Introduction to the Census of the Queensland flora 2018

Queensland Herbarium

Prepared by: Queensland Herbarium, Department of Environment and Science

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Census list example:

Jessup LW. 2018. Ebenaceae. In Bostock PD & Holland AE. 2018. Census of the Queensland Flora 2018. Queensland Department of Environment and Science, Queensland Government. https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2018, accessed 1 September 2018.

Acknowledgements

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August 2018

CCI job number

Contents

About the Queensland Herbarium Collections

The Queensland Herbarium houses the State's flora collections, comprising more than 870,000 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, of which some represent new species records and new distribution records for both native and naturalised species. Most specimens are pressed and dried, and mounted on archival 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 the database HERBRECS, and the Queensland native and naturalised specimen data are available on Queensland's open data portal (http://qldspatial.information.qld.gov.au/catalogue/custom/search.page?q=Queensland+Herbarium+records), Wildlife Online (https://www.qld.gov.au/environment/plants-animals/species-list/) and Australia's Virtual Herbarium (http://avh.chah.org.au/). The information is summarised in the census lists (https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2018).

A manual explaining how to collect plant specimens (https://www.qld.gov.au/environment/plants-animals/plants/herbarium/identify-specimens/) is available. 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 specimen(s), usually a plant specimen held in a Herbarium. New species must be published under international rules that standardise botanical name usage across the world (Turland et al. 2018) and all must be assigned a Type specimen housed in an internationally recognised Herbarium. The Queensland Herbarium holds more than 10,000 Type specimens. High resolution images of the vascular plant Type specimens held at the Queensland Herbarium (BRI) are now available on line at JSTOR (Global Plants Initiative) (http://plant.jstor.org) as part of the Global Plants Initiative.

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 photographs of species, 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 2017). Separate listings of the naturalised and doubtfully naturalised flora are also presented, along with an all combined data list. Queensland species that are only known from cultivation are not included in any of the census lists.

The accepted 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 August 2018. These records are based on the Queensland Herbarium specimens, from collections made over the last 248 years.

2018 presentation

The *Census of the Queensland Flora 2018* lists (https://data.qld.gov.au/dataset/census-of-the-queensland-flora-2018) are provided in spreadsheet compatible format on the Queensland open data portal. The census lists include scientific name, distribution (pastoral district) and status of all currently known Queensland plants, algae, fungi and lichen taxa (see definitions below). Print format for some lists is also available on request. A list of abbreviations is also supplied on the open data portal to assist with interpretation.

A list of name and status changes, since the publication of the *Census of the Queensland Flora 2017* (Bostock & Holland 2017), is provided in Appendix A of this document (vascular plants only).

To view Type specimen images on JSTOR (Global Plants Initiative) http://plants.jstor.org, copy and paste species name into the search box. Some specimen images are also available on the Atlas of Living Australia https://www.ala.org.au/.

Census of the Queensland Flora 2018 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.

Threatened, Near Threatened and Presumed Extinct (new): plants listed under Queensland's *Nature Conservation Act (1992)*, as of 1 August 2018.

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.

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 pastoral districts of Queensland, normally abbreviated as two letters e.g. Mo for Moreton, have been prefaced by a capital Q_ in the spreadsheets, to distinguish them from other regions e.g. Q_Wa for Warrego, Qld, and WA for Western Australia.

Where species (subspecies or varieties) are recognised to exist, but not yet formally described, a temporary phrase name linked to a herbarium specimen 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).

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. This includes species introduced to Queensland in pre-European times. The conservation status (X = Presumed Extinct in the wild, E = Endangered, V = Vulnerable or N = Near Threatened) is as recorded in the Queensland *Nature Conservation Act 1992* (https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/N/NatureConA92.pdf) for species listed in the *Nature Conservation (Wildlife) Regulation 2006* (https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/N/NatureConAdR06.pdf) as of 1 August 2018. 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 taxa are wildlife introduced to Australia, or Queensland, by human intervention (excluding pre-European introductions) and which have subsequently successfully established populations by reproducing without cultivation or other human intervention. Naturalised taxa 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 100 of these species are listed as pests (restricted or prohibited) under the *Queensland Biosecurity Act 2014* (https://www.legislation.qld.gov.au/LEGISLTN/CURRENT/B/BiosecurityA14.pdf).

Scientific names

The scientific names used in these census lists comply with the rules of the International Code of Nomenclature of Algae, Fungi and Plants (Shenzhen Code) (https://www.iapt-taxon.org/nomen/main.php) (Turland *et. al.* 2018) and the International Code of Nomenclature for Cultivated Plants - Ninth Edition (https://www.ishs.org/scripta-horticulturae/international-code-nomenclature-cultivated-plants-ninth-edition) (Brickell *et al.* 2016). Author abbreviations are available from the International Plant Names Index (http://www.ipni.org/index.html). 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 August 2018, reflecting the accepted 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: see comment above regarding species not represented by a Queensland Herbarium specimen. Additional locations from other herbaria may be accessed from the Australasian Herbarium (http://avh.chah.org.au/)

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. Note that a permit is required for collecting activities on state lands or where listed threatened species are involved. Contact the Queensland Herbarium Queensland.Herbarium@qld.gov.au

Queensland flora statistics 2018

The Queensland native flora is currently represented by 14,385 native species across all groups, nearly double the number listed by Bailey in 1913 (7,781 species). These native species include 964 species currently listed as threatened: Endangered (E), Vulnerable (V), Near Threatened (N) or Extinct in the wild (X). The remaining native species are listed as Least Concern (no symbol in the census lists).

There are currently 1,339 non-native species that are known to have become naturalised (*) in Queensland, 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 15% 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, 98 non-native species previously considered to be naturalised have now disappeared from the landscape (not collected for more than 50 years) are here listed as formerly naturalised (!).

One hundred and five years of flora species discovery is summarised in Table 1. Census data over the last two decades are summarised in Figure 1.

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 for angiosperms generally follows that of the Australian Plant Census (https://biodiversity.org.au/nsl/services/apc) with some exceptions. The families of the ferns and lycophytes have recently been updated to follow the Pteridophyte Phylogeny Group classification (PPG1 2016).

Queensland's 8,615 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 vascular plant species are still being discovered and described in Queensland at the rate of approximately 20 species per year. Queensland has a wide diversity of regional ecosystems (http://www.qld.gov.au/environment/plants-animals/plants/herbarium/mapping-ecosystems/): currently there are 1,459 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 (45 species) and the ferns and fern allies (386 species).

