

CHAPTER 1

Flora of the Karri Forest and other Communities in the Warren Botanical Subdistrict of Western Australia

S.D. Hopper G.J. Keighery and G. Wardell-Johnson

Abstract

A review is provided of current knowledge, ongoing research and future research requirements for the Warren Botanical Subdistrict flora. Although a thorough survey of the flora has yet to be undertaken, current literature, herbarium collections and unpublished survey data indicate that some 1947 taxa (species, subspecies or varieties) have been collected. This total comprises 1628 native and 319 introduced taxa. Important families include Papilionaceae (165 taxa), Orchidaceae (152), Myrtaceae (125) and Proteaceae (115). The largest genera include *Acacia* (64 taxa), *Stylium* (55), *Caladenia* (46), *Leucopogon* (41), *Eucalyptus* (26) and *Drosera* (24). The Subdistrict has 99 known endemic taxa, and many more near endemics or geographical outliers. It is the most important centre of endemism for conservative relictual high rainfall taxa in the State.

There are 19 species of Declared Rare Flora, 46 poorly known taxa in urgent need of further survey to assess their conservation status, and 16 adequately surveyed taxa additional to those declared as rare that require monitoring. Coastal heath, granite outcrops, swamps and woodlands contain the majority of endemics and threatened taxa. The main karri forest has few of the endemics, and none of the Declared Rare Flora nor those requiring monitoring.

The most important priority for future research is the production of a published Flora of the Warren Subdistrict. Such a project would stimulate taxonomic and biogeographic research, and enable a better assessment of conservation requirements to be made. Survey and biological studies of threatened taxa and of poorly known and rare habitats at risk are also needed to design appropriate management initiatives.

INTRODUCTION

This paper summarizes existing knowledge of the flora of the Warren Botanical Subdistrict (*sensu* Beard 1980). It presents a list of the known vascular flora, refers to current research projects, and identifies priorities for future research. The work was done primarily as a contribution to a review of research on the impact of forest management in south-west Australia conducted by the Department of Conservation and Land Management, so that it might monitor and manage the woodchip industry with the best available scientific information.

The review of floristic research and plant list may also be of more general interest.

We chose the Warren Botanical Subdistrict as the geographical area of investigation because it includes all karri (*Eucalyptus diversicolor*) forests likely to be harvested for timber, as well as other community types

(Table 1). It is also a geographical area used by botanists in specialist literature, and therefore was convenient for data extraction. Examining floristic data for the whole Warren Subdistrict has enabled placement of those components confined to karri forest in a regional perspective.

The Warren Subdistrict extends over 300 km from Yallingup on the Leeuwin-Naturaliste Ridge to Albany on the south coast. It is bounded by the sea to the south and west, while the northern boundary is drawn where *E. diversicolor* ceases to be a significant component (Beard 1980: p. 55). Thus, from Yallingup the northern or inland boundary runs south-south-east to Alexander Bridge on the Blackwood River, then east-south-east across the top of the Scott River Plain to the Donnelly River where it bends due north almost to Nannup, east to Wheatley, south to Jardee, and meanders east-south-east thereafter to Deeside, Granite Peak, Mt Frankland, Denmark and Albany.

The Subdistrict covers 8323 km², of which an estimated 31 per cent was cleared for agriculture a decade ago (Beard and Sprenger 1984).

Table 1

BEARD'S (1980) SUMMARY DESCRIPTION OF SALIENT FEATURES OF THE WARREN BOTANICAL SUBDISTRICT

Warren Subdistrict

District name

Geographical, after river of same name (Diels 1906).

Tall forest of karri (*Eucalyptus diversicolor*) on deep loams, forest of jarrah-marri (*E. marginata*-*E. calophylla*) on the leached sands. Extensive paperbark (*Melaleuca*) and sedge swamps in valleys.

Climate

Moderate 'mediterranean'; winter, precipitation ranges from 650 to 1500 mm per annum, essential feature is short dry season of only 3-4 dry months.

Geology

Archaean granite and infolded metamorphic rocks of the Yilgarn Block.

Topography and soils

Dissected undulating country of small relief, hard setting loamy soils alternating with leached sand soils.

Boundary

The northern boundary is drawn where *E. diversicolor* ceases to be a significant component.

CURRENT KNOWLEDGE

In common with most areas of W.A., neither a comprehensive floristic list nor a full Flora of the Warren Subdistrict has been published. However, scientific knowledge of the composition and distribution of plants in the Subdistrict has accumulated with general botanical exploration of the south-west (see Beard 1981 for a succinct review) and a small number of specialist projects. Information on Warren Subdistrict plants thus appears in more general works on Western Australian vascular flora such as Blackall and Grieve (1954-88), Erickson *et al.* (1973), Beard (1981) and Green (1985). The same applies to lichens (Richardson and Richardson 1982; Sammy 1985), larger fungi (Hilton 1982, 1988) and

bryophytes (Wyatt and Stoneburner¹). Field guides to selected groups of plants provide more detailed information on some species, e.g. banksias (George 1984; Taylor and Hopper 1988), orchids (Hoffman and Brown 1984), and eucalypts (Boland *et al.* 1984; Brooker and Kleinig 1989).

Current botanical information facilitating the identification of some families is becoming available through publication of the *Flora of Australia*. For example, Volume 45 deals with the Liliaceae and Haemodoraceae, Volume 46 with the Iridaceae (George 1986, 1987).

Vegetation and floristics

A few published works deal specifically with Warren Subdistrict vegetation and flora. Beard (1980) provided a brief outline of key features of the Subdistrict (Table 1). Later (Beard 1981), he subdivided the Subdistrict into five vegetation systems. Such systems each constitute a series of plant communities recurring in a sequence or pattern linked to landform, soil and/or geological features. The five in the Warren Subdistrict correspond to the main karri forest (Nornalup System), the more diverse communities to the east where karri is on the highest ground (Denmark System), the low woodlands, heaths and swamps inland from coastal areas (Scott River System), and coastal heaths, peppermint woodlands and low forests between Yallingup and Walpole (Boranup System) and from Walpole to Albany (Torndirrup System). Greater elaboration of these systems and their component communities was provided by Smith (1972-1974) and Beard (1979) in the three 1 : 250 000 vegetation maps and their explanatory memoirs covering the Warren Subdistrict.

Beard and Sprenger (1984) estimated that tall forests (mainly of karri) originally covered 47.8 per cent of the Subdistrict, jarrah forest on poorer soils covered 23.8 per cent, jarrah-banksia low woodlands 8.2 per cent, reed swamps 5 per cent, paperbark low woodlands in swamps 3.7 per cent, peppermint scrub 3.1 per cent, and heath on coastal dunes 2.6 per cent.

Christensen *et al.* (1985) provided a useful summary of major vegetation types and a preliminary floristic list for the southern forests of W.A. Their study area corresponded approximately with Beard's (1980) Warren and Menzies Botanical Subdistricts. Seven major vegetation types were mapped, all occurring in the Warren Subdistrict:

¹ Prof. R. Wyatt and Dr A. Stoneburner, University of Georgia, USA.

- high open forest of karri or karri and marri, less frequently jarrah, blackbutt and yellow, red and Rate's tingle;
- open forest of jarrah and marri;
- woodlands of casuarinas, banksias and Albany blackbutt;
- low woodlands of banksias, melaleucas, peppermints or eucalypts (on extreme sites);
- closed scrub - heath on swamps or coastal dunes;
- open scrub - heath;
- sedgelands on peaty subcoastal flats.

In addition, these authors singled out granite monadnocks and waterways and wetlands as special sites of unusual and structurally complex vegetation.

For the c. 900 plant species of the southern forests listed, the highest numbers were recorded in the open forest and woodland communities, while the least were in the sedgelands, waterways and wetlands, and closed scrub communities. Relatively few local endemics and rare and endangered plants were noted (see also Anon. 1982).

Two regional studies of landforms, soils and vegetation cover part of the Warren Subdistrict. McArthur and Clifton (1975) undertook a study of 34 000 km² in the Pemberton area, between the coast to the south, Deeside Coast Road in the east, the Donnelly River and Vasse Highway in the west, and Graphite and Renys Roads in the north. Thirteen broadscale soil associations were defined and mapped. Each was discussed in terms of vegetation structure, floristics, and in current and potential land use.

A more comprehensive study was by Churchward *et al.* (1988), who provided a detailed set of five 1:100 000 scale landform and soil maps covering an area between Windy Harbour eastward to Cheyne (Hassell) Beach 80 km east of Albany, and extending inland to latitude 3430'S (as far north as Rocky Gully). Thirty-five units were mapped, based firstly on general geological features (i.e. units developed on granite or unconsolidated sediments, on siltstones and sandstones, on coastal aeolian and fluvial sediments, and on drainage lines), and then on landform (plateau elements, hills and ridges, swampy terrain, dune systems, and major and minor valleys). Further subdivision into individual units was based on local relief, slope and drainage patterns.

Each of the 35 units was described in the accompanying memoir in terms of its physiography, geology, soil morphology and associated native vegetation. The latter was described structurally and

dominants were listed for each major stratum. For example, the Gardner Unit comprises granitic coastal hills and ridges with more than 60 m relief. Areas dominated by granite pavements, domes and tors have vegetation described as

heath communities of *Agonis marginata*, *Anthocercis viscosa*, *Verticordia plumosa* and *Andersonia simplex*; rock surfaces often support *Borya nitida*, orchids, mosses and lichens while ferns grow among the granite boulders.

Smooth gently sloping tracts of sandy podzols between granite outcrops or on lower slopes have

dense heath (2-3 m high) with a wide range of species including *Hakea elliptica*, *H. trifurcata*, *Allocasuarina trichodon*, *Oxylobium cuneatum*, *Dryandra formosa*, *Agonis marginata* and *A. parviceps*; there may be scattered thickets of mallee mainly comprising *Eucalyptus angulosa* and *E. cornuta*. The gullies may have a dense low forest of *Eucalyptus cornuta*, *E. conferruminata*, *E. calophylla*, *Melaleuca baxteri* and *Oxylobium lanceolatum*.

An excellent regional perspective of vegetation types and their association with landforms and soils is thus provided by Churchward *et al.* (1988).

The vegetation and flora of some of the islands and adjacent mainland in the Warren Subdistrict were documented by Gillham (1963) and Abbott (1980a, 1980b; Abbott and Watson 1978). Gillham (1963) showed that islands off Cape Leeuwin with colonies of nesting seabirds had more succulents and annuals in their flora than islands lacking such colonies.

Abbott (1980a, 1980b; Abbott and Watson 1978) provided species lists and/or vegetation maps for Hamelin, Sandy, and Chatham Islands, plus for eight headlands and 21 islands or islets near the large peninsula occupied by Torndirrup National Park south-west of Albany. Most of these studies aimed to provide a baseline to monitor future changes in the vegetation and flora of the islands.

The Torndirrup study established that species richness increases with shelter from waves and salt-spray. Thus, the poorest floras were found on exposed island slopes. Richer communities occurred on sheltered sides of islands where more complex vegetation structure developed. Richer sites again were found on both exposed and sheltered headland areas. Abbott (1980b) explained this trend in terms of exposure to salt, seabird activity and fire regimes.

Flora lists were provided for the Lefroy Brook and Four Mile Brook areas (Dames and Moore 1982), and Smiths Brook Nature Reserve (Griffin 1985). These were baseline studies aimed at assisting planning for a

dam site and management of a nature reserve respectively.

A survey of rare and poorly known flora of the Leeuwin-Naturaliste National Park by Hopper and Brown was summarized in the draft management plan for the Park (Frewer *et al.* 1987). The Leeuwin-Naturaliste Ridge was found to be particularly rich in endemic species and others of conservation significance. Some 40 species of interest were identified, with orchids prominent among them. These species were arranged in priority order for management action.

A survey of priority flora of the Walpole-Nornalup National Park provided by Wardell-Johnson and Annels was summarized in the draft management plan for the Park (Smith *et al.* 1990). The Walpole-Nornalup National Park was found to be rich in endemic species and those of conservation significance. Thirty-seven species were listed in priority order for management action and taxonomic work. Seven hundred native vascular plant species have been found in the Park which also includes the major population of red tingle (*Eucalyptus jacksonii*), and important populations of three other large locally endemic eucalypts (*E. guilfoylei*, *E. brevistylis*, *E. falcifolia*).

Wetland vegetation has been poorly documented in the Warren Subdistrict, with the exception of Congdon's (1981) study of the fringing vegetation of the Blackwood River Estuary. Congdon mapped the vegetation as three major communities and provided detailed descriptions and transects. The major communities recognized were *Baumea* sedge marsh, *Juncus* rush marsh and *Sarcocornia* marsh. The distribution and zonation of these communities in the above order were correlated with increasing salinity. Seventy-seven species were listed for these communities, 72 native and five introduced. While similar to other estuaries in south-eastern Australia, communities on the Blackwood River Estuary were less productive and showed more subtle zonation owing to a lower tidal amplitude.

Evolutionary studies

Churchill (1961, 1968) provided palaeontological and palynological data derived in part from sites in the Warren Subdistrict (Weld Swamp near Shannon Mill, Flinders Bay Swamp at Augusta, Scott River Swamp east of Augusta, and Boggy Lake in Walpole-Nornalup National Park). He documented changes in the abundance of karri, marri and jarrah pollen over the past 6000 years, with periods favouring karri from 4000-3000 B.C., 500 B.C. - 700 A.D., and 1500 A.D. to the present.

Evolutionary and genetic studies of the living flora have been few, but include James' (1979) chromosome number survey in *Stylium*, a cladistic study of south-western monocarpic *Eucalyptus* by Ladiges *et al.* (1987), and Coates and Sokolowski's (1989) survey of allozyme variation in karri. These works suggest that the Warren Subdistrict contains many relictual taxa (e.g. Rate's tingle *Eucalyptus brevistylis*) whose relationships may be with eastern States congeners as much as with Western Australian relatives in adjacent botanical districts. A similar situation appears to hold in some *Banksia* species such as *B. seminuda* ssp. *remanens* and *B. occidentalis* ssp. *formosa* (Hopper 1989). The evolutionary conservatism and relictual nature of most of the high rainfall zone flora was emphasized by Hopper (1979).

However, some groups do have their centres of diversity and appear to have undergone active recent speciation in the Subdistrict. For example, Burbidge (1984) found a centre of species richness in the Warren Subdistrict in triggerplants (*Stylium*), with some groups concentrated there (e.g. the leafy-stemmed triggerplants and the true annuals). Rye (1980) showed that *Agonis* and *Hypocalymma* in the Myrtaceae similarly were concentrated in the Subdistrict.

Keighery (1984) found that most groups of wetland monocotyledons, including genera of Cyperaceae, Xyridaceae, Juncaginaceae, Restionaceae and Orchidaceae, were species-rich in the Warren. Recent taxonomic studies in the Orchidaceae (Bates 1984; Hopper and Brown, in press) have accentuated this trend, as many new taxa endemic to the Subdistrict have been discovered.

Thus, it would appear that for woody genera, active speciation has been concentrated in the transitional rainfall zone, while the wetter Warren Subdistrict has provided a refugium for the persistence of relictual taxa. For annuals and perennial herbs, on the other hand, the Subdistrict has been a major centre of speciation.

Community studies

Seven site-based community studies in the Warren Subdistrict have been published or are in press (others are in progress). Two of these were in forest dominated structurally by jarrah, three by karri, and two in coastal heathland.

George *et al.* (1979) included three coastal sites in the Warren Subdistrict (at Torndirrup, Walpole-Nornalup and Scott National Parks) in a comparison of 25 heathland communities throughout south-western Australia. The Warren Subdistrict sites were of average species richness (50-56 per 100 m²),

with less species than lateritic heathland sites such as at Eneabba-Mt Lesueur, Mt Manypeaks and the Stirling Range (77-92 species), but more species than heathlands in the central western wheatbelt (40-44 species). The Warren sites were atypical of the south-western flora as a whole in their taxonomic composition, being relatively low in Myrtaceae and Proteaceae, but rich in Papilionaceae, Goodeniaceae, Epacridaceae and Stylidiaceae.

Enright (1978) studied a small area of coastal heath near The Gap in Torndirrup National Park. He was interested in testing whether podzolization (formation of acidic non-calcareous soils) was explicable owing to the activity of water-soluble iron-complexing leaf compounds. Do certain plant species aid in development of the podzol soil profile, or do podzols select the kinds of plants that can germinate and grow successfully on them?

Approximately equal numbers of podzol and calcareous sites were chosen for the placement of 24 quadrats 3-m² to sample the flora. Enright found that podzol sites were characterized by a high frequency of *Andersonia simplex*, *Lysinema ciliatum*, *Leucopogon reflexus* and *Dasypteron bromeliaefolius*. Non-podzol (calcareous) sites supported larger populations of *Bossiaea rufa*, *Olearia axillaris*, *Pimelea rosea* and *Leucopogon revolutus*. Leaf extracts of common species from podzol, calcareous and transitional sites were tested for their ability to form a complex with iron. Only podzol and transitional species proved to have this ability. Enright concluded that soil chemistry was the major determinant of which species will grow in the early stages of calcareous soil development, but that plants themselves play an increasing role in determining community composition as they remove iron and aluminium and acidify the soil to a podzol.

Strelein (1988) presented an ordination using over 400 sample sites and 100 indicator species in the southern jarrah forest. He defined seventeen site types from this work using the methods of Havel (1968, 1975) and discussed the regeneration, dieback susceptibility and productivity of each. Strelein (1988) defined the species to be used prior to analysis and presented a list of 211 species recorded. He suggested that all but one site type (type Q - high quality forest on fertile, well drained loams) have some susceptibility to dieback disease.

