

CENTRAL WHEATBELT DISTRICT THREATENED FLORA AND COMMUNITIES MANAGEMENT PROGRAM

Annual Report 2009

For the Central Wheatbelt District Threatened Flora and Communities Recovery
Team

Prepared By:
Joel Collins and Ben Lullfitz



Image 1: *Caladenia drakeoides*

Property and copyright of this document is vested jointly in the Director, Threatened Species and Communities Section, Environment Australia and the Executive Director, Western Australia Department of Environment and Conservation

The Commonwealth disclaims responsibility for the views expressed

Department of Environment and Conservation
PO Box 332 Merredin WA 6415

TABLE OF CONTENTS

1. SUMMARY OF KEY RECOVERY ACTIONS COMPLETED IN 2009	3
2. THREATENED FLORA AND COMMUNITIES RECOVERY TEAM	4
2.1 Roles and Responsibilities	4
2.2 Members	4
2.3 Recovery Team Meetings	5
3. FUNDING	6
3.1 Wheatbelt NRM 'Back from the Edge' Project	6
3.2 Caring for our Country 'Wheatbelt Rabbit Project'	6
3.3 Commonwealth Funding	6
4. CENTRAL WHEATBELT DISTRICT THREATENED FLORA MANAGEMENT PROGRAM	6
4.1 Central Wheatbelt District Threatened Flora Schedule	6
4.2 Central Wheatbelt District Flora List - Changes 2009	7
5. IMPLIMENTATION OF RECOVERY ACTIONS	9
5.1 Critically Endangered	9
5.2 Endangered	11
5.3 Vulnerable	12
5.4 Priority One	14
5.5 Priority Two	16
5.6 Priority Three	16
5.7 Priority Four	17
Appendix 1: 2009 Declared Rare and Priority Flora List Central Wheatbelt District	18

1. SUMMARY OF KEY RECOVERY ACTIONS COMPLETED IN 2009

The Central Wheatbelt District achieved many noteworthy flora recovery actions during 2009. These include the publication of the book 'Threatened Flora of the Western Central Wheatbelt' and associated book launch. Through routine monitoring and surveying new populations were discovered for nine critically endangered taxa, five endangered taxa and fourteen vulnerable taxa. New populations were also surveyed for priority flora with fifteen priority one taxa recording new populations. These include the rediscovery of *Acacia leptoneura*, *Acacia torticarpa* and *Scholtzia eatoniana*, last collected 160, 60 and 30 years respectively. New populations were discovered for six priority 2 taxa, nine priority 3 taxa and four priority 4 taxa. A new translocation was implemented for the critically endangered *Lysiosepalum abollatum* and restocking of existing translocations with new seedlings for the species *Daviesia cunderdin*, *Daviesia euphorbioides* and *Acacia subflexuosa* subsp. *capillata*. Recruitment burns were implemented for the species *Daviesia euphorbioides*, *Philotheca basistyla* and *Cyphanthera odgersii* subsp. *occidentalis* with the successful recruitment of seedlings.

2. THREATENED FLORA AND COMMUNITIES RECOVERY TEAM

2.1 Roles and Responsibilities

The Central Wheatbelt District Threatened Flora and Communities Recovery Team's role is to implement the Central Wheatbelt District Threatened Flora Management Program and relevant Interim Recovery Plans (IRPs). This is coordinated by the Recovery Team and is largely implemented by Conservation Officers in the Department of Environment and Conservation (DEC). The DEC Conservation Officers involved in the implementation of these actions in the Central Wheatbelt District during 2009 were Joel Collins, Ben Lullfitz, Margaret Redfern, Jill Symington, Natasha Moore and Ankur Konnur.

2.2 Members

Table one below lists the members of the Central Wheatbelt District Threatened Flora and Communities Recovery Team in 2009 (Northam and Merredin combined). The participation of Recovery Team Members has been paramount in achieving the goals of the Central Wheatbelt District Threatened Flora Management Program. It has enabled greater flow of information between government and non government agencies, community groups and concerned individuals; facilitating more effective use of resources and resulting in positive outcomes for threatened flora in the district.