The three largest families of native vascular plant species in Queensland are the legumes (Leguminosae) 884 species, the grasses (Poaceae 634 species) and myrtles and eucalypts (Myrtaceae 597 species); these three families dominate many ecosystems. The next largest families are the orchids (Orchidaceae 447 species – see below), the sedges (Cyperaceae 379 species) and the daisies (Asteraceae 375 species). The family with the most naturalised species is the grasses (Poaceae 184 species), followed by the legumes (Leguminosae 181 species) and the daisies (Asteraceae 138 species).

Ailsa Holland

Orchids

The taxonomy and nomenclature of a number of plant families is being actively researched. This particularly applies in Orchidaceae at the generic level. Queensland Herbarium staff are working towards a consensus regarding the application of scientific names to orchids where the views of researchers vary.

Mike Mathieson

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 total species as there are many species still 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

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 just over 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.

Documenting 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 is possible.

Andrew Franks, Ross Patterson

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 (http://qldfungi.org.au/) 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.

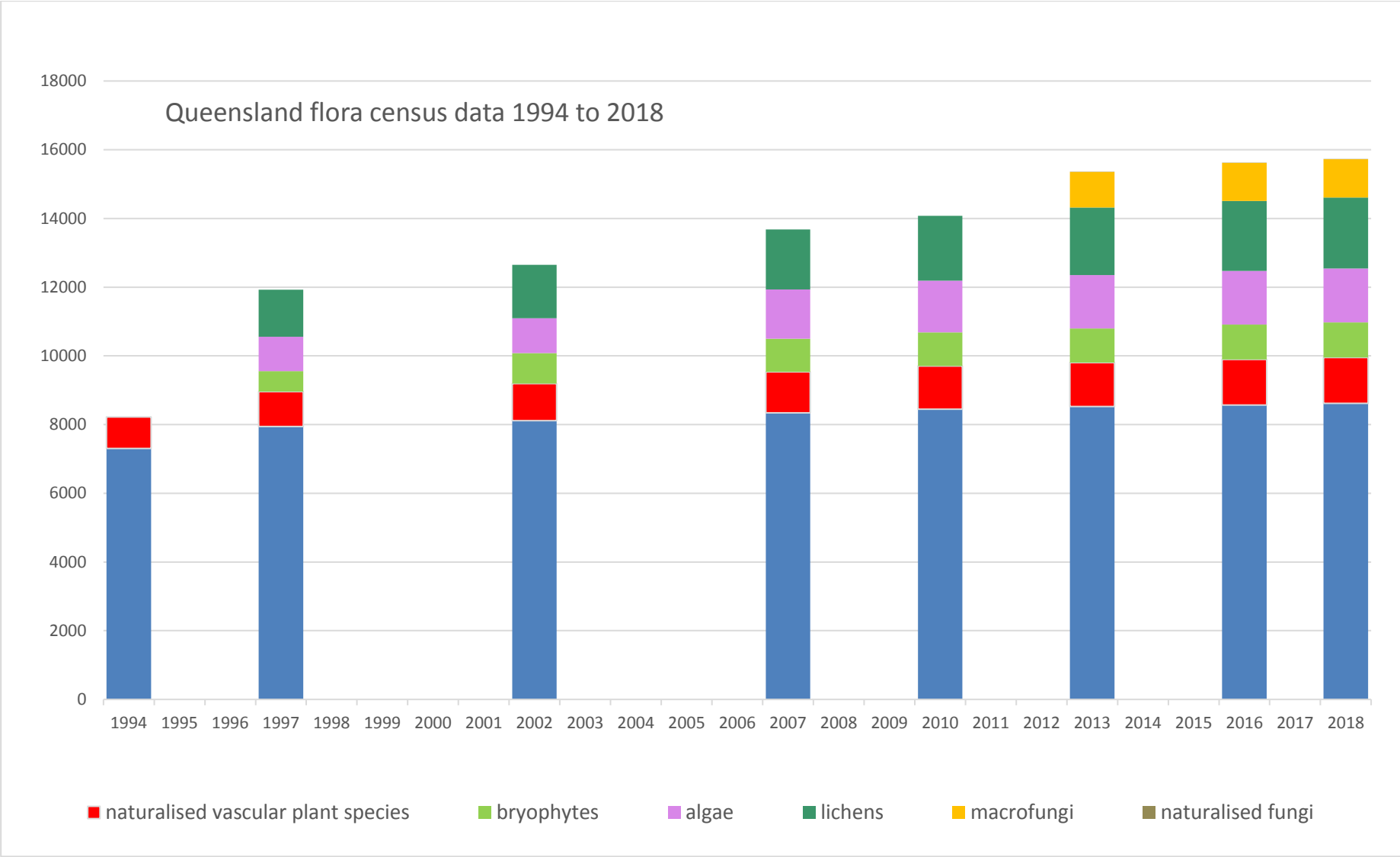
Rod Rogers

Table 1. Queensland Flora Statistics: 1913 to 2018

	Kingdom & Group	2018	2017	2013	2010	2007	2002	1997	1994	1913 (Bailey)
Plantae: Angiosperms (flowering plants)	Native	8,163	8,133	8,078	8,005	7,901	7,677	7,512	7,252	4,626
	Naturalised	1,320	1,312	1,262	1,241	1,175	1,066	1,001	910	297
	Subtotal	9483	9,446	9,340	9,246	9,076	8,743	8,513	8,162	4,923
Plantae: Gymnosperms (conifers, cycads and allies)	Native	66	65	64	62	62	59	60	54	29
	Naturalised	6	6	6	6	6	3	3	3	0
	Subtotal	72	71	70	68	68	62	63	57	29
Plantae: Pteridophytes (ferns and allies)	Native	386	386	381	381	381	377	374	375	233
	Naturalised	11	11	11	11	10	10	7	5	0
	Subtotal	397	397	392	392	391	387	381	380	233
Plantae: non-vascular plants	Mosses (Bryophyta)	571	569	561	555	556	574	595	not listed	360
	Liverworts & hornworts	452	448	437	421	411	315	not listed	not listed	113
Algae (Plantae, Chromista and Cyanobacteria)	Algae	1654	1561	1,555	1,505	1,433	1,011	1,004	not listed	718
Fungi (lichens and	Lichens	2067	2,052	1,962	1,888	1,742	1,558	1,370	not listed	828