Inions *et al.* (1990) derived a floristic classification of regenerating karri forest in the Nornalup System of the Warren Subdistrict. They used 204 permanent inventory plots (Campbell *et al.* 1985) and 105 species were sampled. Annuals, herbs and outliers of forest including karri as a component (e.g. Boranup, Manypeaks and Porongurups) were not included in the

classification. All sites were in regrowth karri forest. Thirteen community types were defined by cluster analysis, ordination and discriminant analysis of the 312-m² quadrats. Inions *et al.* (1990) found that community types varied substantially in productivity as measured by age-standardized top height and this in turn was related to climatic and edaphic factors. Variables relating to rainfall distribution, radiation levels, soil acidity and phosphorous levels were found to be the most discriminatory between community types and each differed in stand productivity and in climatic and edaphic variables. The distribution of the community types defined is broadly geographically based (Wardell-Johnson and Christensen, this volume), although overlap occurs within a single landform/soils unit (as defined by Churchward *et al.* 1988).

The schemes developed by Inions *et al.* (1990) and Strelein (1988) each provide a different means of defining a community or site type. Strelein did not use permanent quadrats. Although each of these studies was in jarrah forest or karri forest, overlap is likely between the studies.

Current emphasis in management is on the ecotone between these two forest types (Bradshaw² personal communication 1988). Two studies (Bridgewater 1981; Wardell-Johnson *et al.* 1989) have examined ecotones in addition to pure forest stands in the Warren Subdistrict.

Bridgewater (1981) used the Zurich-Montpellier system of vegetation description and classification to define the karri forest boundary near Pemberton. A complete species list (40 species) for the time of the visit is presented for Bridgewater's 26 quadrats.

Wardell-Johnson *et al.* (1989) developed a floristic classification of the Walpole/Nornalup National Park based on 219 quadrats and 233 species. Twelve community types were derived with clustering and ordination techniques and were associated with the landform soils units of Churchward *et al.* (1988). A vegetation map was published which recognized this association (Smith *et al.* 1990). Forest in which karri is a component is separated from other community types at the three-group level in cluster analysis and is the most species-poor of the community types.

Both Inions *et al.* (1990) and Wardell-Johnson *et al.* (1989) provided a means of allocating independent sites to the classification using discriminant functions on species defined as indicators in the analyses (72 and 52 species respectively). Thus sites in one classification can be defined according to another.

² F.J. Bradshaw, CALM, Manjimup.

Thus Wardell-Johnson (own data) found that thirty sites in the Walpole-Nornalup National Park defined as community type 8 (*Eucalyptus diversicolor* forest community) separated into one of two community types (Stoate and Wallace) using the Inions *et al.* (1990) scheme.

Classifications developed in both studies have used similar methods and both schemes can be mapped. All studies have used a similar quadrat size (either 312 m² or 400 m²) but not all studies have used the same components of the flora in deriving the classification or ordination. Thus, although an integration of site-based work in the Warren Subdistrict is desirable, considerable site revisiting will be required.

Burbidge and Boscacci (unpublished) suggested a quadrat size in excess of 400 m² to sample 95 per cent of the expected species in a study near Northcliffe. These workers provided species area curves, lists of species and a classification of the 13 quadrats.

Standardization of plot sizes, permanent marking of quadrats and a complete enumeration of the flora in a given quadrat are recommended in further site-based studies in the Warren Subdistrict.

LIST OF THE VASCULAR FLORA

A major aim of this paper was to compile a list of the known vascular flora of the Warren Subdistrict. The list (Appendix 1) is largely the work of GJK, with additional taxa added by CALM Manjimup research staff, Flora Conservation Research Program staff, Dr N.G. Marchant³ and Dr N. Gibson⁴ (personal communication).

The list was compiled by examining all specimens incorporated into collections of the Western Australian Herbarium (up to 1985), Kings Park Herbarium (1985) and CALM's Manjimup Research Herbarium (1988), plus a search of recent Australian taxonomic literature (1950 - 1988) and the compilation of lists in published and unpublished works of ourselves and other Western Australian botanists. A.P. Brown and SDH prepared the orchid list. Records for which no voucher specimen could be traced were rejected.

A total of 1947 taxa is known for the 8323 km² of the Subdistrict (Table 2). This includes 1628 native and 319 introduced taxa. This compares favourably with the larger Perth Region (of 10 500 km², Marchant *et al.* 1987), which has 2057 taxa (1510 native and 547 introduced).

Families with the largest number of known taxa in the Warren Subdistrict include:

Monocotyledons

| | |
|-------------|-----|
| Orchidaceae | 152 |
| Poaceae | 100 |
| Cyperaceae | 75 |

Dicotyledons

| | |
|---------------|-----|
| Papilionaceae | 165 |
| Myrtaceae | 125 |
| Proteaceae | 115 |
| Asteraceae | 105 |
| Mimosaceae | 65 |
| Epacridaceae | 78 |
| Styliadiaceae | 60 |

Table 2

NUMBERS OF NATIVE AND INTRODUCED
VASCULAR TAXA FOR THE WARREN
BOTANICAL SUBDISTRICT AND THE PERTH
REGION (MARCHANT *ET AL.* 1987)

| | Native | Introduced | Total |
|--------------------|--------|------------|-------|
| Warren Subdistrict | | | |
| Ferns | 17 | 2 | 9 |
| Gymnosperm | 3 | 2 | 5 |
| Monocotyledons | 481 | 99 | 580 |
| Dicotyledons | 1127 | 216 | 1343 |
| Totals | 1628 | 319 | 1947 |
| Perth region flora | | | |
| Ferns | 23 | 2 | 25 |
| Gymnosperms | 5 | 2 | 7 |
| Monocotyledons | 462 | 191 | 653 |
| Dicotyledons | 1020 | 352 | 1372 |
| Totals | 1510 | 547 | 2057 |

Especially noteworthy are the unusually large numbers of Orchidaceae, Styliadiaceae and Epacridaceae compared with the State's flora as a whole (Green 1985).

The largest genera include *Acacia* (64 taxa), *Stylium* (55), *Caladenia* (46), *Leucopogon* (41), *Eucalyptus* (26) and *Drosera* (24).

Endemics and geographical outliers

The known Warren Subdistrict flora has 99 endemics (compared with 43 in the Perth Region). This number is probably conservative, as several groups require taxonomic revision, and groups such as orchids that

³ N.G. Marchant, W.A. Herbarium, South Perth.

⁴ N. Gibson, CALM, Woodvale.

have been worked on recently have many endemics among the undescribed taxa recognized.

Most of the known endemics are confined to swamplands, coastal heaths and granitic outcrops, with relatively few found in forests. The majority are found in the wettest country between Denmark and Northcliffe, but some are concentrated on the Leeuwin-Naturaliste ridge (9 taxa) and two are known endemics of the Scott Coastal Plain.

Many more species, including karri itself, are near-endemics of the Subdistrict. That is, they are confined to high rainfall areas or moist habitats, and extend outside the Subdistrict in small areas of favourably wet conditions (e.g. Porongurups, Mt Manypeaks for karri; Cape Riche and Yallingup for *Cephalotus follicularis*; swamps at the base of the Darling Scarp for *Actinodium cunninghamii* and *Reedia spathacea*). There are at least 52 dicotyledons in this category alone. Hence, the Warren Subdistrict is a major centre of endemism for wet country taxa in the State.

Another feature of the flora is the large number of taxa that reach the end of their geographic range in the Warren Subdistrict. For example, 56 south coast heathland species reach their western limits between Albany and Denmark (e.g. *Eucalyptus angulosa*, *Calectasia grandiflora*, *Stylidium hirsutum*). Nine species of the Swan Coastal Plain extend to or have outliers at Cape Leeuwin and the Scott River area (e.g. *Trachymene caerulea*, *Conostylis candicans*).

Declared Rare Flora and other plants of special conservation significance

The most recent schedule of Declared Rare Flora (*Government Gazette* of 17 May 1991) listed the following 19 Warren Subdistrict taxa (main habitat is given to the right):

| | |
|--------------------------------|------------------------------------|
| <i>Adenanthes cunninghamii</i> | coastal dunes |
| <i>Asplenium obtusatum</i> | island granite outcrops |
| <i>Baeckea arbuscula</i> | swamps |
| <i>Banksia goodii</i> | jarrah low forest |
| <i>Banksia verticillata</i> | coastal granite outcrops |
| <i>Caladenia excelsa</i> | Banksia low woodlands |
| <i>Caladenia harringtoniae</i> | swamps |
| <i>Caladenia huegelii</i> | jarrah forest |
| <i>Caladenia viridescens</i> | marri-jarrah forest |
| <i>Darwinia 'ferricola'</i> | lateritic heath |
| <i>Diuris drummondii</i> | swamps |
| <i>Drakaea micrantha</i> | jarrah forest |
| <i>Grevillea cirsifolia</i> | jarrah forest |
| <i>Kennedia glabrata</i> | forest granite outcrops |
| <i>Kennedia macrophylla</i> | granite outcrops, karri low forest |
| <i>Isopogon uncinatus</i> | coastal heath |
| <i>Lambertia orbifolia</i> | jarrah forest |

| | |
|--------------------------|--------|
| <i>Laxmannia jamesii</i> | swamps |
| <i>Microtis globula</i> | swamps |

Six of these taxa occur in jarrah forest, five in swamps, four on granite outcrops, two on coastal dunes, and one each in *Banksia* low woodlands and lateritic heath. None are known from the main karri forest. A population of *Kennedia macrophylla* atypically occurs in stunted coastal karri (*Apium prostratum* ssp. 'phillipii' occurs beneath karri in the Porongurups outside the Warren Subdistrict).

An additional eight taxa have been listed on previous schedules of Declared Rare Flora but were found to be more abundant than previously thought. Populations are monitored by CALM staff. Eight other taxa are similarly monitored because they are adequately surveyed and not considered endangered or in need of special protection but could be if present circumstances change. These sixteen monitored taxa and their main habitats are:

| | |
|---|------------------|
| <i>Adenanthes demoldii</i> | swamps |
| <i>Banksia meisneri</i> var. <i>ascendens</i> | swamps |
| <i>Banksia seminuda</i> ssp. <i>remanens</i> | coastal granite |
| <i>Caladenia arrecta</i> | jarrah forest |
| <i>Caladenia plicata</i> | jarrah forest |
| <i>Caladenia interjacens</i> | coastal heath |
| <i>Caladenia nivalis</i> | coastal granite |
| <i>Caladenia speciosa</i> | jarrah woodland |
| <i>Calothamnus graniticus</i> ssp. <i>graniticus</i> | coastal granite |
| <i>Chamaexeros</i> sp. | coastal woodland |
| <i>Eucalyptus calcicola</i> | coastal dunes |
| <i>Grevillea ripicola</i> | granite outcrops |
| <i>Microtis pulchella</i> | swamps |
| <i>Pentapeltis sylvatica</i> | jarrah forest |
| <i>Prasophyllum triangulare</i> | jarrah forest |
| <i>Restio ustulatus</i> | swamp heath |

There are 46 poorly known taxa collected from the Warren Subdistrict whose conservation status is uncertain and needs urgent investigation. These include:

1. Taxa presumed extinct (not collected or reliably observed over the past 50 years)

| | |
|-----------------------------|---------------------------|
| <i>Meziella trifida</i> | Albany |
| <i>Scaevola attenuata</i> | Albany, ?Cape Naturaliste |
| <i>Tetrapetra elliptica</i> | Bow River |
2. Taxa known only from one or a few localities on lands under threat

| | |
|------------------------------|-------------------------------|
| <i>Actinotus 'laxa'</i> | Walpole |
| <i>Alexgeorgea ganopoda</i> | Bow River, Mt Frankland |
| <i>Andersonia auriculata</i> | Quarram, W Denmark, Bow River |
| <i>Aotus carinata</i> | Scott River Plain |
| <i>Hemiandra podalyrina</i> | E Northcliffe |

| | |
|---------------------------------|------------------------|
| <i>Hybanthus volubilis</i> | Margaret River |
| <i>Isopogon uncinatus</i> | Mt Willyung, Tomdirrup |
| <i>Jacksonia mollissima</i> | Bunbury-Margaret River |
| <i>Leptomeria ericoides</i> | Mt Willyung, Cowaramup |
| <i>Leucopogon alternifolius</i> | Scott River, Albany |
| <i>Leucopogon polystachyus</i> | Manjimup, Nornalup |
| <i>Restio gracilior</i> | Scott River, Busselton |
| <i>Schoenus acuminatus</i> | Albany |
| <i>Schoenus foliatus</i> | Albany |
| <i>Schoenus multiglumis</i> | Albany |
| <i>Solyya drummondii</i> | Denmark |
| <i>Thysanotus formosus</i> | Nannup |
| <i>Thysanotus isantherus</i> | Albany |

3. Taxa known from one or a few localities on land not under immediate threat

| | |
|--|---------------------------|
| <i>Amperea volubilis</i> | Walpole, Albany |
| <i>Banksia occidentalis</i> ssp. <i>formosa</i> | Black Pt, Torbay |
| <i>Caladenia evanescens</i> | Walpole, Peaceful Bay |
| <i>Caladenia huegelii</i> ssp. <i>redacta</i> | W Northcliffe |
| <i>Caladenia winfieldii</i> | Tone River |
| <i>Boronia crassipes</i> | Albany |
| <i>Hemiandra glabrescens</i> | Albany, Scott River Plain |
| <i>Leucopogon bracteolaris</i> | Stirling Range, Albany |
| <i>Leucopogon multiflorus</i> | Albany |
| <i>Lomandra ordii</i> | Northcliffe, Walpole |
| <i>Lysinema lasianthum</i> | Porongurups, Albany |
| <i>Pithocarpa melanostigma</i> | Albany, Millbrook |
| <i>Stylium barleei</i> | Busselton area |
| <i>Tripterococcus</i> sp. nov. | Scott River, Walpole, |

4. Taxa known from several localities, some of which are on lands not under immediate threat

| | |
|------------------------------|-------------------------|
| <i>Boronia virgata</i> | Walpole, Denmark |
| <i>Drosera omissa</i> | Augusta, Busselton |
| <i>Gastrolobium brownii</i> | Walpole, Albany |
| <i>Melaleuca basicephala</i> | Scott River |
| <i>Pultenaea pinifolia</i> | Busselton, Karridale |
| <i>Restio ustulatus</i> | Busselton, Scott River |
| <i>Thomasia discolor</i> | Albany area |
| <i>Thomasia solanacea</i> | Albany, Two Peoples Bay |
| <i>Villarsia lasiosperma</i> | Busselton, Esperance |

A more thorough biogeographical analysis of the present flora list may well highlight other poorly known taxa whose conservation status requires attention. This applies also to the nonvascular flora, which we have not investigated (we do know, however, of at least one moss, *Rhacocarpus webbianus* (C. Muell.) Par., which is only known from Mt Chudalup and possibly Two Peoples Bay - Wyatt and Stoneburner, personal communications).

Weeds

Although less taxa of weeds occur in the Subdistrict than in the Perth Region (Table 2), those present pose major problems to conservation managers. For example, granite outcrop communities rich in endemic

species have been successfully invaded following disturbances such as grazing. This is evident in the karri and granite communities of the Porongurups which have been invaded by *Plantago lanceolata*, *Cirsium vulgare*, *Briza* spp. and *Trifolium* spp.

In the main karri forest, *Acaena* spp. and *Trifolium* spp. appear to be persistent invaders following disturbance. *Rubus* spp. and *Solanum* spp. are major problems along creeklines.

CURRENT STUDIES

Within CALM, ongoing floristic studies of the Warren Subdistrict are included in projects within the Biogeography, Fire, Flora Conservation and Flora Collections Research Programs.

Christensen is examining long-term fire effects in karri forest near Manjimup. Burrows has established five sets of permanently located quadrats to examine the long-term effects of fire in the Southern Forest Region. Four of these study sites are in the Warren Subdistrict. A list of flora and a set of indicator species for one of these study sites in open jarrah forest has been derived from earlier studies.

Wardell-Johnson is obtaining a complete list of flora from permanently marked quadrats in four study sites in karri forest at Gray forest block. Wardell-Johnson has listed vascular flora from 95 x 400 m² quadrats and aims to derive an age series of floristics in community type Shea of Inions *et al.* (1990).

Wardell-Johnson has collected vascular flora from 211 permanently located 600-m² quadrats in the Walpole area. This study aims to examine floristic, edaphic and climatic attributes associated with the distribution of four locally endemic forest eucalypts. This study commenced in April 1989.

Gibson is conducting a survey of regional floristic variation in heath and peppermint low woodland communities between Cape Naturaliste and Albany. This work aims to provide a regional context within which proposals for mineral sand exploration and mining may be assessed.

Keighery is compiling checklists of the vascular flora of south coast reserves, and has manuscript lists for West Cape Howe, Torndirrup and William Bay National Parks in the Subdistrict. Other areas are studied opportunistically, with special emphasis on weeds.

Opportunistic surveys of rare and poorly known flora are continuing throughout the Subdistrict by Flora Conservation Research Program staff and

regional operations staff. Specialist surveys of orchids, eucalypts and granite outcrop flora are part of Hopper's current research. Many new taxa of *Caladenia*, including 11 endemic to the Subdistrict, are described by Hopper and Brown (in press).

Coates is investigating allozyme variation and mating systems in karri itself with a view to improving the conservation and management of genetic resources.

Ad hoc collections of Warren Subdistrict flora are made by Herbarium staff in the course of taxonomic research. Macfarlane is currently describing the new *Chamaexeros* sp. from Walpole-Nornalup National Park.

N. Malajczuk of CSIRO is studying the biology and systematics of soil fungi of the karri forest.

Professor R. Wyatt and Dr A. Stoneburner of the University of Georgia U.S.A. are compiling a checklist of the bryophytes of the State, and have collected at several sites in the Warren Subdistrict.