Name	Organisation
Alan Kietzmann	Former District Manager, DEC Central Wheatbelt
Andrew Brown	DEC, Coordinator – Threatened Flora, Species & Communities Branch
Andrew Crawford	DEC, Threatened Flora Seed Centre
Ben Lullfitz	DEC, Conservation Officer, Merredin
Bob Dixon	Manager – Biodiversity and Extensions, BGPA
Brad Thompson	NRMO, Shire of Kellerberrin
Brett Beecham	DEC, Regional Ecologist, Narrogin
Bruce Eldridge	WestNet Rail
Cicely Howell	York River Conservation Society
Cilla Kuiper	Communications Officer, Wheatbelt NRM
David Jolliffe (Chair)	District Nature Conservation Officer DEC Avon Mortlock
Dennis McDeed	Catalpa Resources, Westonia
Fred Hort	DEC Volunteer
Ian Smith	Wongan Ballidu Bush Care Group / DEC casual employee
Jessica Smith	NRMO, Shire of Mt Marshall
Jill Symington	DEC, Conservation Officer, Northam
Joel Collins	DEC, Conservation Officer, Northam

John Stevens	WestNet Rail
Joy Fleay	York Wildflower Society
Kara Hatch	NRMO, Shires of Westonia & Yilgarn
Kezia Pontifex	Goomalling/Dowerin Community Landcare Officer
Leonie Monks	DEC, Science Division
Luc Cotte	St Barbara Mining Ltd, Southern Cross
Lyn Phillips	Wongan Ballidu Bush Care Group / DEC casual employee
Margaret Redfern (contract finished)	Conservation Officer DEC Avon Mortlock
Mark Brundrett	UWA, Research Scientist
Mary Squire	Mukinbudin Conservation Group
Melanie Smith	Senior Botanist DEC Kensington
Mike Griffiths	WWF Australia Project Officer, Northam
Natasha Moore	DEC, Conservation Officer, Merredin
Nigel Rowe	Main Roads
Peter Bothwell	WestNet Rail
Peter Smyth	WestNet Rail
Phil Knapton	Western Areas NL, Forrestania
Phil Lewis	WWF Australia Project Officer, Northam
Rebecca Palumbo	Wheatbelt NRM
Rob Waller	Water Corporation, Wyalkatchem
Robert Boase	Community member (Dowerin)
Sally Rayner	NRMO, Shire of Bruce Rock
Samantha Pickering	NRMO, Shires Of Nungarin & Trayning
Simon Weighell	MRWA, Goldfields-Esperance Region
Sonya Thomas	Wongan Ballidu Bush Care Group / DEC casual employee
Tobias Vudzijena	NRMO, Shire of Merredin
Todd Gibson	MRWA, Wheatbelt North Region
Wendy Chow	DEC, Project Officer (TEC/PEC), Species & Communities Branch
Whispie Bayly	Mukinbudin Conservation Group

Table 1: 2009 Central Wheatbelt District Rare Flora and Communities Recovery Team Members (Northam and Merredin combined)

2.3 Recovery Team Meetings

The Central Wheatbelt District Threatened Flora and Communities Recovery Team held meetings on the 24th March 2009 and the 24th September 2009 in Northam, the 25th of March 2009 in Westonia and the 25th of September 2009 in Merredin.

3. FUNDING

3.1 *Wheatbelt NRM 'Back from the Edge' Project*

September 2009 saw the completion of the 'Back from the Edge' Project which was funded by Wheatbelt NRM through Commonwealth funding. This project ran from 2006 and enabled the implementation of a range of recovery actions for threatened flora populations and other special projects such as the 'Threatened Flora of the Western Central Wheatbelt' and 'Threatened and Poorly Known Flora of the Yilgarn Region' books.

3.2 *Caring for our Country 'Wheatbelt Rabbit Project'*

In 2009 DEC Wheatbelt Region successfully submitted a proposal to the Commonwealth Government to conduct a project entitled – 'Reducing the impact of rabbits to regenerate threatened flora, ecological communities and critical habitat in the Western Australian Wheatbelt'. This project will focus on the regeneration of critically endangered and endangered (EPBC listed) populations of threatened flora and communities through the control of rabbits, weed control, disturbance trials and rabbit proof fencing.

3.3 *Commonwealth Funding*

The Central Wheatbelt District (through Species and Communities Branch) successfully obtained funding from the Commonwealth government to conduct a range of recovery actions for (EPBC listed) threatened flora and ecological communities. These recovery actions include – disturbance trials, fencing, translocations, weed control and rabbit control.

