicillatus</i>	Australian pelican	
<i>Phalacrocorax carbo</i>	great cormorant	
<i>Phalacrocorax fuscescens</i>	black-faced cormorant	
<i>Phalacrocorax sulcirostris</i>	little black cormorant	
<i>Phalacrocorax varius</i>	pied cormorant	
<i>Platalea flavipes</i>	yellow-billed spoonbill	
<i>Platalea regia</i>	royal spoonbill	
<i>Plegadis falcinellus</i>	glossy ibis	
<i>Pluvialis fulva</i>	Pacific golden plover	
<i>Podiceps cristatus</i>	great crested grebe	
<i>Polyocephalus polyocephalus</i>	hoary-headed grebe	
<i>Porphyrio porphyrio</i>	purple swamphen	
<i>Porzana fluminea</i>	Australian spotted crake	
<i>Porzana pusilla</i>	Baillon's crake	
<i>Porzana tabuensis</i>	spotless crake	
<i>Recurvirostra novaehollandiae</i>	red-necked avocet	
<i>Rostratula australis</i>	Australian painted snipe	Vulnerable
<i>Sterna hirundo</i>	common tern	
<i>Sterna striata</i>	white-fronted tern	
<i>Sternula albifrons</i>	little tern	Migratory, Listed
<i>Sternula nereis</i>	fairy tern	
<i>Stictonetta naevosa</i>	freckled duck	
<i>Tachybaptus novaehollandiae</i>	Australasian grebe	
<i>Tadorna tadornoides</i>	Australian shelduck	
<i>Thalasseus bergii</i>	crested tern	
<i>Thinornis rubricollis</i>	hooded plover	Listed
<i>Threskiornis molucca</i>	Australian white ibis	
<i>Threskiornis spinicollis</i>	straw-necked ibis	
<i>Tringa nebularia</i>	common greenshank	
<i>Tringa stagnatilis</i>	marsh sandpiper	



Scientific Name	Common Name	EPBC Act
<i>Vanellus miles</i>	masked lapwing	
<i>Vanellus tricolor</i>	banded lapwing	
<i>Xenus cinereus</i>	terek sandpiper	

## Fish List

(Sourced from Ecos 2008, based mostly after Jeremy Hindell, unpublished data, 2007)

Scientific Name	Common Name	EPBC Act
<i>Acanthaluteres spilomelanurus</i>	bridled leatherjacket	
<i>Acanthaluteres vittiger</i>	toothbrush leatherjacket	
<i>Acanthopagrus australis</i>	yellow-fin bream	
<i>Acanthopagrus butcheri</i>	black bream	
<i>Afurcagobius tamarensis</i>	Tamar River goby	
<i>Alabes dorsalis</i>	common shore-eel	
<i>Alabes hoesei</i>	dwarf shore-eel	
<i>Alabes parvulus</i>	pygmy shore-eel	
<i>Aldrichetta forsteri</i>	yellow-eye mullet	
<i>Allomycterus pilatus</i>	small-spined porcupinefish	
<i>Ambassis jacksoniensis</i>	Port Jackson chanda perch	
<i>Ammotretis rostratus</i>	longsnout flounder	
<i>Anguilla australis</i>	shortfin eel	
<i>Anguilla reinhardtii</i>	Longfin eel	
<i>Aracana aurita</i>	Shaw's cowfish	
<i>Arenigobius bifrenatus</i>	bridled goby	
<i>Arenigobius frenatus</i>	half-bridled goby	
<i>Argyrosomus hololepidotus</i>	mulloway	
<i>Arripis georgiana</i>	tommy rough	
<i>Arripis trutta</i>	Eastern Australian salmon	
<i>Arripis truttaceus</i>	Western Australian salmon	
<i>Aspasmogaster tasmaniensis</i>	Tasmanian clingfish	

Scientific Name	Common Name	EPBC Act
<i>Atherinason hepsetoides</i>	deepwater hardyhead	
<i>Atherinosoma microstoma</i>	smallmouthed hardyhead	
<i>Atypichthys strigatus</i>	mado	
<i>Bathygobius krefftii</i>	frayedfin goby	
<i>Brachaluteres jacksonianus</i>	southern pygmy leatherjacket	
<i>Brachynectes fasciatus</i>	weedy threefin	
<i>Centropogon australis</i>	eastern fortesque	
<i>Cepola australis</i>	bandfish	
<i>Cheilodactylus fuscus</i>	red morwong	
<i>Chelidonichthys kumu</i>	red gurnard	
<i>Contusus brevicaudatus</i>	prickly toadfish	
<i>Creocele cardinalis</i>	broad clingfish	
<i>Cristiceps australis</i>	southern crested weedfish	
<i>Dactylophora nigricans</i>	dusky morwong	
<i>Dasyatis brevicaudata</i>	smooth stingray	
<i>Dasyatis thetidis</i>	black stingray	
<i>Dicotylichthys punctulatus</i>	three-barred porcupinefish	
<i>Dinolestes lewini</i>	longfin pike	
<i>Diodon nicthemerus</i>	globefish	
<i>Engraulis australis</i>	Australian anchovy	
<i>Enoplosus armatus</i>	old wife	
<i>Eubalichthys mosaicus</i>	mosaic leatherjacket	
<i>Favonigobius lateralis</i>	long-finned goby	
<i>Gadopsis marmoratus</i>	river blackfish	
<i>Galaxias olidus</i>	mountain galaxias	
<i>Galaxias truttaceus</i>	spotted galaxias	
<i>Galaxiella pusilla</i>	dwarf galaxias	Vulnerable
<i>Genus A sp. 2</i>	brownspeckled spiny clingfish	

Scientific Name	Common Name	EPBC Act
<i>Genus B sp.</i>	rat clingfish	
<i>Genus C sp.1</i>	grass clingfish	
<i>Genypterus tigerinus</i>	rock ling	
<i>Geotria australis</i>	pouched lamprey	
<i>Gerres subfasciatus</i>	southern silver biddy	
<i>Girella tricuspidata</i>	luderick	
<i>Gobiomorphus australis</i>	striped gudgeon	
<i>Gobiomorphus coxii</i>	Cox's gudgeon	
<i>Gobiopterus semivestitus</i>	glass goby	
<i>Gonorynchus greyi</i>	beaked salmon	
<i>Gymnapistes marmoratus</i>	soldierfish	
<i>Haletta semifasciata</i>	blue rock whiting	
<i>Herklotsichthys castelnaui</i>	sprat	
<i>Heteroclinus kuiteri</i>	Kuiter's weedfish	
<i>Heteroclinus perspicillatus</i>	spotshoulder weedfish	
<i>Heteroclinus puellarum</i>	little weedfish	
<i>Heteroclinus sp.3</i>	longtail weedfish	
<i>Hippocampus abdominalis</i>	big-bellied seahorse	Listed
<i>Hippocampus breviceps</i>	shortsnout seahorse	Listed
<i>Hippocampus whitei</i>	white's seahorse	Listed
<i>Histiogamphelus briggsii</i>	Brigg's crested pipefish	Listed
<i>Hyperlophus vittatus</i>	sandy sprat	
<i>Hypnos monopterygium</i>	Australian numbfish	
<i>Hyporhamphus australis</i>	Eastern Sea garfish	
<i>Hyporhamphus melanochir</i>	Southern Sea garfish	
<i>Hyporhamphus regularis</i>	river garfish	
<i>Hypselognathus rostratus</i>	knifesnout pipefish	Listed

Scientific Name	Common Name	EPBC Act
<i>Hypseoltris compressa</i>	empire gudgeon	
<i>Iso rhotophilus</i>	surf sardine	
<i>Kathetostoma laeve</i>	common stargazer	
<i>Lepidoblennius haplodactylus</i>	Jumping joey	
<i>Lepidotrigla papilio</i>	spiny gurnard	
<i>Leptatherina presbyteroides</i>	silver fish	
<i>Lissocampus caudalis</i>	smooth pipefish	
<i>Lissocampus runa</i>	javelin pipefish	Listed
<i>Liza argentea</i>	flat-tailed mullet	
<i>Macquaria colonorum</i>	estuary perch	
<i>Macquaria novemaculeata</i>	Australian bass	
<i>Maxillicosta scabriceps</i>	little scorpionfish	
<i>Meuschenia freycineti</i>	six-spined leatherjacket	
<i>Meuschenia scaber</i>	velvet leatherjacket	
<i>Meuschenia trachylepis</i>	yellow-finned leatherjacket	
<i>Mitotichthys semistriatus</i>	halfbanded pipefish	Listed
<i>Monacanthus chinensis</i>	Fanbelly leatherjacket	
<i>Mugil cephalus</i>	sea mullet	
<i>Muraenichthys breviceps</i>	short-headed worm-eel	
<i>Myliobatis australis</i>	eagle ray	
<i>Myxus elongatus</i>	sand mullet	
<i>Narcine tasmaniensis</i>	Tasmanian numbfish	
<i>Nelusetta ayraudi</i>	Chinaman leatherjacket	
<i>Neoodax balteatus</i>	little rock whiting	
<i>Neoplatycephalus aurimaculatus</i>	toothy flathead	
<i>Neoplatycephalus richardsoni</i>	tiger flathead	
<i>Nesogobius hinsbyi</i>	orangespotted goby	