HIGH PRIORITY ADDITIONAL RESEARCH REQUIREMENTS

A major requirement is the production of a Flora of the Warren Botanical Subdistrict. This would increase the level of botanical survey and research, and enable clearer definition of taxa in need of management for their conservation.

Concurrent with the production of a Flora is the need for a systematic and standardized site-based survey of the vegetation communities of the Subdistrict.

In view of the large number of local endemics in groups subject to recent taxonomic research (e.g. orchids), it is considered a priority to stimulate taxonomic studies on poorly known groups such as Poaceae, Tremandraceae, Cyperaceae, Epacridaceae (especially *Andersonia* and *Leucopogon*), and Stylidiaceae.

The identification of taxa most in need of conservation initiatives is a priority, and will come only with an enhanced survey effort and biological research program. The latter may enable the categorization of vulnerable species according to life-history attributes. For example, obligate seed regenerators may be the most vulnerable group to fire.

Those areas most in need of survey include the Mt Lindesay granite monadnocks, forest north of Nornalup, the Scott Coastal Plain, coastal heaths between Walpole and Augusta, and granite outcrops throughout the Subdistrict.

Taxa most in need of biological research include Declared Rare Flora and restricted endemics susceptible to dieback, inappropriate fire regimes (e.g. fires at a greater frequency than the time needed for obligate seeders to replenish seed stores), grazing, weed invasion and other disturbances.

ACKNOWLEDGMENTS

We are grateful to colleagues too numerous to mention for assistance in field work, to the Curator of the Western Australian Herbarium for providing access to the collection, to Andrew Brown for additions to the list of orchids, Dr N. Gibson for other additions to the flora list and to Dr N. Marchant and Dr B. Briggs for useful comments on the manuscript. Dr Marchant also thoroughly checked, corrected and added to the species list, a contribution much appreciated.

REFERENCES

- Abbott, I. (1980a). The floras of 37 south-western Australian islands. *Western Australian Herbarium Research Notes* **3**, 19-36.
- Abbott, I. (1980b). The transition from mainland to island, illustrated by the flora and landbird fauna of headlands, peninsulas and islands near Albany, Western Australia. *Journal of the Royal Society of Western Australia* **63**, 79-92.
- Abbott, I., and Watson, J.R. (1978). The soils, flora, vegetation and vertebrate fauna of Chatham Island, Western Australia. *Journal of the Royal Society of Western Australia* **60**, 65-70.
- Anonymous (1982). Karri at the Crossroads. Conservation Council of Western Australia, Perth.
- Bates, R. (1984). The genus *Microtis* R.Br. (Orchidaceae): a taxonomic revision with notes on biology. *Journal of the Adelaide Botanic Gardens*. **7**, 45-90.
- Beard, J.S. (1979). Albany and Mt Barker. Vegetation Survey of Western Australia 1:250 000 Series. Vegmap Publications, Perth.
- Beard, J.S. (1980). A new phytogeographic map of Western Australia. *Western Australian Herbarium Research Notes* **3**, 37-58.
- Beard, J.S. (1981). The vegetation of the Swan Area. Explanatory notes to Sheet 7 of Vegetation Survey of Western Australia: Swan. University of Western Australia Press, Nedlands.

- Beard, J.S., and Sprenger, B.S (1984). Geographical Data. Vegetation Survey of Western Australia Occasional Paper No. 2. Vegmap Publications, Perth.
- Blackall, W.E., and Grieve, B.J. (1954-88). *How to know Western Australian Wildflowers*. Parts I-IV. University of Western Australia Press, Nedlands.
- Boland, D.J., Brooker, M.I.H., Chippendale, G.M., Hall, N., Hyland, B.P.M., Johnston, R.D., Kleinig, D.A., and Turner, J.D. (1984). *Forest Trees of Australia*. Nelson, CSIRO, Melbourne.
- Bridgewater, P.B (1981). Potential application of the Zurich-Montpellier System of vegetation description and classification in Australia. In: A.N. Gillson and D.J. Anderson, eds. *Vegetation Classification in Australia*. CSIRO, ANU press, Canberra, Australia.
- Brooker, M.I.H., and Kleinig, D.A., (1989). *Field Guide to Eucalypts*. Vol 2. Inkata Press, Melbourne.
- Burbidge, A.H. (1984). Breeding Systems in Triggerplants (*Stylium*; *Styliaceae*). Ph.D. thesis, University of Western Australia, Nedlands.
- Burbidge, A.H., and Boscacci, L. (1987). A biological survey of lands proposed for release for agriculture in the Manjimup Region. Unpublished report, CALM.
- Campbell, H., Armstrong, R., Raynor, M., and Pearce, C. (1985). Site index curves for regrowth karri (*Eucalyptus diversicolor*) in south western Australia. In: Modelling Trees, Stands and Forests. Proc. Workshop sponsored by Research Working Group No 2, CSIRO, Melbourne University.
- Christensen, P., Annels, A., Liddelow, G., and Skinner, P. (1985). Vertebrate fauna in the southern forests of Western Australia: A survey. *Forests Department of Western Australia Bulletin* 94.
- Churchill, D.M. (1961). The Tertiary and Quaternary Vegetation and Climate in Relation to the Living Flora in South-western Australia. Ph.D. thesis, University of Western Australia, Nedlands.
- Churchill, D.M. (1968). The distribution and prehistory of *Eucalyptus diversicolor* F. Muell., *E. marginata* Donn ex Sm. and *E. calophylla* R.Br. in relation to rainfall. *Australian Journal of Botany* 16, 125-51.
- Churchward, H.M., McArthur, W.M., Sewell, P.L., and Bartle, G.A. (1988). Landforms and Soils of the South coast and hinterland, W.A., Northcliffe to Manypeaks. CSIRO. Division of Water Resources Divisional Report 88/1.
- Coates, D.J., and Sokolowski, R.E.S. (1989). Geographic patterns of genetic diversity in karri (*Eucalyptus diversicolor*). *Australian Journal of Botany* 37, 145-156.
- Congdon, R.A. (1981). Zonation in the marsh vegetation of the Blackwood River Estuary in south-western Australia. *Australian Journal of Ecology* 6, 267-78.
- Dames and Moore (1982). Environmental assessment. Proposed alternative dam sites Lefroy Brook and Four Mile Brook, Manjimup, W.A. Dames and Moore, Perth.
- Diels, L. (1906). Die Pflanzenwelt von West-Australien südlich des wendekreises. In *Die Vegetation der Erde*, ed. A. Engles, O. Drude, Vol VII Leipzig: Engelmann, 413 pp.
- Enright, N.J. (1978). The interrelationship between plant species distribution and properties of soils undergoing podzolization in a coastal area of S.W. Australia. *Australian Journal of Ecology* 3, 389-401.
- Erickson, R., George, A.S., Marchant, N.G., and Morcombe, M.K. (1973). *Flowers and Plants of Western Australia*. Reed, Sydney.
- Frewer, P., Hilder, D., Taylor, N., Batchelor, M., and Simpkin-Brown, J. (1987). Leeuwin-Naturaliste National Park. Draft Management Plan. CALM, Perth.
- George, A.S. (1984). *The Banksia Book*. Kangaroo Press, Sydney.
- George, A.S. (ed.). (1986). *Flora of Australia*, Vol 46. Iridaceae to Dioscoreaceae. AGPS Canberra.
- George, A.S. (ed.) (1987). *Flora of Australia* Vol 45 Hydatellaceae to Lilliaceae. AGPS Canberra.
- George, A.S., Hopkins, A.J.M., and Marchant, N.G. (1979). The heathlands of Western Australia. In: R.L. Specht ed., *Heathlands and Related Shrublands of the World*, pp. 211-230. Elsevier, Amsterdam.
- Gillham, M.E. (1963). Association of nesting sea-birds and vegetation types on islands off Cape Leeuwin, south-western Australia. *Western Australian Naturalist* 9, 29-46.

- Green, J.W. (1985). *Census of the Vascular Plants of Western Australia*. Department of Agriculture, Perth.
- Griffin, E.A. (1985). Vegetation Survey of Smiths Brook Nature Reserve. E.A. Griffin & Associates, Perth. (unpublished report).
- Havel, J.J. (1968). The potential of the northern swan coastal plain for *Pinus pinaster* Ait. plantations. *Forest Department of Western Australia, Bulletin No 76*.
- Havel, J.J. (1975). Site-vegetation mapping in the northern jarrah forest (Darling Range). In: Definition of Site Vegetation Types. *Forests Department of Western Australia, Bulletin No 86*.
- Hilton, R. (1982). A census of the larger fungi of Western Australia. *Journal of the Royal Society of Western Australia* **65**, 1-15.
- Hilton, R. (1988). A census of the larger fungi of Western Australia Part 2. *Journal of the Royal Society of Western Australia* **70**, 111-118.
- Hoffman, N. and Brown, A. (1984). *Orchids of South-West Australia*. University of Western Australia Press, Nedlands.
- Hopper, S.D. (1979). Biogeographical aspects of speciation in the southwest Australian Flora. *Annual Review of Ecology and Systematics*, 399-422.
- Hopper, S.D. (1989). New subspecies of *Banksia seminuda* and *B. occidentalis* (proteaceae) from the south coast of Western Australia. *Nuytsia* **7**, 15-24.
- Hopper, S.D. and Brown, A.P. (1991). New and reinstated genera, species, subspecies and hybrids of Western Australian Orchidaceae. *Australian Orchid Research* **3**, (in press).
- Inions, G., Wardell-Johnson, G., and Annels, A. (1990). Classification and evaluation of sites in karri (*Eucalyptus diversicolor*) regeneration. II Floristic Attributes. *Forest Ecology and Management* **32**: 135-154.
- James, S.H. (1979). Chromosome numbers and genetic systems in the triggerplants of Western Australia (*Stylium*: *Styliaceae*). *Australian Journal of Botany* **27**, 17-25.
- Keighery, G.J. (1984). Phytogeography of Western Australia's Monocotyledons. *Kings Park Resource Notes* **8**, 39-67.
- Ladiges, P.Y., Humphries, C.J., and Brooker, M.I.H. (1987). Cladistic and biogeographic analysis of Western Australian species of *Eucalyptus* L'Herit., informal subgenus *Monocalypptus* Pryor & Johnson. *Australian Journal of Botany* **35**, 251-281.
- Marchant, N.G., Wheeler, J.R., Rye, B.L., Bennett, E.M., Lander, N.S., and Macfarlane, T.D. (1987). *Flora of the Perth Region*. Department of Agriculture, Perth.
- McArthur, W.M., and Clifton, A.L. (1975). Forestry and agriculture in relation to soils in the Pemberton area of Western Australia. Soils and land use series No. 54. CSIRO, Canberra.
- Richardson, R.M., and Richardson, D.H.S. (1982). A systematic list with distributions of the lichen species of Western Australia, based on collections in the Western Australian Herbarium. *Western Australian Herbarium Resource Notes* **7**, 17-29.
- Rye, B.L. (1980). Chromosome numbers, reproductive biology and evolution in the Myrtaceae. Ph.D. thesis, University of Western Australia, Nedlands.
- Sammy, N. (1985). The distribution of lichens in Western Australia. *Western Australian Herbarium Research Notes* **11**, 53-113.
- Smith, F.G. (1972-1974). Vegetation Survey of Western Australia, 1:250 000 series. Pemberton and Irwin Inlet, Busselton and Augusta. Department of Agriculture, Perth.
- Smith, V., Annear, R., Hanley, P., Metcalf, V., Sands, A. and Wardell-Johnson, G. (1990). Walpole-Nornalup National Park Draft Management Plan. Department of Conservation and Land Management, Perth.
- Strelein, G. (1988). Site classification in the southern jarrah forest of Western Australia. *Department of Conservation and Land Management Research Bulletin* No 2.
- Taylor, A. and Hopper, S.D. (1988). The Banksia Atlas. Australian Flora and Fauna Series No. 8. Australian Government Publishing Service, Canberra.
- Wardell-Johnson, G., Inions, G. and Annels, A. (1989). A vegetation classification of the Walpole-Nornalup National Park, Southwestern Australia. *Forest Ecology and Management* **28**, 259-279.

Appendix I

List of Flora of the Warren Botanical Subdistrict as known at June 1991

Nomenclature and general systematic arrangement follow Green (1985)

* = Introduced; (E) = endemic to the Warren Botanical Subdistrict

FERNS

LYCOPodiACEAE

- Lycopodium serpentinum* Kunze
Phylloglossum drummondii Kunze

SELAGINELLACEAE

- Selaginella gracillima* (Kunze) Alston

ISOETACEAE

- Isoetes australis* S. Williams
Isoetes drummondii A. Braun

OPHIOGLOSSACEAE

- Ophioglossum lusitanicum* L. ssp. *coriaceum*
(A. Cunn.) Clausen

SCHIZAEACEAE

- Schizaea fistulosa* Labill.

ADIANTACEAE

- Adiantum aethiopicum* L.
Anogramma leptophylla (L.) Link.
Cheilanthes austrotenuifolia Quirk et Chambers

PTERIDACEAE

- Pteris vittata* L.

CYATHEACEAE

- * *Sphaeropteris cooperi* (Hook. ex F. Muell.) Domin

DENNSTAEDTIACEAE

- * *Hypolepis rugulosa* (Labill.) J. Smith
Pteridium esculentum (G. Forster) Cockayne

LINDSÆACEAE

- Lindsaea linearis* Sw.

ASPLENIACEAE

- Asplenium aethiopicum* (Burm.f.) Bech.
Asplenium flabellifolium Cav.
Asplenium obtusatum G. Forster

MARSILIACEAE

- Pilularia novae-hollandiae* A. Braun

GYMNOSPERMS

ZAMIACEAE

- Macrozamia riedlei* (Fischer ex Gaudich.)
C.A. Gardner

PODOCARPACEAE

- Podocarpus drouynianus* F. Muell.

PINACEAE

- * *Pinus pinaster* Aiton
* *Pinus radiata* D. Don

CUPRESSACEAE

- Actinostrobus pyramidalis* Miq.

MONOCOTYLEDONS

TYPHACEAE

- * *Typha orientalis* C. Presl

RUPPIACEAE

- Ruppia megacarpa* Mason
Ruppia polycarpa Mason

POTAMOGETONACEAE

- Potamogeton ochreatus* Raoul
Potamogeton drummondii Benth.

ZANICHELLIACEAE

- Lepilaena bilocularis* Kirk
Lepilaena cylindrocarpa (Koern. ex Walp.) Benth.
Lepilaena preissii (Lehm.) F. Muell.

POSIDONIACEAE

- Posidonia australis* J.D. Hook.
Posidonia denhartogii Kuo et Cambridge
Posidonia kirkmanii Kuo et Cambridge
Posidonia ostenfeldii Hartog
Posidonia robertsoniae Kuo et Cambridge
Posidonia sinuosa Cambridge et Kuo

CYMODOCEACEAE

- Amphibolus antarctica* (Labill.) Sonder
Amphibolus griffithsii (Black) Hartog
Thalassodendron pachyrhizum Hartog

ZOSTERACEAE

Heterozostera tasmanica (Martens ex Asch.)
Hartog

NAJADACEAE

Najas marina L.

JUNCAGINACEAE

Triglochin calcitrappa Hook.
Triglochin centrocarpa Hook.
Triglochin minutissima F. Muell.
Triglochin procera R. Br.
Triglochin striata Ruiz. et Pav.
Triglochin trichophora

HYDROCHARITACEAE

Halophila ovalis (R. Br.) J.D. Hook.
Ottelia ovalifolia (R. Br.) Rich.
* *Vallisneria spiralis* L.

POACEAE

Agrostis avenacea J. Gmelin
Agrostis drummondiana (Steud.) Vickery
* *Agrostis gigantea* Roth.
* *Agrostis stolonifera* L.
Agrostis venusta Trin.
* *Aira caryophyllea* L.
* *Aira cupaniana* Guss.
* *Alopecurus myosuroides* Hudson
* *Ammophila arenaria* (L.) Link
Amphipogon amphipogonoides (Steud.) Vick.
Amphipogon debilis R. Br.
Amphipogon laguroides R. Br.
Amphipogon turbinatus R. Br.
* *Anthoxanthum odoratum* L.
* *Arrhenatherum bulbosum* (Willd.) C. Presl
* *Arundo donax* L.
* *Avellina michelii* (Savi) Parl.
* *Avena barbata* Link
* *Axonopus compressus* (Swartz.) Beauv.
* *Briza maxima* L.
* *Briza minor* L.
Bromus arenarius Labill.
* *Bromus catharticus* M. Vahl.
* *Bromus hordeaceus* (L.) Pers.
* *Cortaderia selloana* (Schultes et J.H. Schultes)
Asch. et Graebn.
* *Cynodon dactylon* (L.) Pers.
* *Cynosurus cristatus* L.
* *Cynosurus echinatus* L.
* *Dactylis glomerata* L.
Danthonia caespitosa Gaud.
Danthonia pilosa R. Br.
Danthonia racemosa R. Br.
Danthonia setacea R. Br. var. *setacea*
Deyeuxia quadriseta Benth.
Dichelachne crinita (L.f.) J.D. Hook.