	Kingdom & Group	2018	2017	2013	2010	2007	2002	1997	1994	1913 (Bailey)
macrofungi groups)	Native Macrofungi	1116	1,090	1,036	1026	not listed	not listed	not listed	not listed	874
	Naturalised fungi	2	2	2						
Totals	Total native	14385	14,304	14,076	—	—	—	—	—	7,781
	Total naturalised	1339	1331	1,279	1,258	1,191	1,079	1,011	918	297
	Overall total native and naturalised	15724	15,635	15,355	—	—	—	—	—	8,078

Figure 1. Queensland Flora Statistics: 1994 to 2018



Useful references and web resources

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

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Contributors

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

Flowering Plant families (Angiosperms) occurring in Queensland (native, naturalised, doubtfully naturalised or formerly naturalised)

Bean A.R., Acanthaceae, Adoxaceae, Amaranthaceae, Apiaceae, Balsaminaceae, Caprifoliaceae, Chrysobalanaceae, Cleomaceae, Hydroleaceae, Hydatellaceae, Lythraceae, Mazaceae, Melastomataceae, Myodocarpaceae, Pedaliaceae, Plantaginaceae, Ranunculaceae, Rhamnaceae, Rosaceae, Solanaceae, Sphenocleaceae, Stylidiaceae, Thymelaeaceae.

Bean A.R. (Leptospermoideae); Guymer G.P. & Jessup L.W.*(Myrtoideae): Myrtaceae

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

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

Booth R.: Centrolepidaceae, Cyperaceae, Juncaceae, Restionaceae.

Clarkson J.R.*: Erythroxylaceae.

Crayn D.*: Ericaceae.

Edginton M.: Brassicaceae, Chenopodiaceae, Cucurbitaceae, Passifloraceae, Proteaceae (*Grevillea* & *Hakea*) Santalaceae, Scrophulariaceae, Viscaceae.

Fechner N.: Linderniaceae, Phrymaceae, Stackhousiaceae.

Fensham R.J.: Burmanniaceae, Eriocaulaceae, Pandanaceae, Thismiaceae (new).

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

Forster P.I.: Agavaceae, Amaryllidaceae, Apocynaceae, Arecaceae, Argophyllaceae, Asphodelaceae, Blandfordiaceae, Bromeliaceae, Cactaceae, Campanulaceae, Carpodetaceae, Commelinaceae, Convallariaceae, 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, Xanthorrhoeaceae, Xyridaceae.

Guymer G.P.: Alseuosmiaceae, Balanopaceae, Bignoniaceae, Bombacaceae, Byttneriaceae, Capparaceae, Corynocarpaceae, Elaeagnaceae, Elaeocarpaceae, Gesneriaceae, Helicteraceae, Icacinaceae, Leptaulaceae, Loranthaceae, Malvaceae, Nothofagaceae, Orobanchaceae, Pennantiaceae, Pentapetaceae, Simaroubaceae, Stemonuraceae, Surianaceae, Tamaricaceae, Winteraceae.

Guymer G.P. & McDonald W.J.*: Sterculiaceae.

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

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

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

Holland A.E. & Pedley L.: Fabaceae

Jackes B.: Vitaceae

Jessup L.W.*: Actinidiaceae, Akaniaceae, Aphanopetalaceae, Aristolochiaceae, Atherospermataceae, Austrobaileyaceae, Basellaceae, Berberidaceae, Berberidopsidaceae, Bixaceae, Burseraceae, Cardiopteridaceae, Caricaceae, Clusiaceae, Cochlospermaceae, Connaraceae, Datiscaceae, Dichapetalaceae, Dipentodontaceae (new), Elatinaceae, Eupomatiaceae, Hamamelidaceae, Hanguanaceae, Hernandiaceae, Himantandraceae, Juglandaceae, 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, Monimiaceae, Symplocaceae, Urticaceae.

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. (northern) & Bostock, P.D.*: Orchidaceae.

McDonald, W.J.*: Combretaceae.

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

Pedley, L.*: Leguminosae (Caesalpiniaceae)

Pedley, L.*, Brown, G.: Leguminosae (Mimosaceae).

Pedley, L.* & Wolff, J.*: Verbenaceae.

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.

Thomas, M.B.: Aizoaceae, Caryophyllaceae, Macarthuriaceae (new), Molluginaceae, Portulacaceae.

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

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

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, Magnoliaceae, Strelitziaceae.

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

Yates N.: Plumbaginaceae, Tropaeolaceae, Phytolaccaceae.

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

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

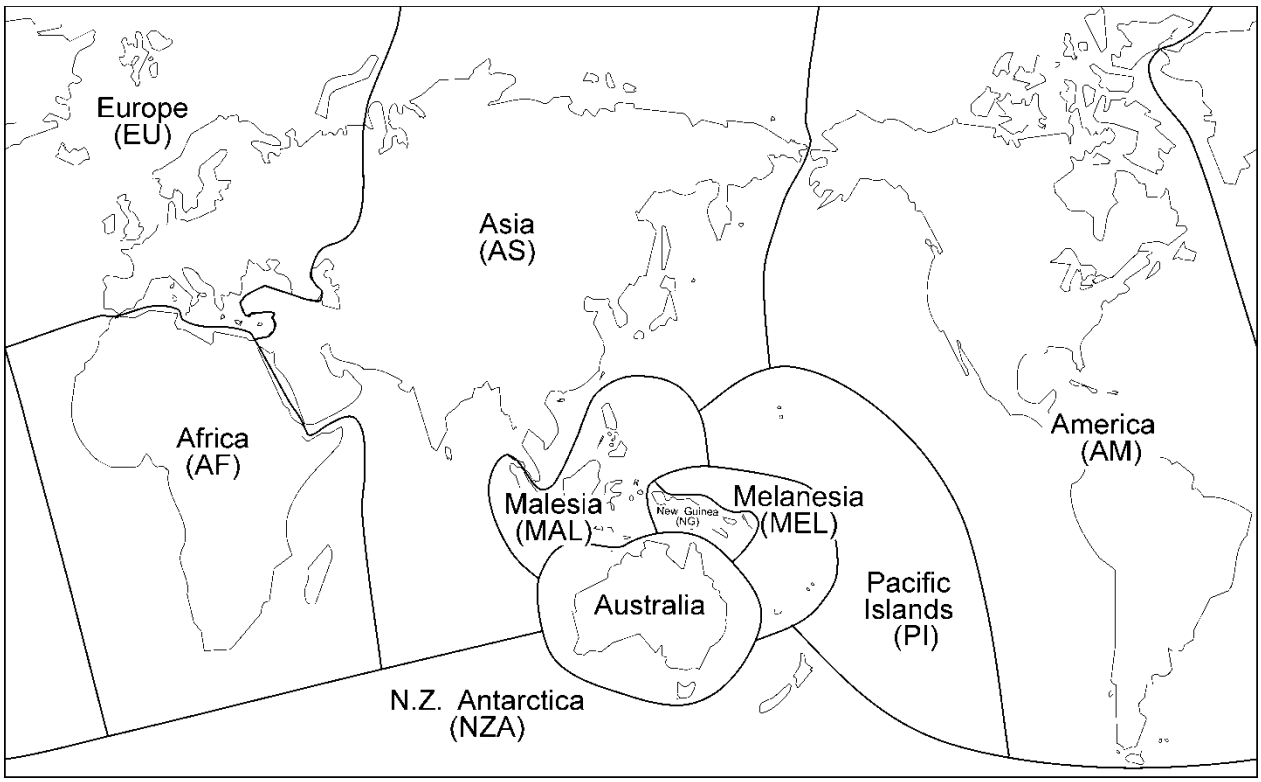
Mosses, liverworts, hornworts (bryophytes): Franks, A.J. & Patterson R.*

