



# **Vegetation and Flora of Blackboy Ridge Reserve, Shire of Chittering, Western Australia**

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August 2013**

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This publication was prepared as a report for the Department of Parks and Wildlife and Shire of Chittering, initially part of a World Wildlife Bioblitz, held in the Reserve over 24 hours on October 23-24, 2010 at Blackboy Ridge

Cover photograph: Wandoo woodland from quadrat BLACK 03, spring 2010. The Reserve is named for the *Xanthorrhoea* plants that are a feature of the Wandoo woodland understorey on the rises in the Reserve. This *Xanthorrhoea* is *X. acanthostachya* a relatively restricted species near its most northern location in the Reserve. The fire earlier in the year has resulted in the *Xanthorrhoea* plants flowering together. Other shrubs are either regrowing from seed or rootstocks and are currently at low density.

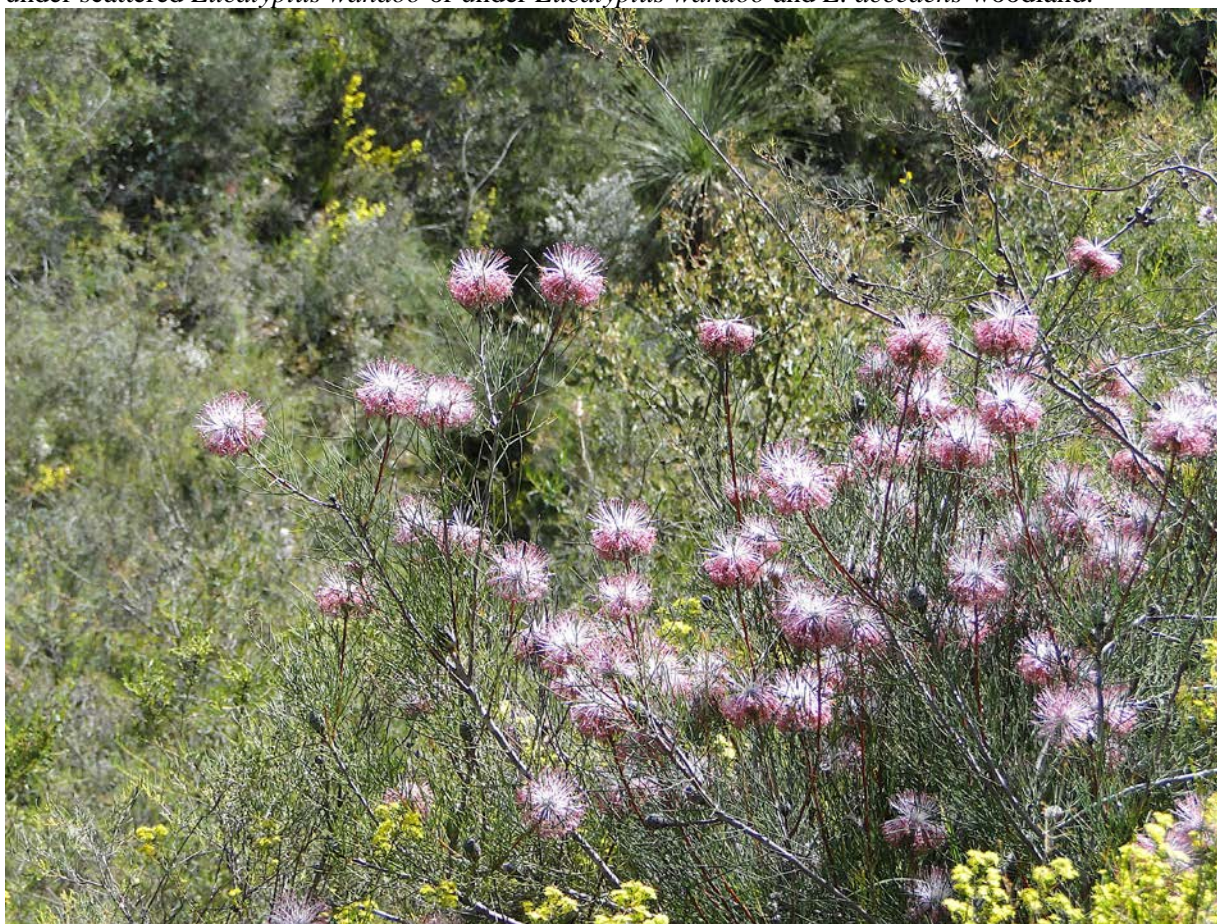
Photographs © Bronwen Keighery.

## SUMMARY

Blackboy Ridge Reserve is a small 61 hectare reserve vested in the Shire of Chittering on the southern side of Chittering Road, about 20 kilometres south-east of Bindoon.

Quadrat based survey work was performed in the Reserve on the 23<sup>rd</sup> October 2010 by a group of conservation volunteers as part of a Bioblitz in the Reserve organised by the World Wildlife Fund. Further visits by the authors were made to the Reserve from 2011 to 2013 to cover all flowering conditions to compile the species list and vegetation map.

Blackboy Ridge Reserve is principally *Eucalyptus wandoo* woodland, with a small area of *E. accedens* woodland and *Corymbia calophylla* woodland along the drainage lines. A heath occurs in patches but general under scattered *Eucalyptus wandoo* or under *Eucalyptus wandoo* and *E. accedens* woodland.



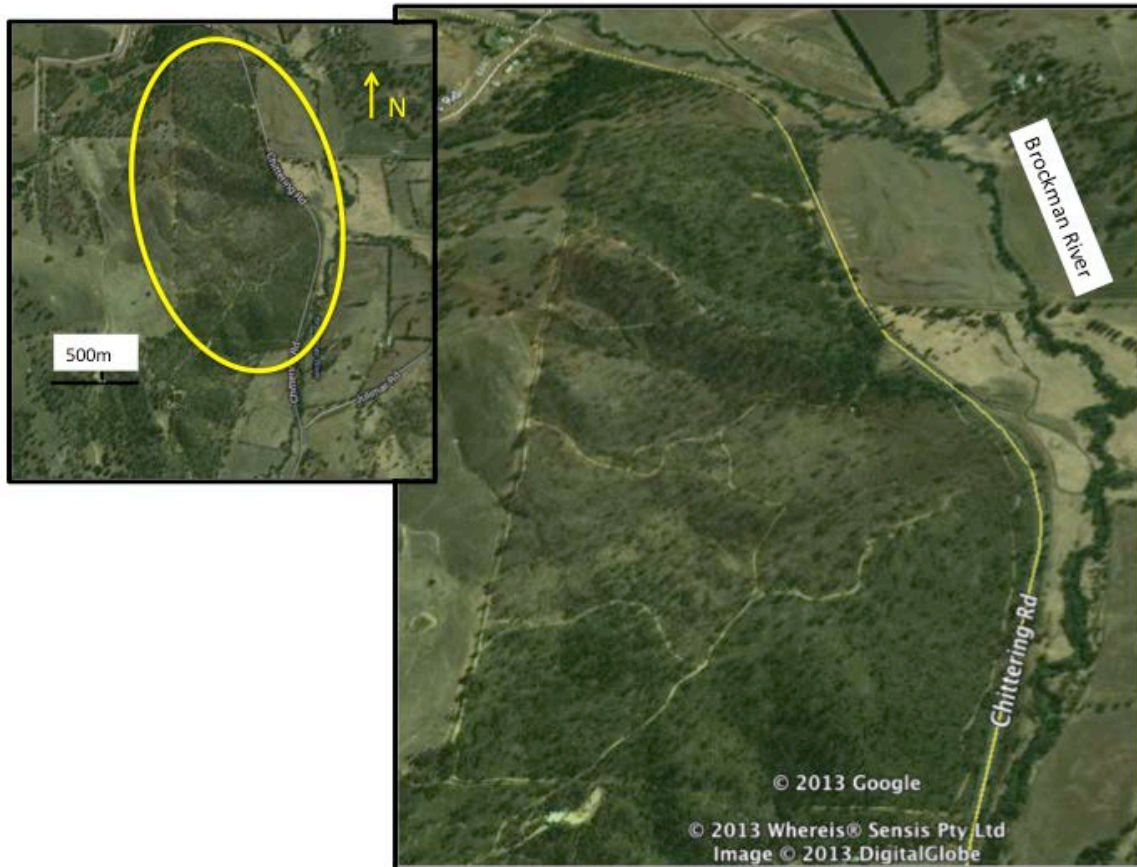
**Figure 1:** Flowering heath above drainage line on the southern boundary. *Isopogon divergens* (pink) and *Verticordia acerosa* var. *preissii* (yellow) are the most conspicuous flowering plants. This area was not burnt in the 2010 fire.

Five hundred and seven vascular plant taxa were recorded from the Reserve. These comprised 410 natives and 97 weeds. There were 4 ferns and fern allies, 1 Gymnosperm, 168 Monocotyledons and 334 Dicotyledons. The diversity of native flora recorded in the Reserve is the result of the diversity of habitats formed by the sandy loams found at a variety of depths over gneiss. Many soil patches are seasonally waterlogged, a habitat that supports many granite rock wetland species. As a consequence the plant communities and flora of the reserve are closely allied with Darling Scarp communities and flora. The Reserve is the only area of such vegetation currently documented in the Shire of Chittering and well deserves its listing in the highest category of significant reserves for the Shire of Chittering.

The Reserve's variable topography, woodlands and diverse flora together present a highly scenic area.

## INTRODUCTION

Blackboy Ridge Reserve (Nos 24129/44186) is a 61 hectare reserve vested in the Shire of Chittering on the southern side of Chittering Road, about 20 kilometres south-east of Bindoon (Figure 1). The reserve is listed in the highest category for biodiversity protection in the Shire of Chittering Local Biodiversity Strategy (Shire of Chittering 2010).



**Figure 2:** Location of Blackboy Ridge Reserve (left) and a 3D view of the Reserve showing the location of the many rises in the Reserve.

There is little specific area information available on the vegetation and flora of reserves and bushland of the Shire of Chittering or the northern Jarrah Forest sub-bioregion and the adjacent Swan Coastal Plain Dandaragan Plateau sub-bioregion (May and McKenzie 2003, DEHWA 2012). The Shire of Chittering is outside the Perth Metropolitan Region (PMR) and is not covered by *Bush Forever* (Government of WA 2000). The reserve is not listed on the Australian Government Heritage database (DEHWA, 2008) and it was not included in the System Six Conservation plan (DCE 1983 a &b).

Reports on the flora and vegetation of a number of nearby reserves are available. These reports describe:

- Burroloo Well Nature Reserve (Keighery 2003);
- five *Bush Forever* Sites that included areas of Dandaragan Plateau in Volume 2 of *Bush Forever* (Government of WA 2000);
- Bullsbrook Nature Reserve (part of *Bush Forever* Site 292 Bullsbrook Nature Reserve and adjacent Bushland in Keighery *et al.* 1997); and
- Barracca Nature Reserve (Keighery *et al.* 2013).

All of these areas are located in the Swan Coastal Plain Bioregion, while Blackboy Ridge is located in the northern Jarrah Forest sub-bioregion (DEHWA 2012).