- * *Dichelachne micrantha* (Cav.) Domin
- * *Digitaria sanguinalis* (L.) Scop.
- Diplopogon setaceus* R. Br.
- * *Echinochloa crusgalli* (L.) Beauv.
- * *Echinopogon ovatus* (G. Forster) P. Beauv.
- * *Ehrharta erecta* Lam.
- * *Ehrharta calycina* Smith
- * *Ehrharta longiflora* Smith
Ehrharta pusilla Nees ex Trin.
- * *Ehrharta villosa*
Eragrostis benthamii Mattei
- * *Eragrostis curvula* (Schrad.) Nees
Eragrostis elongata (Willd.) Jacq.
- * *Festuca arundinacea* Schreber
Festuca littoralis Labill.
- Glyceria australis* C.E. Hubb.
- * *Glyceria maxima* (Hartm.) O.R. Holmberg
- * *Hainardia cylindrica* (Willd.) W. Greuter
Hemarthria uncinata R. Br.
- * *Holcus lanatus* L.
- * *Hordeum glaucum* Steudel
- * *Lagurus ovatus* L.
- * *Lolium perenne* L.
- * *Lolium rigidum* Gaudin
- * *Lolium temulentum* L.
- * *Melinis minutiflora* P. Beauv.
Microlaena stipoides (Labill.) R. Br.
- Neurachne alopecuroidea* R. Br.
- * *Panicum capillare* L.
- * *Panicum maximum* Jacq.
- * *Parapholis incurva* (L.) C.E. Hubb.
- * *Paspalum dilatatum* Poir.
- * *Paspalum distichum* L.
- * *Paspalum vaginatum* Sw.
- Pennisetum clandestinum* Hochst. f. ex Chiov.
- * *Phleum pratense* L.
- * *Phragmites australis* (Cav.) Trin. ex Steud.
Piptatherum miliaceum (L.) Cosson
- * *Poa annua* L.
Poa drummondiana Nees
Poa homomalla Nees
Poa poiformis (Labill.) Druce
Poa porphyroclados Nees
- * *Poa pratensis* L.
Poa serpentum Nees
- * *Polypogon monspeliensis* (L.) Desf.
Polypogon tenellus R. Br.
- * *Polypogon viridis* (Gouan) Breistr.
- * *Sorghum halepense* (L.) Pers.
Spinifex hirsutus Labill.
- * *Sporobolus indicus* (L.) R. Br.
Sporobolus virginicus (L.) Kunth
- * *Stenotaphrum secundatum* (Walter) Kunze
Stipa campylachne Nees
Stipa compressa R. Br.
Stipa flavescens Labill.
Stipa hemipogon Benth.

- Stipa macalpinei* Reader
Stipa mollis R. Br.
Stipa semibarbata R. Br.
Stipa tenuifolia Steud.
Stipa trichophylla Benth.
Tetrarrhena laevis R. Br.
* *Vulpia membranacea* (L.) Dumort.
* *Vulpia myuros* Gmel.
- CYPERACEAE**
- Baumea acuta* (Labill.) Palla
Baumea articulata (R. Br.) S.T. Blake
Baumea juncea (R. Br.) Palla
Baumea rubiginosa (Sprengel) Boeckler
Bolboschoenus caldwellii (Cook) Sojak
Carex appressa R. Br.
* *Carex divisa* Hudson
Carex fascicularis Sol. ex Boott
Carex inversa R. Br.
Chorizandra cymbaria R. Br.
Chorizandra enodis Nees
Cyathochaeta avenacea Benth.
Cyathochaeta clandestina (R. Br.) Benth.
* *Cyperus congestus* Vahl
Cyperus laevigatus L.
Cyperus tenellus L.f.
Evandra aristata R. Br.
Evandra pauciflora R. Br.
Fimbristylis velata R. Br.
Gahnia decomposita (R. Br.) Benth.
Gahnia filum
Gahnia deusta (R. Br.) Benth.
Gahnia trifida Labill.
(E) *Gymnoschoenus anceps* (R. Br.) C.B. Clarke
Isolepis cernua (M. Vahl.) Roemer et Schultes
Isolepis congrua Nees
Isolepis cyperoides R. Br.
Isolepis fluitans (L.) R. Br.
Isolepis marginata (Thunb.) A. Dietr.
Isolepis nodosa (Rottb.) R. Br.
Isolepis oldfieldiana (S.T. Blake) K.L. Wilson
* *Isolepis prolifera* (Rottb.) R. Br.
Isolepis stellata (C.B. Clarke) K.L. Wilson
Lepidosperma angustatum R. Br.
Lepidosperma brunonianum Nees
Lepidosperma effusum Benth.
Lepidosperma gladiatum Labill.
Lepidosperma gracile R. Br.
Lepidosperma leptophyllum Benth.
Lepidosperma leptostachyum Benth.
Lepidosperma longitudinale Labill.
(E) *Lepidosperma persecans* S.T. Blake
Lepidosperma squamatum Labill.
Lepidosperma tenue Benth.
Lepidosperma tetraquetrum Nees in Lehm.
Mesomelaena graciliceps (C.B. Clarke) K.L. Wilson
Mesomelaena stygia (R. Br.) Nees
- Mesomelaena tetragona* (R. Br.) Benth.
Reedia spathacea F. Muell.
Schoenoplectus validus (M. Vahl.) A. Love et D. Love
(?) *Schoenus acuminatus* R. Br.
Schoenus asperocarpus F. Muell.
Schoenus bifidus (Nees) Boeckler
Schoenus breviculmis Benth.
Schoenus brevisetis (R. Br.) Benth.
Schoenus caespititius W. Fitzg.
(E) *Schoenus cruentus* (Nees) Benth.
Schoenus curvifolius (R. Br.) Benth.
(E) *Schoenus efoliatus* F. Muell.
Schoenus grammatophyllum F. Muell.
Schoenus grandiflorus (Nees) F. Muell.
Schoenus lanatus Labill.
(?) *Schoenus multiglumis* Benth.
Schoenus nitens (R. Br.) Poiret
Schoenus odontocarpus F. Muell.
Schoenus pleistomoneus F. Muell.
Schoenus rodwayanus W. Fitzg.
Schoenus subbulbosus Benth.
Schoenus sublaxus Kuek.
Schoenus trachycarpus F. Muell.
Tetraparia capillaris (F. Muell.) J. Black
Tetraparia octandra (Nees.) Kuek.
Tricostularia neesii Lehm. var. *neesii*
Tricostularia neesii var. *elatior* Benth.
- ARACEAE**
- * *Zantedeschia aethiopica* (L.) Sprengel
- LEMNACEAE**
- Lenna disperma* Hegelm.
- RESTIONACEAE**
- (E) *Alexgeorgea ganopoda* L. Johnson et Briggs
Anarthria gracilis R. Br.
Anarthria laevis R. Br.
Anarthria prolifera R. Br.
Anarthria scabra R. Br.
Chaetanthus leptocarpoides R. Br.
Ecdiocolea monostachya F. Muell.
Empodium gracillimum (F. Muell.) L. Johnson et Cutler
Hypolaena exsulca R. Br.
Hypolaena ramosissima Gilg.
Hypolaena sp.
Lepidobolus sp. aff. *chaetocephalus*
(?) *preissianus* Nees
Leptocarpus aristatus R. Br.
Leptocarpus canus Lindley et Nees
Leptocarpus coangustatus Nees
Leptocarpus scariosus R. Br.
Leptocarpus tenax (Labill.) R. Br.
Leptocarpus tenellus (Nees) F. Muell.
Leptocarpus sp. "d"

Leptocarpus sp. "r"
(E) *Leptocarpus* sp. "t"

Lepyrodia drummondiana Steudel
Lepyrodia glauca (Nees) F. Muell.
Lepyrodia heleocharoides Gilg.
Lepyrodia hermaphrodita R. Br.
Lepyrodia muirii F. Muell.
Lepyrodia stricta R. Br.
Loxocarya cinerea R. Br.
Loxocarya fasciculata (R. Br.) Benth.
Loxocarya flexuosa (R. Br.) Benth.
Loxocarya pubescens (R. Br.) Benth.

(E) *Loxocarya* sp. (GK 12794)

Loxocarya aff. *cinerea* "r"
Lyginia barbata R. Br.
Meeboldina denmarkica Suess.
"Pseudoloxocarya grossa" (gen./sp. nov.)
Restio amblycoleus F. Muell.
Restio applanatus Sprengel
Restio "crassus"
Restio gracilior
Restio laxus R. Br.
Restio leptocarpoides Benth.
Restio tremulus R. Br.
Restio ustulatus F. Muell ex Ewart et Sharman

CENTROLEPIDACEAE

Aphelia cyperoides R. Br.
Aphelia drummondii (Hieron.) Benth.
Centrolepis aristata (R. Br.) Roem. et Schult.
(E) *Centrolepis caespitosa* D.A. Cooke
Centrolepis drummondii (Nees) Walp.
Centrolepis fascicularis Labill.
Centrolepis glabra (F. Muell. ex Sond.) Hieron.
Centrolepis humillima F. Muell. ex Benth.
Centrolepis inconspicua W. Fitzg.
Centrolepis mutica (R. Br.) Hieron.
Centrolepis pilosa Hieron.
Centrolepis polygyna (R. Br.) Hieron.
Centrolepis strigosa (R. Br.) Roem. et Schult.

HYDATELLACEAE

Trihuria bibracteata D.A. Cooke
Trihuria submersa J.D. Hook.

XYRIDACEAE

Xyris flexifolia R. Br.
Xyris gracillima F. Muell.
Xyris indivisa Wakef.
Xyris lacera R. Br.
Xyris lanata R. Br.
Xyris laxiflora F. Muell.
(E) *Xyris royciei* Wakef.

PHILYDRACEAE

Philydrella drummondii L.G. Adams
Philydrella pygmaea (R. Br.) Caruel

JUNCACEAE

Juncus amabilis E. Edgar
* *Juncus articulatus* L.
* *Juncus bufonius* L.
Juncus caespiticius E. Meyer
* *Juncus capitatus* Weigel
Juncus gregiflorus L. Johnson
Juncus holoschoenus R. Br.
Juncus kraussii Hochst.
* *Juncus microcephalus* Kunth
* *Juncus oxyacarpus* E. Meyer
Juncus pallidus R.Br.
Juncus pauciflorus R. Br.
Juncus planifolius R. Br.
Juncus prismatocarpus R. Br.
Juncus subsecundus Wakef.
Luzula meridionalis Nordensk.

ASPARAGACEAE

* *Myrsiphyllum asparagoides* (L.) Willd.

DASYPOGONACEAE

Acanthocarpus preissii Lehm.
Baxteria australis R. Br.
Calectasia grandiflora Preiss
Chamaexeros serra (Endl.) Benth.

(E) *Chamaexeros* sp. nov.

Dasypogon bromeliifolius R. Br.
Dasypogon hookeri I. Drumm.
Kingia australis R. Br.
Lomandra brittanii T.S. Choo
Lomandra caespitosa (Benth.) Ewart
Lomandra drummondii (F. Muell. ex Benth.) Ewart
Lomandra hastilis (R. Br.) Ewart
Lomandra hermaphrodita (C. Andrews) C. Gardner
Lomandra integra T.D. Macfarlane
Lomandra micrantha (Endl.) Ewart ssp. *micrantha*
Lomandra nigricans T.D. MacFarlane
Lomandra odora (Endl.) Ewart

(E) *Lomandra ordii* F. Muell.

Lomandra pauciflora (R. Br.) Ewart
Lomandra preissii (Endl.) Ewart
Lomandra purpurea (Endl.) Ewart
Lomandra sericea (Endl.) Ewart
Lomandra sonderi (F. Muell.) Ewart
Lomandra suaveolens (Endl.) Ewart

XANTHORRHOEACEAE

Xanthorrhoea gracilis Endl.
Xanthorrhoea preissii Endl.
Xanthorrhoea platyphylla Bedford

PHORMIACEAE

Dianella divaricata R. Br.
Dianella revoluta R. Br. var. *brevicaulis* Ostenf.
Stypandra grandiflora Lindley

ANTHERICACEAE

- Agrostocrinum* sp. (GJK 1888)
Agrostocrinum scabrum (R. Br.) Baillon
Arthropodium preissii Lehm. ex Endl.
Borya constricta D.M. Churchill
Borya longiscapa D.M. Churchill
Borya nitida Labill.
Borya scripoidea Lindley
Borya sphaerocephala R. Br.
Caesia micrantha Lindley
Caesia occidentalis R. Br.
Caesia parviflora R. Br.
Chamaescilla corymbosa R. Br. var. *corymbosa*
Chamaescilla corymbosa var. *latifolia* (F. Muell.) R. Henderson
Chamaescilla spiralis (Endl.) F. Muell.
Corynotheca micrantha (Lindl.) Macbride var. *panda* Henderson
Hodgsoniola junciformis (F. Muell.) F. Muell.
Johnsonia acaulis Endl.
Johnsonia lupulina R. Br.
Johnsonia teretifolia Endl.
Laxmannia jamesii G.J. Keighery
Laxmannia minor R. Br.
Laxmannia ramosa Lindley
Laxmannia sessiliflora Decne.
Sowerbaea laxiflora Lindley
Thysanotus arbuscula Baker
Thysanotus arenarius N.H. Brittan
Thysanotus dichotomus (Labill.) R. Br.
(E) *Thysanotus formosus* N.H. Brittan
Thysanotus gracilis R. Br.
(E) *Thysanotus isantherus* R. Br.
Thysanotus manglesianus Kunth
Thysanotus multiflorus R. Br.
Thysanotus patersonii R. Br.
Thysanotus pauciflorus R. Br.
Thysanotus pseudojunceus N.H. Brittan
Thysanotus sparteus R. Br.
Thysanotus tenellus Lindl.
Thysanotus thyrsoideus Baker
Thysanotus triandrus (Labill.) R. Br.
Tricoryne elatior R. Br.
Tricoryne humilis Endl.

ASPHODELACEAE

- * *Bulbine semibarbata* (R. Br.) Haw.
* *Trachyandra divaricata* (Jacq.) Kunth.

HYACINTHACEAE

- * *Albuca canadensis* (L.) F.M. Leighton

ALLIACEAE

- * *Allium ampeloprasum* L.
* *Allium triquetrum* L.
* *Nothoscordum gracile* (Aiton) Stearn

COLCHICACEAE

- Burchardia monantha* Domin
Burchardia multiflora Lindley
Burchardia umbellata R. Br.
Wurmbea dioica (R. Br.) F. Muell. ssp. *alba* T.D. MacFarlane
Wurmbea monantha (Endl.) T.D. MacFarlane

HAEMODORACEAE

- Anigozanthos bicolor* Endl. ssp. *decrescens* Hopper
Anigozanthos flavidus Redoute et DC.
Anigozanthos manglesii D. Don ssp. *manglesii*
Anigozanthos preissii Endl.
Anigozanthos viridis Endl. ssp. *viridis*
Conostylis aculeata R. Br. ssp. *aculeata*
Conostylis aculeata R.Br. ssp. *gracilis* Hopper
Conostylis candicans Endl. ssp. *calcicola* Hopper
Conostylis laxiflora Benth.
Conostylis serrulata R. Br.
Conostylis setigera R. Br. ssp. *setigera*
Haemodorum discolor T.D. Macfarlane
Haemodorum laxum R. Br.
Haemodorum paniculatum Lindley
Haemodorum simplex Lindley
Haemodorum sparsiflorum F. Muell.
Haemodorum spicatum R. Br.
Phlebocarya ciliata R. Br.
Tribonanthes australis Endl.
Tribonanthes brachypetala Lindley
Tribonanthes violacea Endl.

AMARYLLIDACEAE

- * *Agapanthus praecox* Willd. ssp. *praecox*
* *Amaryllis belladonna* L.
* *Narcissus tazetta* L.

HYPOXIDACEAE

- Hypoxis glabella* R. Br. var. *glabella*
Hypoxis occidentalis Benth. var. *quadriloba* Henderson

IRIDACEAE

- * *Babiana stricta* (Ait.) Ker-Gawler
* *Chasmanthe floribunda* (Salisb.) N.E. Br.
* *Crocosmia x crocosmiiflora* (Lemoine) N.E. Br.
* *Ferraria crispa* Burman
* *Freesia leichtlinii* Klatt
* *Gladiolus angustus* L.
* *Gladiolus carneus* Del.
* *Gladiolus undulatus* L.
* *Gynandriris setifolia* (L.f.) R. Foster
* *Homeria flaccida* Sweet
* *Homeria miniata* (Andr.) Sweet
* *Iris germanica* L.
* *Iris unguicularis* Poiret
* *Ixia maculata* L.
* *Ixia paniculata* Del.