4. CENTRAL WHEATBELT DISTRICT THREATENED FLORA MANAGEMENT PROGRAM

4.1 *Central Wheatbelt District Threatened Flora Schedule*

DRF	Number of Taxa
CR	34
EN	29
VU	30
X	1
Total	94
Priority	
1	130
2	100

3	200
4	88
Total	518

Table 2: 2009 Declared Rare and Priority Flora List Central Wheatbelt District

4.2 Central Wheatbelt District Flora List - Changes 2009

Additions to list:

Acacia leptoneura (P1)
Aotus sp. Cunderdin (B.J. Lepschi et al 3587) (P1)
Arthropodium sp. Yenyening (G.J. Keighery & N. Gibson 2957) (P1)
Baeckea sp. Tampia Hill (J.C. Anway 327) (P1)
Banksia rufa subsp. *tutanningensis* (P2)
Beyeria apiculata (P1)
Beyeria constellata (P1)
Beyeria disciformis (P1)
Caladenia speciosa (P4)
Calytrix acutifolia subsp. *brevifolia* (P1)
Commersonia sp. Bindoon (C. Wilkins & F. & J. Hort CW 2155) (P1)
Dampiera triloba (P1)
Daviesia smithiorum (P2)
Dillwynia sp. Capel (P.A. Jurjevich 1771) (P1)
Eremophila glabra subsp. *Kokeby* (R. Davis 5080) (P1)
Eremophila glabra subsp. *York* (P. G. Wilson 12172) (P1)
Eremophila sp. Beverley (K. Kershaw KK 2438) (P1)
Eucalyptus sp. Mukinbudin (D. Nicole & M. French DN 3486) (P1)
Eutaxia rubricarina (P3)
Gastrolobium densifolium (P4)
Gastrolobium rotundifolium (P3)
Glyceria drummondii (EN)
Gnephosis multiflora (P3)
Isolepis australiensis (P3)
Lepidosperma diurnum (P1)
Lepidosperma sp. Mt Caudan (N. Gibson & M. Lyons 2081) (P1)
Lilaeopsis polyantha (P2)
Melaleuca barlowii (P3)
Millotia tenuifolia var. *laevis* (P2)
Opercularia rubioides (P3)
Oxymyrrhine plicata (P3)
Petrophile sp. Pithara (P. Armstrong s.n. PERTH 06592090) (P3)
Petrophile trifurcata (P2)
Philotheca sp. Mukinbudin (M. Hancock s.n. 08/09/1999) (P1)
Rhodanthe pyrethrum (P3)
Stylidium sp. Moora (J.A. Wege 713) (P2)
Stylidium tenuicarpum (P4)
Styphelia sp. Bullfinch (M. Hislop 3574) (P3)
Synaphea grandis (P4)
Tecticornia fimbriata (P3)
Tecticornia sp. Lake Wallambin (K.A. Shepherd 1191) (P1)

Tetratheca plumosa (P1)
Thelymitra apiculata (P4)
Thomasia montana (VU)
Verticordia lindleyi subsp. *lindleyi* (P4)
Verticordia paludosa (P4)

Deletions from list:

Blennospora phlegmatocarpa (formally P3)
Boronia penicillata (P3)
Eucalyptus caesia subsp. *magna* (formally P4)
Eucalyptus latens (P4)
Microcorys lenticularis (formally P2)
Phlegmatospermum drummondii (formally P3)
Ptilotus halophilus (P4)
Triglochin stowardii (formally P3)
Wurmbea drummondii (formally P4)

Changes in conservation rankings:

Baeckea sp. *Parker Range* (M Hislop & F Hort MH2968) (P3)
Caladenia cristata (P1)
Dillwynia acerosa (P3)
Eremophila adenotricha (P1)
Eucalyptus subangusta subsp. *virescens* (P3)
Eutaxia actinophylla (P3)
Gastrolobium rotundifolium (P3)
Haegiela tatei (P4)
Hibbertia glabriuscula (P3)
Isolepis australiensis (P3)
Keraudrenia adenogyna ms (P3)
Lepidium genistoides (P3)
Leucopogon sp. *Bungulla* (R.D. Royce 3435) (P3)
Opercularia rubioides (P3)
Phebalium drummondii (P3)
Podotheca pritzelii (P3)
Pseudactinia sp. *Bungalbin Hill* (FH & MP Mollemans 3069) (P3)
Schoenus capillifolius (P3)
Schoenus griffinianus (P3)
Stylidium choreanthum (P3)
Stylidium sejunctum (P3)
Synaphea tripartita (P3)
Tricoryne sp. *Morawa* (GJ Keighery & N Gibson 6759) (P3)
Xanthoparmelia nashii (P3)

Additions to list due to range extensions:

Lysiosepalum aromaticum (P2)

See Appendix for the complete list of threatened and priority taxa for the Central Wheatbelt District.