Studies on adjacent reserves in the Jarrah Forest IBRA have been undertaken (Keighery unpub. obs.), these include flora lists for: Julimar Conservation Park, Chittering Lakes Nature Reserve and Mount Byroomanning Nature Reserve. These lists have been collated, but have not yet been analysed to enable a final comparison to Blackboy Ridge Reserve.

Previous botanical survey of this Reserve is limited, with just 30 collections (mostly collected in September 2006) lodged in the Western Australian Herbarium.

## **SURVEY METHOD**

Quadrat based survey work was performed in the Reserve on the 23<sup>rd</sup> October 2010 by a group of conservation volunteers as part of a Bioblitz in the Reserve organised by the World Wildlife Fund (Appendix 1). Four 10X10m floristic quadrats were located in the Reserve to sample the range of plant communities identified using aerial photographs and field interpretation. These form the reference sites for the mapped units of vegetation.

Further visits by the authors were made to the Reserve from 2011 to 2013 to cover all flowering conditions to compile the species list and complete the vegetation map. It is estimated that 85% of the flora of the Reserve has been listed.

## **GEOMORPHOLOGY AND SOILS**

Blackboy Ridge is on the margin of the Yilgarn Craton (Darling Plateau), near the Darling Scarp where granite rocks are overlain by an extensive lateritic duricrust (Churchward and Macarthur, 1980). However no granite or laterite was evident in the Reserve, the underlying and exposed rock in the Reserve was cream/brown gneiss (M Gole pers. com.)

## **VEGETATION**

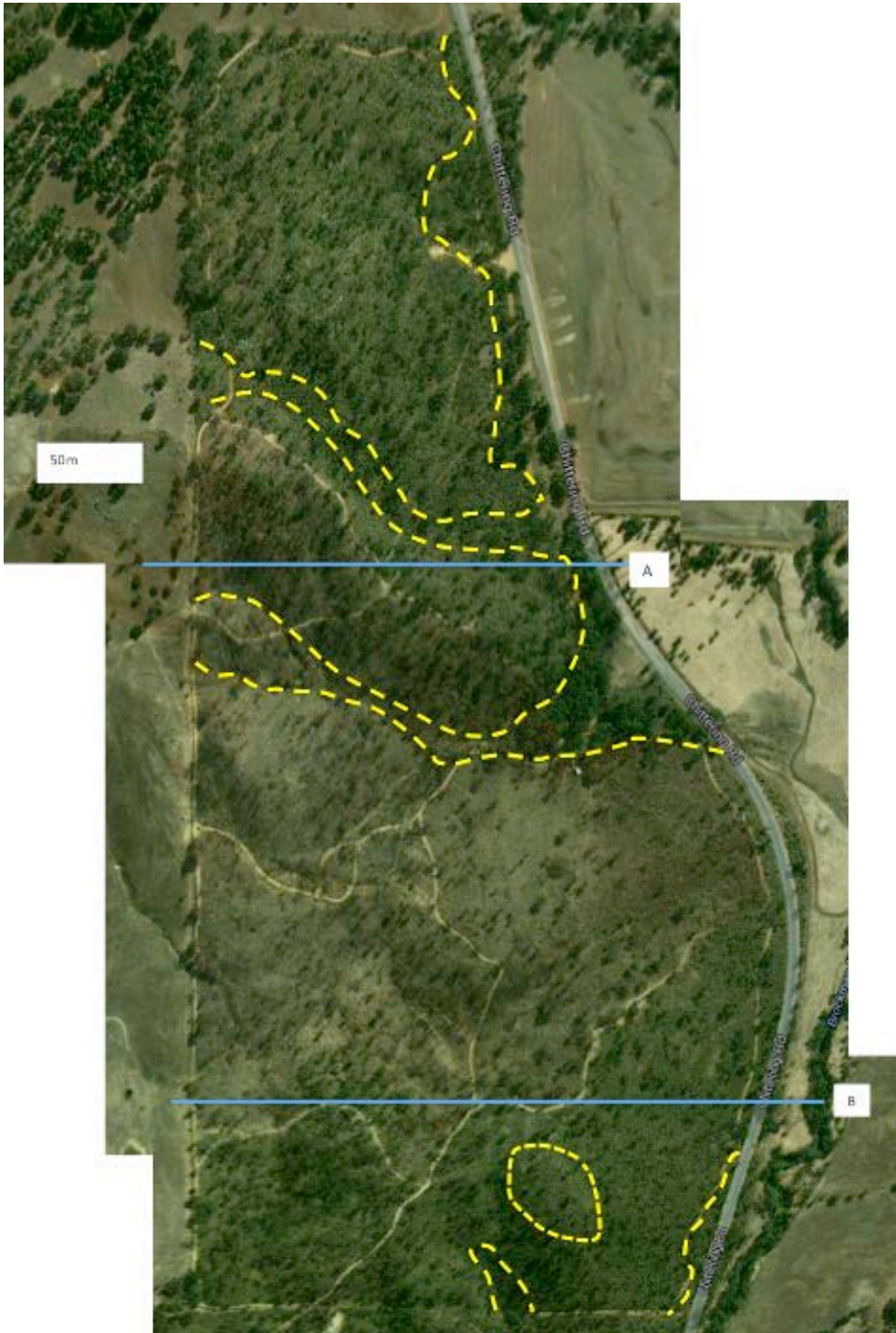
### **Regional Vegetation**

The major vegetation of the Plateau are: woodlands to open forests dominated by *Corymbia calophylla*, *Eucalyptus marginata*, *E. wandoo*, *E. accedens* or combinations of these; low woodlands dominated by *E. marginata*, *E. todtiana*, *Banksia attenuata* and *B. menziesii* or species rich shrublands on laterite. Wetlands usually have *Melaleuca* shrublands or herbfields while watercourses have woodlands dominated by *Eucalyptus rudis* and *Melaleuca raphiophylla*.

Hedde *et al.*, (1980) and the Shire of Chittering (2010) describe the Reserve as containing Williams and Murray vegetation complexes (in medium to high rainfall). Williams is a valley complex of fringing woodlands of *Eucalyptus rudis*-*Melaleuca raphiophylla*, which occurs down slope outside of the reserve and is only recorded in the reserve because of the scale of the mapping. The Murray is open forest of *E. marginata*-*E. calophylla* to woodland of *E. wandoo* with *E. rudis* and *E. patens* on the Valley floors.

### **Vegetation of the Reserve**

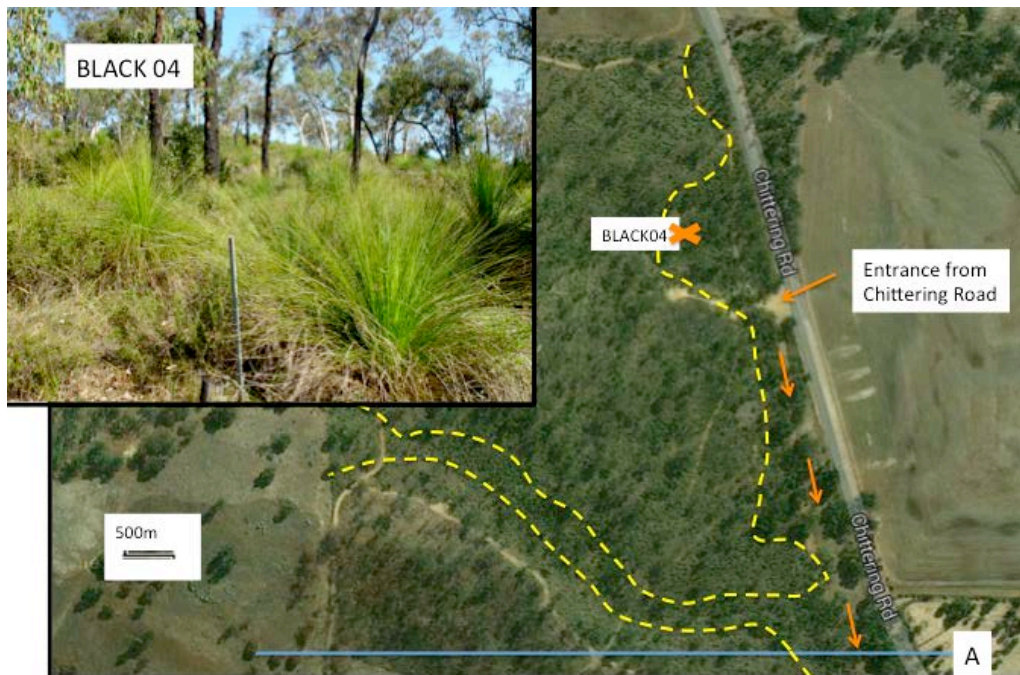
Blackboy Ridge Reserve's vegetation is closely related to topography, depth to gneiss rocks, degree of water logging and soils (see Cover photo and Figures 2 to 5).



**Figure 3: Vegetation Map.** The distribution of the three woodland types – Marri (enclosed by long dash), Powderbark Wandoo (area enclosed by small dash) and Wandoo in the remainder of the area.

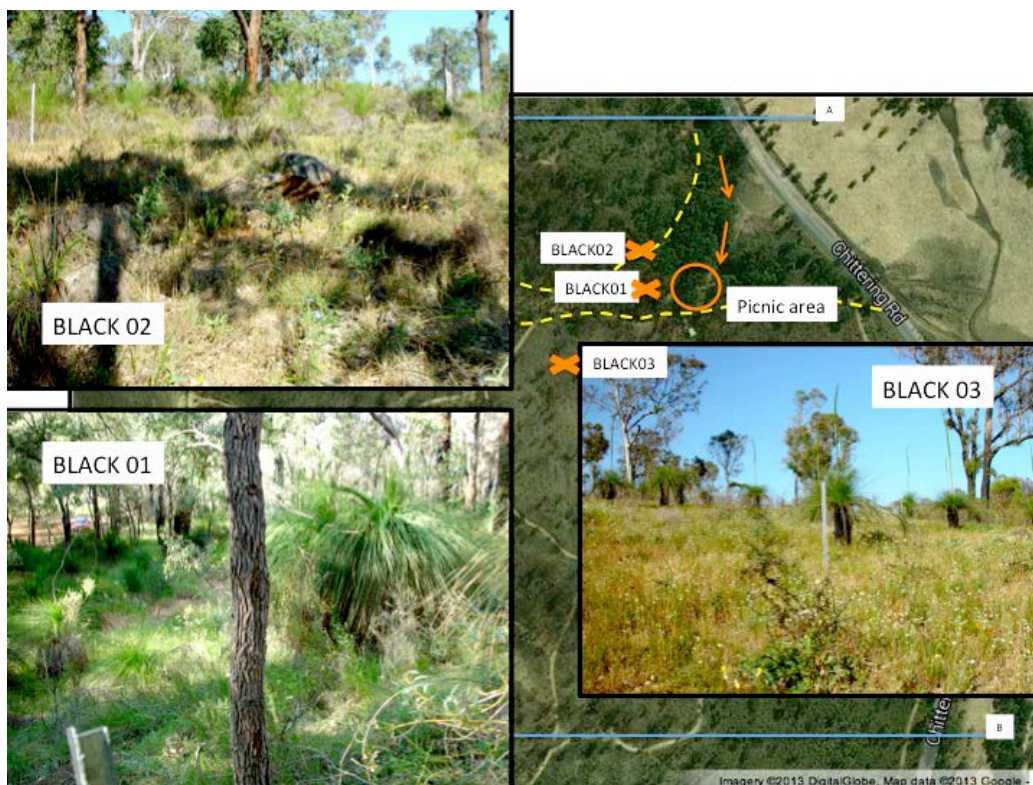
On the steep hills that make up most of the Reserve the principal plant community is Wandoo (*Eucalyptus wandoo*) woodland (Cover, Figures 2 to 5; Appendix 3, BLACK 03; and Appendix 4 Habitats W and H). There is a small area of Powderbark Wandoo (*E. accedens*) woodland on a hilltop in the south of the Reserve (Figure 3). Both Wandoo and Powderbark Wandoo woodlands are underlain by a species rich heath (Cover, Figures 1 and Appendix 4 Habitat H). At times the heath occurs in patches with no overstorey or with scattered Wandoo, Powderbark Wandoo and occasional Marri (*Corymbia calophylla*). Associated with the heath layer is a variable herb layer, the suite of herbs differing with the degree of waterlogging. There are waterlogged pockets of soils in the gneiss rocks supporting a number of species that are generally found in

granite rock wetlands. As a consequence these communities are closely allied with Darling Scarp granite communities.