- Orthrosanthus laxus* (Endl.) Benth. var. *laxus*
Orthrosanthus laxus var. *gramineus* (Endl.) Geer.
Orthrosanthus multiflorus Sweet
(E) *Orthrosanthus polystachyus* Benth.
Patersonia babianoides Benth.
Patersonia juncea Lindley
Patersonia limbata Endl.
Patersonia occidentalis R. Br.
Patersonia pygmaea Lindley
Patersonia umbrosa Endl. var. *umbrosa*
Patersonia umbrosa var. *xanthina* (F.Muell.)
D.A. Cooke
* *Romulea rosea* (L.) Ecklon
* *Sparaxis bulbifera* (L.) Ker-Gawler
* *Tritonia lineata* (Salisb.) Ker-Gawler
* *Watsonia bulbillifera* J. Mathews
* *Watsonia leipoldtii* L. Bolus
* *Watsonia marginata* (L.f.) Ker Gawler
* *Watsonia versfeldii* J. Mathews et L. Bolus var.
alba J. Mathews et L. Bolus
* *Watsonia wordsworthiana* J. Mathews et L. Bolus
- ORCHIDACEAE**
- Burnettia forrestii* (F. Muell.) Hopper et
A.P. Brown
Burnettia nigricans (R. Br.) Hopper et A.P. Brown
(E) *Caladenia abbreviata* Hopper et A.P. Brown
Caladenia applanata Hopper et A.P. Brown
ssp. applanata
(E) *Caladenia applanata* Hopper et A.P. Brown
ssp. erubescens Hopper et A.P. Brown
Caladenia arrecta Hopper et A.P. Brown
Caladenia attingens Hopper et A.P. Brown
ssp. attingens
Caladenia bicalliatia R. Rogers
Caladenia brownii Hopper
(E) *Caladenia busselliana* Hopper et A.P. Brown
Caladenia cairnsiana F. Muell.
Caladenia chapmanii Hopper et A.P. Brown
Caladenia citrina Hopper et A.P. Brown
Caladenia corynephora A.S. George
Caladenia ensata Nicholls
(E) *Caladenia evanescens* Hopper et A.P. Brown
Caladenia excelsa Hopper et A.P. Brown
Caladenia ferruginea Nicholls
Caladenia flava R. Br. ssp. *flava*
Caladenia flava R. Br. ssp. *sylvestris* Hopper
et A.P. Brown
(E) *Caladenia gardneri* Hopper et A.P. Brown
(E) *Caladenia harringtoniae* Hopper et A.P. Brown
Caladenia heberleana Hopper et A.P. Brown.
Caladenia hirta Lindley ssp. *hirta*
(E) *Caladenia huegelii* N.G. Reichb.
(E) *Caladenia humiliflora* Hopper et A.P. Brown
ssp. meridionalis Hopper et A.P. Brown
Caladenia infundibularis A.S. George
(E) *Caladenia interjacens* Hopper et A.P. Brown
- Caladenia latifolia* R. Br.
Caladenia longicauda Lindley ssp. *longicauda*
Caladenia longicauda Lindley ssp. *splendens*
Hopper et A.P. Brown
Caladenia longiclavata E. Coleman
Caladenia macrostylis R.D. Fitzg.
(E) *Caladenia magniclavata* Nicholls
Caladenia marginata Lindley
Caladenia nana Endl. ssp. *nana*
Caladenia nana Endl. ssp. *unita* (R.D. Fitzg.)
Hopper et A.P. Brown
Caladenia nivalis Hopper et A.P. Brown
Caladenia paludosa Hopper et A.P. Brown
Caladenia pectinata R. Rogers
Caladenia pholcoidea Hopper et A.P. Brown
Caladenia plicata R.D. Fitzg.
Caladenia radiata Nicholls
Caladenia reptans Lindley
Caladenia rhomboidiformis (E. Coleman)
M. Clements et Hopper
Caladenia serotina Hopper et A.P. Brown
Caladenia viridescens Hopper et A.P. Brown
(E) *Caladenia winfieldii* Hopper et A.P. Brown
Calochilus robertsonii Benth.
Corybas despectans D.L. Jones et R.C. Nash
Corybas recurvus D. Jones
Corybas abditus D. Jones
Cryptostylis ovata R. Br.
Cyanicula deformis (R. Br.) Hopper et A.P. Brown
Cyanicula gemmata (Lindley) Hopper et A.P. Brown
Cyanicula gertrudeae (Ostenf.) Hopper et A.P. Brown
Cyanicula sericea (Lindley) Hopper et A.P. Brown
Cyrtostylis huegelii Endl.
Cyrtostylis robusta D. Jones et M. Clements
Cyrtostylis tenuissima (Nicholls et Goadby)
D. Jones et M. Clements
Diuris aff. amplissima D. Jones
Diuris carinata Lindley
Diuris drummondii Lindley
Diuris emarginata R. Br.
Diuris filifolia Lindley
Diuris heberlei D. Jones
Diuris laevis R.D. Fitzg.
Diuris laxiflora Lindley
Diuris longifolia R. Br.
Diuris pauciflora R. Br.
Diuris setacea R. Br.
Drakaea glyptodon R.D. Fitzg.
Drakaea livida J. Drummond
Drakaea micrantha Hopper et A.P. Brown
Drakaea thynniphila A.S. George
Elythranthera brunonis (Endl.) A.S. George
Elythranthera emarginata (Lindley) A.S. George
Epiblema grandiflorum R. Br.
Eriochilus dilatatus Lindley ssp. *dilatatus*
Eriochilus dilatatus Lindley ssp. *multiflorus*
(Lindley) Hopper et A.P. Brown

- Eriochilus dilatatus* Lindley ssp. *magnus* Hopper et A.P. Brown
Eriochilus helonomos Hopper et A.P. Brown
(E) *Eriochilus pulchellus* Hopper et A.P. Brown
Eriochilus scaber Lindley ssp. *scaber*
(B) *Eriochilus scaber* Lindley ssp. *orbifolia*
Hopper et A.P. Brown
(E) *Eriochilus valens* Hopper et A.P. Brown
Eriochilus tenuis Lindley
Gastrodia lacista D. Jones
Leporella fimbriata (Lindley) A.S. George
Leptoceras menziesii (R. Br.) Lindley
Lyperanthus serratus Lindley
Microtis alba R. Br.
Microtis atrata Lindley
Microtis brownii H.G. Reichb.
(E) *Microtis familiaris* R. Bates
(E) *Microtis globula* R. Bates
Microtis media R. Br. ssp. *media*
Microtis media ssp. *densiflora* (Benth.) R. Bates
Microtis media ssp. *quadrata* R. Bates
Microtis orbicularis R. Rogers
(E) *Microtis pulchella* R. Br.
Microtis aff. unifolia (G. Forster) H.G. Reichb.
* *Monadenia bracteata* (Sw.) Dur. et Schinz.
Paracaleana linearifolia Hopper et A.P. Brown
Paracaleana nigrita (Lindley) Blaxell
Praecoxanthus aphyllus (Benth.) Hopper et A.P. Brown
Prasophyllum brownii H.G. Reichb.
Prasophyllum calcicola R. Bates
Prasophyllum cyplochilum Benth.
Prasophyllum drummondii H.G. Reichb.
Prasophyllum elatum R. Br.
Prasophyllum fimbria H.G. Reichb.
Prasophyllum gibbosum R. Br.
(E) *Prasophyllum aff. gibbosum* R. Br.
Prasophyllum giganteum Lindley
Prasophyllum hians H.G. Reichb.
Prasophyllum macrostachyum R. Br.
Prasophyllum odoratum R. Rogers
Prasophyllum parvifolium Lindley
Prasophyllum aff. parvifolium Lindley
Prasophyllum plumaeforme R.D. Fitzg.
Prasophyllum regium R. Rogers
Prasophyllum triangulare R.D. Fitzg.
Pterostylis aspera D. Jones et M. Clements
Pterostylis barbata Lindley
Pterostylis aff. dilatata A.S. George
Pterostylis aff. nana R. Br.
Pterostylis aff. plumosa Cady
Pterostylis pyramidalis Lindley
Pterostylis recurva Benth.
Pterostylis rogersii E. Coleman
(?) *Pterostylis turfosa* Lindley
Pterostylis vittata Lindley
- Pterostylis* aff. *vittata* Lindley
Rostranthus forrestii (F. Muell.) Hopper et A.P. Brown
Rostranthus nigricans (R. Br.) Hopper et A.P. Brown
Thelemitra antennifera (Lindley) J.D. Hook.
Thelemitra benthamiana H.G. Reichb.
Thelemitra canaliculata R. Br.
Thelemitra cornicina H.G. Reichb.
Thelemitra crinita Lindley
Thelemitra cucullata Rupp.
Thelemitra flexuosa Endl.
Thelemitra fuscolutea R. Br.
Thelemitra aff. holmesii Nicholls
(E) *Thelemitra jacksonii* Hopper et A.P. Brown
Thelemitra aff. *longifolia* J. Forst. et G. Forst.
Thelemitra mucida Fitzg.
Thelemitra aff. *nuda* R. Br.
Thelemitra pauciflora R. Br.
Thelemitra spiralis (Lindley) F. Muell.
Thelemitra tigrina R. Br.
Thelemitra variegata (Lindley) F. Muell.
Thelemitra villosa Lindley
- ### DICOTYLEDONS
- #### CASUARINACEAE
- Allocasuarina decussata* (Benth.) L. Johnson
Allocasuarina fraseriana (Miq.) L. Johnson
Allocasuarina huegeliana (Miq.) L. Johnson
Allocasuarina humilis (Otto et Dietr.) L. Johnson
Allocasuarina lehmanniana (Miq.) L. Johnson
Allocasuarina trichodon (Miq.) L. Johnson
Allocasuarina thuyoides (Miq.) L. Johnson
- #### URTICACEAE
- Parietaria debilis* G. Forst.
* *Soleirolia soleirolii* (Req.) Dandy
* *Urtica urens* L.
- #### PROTEACEAE
- Adenanthes apiculatus* R. Br.
Adenanthes barbigerus Lindley
Adenanthes cuneatus Labill.
Adenanthes cunninghamii Meissner
(E) *Adenanthes detmoldii* F. Muell.
Adenanthes meisneri Lehm.
Adenanthes obovata Labill.
Adenanthes sericeus Labill. ssp. *sericeus*
Banksia attenuata R. Br.
Banksia gardneri A.S. George
Banksia goodii R. Br.
Banksia grandis R. Br.
Banksia ilicifolia R. Br.
Banksia littoralis R. Br.
Banksia meisneri Lehm. var. *ascendens* A.S. George
(E) *Banksia occidentalis* R. Br. ssp. *formosa* Hopper

- Banksia occidentalis* R. Br. ssp. *occidentalis*
Banksia praemorsa Andrews
Banksia quercifolia R. Br.
Banksia seminuda (A.S. George) B. Rye
 ssp. *seminuda*
 (E) *Banksia seminuda* ssp. *remanens* Hopper
Banksia verticillata R. Br.
Conospermum acerosum Lindley
Conospermum caeruleum R. Br.
Conospermum capitatum R. Br.
Conospermum debile
Conospermum flexuosum R. Br.
Conospermum floribundum Benth.
Conospermum petiolare R. Br.
Conospermum teretifolium R. Br.
Conospermum triplinervium R. Br.
 (E) *Conospermum* sp.
Dryandra armata R. Br.
Dryandra baxteri R. Br.
Dryandra bipinnatifida R. Br.
Dryandra cuneata R. Br.
Dryandra formosa R. Br.
Dryandra mucronulata R. Br.
Dryandra nivea (Labill.) R. Br.
Dryandra serra R. Br.
Dryandra sessilis (Knight) Domin
Dryandra subpinnatifida C. Gardner
 (E) *Grevillea brachystylis* Meissner var. *australis*
 Keighery
Grevillea brownii Meissner
Grevillea cirsifolia Meissner
Grevillea diversifolia Meissner ssp. *subterisericata*
 MacGillivray
Grevillea drummondii Meissner ssp. *centristigma*
 MacGillivray
Grevillea fasiculata R. Br.
Grevillea fuscolutea Keighery
Grevillea manglesioides Meissner ssp.
 manglesioides
Grevillea manglesioides ssp. *papillosa* MacGillivray
Grevillea occidentalis R. Br.
Grevillea pilulifera (Lindley) Druce
Grevillea pulchella (R. Br.) Meissner
Grevillea quercifolia R. Br.
Grevillea pulchella (R. Br.) Meissner
Grevillea ripicola A.S. George
Grevillea trifida (R. Br.) Meissner
Franklandia fucifolia R. Br.
Hakea amplexicaulis R. Br.
Hakea ceratophylla (Sm.) R. Br.
Hakea cyclocarpa Lindley
Hakea elliptica (Smith) R. Br.
Hakea falcata R. Br.
Hakea florida R. Br.
Hakea lasiantha R. Br.
Hakea lasianthoides B.L. Rye
Hakea linearis R. Br.
 Hakea lissocarpha R. Br.
 Hakea oleifolia (Smith) R. Br.
 Hakea prostrata R. Br.
 Hakea ruscifolia Labill.
 Hakea suaveolens R. Br.
 Hakea sulcata R. Br.
 Hakea trifurcata (Sm.) R. Br.
 Hakea undulata R. Br.
 Hakea varia R. Br.
 Isopogon attenuatus R. Br. var. *attenuatus*
 Isopogon axillaris R. Br.
 Isopogon buxifolius R. Br.
 Isopogon formosus R. Br.
 Isopogon uncinatus R. Br.
 Isopogon sphaerocephalus Lindley
 Isopogon teretifolius R. Br.
 Lambertia inermis R. Br.
 Lambertia orbifolia C. Gardner
 Lambertia propinqua R. Br.
 Lambertia uniflora R. Br.
 Persoonia graminea R. Br.
 Persoonia elliptica R. Br.
 Persoonia longifolia R. Br.
 Persoonia microcarpa R. Br.
 Persoonia saccata R. Br.
 Persoonia teretifolia
 Petrophile acicularis R. Br.
 Petrophile divaricata R. Br.
 Petrophile diversifolia R. Br.
 Petrophile linearis R. Br.
 Petrophile longifolia R. Br.
 Petrophile media
 Petrophile rigida R. Br.
 Petrophile serruriae R. Br.
 Petrophile squamata R. Br. ssp. "A" (short-leaved form)
 Petrophile squamata R. Br. ssp. "B" (fine-leaved form)
 Stirlingia latifolia (R. Br.) Steudel
 Stirlingia simplex Lindley
 Stirlingia tenuifolia (R. Br.) Steudel
 Strangea stenocarpoides (F. Muell. ex Benth.) C. Gardner
 Synaphea favosa R. Br.
 Synaphea gracillima Lindley
 Synaphea petiolaris R. Br.
 Synaphea polymorpha R. Br.
 Synaphea preissii Meissner
 Synaphea reticulata (Smith) C. Gardner
 Xylomelum occidentale R. Br.
- SANTALACEAE**
- (E) *Choretrum lateriflorum* R. Br.
Exocarpos odoratus (Miq.) A.DC.
Exocarpos sparteus R. Br.
Leptomeria cunninghamii Miq.
Leptomeria lehmannii Miq.

Leptomeria ericoides Miq.
Leptomeria pauciflora R. Br.
Leptomeria scrobiculata R. Br.
Leptomeria squarrulosa R. Br.
Leptomeria spinosa (Miq.) A.DC.

Sarcocornia blackiana (Ulbr.) A.J. Scott
Sarcocornia quinqueflora (Bunge ex Ung-Sternb.)
A.J. Scott ssp. *quinqueflora*
Sarcocornia blackiana (Ulbr.) A.J. Scott
Suaeda australis (R. Br.) Moq.
Threlkeldia diffusa R. Br.

OLACACEAE

Olax phyllanthi (Labill.) R. Br.
Olax benthamiana Miq.

LORANTHACEAE

Amyema miquelii (Lehm. ex Miq.) Tiegh.
Nuytsia floribunda (Labill.) R. Br.

POLYGONACEAE

* *Emex australis* Steinh.
* *Fagopyrum esculentum* Moench.
Muehlenbeckia appressa (Labill.) Meissner
* *Polygonum attenuatum* R. Br.
Polygonum hydropiper L.
Polygonum prostratum R. Br.
Polygonum salicifolium Brouss. ex Willd.
* *Rumex acetosella* L.
Rumex brownii Campdera
* *Rumex conglomeratus* Murr.
* *Rumex crispus* L.
* *Rumex frutescens* Thouars
* *Rumex pulcher* L. ssp. *pulcher*

CHENOPodiaceae

Atriplex bunburyana F. Muell.
Atriplex cinerea Poiret
* *Atriplex hortensis* L.
Atriplex hypoleuca Nees
Atriplex isatidea Moq.
Atriplex paludosa R. Br. ssp. *baudinii* (Moq.) Aellen
* *Atriplex prostrata* Boucher ex DC
* *Chenopodium album* L.
* *Chenopodium ambrosioides* L.
* *Chenopodium glaucum* L.
* *Chenopodium murale* L.
Chenopodium pumilio R. Br.
Halosarcia halocnemoides (Nees) P.G. Wilson
 ssp. *halocnemoides*
Halosarcia indica (Willd.) P.G. Wilson ssp. *bidens*
 (Nees) P.G. Wilson
Halosarcia pergranulata (J.M. Black) P.G. Wilson
 ssp. *pergranulata*
Halosarcia pterygosperma (J.M. Black) P.G. Wilson
 ssp. *ptyergosperma*
Halosarcia syncarpa P.G. Wilson
Maireana brevifolia (R. Br.) P.G. Wilson
Maireana oppositifolia (F. Muell.) P.G. Wilson
Rhagodia baccata (Labill.) Moq. ssp. *baccata*
Rhagodia bacata (Labill.) Moq. ssp. *dioica*
Rhagodia crassifolia R. Br.
Salsola kali L. ssp. *kali*

AMARANTHACEAE

Alternanthera nodiflora R. Br.
* *Amaranthus albus* L.
Hemicroa diandra R. Br.
Ptilotus declinatus Nees
Ptilotus sericostachyus (Nees) F. Muell.
Ptilotus stirlingii (Lindley) F. Muell. var. *stirlingii*
Ptilotus stirlingii var. *laxus* (Benth.) Benl.

GYROSTEMONACEAE

Gyrostemon sheathii W.V. Fitzg.
Gyrostemon thesioides (J.D. Hook.) A.S. George

PHYTOLACCACEAE

* *Phytolacca octandra* L.

AIZOACEAE

* *Carpobrotus aequilaterus* (Haw.) N.E. Br.
* *Carpobrotus edulis* (L.) L. Bolus
Carpobrotus virescens (Haw.) Schwantes
* *Drosanthemum candens* (Haw.) Schwantes
* *Lampranthus glaucus* (L.) N.E. Br.
* *Mesembryanthemum crystallinum* L.
* *Tetragonia decumbens* Thunb.
Tetragonia implexicoma (Miq.) J.D. Hook.
Tetragonia tetragonoides (Pallas) Kuntze

PORFULACACEAE

Calandrinia brevipedata F. Muell.
Calandrinia calyptata Hook.
Calandrinia corrigioloides F. Muell. ex Benth.
Calandrinia granulifera Benth.
Calandrinia liniflora Fenzl

CARYOPHYLLACEAE

* *Cerastium glomeratum* Thuill.
* *Cerastium semidecandrum* L.
* *Corrigiola litoralis* L.
* *Lychnis coronaria* L.
* *Moenchia erecta* (L.) P. Gaertner
* *Petrohagia velutina* (Guss.) P. Ball et Heyw.
* *Polycarpon tetraphyllum* (L.) L.
* *Sagina maritima* Don
* *Sagina procumbens* L.
* *Silene gallica* L. var. *gallica*
* *Silene gallica* L. var. *quinquevulnera* (L.) Mert.
 et Koch
* *Silene nocturna* L.
* *Spergula diandra* Heldr. et Sart
* *Stellaria media* (L.) Vill.
* *Vaccaria pyramidata* L.