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

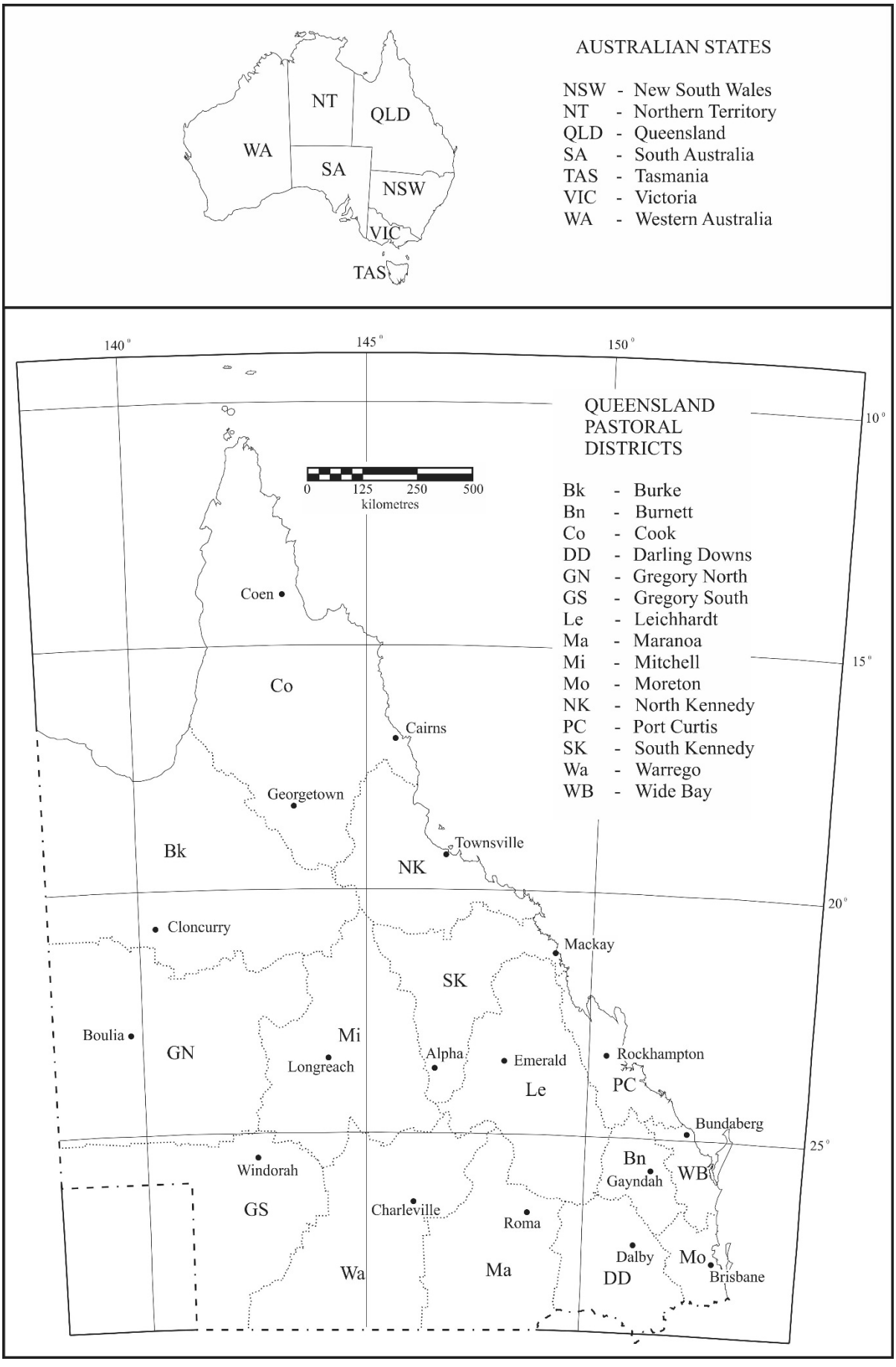
Lichens: Rogers, R.* & Holland, A.E.