5. IMPLIMENTATION OF RECOVERY ACTIONS

5.1 *Critically Endangered*

Acacia cochlocarpa subsp. *cochlocarpa*

- Surveyed new population on Ucarty South road, Dowerin.

Acacia cochlocarpa subsp. *velutinosa*

- Surveyed new population on Bulgin road, Cunderdin.

Acacia sciophanes

- Monitored populations 1A, 1B, 1C, 1D, 2A, 2B, 2C and new sub-population 2D.
- Conducted weed control at populations 1A, 1C, 1D, 2B and 2C.
- Preparation of Adaptive Management Induced Recruitment Proposal.

Acacia subflexuosa subsp. *capillata*

- Re-stocked translocation with 15 seedlings. Reticulation maintained during summer. Water tank filled by shire of Tammin.

Acacia vassalii

- Surveyed new population on Manmanning Rd, Dowerin.

Acacia volubilis

- Rabbit control at population 8B, 8C, and 8T using 1080 oats.
- Surveyed new populations on Bond road and Wamenusking nature reserve, Quairading and Leeming road, Cunderdin.
- Weed control at population 1B and 3.
- Seed collection from multiple populations for translocation (threatened flora seed centre contract).
- Investigation of illegal clearing with population 4 and 5A/B, Scadden road Cunderdin Wildlife Officer followed up and liaised with adjoining landholder.

Caladenia drakeoides

- Surveyed new population at Jouerdine Rock.
- Monitored population 13A and 13B.

Cyphanthera odgersii subsp. *occidentalis*

- Monitored 2007 recruitment burns at population 1, 16 seedlings recorded.
- Implementation of 5 recruitment burns at population 1. Sites fenced and monitored.

Daviesia cunderdin

- Rabbit control at population 2T using 1080 oats.
- Liaised with shire of Cunderdin regarding grading through population, no plants taken.

- Restocked translocation with 25 seedlings at population 2T. Translocation fenced with rabbit proof netting around perimeter. Reticulation installed. Water tank filled by shire of Cunderdin.
- Weed control at population 1.
- Seed collection from population 1 for translocation (threatened flora seed centre contract).

Daviesia euphorbioides

- Rabbit control at population 16T (Hindmarsh NR) using 1080 oats.
- Implementation of 2 recruitment burns at population 1B and 3A, sites fenced and monitored.
- Weed control at population 7.
- Restocking of translocation with 10 seedlings. Seedlings watered during summer.

Daviesia microcarpa

- Monitored 2008 recruitment burn at population 2A.
- Monitored populations 2A, 2B, 2C & 2D.

Gastrolobium glaucum

- Surveyed new subpopulation (population 8) on Wilkins road, Shire of Wongan-Ballidu.

Grevillea dryandroides subsp. *dryandroides*

- Translocation, 2008 seedlings watered during summer. Shire of Wongan-Ballidu filled water tank.

Guichenotia seorsiflora

- Surveyed new population on Pantagin North road, east of Quairading. Discovered by DEC volunteer (Bert Hort).

Haloragis platycarpa

- Monitored population 1, Dalwallinu.
- Surveyed remnants in Dalwallinu town site for new populations.

Jacksonia pungens

- Surveyed new population on Dalwallinu West road and crown reserve 27123 (Dalwallinu tip reserve).

Lysiosepalum abollatum

- Translocation established at Wongan Hills Nature Reserve with 33 seedlings planted in 2009. Translocation fenced with rabbit netting around perimeter. Reticulation set up with 4500 L water tank.

Pityrodia scabra

- Watered seedlings from 2008 recruitment burns at population 14 and 1B.
- Monitored 2008 recruitment burns at population 1B.

Philothea basistyla

- Conducted rabbit control (fumigation) at populations 1 and 2A.
- Implemented induced recruitment trial.
- Monitoring of induced recruitment trial.
- Conducted ground truthing of recommended critical habitat sites.
- Collected seed from population 2A. Forwarded to TFSC.