RANUNCULACEAE

- Clematis microphylla* DC.
Clematis pubescens Huegel ex Endl.
Ranunculus colonorum Endl.
* *Ranunculus muricatus* L.
Ranunculus rivularis Banks et Sol. ex DC.

LAURACEAE

- Cassytha glabella* R. Br. forma *casuarinae* (Nees)
J.Z. Weber
Cassytha flava Nees
Cassytha melantha R. Br.
Cassytha micrantha Meisn.
Cassytha pomiformis Nees
Cassytha racemosa Nees forma *racemosa*
Cassytha racemosa forma *pilosa* (Benth.) J.Z. Weber

FUMARIACEAE

- * *Fumaria capreolata* L.
* *Fumaria muralis* Sond. ex Koch
* *Fumaria officinalis* L.

BRASSICACEAE

- * *Brassica rapa* L. ssp. *sylvestris* (L.) Janden
* *Brassica tournefortii* Gouan
* *Cakile maritima* Scop.
* *Capsella bursa-pastoris* (L.) Medikus
* *Cardamine hirsuta* L.
Cardamine paucijuga Turcz.
* *Coronopus didymus* (L.) Smith
* *Diplotaxis muralis* (L.) DC.
* *Heliophila pusilla* L.f.
* *Hirschfeldia incana* (L.) Lag-Foss.
* *Hymenolobus procumbens* (L.) Nutt.
* *Lepidium africanum* (Burm.) DC.
Lepidium foliosum Desv.
Lepidium linifolium (Desv.) Steudel
Lepidium pseudohyssopifolium Hewson
Lepidium rotundum (Desv.) DC.
* *Nasturtium officinale* R. Br. in Ait.
* *Rapistrum rugosum* (L.) All
* *Raphanus raphanistrum* L.
* *Rorippa dictyosperma* (F. Muell.) L. Johnson
* *Sinapis arvensis* L.
* *Sisymbrium irio* L.
* *Sisymbrium orientale* L.
(E?)*Stenopetalum robustum* Endl.

RESEDACEAE

- * *Reseda luteola* L.

DROSERACEAE

- Drosera bulbosa* Hook.
Drosera dichrosepala Turcz.
Drosera erythrorhiza Lindley ssp. *erythrorhiza*
Drosera erythrorhiza Lindley ssp. *squarrosa*
Drosera gigantea Lindley

- Drosera glanduligera* Lehm.

- (E) *Drosera hamiltonii* C.R.P. Andrews
Drosera huegelii Endl.
Drosera macrantha Endl. ssp. *macrantha*
Drosera menziesii R. Br. ssp. *menziesii*
Drosera microphylla Endl.
Drosera modesta Diels

- (E) *Drosera myriantha* Planchon
Drosera neesii Lehm. ssp. *neesii*
Drosera occidentalis Morrison ssp. *australis*
Drosera omissa Diels
Drosera pallida Lindley
Drosera platypoda Turcz.
Drosera platystigma Lehm.
Drosera pulchella Lehm.
Drosera pygmaea DC.
Drosera ramellosa Lehm.
Drosera stolonifera Endl. ssp. *stolonifera*
Drosera subhirtella Planchon

CRASSULACEAE

- * *Aeonium castello-pavoniae* Bolle
* *Cotyledon orbiculare* L.
Crassula colorata (Nees) Ostenf. var. *colorata*
Crassula colorata var. *acuminata* (Reader) Toelken
Crassula decumbens Thunb. var. *decumbens*
* *Crassula glomerata* P. Bergius
* *Crassula natans* Thunb. var. *minus* (Eckl. et Zeyh.) Rowley
Crassula sieberiana (J.A. et J.H. Schultes) Druce ssp. *tetramera* Tolken
* *Crassula thunbergiana* J.A. Schultes ssp. *thunbergiana*
* *Crassula tetragona* L. ssp. *robusta* (Toelken) Toelken

CEPHALOTACEAE

- Cephalotus follicularis* Labill.

SAXIFRAGACEAE

- Eremosyne pectinata* Endl.

PITTOSPORACEAE

- Billardiera candida* (Huegel ex Endl.) E.M. Bennett
Billardiera coerulea-punctata (Klotzsch) E.M. Bennett
Billardiera drummondiana (Putterl.) E.M. Bennett var. *drummondiana*
Billardiera erubescens (Putterl.) E.M. Bennett
Billardiera floribunda (Putterl.) F. Muell.
Billardiera laxiflora (Benth.) E.M. Bennett
Billardiera parviflora DC. var. *parviflora*
Billardiera sericea (Turcz.) E.M. Bennett
Billardiera variifolia DC.
Cheiranthera preissiana Putterl. var. *planifolia* E.M. Bennett
(E) *Sollya drummondii* Morren
Sollya heterophylla Lindley

ROSACEAE

- * *Acaena echinata* Nees var. *retrorsum pilosa* (Bitter) Orch.
- * *Acaena novae-zelandiae* Kirk
- * *Cotoneaster glaucophyllus* L.
- * *Rosa chinensis* Jacq. x *R. multiflora* Thunb. ex Murray
- * *Rosa rubiginosa* L.
- * *Rubus discolor* Weihe et Nees
- * *Rubus selmeri* Lindb. ex F. Aresch.
- * *Rubus ulmifolius* Schott
- * *Sanguisorba minor* Scop.

MIMOSACEAE

- Acacia acuminata* Benth.
- Acacia acutifolia* Maiden et Blakely
- Acacia alata* R. Br.
- Acacia assimilis* S. Moore
- Acacia ataxiphyllea* Benth.
- Acacia baxteri* Benth.
- Acacia biflora* R. Br.
- Acacia browniana* Wendl. var. *browniana*
- Acacia browniana* Wendl. var. *endllicheri*
- Acacia browniana* Wendl. var. *obscura* (A.DC.) Maslin
- Acacia cochlearis* (Labill.) H. Wendl.
- Acacia costata* Benth.
- Acacia crassiuscula* Wendl.
- Acacia crispula* Benth.
- Acacia cyclops* Cunn. ex Don
- * *Acacia decurrens* (Wendl.) Willd.
- Acacia divergens* Benth.
- * *Acacia dealbata* Link
- Acacia drummondii* Lindley ssp. *elegans* B.R. Maslin
- Acacia extensa* Lindley
- Acacia fragilis* Maiden et Blakely
- Acacia gilbertii* Meissner
- Acacia hastulata* Smith in Rees
- Acacia huegelii* Benth.
- Acacia incurva* Benth.
- Acacia insolita* E. Pritzel
- Acacia laricina* Meissner
- Acacia latipes* Benth.
- Acacia leioderma* Maslin
- Acacia lateriticola* Maslin
- Acacia littorea* Maslin
- Acacia luteola* Maslin
- Acacia microbotrya* Benth.
- Acacia mooreana* W.V. Fitzg.
- Acacia multispicata* Benth.
- * *Acacia melanoxylon* R. Br.
- Acacia myrtifolia* (Smith) Willd.
- Acacia nervosa* DC.
- Acacia obovata* Benth.
- Acacia paradoxa* DC.
- (E) *Acacia pentadenia* Lindley
- (E) *Acacia aff. pentadenia* (Amels 3700)

Acacia preissiana (Meissner) Maslin

Acacia prismifolia E. Pritzel

Acacia pulchella R. Br. var. *pulchella*

Acacia pulchella R. Br. var. *glaberrima* Meissner

Acacia pulchella R. Br. var. *goadbyi* (Domin.) Maslin

* *Acacia pycnantha* Benth.

Acacia pycnocephala Maslin

Acacia robiniae Maslin

Acacia rostellifera Benth.

Acacia saligna (Labill.) H.L. Wendl.

(E) *Acacia scalpelliformis* Meissner

Acacia semitrullata Maslin

Acacia subcaerulea Lindley

(E) *Acacia subracemosa* Maslin

Acacia sulcata R. Br.

(E) *Acacia tayloriana* F. Muell.

Acacia tetragonocarpa Meissner

Acacia triptycha F. Muell. ex Benth.

Acacia uliginosa Maslin

Acacia urophylla Benth. ex Lindley

Acacia varia Maslin var. *varia*

Acacia willdenowiana H.L. Wendl.

Paraserianthes lophantha (Willd.) I. Nielsen

CAESALPINIACEAE

Labichea punctata Benth. in Lindley

PAPILIONACEAE

Aotus carinata Meissner

Aotus sp. aff. *diffusa*

Aotus genistoides Turcz.

Aotus gracillima Meissner

Aotus intermedia Meissner

(E) *Aotus passerinoides* Meissner

Aotus procumbens Meissner

Aotus villosa

Bossiaea aquifolium Benth.

Bossiaea dentata (R. Br.) Benth.

(E) *Bossiaea disticha* Lindley

Bossiaea eriocarpa Benth.

Bossiaea laidlawiana Tovey et P. Morris

Bossiaea linophylla R. Br.

Bossiaea ornata (Lindley) Benth.

Bossiaea rufa R. Br.

Bossiaea webbii F. Muell.

Brachysema praemorsum Meissner

Brachysema sericeum (Sm.) Domin.

Burtonia conferta DC.

Burtonia scabra R. Br.

Burtonia villosa Meissner

Chorizema aciculare (DC.) C. Gardner

Chorizema cordatum Lindley

Chorizema ilicifolium Labill.

Chorizema diversifolium DC.

Chorizema glycinifolium (Sm.) Druce

Chorizema reticulatum Meissner

- Chorizema rhomboideum* R. Br.
 (E) *Chorizema* sp aff. *varium* (Annals 2189)
 * *Cytisus prolifer* L.f.
Daviesia alternifolia Endl.
Daviesia angulata Benth.
Daviesia benthamii Meissner
Daviesia brachyphylla M.D. Crisp
Daviesia colletoides
Daviesia cordata Smith
Daviesia decurrens Meissner
Daviesia divaricata
Daviesia flexuosa Benth.
Daviesia gracilis M.D. Crisp
Daviesia horrida Preiss ex Meissner
Daviesia incrassata Smith
Daviesia inflata M.D. Crisp
Daviesia longifolia Benth.
Daviesia oppositifolia Endl.
Daviesia polyphylla Benth.
Daviesia preissii Meissner
Dillwynia cinerascens R. Br. ex Sims
Dillwynia uncinata (Turcz.) J. Black
 * *Dipogon lignosus* (L.) Verdc.
Euchilopsis linearis (Benth.) F. Muell.
Eutaxia densifolia Turcz.
Eutaxia epacridoidea Meissner
Eutaxia obovata (Labill.) C. Gardner
Eutaxia parvifolia Benth.
Eutaxia virgata Benth.
Gastrolobium bilobum R. Br.
Gastrolobium brownii Meissner
Gastrolobium callistachys Meissner
Gastrolobium forrestii Ewart
Gastrolobium villosum Benth.
 * *Genista canariensis* L.
 * *Genista linifolia* L.
Gompholobium amplexicaule Meissner
Gompholobium aristatum Benth.
Gompholobium burtonioides Meissner
Gompholobium capitatum A. Cunn.
Gompholobium knightianum Lindley
Gompholobium marginatum R. Br.
Gompholobium ovatum Meissner
Gompholobium polymorphum R. Br.
Gompholobium tomentosum Labill.
Gompholobium venustum R. Br.
Goodia lotifolia Salisb.
Hardenbergia comptoniana (Andrews) Benth.
Hovea chorizemifolia (Sweet) DC.
Hovea stricta
Hovea trisperma Benth.
Hovea elliptica (Sm.) DC.
Isotropis cuneifolia (Sm.) Domin.
Jacksonia alata Benth.
Jacksonia aphylla (Turcz.) Druce
Jacksonia furcellata (Bonpl.) DC.
Jacksonia horrida DC.
Jacksonia mollissima W. Fitzg.
Jacksonia spinosa (Labill.) R. Br.
Jacksonia sternbergiana Huegel
 (E) *Jansonia formosa* Kipp. ex Lindley
Kennedia carinata (Benth.) Domin.
Kennedia coccinea Vent.
 (E) *Kennedia glabrata* (Benth.) Lindley
 (E) *Kennedia macrophylla* (Meissner) Benth.
Kennedia microphylla Meissner
Kennedia prostrata R. Br.
Kennedia stirlingii Lindley
Latrobea brunonis (Benth.) Meissner
Latrobea diosmifolia Benth.
Latrobea genistoides (Meissner) Benth.
Latrobea hirtella (Turcz.) Benth.
Latrobea tenella (Meissner) Benth. var. *tenella*
 * *Lathyrus tingitanus* L.
 * *Lathyrus sylvestris* L.
 * *Lotus angustissimus* L.
 * *Lotus suaveolens* Pers.
 * *Lotus uliginosus* Schkuhr
 * *Lupinus luteus* L.
 * *Medicago arabica* (L.) Hudson
 * *Medicago lupulina* L.
 * *Medicago polymorpha* L. var. *brevispina* (Benth.) Heyn
 * *Melilotus indica* (L.) All.
Mirbelia dilatata R. Br.
Mirbelia ovata Meissner
Mirbelia spinosa Benth.
Nemcia hookeri (Meissner) M.D. Crisp
Nemcia spathulata (Benth.) M.D. Crisp
 * *Ornithopus compressus* L.
 * *Ornithopus pinnatus* (Miller) Druce
Oxylobium carinatum (Meissner) Benth.
Oxylobium coriaceum (Sm.) C. Gardner
Oxylobium drummondii Meissner
Oxylobium lanceolatum (Vent.) Druce
Oxylobium linearifolium (G. Don.) Domin.
Oxylobium spathulatum (Meissner) Benth.
Phyllota barbata Benth.
 * *Psoralea pinnata* L.
Pultenaea adunca Turcz.
Pultenaea aspalathoides Meissn.
Pultenaea barbata C. Andrews
Pultenaea ?calycina
Pultenaea drummondii Meissner
Pultenaea ericifolia Benth.
Pultenaea ochreata Meissner
Pultenaea pinifolia Meissner
Pultenaea reticulata (Sm.) Benth.
Pultenaea skinneri F. Muell.
Pultenaea strobilifera Meissner
Pultenaea verruculosa Turcz.
Pultenaea vestita R. Br.
Sphaerolobium alatum Benth.
Sphaerolobium fornicatum Benth.

- Sphaerolobium grandiflorum* (R. Br.) Benth.
Sphaerolobium linophyllum (Huegel) Benth.
Sphaerolobium macranthum Meissner
Sphaerolobium medium R. Br.
Sphaerolobium nudiflorum (Meissner) Benth.
Sphaerolobium racemulosum Benth.
Sphaerolobium scabriusculum Meissner
Sphaerolobium vimineum Sm.
Templetonia retusa (Vent.) R. Br.
* *Trifolium arvense* L.
* *Trifolium campestre* Schreber
* *Trifolium cernuum* Brot.
* *Trifolium dubium* Sibth.
* *Trifolium glomeratum* L.
* *Trifolium hirtum* All.
* *Trifolium ligusticum* Balbis ex Lois.
* *Trifolium repens* L.
* *Trifolium striatum* L.
* *Trifolium tomentosum* L.
* *Ulex europaeus* L.
* *Vicia hirsuta* (L.) Gray
* *Vicia sativa* L. ssp. *sativa*
* *Vicia sativa* ssp. *nigra* (L.) Ehrh.
Viminaria juncea (Schrader et Wendl.) Hoffsgg.
- GERANIACEAE**
- * *Erodium botrys* (Cav.) Bertol
* *Erodium cicutarium* (L.) L'. Her.
Erodium cygnorum Nees in Lehm. ssp. *cygnorum*
* *Eranium dissectum* L.
Geranium drummondii Carolin
Geranium retrorsum L. Her. ex DC.
Geranium solanderi Carolin
Pelargonium alchemilloides (L.) L. Her. ssp. *alchemilloides*
Pelargonium australe Willd.
* *Pelargonium capitatum* (L.) L. Her. ex Ait.
Pelargonium drummondii Turcz.
Pelargonium littorale Huegel
- OXALIDACEAE**
- * *Oxalis corniculata* L.
Oxalis perennans Haw.
* *Oxalis flava* L.
* *Oxalis incarnata* L.
* *Oxalis pes-caprae* L.
* *Oxalis polyphylla* Jacq.
* *Oxalis purpurea* L.
- LINACEAE**
- Linum marginale* Cunn. ex Planchon
* *Linum trigynum* L.
- ZYGOPHYLLACEAE**
- Nitraria billardieri* DC.
- RUTACEAE**
- Asterolasia pallida* Benth.
- Asterolasia squamuligera* Hook.
Boronia alata Sm.
Boronia albiflora R. Br. ex Benth.
Boronia crenulata Sm. var. *crenulata*
Boronia crenulata var. *pubescens* Benth.
Boronia crassipes Bartling
Boronia denticulata Smith
Boronia dichotoma Lindley
Boronia fastigata Bartling
Boronia gracilipes F. Muell.
Boronia heterophylla F. Muell.
Boronia juncea Bartling
Boronia megastigma Nees ex Bartling
Boronia molloyae J. Drumm.
Boronia pulchella Turcz.
Boronia spathulata Lindley
Boronia stricta Bartling
Boronia subsessilis Benth.
Boronia virgata P.G. Wilson
Boronia sp. aff. *juncea*
Boronia sp. aff. *spathulata*
Chorilaena quercifolia Endl.
Crowea angustifolia Smith var. *angustifolia*
Crowea angustifolia var. *dentata* (Benth.) P.G. Wilson
Diplolaena dampieri Desf.
Diplolaena drummondii (Benth.) Ostenf.
Diplolaena microcephala Bartling var. *microcephala*
Eriostemon nodiflorus Lindley var. *nodiflorus*
Eriostemon spicatus A. Rich.
Phebalium anceps DC.
Phebalium rude Bartl. ssp. *rude*
- TREMANDRACEAE**
- Platitheca galiooides* Steetz
Tetrapheca affinis Endl.
(E) *Tetrapheca elliptica* J. Thompson
(E) *Tetrapheca filiformis* Benth.
Tetrapheca hirsuta Lindley
Tetrapheca hispidissima Steetz
Tetrapheca setigera Endl.
Tremandra diffusa R. Br.
Tremandra stelligera R. Br.
- POLYGALACEAE**
- Comesperma calymega* Labill.
Comesperma ciliatum Steetz.
Comesperma confertum Labill.
Comesperma flavum DC.
Comesperma nudiusculum DC.
Comesperma virgatum Labill.
Comesperma volubile Labill.
* *Polygala myrtifolia* L.
* *Polygala virgata* Thunb.
- EUPHORBIACEAE**
- Adriana quadripartita* (Labill.) Gaudich
Amperea ericoides Adr. Juss.

