

# Introduction to the Census of the Queensland flora 2015

**Queensland Herbarium** 

2015 Version 1.1



#### Prepared by

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#### Acknowledgements

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November 2015

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## **About the Queensland Herbarium collections**

The Queensland Herbarium houses the state's flora collections, comprising more than 839,000 specimens and associated data, of mainly Queensland species of plants, fungi and algae. Botanists and members of the public contribute thousands of specimens to the herbarium collection each year, representing new species records and a new distribution records for both native and naturalised species. Specimens are mostly pressed and dried, mounted on cardboard sheets. Some bulky specimens are stored in boxes or paper bags and some delicate specimens are stored in preserving liquid. Each specimen is labelled with the collector, collector's number, date of collection, location, habitat and the plant's features such as bark and flower colour. This information is recorded in a database HERBRECS, available through <u>Wildlife Online</u> and <u>Australia's Virtual Herbarium</u> (Queensland native and naturalised specimens only) and summarised in the <u>census lists</u> (https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2015).

A manual explaining <u>how to collect plant specimens</u> is available (Bean 2013). Algae and fungi require specialist processing, please contact us for further information on these groups.

#### Significance of the collections

The Queensland Herbarium specimen collections are fundamental and irreplaceable materials and data sources used to document the flora and vegetation of Queensland. They are essential for: taxonomic and phylogenetic research, the application of scientific names, new species discovery, identification of species, mapping the distribution of species, conservation planning and management, ecology of species, biodiversity assessment, state legislation (*Vegetation Management Act, Nature Conservation Act, Land Protection Act, Environmental Protection Act*), weed identification and ecology, agriculture, ethnobotany, forensic botany, molecular biology and education.

#### Type specimens

A type specimen is a specimen assigned by a taxonomist to be the reference point/material for the application of a scientific name. All species with a scientific name have type material, usually a plant specimen held in a Herbarium. The Queensland Herbarium holds 9,891 type specimens. High resolution images of the vascular plant type specimens held at the Queensland Herbarium (BRI) are now available on line at <u>JSTOR</u> (http://plant.jstor.org) as part of the Global Plants Initiative. Newly discovered species must be published under international rules that standardise botanical name usage across the world (McNeil et al. 2012) and all must be assigned a type specimen housed in an internationally recognised Herbarium.

#### **Voucher specimens**

Scientists using plants in their research are usually required to deposit voucher specimens in a herbarium collection as a permanent and verifiable record of the plant sampled. Voucher specimens are also required to verify a new declared weed or threatened species record and are often used as points of reference for a published species photographs, seed bank accessions or other record. Please contact us before collecting voucher specimens to find out what is required.

## **Census of the Queensland flora**

This census provides authoritative published lists of all the known native and naturalised species of plants, algae, fungi and lichens in Queensland, updated from the previous census lists (Bostock & Holland 2014). Separate listings of the naturalised and doubtfully naturalised flora are also presented, along with an all combined data list. Species that are only presented by specimens from cultivation are not included in any of the census lists.

The names of all native and naturalised species, subspecies, varieties, forms and hybrids known to occur in Queensland are listed, generated from the Queensland Herbarium specimen information database (HERBRECS) as at 1 September 2015. These records are primarily based on the Queensland Herbarium specimen collections representing 245 years of verified specimen data.

#### 2015 presentation

The Census of the Queensland Flora 2015 lists are provided in spreadsheet compatible format on the Queensland <u>open data portal</u> (https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2015). The census lists include current names, distributions (pastoral districts) and status of all currently known Queensland plants, algae, fungi and lichens (see definitions below). Print format for some lists is also available on request.

A list of name and status changes from the 2014 census (Bostock & Holland 2014) is provided in Appendix A of this document.

#### Census of the Queensland Flora 2015 lists (spreadsheet compatible format):

**All combined records**: Names, distributions and status of Queensland plants, algae, fungi, lichens and cyanobacteria combined into one list.

**Full data set**: The full data set includes the botanical names broken down into parts (genus, species etc.), names with and without authors and botanical classification number (unique identifier for each name).

**Vascular plants (Plantae)**: Queensland native and naturalised flowering plants, conifers, cycads and ferns.

Non-vascular plants (Plantae): Queensland mosses, liverworts and hornworts.

Green and red algae (Plantae): Queensland green and red algae.

Macrofungi (Fungi): Queensland macrofungi (microfungi are excluded).

Lichens (Fungi): Queensland lichens.

True algae (Chromista): Queensland Chromista.

Bacteria (Cyanobacteria only): Queensland cyanobacteria.

Naturalised plants: non-native plants that have become naturalised in Queensland.

**Native plants naturalised in Qld:** native Queensland plants that have naturalised outside of their native range.

**Formerly naturalised plants:** plants that have previously been naturalised in Queensland, but have not persisted.

**Doubtfully naturalised plants:** plants with populations occurring outside of cultivation, but that are not yet considered to be naturalised (established) in Queensland.

The **Plantae** (green plants) comprise vascular plants (flowering plants, conifers, cycads, ferns and fern allies) and non-vascular plants (mosses, liverworts, hornworts, green algae and red algae). **True algae** include brown algae and some related groups, together with diatoms (Chromista). **Bacteria** are here restricted to the cyanobacteria, previously called blue-green algae. More information on the classification of these groups is given below.

The districts used are the Pastoral Districts of Queensland as outlined on maps issued by the former Survey Office of the Department of Natural Resources, Brisbane, based on State Map 4a. Specimen counts are given for each Queensland district, together with regional (non-Queensland) counts where applicable. Queensland collections not identifiable to a district are recorded under "QLD". Explanatory maps are provided for World regions (Map 1) and Australian States and Territories and Queensland pastoral districts (Map 2), at the end of this document. Note that districts of Queensland, normally abbreviated as 2 letters e.g. MO for Moreton, have been prefaced by a capital Q in the spreadsheets, to distinguish them from other regions e.g. QWA for Warrego, Qld and WA for Western Australia.

Where species and intraspecific taxa (subspecies and varieties) are recognised to exist, but not yet formally described, a temporary phrase name is provided e.g. *Tephrosia* sp. (Barkly Downs S.L.Everist 3384). Taxa that are known to occur in Queensland but which are only represented by verified specimen(s) held at another herbarium are included with a value of "0" (zero). Species are listed alphabetically by family and genus in the pdf document.

#### **Native status**

Native species are here defined as those that are considered to have evolved in Queensland unaided by humans, or have migrated to and persisted in Queensland without assistance from humans, from an area in which they are considered to be native. The conservation status (X = Extinct in the wild, E = Endangered, V = Vulnerable or N = Near Threatened) is as recorded in the Queensland <u>Nature Conservation Act 1992</u> for species listed in the <u>Nature Conservation (Wildlife)</u> <u>Regulation 2006</u> (as at 28 Aug 2015). The remaining native plant species have a conservation status of Least Concern and these are not marked with a symbol in the status column.

#### **Non-native status**

Naturalised species are here defined as those that are considered to have established populations outside of their native range, by reproducing there without cultivation or other human intervention. Naturalised species are indicated by an asterisk (\*) in the status column. Queensland native plants that have become naturalised in a pastoral district outside their native range are also recorded in a separate list.

There are separate census lists for naturalised (\*), doubtfully naturalised (D) and formerly naturalised plant species (!). Formerly naturalised species are those that were previously considered naturalised, but are presumed to have disappeared from the landscape (not collected for more than 50 years). Doubtfully naturalised species have populations that may be in the early stages of naturalisation and not yet established in the landscape, or their continued existence in the landscape may be doubtful, for example where the entire Queensland population has been subject to an eradication program. Adventive plants or weeds appearing only in gardens and other cultivated situations are not considered to be either doubtfully naturalised or naturalised. Plants known only from cultivation are excluded from all lists.

Many naturalised and doubtfully naturalised species pose a threat to natural ecosystems, agriculture and grazing lands. More than 80 species are listed as declared pests currently listed in the <u>Land Protection (Pest and Stock Route Management) Regulation 2003</u> (as at 1 July 2015).

#### **Botanical names**

The botanical names used in these census lists comply with the rules of the <u>International Code of</u> <u>Nomenclature of Algae, Fungi and Plants (Melbourne Code)</u> (McNeill *et. al.* 2012) and the <u>International Code of Nomenclature for Cultivated Plants</u> (Brickell *et al.* 2009). Author abbreviations follow Brummitt and Powell (1992) and are also available from the <u>International Plant</u> <u>Names Index</u>. Names at the level of Kingdom and Phylum follow Cavalier-Smith (2004).