Macrofungi: Fechner, N., Prance, M. (*Trametes, Geastrum*), with assistance from Guard F.*, McMullan-Fisher S.*, Evans G.*, ,Ryan V.*

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 2017 to 2018

(vascular plants only)

X = Extinct in the wild

E = Endangered

V = Vulnerable

N = Near Threatened

LC = Least Concern (blank in this document)

* = naturalised

D = doubtfully naturalised

! = formerly naturalised

Ferns and fern allies

Lycopodiaceae

E *Phlegmariurus filiformis* (Sw.) W.H.Wagner to **E** *Phlegmariurus creber* (Alderw.) A.R.Field & Bostock

V *Phlegmariurus marsupiiformis* (D.L.Jones & B.Gray) A.R.Field & Bostock to **V** *Phlegmariurus delbrueckii* (Herter) A.R.Field & Bostock

Dryopteridaceae

Coveniella poecilophlebia (Hook.) Tindale to *Lastreopsis poecilophlebia* (Hook.) Labiak, Sundue & R.C.Moran

N *Oenotrichia dissecta* (C.T.White & Goy) S.B.Andrews to **N** *Lastreopsis dissecta* (C.T.White & Goy) Labiak, Sundue & R.C.Moran

Oenotrichia tripinnata (F.Muell. ex Benth.) Copel. to *Lastreopsis tripinnata* (F.Muell. ex Benth.) Labiak, Sundue & R.C.Moran

Gymnosperms

Cycadaceae

Cycas distans P.I.Forst. & B.Gray, a new species for Queensland

Flowering plants

Acanthaceae

D *Andrographis paniculata* (Burm.f.) Wall. ex Nees, a new doubtfully naturalised species for Queensland, previously cultivated

Justicia platyphylla S.Moore to *Rhaphidospora platyphylla* (S.Moore) Bremek. ex A.R.Bean

Actinidiaceae

D *Actinidia chinensis* Planch., a new doubtfully naturalised species for Queensland

Alismataceae

***** *Alisma plantago-aquatica* L., a new naturalisation for Queensland, previously doubtfully naturalised

Amaranthaceae

Achyranthes aspera var. *canescens* (R.Br.) Drake to *Achyranthes aspera* L., varieties are no longer recognised

Annonaceae

N *Haplostichanthus submontanus* subsp*. sessiliflorus* Jessup to **N** *Polyalthia submontana* subsp. *sessiliflora* (Jessup) Jessup

Haplostichanthus submontanus Jessup subsp. *submontanus* to *Polyalthia submontana* (Jessup) B.Xue & R.M.K.Saunders subsp. *submontana*

Apocynaceae

D *Asclepias tuberosa* L. removed, this specimen re-determined to *A. curassavica*

D *Rauvolfia verticillata* Baill., a new doubtfully naturalised species for Queensland, previously cultivated

Araceae

**Typhonium blumei* Nicolson & Sivad., this species now considered to be naturalised (previously native)

Aristolochiaceae

Aristolochia nauseifolia Michael J.Parsons to *Aristolochia thozetii* F.Muell.

Asteraceae

D *Ambrosia tenuifolia* Spreng., a new doubtfully naturalised species for Queensland

Blumea milnei Seem. to *Blumea sylvatica* (Blume) DC.

Blumea mollis (D.Don) Merr. to *Blumea axillaris* (Lam.) DC.

Blumea sinuata (Lour.) Merr., a new species for Queensland

Euchiton collinus Cass. to *Euchiton japonicus* (Thunb.) Holub

Euchiton sp. (Hughenden C.E.Hubbard+ 7639) to *Euchiton sphaericus* (Willd.) Holub

**Gazania rigens* (L.) Gaertn. var. *rigens* to *Gazania *rigens* (L.) Gaertn., varieties are no longer recognised

Microseris lanceolata (Walp.) Sch.Bip. to *Microseris walteri* Gand.

Olearia bella A.R.Bean & Jobson, a new species for Queensland

Olearia chrysophylla (DC.) Benth. removed, this specimen re-detemined to *O. oppositifolia* (F.Muell.) Lander

Olearia macdonnellensis D.A.Cooke removed, Queensland specimens re-determined to *Olearia orientalis* A.R.Bean & Jobson

Olearia orientalis A.R.Bean & Jobson, a new species for Queensland

Podolepis aristata Benth., this name re-instated for Queensland

Podolepis aristata subsp. *affinis* (Sond.) Jeanes, a new subspecies for Queensland

Podolepis aristata Benth. subsp. *aristata,* a new subspecies for Queensland

Podolepis aristata subsp. *auriculata* (DC.) Jeanes, a new subspecies for Queensland

Podolepis canescens A.Cunn. ex DC. removed, Queensland specimens re-determined to *Podolepis aristata* Benth. (with three subspecies)

Vernonia cuneata Less. to *Decaneuropsis obovata* (Gaudich.) H.Rob. & Skvarla

Bignoniaceae

D *Handroanthus chrysanthus* (Jacq.) S.O.Grose, a new doubtfully naturalised species for Queensland, previously cultivated (*Tabebuia chrysanthus* Nicols.)

Boraginaceae

Austrocynoglossum latifolium (R.Br.) R.R.Mill to *Hackelia latifolia* (R.Br.) Dimon & M.A.M.Renner

V *Carmona retusa* (Vahl) Masam. to **V** *Ehretia microphylla* Lam.

Cynoglossum suaveolens R.Br. to *Hackelia suaveolens* (R.Br.) Dimon & M.A.M.Renner

Cynoglossum torvum Dimon & M.A.M.Renner, a new species for Queensland

D *Ehretia laevis* Roxb. removed, specimens re-determined to *Ehretia* sp. (Whitfield Range R.Jago 17)

Brassicaceae

**Arabidopsis thaliana* (L.) Heynh., a new naturalisation for Queensland, previously doubtfully naturalised

Stenopetalum anfractum E.A.Shaw, a new record for Queensland

Stenopetalum lineare R.Br. ex DC. var. *lineare* to *Stenopetalum lineare* R.Br. ex DC., varieties are no longer recognised

Byblidaceae

Byblis aquatica Lowrie & Conran, a new species for Queensland

Cactaceae

**Cylindropuntia prolifera* (Engelm.) F.M.Knuth, a new naturalisation for Queensland, previously doubtfully naturalised

**Opuntia elata* Link & Otto ex Salm-Dyck, a new naturalisation for Queensland

Campanulaceae

Lobelia gibbosa var. *browniana* (Roem. & Schult.) F.M.Bailey to *Lobelia browniana* Schult.

Lobelia gibbosa Labill. var. *gibbosa* to *Lobelia gibbosa* Labill.

Lobelia pedunculata R.Br. removed, this specimen re-determined elsewhere

Wahlenbergia communis Carolin to *Wahlenbergia capillaris* (G.Lodd.) G.Don

Caryophyllaceae

Colobanthus sp. (Allora S.T.Blake 13812) and *Scleranthus biflorus* (J.R.Forst.) Hook.f. removed, specimens re-determined to *Scleranthus* sp.