Scientific Name	Common Name	EPBC Act
<i>Nesogobius pulchellus</i>	Castelnau's goby	
<i>Nesogobius</i> sp. 1	girdled goby	
<i>Nesogobius</i> sp. 3	twinbar goby	
<i>Nesogobius</i> sp. 5	sicklefin sandgoby	
<i>Nesogobius</i> sp. 6	opalescent sandgoby	
<i>Nesogobius</i> sp. 7	speckled sandgoby	
<i>Norfolkia clarkei</i>	common threefin	
<i>Notolabrus fucicola</i>	saddled wrasse	
<i>Omobranchus anolius</i>	oyster blenny	
<i>Ophiclinops varius</i>	variegated snakeblenny	
<i>Ophisurus serpens</i>	serpent eel	
<i>Pagrus auratus</i>	snapper	
<i>Parablennius tasmanianus</i>	Tasmanian blenny	
<i>Parequula melbournensis</i>	silverbelly	
<i>Parvicrepis parvipinnis</i>	smallfin clingfish	
<i>Parvicrepis</i> sp. 1	longsnout clingfish	
<i>Parvicrepis</i> sp. 2	obscure clingfish	
<i>Pegasus lancifer</i>	sculptured seamoth	
<i>Phyllopteryx taeniolatus</i>	weedy Seadragon	Listed
<i>Platycephalus bassensis</i>	southern sand flathead	
<i>Platycephalus caeruleopunctatus</i>	eastern blue-spotted flathead	
<i>Platycephalus fuscus</i>	dusky flathead	
<i>Platycephalus laevigatus</i>	rock flathead	
<i>Pomatomus saltatrix</i>	tailor	
<i>Potamalosa richmondia</i>	freshwater herring	
<i>Pristiophorus nudipinnis</i>	southern sawshark	
<i>Prototroctes maraena</i>	Australian grayling	Vulnerable

Scientific Name	Common Name	EPBC Act
<i>Pseudocaranx dentex</i>	silver trevally	
<i>Pseudocaranx wrighti</i>	skipjack trevally	
<i>Pseudogobius olorum</i>	western blue-spotted goby	
<i>Pseudogobius sp. 9</i>	eastern blue-spotted goby	
<i>Pseudophycis breviuscula</i>	bastard red cod	
<i>Pseudophysis bachus</i>	red rock cod	
<i>Pseudophysis barbata</i>	bearded rock cod	
<i>Pugnaso curtirostris</i>	pugnose pipefish	
<i>Raja lemprieri</i>	thornback skate	
<i>Raja whitleyi</i>	Melbourne skate	
<i>Redigobius macrostoma</i>	large-mouthed goby	
<i>Retropinna semoni</i>	Australian smelt	
<i>Rhabdosargus sarba</i>	tarwhine	
<i>Rhombosolea tapirina</i>	greenback flounder	
<i>Salmo salar</i>	Atlantic salmon	
<i>Salmo trutta</i>	brown trout	
<i>Sardinops neopilchardus</i>	pilchard	
<i>Scobinichthys granulatus</i>	rough leatherjacket	
<i>Scorpaena papillosus</i>	red rock cod	
<i>Scorpius aequipinnis</i>	sea sweep	
<i>Sillaginodes punctata</i>	King George whiting	
<i>Sillago ciliata</i>	sand whiting	
<i>Sillago flindersi</i>	school whiting	
<i>Siphaemia cephalotes</i>	Wood's siphon fish	
<i>Siphonognathus attenuatus</i>	slender weed whiting	
<i>Solegnathus spinosissimus</i>	spiny pipehorse	Listed
<i>Sphyræna novaehollandiae</i>	shortfin seapike	

Scientific Name	Common Name	EPBC Act
<i>Spratelloides robustus</i>	blue sprat	
<i>Sprattus novaehollandiae</i>	Australian sprat	
<i>Stigmatopora argus</i>	spotted pipefish	Listed
<i>Stigmatopora nigra</i>	wide-bodied pipefish	Listed
<i>Stipecampus cristatus</i>	ring-backed pipefish	Listed
<i>Synaptura nigra</i>	black sole	
<i>Taratretis derwentensis</i>	Derwent flounder	
<i>Tasmanogobius gloveri</i>	marine goby	
<i>Tasmanogobius lasti</i>	lagoon goby	
<i>Tasmanogobius lordi</i>	Tasmanian goby	
<i>Tetractenos glaber</i>	smooth toadfish	
<i>Tetractenos hamiltoni</i>	common toadfish	
<i>Torquigener pleurogramma</i>	weeping toado	
<i>Trachurus novaezelandiae</i>	yellowtail	
<i>Tridentiger trigonocephalus</i>	Japanese goby	
<i>Trygonoptera mucosa</i>	western stingaree	
<i>Trygonorrhina guaneri</i>	southern fiddler ray	
<i>Urocampus carinirostris</i>	hairy pipefish	Listed
<i>Urolophus curciatus</i>	banded stingaree	
<i>Urolophus gigas</i>	spotted stingaree	
<i>Urolophus paucimaculatus</i>	sparsely-spotted stingaree	
<i>Vanacampus margaritifer</i>	mother-of-pearl pipefish	Listed
<i>Vanacampus phillipi</i>	Port Phillip pipefish	Listed
<i>Zeus faber</i>	john dory	

## Flora List

Source: Data extracted from FIS database

Scientific Name	Common name	EPBC Status
<i>Acacia caerulescens</i>	limestone blue wattle	Vulnerable

Scientific Name	Common name	EPBC Status
<i>Acacia dealbata</i>	silver wattle	
<i>Acacia genistifolia</i>	spreading wattle	
<i>Acacia implexa</i>	lightwood	
<i>Acacia mearnsii</i>	black wattle	
<i>Acacia melanoxylon</i>	blackwood	
<i>Acacia oxycedrus</i>	spike wattle	
<i>Acacia pycnantha</i>	golden wattle	
<i>Acacia</i> spp.	wattle	
<i>Acacia stricta</i>	hop wattle	
<i>Acacia suaveolens</i>	sweet wattle	
<i>Acacia terminalis</i>	sunshine wattle	
<i>Acacia ulicifolia</i>	juniper wattle	
<i>Acacia verticillata</i>	prickly moses	
<i>Acacia verticillata</i> subsp. <i>ovoidea</i>	ovoid prickly moses	
<i>Acacia verticillata</i> subsp. <i>verticillata</i>	prickly moses	
<i>Acaena agnipila</i>	hairy sheep's burr	
<i>Acaena agnipila/ovina</i> complex	hairy/Australian sheep's burr	
<i>Acaena echinata</i>	sheep's burr	
<i>Acaena novae-zelandiae</i>	bidgee-widgee	
<i>Acaena ovina</i>	Australian sheep's burr	
<i>Acaena</i> spp.	sheep's burr	
<i>Acianthus exsertus</i> s.l.	gnat orchid	
<i>Acianthus exsertus</i> s.s.	large mosquito-orchid	
<i>Acianthus pusillus</i>	small mosquito-orchid	
<i>Acianthus</i> spp.	mosquito orchid	
<i>Acrocladium chlamydophyllum</i>	spear moss	
<i>Acronychia oblongifolia</i>	yellow-wood	
<i>Acrotriche serrulata</i>	honey-pots	
<i>Actites megalocarpa</i>	dune thistle	
<i>Adiantum aethiopicum</i>	common maidenhair	
<i>Agrostis</i> s.l. spp.	bent/blown grass	
<i>Ajuga australis</i>	Austral bugle	
<i>Alisma plantago-aquatica</i>	water plantain	



Scientific Name	Common name	EPBC Status
<i>Allocasuarina littoralis</i>	black sheoak	
<i>Allocasuarina misera</i>	slender sheoak	
<i>Allocasuarina misera/paradoxa</i>	slender/green sheoak	
<i>Allocasuarina paludosa</i>	scrub sheoak	
<i>Allocasuarina paradoxa</i>	green sheoak	
<i>Allocasuarina</i> spp.	sheoak	
<i>Allocasuarina verticillata</i>	drooping sheoak	
<i>Almaleea subumbellata</i>	wiry bush-pea	
<i>Alternanthera denticulata</i> s.l.	lesser joyweed	
<i>Alternanthera denticulata</i> s.s.	lesser joyweed	
<i>Alyxia buxifolia</i>	sea box	
<i>Amperea xiphoclada</i> var. <i>xiphoclada</i>	broom spurge	
<i>Amphipogon strictus</i>	grey-beard grass	
<i>Amyema miquelii</i>	box mistletoe	
<i>Amyema pendula</i>	drooping mistletoe	
<i>Amyema pendula</i> subsp. <i>pendula</i> (s.s.)	drooping mistletoe	
<i>Amyema</i> spp.	mistletoe	
<i>Angianthus preissianus</i>	salt angianthus	
<i>Anisopogon avenaceus</i>	oat spear-grass	
<i>Aotus ericoides</i>	common aotus	
<i>Apalochlamys spectabilis</i>	showy cassinia	
<i>Aphelia pumilio</i>	dwarf aphelia	
<i>Apium prostratum</i> subsp. <i>prostratum</i>	sea celery	
<i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>filiforme</i>	sea celery	
<i>Apium prostratum</i> subsp. <i>prostratum</i> var.	sea celery	
<i>Apodasmia brownii</i>	coarse twine-rush	
<i>Arthropodium minus</i>	small vanilla-lily	
<i>Arthropodium strictum</i> s.l.	chocolate lily	
<i>Asperula conferta</i>	common woodruff	
<i>Asperula</i> spp.	woodruff	
<i>Asperula subsimplex</i>	water woodruff	
<i>Asplenium bulbiferum</i> subsp. <i>gracillimum</i>	mother spleenwort	
<i>Asplenium flabellifolium</i>	necklace fern	