#### **Data limitations**

These census lists are a snapshot of the flora of Queensland as at 1 September 2015, reflecting the scientific names and distribution of Queensland plants, algae, cyanobacteria, lichens and macrofungi in the State of Queensland based primarily on the Queensland Herbarium collections. Other Australian herbarium collections holding Queensland plant data are not included, but see comment above regarding species not represented by a <u>Queensland Herbarium specimen</u>. Additional locations from other herbaria may be accessed from <u>Australia's Virtual Herbarium</u>.

Readers may submit specimen collections to fill obvious distribution gaps, but are requested to please contact us first and find out what is required. Bryophytes, algae, lichens and fungi usually require additional processing. It is recommended that you first contact a specialist curator or technician before collecting these organisms. Note that a permit is required for collecting activities on state lands or where listed threatened species are involved.

#### **Queensland flora statistics 2015**

The Queensland native flora is currently represented by 14,229 native species across all groups, nearly double the number listed by Bailey in 1913 (7,781 species), with a net increase of 55 additional species recorded since the last census (Bostock & Holland 2014). These native species include 981 species currently listed as threatened: Endangered (E) or Vulnerable (V), Near Threatened (NT) or Extinct in the wild (X). The remaining native species are listed as Least Concern (no symbol in the census lists).

There are currently 1,313 non-native species that are known to have become naturalised (\*) in Queensland since European contact, including two fungi species. The naturalised flora of Queensland has been increasing at the rate of approximately 10 species per year for more than 100 years according to Queensland Herbarium records and now represents more than 13% of the total vascular flora. A further 351 species are considered to be doubtfully naturalised (D). In addition, 22 native Queensland species are recorded here as naturalised outside of their native range. In Queensland, 93 non-native species previously considered to be naturalised have now disappeared from the landscape (not collected for more than 50 years) and are therefore not considered to be naturalised at the present time, here listed at formerly naturalised (!).

One hundred years of flora species discovery is summarised in **Table 1**. Census data over the last 21 years is summarised in **Figure 1**.

Table 1. Census of the Queensland Flora Statistics—1913 to 2015

Kingdom &	Group	2015	2014	2013	2010	2007	2002	1997	1994	1913 (Bailey)	
	Plantae: Angiosperms (flowering plants)										
Native		8,113	8,098	8,078	8,005	7,901	7,677	7,512	7,252	4,626	
Natu	uralised	1,294	1,284	1,262	1,241	1,175	1,066	1,001	910	297	
s	Subtotal		9,382	9,340	9,246	9,076	8,743	8,513	8,162	4,923	
	Plantae: Gymnosperms (conifers, cycads and allies)										
	Native	64	64	64	62	62	59	60	54	29	
Natu	Naturalised		6	6	6	6	3	3	3	0	
S	Subtotal	70	70	70	68	68	62	63	57	29	
	Plantae: Pteridophytes (ferns and allies)										
	Native	383	383	381	381	381	377	374	375	233	
Natu	uralised	11	11	11	11	10	10	7	5	0	
S	Subtotal	394	394	392	392	391	387	381	380	233	
	Plan	tae: Non-vascular	plants								
Mosses (Bryo	ophyta)	562	558	561	555	556	574	595	not listed	360	
Liverworts & hor	Liverworts & hornworts		442	437	421	411	315	not listed	not listed	113	
	Alga	Algae (Plantae, Chromista and Cyanobacteria)									
	Algae	1,558	1,558	1,555	1,505	1,433	1,011	1,004	not listed	718	
	Fung	gi									
L	Lichens	2025	1,988	1,962	1,888	1,742	1,558	1,370	not listed	828	
Native Mac	crofungi	1080	1,083	1,036	1026	not listed	not listed	not listed	not listed	874	
Naturalise	ed fungi	2	2	2							
	Tota	ls		•							
Tota	I native	14,229	14,174	14,076	_	_	_	_	_	7,781	
Total natu	uralised	1313	1,303	1,279	1,258	1,191	1,079	1,011	918	297	
Overall total nati natu	ive and uralised	15,542	15,477	15,355					_	8,078	

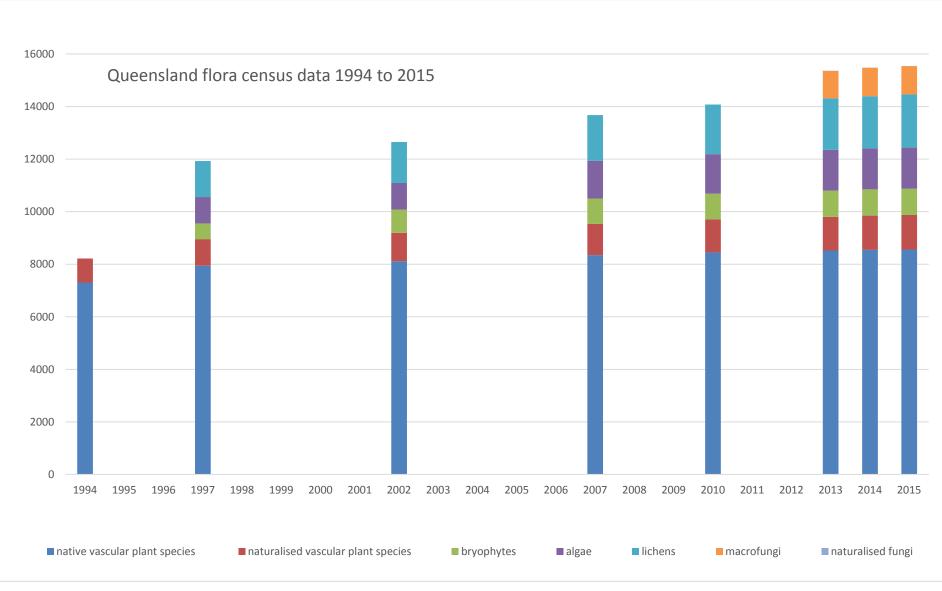


Figure 1 Census of the Queensland Flora Statistics —1994 to 2015

#### Plantae: vascular plants

Vascular plants are those that have distinct vascular tissue (xylem and phloem), as opposed to the non-vascular plants (see below). They are considered to have evolved from a single freshwater green algal ancestor and now include approximately 250,000 species worldwide. The flowering plants (angiosperms) are the largest group, but Queensland also has many native conifers, cycads and ferns. The classification presented here generally follows that of the <u>Australian Plant Census</u> and the <u>Angiosperm Phylogeny Group III</u>, with some exceptions.

Queensland's 8,560 native vascular plant species represent about half of the known Australian vascular flora. More than one third of these species are endemic, that is they are only found in Queensland. New flora species are still being discovered and described in Queensland at the rate of over 50 species per year. Queensland has a wide diversity of <u>regional ecosystems</u>, currently there are 1,386 identified ecosystems which include many unique habitats such as lowland tropical rainforests and desert dune systems. Queensland is also the Australian centre of diversity for several iconic plant groups such as the cycads and zamia palms (44 species) and the ferns and fern allies (383 species).

The two largest families of vascular plants in Queensland are the grasses (Poaceae 632 species) and the myrtles and eucalypts (Myrtaceae 607 species); these two families dominate many ecosystems. The next largest families are the legumes (Fabaceae 474 species) and the orchids (Orchidaceae 437 species). The family with the most naturalised species is again the grasses (Poaceae 183 species), followed by the daisies (Asteraceae 137 species) and the legumes (Fabaceae 130 species).

Ailsa Holland

#### Plantae: non-vascular plants—bryophytes

"Bryophyte" is a collective term for three distinct lineages of non-vascular land plants within the Kingdom Plantae: mosses (Bryophyta), liverworts (Marchantiophyta) and hornworts (Anthocerotophyta). The three lineages are grouped together because of shared traits, primarily small stature, lack of vascular tissue and a life cycle including a sporophyte (diploid spore producing phase) and a dominant gametophyte (haploid sexual phase which is the most easily seen form). From an evolutionary viewpoint, the bryophytes mark the transition from aquatic to terrestrial environments and are considered the closest modern relatives of terrestrial plants but the classification and relationships of the three lineages is still debated. There are an estimated 20,000 species worldwide with approximately 1,800 occurring in Australia. With approximately 1,000 known species occurring in Queensland, the Bryophytes are the second-most diverse group of land plants after the angiosperms.