Chenopodiaceae

Atriplex sp. (Edgbaston E.J.Thompson+ MUT401) to *Atriplex alces* Edginton & E.J.Thomps., a new species for Queensland

Dissocarpus sp. (Doongmabulla E.J.Thompson+ GAL21) removed, specimens re-determined to *Dissocarpus paradoxus* (R.Br.) F.Muell. ex Ulbr.

Convolvulaceae

Bonamia media (R.Br.) Hallier f. var. *media* and *Bonamia media* var. *emarginata* Myint & Ward, both to *Bonamia media* (R.Br.) Hallier f., varieties are no longer recognised

Costaceae

D *Costus speciosus* (J.Koenig) Sm., a new doubtfully naturalised species for Queensland

Cyperaceae

Eleocharis caespitosissima Baker, a new record for Queensland

Eleocharis triquetra K.L.Wilson, a new record for Queensland

Fimbristylis sp. (Esmeralda Gorge S.T.Blake 19640) to *Fimbristylis triloba* R.Booth & Sharpe, a new species for Queensland

Fimbristylis sp. (Lake Buchanan V.J.Neldner+ 3362) to *Fimbristylis buchananensis* R.Booth & Sharpe, a new species for Queensland

Ericaceae

Leucopogon melaleucoides A.Cunn. ex DC. to *Acrothamnus melaleucoides* (A.Cunn. ex DC.) Puente-Lel.

Lissanthe sp. (Diggers Camp J.M.Powell 4557) to *Agiortia pleiosperma* (F.Muell.) Quinn

Eriocaulaceae

Eriocaulon pallidum R.Br. removed, these specimens re-determined to *Eriocaulon nanum* R.Br.

Eriocaulon wolseleyi G.J.Leach, a new species for Queensland

Euphorbiaceae

Pedilanthus tithymaloides subsp. *smallii* (Millsp.) Dressler to *Euphorbia tithymaloides* subsp. *smallii* (Millsp.) V.W.Steinm.

Flagellariaceae

Flagellaria indica var. *australiensis* Wepfer & H.P. Linder to *Flagellaria indica* L., varieties no longer recognised

Iridaceae

Geosiris australiensis B.Gray & Y.W.Low, a new species for Queensland

**Sisyrinchium* sp. (Peregian P.R.Sharpe 4970) removed, these specimens re-determined to **Sisyrinchium rosulatum* E.P.Bicknell

Lamiaceae

Prostanthera incisa R.Br. removed, Queensland specimens re-determined to *Prostanthera ovalifolia* R.Br.

D *Stachys palustris* L., a new doubtfully naturalisation species for Queensland

Teucrium fallax A.R.Bean, a new species for Queensland

Teucrium irroratum A.R.Bean, a new species for Queensland

Teucrium racemosum R.Br. var. *racemosum* to *Teucrium racemosum* R.Br., varieties are no longer recognised

Teucrium sagittatum A.R.Bean, a new species for Queensland

Teucrium sp. (Ormeau G.Leiper AQ476858) to *Teucrium modestum* A.R.Bean, a new species for Queensland

Teucrium sp. (Pittsworth A.R.Bean 18338) to *Teucrium daucoides* A.R.Bean, a new species for Queensland

Laxmanniaceae

Lomandra decomposita (R.Br.) Jian Wang ter & A.R.Bean, a new species for Queensland

Leguminosae (Caesalpiniaceae)

Labichea mulliganensis A.R.Bean, a new species for Queensland

Leguminosae (Fabaceae)

D *Genista linifolia* L., a new doubtfully naturalisation species for Queensland

Pultenaea maritima de Kok removed, Queensland specimens re-determined to *Pultenaea villosa* Willd.

Leguminosae (Mimosaceae)

D *Mimosa quadrivalvis* L., a new doubtfully naturalised species for Queensland

**Vachellia karroo* (Hayne) Banfi & Galasso, a new naturalisation for Queensland, previously doubtfully naturalised

Lentibulariaceae

Utricularia jobsonii Lowrie, a new record for Queensland

Molluginaceae

Mollugo cerviana (L.) Ser. to *Hypertelis cerviana* (L.) Thulin

**Mollugo pentaphylla* L. to **Trigastrotheca stricta* (L.) Thulin

Myrtaceae

Melaleuca sp. (Mt Marlow M.E.Ballingall MEB2737) to *Melaleuca comosa* A.R.Bean, a new species for Queensland

Oleaceae

Chionanthus acuminiger F.Muell., re-instated for Queensland (*Chionanthus acuminigera*)

Chionanthus picrophloia F.Muell. removed, Queensland specimens re-determined to *Chionanthus ramiflorus* Roxb.

**Olea europaea* subsp. *cuspidata* (Wall. ex G.Don) Cif., a new subspecies for Queensland (newly recognised for Queensland)

Orchidaceae

Cestichis angustilabris (F.Muell.) M.A.Clem. & D.L.Jones, a new species for Queensland

Cestichis bracteata (T.E.Hunt) M.A.Clem. & D.L.Jones, a new species for Queensland

Corunastylis cuspidata D.L.Jones & L.M.Copel., a new species for Queensland

Corunastylis tenella D.L.Jones & L.M.Copel., a new species for Queensland

Danhatchia australis (Hatch) Garay & Christenson, a new record for Queensland

E *Dipodium pictum* (Lindl.) Rchb.f. to **E** *Dipodium pandanum* F.M.Bailey

Diuris maculata Sm. removed, Queensland specimens re-determined to *Diuris chrysantha* D.L.Jones & M.A.Clem.

V *Eria dischorensis* Schltr. to **V** *Bryobium dischorense* (Schltr.) M.A.Clem. & D.L.Jones

Eria eriaeoides (F.M.Bailey) Rolfe to *Bryobium eriaeoides* (F.M.Bailey) M.A.Clem. & D.L.Jones

Eria fitzalanii F.Muell. to *Pinalia fitzalanii* (F.Muell.) Kuntze

V *Eria irukandjiana* St.Cloud to **V** *Bryobium irukandjianum* (St.Cloud) M.A.Clem. & D.L.Jones

Eria kingii F.Muell. to *Pinalia kingii* (F.Muell.) Kuntze

Eria queenslandica T.E.Hunt to *Bryobium queenslandicum* (T.E.Hunt) M.A.Clem. & D.L.Jones

Gastrodia umbrosa B.Gray, a new species for Queensland

Genoplesium acuminatum (R.S.Rogers) D.L.Jones & M.A.Clem. to *Corunastylis acuminata* (R.S.Rogers) D.L.Jones & M.A.Clem.