**Figure 4: Quadrat Location.** One quadrat was located in the northern section Marri woodland (BLACK04).

In the deeper soils of the valleys Marri Woodland to Forest is found (Figures 4 and 5; Appendix 3, BLACK 01, 02 and 04; and Appendix 4 Habitats M and Cr).



**Figure 5: Quadrat Location.** Three quadrats were located near the picnic area, two in Marri woodland (BLACK01 and 02) and one in Wandoo woodland on dolerite (BLACK03).

On the deep loams in the south – eastern corner of the Reserve Jam (*Acacia acuminata*) forms a low tree layer under the Marri.

No commonwealth or state listed communities threatened ecological communities were identified in the reserve.

### Floristic Community Types

Four floristic quadrats were established in the reserve (see Figures 4 and 5) to enable future comparisons to be made with other areas of the northern Jarrah Forest, especially the Darling Scarp Survey sites (Markey, 1997).

## FLORA

The Reserve contains a flora of 507 vascular plant taxa (Appendix 4, Figures 1 and 6 to 10), with 410 natives and 97 weeds. There were 4 ferns and fern allies, 1 Gymnosperm, 168 Monocotyledons and 334 Dicotyledons.



**Figure 6: Some wildflowers in the Reserve.** From the top left corner/side: line one – *Jacksonia restioides*, *Petrophile squamata*, *Hibbertia comutata*; line 2 - *Verticordia insignis* subsp. *insignis*, *Grevillea bipinnatifida* subsp. *bipinnatifida*, *Anigozanthos bicolor* subsp. *bicolor*; and line 3 – *Hemigenia argentea*, *Thysanotus thyrsoides*, *Pimelea imbricata* and *Laxmannia grandiflora*.



There are a number of factors underlying this outstanding diversity of native plants (410) in the relatively small Reserve.

- For its size the Reserve has a large variety of habitats, including: ridge tops, slopes with a variety of N/S/W/E aspects, steep ‘wet’ gullies, creek lines and well drained to poorly drained pockets of soil in the gneiss. The creek line and the poorly drained soils form areas of wetland. These wetland features are reflected in large number of perennial herbs, sedges and grasses (172) found in the Reserve, 63 of these are geophytes and 30 are sedges and grasses. There are 60 annual herbs and sedges.
- The Reserve’s location within an area of rapidly changing rainfall, Bindoon (20 km north-east) has an annual rainfall of 685 mm, compared to Toodyay (523 mm) only 37 kilometres east of Blackboy Ridge.

The largest families recorded are the Fabaceae (40 taxa: 30 natives and 10 weeds), Orchidaceae (33: 32 natives and 1 weed), Proteaceae (29 natives), Myrtaceae (28 natives), Asparagaceae (23: 22 natives, 1 weed); Cyperaceae (24: 22 natives and 2 weeds), Asteraceae (38: 26 natives and 12 weeds) and Poaceae (30: 16 natives and 14 weeds). The families Cyperaceae, Fabaceae, Myrtaceae and Proteaceae, comprising over 25% of the native flora of Blackboy Ridge are the characteristic families of the species rich woodlands and heath lands of southern Western Australia. The largest genera present in the Reserve are *Acacia* (12 species), *Caladenia* (8 species), *Drosera* (8), *Stylidium* (11) and *Schoenus* (8).

### Significant Flora

No state listed declared rare flora a priority flora (Smith 2012), or Commonwealth listed species (Commonwealth of Australia, 1999 and DEWHA, 2007), were located in the Reserve.

A number of conservation significant taxa were listed for the Reserve.

- Both *Lawrencella rosea* (previously *Helichrysum lindleyi*) and *Convolvulus angustissimus* subsp. *angustissimus* are at or near the western limits of their ranges.



**Figure 7:** A patch of *Lawrencella rosea*. This picture was taken in granite rock community to the south east of Blackboy Ridge Reserve. In the Reserve this species is on the western margin of its range.

- The records of *Boerhavia coccinea* (Nyctaginaceae) and *Enteropogon ramosus* (Poaceae) are west of their known ranges. However, these are typically desert and northern annuals probably introduced into the

temperate south Western Australia along transport and stock routes (Keighery, 2013) and both species were only present in the reserve in the disturbed edge near the main car park.

- Blackboy Ridge has the northern most herbarium record of Water Bush *Bossiaea aquifolium* subsp. *aquifolium* (Fabaceae) previously recorded north to the Mundaring area. We were unable to re-locate this species in the Reserve during our survey.
- The Reserve contains a series of species that typically define the Darling Scarp. These are *Grevillea bipinnatifida* subsp. *bipinnatifida* (Proteaceae, northern limit at Gillingarra; Figure 6), *Petrophile biloba* (Proteaceae, N Wannamal), *Synaphea acutiloba* (Proteaceae, N Mogumber, Figure 8), *Xanthorrhoea acanthostachya* (Xanthorrhoeaceae, N Mogumber; Cover and Figure 9) and *Lomandra spartea* (Asparagaceae, N Julimar).



**Figure 8:** *Synaphea acutiloba* from Blackboy Ridge Reserve. This is just one of the species found in the Reserve that is typically associated with the Darling Scarp.

- A number of typically scarp granite rock wetland species: *Acanthocarpus canaliculatus*, *Arthropodium fimbriatus*, *Anigozanthos bicolor* (Figure 6), *Borya scirpoidea*, *Burchardia multiflora*, *Cheilanthes austrotenuifolia*, *Drosera bulbosa* subsp. *bulbosa*, *Drosera gigantea* subsp. *gigantea*, *Drosera menziesii* subsp. *menziesii*, *Goodenia micrantha*, *Haemodorum simplex*, *Tribonanthes longipetala* and *Wurmbea dioica* subsp. *alba*.



**Figure 9: *Xanthorrhoea acanthostachya* on hilltops and slopes in Blackboy Ridge Reserve.**

This is the most common *Xanthorrhoea* in the Reserve. This species is distinguished by its reflexed dead leaves (right), short flowering spike (left and right – compare with *X. preissii* spike in Figure 10) and long packing bracts (centre insert). This species is typically located on ridges or hilltops, being found on soils associated with granites, laterites and gneiss.

Photo BJ Keighery, spring 2011, after a summer fire.

**Figure 10: *Xanthorrhoea preissii* in the valleys in Blackboy Ridge Reserve.**

This picture was taken at the same time as Figure 9. Note the long flowering spikes that are yet to finish growing and flower.



## Weeds

Although a comparatively high number of weeds were recorded for the Reserve (97), most of these occur along the highly disturbed eastern margin of the Reserve, which adjoins Chittering Road. A higher cover of local native species in these edges would reduce this weed load.

The other area of significant weed incursions is along the central creek (see Figures 3 and 5, BLACKOI is located on the banks of this creek). After heavy rainfall events weed seeds and nutrients flood into the Reserve from adjoining farmland along this creek line. The current works aimed at slowing these incursions on the western margin of the Reserve should help reduce this problem. Here the major weeds benefitting from this disturbance appear to be Cape Weed (*Arctotheca calendula*), *Fumaria capreolata*, Couch (*Cynodon dactylon*)

and Sour-Sob (*Oxalis pes-caprae*). If the issues with flooding and nutrient enrichment are addressed, then control of these weeds will be more successful.

Scattered trees of some eastern Australian wattles: *Acacia decurrens*, *A. dealbata* and *A. podaryllifolia*; are located in the northern end of the Reserve. These wattles, together with scattered trees of Olives (*Olea europea*) around the car park, should be targeted for removal, before they spread.

Other weeds in need of control are:

- geophytic weeds are Bridal Creeper (*Asparagus asparagoides*), Pink Gladiolus (*Gladiolus caryophyllaceus*), Cape Tulips (*Moraea collina* and *Moraea flaccida*) and *Hesperantha falcata*; and
- annual grasses Wild Oats (*Avena barbata*) for woodlands and Blowfly Grass (*Briza maxima*) for granites and creek lines.

## **CONSERVATION VALUE**

Blackboy Ridge Reserve well deserves it's listing in the highest category of significant reserves for the Shire of Chittering. The Reserve's variable topography, woodlands and diverse flora together form a highly scenic area.

Blackboy Ridge Reserve is unusual in the area in supporting a flora closely allied with that of the Wandoo woodlands of the Darling Scarp. The Reserve is the only area of such vegetation currently documented in the Shire of Chittering.

## REFERENCES

- Churchward, HM and McArthur, WM** 1980 Landforms and Soils of the Darling System. IN: *Atlas of Natural Resources, Darling System, Western Australia*. Department of Conservation and Environment, Western Australia.
- Commonwealth of Australia** 1999 *Environment Protection and Biodiversity Conservation Act 1999*. Available at <http://www.frli.gov.au/> (Accessed on 22.11.2007).
- DCE** 1983a *Conservation Reserves for Western Australia. The Darling System – System 6. Part 1. Report 13*. Department of Conservation and Environment, Perth, Western Australia.
- DCE** 1983b *Conservation Reserves for Western Australia. The Darling System – System 6. Part 2. Report 13*. Department of Conservation and Environment, Perth, Western Australia.
- DEHWA** 2012 *IBRA Version 7.1*. Available at <http://www.environment.gov.au/parks/nrs/ibra/version6-1/index.html>.
- DEWHA** – Department of the Environment, Water, Heritage and the Arts
- DEWHA** 2007 Database *EPBC Act List of Threatened Flora*. Updated regularly. Available at [http://www.environment.gov.au/cgi-bin/sprat/public/public\\_threatenedlist.pl?wanted=flora](http://www.environment.gov.au/cgi-bin/sprat/public/public_threatenedlist.pl?wanted=flora). this is a website and a database
- DEWHA** 2008 Database Australian Heritage Database. Available at <http://www.environment.gov.au> then choose Australian Heritage Places Inventory (Accessed 13th February 2008).
- Gibson, N, Keighery, B, Keighery, G, Burbidge, A and Lyons, M** 1994 *A Floristic Survey of the Southern Coastal Plain*. Unpublished Report for the Australian Heritage Commission prepared by the Department of Conservation and Land Management and the Conservation Council of Western Australia (Inc.). Perth, Western Australia.
- Hedde EM, Loneragan, OW and Havel, JJ** 1980 Vegetation of the Darling System. IN: DCE 1980 Atlas of Natural Resources, Darling System, Western Australia. Department of Conservation and Environment, Perth, Western Australia. (# 22 June 1995, DEP)
- Keighery, BJ, Keighery, GJ and Gibson, N** 1997 Floristics of System Six Reserves and Bushland X11: Floristics of Bullsbrook Nature Reserve. W.A. Wildflower Society Inc. (Nedlands), pages 33- 69.
- Keighery, GJ** 2003 *Vegetation and vascular flora of Burroloo Well Nature Reserve, Chittering Shire*. Department of Conservation and Land Management, Western Australia, Unpub. report for Conservation Commission. 18 pp.
- Keighery, GJ** 2013 Weedy native plants: an annotated checklist. Conservation Science Western Australia **8**: 259-275.
- Keighery, GJ, Keighery, BJ & Longman, VA** 2013 *Vegetation and vascular flora of Barracca Nature Reserve, Chittering Shire*. Department of Environment and Conservation, Western Australia.
- Markey, A** 1997 *A Floristic Survey of the Northern Darling Scarp*. Unpublished report to the Western Australian Department of Conservation and Land Management, the Western Australian Department of

Environmental Protection and the Conservation Council of Western Australia (Inc.) for the Australian Heritage Commission, Canberra, Australian Capital Territory.