In Queensland, bryophytes occupy a diverse range of habitats from arid environments through to tropical rainforests. They are often among the first species to colonise exposed surfaces such as road cuttings. Along with cyanobacteria, lichens and algae, bryophytes are a critical component of the biological crusts which bind the soil surface in semi-arid to arid areas.

The true mosses (Bryophyta) are the most diverse group and generally have leaves spirally arranged around the stem and usually have a mid-rib (costa). Mosses are generally erect in form and are attached to the substrate via root-like structures (rhizoids).

Liverworts (Marchantiophyta) may be either flat (thallose) or leafy and superficially resemble mosses but leaves lack a mid-rib. Many species grow on other plants, especially in high-rainfall forests and are important as habitats for invertebrates and in regulating forest hydrology.

Hornworts (Anthocerotophyta) have distinctive elongated sporophytes that split longitudinally to release the spores, while the gametophytes are flat. Most species are terrestrial, growing on moist earthen banks or in gaps between ground covers. One genus (*Dendroceros*) is epiphytic, growing on rough barked trees in rainforests.

The bryophyte flora of Queensland is far from complete with many areas yet to be properly surveyed. However, with more identification resources readily available such as Australian Mosses Online and well-illustrated field guides, a greater understanding of the bryophyte diversity and distribution in Queensland will be possible.

Andrew Franks, Ross Patterson

#### Algae

Algae and Cyanobacteria (blue-green algae) have traditionally been grouped together based on their ability to undertake photosynthesis in aquatic environments. Unlike land plants which evolved from a common ancestor, different lineages of algae have evolved separately in aquatic environments over the last three billion years. These different evolutionary histories are reflected in the current classification scheme which assigns 'algal' species to four of the six Kingdoms of Life on Earth: cyanobacteria (Bacteria), red and green algae (Plantae), euglenoids and dinoflagellates (Protozoa, not covered in this census) and the brown algae, diatoms and several other phyla (Chromista, algae in the narrow sense). The classification of the 'algae' has changed markedly over the last fifty years and is expected to undergo further revisions as new species are discovered and more intensive studies generate new data. The arrangement of the kingdoms and their constituent cyanobacterial and algal species in this census follows Cavalier-Smith (2004).

Globally, there are approximately 34,000 described species of cyanobacteria and algae, but this is probably only a tenth of the species still waiting to be discovered. These organisms play an important role in aquatic ecosystems underpinning food webs including those supporting commercial fisheries, contributing to global carbon, nitrogen and sulphur cycles, stabilizing sediments to improve water quality and providing habitat for many other species.

Julie Phillips, Glenn McGregor

#### Fungi: macrofungi

Fungi are an important part of ecosystem processes. The roles of different fungi include decomposers that recycle nutrients, mycorrhizal fungi that are associated with plant roots and assist water and nutrient absorption, along with disease fungi such as myrtle rust which attack their hosts. Many fungi are important food sources for native animals.

Fungi appear in the fossil record at around the same time as plants and animals. The macrofungi recorded here include those with larger, more visible fruiting bodies and are mainly decomposers or mycorrhiza. Two groups are included in this census, reflecting the majority of fungal collections: the sac fungi (Ascomycetes) and the club fungi (Basidiomycetes). The sac fungi are recognised by the typical ascus (plural asci), a cup or sac usually containing eight sexually-produced spores. These include the cup fungi, morels, truffles and most lichens. Club fungi are recognised by their distinctive basidium (plural basidia), or club shaped cells, which usually bear sexually-produced

spores in groups of four. They include the mushrooms, puffballs, coral fungi, bracket fungi and many other forms.

The fungal biodiversity of Queensland is still largely unknown and the classification of fungi is undergoing rapid changes due to the results of molecular studies. Recent surveys in south-eastern Queensland have shown that more than 70% of fungi species in this area are new to science. The Queensland Herbarium and the Queensland Mycological Society are actively involved in discovering and documenting the fungi flora.

Two non-native species are known to be naturalised in Queensland.

Nigel Fechner, Megan Prance

#### **Fungi: lichens**

The lichens are a group of organisms characterised by a symbiotic relationship between a fungus and a photobiont (photosynthetic organism). The photobiont is usually a green alga or a cyanobacterium (blue-green alga). The fungus is almost always a sac fungus (Ascomycete) but may also be a club fungus (Basidiomycete). About 40% of sac fungi are lichenized. Lichens are considered to be ancient in origin, appearing in the earliest known land floras.

A lichen name is strictly applicable to the fungal component only, the photobiont being classified separately. Most of the green-algal photobionts are not known to occur outside of lichens and many show genetic adaptation to the lichen life-style. Lichenization has occurred at least five times within the Ascomycota and several times in the Basidiomycota.

About half of the known Australian lichens occur in Queensland, with many more yet to be discovered, especially in central and northern Queensland. The Queensland Herbarium and the Queensland Mycological Society are actively involved in discovering and documenting the lichen flora.

**Rod Rogers** 

#### Useful references and web resources

- Australia Biological Resources Study (2015). Australian Mosses Online. http://www.anbg.gov.au/abrs/Mosses\_online/index.html
- Australian Plant Census, IBIS database, Centre for Australian National Biodiversity Research, Council of Heads of Australasian Herbaria, <u>https://biodiversity.org.au/nsl/services/apc</u>
- Australian Plant Name Index, IBIS database, Centre for Australian National Biodiversity Research, Australian Government, Canberra http://www.cpbr.gov.au/cgi-bin/apni

Australia's Virtual Herbarium, Council of Heads of Australasian Herbaria http://avh.chah.org.au

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- USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network -(GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland. http://www.ars-grin.gov/cgi-bin/npgs/html/index.pl?language=en

#### Contributors

[\*= Queensland Herbarium honorary research associate or external contributor]

#### Flowering Plant families (Angiosperms)

Bean, A.R.: Acanthaceae, Amaranthaceae, Apiaceae, Balsaminaceae, Caprifoliaceae, Chrysobalanaceae, Cleomaceae, Hydatellaceae, Hydroleaceae, Lythraceae, Mazaceae, Melastomataceae, Myodocarpaceae, Myrtaceae (Leptospermoideae), Pedaliaceae, Plantaginaceae, Ranunculaceae, Rhamnaceae, Rosaceae, Sambucaceae, Solanaceae, Sphenocleaceae, Stylidiaceae, Thymelaeaceae.

Bean, A.R. & Jessup, L.W.\*: Araliaceae.

Bean, A.R. & Forster, P.I.: Lamiaceae.

Booth, R.: Centrolepidaceae, Cyperaceae, Restionaceae.

Clarkson, J.R.\*: Erythroxylaceae.

Crayn, D.\*: Ericaceae.

Dowling, R: Rhizophoraceae.

Edginton, M.: Brassicaceae, Chenopodiaceae, Cucurbitaceae, Passifloraceae, Santalaceae, Scrophulariaceae, Viscaceae.

Fechner, N.: Linderniaceae, Phrymaceae, Stackhousiaceae.

Fensham, R.J.: Burmanniaceae, Eriocaulaceae, Pandanaceae.

Field, A.R.: Cymodoceaceae, Nymphaeaceae, Ruppiaceae, Zosteraceae.

Forster, P.I.: Agavaceae, Amaryllidaceae, Apocynaceae, Arecaceae, Argophyllaceae, Asphodelaceae, Blandfordiaceae, Bromeliaceae, Cactaceae, Campanulaceae, Carpodetaceae, Commelinaceae, Costaceae, Crassulaceae, Dioscoreaceae, Doryanthaceae, Dracaenaceae, Escalloniaceae, Flagellariaceae, Haemodoraceae, Hyacinthaceae, Iridaceae, Loganiaceae, Melianthaceae, Phyllanthaceae, Piperaceae, Proteaceae (Edginton M.: *Grevillea & Hakea*); Ptaeroxylaceae, Putranjivaceae, Quintiniaceae, Ripogonaceae, Rutaceae, Smilacaceae, Stemonaceae, Taccaceae, Violaceae, Vitaceae, Xanthorrhoeaceae, Xyridaceae.