Scientific Name	Common name	EPBC Status
<i>Asplenium flaccidum</i> subsp. <i>flaccidum</i>	weeping spleenwort	
<i>Asplenium trichomanes</i>	common spleenwort	
<i>Asterella drummondii</i>	licorice strap	
<i>Astroloma humifusum</i>	cranberry heath	
<i>Astroloma pinifolium</i>	pine heath	
<i>Astrotricha parvifolia</i>	small-leaf star-hair	
<i>Atriplex australasica</i>	native orache	
<i>Atriplex cinerea</i>	coast saltbush	
<i>Atriplex paludosa</i> subsp. <i>paludosa</i>	marsh saltbush	
<i>Atriplex semibaccata</i>	berry saltbush	
<i>Atriplex</i> spp.	saltbush	
<i>Australina pusilla</i> subsp. <i>muelleri</i>	shade nettle	
<i>Austrocynoglossum latifolium</i>	forest hound's-tongue	
<i>Austrodanthonia caespitosa</i>	common wallaby-grass	
<i>Austrodanthonia eriantha</i>	hill wallaby-grass	
<i>Austrodanthonia geniculata</i>	kneed wallaby-grass	
<i>Austrodanthonia penicillata</i>	weeping wallaby-grass	
<i>Austrodanthonia pilosa</i>	velvet wallaby-grass	
<i>Austrodanthonia racemosa</i> var. <i>racemosa</i>	slender wallaby-grass	
<i>Austrodanthonia setacea</i>	bristly wallaby-grass	
<i>Austrodanthonia setacea</i> var. <i>setacea</i>	bristly wallaby-grass	
<i>Austrodanthonia</i> spp.	wallaby grass	
<i>Austrodanthonia tenuior</i>	purplish wallaby-grass	
<i>Austrofestuca littoralis</i>	coast fescue	
<i>Austrostipa blackii</i>	crested spear-grass	
<i>Austrostipa flavescens</i>	coast spear-grass	
<i>Austrostipa mollis</i>	supple spear-grass	
<i>Austrostipa pubinodis</i>	tall spear-grass	
<i>Austrostipa rudis</i>	veined spear-grass	
<i>Austrostipa rudis</i> subsp. <i>nervosa</i>	veined spear-grass	
<i>Austrostipa rudis</i> subsp. <i>rudis</i>	veined spear-grass	
<i>Austrostipa scabra</i>	rough spear-grass	
<i>Austrostipa scabra</i> subsp. <i>scabra</i>	rough spear-grass	

Scientific Name	Common name	EPBC Status
<i>Austrostipa semibarbata</i>	fibrous spear-grass	
<i>Austrostipa</i> spp.	spear grass	
<i>Austrostipa stuposa</i>	quizzical spear-grass	
<i>Azolla filiculoides</i>	Pacific azolla	
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	coast banksia	
<i>Banksia marginata</i>	silver banksia	
<i>Banksia serrata</i>	saw banksia	
<i>Baumea acuta</i>	pale twig-sedge	
<i>Baumea articulata</i>	jointed twig-sedge	
<i>Baumea juncea</i>	bare twig-sedge	
<i>Baumea rubiginosa</i> s.s.	soft twig-sedge	
<i>Baumea</i> spp.	twig sedge	
<i>Bedfordia arborescens</i>	blanket leaf	
<i>Berula erecta</i>	water parsnip	
<i>Beyeria lasiocarpa</i>	wallaby-bush	
<i>Beyeria lechenaultii</i>	pale turpentine-bush	
<i>Beyeria viscosa</i>	pinkwood	
<i>Billardiera scandens</i> s.l.	common apple-berry	
<i>Blechnum cartilagineum</i>	gristle fern	
<i>Blechnum nudum</i>	fishbone water-fern	
<i>Blechnum patersonii</i> subsp. <i>patersonii</i>	strap water-fern	
<i>Bolboschoenus caldwellii</i>	salt club-sedge	
<i>Bolboschoenus medianus</i>	marsh club-sedge	
<i>Bolboschoenus</i> spp.	club sedge	
<i>Boronia anemonifolia</i>	sticky boronia	
<i>Boronia anemonifolia</i> subsp. <i>anemonifolia</i>	sticky boronia	
<i>Bossiaea cinerea</i>	showy bossiaea	
<i>Bossiaea heterophylla</i>	variable bossiaea	
<i>Bossiaea obcordata</i>	spiny bossiaea	
<i>Bossiaea prostrata</i>	creeping bossiaea	
<i>Bossiaea</i> spp.	bossiaea	
<i>Botrychium australe</i>	Austral moonwort	
<i>Brachyloma daphnoides</i>	daphne heath	

Scientific Name	Common name	EPBC Status
<i>Brachyscome graminea</i>	grass daisy	
<i>Brachyscome parvula</i>	coast daisy	
<i>Brachyscome spathulata</i> subsp. <i>spathulata</i>	spoon daisy	
<i>Brachyscome</i> spp.	daisy	
<i>Brachythecium rutabulum</i>	rough-stalked feather-moss	
<i>Bromus</i> spp.	brome	
<i>Bulbine bulbosa</i>	bulbine Lily	
<i>Bulbine semibarbata</i>	leek Lily	
<i>Burchardia umbellata</i>	milkmaids	
<i>Bursaria spinosa</i> subsp. <i>spinosa</i>	Sweet bursaria	
<i>Caesia parviflora</i>	pale grass-lily	
<i>Caladenia alata</i>	fairy orchid	
<i>Caladenia carnea</i> s.s.	pink fingers	
<i>Caladenia dilatata</i> s.l.	green-comb spider-orchid	
<i>Caladenia latifolia</i>	pink fairies	
<i>Caladenia phaeoclavia</i>	brown-clubbed spider-orchid	
<i>Caladenia pusilla</i>	tiny pink-fingers	
<i>Caladenia</i> spp.	caladenia	
<i>Caladenia tentaculata</i>	mantis orchid	
<i>Caladenia tessellata</i>	thick-lip spider-orchid	
<i>Caladenia valida</i>	robust spider-orchid	
<i>Caladenia vulgaris</i>	slender pink-fingers	
<i>Caleana major</i>	large duck-orchid	
<i>Callistemon pallidus</i>	lemon bottlebrush	
<i>Callistemon sieberi</i>	river bottlebrush	
<i>Callistemon subulatus</i>	dwarf bottlebrush	
<i>Callitriche muelleri</i>	round water-starwort	
<i>Callitriche</i> spp.	water starwort	
<i>Calocephalus lacteus</i>	milky beauty-heads	
<i>Calochilus robertsonii</i>	purple beard-orchid	
<i>Calochlaena dubia</i>	common ground-fern	
<i>Calypstrochaeta apiculata</i>	priest's-cap mitre-moss	
<i>Calystegia marginata</i>	forest bindweed	

Scientific Name	Common name	EPBC Status
<i>Calystegia sepium subsp. roseata</i>	large bindweed	
<i>Calystegia spp.</i>	bindweed	
<i>Calytrix spp.</i>	fringe myrtle	
<i>Calytrix tetragona</i>	common fringe-myrtle	
<i>Campylopus introflexus</i>	heath star moss	
<i>Cardamine gunnii s.l.</i>	common bitter-cress	
<i>Cardamine paucijuga s.l.</i>	annual bitter-cress	
<i>Carex appressa</i>	tall sedge	
<i>Carex breviculmis</i>	common grass-sedge	
<i>Carex fascicularis</i>	tassel sedge	
<i>Carex gaudichaudiana</i>	fen sedge	
<i>Carex incomitata</i>	hillside sedge	
<i>Carex inversa</i>	knob sedge	
<i>Carex longebrachiata</i>	bergalia tussock	
<i>Carex polyantha</i>	river sedge	
<i>Carex pumila</i>	strand sedge	
<i>Carex spp.</i>	sedge	
<i>Carex tereticaulis</i>	poong'ort	
<i>Carpobrotus glaucescens</i>	bluish pigface	
<i>Carpobrotus rossii</i>	karkalla	
<i>Cassinia aculeata</i>	common cassinia	
<i>Cassinia longifolia</i>	shiny cassinia	
<i>Cassinia maritima</i>	coast cassinia	
<i>Cassinia spp.</i>	cassinia	
<i>Cassinia trinerva</i>	three-nerved cassinia	
<i>Cassytha glabella</i>	slender dodder-laurel	
<i>Cassytha melantha</i>	coarse dodder-laurel	
<i>Cassytha phaeolasia</i>	rusty dodder-laurel	
<i>Cassytha pubescens s.s.</i>	downy dodder-laurel	
<i>Cassytha spp.</i>	dodder laurel	
<i>Casuarina spp.</i>	sheoak	
<i>Caustis flexuosa</i>	curly Wig	
<i>Caustis pentandra</i>	thick twist-rush	

Scientific Name	Common name	EPBC Status
<i>Caustis</i> spp.	twist rush	
<i>Celastrus australis</i>	staff climber	
<i>Centaurium spicatum</i>	spiked centaury	
<i>Centella cordifolia</i>	centella	
<i>Centella</i> spp.	centella	
<i>Centipeda cunninghamii</i>	common sneezeweed	
<i>Centrolepis strigosa</i> subsp. <i>strigosa</i>	hairy centrolepis	
<i>Cheilanthes austrotenuifolia</i>	green rock-fern	
<i>Cheilanthes sieberi</i> subsp. <i>sieberi</i>	narrow rock-fern	
<i>Chenopodiaceae</i> spp.	chenopod	
<i>Chenopodium glaucum</i>	glaucous goosefoot	
<i>Chenopodium pumilio</i>	clammy goosefoot	
<i>Chenopodium</i> spp.	goosefoot	
<i>Chiloglottis gunnii</i> s.l.	common bird-orchid	
<i>Chiloglottis reflexa</i>	autumn wasp-orchid	
<i>Chiloglottis trapeziformis</i>	dainty wasp-orchid	
<i>Chloris truncata</i>	windmill grass	
<i>Chrysocephalum semipapposum</i>	clustered everlasting	
<i>Cissus hypoglauca</i>	jungle grape	
<i>Cladium procerum</i>	leafy twig-sedge	
<i>Clematis aristata</i>	mountain clematis	
<i>Clematis glycinoides</i>	forest clematis	
<i>Clematis microphylla</i> s.l.	small-leaved clematis	
<i>Clematis microphylla</i> var. <i>microphylla</i> spp. agg.	small-leaved clematis	
<i>Clematis</i> spp.	clematis	
<i>Comesperma calymega</i>	blue-spike milkwort	
<i>Comesperma defoliatum</i>	leafless milkwort	
<i>Comesperma volubile</i>	love creeper	
<i>Convolvulus erubescens</i> spp. agg.	pink bindweed	
<i>Coprosma quadrifida</i>	prickly currant-bush	
<i>Correa reflexa</i>	common correa	
<i>Correa reflexa</i> var. <i>speciosa</i>	eastern correa	
<i>Corunastylis despectans</i>	sharp midge-orchid	