**May, JE and McKenzie, NL** 2003 (eds) A Biodiversity Audit of western Australia's Biogeographical Subregions in 2002. Department of Conservation and Land Management, Western Australia.

**Shire of Chittering** (2010). Local Biodiversity Strategy. Shire of Chittering.  
(<http://www.chittering.wa.gov.au>)

**Smith,** 2012 *Declared Rare and Priority Flora List for Western Australia, 21 Dec 2012*. Department of Environment and Conservation. Como, Western Australia.

**Western Australian Herbarium** 1998- *FloraBase – The Western Australian Flora*. Department of Environment and Conservation. Available at <http://florabase.dec.wa.gov.au/>.

## **Appendix One: WWF Press Release**

This press release and associated material can be found on [www.wwf.org.au](http://www.wwf.org.au)

**WWF-Australia (World Wide Fund for Nature Australia) ABN: 57 001 594 074**

**Media release**

**29 October 2010**

**Blackboy Ridge Bioblitz**

Last weekend (October 23-24), 133 people of all ages converged on a small, but special reserve 80km northeast of Perth with one aim in mind – to explore and discover as much biodiversity as they could.

As its name suggests, BioBlitz 2010 was a 24-hour intensive community survey of native plants and animals across Blackboy Ridge, a 64ha reserve in the Shire of Chittering that was extensively burnt by bushfires earlier this year.

Sponsored by conservation group WWF-Australia, the survey was officially opened by WA Chief Scientist Professor Lyn Beazley, and led by volunteer scientists from the state's top research organisations, including CSIRO, the WA Museum, Birds Australia, the WA Department of Environment and Conservation, Curtin University, and retired and consultant experts.

The good news during the 24-hour survey was Blackboy Ridge Reserve was found to be making a very healthy recovery, with extensive regeneration of vegetation and the discovery of 171 species of native plants and 61 species of native animals and birds – not including more than 100 species of invertebrates (and millions of flies!). \*

Blackboy Ridge is a prime example of the astounding diversity within Australia's Southwest Ecoregion – a corner of the continent stretching roughly from Shark Bay to Esperance that is internationally recognised as a "global biodiversity hotspot", and one of only 34 in the world. In ecological terms, the Southwest Ecoregion is as important as the Amazon Rainforest, the Galapagos Islands, the Jungles of Borneo and the Plains of Africa.

Within this remarkable Ecoregion, Blackboy Ridge Reserve is an area that has been defined as a particularly important area for conservation, with WWF-Australia working to improve management of native vegetation and habitat within its landscape.

The reserve is managed by the Chittering Landcare Centre on behalf of the Shire of Chittering, with WWF-Australia working with both to ensure it endures in the face of a number of threats, including introduced weeds, feral animals and too-frequent bushfires.

It was with this in mind that volunteers from around the region – and as far away as Burracoppin and Manjimup – converged for WWF-Australia's 6th BioBlitz to search hills, gullies, trees, leaf-litter and dense scrub to find whatever they could. The almost 30 children who accompanied their parents were particularly good at spotting hidden frogs, camouflaged grasshoppers and tiny flowers, with birds, mammals, spiders, reptiles, amphibians and fungi all found in this beautiful patch of bush they call home.

As well as celebrating this magnificent natural area, those who participated in BioBlitz will never look at bushland the same way again – realising that every bit of bush is a treasure.

It was a fitting activity for the area in 2010, the International Year of Biodiversity, with the project supported through funding from the Australian Government's Caring for our Country program and the Council of Australian Museum Directors, through assistance from the Science Connections program within the Department of Innovation, Industry, Science and Research.

**For media enquiries, please contact WWF-Australia WA Media Officer Cortlan Bennett on 9442 1206 or 0404 700 001, or email [cbennett@wwf.org.au](mailto:cbennett@wwf.org.au)**

2010 Blackboy Ridge BioBlitz statistics

- Participants: 133
- Youngest: 1 year
- Oldest: "Wouldn't be polite to say!"

- Under 18s: 28 (often kids were the first to spot the animals)
- Number of survey sessions: 47
- Native species recorded during survey:
- 42 species of birds (including Carnaby's Black Cockatoo)
- 171 species of flowering plants (though reserve probably has around 300 species)
- 2 species of fungi (pretty good for this time of year)
- 9 reptiles
- 5 frogs
- 5 mammals – including 3 species of bats
- Invertebrates – a conservative estimate would be 100 species, including at least 10 different species of grasshoppers and 40 million flies!
- Unfortunately also 4 non-native species of mammals (not including humans) and a significant number of weeds.



© Danielle Witham

A Bioblitz is an intensive, interactive and fun 24-hour snapshot of the biodiversity of a natural area. Volunteer scientists lead community members in surveys of plants, mammals, reptiles, birds, insects, frogs, bats, spiders, lichen and fungi. The surveys glean useful information for the management of the area and the species it supports. They also engage and educate members of the community about biodiversity and the methods used to document it.

#### **What WWF surveys and records**

Different species emerge at different times of the day, so the survey aims to record all species during a 24-hour period. For example, the 2010 Chittering Bioblitz surveyed for birds (best seen in the early morning and late afternoon); bats, frogs and some spiders (best at night); and flora, reptiles and other insects (best seen during the day).

#### **WWF work with government**

WWF has run Bioblitzes occasionally since 2002 (see below for reports) and they have grown in size, culminating in 133 people participating in the 2010 Chittering Bioblitz. The surveys have mostly been conducted in local government reserves for which WWF staff are developing management recommendations.

#### **Wheatbelt spider surveys**

In 2007 and 2008, WWF ran Spiderblitzes in the wheatbelt town of Kellerberrin to educate the community about SWAE's amazing trapdoor spiders, which are relics of the Gondwanan age. Surveys were conducted



for the threatened shield-backed trapdoor spider, a species that conceals its burrow entrance with an intricate design of leaf litter and twigs.

### **Co-ordinating a Bioblitz**

A great deal of work is required to organise and run a Bioblitz. WWF has been fortunate to receive both funding and in-kind support from a large number of organisations to run these events.



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## Appendix 2: Vegetation and Flora Conservation Codes

**Table 1** Vegetation structure: the classification system used to describe vegetation structure.

Based on Keighery (1994), as adapted from Muir (1977) and Aplin (1979). Each row indicates a different vegetation layer.

Growth Form/Height Class	Canopy Cover			
	100-70%	70-30%	30-10%	10-2%
<b>Trees over 30m</b>	Closed Tall Forest <b>CTF</b>	Open Tall Forest <b>OTF</b>	Tall Woodland <b>TW</b>	Open Tall Woodland <b>OTW</b>
<b>Trees 10-30m</b>	Closed Forest <b>CF</b>	Open Forest <b>OF</b>	Woodland <b>W</b>	Open Woodland <b>OW</b>
<b>Trees under 10m</b>	Closed Low Forest <b>CLF</b>	Open Low Forest <b>OLF</b>	Low Woodland <b>LW</b>	Open Low Woodland <b>OLW</b>
<b>Mallee over 8m (Tree Mallee)</b>	Closed Tree Mallee <b>CTM</b>	Tree Mallee <b>TM</b>	Open Tree Mallee <b>OTM</b>	Very Open Tree Mallee <b>VOTM</b>
<b>Mallee under 8m (Shrub Mallee)</b>	Closed Shrub Mallee <b>CSM</b>	Shrub Mallee <b>SM</b>	Open Shrub Mallee <b>OSM</b>	Very Open Shrub Mallee <b>VOSM</b>
<b>Shrubs over 2m</b>	Closed Scrub <b>CSC</b>	Open Scrub <b>OSC</b>	Tall Shrubland <b>TS</b>	Open Tall Shrubland <b>OTS</b>
<b>Shrubs 1-2m</b>	Closed Heath <b>CH</b>	Open Heath <b>OH</b>	Shrubland <b>S</b>	Open Shrubland <b>OS</b>
<b>Shrubs under 1m</b>	Closed Low Heath <b>CLH</b>	Open Low Heath <b>OLH</b>	Low Shrubland <b>LS</b>	Open Low Shrubland <b>OLS</b>
<b>Grasses</b>	Closed Grassland <b>CG</b>	Grassland <b>G</b>	Open Grassland <b>OG</b>	Very Open Grassland <b>VOG</b>
<b>Herbs</b>	Closed Herbland <b>CHB</b>	Herbland <b>HB</b>	Open Herbland <b>OHB</b>	Very Open Herbland <b>VOHB</b>
<b>Sedges</b>	Closed Sedgeland <b>CSG</b>	Sedgeland <b>SG</b>	Open Sedgeland <b>OSG</b>	Very Open Sedgeland <b>VOSG</b>
<b>Ferns</b>	Closed Fernland <b>CFL</b>	Fernland <b>FL</b>	Open Fernland <b>OFL</b>	Very Open Fernland <b>VOFL</b>
<b>Climbers</b>	Closed Climbers <b>CC</b>	Climbers <b>C</b>	Open Climbers <b>OC</b>	Very Open Climbers <b>VOC</b>

**Table 2 Vegetation condition scale.**

From Keighery 1994.

Vegetation Condition Scale	
<b>1 Pristine</b>	Pristine or nearly so, no obvious signs of disturbance
<b>2 Excellent</b>	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.
<b>3 Very Good</b>	Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
<b>4 Good</b>	Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing
<b>5 Degraded</b>	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
<b>6 Completely Degraded</b>	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

**Table 3 Categories used to define the conservation status of flora taxa at state level, under the *Wildlife Conservation Act 1950*.**

Categories are defined in Department of Environment and Conservation (2010).