Forster, P.I. & Guymer, G.P.: Sapindaceae.

Forster, P.I. & Halford, D.A.\*: Euphorbiaceae, Picrodendraceae, Rubiaceae.

Forster, P.I. & Laidlaw, M.J.: Araceae.

Forster, P.I. & Ngugi, L.: Zingiberaceae.

Guymer, G.P.: Aceraceae, Alseuosmiaceae, Balanopaceae, Bignoniaceae, Bombacaceae, Byttneriaceae, Capparaceae, Corynocarpaceae, Elaeagnaceae, Elaeocarpaceae, Gesneriaceae, Helicteraceae, Icacinaceae, Leptaulaceae, Loranthaceae, Malvaceae, Nothofagaceae, Orobanchaceae, Pennantiaceae, Pentapetaceae, Simaroubaceae, Stemonuraceae, Sterculiaceae (McDonald W.J.: *Argyrodendron*), Surianaceae, Tamaricaceae, Winteraceae.

Guymer, G.P. & Jessup, L.W.\*: Myrtaceae (Myrtoideae).

Halford, D.A.\*: Brownlowiaceae, Convolvulaceae, Muntingiaceae, Sparrmanniaceae.

Harris, W.K.\*: Oleaceae.

Hodgon, J.\*: Juncaceae.

Holland, A.E.: Bataceae, Begoniaceae, Cannabaceae, Casuarinaceae, Corsiaceae, Dilleniaceae, Goodeniaceae, Gyrostemonaceae, Hydrangeaceae, Martyniaceae, Moringaceae, Nitrariaceae, Olacaceae, Oxalidaceae, Papaveraceae, Petiveriaceae, Phytolaccaceae, Plumbaginaceae, Resedaceae, Triuridaceae, Tropaeolaceae, Zygophyllaceae.

Holland, A.E. & Bean, A.R.: Asteraceae.

Holland, A.E. & Pedley, L.\*: Fabaceae.

Hosking, J.\* & Bean, A.R.: naturalised species.

Jessup, L.W.\*: Actinidiaceae, Akaniaceae, Aphanopetalaceae, Aristolochiaceae, Atherospermataceae, Austrobaileyaceae, Basellaceae, Berberidaceae, Berberidopsidaceae, Bixaceae, Burseraceae, Cardiopteridaceae, Caricaceae, Clusiaceae, Cochlospermaceae, Connaraceae, Datiscaceae, Dichapetalaceae, Elatinaceae, Eupomatiaceae, Hamamelidaceae, Hanguanaceae, Hernandiaceae, Himantandraceae, Idiospermaceae, Lauraceae, Malpighiaceae, Meliaceae, Memecylaceae, Menispermaceae, Moraceae, Myristicaceae, Myrsinaceae, Ochnaceae, Opiliaceae, Paulowniaceae, Pittosporaceae, Samolaceae, Sapotaceae, Sphenostemonaceae, Theaceae, Trimeniaceae, Turneraceae, Ulmaceae.

Jessup, L.W.\* & Field, A.R.: Annonaceae, Ebenaceae.

Jessup, L.W.\* & Halford, J.J.\*: Anacardiaceae, Aquifoliaceae, Celastraceae, Cornaceae, Flacourtiaceae, Monimiaceae, Symplocaceae, Urticaceae, Cunoniaceae

Jessup, L.W.\* & Laidlaw, M.J.: Cunoniaceae.

Laidlaw, M.J.: Calceolariaceae, Heliconiaceae, Salicaceae, Tetrachondraceae.

Mathieson, M.T.: Byblidaceae, Droseraceae, Frankeniaceae, Lentibulariaceae.

Mathieson, M.T., Field, A.R. & Bostock, P.D.\*: Orchidaceae.

McDonald, W.J.\*: Combretaceae.

Ngugi, L.B.: Asparagaceae, Cannaceae, Marantaceae, Musaceae.

Pedley, L.\*: Avicenniaceae, Caesalpiniaceae, Verbenaceae.

Pedley, L.\*, Holland, A.E. & Booth, R.: Mimosaceae.

Pennay, C.: Alismataceae, Aponogetonaceae, Cabombaceae, Ceratophyllaceae, Haloragaceae, Hydrocharitaceae, Juncaginaceae, Limnocharitaceae, Maundiaceae, Mayacaceae, Menyanthaceae, Najadaceae, Nelumbonaceae, Onagraceae, Philydraceae, Podostemaceae, Polygonaceae, Pontederiaceae, Potamogetonaceae, Typhaceae.

Pollock, A.: Nyctaginaceae.

Thompson, E.J.\*: Poaceae & Kelman, D. (Bambusa).

Thomas, M.B.: Aizoaceae, Caryophyllaceae, Molluginaceae, Portulacaceae.

Thompson, E.J.\*: Boraginaceae, Polygalaceae.

Wang, J.: Alliaceae, Alstroemeriaceae, Anthericaceae, Balanophoraceae, Boryaceae, Cecropiaceae, Colchicaceae, Gentianaceae, Hemerocallidaceae, Hugoniaceae, Hypoxidaceae, Johnsoniaceae, Laxmanniaceae, Liliaceae, Linaceae, Luzuriagaceae, Maesaceae, Pentaphylacaceae, Petermanniaceae.

Wilson, G.\*: Nepenthaceae.

Wood, A.: Geraniaceae, Lecythidaceae, Strelitziaceae.

Wood, A. & Cameron, P.\*: cultivated species.

Conifers, cycads and allies (gymnosperms): Forster, P.I.; Edginton, M. (Pinaceae)

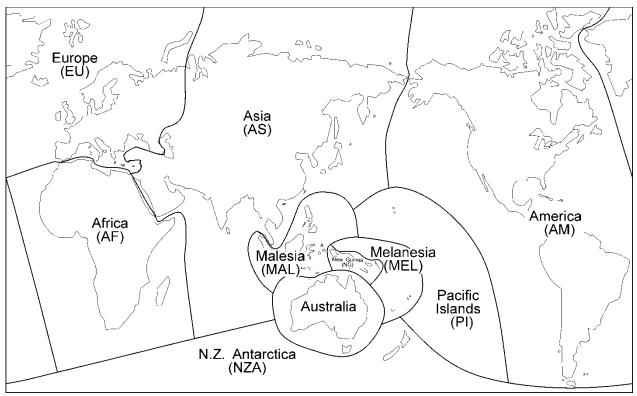
Ferns and fern allies (pteridophytes): Field, A.R. & Bostock, P.D.\*

Mosses, liverworts, hornworts (bryophytes): Franks, A.J.\*

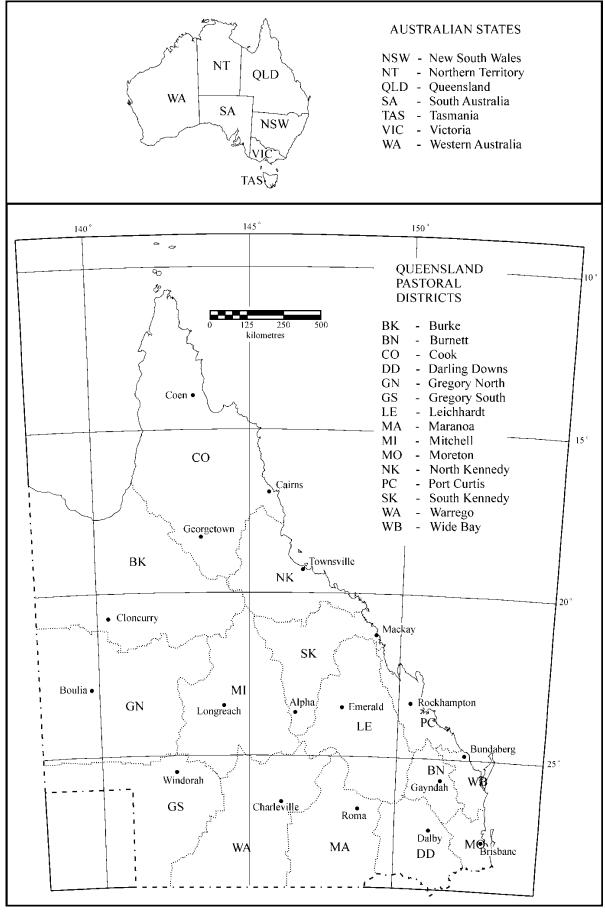
Algae (all groups): McGregor, G.B.\* (freshwater); Phillips, J.A.\* (marine)