- Amperea micrantha* Benth.
 (E) *Amperea protensa* Nees
 (E) *Amperea volubilis* F. Muell. ex Benth.
Ampera sp. (CJR 227)
Beyeria viscosa (Labill.) Miq.
 * *Euphorbia peplus* L.
 * *Euphorbia paralias* L.
 * *Euphorbia helioscopia* L.
 * *Mercurialis annua* L.
Monotaxis grandiflora Endl.
Monotaxis occidentalis Endl.
Phyllanthus calycinus Labill.
Phyllanthus sp. (?scaber Klotzsch)
Poranthera huegelii Klotzsch
Poranthera microphylla Brongn.
Ricinocarpus glaucus Endl.
 * *Ricinus communis* L.
- CALLITRICHACEAE**
 * *Callitricha stagnalis* Scop.
- STACKHOUSIACEAE**
Stackhousia pubescens Labill.
Tripteroecoccus brunonis Endl.
 (E) *Tripteroecoccus* sp. nov. (CJR 414)
- SAPINDACEAE**
Dodonaea aptera Miq.
Dodonaea ceratocarpa Endl.
Dodonaea trifida F. Muell.
Dodonaea viscosa Jacq. ssp. *spatulata* (Smith)
 J.G. West
- RHAMNACEAE**
Cryptandra arbutiflora Fenzl
Cryptandra pungens Steudel
Cryptandra tubulosa Fenzl
Pomaderris myrtilloides Fenzl
Spiridium globulosum (Labill.) Benth.
 (E) *Spiridium spadiceum* (Fenzl) Benth.
Trymalium floribundum Steud.
 (E) *Trymalium aff. floribundum* (R.D. Royce 4286)
Trymalium ledifolium Fenzl var. *ledifolium*
- MALVACEAE**
 * *Lavatera arborea* L.
Lavatera plebeia Sims var. *plebeia*
Lavatera plebeia var. *tomentosa* Hook. f.
 * *Malva parviflora* L.
 * *Modiola caroliniana* (L.) G. Don.
Sida hookeriana Miq.
- STERCULIACEAE**
Guichenotia ledifolia Gay
Lasiopetalum cordifolium Endl.
 (E) *Lasiopetalum floribundum* Benth. ssp. nov.
Rulingia corylifolia R.A. Graham
- Rulingia cygnorum* (Steud.) C. Gardner var. *cygnorum*
Rulingia grandiflora Endl.
Rulingia parviflora Endl.
Thomasia brachystachys Turcz.
Thomasia cognata Steud.
Thomasia discolor Steud.
Thomasia foliosa Gay
Thomasia grandiflora Lindley
Thomasia laxiflora Benth.
Thomasia macrocalyx Steud.
Thomasia pauciflora Lindley
Thomasia multiflora E. Pritzel
Thomasia purpurea (Aiton) Gay
 (E) *Thomasia quercifolia* (Andrews) Gay
Thomasia rhynchocarpa Turcz.
 (E) *Thomasia solanacea* Gay
Thomasia triloba Turcz.
Thomasia triphylla Gay
- DILLENIACEAE**
Hibbertia acerosa (R. Br. ex DC.) Benth.
Hibbertia amplexicaulis Steud.
Hibbertia commutata Steud.
Hibbertia cuneiformis (Labill.) Sm.
Hibbertia cunninghamii Ait. ex Hook
Hibbertia furfuracea (R. Br. ex DC.) Benth.
Hibbertia glaberrima F. Muell.
Hibbertia glomerata Benth.
Hibbertia grossulariifolia (Salisb.) Salisb.
Hibbertia hypericoides (DC.) Benth.
Hibbertia inconspicua Ostenf.
Hibbertia lasiopus Benth.
Hibbertia microphylla Steud.
Hibbertia pachyrrhiza Steudel
Hibbertia perfoliata Endl.
Hibbertia pulchra Ostenf.
Hibbertia quadricolor Domin
Hibbertia racemosa (Endl.) Gilg
Hibbertia rhadinopoda F. Muell.
Hibbertia serrata Hotchk.
Hibbertia silvestris Diels
Hibbertia stellaris Endl.
Hibbertia subvaginata (Benth.) F. Muell.
- CLUSIACEAE**
Hypericum gramineum G. Forster
Hypericum japonicum Thunb.
 * *Hypericum perforatum* L.
- FRANKENIACEAE**
Frankenia pauciflora DC.
Frankenia tetrapetala Labill.
- VIOLACEAE**
Hybanthus calycinus (DC. ex Ging.) F. Muell.

Hybanthus debilissimus F. Muell.
Hybanthus floribundus (Lindley) F. Muell. ssp.
 floribundus
Hybanthus volubilis E.M. Bennett
* *Viola odorata* L.

THYMELAEACEAE

Pimelea angustifolia R. Br.
Pimelea argentea R. Br.
Pimelea brevifolia R. Br. ssp. *brevifolia*
Pimelea ciliata B.L. Rye ssp. *ciliata*
Pimelea clavata Labill.
Pimelea cracens B.L. Rye ssp. *cracens*
Pimelea cracens ssp. *glabra* B.L. Rye
Pimelea ferruginea Labill.
Pimelea hispida R. Br.
Pimelea imbricata R. Br. ssp. *imbricata*
Pimelea imbricata ssp. *piligera* B.L. Rye
Pimelea lanata R. Br.
Pimelea lehmanniana Meissner ssp. *lehmanniana*
Pimelea longiflora R. Br. ssp. *longiflora*
Pimelea preissii Meissner
Pimelea rosea R. Br.
Pimelea spectabilis Lindley
Pimelea suaveolens Meissner ssp. *suaveolens*
Pimelea sylvestris R. Br.
Pimelea tinctoria Meissner

LYTHRACEAE

* *Lythrum hyssopifolia* L.

MYRTACEAE

Actinodium cunninghamii Schauer
Agonis flexuosa (Sprengel) Schauer
Agonis floribunda Turcz.
Agonis hypericifolia Schauer
Agonis juniperina Schauer
Agonis linearifolia (DC.) Schauer
Agonis marginata (Labill.) Schauer
Agonis parviceps Schauer
Agonis undulata Benth.
Astartea clavulata Turcz.
Astartea aff. fascicularis (Labill.) DC.
(E) *Astartea* sp. nov (GK 970)
Baeckea arbuscula R. Br. ex Benth.
Baeckea astarteoides Benth.
Baeckea blacketii F. Muell.
Baeckea camphorosmae Endl.
Baeckea pygmaea R. Br. ex Benth.
Beaufortia anisandra Schauer
Beaufortia decussata R. Br.
Beaufortia micrantha Schauer
Beaufortia sparsa R. Br.
Beaufortia squarrosa Schauer
Callistemon glaucus Bonpl. Sweet
Calothamnus gracilis R. Br.

Calothamnus graniticus T.J. Hawkeswood ssp.
 graniticus
Calothamnus lateralis Lindley
Calothamnus preissii Schauer
Calothamnus sanguineus Labill.
Calothamnus schaueri Lehm.
Calytrix acutifolia (Lindley) Craven
Calytrix asperula (Schau.) Benth.
Calytrix birdii (F. Muell.) B.D. Jackson
Calytrix flavescentia Cunn.
Calytrix leschenaultii (Schauer) Benth.
Calytrix tenuiramea (Turcz.) Benth.
Calytrix tetragona Labill.
Chamelia ciliatum Desf.
(E) *Chamelia* sp.
Darwinia citriodora (Endl.) Benth.
Darwinia diosmoides (DC.) Benth.
Darwinia forrestii F. Muell.
Darwinia oederoides (Turcz.) Benth.
Darwinia vestita (Endl.) Benth.
Eremaea pauciflora (Endl.) Druce
Eucalyptus angulosa Schauer
(E) *Eucalyptus brevistylis* Brooker
 Eucalyptus calophylla Lindley
(E) *Eucalyptus calcicola* Brooker
Eucalyptus conferruminata D. Carr et S. Carr
Eucalyptus cornuta Labill.
Eucalyptus decipiens Endl.
Eucalyptus decurva F. Muell.
Eucalyptus diversicolor F. Muell.
Eucalyptus doratoxylon F. Muell.
Eucalyptus drummondii Benth.
Eucalyptus falcata Turcz.
(E) *Eucalyptus ficifolia* F. Muell.
 Eucalyptus goniantha Turcz. ssp. nov.
(E) *Eucalyptus guilfoylei* Maiden
 Eucalyptus jacksonii Maiden
 Eucalyptus loxophleba Benth.
 Eucalyptus marginata Donn. ex Smith
 Eucalyptus megacarpa F. Muell.
 Eucalyptus missilis Brooker & Hopper ined.
* *Eucalyptus muelleriana*
Eucalyptus patens Benth.
Eucalyptus rufa Endl. ssp. *rufa*
Eucalyptus rufa Endl. ssp. *cratyantha* Brooker &
 Hopper ined.
Eucalyptus staeri (Maiden) Kessell et C. Gardner
Eucalyptus wandoo Blakely
Homalospermum firmum Schauer
Hypocalymma angustifolium Endl.
Hypocalymma cordifolium (Lehm.) Schauer
Hypocalymma ericifolium Benth.
Hypocalymma robustum Endl.
Hypocalymma strictum Schauer
(E) *Hypocalymma* sp.
Kunzea ericifolia (Smith) Heynh.
Kunzea aff. micrantha Schauer

- Kunzea spicata* S. Moore
Kunzea recurva Schauer var. *recurva*
Kunzea recurva var.? *melaleucoides*
(E) *Kunzea sulphurea* Tovey et Morris
Kunzea vestita Schauer
Leptospermum erubescens Schauer
* *Leptospermum laevigatum* (Gaertner) F. Muell.
Melaleuca acerosa Schauer
(E) *Melaleuca basicephala* Benth.
Melaleuca baxteri Benth.
Melaleuca bracteosa Turcz.
Melaleuca cuticularis Labill.
Melaleuca densa R. Br.
Melaleuca diosmifolia Andrews
Melaleuca huegelii Endl.
Melaleuca incana R. Br.
Melaleuca lanceolata Otto
Melaleuca laterita Otto L.A. Dietr.
Melaleuca leptoclada Benth.
Melaleuca micromera Schauer
Melaleuca microphylla Smith
Melaleuca pauciflora Turcz.
Melaleuca pentagona Labill.
Melaleuca polygaloides Schauer
Melaleuca preissiana Schauer
Melaleuca raphiophylla Schauer
Melaleuca scabra R. Br. var. *trichophylla*
Melaleuca ?seriata Lindley
Melaleuca spathulata Schauer
Melaleuca striata Labill.
Melaleuca thymoides Turcz.
Melaleuca viminea Lindley
Melaleuca violacea Lindley
(E) *Pericalymma crassipes* (Endl.) Schauer
Pericalymma ellipticum (Endl.) Schauer
Scholtzia sp.
Thryptomene saxicola (Cunn. ex Hook.) Schauer
Thryptomene aff. hyporhytis Turcz.
Verticordia acerosa Lindley
Verticordia densiflora Lindley
Verticordia habrantha Schauer
Verticordia lemannii Schauer
Verticordia lindleyi Schauer
Verticordia pennigera Endl.
Verticordia plumosa (Desf.) Druce

ONAGRACEAE

- Epilobium billardierum* Ser. ssp. *billardierum*
Epilobium billardierum ssp. *cinereum* (A. Rich.)
Raven et Englehorn
Epilobium billardierum ssp. *intermedium* Raven et
Englehorn
* *Epilobium ciliatum* Raf.
Epilobium hirtigerum Cunn.
* *Oenothera glazioviana* Micheli
* *Oenothera stricta* Ledeb. ex Link.

HALORAGACEAE

- Glischrocaryon aureum* (Lindley) Orch. var. *aureum*
Glischrocaryon aureum var. *angustifolium* (Nees)
Orch.
Glischrocaryon roei Endl.
Gonocarpus benthamii Orch.
Gonocarpus diffusus (Diels.) Orch.
(E) *Gonocarpus hexandrus* (F. Muell.) Orch. ssp.
hexandrus
(E) *Gonocarpus hexandrus* ssp. *serratus* (Schindl.)
Orch.
Gonocarpus nodulosus Nees
Gonocarpus panniculatus (R. Br. ex Benth.) Orch.
Gonocarpus simplex (R. Br. ex Britt.) Orch.
Haloragis acutangula F. Muell. forma *occidentalis*
Orch.
Haloragis brownii (J.D. Hook) Schindler
Haloragis ?digyna Labill.
Haloragodendron racemosum (Labill.) Orch.
(E) *Meziella trifida* (Nees) Schindler
* *Myriophyllum aquaticum* (Vell. Conc.) Verde.
Myriophyllum crispatum Orch.
Myriophyllum drummondii Benth.
Myriophyllum salsugineum Orch.

APIACEAE

- (E) *Actinotus 'laxa'*
Actinotus omnifertilis F. Muell. ex Benth.
Actinotus glomeratus Benth.
* *Ammi majus* L.
Apium annuum P.S. Short
Apium prostratum Labill. ex Vent. ssp. *prostratum*
Apium prostratum var. *filiforme* (A. Rich.) Kirk
* *Centella asiatica* (L.) Urban
* *Conium maculatum* L.
* *Daucus carota* L.
Daucus glochidiatus (Labill.) Fischer
Eryngium pinnatifidum Bunge
* *Foeniculum vulgare* Miller
Homalosciadium homalocarpum (F. Muell.) Hj.
Eichler
Hydrocotyle alata R. Br.
Hydrocotyle blepharocarpa F. Muell.
Hydrocotyle callicarpa Bunge
Hydrocotyle diantha DC.
Hydrocotyle hirta R. Br. ex A. Rich.
Hydrocotyle hispidula Bunge. var. *hispidula*
(E) *Hydrocotyle hispidula* var. *tenella* Benth.
Hydrocotyle medicagineoides Turcz.
Hydrocotyle pilifera Turcz. var. *glabrata* Benth.
Hydrocotyle plebeja R. Br. ex A. Rich.
Hydrocotyle scutellifera Benth.
Hydrocotyle tetragonocarpa F. Muell.
Hydrocotyle sp. (Hamelin Bay)
Pentapeltis peltigera (Hook) Bunge
Pentapeltis silvatrica (Diels) Domin
Platysace anceps (DC.) Norman