Western Australian Flora Conservation Codes	
<b>R</b>	<b>Declared Rare Flora – Extant Taxa</b> Taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such.
<b>X</b>	<b>Declared Rare Flora - Presumed Extinct Taxa</b> Taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such.
<b>P1</b>	<b>Priority One - Poorly Known Taxa</b> Taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as ‘rare flora’, but are in urgent need of further survey
<b>P2</b>	<b>Priority Two - Poorly Known Taxa</b> Taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as ‘rare flora’, but are in urgent need of further survey
<b>P3</b>	<b>Priority Three - Poorly Known Taxa</b> Taxa which are known from several populations, and the taxa are not believed to be under immediate threat (i.e. not currently endangered), either due to the number of known populations (generally >5), or known populations being large, and either widespread or protected. Such taxa are under consideration for declaration as ‘rare flora’ but are in need of further survey.
<b>P4</b>	<b>Priority Four – Rare Taxa</b> Taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.

Note, the need for further survey of poorly known taxa is prioritised into the three categories depending on the perceived urgency for determining the conservation status of those taxa, as indicated by the apparent degree of threat to the taxa based on the current information.

### Appendix 3: Blackboy Ridge Reserve Quadrat Descriptions

See Appendix 2, Table 1 for vegetation structure definitions and Table 2 for vegetation condition definitions.

#### Quadrat BLACK01

**GPS location (GDA94):** 31° 29' 6.4" S 116° 6' 50.2" E

**Date Sampled:** 23/10/2010

**Site description:** Well drained SE facing steeply sloping upland site. Brown deep sandy loam. Litter 100% cover; no bare ground.

**Vegetation condition:** Excellent-Very Good.

**Vegetation Description:** *Corymbia calophylla* Woodland, over *Xanthorrhoea preissii* and *Gastrolobium calycinum* Open Heath, over *Hypocalymma angustifolium* Open Low Shrubland, over *Opercularia apiciflora* and *Arthropodium capillipes* Herbland, and *Lepidosperma angustatum* and *Lepidosperma scabrum* Very Open Sedgeland.

#### Taxa in quadrat

**Trees:** *Corymbia calophylla*, *Eucalyptus wandoo*

**Shrubs:** *Acacia applanata*, *Daviesia decurrens*, *Gastrolobium calycinum*, *Grevillea pilulifera*, *Hakea incrassata*, *Hibbertia commutata*, *Hypocalymma angustifolium*, *Olearia paucidentata*, *Opercularia apiciflora*, *Opercularia vaginata*, *Xanthorrhoea preissii*

**Grasses:** *\*Avena barbata*, *\*Briza maxima*, *Neurachne alopecuroidea*, *Tetrarrhena laevis*, *\*Vulpia bromoides*

**Herbs:** *Acaena echinata*, *Arthropodium capillipes*, *\*Asparagus asparagoides*, *Caesia micrantha*, *Cheilanthes austrotenuifolia*, *Dampiera alata*, *Drosera pallida*, *Goodenia berardiana*, *\*Hypochaeris glabra*, *Lagenophora huegelii*, *Lechenaultia biloba*, *\*Lysimachia arvensis*, *Oxalis exilis*, *Phyllanthus calycinus*, *Ptilotus drummondii*, *Ptilotus manglesii*, *\*Sonchus oleraceus*, *Stackhousia monogyna*, *Stypandra glauca*

**Sedges:** *Lepidosperma angustatum*, *Lepidosperma scabrum*

#### Taxa adjacent to quadrat

**Grasses:** *Austrodanthonia setacea*, *Austrostipa pycnostachya*, *\*Avellinia michelii*, *\*Bromus diandrus*, *\*Hordeum leporinum*, *Poa poiformis*

**Herbs:** *Kennedia prostrata*, *Kennedia stirlingii*

#### Quadrat BLACK02

**GPS location (GDA94):** 31° 29' 4.2" S 116° 6' 50.2" E

**Date Sampled:** 23/10/2010

**Site description:** Well drained E facing gently sloping upland site. Brown sandy loam with surface and subsurface gneiss. Litter 20% cover; bare ground 10% cover.

**Vegetation condition:** Excellent.

**Vegetation Description:** *Corymbia calophylla* Open Woodland, over *Xanthorrhoea preissii* Shrubland, over *Gastrolobium calycinum* and *Hibbertia* Open Low Shrubland, over a mixed Open Herbland, and *Desmocladius asper* Sedgeland.

#### Taxa in quadrat

**Trees:** *Corymbia calophylla*

**Shrubs:** *Bossiaea eriocarpa*, *Gastrolobium calycinum*, *Gompholobium marginatum*, *Grevillea pilulifera*, *Hibbertia commutata*, *Hibbertia polystachya*, *Hypocalymma angustifolium*, *Opercularia vaginata*, *Xanthorrhoea preissii*

**Grasses:** *Austrostipa pycnostachya*, *\*Briza maxima*, *Neurachne alopecuroidea*

**Herbs:** *Anigozanthos humilis*, *Borya sphaerocephala*, *Burchardia congesta*, *Cheilanthes austrotenuifolia*, *Conostylis setigera*, *Dampiera alata*, *Eryngium pinnatifidum* subsp. *pinnatifidum* MS, *\*Gladiolus caryophyllaceus*, *Haemodorum simplex*, *Lagenophora huegelii*, *Lawrencella rosea*, *Lechenaultia biloba*, *Orthrosanthus laxus*, *Phyllanthus calycinus*, *Ptilotus drummondii*, *Ptilotus manglesii*, *Senecio diaschides*, *Stylidium araeophyllum* MS, *Stypandra glauca*, *\*Ursinia anthemoides*, *Waitzia acuminata*

**Sedge:** *Desmocladius asper*

#### Taxa adjacent to quadrat:

**Shrubs:** *Opercularia vaginata*

### Quadrat BLACK03

**GPS location (GDA94):** 31° 29' 9.8" S 116° 6' 46.6" E

**Date Sampled:** 23/10/2010

**Site description:** Poorly drained N facing moderately sloping site. Brown sandy loam with surface and subsurface gneiss. Litter 10% cover; bare ground 30% cover.

**Vegetation condition:** Excellent-Very Good.

**Vegetation Description:** Scattered *Eucalyptus wandoo* and *Corymbia calophylla*, over *Xanthorrhoea acanthostachya* Open Shrubland, over *Grevillea bipinnatifida*, *Daviesia preissii* and *Gastrolobium calycinum* Open Low Heath, over a mixed Herbland.

#### Taxa in quadrat

**Trees:** *Eucalyptus wandoo*

**Shrubs:** *Babingtonia camphorosmae*, *Banksia fraseri*, *Comesperma* sp., *Cryptandra* sp., *Daviesia preissii*, *Gastrolobium calycinum*, *Gompholobium marginatum*, *Grevillea bipinnatifida*, *Grevillea pilulifera*, *Hakea lissocarpa*, *Hibbertia hypericoides*, *Hypocalymma angustifolium*, *Opercularia vaginata*, *Xanthorrhoea acanthostachya*

**Grasses:** *Austrostipa compressa*, \**Avellinia michelii*, \**Briza maxima*, \**Briza minor*, *Neurachne alopecuroidea*

**Herbs:** *Actinotus leucocephalus*, \**Bartsia trixago*, *Borya* ?*scirpoidea*, *Burchardia multiflora*, *Cheilanthes austrotenuifolia*, *Drosera menziesii* subsp. *menziesii*, \**Gladiolus caryophyllaceus*, *Goodenia micrantha*, *Haemodorum discolor*, *Haemodorum simplex*, *Hyalosperma cotula*, *Hydrocotyle callicarpa*, *Lomandra caespitosa*, \**Lysimachia arvensis*, *Phyllanthus calycinus*, *Podolepis canescens*, *Ptilotus drummondii*, *Ptilotus manglesii*, *Quinetia urvillei*, \**Romulea rosea*, \**Silene gallica*, *Stypandra glauca*, *Thysanotus thyrsoides*, *Tribonanthes longipetala*, *Tricoryne elatior*, *Wahlenbergia preissii*

**Sedges:** *Desmocladius flexuosus*, *Schoenus* ?*clandestinus*, *Schoenus* sp.

#### Taxa adjacent to quadrat

**Herbs:** *Anigozanthos bicolor*

### Quadrat BLACK04

**GPS location (GDA94):** 31° 28' 52.7" S 116° 6' 46.3" E

**Date Sampled:** 24/10/2010

**Site description:** Well drained E facing gently sloping upland site. Chocolate coloured sandy loam with surface gneiss. Litter 10-30% cover; no bare ground.

**Vegetation condition:** Very Good.

**Vegetation Description:** *Corymbia calophylla* Open Forest, over *Xanthorrhoea preissii* Shrubland, over *Bossiaea eriocarpa* and *Gastrolobium calycinum* Open Low Heath, over \**Briza maxima* Very Open Grassland, and *Dampiera alata* and \**Romulea rosea* Very Open Herbland, and *Desmocladius asper* Sedgeland.

#### In quadrat

**Trees:** *Corymbia calophylla*

**Shrubs:** *Acacia drummondii*, *Allocasuarina humilis*, *Bossiaea eriocarpa*, *Cryptandra arbutiflora* var. *tubulosa*, *Daviesia preissii*, *Dillwynia* sp. A Perth Flora (R. Coveny 8036) PN, *Gastrolobium calycinum*, *Gompholobium marginatum*, *Grevillea pilulifera*, *Hibbertia hypericoides*, *Hibbertia polystachya*, *Xanthorrhoea preissii*

**Grasses:** *Austrostipa pycnostachya*, \**Avena barbata*, \**Briza maxima*, *Neurachne alopecuroidea*, \**Vulpia bromoides*

**Herbs:** *Arthropodium capillipes*, *Burchardia congesta*, *Caesia micrantha*, *Caladenia* sp., *Cheilanthes austrotenuifolia*, *Dampiera alata*, *Haemodorum laxum*, \**Hypochaeris glabra*, *Kennedia stirlingii*, *Lagenophora huegelii*, \**Lysimachia arvensis*, *Oxalis exilis*, *Phyllanthus calycinus*, \**Romulea rosea*, \**Silene gallica*, *Sowerbaea laxiflora*, *Stylidium schoenoides*, *Stypandra glauca*, \**Trifolium campestre*, \**Ursinia anthemoides*

**Sedges:** *Desmocladius asper*, *Lepidosperma angustatum*, *Lepidosperma tenue*

#### Adjacent to quadrat

**Shrubs:** *Acacia pulchella*, *Adenanthos cygnorum*, *Banksia sessilis*, *Banksia squarrosa*, *Gonocarpus cordiger*, *Hakea prostrata*, *Isopogon asper*, *Jacksonia sternbergiana*, *Leucopogon propinquus*, *Pimelea imbricata* var. *piligera*, *Platysace juncea*, *Verticordia huegelii*

**Herbs:** *Gonocarpus pithyoides*, *Laxmannia grandiflora*, *Lechenaultia biloba*, *Levenhookia stipitata*, *Lomandra caespitosa*, *Ptilotus polystachyus*, *Stylidium araeophyllum* MS, *Xanthosia candida*

**Sedges:** *Tetraria octandra*

## Appendix 4: Blackboy Ridge Reserve Flora List

### Column 1

#### FAMILY NAME

#### PLANT NAME

Genus + Species + Infra Species Rank + Infra Species Name + Informal Name. Taxa (genera, species, sub-species and varieties) are listed alphabetically by supra code, then by family, then by plant name. Names follow Western Australian Herbarium (2010). Some names are from a supplementary list.

subsp. Subspecies  
var. Variety  
\* Weed/non-local native

### Columns 3 - 7

#### HABITAT CODE

**W** - Wandoo Woodland  
**M** - Marri Forest to woodland  
**H** - Heath,  
**Cr** - Creek lines  
**D** - Disturbed,  
**V** - Voucher collection in PERTH.