Scientific Name	Common name	EPBC Status
<i>Corybas aconitiflorus</i>	spurred helmet-orchid	
<i>Corybas diemenicus</i> s.l.	veined helmet-orchid	
<i>Corybas fimbriatus</i>	fringed helmet-orchid	
<i>Corybas incurvus</i>	slaty helmet-orchid	
<i>Corybas</i> spp.	helmet orchid	
<i>Corybas unguiculatus</i>	small pelican-orchid	
<i>Cotula australis</i>	common cotula	
<i>Cotula</i> spp.	cotula	
<i>Craspedia glauca</i> spp. agg.	common billy-buttons	
<i>Crassula decumbens</i> var. <i>decumbens</i>	spreading crassula	
<i>Crassula helmsii</i>	swamp crassula	
<i>Crassula peduncularis</i>	purple crassula	
<i>Crassula sieberiana</i> s.l.	sieber crassula	
<i>Crassula sieberiana</i> s.s.	sieber crassula	
<i>Crassula</i> spp.	crassula	
<i>Crassula tetramera</i>	Australian stonecrop	
<i>Cryptandra amara</i> s.s.	bitter cryptandra	
<i>Cryptostylis subulata</i>	large tongue-orchid	
<i>Cyathea australis</i>	rough tree-fern	
<i>Cymbonotus lawsonianus</i>	bear's-ear	
<i>Cymbonotus preissianus</i>	Austral bear's-ear	
<i>Cynodon dactylon</i>	couch	
<i>Cynoglossum australe</i>	Australian hound's-tongue	
<i>Cynoglossum</i> spp.	hound's tongue	
<i>Cynoglossum suaveolens</i>	sweet hound's-tongue	
<i>Cyperaceae</i> spp.	sedge	
<i>Cyperus lucidus</i>	leafy flat-sedge	
<i>Cyrtostylis reniformis</i>	small gnat-orchid	
<i>Cyrtostylis robusta</i>	large gnat-orchid	
<i>Dampiera</i> spp.	dampiera	
<i>Dampiera stricta</i>	blue dampiera	
<i>Danthonia</i> s.l. spp.	wallaby grass	
<i>Daucus glochidiatus</i>	Australian carrot	

Scientific Name	Common name	EPBC Status
<i>Daviesia latifolia</i>	hop bitter-pea	
<i>Daviesia leptophylla</i>	narrow-leaf bitter-pea	
<i>Daviesia ulicifolia</i>	gorse bitter-pea	
<i>Daviesia ulicifolia</i> subsp. <i>ulicifolia</i>	gorse bitter-pea	
<i>Dennstaedtia davallioides</i>	lacy ground-fern	
<i>Desmodium gunnii</i>	southern tick-trefoil	
<i>Desmodium</i> spp.	tick trefoil	
<i>Deyeuxia contracta</i>	compact bent-grass	
<i>Deyeuxia minor</i>	small bent-grass	
<i>Deyeuxia quadriseta</i>	reed bent-grass	
<i>Deyeuxia rodwayi</i>	Tasman bent-grass	
<i>Deyeuxia</i> spp.	bent-grass	
<i>Dianella brevicaulis</i>	small-flower flax-lily	
<i>Dianella caerulea</i> s.l.	paroo lily	
<i>Dianella longifolia</i> s.l.	pale flax-lily	
<i>Dianella revoluta</i> s.l.	black-anther flax-lily	
<i>Dianella revoluta</i> var. <i>revoluta</i> s.l.	black-anther flax-lily	
<i>Dianella</i> spp.	flax lily	
<i>Dianella tasmanica</i>	Tasman flax-lily	
<i>Dichelachne crinita</i>	long-hair plume-grass	
<i>Dichelachne rara</i>	common plume-grass	
<i>Dichelachne sciurea</i> spp. agg.	short-hair plume-grass	
<i>Dichelachne sieberiana</i>	rough plume-grass	
<i>Dichelachne</i> spp.	plume grass	
<i>Dichondra repens</i>	kidney-weed	
<i>Dicksonia antarctica</i>	soft tree-fern	
<i>Dicranoloma dicarpum</i>	pale fork-moss	
<i>Dillwynia cinerascens</i> s.l.	grey parrot-pea	
<i>Dillwynia cinerascens</i> s.s.	grey parrot-pea	
<i>Dillwynia glaberrima</i>	smooth parrot-pea	
<i>Dillwynia sericea</i>	showy parrot-pea	
<i>Dillwynia</i> spp.	parrot pea	
<i>Diplazium australe</i>	Austral lady-fern	



Scientific Name	Common name	EPBC Status
<i>Dipodium punctatum</i> s.l.	hyacinth orchid	
<i>Dipodium punctatum</i> s.s.	purple hyacinth-orchid	
<i>Dipodium roseum</i> s.s.	rosy hyacinth-orchid	
<i>Disphyma crassifolium</i> subsp. <i>clavellatum</i>	rounded noon-flower	
<i>Distichlis distichophylla</i>	Australian salt-grass	
<i>Diuris orientis</i>	wallflower orchid	
<i>Diuris pardina</i>	leopard orchid	
<i>Diuris punctata</i> var. <i>punctata</i>	purple diuris	
<i>Diuris sulphurea</i>	tiger orchid	
<i>Dodonaea viscosa</i> subsp. <i>angustissima</i>	slender hop-bush	
<i>Dodonaea viscosa</i> subsp. <i>spatulata</i>	sticky hop-bush	
<i>Doodia aspera</i>	prickly rasp-fern	
<i>Doodia australis</i>	common rasp-fern	
<i>Drosera macrantha</i>	climbing sundew	
<i>Drosera peltata</i>	pale sundew	
<i>Drosera peltata</i> subsp. <i>auriculata</i>	tall sundew	
<i>Drosera peltata</i> subsp. <i>peltata</i>	pale sundew	
<i>Drosera</i> spp.	sundew	
<i>Drymophila cyanocarpa</i>	turquoise berry	
<i>Echinopogon caespitosus</i> var. <i>caespitosus</i>	bushy hedgehog-grass	
<i>Echinopogon ovatus</i>	common hedgehog-grass	
<i>Echinopogon</i> spp.	hedgehog grass	
<i>Einadia hastata</i>	saloop	
<i>Einadia nutans</i> subsp. <i>nutans</i>	hodding saltbush	
<i>Einadia</i> spp.	einadia	
<i>Einadia trigonos</i> subsp. <i>trigonos</i>	lax goosefoot	
<i>Elaeocarpus reticulatus</i>	blue oliveberry	
<i>Eleocharis acuta</i>	common spike-sedge	
<i>Eleocharis atricha</i>	tuber spike-sedge	
<i>Eleocharis gracilis</i>	slender spike-sedge	
<i>Eleocharis pusilla</i>	small spike-sedge	
<i>Eleocharis sphacelata</i>	tall spike-sedge	
<i>Elymus scaber</i> var. <i>scaber</i>	common wheat-grass	

Scientific Name	Common name	EPBC Status
<i>Empodisma minus</i>	spreading rope-rush	
<i>Entolasia marginata</i>	bordered panic	
<i>Epacris impressa</i>	common heath	
<i>Epacris obtusifolia</i>	blunt-leaf heath	
<i>Epilobium billardierianum</i>	variable willow-herb	
<i>Epilobium billardierianum</i> subsp. <i>billardierianum</i>	smooth willow-herb	
<i>Eragrostis</i> spp.	love grass	
<i>Eriochilus cucullatus</i>	Parson's bands	
<i>Eucalyptus</i> aff. <i>willisii</i> (Gippsland Lakes)	Gippsland Lakes peppermint	
<i>Eucalyptus angophoroides</i>	apple box	
<i>Eucalyptus baueriana</i>	blue box	
<i>Eucalyptus bosistoana</i>	coast grey-box	
<i>Eucalyptus bridgesiana</i> s.l.	but but	
<i>Eucalyptus bridgesiana</i> s.s.	but but	
<i>Eucalyptus camaldulensis</i>	river red-gum	
<i>Eucalyptus cephalocarpa</i> s.s.	mealy stringybark	
<i>Eucalyptus consideniana</i>	yertchuk	
<i>Eucalyptus conspicua</i>	silver swamp stringybark	
<i>Eucalyptus croajingolensis</i>	Gippsland peppermint	
<i>Eucalyptus cypellocarpa</i>	mountain grey-gum	
<i>Eucalyptus elata</i>	river peppermint	
<i>Eucalyptus globoidea</i>	white stringybark	
<i>Eucalyptus globulus</i> subsp. <i>bicostata</i>	eurabbie	
<i>Eucalyptus globulus</i> subsp. <i>pseudoglobulus</i>	Gippsland blue-gum	
<i>Eucalyptus melliodora</i>	yellow box	
<i>Eucalyptus muelleriana</i>	yellow stringybark	
<i>Eucalyptus obliqua</i>	messmate stringybark	
<i>Eucalyptus ovata</i>	swamp gum	
<i>Eucalyptus ovata</i> var. <i>ovata</i>	swamp gum	
<i>Eucalyptus pauciflora</i> subsp. <i>pauciflora</i>	white sallee	
<i>Eucalyptus polyanthemos</i>	red box	
<i>Eucalyptus polyanthemos</i> subsp. <i>vestita</i>	red box	
<i>Eucalyptus sieberi</i>	silvertop ash	