Symonanthus bancroftii

- Installed automatic watering system at Nangeen Hill translocation.
- Regular site visits to Nangeen Hill and Ardath sites to maintain watering systems, check fences and monitor plants.
- Regular liaison with BGPA staff in regard to both translocation sites.

Tetralochea deltoidea

- Monitored population 1, Mt Caroline.
- Collected seed from population 1, Mt Caroline. Forwarded to TFSC.

5.2 **Endangered**

Acacia ataxiphylla subsp. *magna*

- Surveyed new population at Dulbellington nature reserve, Quairading.

Acacia pygmaea

- New populations surveyed on property of Rex Glass, Wongan Hills.

Conostylis wonganensis

- Seed collection from Elphin nature reserve populations with Threatened Flora Seed Centre.

Eremophila resinosa

- Weed control at populations 1B, 3 and 4.
- Seed collected from population 23B and forwarded to BGPA.
- Liaison with BGPA and Catalpa Resources in regard to translocation sites in Westonia.
- Liaison with Shire of Westonia in regard to grading road verges near population 1. Presented shire works crew with a training session about working in the vicinity of DRF.

Eremophila virens

- Monitored populations 10B, 10C and 11.

Eremophila viscida

- Surveyed new populations 25 and 26 in the Shire of Trayning and delivered notification letter to landholder.
- Monitored populations 12B and 12C.

Eucalyptus brevipes

- Monitored populations 2A, 2B, 3A, 6, 7, 8, 9 and 14.

Eucalyptus crucis subsp. *crucis*

- Installed 1.3km of fencing at populations 9A and 9B.
- Monitored populations 3 & 5.
- Seed collected from populations 1 and 3. Forwarded to TFSC.

Jacksonia quairading

- Delivered notification letter for population 2 located on Rohan Johnstone property in Quairading.
- Liaised with Shire of Quairading regarding population 1 on firebreaks within shire reserves 13002 and 21459. Application to take submitted for accidental destruction during firebreak maintenance.

Melaleuca sciotostyla

- Fencing agreement signed for population to exclude livestock grazing from remnant bushland on private property (Lyn Phillips). Fencing materials supplied for 0.7 km.
- Taxonomic study in the relationship of *Melaleuca haplantha* and *M. sciotostyla* in light of new discovered populations in conjunction with WA Herbarium.
- Delivered notification letter for population 9 located on Eugene Stone property in Quairading.

Ptilotus fascicularis

- Monitored populations 8, 9 and 10.

Stylidium coroniforme subsp. *coroniforme*

- Delivered notification letter for population 12 located on Mark Hyde's property in Wongan Hills.
- Surveyed new population on property of Rex Glass, Wongan Hills.

Verticordia hughanii

- Fencing agreement signed for population 3 to exclude livestock grazing from remnant bushland on private property (Gavin Hagboom). Fencing materials supplied for 3.2 km.
- Rabbit control at population 1 (Hindmarsh NR) using 1080 oats.
- Monitoring of population 1 for Caring for Country project.

5.3 Vulnerable*Acacia aphylla*

- 2008 recruitment burns monitored at population 2B and 21, Northam.

Acacia brachypoda

- Investigated clearing of part of population 4B south of Beverley (Westnet Rail). Liaised with WestNet rail, clearing outside of application to take (expired). Westnet rail agreed to fence the population.

Acacia denticulosa

- Monitored population 1.

Acacia lanuginophylla

- Monitored populations 3 and 4.

Banksia sphaerocarpa var. *dolichostyla*

- Monitored population 20.

Boronia adamsiana

- Surveyed new population on private property in Mukinbudin (Smith).
- Monitored populations 23A and 23B.
- Delivered notification letter to landholder of population (Della Bosca).

Boronia revoluta

- Monitored populations 2A, 2B, 2C, 2D & 3.

Calectasia pignattiana

- Delivered notification letter to landholder (R. Boase) for population 16, Dowerin.

Eremophila ternifolia

- Surveyed new population on property of Rex Glass, Wongan Hills.

Eucalyptus recta

- Delivered notification letter for population 5 located on Colin Fowler property in Wongan Hills. Monitored population.

Eucalyptus steedmanii

- New population located by Botanica consulting in Forrestania area.
- Seed collected from populations 1, 2, 3, 4 and 5 by Botanica consulting and forwarded to TFSC.

Eucalyptus synandra

- Monitored population 28 on private property and located new populations 29A, 29B, 30, 31A and 31B.