V *Genoplesium alticola* D.L.Jones & B.Gray to **V** *Corunastylis alticola* (D.L.Jones & B.Gray) D.L.Jones & M.A.Clem.

Genoplesium archeri (Hook.f.) D.L.Jones & M.A.Clem. to *Corunastylis archeri* (Hook.f.) D.L.Jones & M.A.Clem.

Genoplesium confertum D.L.Jones to *Corunastylis conferta* (D.L.Jones) D.L.Jones & M.A.Clem.

V *Genoplesium cranei* D.L.Jones to **V** *Corunastylis cranei* (D.L.Jones) D.L.Jones & M.A.Clem.

Genoplesium filiforme (Fitzg.) D.L.Jones & M.A.Clem. to *Corunastylis filiformis* (Fitzg.) D.L.Jones & M.A.Clem.

Genoplesium fimbriatum (R.Br.) D.L.Jones & M.A.Clem. to *Corunastylis fimbriata* (R.Br.) D.L.Jones & M.A.Clem.

Genoplesium nudiscapum (Hook.f.) D.L.Jones & M.A.Clem. (= *Corunastylis nudiscapa* (Hook.f.) D.L.Jones & M.A.Clem. removed, this species not in Queensland

Genoplesium parvicallum (Rupp) D.L.Jones & M.A.Clem. to *Corunastylis parvicalla* (Rupp) D.L.Jones & M.A.Clem

V *Genoplesium pedersonii* D.L.Jones to **V** *Corunastylis pedersonii* (D.L.Jones) D.L.Jones & M.A.Clem.

Genoplesium psammophilum D.L.Jones to *Corunastylis psammophila* (D.L.Jones) D.L.Jones & M.A.Clem.

Genoplesium pumilum (Hook.f.) D.L.Jones & M.A.Clem. to *Corunastylis pumila* (Hook.f.) D.L.Jones & M.A.Clem.

Genoplesium rufum (R.Br.) D.L.Jones & M.A.Clem. to *Corunastylis rufa* (R.Br.) D.L.Jones & M.A.Clem.

Genoplesium sagittiferum (Rupp) D.L.Jones & M.A.Clem. to *Corunastylis sagittifera* (Rupp) D.L.Jones & M.A.Clem.

N *Genoplesium sigmoideum* D.L.Jones to **N** *Corunastylis sigmoidea* (D.L.Jones) D.L.Jones & M.A.Clem.

Genoplesium sp. (Fraser Island NP R.Crane 2063) to *Corunastylis* sp. (Fraser Island NP R.Crane 2063)

Genoplesium sp. (Raby Bay J.Elsol AQ462423) to *Corunastylis* sp. (Raby Bay J.Elsol AQ462423)

Genoplesium sp. (Wyberba D.L.Jones+ 2557) to *Corunastylis* sp. (Wyberba D.L.Jones+ 2557)

E *Genoplesium tectum* D.L.Jones to **E** *Corunastylis tecta* (D.L.Jones) D.L.Jones & M.A.Clem.

V *Genoplesium validum D.L.Jones* to **V** *Corunastylis valida* (D.L.Jones) D.L.Jones & M.A.Clem.

E *Goodyera grandis* (Blume) Blume removed, Queensland specimens re-determined to **E** *Salacistis ochroleuca* (F.M.Bailey) M.A.Clem. & D.L.Jones

E *Goodyera ochroleuca F*.M.Bailey to **E** *Salacistis ochroleuca* (F.M.Bailey) M.A.Clem. & D.L.Jones

Liparis coelogynoides (F.Muell.) Benth. to *Cestichis coelogynoides* (F.Muell.) M.A.Clem. & D.L.Jones

Liparis collinsii B.Gray to *Diteilis collinsii* (B.Gray) M.A.Clem. & D.L.Jones

V *Liparis condylobulbon* Rchb.f. to **V** *Cestichis condylobulbon* (Rchb.f.) M.A.Clem. & D.L.Jones

Liparis fleckeri Nicholls to *Cestichis fleckeri* (Nicholls) M.A.Clem. & D.L.Jones

Liparis nugentiae F.M.Bailey *to Cestichis nugentiae* (F.M.Bailey) M.A.Clem. & D.L.Jones

Liparis petricola (D.L.Jones & B.Gray) Bostock to *Diteilis petricola* D.L.Jones & B.Gray

Liparis swenssonii F.M.Bailey to Cestichis swenssonii (F.M.Bailey) M.A.Clem. & D.L.Jones

N *Liparis simmondsii* F.M.Bailey to **N** *Diteilis simmondsii* (F.M.Bailey) M.A.Clem. & D.L.Jones

Oberonia crateriformis D.L.Jones & M.A.Clem., a new species for Queensland

Oberonia flavescens D.L.Jones & M.A.Clem., a new species for Queensland

Oberonia rimachila D.L.Jones & M.A.Clem., a new species for Queensland

E *Phalaenopsis amabilis* subsp. *rosenstromii* (F.M.Bailey) Christenson to **E** *Phalaenopsis rosenstromii* F.M.Bailey

Pterostylis pearsonii (D.L.Jones) Janes & Duretto, a new record for Queensland

Spiranthes sinensis (Pers.) Ames, Queensland specimens re-determined to *Spiranthes australis* (R.Br.) Lindl. (misapplication)

Taeniophyllum epacridicola B.Gray, a new species for Queensland

Taeniophyllum walkeri B.Gray, a new species for Queensland

Oxalidaceae

D *Averrhoa carambola* L., a new doubtfully naturalised species for Queensland

Phyllanthaceae

Sauropus aphyllus J.T.Hunter & J.J.Bruhl to *Synostemon aphyllus* (J.T.Hunter & J.J.Bruhl) I.Telford & Pruesapan

Sauropus hubbardii Airy Shaw to *Synostemon hubbardii* (Airy Shaw) I.Telford & Pruesapan

Sauropus trachyspermus (F.Muell.) Airy Shaw to *Synostemon trachyspermus* (F.Muell.) I.Telford & Pruesapan

Synostemon lissocarpus (S.Moore) I.Telford & Pruesapan, a new species for Queensland

Synostemon rhytidospermus (F.Muell. ex Muell.Arg.) I.Telford & Pruesapan, a new species for Queensland

Piperaceae

D *Piper auritum* Kunth, a new doubtfully naturalised species for Queensland, previously cultivated

Pittosporaceae

Pittosporum ferrugineum subsp. *linifolium* (A.Cunn.) L.Cayzer, Crisp & I.Telford to *Pittosporum tinifolium* A.Cunn.