Lichens: Rogers, R.\*

Macrofungi: Fechner, N., Prance, M. (Trametes, Geastrum), Leonard P.\*, Guard F.\* & Evans G.\*



Map 1. Regions of the world



Map 2. States of Australia and pastoral districts of Queensland

# Appendix A: New names and name and status changes 2014 census to 2015 census

(vascular plants only)

X = Extinct in the wild

- E = Endangered
- V = Vulnerable
- N = Near Threatened
- LC = Least Concern
- \* = naturalised
- D = doubtfully naturalised

#### Conifers

#### Podocarpaceae

Sundacarpus amarus (Blume) C.N.Page to Prumnopitys amara (Blume) de Laub., a synonym

#### Cycads

#### Cycadaceae

Cycas couttsiana K.D.Hill, status change N to V

Cycas cupida P.I.Forst., status change LC to V

#### Zamiaceae

Macrozamia cardiacensis P.I.Forst. & D.L.Jones, status change N to V

#### Ferns and fern allies

#### Aspleniaceae

Asplenium normale D.Don, status change N to V Pleurosorus rutifolius (R.Br.) Fee and Pleurosorus subglandulosus (Hook. & Grev.) Tindale, both to Asplenium subglandulosum (Hook. & Grev.) Salvo, Prada & T.E.Diaz subsp. subglandulosum, synonyms

#### Dryopteridaceae

Tectaria siifolia (Willd.) Copel., status change N to V

#### Gleicheniaceae

Sticherus milnei (Baker) Ching, status change N to V

#### Lindsaeaceae

Lindsaea walkerae Hook., status change N to LC

#### **Flowering plants**

#### Acanthaceae

Lepidagathis royenii Bremek., status change N to V

**D** *Megaskepasma erythrochlamys* Lindau, a new doubtfully naturalised species for Queensland (previously cultivated)

**D** *Thunbergia erecta* (Benth.) T.Anderson, a new doubtfully naturalised species for Queensland (previously cultivated)

Xerothamnella parvifolia C.T.White, status change V to LC

#### Aizoaceae

Gunniopsis sp. (Edgbaston R.J.Fensham 5094), status change LC to E

#### Amaranthaceae

\*Celosia elegantissima Hauman, a new naturalisation for Queensland

Kelita uncinella A.R.Bean, status change LC to E

Nyssanthes impervia A.R.Bean, status change LC to V

Nyssanthes longistyla C.H.Miller, status change LC to V

Ptilotus pseudohelipteroides Benl, status change N to LC

*Ptilotus* sp. (Gilbert River L.J.Brass 430) to *Ptilotus senarius* A.R.Bean, a new species for Queensland

#### Amaryllidaceae

*Crinum lakefieldense* Lehmiller, Lykos & Hamilton, a new species for Queensland (no specimens at BRI)

#### Annonaceae

Haplostichanthus fruticosus Jessup to Polyalthia fruticosa (Jessup) B.Xue & R.M.K.Saunders, a synonym

Haplostichanthus johnsonii F.Muell. to Polyalthia johnsonii (F.Muell.) B.Xue & R.M.K.Saunders, a synonym

Haplostichanthus rufescens Jessup to Polyalthia hispida B.Xue & R.M.K.Saunders, a synonym Polyalthia australis (Benth.) Jessup to Monoon australe (Benth.) B. Xue & R.M.K.Saunders, a synonym

*Polyalthia michaelii* C.T.White to *Monoon michaelii* (C.T.White) B.Xue & R.M.K.Saunders, a synonym

*Polyalthia patinata* Jessup to *Monoon patinatum* (Jessup) B.Xue & R.M.K.Saunders, a synonym *Pseuduvaria froggattii* (F.Muell.) Jessup, status change N to LC

Pseuduvaria mulgraveana var. glabrescens Jessup, status change N to LC

Pseuduvaria mulgraveana Jessup var. mulgraveana, status change N to LC

Pseuduvaria villosa Jessup, status change N to LC

**D** *Rollinia deliciosa* Saff., a new doubtfully naturalised species for Queensland (previously cultivated)

#### Apiaceae

Actinotus paddisonii R.T.Baker, status change N to LC

Eryngium ovinum A.Cunn. removed, Queensland specimens variously re-determined

#### Apocynaceae

Marsdenia hemiptera Rchb., status change N to LC

#### Aponogetonaceae

Aponogeton lancesmithii Hellq. & S.W.L.Jacobs, status change LC to E

#### Aquifoliaceae

Ilex sp. (Gadgarra B.P.Hyland RFK2011), status change N to LC

#### Araceae

\* Caladium bicolor (Aiton) Vent, a new naturalisation (previously doubtfully naturalised)

Pothos brassii B.L.Burtt, status change N to LC

#### Araliaceae

Astrotricha floccosa DC., newly recognised as occurring in Queensland

Gastonia spectabilis (Harms) Philipson to Polyscias spectabilis (Harms) Lowry & G.M.Plunkett, a synonym

Polyscias scutellaria (Burm.f.) Fosberg removed, cultivated only in Queensland

Polyscias zippeliana (Miq.) Valeton, this name reinstated

Trachymene glandulosa (F.Muell.) Benth., status change V to N

#### Arecaceae

Calamus aruensis Becc., status change N to V

Linospadix microcaryus (Domin) Burret, status change N to LC

Livistona fulva Rodd, status change N to V

#### Asphodelaceae

D Aloe maculata All. x A.striata Haw., a new doubtfully naturalised hybrid for Queensland

#### Asteraceae

*Brachyscome aculeata* (Labill.) Cass. ex Less. removed, Queensland specimens variously redetermined

*Brachyscome basaltica* var. *gracilis* Benth. and *Brachyscome basaltica* F.Muell. var. *basaltica*, both to *Brachyscome basaltica* F.Muell. (varieties no longer recognised)

*Brachyscome chrysoglossa* F.Muell., this taxon re-instated (many specimens previously identified as *B. curvicarpa* have been re-determined to this taxon but *B. curvicarpa* still occurs in Qld)

*Brachyscome ciliaris* (Labill.) Less. var. *ciliaris, Brachyscome ciliaris* var. *lanuginosa* (Steetz) Benth. and *Brachyscome ciliaris* var. *subintegrifolia* G.L.Davis, all to *Brachyscome ciliaris* (Labill.) Less. (varieties are no longer recognised)

*Brachyscome ciliocarpa* W.Fitzg., Queensland specimens re-determined to *Roebuckiella similis* (P.S.Short) P.S.Short, a new species

*Brachyscome diversifolia* var. *dissecta* G.L.Davis, Queensland specimens re-determined to *Brachyscome casstiana* P.S.Short, a new species

Brachyscome eriogona (J.M.Black) G.L.R.Davis, newly recorded for Qld (no specimens at BRI)

Brachyscome exilis Sond., newly recorded for Qld (no specimens at BRI)

Brachyscome georginensis P.S.Short, a new species for Queensland

Brachyscome gilesii P.S.Short, a new species for Queensland (no specimens at BRI)

Brachyscome melanocarpa subsp. thompsonensis P.S.Short, a new subspecies for Queensland

*Brachyscome microcarpa* F.Muell. subsp. *darlingensis* P.S.Short., a new subspecies for Queensland

*Brachyscome multifida* DC. var. *multifida* and *Brachyscome multifida* var. *dilatata* Benth., both to *Brachyscome multifida* DC. (varieties no longer recognised)

Brachyscome tenuiscapa var. pubescens (Benth.) G.L.Davis to Brachyscome staceae P.S.Short, a new name and raised to species

Brachyscome watanabei P.S.Short, a new species for Queensland

Brachyscome whitei subsp. (Charleville P.S.Short+ 3590) to Brachyscome whitei subsp.

lophoptera P.S.Short., a new subspecies for Queensland

*Calocephalus knappii* (F.Muell.) Ewart & Jean White, newly recognised as occurring in Queensland *Calocephalus sonderi* F.Muell., status change N to LC

Calocephalus sp. (Eulo M.E.Ballingall MEB2590), status change N to V

Calotis glabrescens C.T.White, status change N to X (now considered to be extinct in the wild)

Calotis suffruticosa Domin, status change N to E

*Minuria macrorhiza* (DC.) Lander removed, Queensland specimens re-determined to *Minuria leptophylla* DC.