Family/ Scientific name	W	M	H	Cr	D	V
<b>Aizoaceae</b>						
<i>Carpobrotus modestus</i>		+			+	
<b>Alliaceae</b>						
* <i>Allium triquetrum</i>					+	
<b>Amaranthaceae</b>						
* <i>Amaranthus albus</i>				+		V
<i>Ptilotus declinatus</i>	+					
<i>Ptilotus drummondii</i> var. <i>drummondii</i>	+	+				V
<i>Ptilotus manglesii</i>	+		+			
<i>Ptilotus polystachyus</i>			+		+	
<i>Ptilotus stirlingii</i> var. <i>stirlingii</i>	+					
<b>Apiaceae</b>						
<i>Actinotus leucocephalus</i>	+					
<i>Daucus glochidiatus</i>	+	+	+	+	+	
<i>Eryngium pinnatifidum</i> subsp. <i>pinnatifidum</i> MS	+	+				V
<i>Homalosciadium homalocarpum</i>		+		+		
<i>Platysace juncea</i>	+		+			V
<i>Xanthosia candida</i>	+					
<i>Xanthosia ciliata</i>	+					V
<i>Xanthosia huegelii</i>		+				
<b>Araliaceae</b>						
<i>Hydrocotyle callicarpa</i>	+	+			+	
<i>Hydrocotyle pilifera</i> var. <i>glabrata</i>		+				
<i>Trachymene pilosa</i>	+	+	+			
<b>Apocynaceae</b>						
* <i>Vinca major</i>					+	
<b>Asparagaceae</b>						
<i>Acanthocarpus canaliculatus</i>	+		+			

Family/ Scientific name	W	M	H	Cr	D	V
<i>Arthropodium capillipes</i>				+	+	V
<i>Arthropodium fimbriatus</i>			+			V
* <i>Asparagus asparagoides</i>		+			+	
<i>Chamaescilla corymbosa</i> var. <i>corymbosa</i>				+		
<i>Chamaescilla versicolor</i>		+	+		+	
<i>Corynotheca micrantha</i>	+		+			
<i>Laxmannia grandiflora</i> subsp. <i>grandiflora</i>		+				V
<i>Laxmannia sessiliflora</i> subsp. <i>australis</i>	+		+			
<i>Laxmannia squarrosa</i>	+		+			
<i>Lomandra caespitosa</i>	+	+				
<i>Lomandra micrantha</i> subsp. <i>micrantha</i>	+	+				
<i>Lomandra preissii</i>		+				
<i>Lomandra purpurea</i>	+					
<i>Lomandra spartea</i>	+					V
<i>Sowerbaea laxiflora</i>	+	+	+		+	
<i>Thysanotus arbuscular</i>	+					V
<i>Thysanotus dichotomus</i>	+		+			
<i>Thysanotus manglesianus</i>	+					
<i>Thysanotus multiflorus</i>		+	+			
<i>Thysanotus patersonii</i>	+	+				
<i>Thysanotus sparteus</i>	+		+			
<i>Thysanotus thyrsoides</i>	+					V
<b>Asphodelaceae</b>						
<i>Bulbine semibarbata</i>		+		+		
<b>Asteraceae</b>						
<i>Actinobole uliginosa</i>		+		+		
* <i>Arctotheca calendula</i>		+		+	+	
<i>Blennospora drummondii</i>			+			
<i>Brachyscome iberidifolia</i>	+	+	+	+		
* <i>Carduus pycnocephalus</i>				+	+	
* <i>Conyza bonariensis</i>					+	V
* <i>Conyza sumatrensis</i>					+	
<i>Cotula australis</i>		+				
<i>Craspedia variabilis</i>						
* <i>Dittrichia graveolens</i>				+	+	V
* <i>Helichrysum luteoalbum</i>				+	+	
<i>Hyalosperma cotula</i>	+					
* <i>Hypochaeris glabra</i>	+	+	+	+	+	
<i>Lawrencella rosea</i>	+					V
<i>Lagenophora huegelii</i>	+	+	+			
<i>Millotia myosotidifolia</i>	+	+	+			
<i>Millotia tenuifolia</i>		+				
<i>Olearia muricata</i>	+					
<i>Podolepis canescens</i>	+					
<i>Podolepis lessonii</i>	+	+				
<i>Podotheca angustifolia</i>	+					
<i>Podotheca gnaphaloides</i>	+		+			
<i>Pterochaeta paniculata</i>	+	+	+			
<i>Quinetia urvillei</i>	+	+	+			
<i>Rhodanthe citrina</i>	+	+				
<i>Senecio pinnatifolius</i>	+	+				
<i>Senecio diaschides</i>		+				
<i>Siloxerus humifusus</i>	+	+	+			
<i>Siloxerus multiflorus</i>		+			+	



<b>Family/ Scientific name</b>	<b>W</b>	<b>M</b>	<b>H</b>	<b>Cr</b>	<b>D</b>	<b>V</b>
* <i>Soliva sessilis</i>		+				
* <i>Sonchus asper</i>			+		+	
* <i>Sonchus oleraceus</i>		+		+	+	
<i>Trichocline spathulata</i>	+					
* <i>Ursinia anthemoides</i>	+	+	+	+		
<i>Vittadinia australasica</i>		+		+		V
* <i>Vellereophyton dealbatum</i>		+		+		
<i>Waitzia acuminata</i>	+		+			
<i>Waitzia suaveolens</i> var. <i>suaveolens</i>	+		+			
<b>Boraginaceae</b>						
* <i>Echium plantagineum</i>		+			+	
<b>Boryaceae</b>						
<i>Borya scirpioidea</i>		+				
<i>Borya sphaerocephala</i>	+	+				
<b>Brassicaceae</b>						
* <i>Brassica tournefortii</i>		+			+	
* <i>Rhaphanus raphanistrum</i>		+			+	
<b>Campanulaceae</b>						
<i>Isotoma hypocrateriformis</i>	+					
<i>Lobelia rhombifolia</i>	+	+	+			
<i>Lobelia tenuior</i>	+					
* <i>Monopsis debilis</i>				+		
* <i>Wahlenbergia capensis</i>	+			+		
<i>Wahlenbergia preissii</i>	+	+		+		
<b>Caesalpiniaceae</b>						
<i>Labichea punctata</i>				+		
<b>Caryophyllaceae</b>						
* <i>Cerastium glomeratum</i>					+	
* <i>Petrorhagia dubia</i>				+	+	
* <i>Polycarpon tetraphyllum</i>		+				
* <i>Silene gallica</i> var. <i>gallica</i>		+			+	
* <i>Silene gallica</i> var. <i>quiquevulnera</i>		+			+	
<b>Casuarinaceae</b>						
<i>Allocasuarina huegeliana</i>				+		
<i>Allocasuarina humilis</i>	+		+			
<b>Celastraceae</b>						
<i>Stackhousia pubescens</i>	+		+			
<i>Tripterococcus brunonis</i>	+	+				V
<b>Centrolepidaceae</b>						
<i>Aphelia brizula</i>						
<i>Aphelia cyperoides</i>		+		+		
<i>Centrolepis aristata</i>		+		+		
<i>Centrolepis drummondiana</i>		+	+			
<b>Chenopodiaceae</b>						
<i>Dysphania pumilio</i>				+		V

Family/ Scientific name	W	M	H	Cr	D	V
<b>Clusiaceae</b>						
<i>Hypericum gramineum</i>		+		+		V
<b>Colchicaceae</b>						
<i>Burchardia congesta</i>	+	+	+			
<i>Burchardia multiflora</i>	+	+		+		V
<i>Wurmbea dioica</i> subsp. <i>alba</i>				+		
<i>Wurmbea tenella</i>	+		+			
<b>Convolvulaceae</b>						
<i>Convolvulus angustissimus</i> subsp. <i>angustissimus</i>				+		
<b>Crassulaceae</b>						
<i>Crassula colorata</i> var. <i>colorata</i>	+		+	+	+	
<i>Crassula closiana</i>		+				
<i>Crassula decumbens</i>				+		
<i>Crassula exserta</i>	+					
* <i>Crassula natans</i> var. <i>minus</i>				+		
<b>Cucurbitaceae</b>						
* <i>Citrillus lanatus</i>				+	+	V
* <i>Cucumis myriocarpus</i>				+	+	V
<b>Cuscutaceae</b>						
* <i>Cuscuta epithymum</i>					+	
<b>Cyperaceae</b>						
<i>Caustis dioica</i>	+					
<i>Cyathochaeta avenacea</i>				+		V
* <i>Cyperus tenellus</i>		+		+		
<i>Gahnia ?ancistrophylla</i>						
<i>Isolepis cernua</i>	+					
<i>Isolepis cyperoides</i>				+		
* <i>Isolepis marginata</i>	+		+			
<i>Isolepis stellata</i>			+			
<i>Lepidosperma brunonianum</i>			+			
<i>Lepidosperma pubisquamemum</i>	+					
<i>Lepidosperma squamatatum</i>	+	+	+			
<i>Lepidosperma tenue</i>	+		+			
<i>Mesomelaena preissii</i>	+					
<i>Schoenus brevisetis</i>					+	
<i>Schoenus ?clandestinus</i> (G.Keighery 14984)		+				
<i>Schoenus curvifolius</i>		+				
<i>Schoenus nanus</i>			+			
<i>Schoenus odontocarpus</i>	+	+				
<i>Schoenus pleiostemoneus</i>	+					
<i>Schoenus tenellus</i>				+		
<i>Schoenus unispiculatus</i>	+	+				
<i>Tetraria capillaris</i>	+					
<i>Tetraria octandra</i>	+	+				
<i>Tricostularia compressa</i>		+				
<i>Tricostularia neesii</i>	+					
<b>Dioscoreaceae</b>						
<i>Dioscorea hastifolia</i>			+			