Scientific Name	Common name	EPBC Status
<i>Eucalyptus</i> spp.	eucalypt	
<i>Eucalyptus tereticornis</i> subsp. <i>mediana</i>	Gippsland red-gum	
<i>Eucalyptus tricarpa</i>	red ironbark	
<i>Eucalyptus tricarpa</i> subsp. <i>tricarpa</i>	red ironbark	
<i>Eucalyptus viminalis</i>	mannan gum	
<i>Eucalyptus viminalis</i> subsp. <i>pyroriana</i>	coast manna-gum	
<i>Eucalyptus X williamsonii</i>	mallacoota gum	
<i>Euchiton collinus</i> s.l.	clustered/creeping cudweed	
<i>Euchiton collinus</i> s.s.	creeping cudweed	
<i>Euchiton involucratus</i> s.l.	common cudweed	
<i>Euchiton involucratus</i> s.s.	star cudweed	
<i>Euchiton sphaericus</i>	annual cudweed	
<i>Euchiton</i> spp.	cudweed	
<i>Eupomatia laurina</i>	bolwarra	
<i>Euryomyrtus ramosissima</i> subsp. <i>prostrata</i>	Nnodding baeckea	
<i>Eustrephus latifolius</i>	wombat berry	
<i>Exocarpos cupressiformis</i>	cherry ballart	
<i>Exocarpos</i> spp.	ballart	
<i>Festuca</i> spp.	fescue	
<i>Ficinia nodosa</i>	knobby club-sedge	
<i>Ficus</i> spp.	fig	
<i>Fissidens curvatus</i>	Portuguese pocket-moss	
<i>Fissidens taylorii</i>	pygmy pocket-moss	
<i>Gahnia clarkei</i>	tall saw-sedge	
<i>Gahnia filum</i>	chaffy saw-sedge	
<i>Gahnia melanocarpa</i>	black-fruit saw-sedge	
<i>Gahnia radula</i>	thatch saw-sedge	
<i>Gahnia sieberiana</i>	red-fruit saw-sedge	
<i>Gahnia</i> spp.	saw sedge	
<i>Gahnia trifida</i>	coast saw-sedge	
<i>Galium australe</i>	tangled bedstraw	
<i>Galium binifolium</i>	reflexed bedstraw	
<i>Galium gaudichaudii</i>	rough bedstraw	

Scientific Name	Common name	EPBC Status
<i>Galium migrans</i>	wandering bedstraw	
<i>Galium propinquum</i>	Maori bedstraw	
<i>Galium spp.</i>	bedstraw	
<i>Gastrodia spp.</i>	potato orchid	
<i>Geitonoplesium cymosum</i>	scrambling lily	
<i>Gemmabryum sauteri</i>	Sauter's thread-moss	
<i>Geranium gardneri</i>	rough crane's-bill	
<i>Geranium homeanum</i>	rainforest crane's-bill	
<i>Geranium potentilloides</i>	soft crane's-bill	
<i>Geranium potentilloides</i> var. <i>potentilloides</i>	soft crane's-bill	
<i>Geranium retrorsum</i> s.l.	grassland crane's-bill	
<i>Geranium solanderi</i> s.l.	Austral crane's-bill	
<i>Geranium</i> sp. 2	variable crane's-bill	
<i>Geranium spp.</i>	crane's bill	
<i>Gleichenia microphylla</i>	scrambling coral-fern	
<i>Glossodia major</i>	wax-lip orchid	
<i>Glyceria australis</i>	Australian sweet-grass	
<i>Glycine clandestina</i>	twining glycine	
<i>Glycine microphylla</i>	small-leaf glycine	
<i>Glycine spp.</i>	glycine	
<i>Glycine tabacina</i> s.l.	variable glycine	
<i>Glycine tabacina</i> s.s.	variable glycine	
<i>Gnaphalium indutum</i>	tiny cudweed	
<i>Gnaphalium spp.</i>	cudweed	
<i>Gompholobium huegelii</i>	common wedge-pea	
<i>Gonocarpus humilis</i>	shade raspwort	
<i>Gonocarpus micranthus</i>	creeping raspwort	
<i>Gonocarpus micranthus</i> subsp. <i>micranthus</i>	creeping raspwort	
<i>Gonocarpus spp.</i>	raspwort	
<i>Gonocarpus tetragynus</i>	common raspwort	
<i>Gonocarpus teucrioides</i> s.l.	germander raspwort	
<i>Gonocarpus teucrioides</i> s.s.	germander raspwort	
<i>Goodenia humilis</i>	swamp goodenia	

Scientific Name	Common name	EPBC Status
<i>Goodenia ovata</i>	hop goodenia	
<i>Goodenia paniculata</i>	branched goodenia	
<i>Gratiola pedunculata</i>	stalked brooklime	
<i>Gratiola peruviana</i>	Austral brooklime	
<i>Gratiola peruviana</i>	Austral brooklime	
<i>Grevillea celata</i>	Colquhoun grevillea	Vulnerable
<i>Grevillea chrysophaea</i>	golden grevillea	
<i>Grevillea lanigera</i>	woolly grevillea	
<i>Gymnostomum calcareum</i>	lime cave-moss	
<i>Gynatrix pulchella</i> s.l.	hemp bush	
<i>Hakea decurrens</i> subsp. <i>physocarpa</i>	bushy needlewood	
<i>Hakea eriantha</i>	tree hakea	
<i>Hakea teretifolia</i> subsp. <i>hirsuta</i>	dagger hakea	
<i>Hakea ulicina</i>	furze hakea	
<i>Haloragis brownii</i>	swamp raspwort	
<i>Halosarcia pergranulata</i> subsp. <i>pergranulata</i>	blackseed glasswort	
<i>Halosarcia</i> spp.	glasswort	
<i>Hardenbergia violacea</i>	purple coral-pea	
<i>Helichrysum leucopsideum</i>	satin everlasting	
<i>Helichrysum rutidolepis</i> s.l.	pale everlasting	
<i>Helichrysum rutidolepis</i> s.s.	pale everlasting	
<i>Helichrysum scorpioides</i>	button everlasting	
<i>Helichrysum</i> spp.	everlasting	
<i>Hemarthria uncinata</i> var. <i>uncinata</i>	mat grass	
<i>Hemichroa pentandra</i>	trailing hemichroa	
<i>Hibbertia acicularis</i>	prickly Guinea-flower	
<i>Hibbertia aspera</i> s.l.	rough Guinea-flower	
<i>Hibbertia aspera</i> subsp. <i>aspera</i> s.s.	rough Guinea-flower	
<i>Hibbertia calycina</i>	juniper Guinea-flower	
<i>Hibbertia empetrifolia</i> s.l.	tangled Guinea-flower	
<i>Hibbertia empetrifolia</i> s.l.	tangled Guinea-flower	
<i>Hibbertia fasciculata</i> var. <i>prostrata</i>	bundled Guinea-flower	
<i>Hibbertia obtusifolia</i>	grey Guinea-flower	

Scientific Name	Common name	EPBC Status
<i>Hibbertia riparia</i>	erect Guinea-flower	
<i>Hibbertia</i> spp.	Guinea-flower	
<i>Hibbertia stricta</i> s.l.	upright Guinea-flower	
<i>Hibbertia virgata</i>	twiggy Guinea-flower	
<i>Histiopteris incisa</i>	bat's wing fern	
<i>Howittia trilocularis</i>	blue wowittia	
<i>Hydrocotyle acutiloba</i>	broad-leaf pennywort	
<i>Hydrocotyle callicarpa</i>	small pennywort	
<i>Hydrocotyle foveolata</i>	yellow pennywort	
<i>Hydrocotyle hirta</i>	hairy pennywort	
<i>Hydrocotyle laxiflora</i>	stinking pennywort	
<i>Hydrocotyle pterocarpa</i>	wing pennywort	
<i>Hydrocotyle sibthorpioides</i>	shining pennywort	
<i>Hydrocotyle</i> spp.	pennywort	
<i>Hydrocotyle tripartita</i>	slender pennywort	
<i>Hydrocotyle verticillata</i>	shield pennywort	
<i>Hymenophyllum cupressiforme</i>	common filmy-fern	
<i>Hypericum gramineum</i>	small St John's wort	
<i>Hypericum japonicum</i>	matted St John's wort	
<i>Hypnum cupressiforme</i>	common plait-moss	
<i>Hypolaena fastigiata</i>	tassel rope-rush	
<i>Hypolepis glandulifera</i>	downy ground-fern	
<i>Hypolepis muelleri</i>	harsh ground-fern	
<i>Hypolepis rugosula</i>	ruddy ground-fern	
<i>Hypolepis</i> spp.	ground-fern	
<i>Hypoxis hygrometrica</i>	golden weather-glass	
<i>Hypoxis hygrometrica</i> var. <i>villosisepala</i>	golden weather-glass	
<i>Imperata cylindrica</i>	blady grass	
<i>Indigofera australis</i>	Austral indigo	
<i>Isolepis cernua</i>	nodding club-sedge	
<i>Isolepis cernua</i> var. <i>cernua</i>	nodding club-sedge	
<i>Isolepis cernua</i> var. <i>platycarpa</i>	broad-fruit club-sedge	
<i>Isolepis fluitans</i>	floating club-sedge	