*Olearia canescens* subsp. (SF618 P.Forster PIF6660) to *Olearia canescens* subsp. *discolor* Messina, a new subspecies for Queensland

Olearia gravis (F.Muell.) Benth., status change N to LC

Olearia stellulata (Labill.) DC. removed, Queensland specimens variously re-determined

Ozothamnus whitei (N.T.Burb.) Anderb., status change N to LC

Peripleura scabra (DC.) G.L.Nesom, status change N to LC

Peripleura sericea (N.T.Burb.) G.L.Nesom, status change N to LC

Pluchea punctata A.R.Bean, status change LC to E

Pluchea tenuis A.R.Bean, a new species for Queensland

*Roebuckiella* P.S.Short, a new genus related to *Brachyscome*, one species in Queensland (*Roebuckiella similis*).

Vittadinia decora N.T.Burb., status change N to E

#### Brassicaceae

**D** Arabidopsis thaliana (L.) Heynh., re-instated as doubtfully naturalised (re-discovered) *Harmsiodoxa brevipes (*F.Muell.) O.E.Schulz, Queensland specimens re-determined to *Harmsiodoxa blennodioides* (F.Muell.) O.E.Schulz.

#### Byttneriaceae

Commersonia breviseta C.F.Wilkins & L.M.Copel., status change N to LC

Commersonia leiperi Guymer, status change LC to V

Commersonia salviifolia (Hook. ex Steetz) F.Muell., status change N to LC

#### Cabombaceae

Brasenia schreberi J.F.Gmel., status change N to LC

#### Cactaceae

\**Cylindropuntia rosea (*DC.) Backeb., Queensland specimens re-determined to \**Cylindropuntia pallida* (Rose) F.M.Knuth

#### Caesalpiniaceae

Caesalpinia robusta (C.T.White) Pedley, status change N to LC

Cassia sp. (Paluma Range G.Sankowsky+ 450), status change N to LC

Crudia papuana Kosterm., status change N to V

Senna acclinis (F.Muell.) Randell, status change N to LC

#### Campanulaceae

Isotoma sp. (Elizabeth Springs R.J.Fensham 3676), status change LC to E

Isotoma sp. (Myross R.J.Fensham 3883), status change LC to V

Wahlenbergia ceracea Lothian, a new record for Queensland

Wahlenbergia glabra P.J.Sm., status change N to LC

Wahlenbergia islensis P.J.Sm., status change N to LC

Wahlenbergia scopulicola Carolin ex P.J.Sm., status change N to V

#### Chenopodiaceae

Atriplex lobativalvis F.Muell., status change N to LC

Sclerolaena articulata (J.M.Black) A.J.Scott, newly recognised as occurring in Queensland

Sclerolaena blackiana (Ising) A.J.Scott, status change N to LC

Sclerolaena divaricata (R.Br.) Sm., newly recognised as occurring in Queensland

Sclerolaena walkeri (C.T.White) A.J.Scott, status change V to LC

#### Combretaceae

Macropteranthes fitzalanii F.Muell., status change N to LC

#### Commelinaceae

Aneilema sp. (Tozer Gap L.J.Brass 19441) to Aneilema papuanum Warb., a re-instated name

#### Connaraceae

Rourea brachyandra F.Muell., status change N to LC

#### Convolvulaceae

*Bonamia* sp. (Chillagoe K.R.McDonald KRM334) and *Bonamia* sp. (Musselbrook M.B.Thomas+MRS639), both to *Bonamia multiflora* R.W.Johnson, a new species for Queensland

*Bonamia* sp. (Lawn Hill R.J.Cumming 17533) to *Bonamia longipilosa* R.W.Johnson, a new species for Queensland

Bonamia toniae R.W.Johnson, a new species for Queensland

Ipomoea imperati (Vahl) Griseb., status change N to V

Ipomoea saintronanensis R.W.Johnson, status change N to V

Operculina brownii Ooststr., status change N to LC

Polymeria mollis (Benth.) Domin, a new record for Queensland

Stictocardia queenslandica (Domin) R.W.Johnson, status change N to V

#### Corynocarpaceae

Corynocarpus rupestris subsp. arborescens Guymer, status change LC to V

#### Cucurbitaceae

Austrobryonia argillicola I.Telford, status change E to LC

Momordica sphaeroidea Blanco, status change LC to N

*Momordica cochinchinensis* (Lour.) Spreng., Queensland specimens re-determined to *Momordica sphaeroidea* Blanco

*Neoachmandra cunninghamii* (F.Muell.) W.J.de Wilde & Duyfjes to *Zehneria cunninghamii* F.Muell., a synonym

#### Cunoniaceae

*Caldcluvia australiensis* (Schltr.) Hoogland to *Ackama australiensis* (Schltr.) C.T.White, a synonym *Ackama* A.Cunn., this genus re-instated

*Caldcluvia paniculosa* (F.Muell.) Hoogland to *Ackama paniculosa* (F.Muell.) Heslew., a synonym *Schizomeria whitei* Mattf., status change N to LC

#### Cyperaceae

*Bulbostylis* sp. (White Mountains R.J.Cumming+ 19025), specimens re-determined to *Fimbristylis subaristata* Benth.

Fimbristylis carolinii Latz, status change LC to N

Fimbristylis distincta S.T.Blake, status change N to V

Fimbristylis sp. (Elizabeth Springs R.J.Fensham 3743), status change LC to V

*Fimbristylis* sp. (Iron Range H.Flecker NQNC8728), specimens re-determined to *Fimbristylis pubisquama* J.Kern

Paramapania parvibractea (C.B.Clarke) Uittien, status change N to V

Schoenoplectus articulatus (L.) Palla to Schoenoplectiella articulata (L.) Lye, a synonym

Schoenoplectus dissachanthus (S.T.Blake) J.Raynal to Schoenoplectiella dissachantha (S.T.Blake) Lye, a synonym

Schoenoplectus laevis (S.T.Blake) J.Raynal to Schoenoplectiella laevis (S.T.Blake) Lye, a synonym

Schoenoplectus lateriflorus (J.G.Gmel.) Lye to Schoenoplectiella lateriflora (J.F.Gmel.) Lye, a synonym

Schoenoplectus mucronatus (L.) Palla ex J.Kern. to Schoenoplectiella mucronata (L.) J.Jung & H.K.Choi, a synonym

\*Schoenoplectus erectus (Poir.) Palla ex J.Raynal to \*Schoenoplectiella erecta (Poir.) Lye, a synonym

Schoenoplectus praelongatus (Poir.) J.Raynal to Schoenoplectiella praelongata (Poir.) Lye, a synonym

Schoenus scabripes Benth., status change N to LC

#### Dilleniaceae

Hibbertia oblongata R.Br. ex DC., a new record for Queensland

Hibbertia pedunculata R.Br. ex DC. removed, Queensland specimens variously re-determined

#### Droseraceae

Drosera indica L. removed, Queensland specimens variously re-determined

*Drosera peltata* Thunb., Queensland specimens re-determined to *Drosera lunata* Buch.-Ham. ex DC.

#### Ebenaceae

*Diospyros cupulosa* (F.Muell.) F.Muell. to *Diospyros laurina* (R.Br.) Jessup, a synonym *Diospyros granitica* Jessup, status change LC to N

*Diospyros* sp. (Baird LA B.P.Hyland 9374) to *Diospyros rheophila* Jessup, a new species for Queensland

*Diospyros* sp. (Blackall Range C.T.White AQ183530) to *Diospyros yandina* Jessup, a new species for Queensland

*Diospyros* sp. (Kuranda L.J.Webb+ 7265A) to *Diospyros peninsularis* Jessup, a new species for Queensland

*Diospyros* sp. (Millaa Millaa L.W.Jessup 515) to *Diospyros pluviatilis* Jessup, a new species for Queensland

*Diospyros* sp. (Mt Lewis L.S.Smith 10107) to *Diospyros hemicycloides* (F.Muell. ex Benth.) Jessup, a re-instated name

*Diospyros* sp. (Mt White P.I.Forster PIF14415), specimens re-determined to *Diospyros compacta* (R.Br.) Kosterm.