Family/ Scientific name	W	M	H	Cr	D	V
<b>Dilleniaceae</b>						
<i>Hibbertia commutata</i>	+	+				V
<i>Hibberia hypericoides</i>	+	+	+			
<i>Hibberia polystachya</i>	+					
<i>Hibbertia quadicolor</i>	+		+			V
<i>Hibbertia rhadinopoda</i>		+				
<i>Hibbertia vaginata</i>	+	+				
<b>Droseraceae</b>						
<i>Drosera bulbosa</i> subsp. <i>bulbosa</i>	+	+				
<i>Drosera erythrorhiza</i> subsp. <i>erythrorhiza</i>	+	+	+			
<i>Drosera gigantea</i> subsp. <i>gigantea</i>			+	+		
<i>Drosera glanduligera</i>	+	+	+	+		
<i>Drosera macrantha</i> subsp. <i>macrantha</i>		+	+			
<i>Drosera menziesii</i> subsp. <i>menziesii</i>	+					
<i>Drosera pallida</i>		+				
<i>Drosera porrecta</i>	+		+			
<b>Elaeocarpaceae</b>						
<i>Tetratheca confertifolia</i>	+		+			
<b>Ericaceae</b>						
<i>Andersonia lehmanniana</i> subsp. <i>pubescens</i>	+					
<i>Astroloma ciliatum</i>		+				
<i>Astroloma pallidum</i>	+		+			
<i>Astroloma serratifolium</i>	+					
<i>Leucopogon gracillimus</i>		+				
<i>Leucopogon oxycedrus</i>	+					
<i>Leucopogon pulchellus</i>	+	+	+			V
<i>Leucopogon sprengeloides</i>	+		+			
<i>Lysinema pentapeltum</i>			+			
<i>Styphelia tenuiflora</i>	+					
<b>Euphorbiaceae</b>						
<i>Euphorbia australis</i>				+		V
* <i>Euphorbia peplus</i>				+		
<i>Monotaxis grandiflora</i> var. <i>grandiflora</i>		+				
<b>Fabaceae</b>						
<i>Acacia acuminata</i>		+		+		
<i>Acacia applanata</i>	+					V
* <i>Acacia dealbata</i>					+	V
* <i>Acacia decurrens</i>		+			+	V
<i>Acacia drummondii</i> subsp. <i>affinis</i>	+					V
<i>Acacia drewiana</i>	+	+				
<i>Acacia huegelii</i>		+				
* <i>Acacia itaephylla</i>				+		V
<i>Acacia microbotrya</i>		+				
<i>Acacia nervosa</i>	+					
* <i>Acacia podaryllifolia</i>					+	V
<i>Acacia pulchella</i> var. <i>glaberrima</i>	+	+				V
<i>Acacia saligna</i>		+		+		
<i>Acacia sessilis</i>		+		+		
<i>Acacia stenoptera</i>		+				
<i>Acacia teretifolia</i>	+					
<i>Bossiaea aquifolium</i> subsp. <i>aquifolium</i>	+					

Family/ Scientific name	W	M	H	Cr	D	V
<i>Bossiaea eriocarpa</i>	+	+				V
<i>Bossiaea spinescens</i>	+					
<i>Chorizema dicksonii</i>	+					V
<i>Daviesia cordata</i>		+		+		
<i>Daviesia nudiflora</i>	+					
<i>Daviesia physodes</i>	+					
<i>Daviesia polyphylla</i>	+		+			V
<i>Daviesia preissii</i>	+	+				V
<i>Dillwynia laxiflora</i>	+					V
<i>Gastrolobium acutum</i>	+	+				
<i>Gastrolobium calycinum</i>	+	+				V
<i>Gastrolobium capitatum</i>		+				
<i>Gastrolobium spinosum</i>		+				
<i>Gastrolobium villosum</i>	+					
<i>Gompholobium aristatum</i>		+			+	
<i>Gompholobium knightianum</i>	+	+				
<i>Gompholobium marginatum</i>	+	+				
<i>Gompholobium preissii</i>						
<i>Gompholobium tomentosum</i>	+					
<i>Hovea chorizemifolia</i>	+					
<i>Isotropis cuneifolia</i> subsp. <i>cuenifolia</i>		+				
<i>Jacksonia restioides</i>	+					V
<i>Jacksonia sternbergiana</i>		+				
<i>Kennedia prostrata</i>	+	+		+		
<i>Kennedia stirlingii</i>		+				
* <i>Lotus angustissimus</i>		+		+	+	
* <i>Lupinus angustifolium</i>		+				V
* <i>Lupinus cosentinii</i>		+				V
* <i>Medicago polymorpha</i>					+	
<i>Mirbelia floribunda</i>		+	+			
<i>Mirbelia spinosa</i>	+					
* <i>Ornithopus compressus</i>						
<i>Pultenaea ericifolia</i>	+					V
<i>Sphaerolobium medium</i>	+	+				V
* <i>Trifolium arvense</i>				+		
* <i>Trifolium campestre</i>		+		+		
* <i>Trifolium dubium</i>		+		+		
* <i>Trifolium cernuum</i>		+		+		
* <i>Trifolium subterraneum</i>		+				
<b>Gentianaceae</b>						
* <i>Centaurium erythraea</i>		+			+	V
* <i>Cicendia filiformis</i>				+		
<b>Geraniaceae</b>						
* <i>Erodium botrys</i>		+		+		
* <i>Erodium cicutarium</i>		+			+	
<i>Erodium cygnorum</i>	+				+	
<i>Geranium solanderi</i>				+		V
<i>Pelargonium littorale</i>				+		
<b>Goodeniaceae</b>						
<i>Dampiera alata</i>		+		+		V
<i>Dampiera coronata</i>	+					
<i>Dampiera lavandulacea</i>	+					
<i>Dampiera linearis</i>	+	+				

Family/ Scientific name	W	M	H	Cr	D	V
<i>Goodenia berardiana</i>			+			
<i>Goodenia caerulea</i>	+					
<i>Goodenia micrantha</i>				+		
<i>Lechenaultia biloba</i>	+	+				
<i>Scaevola calliptera</i>	+					
<i>Velleia trinervis</i>	+					
<b>Hemerocallidaceae</b>						
<i>Agrostocrinum hirsutum</i>				+		
<i>Agrostocrinum scabrum</i> subsp. <i>scabrum</i>	+					V
<i>Caesia micrantha</i>	+		+			
<i>Dianella revoluta</i> var. <i>divaricata</i>	+	+	+			V
<i>Stypandra glauca</i>	+		+	+		
<i>Tricoryne elatior</i>	+	+				V
<i>Tricoryne humilis</i>	+	+				
<i>Tricoryne tenella</i>			+			
<b>Haemodoraceae</b>						
<i>Anigozanthos bicolor</i> subsp. <i>bicolor</i>	+	+				V
<i>Anigozanthos humilis</i> subsp. <i>humilis</i>	+					
<i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>	+					
<i>Conostylis aculeata</i>	+	+	+			
<i>Conostylis teretifolia</i>	+					
<i>Conostylis setigera</i> subsp. <i>setigera</i>	+					
<i>Haemodorum brevisepalum</i>	+					
<i>Haemodorum discolor</i>	+					
<i>Haemodorum laxum</i>	+					
<i>Haemodorum simplex</i>				+		
<i>Haemodorum simulans</i>	+					
<i>Haemodorum spicatum</i>	+	+	+			
<i>Tribonanthes longipetala</i>	+					V
<b>Haloragaceae</b>						
<i>Glischrocaryon aureum</i>	+					
<i>Gonocarpus cordiger</i>	+					
<i>Gonocarpus nodulosus</i>				+		
<b>Hypoxidaceae</b>						
<i>Hypoxis glabella</i> var. <i>glabella</i>				+		
<i>Hypoxis occidentalis</i> var. <i>quadriloba</i>	+	+				
<b>Iridaceae</b>						
* <i>Gladiolus caryophyllaceus</i>	+		+			V
* <i>Hesperantha falcata</i>				+		
* <i>Moraea faccida</i>		+		+		
* <i>Moraea collina</i>					+	
<i>Orthrosanthus laxus</i> var. <i>gramineus</i>	+	+				
<i>Patersonia occidentalis</i> var. <i>occidentalis</i>	+		+			
* <i>Romulea rosea</i> var. <i>australis</i>				+		
* <i>Romulea rosea</i> var. <i>rosea</i>	+			+	+	
* <i>Watsonia meriana</i> var. <i>bulbillifera</i>				+		
<b>Juncaceae</b>						
* <i>Juncus bufonius</i>				+		
* <i>Juncus capitatus</i>				+		
<i>Juncus subsecundus</i>				+		

Family/ Scientific name	W	M	H	Cr	D	V
<i>Luzula meridionalis</i>		+				
<b>Juncaginaceae</b>						
<i>Triglochin nana</i>				+		
<b>Lamiaceae</b>						
<i>Hemigenia argentea</i>		+				V
* <i>Stachys arvensis</i>		+		+		
<b>Lauraceae</b>						
<i>Cassytha glabella</i>				+		
<i>Cassytha pomiformis</i>	+		+			V
<i>Cassytha racemosa</i>			+			
<b>Lentibulariaceae</b>						
<i>Utricularia multifida</i>				+		
<i>Polypomphylx tenella</i>				+		
<b>Linaceae</b>						
* <i>Linum trigynum</i>	+	+			+	
<b>Loganiaceae</b>						
<i>Logania campanulata</i>	+		+			
<i>Phyllangium paradoxum</i>			+	+		
<b>Loranthaceae</b>						
<i>Amyema miquelii</i>	+	+				
<i>Amyema preissii</i>		+				
<b>Lycopodiaceae</b>						
<i>Phylloglossum drummondii</i>				+		
<b>Lythraceae</b>						
* <i>Lythrum hyssopifolium</i>				+		V
<b>Malvaceae</b>						
* <i>Malva parviflora</i>		+			+	
<b>Myrtaceae</b>						
<i>Babingtonia camphorosmae</i>	+	+				
<i>Baeckea crispiflora</i>	+					
<i>Beaufortia ?elegans</i>	+					
* <i>Callistemon citrinus</i>				+		
<i>Calothamnus quadrifidus</i>	+					
<i>Calothamnus sanguineus</i>	+					
<i>Calytrix variabilis</i>	+					V
<i>Corymbia calophylla</i>	+	+		+	+	
<i>Darwinia citriodora</i>			+			
<i>Eremaea pauciflora</i>	+					
<i>Eucalyptus accedens</i>	+					
<i>Eucalyptus marginata</i> subsp. <i>marginata</i>	+					
<i>Eucalyptus rudis</i> subsp. <i>rudis</i>				+		
<i>Eucalyptus wandoo</i>	+					
<i>Hypocalymma angustifolium</i>				+		V
<i>Hypocalymma xanthopetalum</i>	+					
<i>Kunzea glabrescens</i>		+			+	