Scientific Name	Common name	EPBC Status
<i>Isolepis fluitans</i> var. <i>fluitans</i>	floating club-sedge	
<i>Isolepis fluitans</i> var. <i>lenticularis</i>	floating club-sedge	
<i>Isolepis hookeriana</i>	grassy club-sedge	
<i>Isolepis inundata</i>	swamp club-sedge	
<i>Isolepis marginata</i>	little club-sedge	
<i>Isolepis</i> spp.	club-sedge	
<i>Isotoma fluviatilis</i> subsp. <i>australis</i>	swamp isotome	
<i>Joycea pallida</i>	silvertop wallaby-grass	
<i>Juncus australis</i>	Austral rush	
<i>Juncus bufonius</i>	toad rush	
<i>Juncus caespiticius</i>	grassy rush	
<i>Juncus continuus</i>	pithy rush	
<i>Juncus flavidus</i>	gold rush	
<i>Juncus fockei</i>	slender joint-leaf rush	
<i>Juncus gregiflorus</i>	green rush	
<i>Juncus ingens</i>	giant rush	
<i>Juncus ingens</i>	giant rush	
<i>Juncus kraussii</i> subsp. <i>australiensis</i>	sea rush	
<i>Juncus pallidus</i>	pale rush	
<i>Juncus pauciflorus</i>	loose-flower rush	
<i>Juncus planifolius</i>	broad-leaf rush	
<i>Juncus prismatocarpus</i>	branching rush	
<i>Juncus procerus</i>	tall rush	
<i>Juncus revolutus</i>	creeping rush	
<i>Juncus sarophorus</i>	broom rush	
<i>Juncus</i> spp.	rush	
<i>Juncus subsecundus</i>	finger rush	
<i>Kennedia prostrata</i>	running postman	
<i>Korthalsella rubra</i> subsp. <i>rubra</i>	jointed mistletoe	
<i>Kunzea ericoides</i> spp. agg.	burgan	
<i>Lachnagrostis aemula</i> s.l.	leafy blown-grass	
<i>Lachnagrostis billardierei</i> s.l.	coast blown-grass	
<i>Lachnagrostis billardierei</i> subsp. <i>billardierei</i>	coast blown-grass	

Scientific Name	Common name	EPBC Status
<i>Lachnagrostis filiformis</i>	common blown-grass	
<i>Lachnagrostis filiformis</i> var. 1	common blown-grass	
<i>Lachnagrostis punicea</i> subsp. <i>filifolia</i>	purple blown-grass	
<i>Lachnagrostis robusta</i>	salt blown-grass	
<i>Lagenophora gracilis</i>	slender bottle-daisy	
<i>Lagenophora</i> spp.	bottle-daisy	
<i>Lagenophora stipitata</i>	common bottle-daisy	
<i>Landoltia punctata</i>	thin duckweed	
<i>Lasiopetalum macrophyllum</i>	shrubby velvet-bush	
<i>Lastreopsis acuminata</i>	shiny shield-fern	
<i>Lawrencia spicata</i>	salt lawrencia	
<i>Laxmannia orientalis</i>	dwarf wire-lily	
<i>Lemna disperma</i>	common duckweed	
<i>Lepidium foliosum</i>	leafy peppergrass	
<i>Lepidium pseudotasmanicum</i>	shade peppergrass	
<i>Lepidium</i> spp.	peppergrass	
<i>Lepidosperma concavum</i>	sandhill sword-sedge	
<i>Lepidosperma elatius</i>	tall sword-sedge	
<i>Lepidosperma gladiatum</i>	coast sword-sedge	
<i>Lepidosperma laterale</i>	variable sword-sedge	
<i>Lepidosperma laterale</i> var. <i>laterale</i>	variable sword-sedge	
<i>Lepidosperma longitudinale</i>	pithy sword-sedge	
<i>Lepidosperma</i> spp.	sword-sedge	
<i>Lepilaena</i> spp.	water mat	
<i>Leptinella longipes</i>	coast cotula	
<i>Leptinella reptans</i> s.l.	creeping cotula	
<i>Leptinella reptans</i> s.s.	creeping cotula	
<i>Leptocarpus tenax</i>	slender twine-rush	
<i>Leptodictyum riparium</i>	marsh feather-moss	
<i>Leptorhynchus nitidulus</i>	shiny buttons	
<i>Leptospermum continentale</i>	prickly tea-tree	
<i>Leptospermum emarginatum</i>	twin-flower tea-tree	
<i>Leptospermum grandifolium</i>	mountain tea-tree	



Scientific Name	Common name	EPBC Status
<i>Leptospermum lanigerum</i>	woolly tea-tree	
<i>Leptospermum myrsinoides</i>	heath tea-tree	
<i>Leptospermum</i> spp.	tea-tree	
<i>Leptostigma reptans</i>	dwarf nertera	
<i>Leucophyta brownii</i>	cushion bush	
<i>Leucopogon ericoides</i>	pink beard-heath	
<i>Leucopogon juniperinus</i>	long-flower beard-heath	
<i>Leucopogon parviflorus</i>	coast beard-heath	
<i>Leucopogon</i> spp.	beard-heath	
<i>Leucopogon virgatus</i>	common beard-heath	
<i>Leucopogon virgatus</i> var. <i>virgatus</i>	common beard-heath	
<i>Lilaeopsis polyantha</i>	Australian lilaeopsis	
<i>Lindsaea linearis</i>	screw fern	
<i>Linum marginale</i>	native flax	
<i>Lissanthe strigosa</i> subsp. <i>subulata</i>	peach heath	
<i>Lobelia anceps</i>	angled lobelia	
<i>Lobelia</i> spp.	lobelia	
<i>Lomandra confertifolia</i> subsp. <i>leptostachya</i>	slender mat-rush	
<i>Lomandra filiformis</i>	wattle mat-rush	
<i>Lomandra filiformis</i> subsp. <i>filiformis</i>	wattle mat-rush	
<i>Lomandra glauca</i> s.s.	blue mat-rush	
<i>Lomandra longifolia</i>	spiny-headed mat-rush	
<i>Lomandra longifolia</i> subsp. <i>exilis</i>	cluster-headed mat-rush	
<i>Lomandra longifolia</i> subsp. <i>longifolia</i>	spiny-headed mat-rush	
<i>Lomandra nana</i>	dwarf mat-rush	
<i>Lomandra</i> spp.	mat-rush	
<i>Lomatia ilicifolia</i>	holly lomatia	
<i>Lotus australis</i> var. <i>australis</i>	Austral trefoil	
<i>Ludwigia peploides</i> subsp. <i>montevidensis</i>	clove-strip	
<i>Luzula campestris</i> spp. agg.	field woodrush	
<i>Luzula meridionalis</i>	common woodrush	
<i>Luzula meridionalis</i> var. <i>flaccida</i>	common woodrush	
<i>Luzula meridionalis</i> var. <i>meridionalis</i>	common woodrush	

Scientific Name	Common name	EPBC Status
<i>Luzula spp.</i>	woodrush	
<i>Lycopus australis</i>	Australian gipsywort	
<i>Lyperanthus suaveolens</i>	brown-beaks	
<i>Lysimachia japonica</i>	creeping loosestrife	
<i>Lythrum hyssopifolia</i>	small loosestrife	
<i>Marsdenia flavescens</i>	yellow milk-vine	
<i>Marsdenia rostrata</i>	milk-vine	
<i>Marsilea hirsuta</i>	short-fruit nardoo	
<i>Mazus pumilio</i>	swamp mazus	
<i>Melaleuca ericifolia</i>	swamp paperbark	
<i>Melaleuca parvistaminea</i>	rough-barked honey-myrtle	
<i>Melaleuca squarrosa</i>	scented paperbark	
<i>Melicytus dentatus s.l.</i>	tree violet	
<i>Melicytus dentatus s.s.</i>	tree violet	
<i>Mentha diemenica</i>	slender mint	
<i>Micrantheum hexandrum</i>	box micrantheum	
<i>Microlaena stipoides var. stipoides</i>	weeping grass	
<i>Microseris scapigera spp. agg.</i>	yam daisy	
<i>Microsorium pustulatum subsp. pustulatum</i>	kangaroo fern	
<i>Microsorium scandens</i>	fragrant fern	
<i>Microtis arenaria</i>	notched onion-orchid	
<i>Microtis parviflora</i>	slender onion-orchid	
<i>Microtis unifolia</i>	common onion-orchid	
<i>Mimulus repens</i>	creeping monkey-flower	
<i>Mimulus spp.</i>	monkey flower	
<i>Monotoca elliptica s.l.</i>	tree broom-heath	
<i>Monotoca elliptica s.s.</i>	tree broom-heath	
<i>Monotoca scoparia</i>	prickly broom-heath	
<i>Morinda jasminoides</i>	jasmine morinda	
<i>Muehlenbeckia adpressa</i>	climbing lignum	
<i>Muellerina celastroides</i>	coast mistletoe	
<i>Muellerina eucalyptoides</i>	creeping mistletoe	
<i>Myosotis australis</i>	Austral forget-me-not	

Scientific Name	Common name	EPBC Status
<i>Myriophyllum caput-medusae</i>	coarse water-milfoil	
<i>Myriophyllum crispatum</i>	upright water-milfoil	
<i>Myriophyllum simulans</i>	amphibious water-milfoil	
<i>Myriophyllum verrucosum</i>	red water-milfoil	
<i>Myrsine howittiana</i>	mutton-wood	
<i>Neckera pennata</i>	feathered neckera	
<i>Neopaxia australasica</i>	white rurslane	
<i>Notelaea venosa</i>	large mock-olive	
<i>Notodanthonia longifolia</i>	long-leaf wallaby-grass	
<i>Notodanthonia semiannularis</i>	wetland wallaby-grass	
<i>Olearia argophylla</i>	musk daisy-bush	
<i>Olearia axillaris</i>	coast daisy-Bush	
<i>Olearia glutinosa</i>	sticky daisy-bush	
<i>Olearia lirata</i>	snowy daisy-bush	
<i>Olearia phlogopappa</i>	dusty daisy-bush	
<i>Olearia ramulosa</i> var. <i>ramulosa</i>	twiggy daisy-bush	
<i>Olearia viscosa</i>	viscid daisy-bush	
<i>Opercularia aspera</i>	coarse stinkweed	
<i>Opercularia hispida</i>	hairy stinkweed	
<i>Opercularia</i> spp.	stinkweed	
<i>Opercularia varia</i>	variable stinkweed	
<i>Ophioglossum lusitanicum</i>	Austral adder's-tongue	
<i>Oplismenus hirtellus</i>	Australian basket-grass	
<i>Orthoceras strictum</i>	horned orchid	
<i>Oxalis corniculata</i> s.l.	yellow wood-sorrel	
<i>Oxalis exilis</i>	shady wood-sorrel	
<i>Oxalis perennans</i>	grassland wood-sorrel	
<i>Oxalis radicata</i>	stout-rooted wood-sorrel	
<i>Oxalis rubens</i>	dune wood-sorrel	
<i>Oxalis</i> spp.	wood sorrel	
<i>Ozothamnus argophyllus</i>	spicy everlasting	
<i>Ozothamnus conditus</i>	pepper everlasting	
<i>Ozothamnus cuneifolius</i>	wedge-leaf everlasting	