Pittosporum ferrugineum W.T.Aiton subsp. *ferrugineum* to *Pittosporum ferrugineum* W.T.Aiton

Poaceae

Anthosachne multiflora (Banks & Sol. ex Hook.f.) C.Yen & J.L.Yang subsp. *multiflora* to *Anthosachne kingiana* subsp. *multiflora* (Banks & Sol. ex Hook.f.) Govaerts

Cyrtococcum trigonum (Retz.) A.Camus removed, Queensland specimens re-determined elsewhere

Elionurus purpureus E.J.Thomps., a new species for Queensland

Mnesithea granularis (L.) de Koning & Sosef to *Hackelochloa granularis* (L.) Kuntze

Thaumastochloa rubra Sosef & de Koning, a new record for Queensland

Polygalaceae

Comesperma albimontanense A.J.Ford & Halford, a new species for Queensland

Comesperma anemosmaragdinum A.J.Ford & Halford, a new species for Queensland

Comesperma rhyoliticum A.J.Ford & Halford, a new species for Queensland

Comesperma secundum Banks ex DC. subsp. *secundum*, a new subsp. for Queensland (on publication of *Comesperma secundum* subsp. *oligotrichum* A.J.Ford & Halford)

Polygonaceae

**Emex australis* Steinh. to **Rumex hypogaeus* T.M.Schust. & Reveal (replaced synonym)

!*Emex spinosa* (L.) Campd. to !*Rumex spinosus* L.

Hodgkinsonia frutescens C.T.White to Eumachia frutescens (C.T.White) Barrabe, C.M.Taylor & Razafim.

**Persicaria glabra* (Willd.) M.Gomez removed, Queensland specimens re-determined to *Persicaria lapathifolia* (L.) Gray (native)

**Triplaris americana* L.*,* a new naturalisation for Queensland, previously doubtfully naturalised

Ripogonaceae

Ripogonum danesii Domin, this name re-instated for Queensland

Rubiaceae

Gen.(AQ520454) sp. (Iron Range L.J.Brass 19119) to *Randia* sp. (Iron Range L.J.Brass 19119)

Gen.(AQ520454) sp. (Shute Harbour D.A.Halford Q811) to *Randia* sp. (Shute Harbour D.A.Halford Q811)

Gynochthodes australiensis J.T.Johanss. removed, Queensland specimens re-determined elsewhere

Hodgkinsonia frutescens C.T.White to *Eumachia frutescens* (C.T.White) Barrabe, C.M.Taylor & Razafim.

D *Mussaenda frondosa* L., a new doubtfully naturalised species for Queensland

Salicaceae

**Salix humboldtiana* Willd., a new naturalisation for Queensland, previously doubtfully naturalised

Sapotaceae

**Chrysophyllum oliviforme* L., a new naturalisation for Queensland, previously doubtfully naturalised

Donella roxburghii Pierre ex Lecomte, a new record for Queensland and Australia

Solanaceae

D *Brugmansia suaveolens* Bercht. & Presl, a new doubtfully naturalised species for Queensland

Nicotiana exigua H.-M.Wheeler to *Nicotiana suaveolens* Lehm.

Thismiaceae

Thismia hawkesii W.E.Cooper, a new species for Queensland

Thismia lanternata W.E.Cooper, a new species for Queensland

Thymelaeaceae

Pimelea approximans A.R.Bean, a new species for Queensland

Pimelea confertiflora A.R.Bean, a new species for Queensland

Pimelea fugiens A.R.Bean, a new species for Queensland

Pimelea gigandra A.R.Bean, a new species for Queensland (includes *Pimelea altior* var. *longifolia* Domin)

Pimelea latifolia subsp. altior (F.Muell.) Threlfall to *Pimelea altior* F.Muell.

N *Pimelea leptospermoides* F.Muell. to **N** *Pimelea leptospermoides* F.Muell. subsp. *leptospermoides* and **N** *Pimelea leptospermoides* subsp. *bowmanni* (Benth.) A.R.Bean, new subspecies for Queensland

Pimelea leptostachya Benth., re-instated

Pimelea mollis A.R.Bean, a new species for Queensland

Pimelea plurinervia A.R.Bean, a new species for Queensland

Pimelea rupestris A.R.Bean, a new species for Queensland

Pimelea sericostachya subsp. *amabilis* (Domin) Threlfall to *Pimelea amabilis* (Domin) A.R.Bean

Pimelea sericostachya F.Muell. subsp. *sericostachya* to *Pimelea sericostachya* F.Muell.

Pimelea sp. (Bakers Blue Mt D.G.Fell DF1588) to *Pimelea chlorina* A.R.Bean, a new species for Queensland

Pimelea sp. (Hughenden D.A.Halford Q242) to *Pimelea sericostachya* F.Muell.

Family Changes

Ferns and allies

Adiantaceae to Pteridaceae

Angiopteridaceae to Marattiaceae

Arthropteris to Tectariaceae (previously Nephrolepidaceae)

Azollaceae to Salviniaceae

Bolbitis, Elaphoglossum, Teratophyllum to Dryopteridaceae (previously Lomariopsidaceae)

Grammitidaceae to Polypodiaceae

Lygodium to Lygodiaceae (previously Schizaeaceae)

Platyzomataceae to Pteridaceae

Tectaria to Tectariaceae (previously Dryopteridaceae)

Tmesipteridaceae to Psilotaceae

Vittariaceae to Pteridaceae

Flowering Plants

D *Acer negundo* L. to Sapindaceae (previously Aceraceae)

Baileyoxylon, Hydnocarpus, Ryparosa all to Achariaceae (previously Flacourtiaceae)

Casearia, Dovyalis, Flacourtia, Homalium, Oncoba, Scolopia and *Xylosma* to Salicaceae (previously Flacourtiaceae)

Idiospermum to Calycanthaceae (previously Idiospermaceae)

Macarthuria species to Macarthuriaceae (previously in Molluginaceae)

Perrottetia to Dipentodontaceae (previously Celastraceae)

Thismia to Thismiaceae (previously Burmanniaceae)