- Platysace compressa* (Labill.) Norman
Platysace filiformis (Bunge.) Norman
Platysace haplosciadia (Benth.) Norman
Platysace ramosissima (Benth.) Norman
Platysace pendula (Benth.) Norman
Platysace tenuissima (Benth.) Norman
Schoenolaena juncea Bunge.
Schoenolaena tenuior Bunge.
Sium latifolium L.
Trachymene anisocarpa (Turcz.) B.L. Burtt
Trachymene coerulea R.A. Graham
Trachymene ornata (Endl.) Druce
Trachymene pilosa Sm.
Xanthosia atkinsoniana F. Muell.
Xanthosia candida (Benth.) Steudel
Xanthosia hederifolia Benth.
Xanthosia huegelii (Benth.) Steudel
Xanthosia pusilla Bunge.
Xanthosia rotundifolia DC.
 (?E) Gen Nov/Sp. Nov. (Shannon)
- EPACRIDACEAE**
- Actrotriche cordata* (Labill.) R. Br.
Actrotriche depressa R. Br.
 (E) *Andersonia auriculata* L. Watson
 (E) *Andersonia barbata* L. Watson
Andersonia caerulea R. Br.
Andersonia involucrata Sonder
Andersonia lehmanniana Sonder ssp. *lehmanniana*
Andersonia longifolia (Benth.) L. Watson
Andersonia micrantha R. Br.
Andersonia simplex (Stschegl.) Druce
Andersonia sprengelioides R. Br.
Andersonia sp. I (Annals 4064)
Andersonia sp. II (Hamersley 335)
Astroloma baxteri DC.
Astroloma ciliatum (Lindley) Druce
Astroloma drummondii Sonder
Astroloma epacridis (DC.) Druce
Astroloma humifusum (Cav.) R. Br.
Astroloma pallidum R. Br.
Astroloma prostratum R. Br.
Brachyloma concolor (F. Muell.) C. Gardner
Brachyloma preissii Sonder
Conostephium preissii Sonder
Cosmilia rubra R. Br.
 (E) *Leucopogon alternifolius* R. Br.
Leucopogon assimilis R. Br.
Leucopogon australis R. Br.
Leucopogon bracteolaris Benth.
Leucopogon capitellatus DC.
Leucopogon carinatus
Leucopogon cinereus E. Pritzel
Leucopogon concinnus Benth.
Leucopogon conostephioides DC.
Leucopogon cordatus Sonder
Leucopogon cucullatus R. Br.
- (E) *Leucopogon denticulatus* W.V. Fitzg.
Leucopogon distans R. Br.
Leucopogon elatior Sonder
Leucopogon flavescens Sonder
 (E) *Leucopogon gilbertii* Stschegl.
 (E) *Leucopogon* aff. *gilbertii* (CJR 192)
Leucopogon glabellus R. Br.
Leucopogon gracilis R. Br.
Leucopogon gracillimus DC.
Leucopogon hirsutus Sonder
Leucopogon kingianus (F. Muell.) C. Gardner
Leucopogon multiflorus R. Br.
Leucopogon nutans E. Pritzel
Leucopogon obovatus (Labill.) R. Br.
Leucopogon oppositifolius Sonder
Leucopogon ovalifolius Sonder
Leucopogon oxycedrus Sonder
Leucopogon parviflorus (Andr.) Lindley
Leucopogon pendulus R. Br.
Leucopogon polymorphus Sonder
 (E) *Leucopogon polystachyus* R. Br.
Leucopogon propinquus R. Br.
Leucopogon racemulosus DC.
Leucopogon reflexus R. Br.
Leucopogon sprengelioides Sonder
Leucopogon striatus R. Br.
Leucopogon strictus Benth.
Leucopogon aff. *tenuis* DC.
Leucopogon unilateralis Stschegl.
Leucopogon verticillatus R. Br.
Lysinema ciliatum R. Br.
Lysinema sp. aff. *ciliatum*
Lysinema conspicuum R. Br.
Lysinema fimbriatum F. Muell.
Lysinema lasianthum R. Br.
Monotoca tamariscina F. Muell.
Needhamiella pumilio (R. Br.) L. Watson
Oligarrhena micrantha R. Br.
Sphenotoma capitatum (R. Br.) Lindley
Sphenotoma gracile (R. Br.) Sweet
Sphenotoma parviflorum F. Muell.
Sphenotoma squarrosum (R. Br.) Don
Styphelia tenuiflora Lindl.
- PRIMULACEAE**
- * *Anagallis arvensis* L. var. *arvensis*
 * *Anagallis arvensis* var. *caerulea* Gouan
Samolus junceus R. Br.
Samolus repens (Forster et G. Forster) Pers.
Samolus valerandi L.
- LOGANIACEAE**
- Logania buxifolia* F. Muell.
Logania campanulata R. Br.
Logania fasciculata R. Br.
Logania serpyllifolia R. Br.
Logania vaginalis (Labill.) F. Muell.

Logania sp. aff. *serphyllifolia* (GK 10371)
Mitrasacme paradoxa R. Br.
Mitrasacme sp. (Annels 2706)

GENTIANACEAE

- * *Centaureum erythraea* Rafn.
- * *Centaureum spicatum* (L.) Fritsch
Sebaea ovata (Labill.) R. Br.

MENYANTHACEAE

- Villarsia albiflora* F. Muell.
- Villarsia capitata* Nees.
- Villarsia lasiosperma* F. Muell.
- Villarsia latifolia* Benth.
- Villarsia parnassifolia* (Labill.) R. Br.
- Villarsia submersa* Aston
- Villarsia violifolia* F. Muell.

APOCYNACEAE

- * *Vinca major* L.

ASCELIADACEAE

- * *Gomphocarpus fruticosus* (L.) W.T. Aiton

CONVOLVULACEAE

- ?* *Calystegia soldanella* R. Br.
- Dichondra repens* Forster et G. Forster
- * *Ipomoea indica* (Burrman) Merr.
Wilsonia backhousii J.D. Hook.
Wilsonia humilis R. Br.

CUSCUTACEAE

- Cuscuta australis* R. Br.

BORAGINACEAE

- * *Borago officinalis* L.
- * *Echium plantagineum* L.
Myosotis australis R. Br.

VERBENACEAE

- * *Verbena bonariensis* L.

CHLOANTHACEAE

- Pityrodia bartlingii* (Lehm.) Benth.

LAMIACEAE

- Hemianthus pungens* R. Br. var. *pungens*
- Hemigenia incana* (Lindley) Benth.
- Hemigenia microphylla* Benth.
- Hemigenia podalyrina* F. Muell.
- Hemigenia sericea* Benth.
- * *Mentha aquatica* L.
- * *Mentha x piperita* L.
- * *Mentha pulegium* L.
- * *Mentha spicata* L.
- * *Mentha suaveolens* Ehrh.
Microcorys aff. *obvata* Benth.
- * *Prunella vulgaris* L.

- * *Salvia verbenacea* L.
- Westringia dampieri* R. Br.

SOLANACEAE

- Anthocercis littorea* Labill.
- Anthocercis viscosa* R. Br. ssp. *viscosa*
- (E) *Anthocercis* sp. (Annels 4036)
- * *Datura stramonium* L.
- * *Lycium ferocissimum* Miers
- * *Nicandra physalodes* (L.) P. Gaertner
- * *Physalis peruviana* L.
- * *Solanum laciniatum* Aiton
- * *Solanum nigrum* L.
Solanum symonii Hj. Eichler

SCROPHULARIACEAE

- * *Bellardia trixago* (L.) All.
- * *Dischisma arenarium* E. Meyer
Euphrasia collina R. Br. ssp. *tetragona* (R. Br.)
W.R. Barker
- Euphrasia scabra* R. Br.
- Glossostigma drummondii* Benth.
- Gratiola peruviana* L.
- Morgania floribunda?* Benth.
- * *Parentucellia latifolia* (L.) Caruel
- * *Parentucellia viscosa* (L.) Caruel
- * *Verbascum virgatum* Stokes
- * *Veronica arvensis* L.
Veronica calycina R. Br.
- Veronica distans* R. Br.
- Veronica plebeia* R. Br.

OROBANCHACEAE

- * *Orobanche minor* Smith

LENTIBULARIACEAE

- Polypomphlyx multifida* (R. Br.) F. Muell.
- Polypomphlyx tenella* (R. Br.) Lehm.
- Utricularia menziesii* R. Br.
- Utricularia multifida* R. Br.
- Utricularia tenella* R. Br.
- Utricularia simplex* R. Br.
- Utricularia violacea* R. Br.
- Utricularia volubilis* R. Br.

MYOPORACEAE

- Myoporum apiculatum* A. DC.
- Myoporum gracile* Bartling
- Myoporum insulare* R. Br.
- Myoporum oppositifolium* R. Br.
- Myoporum tetrandrum* (Labill.) Domin

PLANTAGINACEAE

- Plantago debilis* R. Br.
- * *Plantago lanceolata* L.
- * *Plantago major* L.

RUBIACEAE

- * *Galium murale* (L.) All.
- Opercularia echinocephala* Benth.
- Opercularia hispidula* Endl.
- Opercularia vaginata* Labill.
- Opercularia volubilis* R. Br. ex Benth.

VALERIANACEAE

- * *Centranthus ruber* (L.) DC.

CUCURBITACEAE

- * *Cucumis myriocarpus* Naudin

CAMPANULACEAE

- Wahlenbergia communis* Carolin
- Wahlenbergia gracilenta* Lothian
- Wahlenbergia graniticola* Carolin
- Wahlenbergia litticola* P.J. Smith
- Wahlenbergia multicaulis* Benth.
- Wahlenbergia preissii* Vriese
- Wahlenbergia simplicicaulis* Vriese

LOBELIACEAE

- Grammatotheca bergiana* (Cham.) C. Presl
- Isotoma hypocratiformis* (R. Br.) Druce
- Isotoma scapigera* (R. Br.) G. Don.
- Lobelia alata* Labill.
- Lobelia gibbosa* Labill.
- Lobelia heterophylla* Labill.
- Lobelia rhombifolia* Vriese
- Lobelia rhytidosperma* Benth.
- Lobelia rariflora* F. Wimmer
- Lobelia tenuior* R. Br.
- * *Monopsis simplex* (L.) E. Wimm.

GOODENIACEAE

- Anthotium junciforme* (De Vr.) Morrison
- Dampiera fasciculata* R. Br.
- Dampiera hederacea* R. Br.
- (E) *Dampiera heteroptera* Rajput et Carolin
- Dampiera leptoclada* Benth.
- Dampiera linearis* R. Br.
- Dampiera pedunculata* Rajput et Carolin
- Dampiera trigona* De Vriese
- Diaspasis filifolia* R. Br.
- Goodenia caerulea* R. Br.
- Goodenia concinna* Benth.
- Goodenia eatoniana* F. Muell.
- Goodenia filiformis* R. Br. var. *filiformis*
- Goodenia filiformis* var. *pulchella* Benth.
- Goodenia incana* R. Br.
- Goodenia laytoniana* Benth.
- Goodenia leptoclada* Benth.
- Goodenia pulchella* Benth.
- Goodenia sepalosa* F. Muell. ex Benth. var. *glandulosa* F. Muell.
- Goodenia tenella* R. Br.
- Lechenaultia biloba* Lindley

Lechenaultia expansa R. Br.

Lechenaultia floribunda Benth.

Lechenaultia formosa R. Br.

Lechenaultia tubiflora R. Br.

(E) *Scaevola attenuata* R. Br.

Scaevola auriculata Benth.

Scaevola calliptera Benth.

Scaevola crassifolia Labill.

Scaevola glandulifera DC.

Scaevola globulifera Labill.

Scaevola lanceolata Benth.

Scaevola longifolia Vriese

Scaevola microphylla Benth.

Scaevola nitida R. Br.

Scaevola pilosa Benth.

Scaevola striata R. Br.

Scaevola thesioides Benth.

Selliera radicans Cav.

(E) *Velleia macrophylla* (Lindley) Benth.

Velleia trinervis Labill.

STYLDIACEAE

Levenhookia dubia Sonder

Levenhookia leptantha Benth.

Levenhookia pauciflora Benth.

Levenhookia preissii (Sonder) F. Muell.

Levenhookia pusilla R. Br.

Stylium adnatum R. Br.

Stylium affine Sonder

Stylium amoenum R. Br.

Stylium assimile R. Br.

Stylium barleei F. Muell.

Stylium beaugleholei J.H. Willis

Stylium breviscapum R. Br.

Stylium brunonianum Benth. ssp. *brunonianum*

Stylium brunonianum Benth. ssp. *minor* Carlg.

Stylium bulbiferum Benth.

Stylium caespitosum R. Br.

Stylium calcaratum R. Br.

Stylium aff. calcaratum R. Br.

Stylium canaliculatum Lindley

Stylium carnosum Benth.

Stylium ciliatum Lindley

Stylium corymbosum R. Br.

Stylium crassifolium R. Br.

Stylium despectum R. Br.

Stylium dichotomum DC.

Stylium ecorne (F. Muell. ex R. Erickson et

J.H. Willis) P.G. Farrell et S.H. James

Stylium exoglossum R. Erickson et J.H. Willis

Stylium falcatum R. Br.

Stylium fasciculatum R. Br.

Stylium glaucum Labill. ssp. *glaucum*

(E) *Stylium glaucum* ssp. *angustifolium* Carlg.

Stylium guttatum R. Br.

Stylium hirsutum R. Br.

Stylium imbricatum Benth.

- Stylium inundatum* R. Br.
Stylium junceum R. Br. ssp. *junceum*
Stylium junceum ssp. *brevis* (E. Pritz.) Carlq.
(E) *Stylium laciniatum* C. Gardner
Stylium lepidum F. Muell. ex Benth.
Stylium luteum R. Br. ssp. *luteum*
Stylium luteum ssp. *glaucifolium* Carlq.
Stylium periscelianthum R. Erickson et J.H. Willis
Stylium perpusillum J.D. Hook
Stylium petiolare Sonder
Stylium piliferum R. Br.
Stylium preissii (Sonder) F. Muell.
(E) *Stylium pritzelianum* Milbr.
Stylium pulchellum Sonder
(E) *Stylium pygmaeum* R. Br.
Stylium rhynchocarpum Sonder
Stylium repens R. Br.
Stylium rupestre Sonder
Stylium scandens R. Br.
(E) *Stylium aff. scandens* R. Br.
Stylium schoenoides DC.
Stylium spathulatum R. Br. ssp. *spathulatum*
(?) *Stylium spathulatum* ssp. *acuminatum* Carlq.
Stylium spinulosum R. Br.
Stylium squamosotuberous Carlq.
Stylium uniflorum Sond.
Stylium violaceum R. Br.

ASTERACEAE

- Actites megalocarpa* (J.D. Hook) N.S. Lander
Angianthus preissianus (Steetz.) Benth.
* *Arctotheca calendula* (L.) Levyns
* *Arctotheca populifolia* (P. Bergius) Norlindh
Asteridea gracilis A. Gray
Asteridea nivea (Steetz.) G. Krone
Asteridea pulverulenta Lindley
Berkheya rigida (Thunb.) Ewart, J. White et B. Rees
Blennospora drummondii A. Gray
Brachycome ciliaris (Labill.) Less
Brachycome exilis Sonder
Brachycome iberidifolia Benth.
Calocephalus brownii (A. Gray) Benth.
* *Carduus pycnocephalus* L.
* *Carduus tenuiflorus* Curt
* *Centaurea melitensis* L.
Centipeda cunninghamii (DC.) A. Braun et Asch.
* *Chrysanthemum segetum* L.
Chrysocoryne pusilla (Benth.) Endl.
* *Cirsium arvense* (L.) Scop.
* *Cirsium vulgare* (Savi) Ten.
* *Conyza albida* Willd. ex Spreng.
* *Conyza bonariensis* (L.) Cronq.
* *Conyza parva* Cronq.
* *Coreopsis grandiflora* Hogg ex Sweet
Cotula australis (Sieber ex Sprengel) J.D. Hook.
Cotula coronopifolia L.
Cotula cotuloides (Steetz) Druce

- Cotula drummondii* Benth.
* *Cotula turbinata* L.
Craspedia pleiocephala F. Muell.
* *Crepis foetida* L.
* *Cynara cardunculus* L.
* *Dittrichia graveolens* (L.) Greuter
* *Dittrichia viscosa* (L.) Greuter
Gnaphalium gymnocephalum DC.
Gnaphalium indutum J.D. Hook.
* *Gnaphalium pensylvanicum* Willd.
Gnaphalium sphaericum Willd.
* *Hedyporis rhagadioloides* (L.) F.W. Schmidt
Helichrysum cordatum DC.
Helichrysum macranthum Benth.
Helichrysum obtusifolium F. Muell. et Sonder
Helichrysum ramosum DC.
Helipterum pygmaeum (DC.) Benth.
Hyalosperma cotula (Benth.) P.G. Wilson
Hyalosperma pusillum (Turcz.) P.G. Wilson
Hyalosperma simplex (Steetz.) P.G. Wilson
* *Hypochaeris glabra* L.
Ixiolaena viscosa Benth.
Lagenifera huegelii Benth.
Leptorhynchos nudius
Leptorhynchos scabrus L. Haegi
Millotia myosotidifolia (Benth.) Steetz
Millotia tenuifolia Cass
Olearia axillaris (DC.) F. Muell. et Benth.
Olearia calcarea F. Muell.
Olearia cassiniaef (F. Muell.) Benth.
Olearia ciliata (Benth.) F. Muell.
Olearia elaeophila (DC.) F. Muell. ex Benth.
Olearia paucidentata (Steetz) F. Muell. ex Benth.
Olearia revoluta F. Muell. ex Benth.
Olearia rufis (Benth.) F. Muell. ex Benth.
* *Osteospermum clandestinum* (Lees.) Norlindh.
* *Pentzia suffruticosa* (L.) Druce
Picris squarrosa Steetz
Pithocarpa corymbulosa Lindley
Pithocarpa melanostigma Lewis et Summerh.
Podolepis canescens A. Cunn. ex DC.
Podolepis gracilis (Lehm.) R. Graham
Podolepis lessonii (Cass.) Benth.
Podolepis rugata Labill.
Podotheca angustifolia (Labill.) Less.
* *Pseudognaphalium luteo-album* (L.) Hilliard et B.L. Burtt
Quinetia urvillei Cass.
Rutidosis multiflora (Nees) Robinson
* *Senecio diascides* Drury
* *Senecio elegans* L.
Senecio glomeratus Desf. ex Poiret
Senecio glossanthus (Sonder) Belcher
Senecio hispidulus
* *Senecio jacobaea* L.
Senecio lautus G. Forster ex Willd. ssp. *maritimus* Ali
* *Senecio mikanioides* Otto ex Wal.

- Senecio minimus* Poiret var. *minimus*
Senecio minimus Poiret var. *piceoides* Benth.
Senecio quadridentatus Labill.
Senecio ramosissimus DC.
* *Senecio vulgaris* L.
* *Siegsbeckia orientalis* L.
Siloxerus filifolius (Benth.) Ostenf.
Siloxerus humifusus Labill.
* *Silybum marianum* (L.) Gaertner
* *Soliva pterosperma* (A.L. Juss.) Less.
* *Sonchus asper* Hill
* *Sonchus oleraceus* L.
- Trichocline spathulata* (A. Cunn. ex DC.) J.H. Willis
* *Ursinia anthemoides* (L.) Poiret
* *Ursinia speciosa* DC.
* *Vellereophyton dealbatum* (Thunb.) Hilliard et B.L. Burtt.
Waitzia citrina Steetz
Waitzia paniculata (Steetz) Benth.
Waitzia suaveolens (Benth.) Druce
* *Xanthium spinosum* L.