*Diospyros* sp. (Swipers LA B.Hyland 1984RFK) *to Diospyros uvida* Jessup, a new species for Queensland

*Diospyros* sp. (Mt Spurgeon C.T.White 10677) to *Diospyros granitica* Jessup, a new species for Queensland

#### Ericaceae

Leucopogon grandiflorus Pedley, status change N to LC

Sprengelia incarnata Sm., newly recognised as occurring in Queensland

#### Eriocaulaceae

Eriocaulon bifistulosum Van Heurck removed, Queensland specimens variously re-determined

#### Escalloniaceae

Polyosma rigidiuscula F.Muell. & F.M.Bailey ex F.M.Bailey, status change N to LC

#### Euphorbiaceae

D Jatropha multifida L., a new doubtfully naturalised species for Queensland (previously cultivated)

Euphorbia sarcostemmoides J.H.Willis, status change V to LC

Mallotus megadontus P.I.Forst., status change LC to V

#### Fabaceae

Bossiaea sp. (Castletower N.Gibson TOI302), specimens re-determined to B. prostrata R.Br.

Glycine albicans Tindale & Craven removed, Queensland specimens variously re-determined

Pultenaea pycnocephala F.Muell. ex Benth., status change N to LC

Sesbania erubescens (Benth.) N.T.Burb., status change N to LC

\*Sesbania grandiflora (L.) Pers., a new naturalisation (previously doubtfully naturalised)

\**Stylosanthes guianensis* var. *intermedia* (Vogel) Hassl., a new naturalisation (previously doubtfully naturalised)

*Tephrosia* sp. (Battle Camp K.R.Mcdonald KRM7106) to *Tephrosia delicatula* Pedley, a new species for Queensland

*Tephrosia* sp. (Mushroom Rock J.R.Clarkson 4693) to *Tephrosia debilis* Domin, a re-instated name *Tephrosia* sp. (Petford J.R.Clarkson 2774A) to *Tephrosia turpinii* Pedley, a new species for Queensland

Zornia pallida Mohlenbr., status change N to LC

#### Flagellariaceae

Flagellaria indica var. australiensis Wepfer & H.P. Linder, a new variety for Queensland

#### Gesneriaceae

Lenbrassia australiana (C.T.White) G.W.Gillett, status change N to LC

Lenbrassia australiana (C.T.White) G.W.Gillett var. australiana, status change N to LC

Lenbrassia australiana var. glabrescens B.D.Morley, status change N to LC

#### Goodeniaceae

Goodenia angustifolia Carolin, status change N to LC

Goodenia effusa A.E.Holland, a new species for Queensland

#### Haloragaceae

*Gonocarpus chinensis* (Lour.) Orchard subsp. *chinensis* removed, all Queensland specimens variously re-determined

#### Hemerocallidaceae

Thelionema grande (C.T.White) R.J.F.Hend., status change N to LC

#### Icacinaceae

Ryticaryum longifolium K.Schum. & Lauterb., status change N to LC

#### Lamiaceae

Anisomeles moschata R.Br., a re-instated name (specimens previously included under Anisomeles malabarica (L.) R.Br.)

\*Ocimum americanum L. var. americanum to \*Ocimum americanum L. (varieties no longer recognised)

Plectranthus acariformis P.I.Forst., a new species for Queensland

Plectranthus alloplectus S.T.Blake, status change N to LC

Plectranthus bipartitus P.I.Forst., a new species for Queensland

Plectranthus geminatus P.I.Forst., a new species for Queensland

Plectranthus spectabilis S.T.Blake, status change N to LC

Plectranthus splendens P.I.Forst., a new species for Queensland

Prostanthera athertoniana B.J.Conn & T.C.Wilson, a new species for Queensland

*Prostanthera nivea* A.Cunn. ex Benth. var. *nivea* to *Prostanthera nivea* A.Cunn. ex Benth. (varieties no longer recognised)

*Prostanthera* sp. (Mt Mulligan J.R.Clarkson 5838) to **V** *Prostanthera mulliganensis* B.J.Conn & T.C.Wilson, a new species for Queensland; status change LC to V

*Prostanthera* sp. (Mt Tozer L.J.Brass 19478) to *Prostanthera tozerana* B.J.Conn & T.C.Wilson, a new species for Queensland and status change LC to V

\*Salvia hispanica L., a new naturalisation (previously doubtfully naturalised)

Westringia amabilis B.Boivin, status change N to LC

Westringia sericea B.Boivin, status change N to V

#### Lauraceae

*Endiandra virens* F.Muell., Queensland specimens re-determined to *Endiandra lowiana* F.M.Bailey, a re-instated name

#### Lentibulariaceae

Utricularia nivea Vahl, a new record for Queensland

#### Linderniaceae

Torenia polygonoides Benth., status change N to V

#### Loranthaceae

Lysiana filifolia Barlow, status change N to LC

#### Marantaceae

\*Ctenanthe lubbersiana (E.Morren) Eichler ex Petersen, Queensland specimens re-determined to

\*Ctenanthe setosa Eichl.

#### Marsileaceae

Pilularia novae-hollandiae A.Braun, a new record for Queensland

#### Melastomataceae

D Tibouchina multiflora Cogn. to D Tibouchina heteromalla (D.Don) Cogn., a synonym

#### Mimosaceae

Acacia deuteroneura Pedley, status change N to E

**D** Acacia dunnii Turrill, a new doubtfully naturalised species for Queensland (native to the Northern Territory)

Acacia ramulosa var. linophylla (W.Fitzg.) Pedley, Queensland specimens re-determined to Acacia ramulosa var. ramulosa W. Fitzg.

Acacia sp. (Castletower N.Gibson TOI345), status change N to V

Acacia wardellii Tindale, status change V to N

Archidendron muellerianum (Maiden & R.T.Baker) I.C.Nielsen, status change N to LC

**D** *Prosopis laevigata* (Humb. & Bonpl. ex Willd.) M.C.Johnst., a new doubtfully naturalised species for Queensland (previously cultivated)

**D** Senegalia pennata subsp. insuavis (Lace) Maslin, Seigler & Ebinger to Senegalia insuavis (Lace) Pedley, raised to species

Senegalia pennata subsp. kerrii (I.C.Nielsen) Maslin, status change N to V

D Vachellia gerrardii (Benth.) P.J.H.Hurter, a new doubtfully naturalised species for Queensland

**D** *Vachellia pallidifolia* (Tindale) Kodela, a new doubtfully naturalised species for Queensland (native of the Northern Territory)

#### Monimiaceae

Hemmantia webbii Whiffin, status change N to V

#### Moraceae

Fatoua villosa (Thunb.) Nakai, status change N to LC

*Ficus platypoda* (Miq.) A.Cunn. ex Miq. removed, all Queensland specimens variously redetermined.

*Ficus superba* var. *henneana* (Miq.) Corner to *Ficus henneana* Miq., raised to species *Ficus virens* var. *sublanceolata* (Miq.) Corner to *Ficus virens* Aiton var. *virens*, a synonym *Streblus pendulinus* (Endl.) F.Muell., Queensland specimens to *Streblus brunonianus* (Endl.) F.Muell., a re-instated name

#### Myrsinaceae

Ardisia fasciculata C.T.White, status change N to V

#### Myrtaceae

Eucalyptus michaeliana Blakely, status change N to LC

Eucalyptus nudicaulis A.R.Bean, status change LC to V

Eucalyptus raveretiana F.Muell. status change V to LC

Homoranthus zeteticorum Craven & S.R.Jones, status change N to V

Kunzea flavescens C.T.White & W.D.Francis, status change N to LC

Kunzea sp. (Herbert River R.J.Cumming 11309), status change N to E

Melaleuca flammea Craven, newly recognised as occurring in Queensland

Rhodamnia pauciovulata Guymer, status change N to LC

Sannantha brachypoda (A.R.Bean) Peter G.Wilson, status change N to V

Sphaerantia chartacea Peter G.Wilson & B.Hyland, status change N to V

Stockwellia quadrifida D.J.Carr, S.G.M.Carr & B.Hyland, status change N to V

Syzygium aqueum (Burm.f.) Alston, status change N to V

Syzygium macilwraithianum B.Hyland, status change N to V

Syzygium malaccense (L.) Merr. & L.M.Perry, status change N to LC

Thaleropia queenslandica (L.S.Sm.) Peter G.Wilson, status change N to LC

Thryptomene hexandra C.T.White, status change N to LC

Waterhousea mulgraveana B.Hyland, status change N to V

Xanthostemon graniticus Peter G. Wilson, status change N to V

#### Nyctaginaceae

*Boerhavia* sp. (Winton D.Halford Q289), specimens re-determined to *Boerhavia schomburgkiana* Oliv.