Scientific Name	Common name	EPBC Status
<i>Ozothamnus ferrugineus</i>	tree everlasting	
<i>Ozothamnus</i> spp.	everlasting	
<i>Ozothamnus turbinatus</i>	coast everlasting	
<i>Pandorea pandorana</i>	Wonga vine	
<i>Papillaria flavolimbata</i>	festoon moss	
<i>Paracaleana minor</i>	small duck-orchid	
<i>Parietaria debilis</i> s.l.	shade pellitory	
<i>Parietaria debilis</i> s.s.	shade pellitory	
<i>Parsonsia brownii</i>	twining silkpod	
<i>Pelargonium australe</i>	Austral stork's-bill	
<i>Pelargonium inodorum</i>	kopata	
<i>Pelargonium</i> spp.	stork's bill	
<i>Pellaea falcata</i> s.l.	sickle fern	
<i>Pellaea falcata</i> s.s.	sickle fern	
<i>Pentapogon quadrifidus</i> var. <i>quadrifidus</i>	five-awned spear-grass	
<i>Persicaria decipiens</i>	slender knotweed	
<i>Persicaria hydropiper</i>	water pepper	
<i>Persicaria lapathifolia</i>	pale knotweed	
<i>Persicaria praetermissa</i>	spotted knotweed	
<i>Persicaria subsessilis</i>	hairy knotweed	
<i>Persoonia juniperina</i>	prickly geebung	
<i>Persoonia linearis</i>	narrow-leaf geebung	
<i>Phebalium squamulosum</i>	forest phebalium	
<i>Philydrum lanuginosum</i>	woolly waterlily	
<i>Phragmites australis</i>	common reed	
<i>Phyllanthus gunnii</i>	shrubby spurge	
<i>Phyllanthus hirtellus</i>	thyme spurge	
<i>Pimelea axiflora</i>	bootlace bush	
<i>Pimelea axiflora</i> subsp. <i>axiflora</i>	bootlace bush	
<i>Pimelea curviflora</i> s.s.	curved rice-flower	
<i>Pimelea glauca</i>	smooth rice-flower	
<i>Pimelea humilis</i>	common rice-flower	
<i>Pimelea linifolia</i> subsp. <i>linifolia</i>	slender rice-flower	

Scientific Name	Common name	EPBC Status
<i>Pimelea serpyllifolia</i> subsp. <i>serpyllifolia</i>	thyme rice-flower	
<i>Pimelea</i> spp.	rice flower	
<i>Pittosporum</i> spp.	pittosporum	
<i>Plantago debilis</i>	shade plantain	
<i>Plantago gaudichaudii</i>	narrow plantain	
<i>Plantago</i> spp.	plantain	
<i>Plantago varia</i>	variable plantain	
<i>Platylobium formosum</i>	handsome flat-pea	
<i>Platylobium obtusangulum</i>	common flat-pea	
<i>Platysace ericoides</i>	heath platysace	
<i>Platysace lanceolata</i>	shrubby platysace	
<i>Plectranthus parviflorus</i>	cockspur flower	
<i>Poa australis</i> spp. agg.	tussock grass	
<i>Poa clelandii</i>	Noah's Ark	
<i>Poa ensiformis</i>	sword tussock-grass	
<i>Poa fordeana</i>	forde poa	
<i>Poa labillardierei</i>	common tussock-grass	
<i>Poa labillardierei</i> var. <i>labillardierei</i>	common tussock-grass	
<i>Poa morrisii</i>	soft tussock-grass	
<i>Poa poiformis</i>	coast tussock-grass	
<i>Poa poiformis</i> var. <i>poiformis</i>	coast tussock-grass	
<i>Poa sieberiana</i>	grey tussock-grass	
<i>Poa sieberiana</i> var. <i>hirtella</i>	grey tussock-grass	
<i>Poa sieberiana</i> var. <i>sieberiana</i>	grey tussock-grass	
<i>Poa</i> spp.	tussock grass	
<i>Poa tenera</i>	slender tussock-grass	
<i>Polystichum proliferum</i>	mother shield-fern	
<i>Polytrichum juniperinum</i>	juniper haircap	
<i>Pomaderris aspera</i>	hazel pomaderris	
<i>Pomaderris elliptica</i> var. <i>elliptica</i>	smooth pomaderris	
<i>Pomaderris eriocephala</i>	woolly-head pomaderris	
<i>Pomaderris ferruginea</i>	rusty pomaderris	
<i>Pomaderris oraria</i> subsp. <i>calcicola</i>	limestone pomaderris	

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<i>Pomaderris paniculosa</i> subsp. <i>paralia</i>	coast pomaderris	
<i>Pomaderris prunifolia</i> var. <i>prunifolia</i>	prunus pomaderris	
<i>Pomax umbellata</i>	pomax	
<i>Poranthera microphylla</i> s.l.	small poranthera	
<i>Potamogeton tricarinatus</i> s.l.	floating pondweed	
<i>Prasophyllum correctum</i>	gaping leek-orchid	Endangered
<i>Prasophyllum elatum</i>	tall leek-orchid	
<i>Prasophyllum frenchii</i>	maroon Leek-orchid	Endangered
<i>Prasophyllum</i> spp.	leek orchid	
<i>Prostanthera lasianthos</i>	Victorian Christmas-bush	
<i>Pseudanthus ovalifolius</i>	oval-leaf pseudanthus	
<i>Pseudognaphalium luteoalbum</i>	jersey cudweed	
<i>Pteridium esculentum</i>	Austral bracken	
<i>Pteris tremula</i>	tender brake	
<i>Pteris umbrosa</i>	jungle brake	
<i>Pterostylis alpina</i> s.s.	mountain greenhood	
<i>Pterostylis alveata</i>	coastal greenhood	
<i>Pterostylis concinna</i>	trim greenhood	
<i>Pterostylis curta</i>	blunt greenhood	
<i>Pterostylis falcata</i> s.s.	large sickle greenhood	
<i>Pterostylis fischii</i>	Fisch's greenhood	
<i>Pterostylis grandiflora</i>	cobra greenhood	
<i>Pterostylis longifolia</i> s.l.	tall greenhood	
<i>Pterostylis nana</i>	dwarf greenhood	
<i>Pterostylis nutans</i>	nodding greenhood	
<i>Pterostylis parviflora</i> s.l.	tiny greenhood	
<i>Pterostylis pedunculata</i>	maroonhood	
<i>Pterostylis</i> spp.	greenhood	
<i>Ptychomitrium mittenii</i>	pincushion	
<i>Pultenaea daphnoides</i>	large-leaf bush-pea	
<i>Pultenaea dentata</i>	clustered bush-pea	
<i>Pultenaea humilis</i>	dwarf bush-pea	
<i>Pultenaea retusa</i>	blunt bush-pea	

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<i>Pyrorchis nigricans</i>	red-beaks	
<i>Pyrrosia rupestris</i>	rock felt-fern	
<i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>	common carpet-moss	
<i>Ranunculus amphitrichus</i>	small river buttercup	
<i>Ranunculus inundatus</i>	river buttercup	
<i>Ranunculus plebeius</i> s.l.	forest/hairy buttercup	
<i>Ranunculus plebeius</i> s.s.	forest buttercup	
<i>Ranunculus sessiliflorus</i>	annual buttercup	
<i>Ranunculus sessiliflorus</i> var. <i>sessiliflorus</i>	annual buttercup	
<i>Ranunculus</i> spp.	buttercup	
<i>Rhagodia candolleana</i> subsp. <i>candolleana</i>	seaberry saltbush	
<i>Rhagodia</i> spp.	saltbush	
<i>Rhytidosporum procumbens</i>	white marianth	
<i>Ricinocarpos pinifolius</i>	wedding bush	
<i>Rubus parvifolius</i>	small-leaf bramble	
<i>Rubus rosifolius</i> var. <i>rosifolius</i>	rose-leaf bramble	
<i>Rubus</i> spp.	bramble	
<i>Rulingia prostrata</i>	dwarf kerrawang	Endangered
<i>Rumex bidens</i>	mud dock	
<i>Rumex brownii</i>	slender dock	
<i>Rumex</i> spp.	dock	
<i>Ruppia megacarpa</i>	large-fruit tassel	
<i>Sambucus gaudichaudiana</i>	white elderberry	
<i>Samolus repens</i>	creeping brookweed	
<i>Sarcochilus australis</i>	butterfly orchid	
<i>Sarcocornia blackiana</i>	thick-head glasswort	
<i>Sarcocornia quinqueflora</i>	beaded glasswort	
<i>Sarcocornia quinqueflora</i> subsp. <i>quinqueflora</i>	beaded glasswort	
<i>Sarcocornia</i> spp.	glasswort	
<i>Sarcopetalum harveyanum</i>	pearl vine	
<i>Scaevola albida</i>	small-fruit fan-flower	
<i>Scaevola hookeri</i>	creeping fan-flower	
<i>Scaevola ramosissima</i>	hairy fan-flower	