<b>Family/ Scientific name</b>	<b>W</b>	<b>M</b>	<b>H</b>	<b>Cr</b>	<b>D</b>	<b>V</b>
<i>Kunzea ?micrantha</i>	+					V
<i>Leptospermum erubescens</i>		+	+			
<i>Melaleuca radula</i>	+					V
<i>Melaleuca seriata</i>		+				V
<i>Melaleuca trichophylla</i>	+		+			V
<i>Melaleuca viminea</i>		+				
<i>Verticordia acerosa</i> var. <i>preissii</i>	+					V
<i>Verticordia huegelii</i> var. <i>stylosa</i>			+			V
<i>Verticordia insignis</i> subsp. <i>insignis</i>	+					V
<i>Verticordia pennigera</i>	+					
<i>Verticordia serrata</i> var. <i>serrata</i>		+				
<b>Nyctaginaceae</b>						
<i>Boerhavia coccinea</i>				+	+	V
<b>Oleaceae</b>						
* <i>Olea europea</i>		+			+	
<b>Onagraceae</b>						
<i>Epilobium billardierianum</i> subsp. <i>cinereum</i>				+		V
<i>Epilobium hirtigerum</i>				+		V
<b>Ophioglossaceae</b>				+		
<i>Ophioglossum lusitanicum</i>						
<b>Orobanchaceae</b>						
* <i>Bartsia trixago</i>		+		+		
* <i>Orobanche minor</i>	+	+		+	+	
* <i>Parentucellia latifolia</i>		+		+		
* <i>Parentucellia viscosa</i>		+		+		
<b>Orchidaceae</b>						
<i>Caladenia discoidea</i>			+			
<i>Caladenia flava</i> subsp. <i>flava</i>	+	+	+			
<i>Caladenia hirta</i> subsp. <i>rosea</i>						
<i>Caladenia longicauda</i>	+		+			V
<i>Caladenia marginata</i>		+				
<i>Caladenia pendens</i>	+					V
<i>Caladenia reptans</i> subsp. <i>reptans</i>	+					V
<i>Cyanicula sericea</i>		+				
* <i>Disa bracteata</i>						
<i>Diuris brumalis</i>	+					V
<i>Diuris corymbosa</i>	+					
<i>Diuris setacea</i>	+					
<i>Elythranthera brunonis</i>		+				
<i>Elythranthera emarginata</i>		+				
<i>Eriochilus dilatatus</i>	+					
<i>Leptoceras menziesii</i>		+				
<i>Leporella fimbriata</i>	+					
<i>Microtis alba</i>	+					
<i>Microtis media</i> subsp. <i>media</i>				+	+	
<i>Pheladenia deformis</i>	+	+				
<i>Prasophyllum hians</i>			+			
<i>Prasophyllum macrostachyum</i>			+	+		V
<i>Prasophyllum parviflorum</i>	+					
<i>Pterostylis</i> aff. <i>nana</i>	+	+	+			

Family/ Scientific name	W	M	H	Cr	D	V
<i>Pterostylis barbata</i>	+					
<i>Pterostylis recurva</i>		+	+			
<i>Pterostylis sanguinea</i>		+				
<i>Pyrorchis nigricans</i>		+				
<i>Thelymitra antennifera</i>				+		
<i>Thelymitra benthamiana</i>						
<i>Thelymitra crinita</i>	+	+	+			
<i>Thelymitra flexuosa</i>			+			
<i>Thelymitra fuscolutea</i>	+					
<b>Oxalidaceae</b>						
<i>Oxalis exilis</i>		+	+	+		
* <i>Oxalis pes-caprae</i>				+	+	
* <i>Oxalis polyphylla</i>		+		+	+	
* <i>Oxalis purpurea</i>		+			+	
<b>Papaveraceae</b>						
* <i>Fumaria capreolata</i>				+	+	
* <i>Fumaria muralis</i>				+	+	
<b>Phyllanthaceae</b>						
<i>Phyllanthus calycinus</i>	+	+		+		
<i>Poranthera microphylla</i>		+		+		
<b>Philydraceae</b>						
<i>Philydrella pygmaea</i>			+			
<b>Pittosporaceae</b>						
<i>Billardiera coriacea</i>	+					
<i>Billardiera fraseri</i>			+			
<i>Billardiera fusiformis</i>			+	+		
<i>Billardiera variifolia</i>	+					
<i>Cheiranthra preissiana</i>				+		
<i>Marianthus bicolor</i>	+					
<b>Plantaginaceae</b>						
<i>Plantago ?exilis</i>			+	+		
<b>Poaceae</b>						
* <i>Aira cupaniana</i>	+	+		+	+	
<i>Amphipogon debilis</i>	+					
<i>Amphipogon strictus</i>			+			
<i>Austrostipa compressa</i>	+	+				
<i>Austrostipa elegantissima</i>		+	+			
<i>Austrostipa pycnostachya</i>		+				
<i>Austrostipa variabilis</i>	+	+	+			
* <i>Avellinia michelii</i>						
* <i>Avena barbata</i>	+	+		+	+	
* <i>Briza maxima</i>		+		+		
* <i>Briza minor</i>		+		+		
* <i>Bromus diandrus</i>		+			+	
* <i>Bromus hordeaceus</i>				+	+	
<i>Cymbypogon obtectus</i>			+			
* <i>Cynodon dactylon</i>				+	+	
* <i>Ehrharta calycina</i>		+				
* <i>Ehrharta longiflora</i>		+		+	+	



<b>Family/ Scientific name</b>	<b>W</b>	<b>M</b>	<b>H</b>	<b>Cr</b>	<b>D</b>	<b>V</b>
<i>Enteropogon acicularis</i>		+		+		V
* <i>Hordeum leporinum</i>		+				
<i>Lachnagrostis filiformis</i>				+		
* <i>Lolium multiflorum</i>		+		+		
<i>Microlaena stipoides</i>		+		+		
<i>Neurachne alopecuroidea</i>	+	+				
* <i>Panicum capillare</i>				+	+	V
* <i>Pentaschistis airoides</i>	+	+				
<i>Poa drummondiana</i>	+	+				
<i>Poa homomalla</i>		+		+		
<i>Rytidosperma caespitosa</i>		+		+		
<i>Tetrarrhena laevis</i>				+		
<i>Themeda australis</i>	+	+				
* <i>Vulpia bromoides</i>	+	+		+		
* <i>Vulpia myuros</i>	+	+		+		
<b>Polygalaceae</b>						
<i>Comesperma calymega</i>		+				
<b>Polygonaceae</b>						
* <i>Acetosella vulgaris</i>						
* <i>Emex australis</i>					+	
<i>Muehlenbeckia adpressa</i>			+	+		
<i>Persicaria prostrata</i>				+		
* <i>Polygonum arenastrum</i>						
* <i>Rumex crispus</i>						
<b>Portulacaceae</b>						
<i>Calandrinia calyptata</i>	+		+			
<i>Calandrinia corrigioloides</i>		+				
<i>Calandrinia granulifera</i>			+		+	
<b>Primulaceae</b>						
* <i>Anagallis arvensis</i> var. <i>arvensis</i> (also known as <i>Lysmachia arvensis</i> )	+				+	
* <i>Anagallis arvensis</i> var. <i>caerulea</i> (also known as <i>Lysmachia arvensis</i> )		+		+	+	
<b>Proteaceae</b>						
<i>Adenanthos cygnorum</i>		+	+			
<i>Banksia grandis</i>		+				
<i>Conospermum stoechadis</i> subsp. <i>stoechadis</i>	+					
<i>Dryandra armata</i> var. <i>armata</i>	+					V
<i>Dryandra bipinnatifida</i> subsp. <i>bipinnatifida</i>	+	+				
<i>Dryandra fraseri</i> var. <i>fraseri</i>	+					
<i>Dryandra lindleyana</i> subsp. <i>lindleyana</i>	+	+				V
<i>Dryandra sessilis</i> var. <i>sessilis</i>	+					
<i>Dryandra squarrosa</i> subsp. <i>squarrosa</i>	+	+				
<i>Grevillea bipinnatifida</i> subsp. <i>bipinnatifida</i>	+	+	+			V
<i>Grevillea paniculata</i>	+					
<i>Grevillea pilifera</i> var. <i>occidentalis</i>	+	+				V
<i>Hakea erinacea</i>	+					
<i>Hakea incrassata</i>	+					
<i>Hakea lissocarpha</i>	+	+	+			
<i>Hakea prostrata</i>		+				
<i>Hakea ruscifolia</i>	+					
<i>Hakea trifurcata</i>	+		+			
<i>Hakea undulata</i>	+					

Family/ Scientific name	W	M	H	Cr	D	V
<i>Isopogon asper</i>		+				
<i>Isopogon divergens</i>	+					
<i>Isopogon dubius</i>	+					
<i>Isopogon sphaerocephalus</i>	+	+				
<i>Persoonia angustiflora</i>	+					
<i>Petrophile biloba</i>			+			V
<i>Petrophile brevifolia</i>	+					
<i>Petrophile linearis</i>		+				
<i>Petrophile striata</i>	+		+			V
<i>Synaphea acutiloba</i>	+		+			
<i>Synaphea petiolaris</i>	+					
<b>Pteridaceae</b>						
<i>Cheilanthes austrotenuifolia</i>		+				
<b>Restionaceae</b>						
<i>Desmocladius asper</i>	+	+				
<i>Desmocladius fasciculatus</i>	+					
<i>Lepidobolus chaetocephalus</i>			+			
<i>Loxocarya cinera</i>	+					
<i>Lyginia barbata</i>	+					
<b>Rhamnaceae</b>						
<i>Cryptandra arbutiflora</i> var. <i>tubulosa</i>		+				
<i>Cryptandra myriantha</i>					+	V
<i>Cryptandra nutans</i>			+			
<i>Stenanthemum ?tridendatum</i>			+			
<i>Trymalium ledifolium</i> var. <i>rosmarinifolium</i>		+		+		
<b>Rosaceae</b>						
<i>Acaena echinata</i>		+		+		
<b>Rubiaceae</b>						
* <i>Galium divaricatum</i>		+				
<i>Opercularia apiciflora</i>		+		+		V
<i>Opercularia vaginata</i>	+	+	+			
<b>Rutaceae</b>						
<i>Boronia cymosa</i>			+			
<i>Boronia ramosa</i> subsp. <i>anethifolia</i>		+				
<i>Diplolaena graniticola</i>	+		+			
<i>Philotheca spicata</i>	+	+		+		V
<b>Santalaceae</b>						
<i>Leptomeria cunninghamii</i>	+					
<i>Santalum acuminatum</i>			+			
<b>Sapindaceae</b>						
<i>Dodonaea pinifolia</i>			+			
<b>Selaginellaceae</b>						
<i>Selaginella gracillima</i>						
<b>Solanaceae</b>						
* <i>Solanum nigrum</i>		+		+		

Family/ Scientific name	W	M	H	Cr	D	V
<b>Sterculiaceae</b>						
<i>Thomasia foliosa</i>	+					
<b>Stylidiaceae</b>						
<i>Levenhookia pusilla</i>	+	+				
<i>Levenhookia stipitata</i>	+	+				
<i>Stylidium affine</i>	+	+				
<i>Stylidium amoemum</i>	+		+			
<i>Stylidium androsaceum</i>		+				
<i>Stylidium araeophyllum</i> ms			+			
<i>Stylidium diuroides</i>	+					
<i>Stylidium eriopodum</i>	+					
<i>Stylidium leptophyllum</i>	+		+			
<i>Stylidium inundatum</i>				+		
<i>Stylidium pycnostachyum</i>			+			
<i>Stylidium repens</i>		+				
<i>Stylidium schoenoides</i>	+	+				
<b>Thymelaeaceae</b>						
<i>Pimelea imbricata</i> var. <i>imbricata</i>	+		+			V
<b>Violaceae</b>						
<i>Hybanthus floribundus</i> subsp. <i>floribundus</i>	+	+				
<b>Xanthorrhoeaceae</b>						
<i>Xanthorrhoea acanthostachya</i>	+					
<i>Xanthorrhoea gracilis</i>	+					
<i>Xanthorrhoea preissii</i>	+	+		+		
<b>Zamiaceae</b>						
<i>Macrozamia fraseri</i>	+	+	+			