#### Oleaceae

Notelaea pungens Guymer, status change N to LC

#### Orchidaceae

Acianthus saxatilis D.L.Jones & M.A.Clem., status change LC to E Anoectochilus vatesiae Bailey, status change LC to N Bulbophyllum argyropus (Endl.) Rchb.f., status change N to V Bulbophyllum boonjee B.Gray & D.L.Jones, status change N to V Cooktownia robertsii D.L.Jones, status change LC to E Dendrobium fellowsii F.Muell., status change N to V Eria dischorensis Schltr., status change N to V Eria irukandjiana St.Cloud, status change N to V Eulophia pelorica D.L.Jones & M.A.Clem., status change N to V Eulophia zollingeri (Rchb.f.) J.J.Sm., status change N to V Habenaria euryloba D.L.Jones, status change LC to V Habenaria fuscina D.L.Jones, status change LC to V V Habenaria vatia D.L.Jones, a new species for Queensland Liparis condylobulbon Rchb.f., status change LC to V Oberonia carnosa Laverack, status change N to V Pachystoma pubescens Blume, status change N to V Peristylus banfieldii (F.M.Bailey) Laverack, status change N to E Pterostylis caligna M.T.Mathieson, status change LC to E Pterostylis gibbosa R.Br. removed, Queensland specimens variously re-determined Pterostylis torquata D.L.Jones, a new species for Queensland Pterostylis woollsii Fitzg., status change N to LC Rhizanthella omissa D.L.Jones & M.A.Clem., status change N to E Rhomboda polygonoides (F.Muell.) Ormerod, status change LC to V Schoenorchis sarcophylla Schltr., status change N to V Thelasis carinata Blume, status change N to V Thelymitra aristata Lindl. removed, Queensland specimens variously re-determined

Thelymitra longifolia J.R.Forst. & G.Forst. removed, Queensland specimens variously redetermined

*Thelymitra* x *truncata* R.S.Rogers removed, Queensland specimens variously re-determined *Zeuxine polygonoides* (F.Muell.) P.J.Cribb to **V** *Rhomboda polygonoides* (F.Muell.) Ormerod, a synonym

#### Orobanchaceae

Rhamphicarpa australiensis Steenis, status change N to LC

#### Pandanaceae

Pandanus gemmifer H.St.John, status change N to LC

#### Passifloraceae

**D** *Passiflora vitifolia* Kunth, new doubtfully naturalised species for Queensland (previously cultivated)

#### Philydraceae

Helmholtzia glaberrima (Hook.f.) Caruel, status change N to LC

#### Phyllanthaceae

Breynia macrantha (Hassk.) Chakrab. & N.P.Balakr., status change LC to V

Phyllanthus sauropodoides Airy Shaw, status change N to LC

Phyllanthus sp. (Bulburin P.I.Forster+ PIF16034), status change N to V

\*Sauropus androgynus (L.) Merr. to \*Breynia androgyna (L.) Chakrab. & N.P.Balakr., a synonym

Sauropus macranthus Hassk. to Breynia macrantha (Hassk.) Chakrab. & N.P.Balakr., a synonym

#### Piperaceae

Peperomia bellendenkerensis Domin, status change N to LC

#### Pittosporaceae

*Cheiranthera* sp. (Inglewood R.W.Johnson 2940), specimens re-determined to *Cheiranthera borealis* (E.M.Benn.) L.Cayzer & Crisp

#### Plantaginaceae

\*Veronica anagallis-aquatica L., a new naturalisation (previously doubtfully naturalised) **D** Veronica beccabunga L., newly recognised as doubtfully naturalised in Queensland

Veronica calycina R.Br. removed, Queensland specimens variously re-determined

#### Poaceae

Apluda mutica L., status change N to V Chloris sp. (Edgbaston R.J.Fensham 5694), status change LC to E Ectrosia blakei C.E.Hubb., status change V to LC Ectrosia eragrostoides Domin, to Ectrosia lasioclada (Merr.) S.T.Blake, a synonym Eragrostis fenshamii B.K.Simon, status change LC to E \*Festuca pratensis Huds., a new naturalisation (previously doubtfully naturalised) Ichnanthus pallens var. major (Nees) Stieber, status change N to LC Neololeba atra (Lindl.) Widjaja, status change N to LC Panicum chillagoanum B.K.Simon, status change N to V Paspalidium scabrifolium S.T.Blake, status change N to LC Paspalum multinodum B.K.Simon, status change N to V Sporobolus partimpatens R.Mills ex B.K.Simon, status change N to LC

\*Steinchisma laxa (Sw.) Zuloaga, a new naturalisation (previously doubtfully naturalised)

#### Polygalaceae

*Polygala linariifolia* Willd. removed, all Queensland specimens variously re-determined *Polygala pycnantha* R.A.Kerrigan, status change N to LC

D Rumex lanceolatus Thunb. removed, specimen re-determined

#### Portulacaceae

\*Portulaca pilosa L. subsp. pilosa to \*Portulaca pilosa (subspecies no longer recognised)

#### Proteaceae

*Hakea laevipes* Gand. subsp. *laevipes,* newly recognised as occurring in Queensland *Helicia grayi* Foreman, status change N to V

Persoonia volcanica P.H.Weston & L.A.S.Johnson, status change N to LC

#### Rhamnaceae

Cryptandra lanosiflora F.Muell., status change N to LC

Pomaderris betulina A.Cunn. subsp. betulina, a new record for Queensland

Pomaderris notata S.T.Blake, status change N to V

#### Rosaceae

\**Prunus munsoniana* W.Wight & Hedrick to \* *Prunus rivularis* Scheele, a synonym **D** *Prunus serotina* Ehrh., a new doubtfully naturalised species for Queensland (previously cultivated)

#### Rubiaceae

Aidia gyropetala A.J.Ford & Halford, a new species for Queensland

\*Diodia teres Walter, a new naturalisation (previously doubtfully naturalised)

Lasianthus hirsutus (Roxb.) Merr., status change N to V

\*Sherardia arvensis L., a new naturalisation (previously doubtfully naturalised)

Uncaria cordata var. cordata (Lour.) Merr., status change N to E

Wendlandia basistaminea F.Muell., status change N to LC

#### Rutaceae

\**Citrus* x *aurantiifolia* (Christm.) Swingle, a new naturalisation (previously doubtfully naturalised) Phebalium glandulosum Hook., status change LC to V

Philotheca sporadica (Bayly) Paul G.Wilson, status change V to N

#### Salicaceae

\*Populus alba L., a new naturalisation (previously doubtfully naturalised)

#### Sapindaceae

\**Cardiospermum halicacabum* var. *microcarpum* (Kunth) Blume, a new naturalisation (previously doubtfully naturalised)

Diploglottis alaticarpa W.E.Cooper, a new species for Queensland

Sarcopteryx acuminata S.T.Reynolds, status change N to LC

#### Scrophulariaceae

Eremophila stenophylla Chinnock, status change LC to V

#### Solanaceae

Solanum adoxum A.R.Bean, a new species for Queensland Solanum callium C.T.White ex R.J.F.Hend., status change N to V Solanum capitaneum A.R.Bean, a new species for Queensland Solanum chillagoense (Domin) A.R.Bean, a re-instated name raised to species Solanum dianthophorum Dunal, to Solanum ellipticum R.Br., a new synonym Solanum prolatum A.R.Bean, a new species for Queensland

#### Sparrmanniaceae

Corchorus subargenteus Halford, status change LC to V

#### Stylidiaceae

Stylidium elachophyllum A.R.Bean & M.T.Mathieson, status change LC to E

#### Urticaceae

Boehmeria macrophylla Hornem., Queensland specimens re-determined to Boehmeria virgata var. austroqueenslandica (Domin) Friis & Wilmot-Dear

#### Vitaceae

\*Ampelocissus arachnoidea (Hassk.) Planch. removed, Queensland specimens variously redetermined

**D** *Ampelocissus martinii* Planch., newly recognised as doubtfully naturalised in Queensland Leea guineensis G.Don, Queensland specimens re-determined to *Leea novoguineensis* Valeton