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<i>Schizaea bifida</i> s.s.	forked comb-fern	
<i>Schoenoplectus pungens</i>	sharp club-sedge	
<i>Schoenoplectus tabernaemontani</i>	river club-sedge	
<i>Schoenus apogon</i>	common bog-sedge	
<i>Schoenus brevifolius</i>	zig-zag bog-sedge	
<i>Schoenus ericetorum</i>	heathy bog-sedge	
<i>Schoenus imberbis</i>	beardless bog-sedge	
<i>Schoenus maschalinus</i>	leafy bog-sedge	
<i>Schoenus nitens</i>	shiny bog-sedge	
<i>Schoenus</i> spp.	bog sedge	
<i>Scutellaria humilis</i>	dwarf skullcap	
<i>Sebaea ovata</i>	yellow sebaea	
<i>Selaginella uliginosa</i>	swamp selaginella	
<i>Selliera radicans</i>	shiny swamp-mat	
<i>Sematophyllum homomallum</i>	bronze signal-moss	
<i>Senecio biserratus</i>	jagged fireweed	
<i>Senecio glomeratus</i>	annual fireweed	
<i>Senecio hispidulus</i> s.l.	rough fireweed	
<i>Senecio hispidulus</i> s.s.	rough fireweed	
<i>Senecio linearifolius</i>	fireweed groundsel	
<i>Senecio minimus</i>	shrubby fireweed	
<i>Senecio pinnatifolius</i>	variable groundsel	
<i>Senecio quadridentatus</i>	cotton fireweed	
<i>Senecio spathulatus</i> s.l.	dune groundsel	
<i>Senecio</i> spp.	groundsel	
<i>Senecio squarrosus</i> s.s.	leafy fireweed	
<i>Senecio tenuiflorus</i> spp. agg.	slender fireweed	
<i>Senecio X orarius</i>	coast fireweed	
<i>Sicyos australis</i>	star cucumber	
<i>Sigesbeckia orientalis</i> subsp. <i>orientalis</i>	Indian weed	
<i>Smilax australis</i>	Austral sarsaparilla	
<i>Solanum aviculare</i>	kangaroo apple	
<i>Solanum laciniatum</i>	large kangaroo apple	



Scientific Name	Common name	EPBC Status
<i>Solanum opacum</i>	green-berry nightshade	
<i>Solanum prinophyllum</i>	forest nightshade	
<i>Solanum pungetium</i>	eastern nightshade	
<i>Solanum spp.</i>	nightshade	
<i>Solanum vescum</i>	gunyang	
<i>Solenogyne dominii</i>	smooth solenogyne	
<i>Solenogyne gunnii</i>	hairy solenogyne	
<i>Sonchus hydrophilus</i>	native sow-thistle	
<i>Spergularia marina s.l.</i>	salt sand-spurrey	
<i>Spergularia media s.l.</i>	coast sand-spurrey	
<i>Spergularia sp. 1</i>	native sea-spurrey	
<i>Sphaerolobium minus</i>	eastern globe-pea	
<i>Sphaerolobium vimineum s.l.</i>	leafless globe-pea	
<i>Sphaerolobium vimineum s.s.</i>	leafless globe-pea	
<i>Sphagnum novozelandicum</i>	peat moss	
<i>Spinifex sericeus</i>	hairy spinifex	
<i>Sporobolus virginicus</i>	salt couch	
<i>Sprengelia incarnata</i>	pink swamp-heath	
<i>Spyridium parvifolium</i>	dusty miller	
<i>Stackhousia monogyna</i>	creamy stackhousia	
<i>Stackhousia spathulata</i>	coast stackhousia	
<i>Stackhousia spp.</i>	stackhousia	
<i>Stellaria angustifolia</i>	swamp starwort	
<i>Stellaria flaccida</i>	forest starwort	
<i>Stellaria multiflora</i>	rayless starwort	
<i>Stellaria pungens</i>	prickly starwort	
<i>Stellaria spp.</i>	starwort	
<i>Stuartina muelleri</i>	spoon cudweed	
<i>Stylidium armeria</i>	common triggerplant	
<i>Stylidium graminifolium s.s.</i>	grass triggerplant	
<i>Stylidium inundatum</i>	hundreds and thousands	
<i>Stylidium spp.</i>	trigger plant	
<i>Suaeda australis</i>	Austral seablite	

Scientific Name	Common name	EPBC Status
<i>Suaeda</i> spp.	seablite	
<i>Taraxacum</i> spp.	dandelion	
<i>Tetragonia implexicoma</i>	bower spinach	
<i>Tetragonia</i> spp.	native spinach	
<i>Tetragonia tetragonioides</i>	New Zealand spinach	
<i>Tetrarrhena juncea</i>	forest wire-grass	
<i>Tetradlea ciliata</i>	pink-bells	
<i>Tetradlea pilosa</i>	hairy pink-bells	
<i>Tetradlea pilosa</i> subsp. <i>latifolia</i>	hairy pink-bells	
<i>Thelionema</i> spp.	tufted lily	
<i>Thelymitra arenaria</i>	forest sun-orchid	
<i>Thelymitra aristata</i>	great sun-orchid	
<i>Thelymitra circumsepta</i>	naked sun-orchid	
<i>Thelymitra epipactoides</i>	metallic sun-orchid	Endangered
<i>Thelymitra flexuosa</i>	twisted sun-orchid	
<i>Thelymitra ixioides</i> s.s.	spotted sun-orchid	
<i>Thelymitra nuda</i>	plain sun-orchid	
<i>Thelymitra planicola</i>	shy sun-orchid	
<i>Thelymitra rubra</i>	salmon sun-orchid	
<i>Thelymitra</i> spp.	sun orchid	
<i>Themeda triandra</i>	kangaroo grass	
<i>Thryptomene micrantha</i>	ribbed thryptomene	
<i>Thuidiopsis furfurosa</i>	golden weft-moss	
<i>Thysanotus patersonii</i>	twining fringe-lily	
<i>Tricoryne elatior</i>	yellow rush-lily	
<i>Triglochin microtuberosa</i>	eastern water-ribbons	
<i>Triglochin minutissima</i>	tiny arrowgrass	
<i>Triglochin mucronata</i>	prickly arrowgrass	
<i>Triglochin procera</i> s.l.	water ribbons	
<i>Triglochin procera</i> s.s.	common water-ribbons	
<i>Triglochin</i> spp.	water ribbons	
<i>Triglochin striata</i>	streaked arrowgrass	
<i>Triquetrella papillata</i>	common twine-moss	

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<i>Tylophora barbata</i>	bearded tylophora	
<i>Typha domingensis</i>	narrow-leaf cumbungi	
<i>Typha orientalis</i>	broad-leaf cumbungi	
<i>Typha</i> spp.	bulrush	
<i>Urtica incisa</i>	scrub nettle	
<i>Veronica calycina</i>	hairy speedwell	
<i>Veronica gracilis</i>	slender speedwell	
<i>Veronica plebeia</i>	trailing speedwell	
<i>Veronica</i> spp.	speedwell	
<i>Villarsia exaltata</i>	erect marsh-flower	
<i>Villarsia reniformis</i>	running marsh-flower	
<i>Viminaria juncea</i>	golden spray	
<i>Viola hederacea</i> sensu Entwisle (1996)	ivy-leaf violet	
<i>Viola hederacea</i> sensu Willis (1972)	ivy-leaf violet	
<i>Vittadinia cuneata</i> var. <i>cuneata</i>	fuzzy New Holland daisy	
<i>Wahlenbergia gracilentia</i> s.l.	annual bluebell	
<i>Wahlenbergia gracilentia</i> s.s.	hairy annual-bluebell	
<i>Wahlenbergia gracilis</i>	sprawling bluebell	
<i>Wahlenbergia graniticola</i> s.l.	granite bluebell	
<i>Wahlenbergia gymnoclada</i>	naked bluebell	
<i>Wahlenbergia multicaulis</i>	branching bluebell	
<i>Wahlenbergia</i> spp.	bluebell	
<i>Wahlenbergia stricta</i> subsp. <i>stricta</i>	tall bluebell	
<i>Westringia glabra</i>	violet westringia	
<i>Wijkia extenuata</i>	spear moss	
<i>Wilsonia backhousei</i>	narrow-leaf wilsonia	
<i>Wurmbea dioica</i>	common early nancy	
<i>Xanthorrhoea australis</i>	Austral grass-tree	
<i>Xanthorrhoea minor</i> subsp. <i>lutea</i>	small grass-tree	
<i>Xanthorrhoea resinosa</i>	spear grass-tree	
<i>Xanthorrhoea</i> spp.	grass tree	
<i>Xanthosia</i> spp.	xanthosia	
<i>Xerochrysum bracteatum</i>	golden everlasting	

Scientific Name	Common name	EPBC Status
<i>Xerochrysum palustre</i>	swamp everlasting	Vulnerable
<i>Zieria arborescens subsp. arborescens</i>	stinkwood	
<i>Zieria smithii subsp. smithii</i>	sandfly zieria	
<i>Zieria veronicea subsp. veronicea</i>	pink zieria	
<i>Zoysia macrantha subsp. macrantha</i>	prickly couch	
<i>Zoysia macrantha subsp. walshii</i>	walsh's couch	

EPBC Status indicates the listing of a particular species under the *Environmental Protection and Biodiversity Conservation Act 1999* as of October 29, 2010. 'Migratory' species are those listed under international and bilateral agreements for the conservation of migratory species (Bonn Convention, JAMBA, CAMBA). 'Listed' species include marine species declared under s248 of the Act and migratory species listed separate to international agreements.