Frankenia conferta

- Delivered notification letters for population 11A/B located on Bruce Sanderson property and population 13 located on Nixon property, Dalwallinu.
- Conducted targeted survey in Karroun Hill NR. Located one new population.
- Surveyed new populations 10A, 10B and 10C in Shire of Mt Marshall.

Gastrolobium graniticum

- Searched for populations 5 and 6, however neither were relocated.

Grevillea dryandroides subsp. *hirsuta*

- Rabbit control at population 5 (Hindmarsh NR) using 1080 oats.

Microcorys eremophiloides

- Surveyed new population on property of Rex Glass, Wongan Hills.

Muelleranthus crenulatus

- Monitored population 1A, 1B, 2A and 2B.

Myriophyllum lapidicola

- Monitored populations 1, 4, 5, 6 and 7.

Rhagodia acicularis

- Surveyed new population on property of Rex Glass, Wongan Hills.

Roycea pycnophylloides

- Monitored population 13.

5.4 Priority One*Acacia lanei*

- Range extension following discovery of a new population in Mukinbudin by member of the Mukinbudin Conservation Group.

Acacia leptoneura

- Rediscovery of taxon after 160 years, new population surveyed on Old Koorda road, Dowerin.
- Meeting with shire of Dowerin CEO and Works Supervisor on-site of new population to discuss conservation and management.
- Media release for rediscovery of taxon resulting in articles in several papers, including The West Australian, and radio interviews, including on ABC radio. Articles in Environment and Conservation News and DEC Matters.

Acacia sp. Manmanning (B. R. Maslin 7711)

- Surveyed new population at Nature reserve 14907, Rifle Range road, Wongan-Ballidu.

Acacia sp. Petrudor Rocks (B. R. Maslin 7714)

- Surveyed two new populations on Rifle Range road and Hourigan road, Wongan-Ballidu.

Acacia torticarpa

- Survey known herbarium records north of Bungulla, South Kuminin and Yorkrakine area, no populations located.
- Rediscovery of taxon after 60 years, new population discovered at Cunderdin cemetery reserve.
- Media release for rediscovery of taxon resulting in articles in several papers, including The West Australian, and radio interviews, including on ABC radio. Articles in Environment and Conservation News and DEC Matters.

Acacia trinalis

- Surveyed new population on Morrell Rd, Goomalling.

Baeckea sp. Beringbooding (A.R. Main 11/9/1957)

- New population located in the Shire of Mukinbudin at Jouerdine Rock.

Baeckea sp. Tampia Hill (J.C. Anway 327)

- New population located in the Shire of Kellerberrin.
- DEC volunteer (Bert Hort) surveyed new population at Wamenusking nature reserve, Quairading.

Chorizema circinale

- Surveyed new population in the Shire of Yilgarn.

Conospermum galeatum

- Searched for historical records in the Shires of Kellerberrin and Tammin. Did not relocate any records of this species.

Dampiera scaevolina

- New population located by members of the Mukinbudin Conservation Group.

Goodenia heatheriana

- Surveyed new population along Marvel-Loch to Forrestania Road.

Grevillea lissopleura

- New population located in the Shire of Yilgarn.

Grevillea minutiflora

- New population located in the Shire of Mukinbudin.

Hakea chromatropa

- Monitored population on Carani east road, Victoria Plains.

Millotia newbeyi

- Relocated the population occurring south of Marvel Loch.

Philothea sp. Mukinbudin (M. Hancock s.n. 08/09/1999)

- Surveyed the population occurring on the Squire's property in the Mt Marshall Shire.

Scholtzia eatoniana

- Rediscovery of taxon after 30 years, new population surveyed on Moore road, Cunderdin.

Trymalium densiflorum

- Searched for the single known collection of this species in the Kununoppin area however was unable to relocate.

5.5 Priority Two

Acacia dura

- Surveyed new population on property of Rex Glass, Wongan Hills.

Conostylis albescens

- Monitored population 1.

Hakea pendens

- New population located in the Shire of Yilgarn near Marvel Loch.

Hakea rigida

- New population located in the Shire of Mukinbudin along Koorda-Bullfinch Road.

Leucopogon amplexans

- Monitored populations 1, 2A and 2B in the Shire of Kellerberrin.

Millotia pilosa

- New population located in Mt Caroline Nature Reserve in the Shire of Kellerberrin.

Lysiosepalum aromaticum

- Surveyed new population on rail reserve, west of Berring road, Goomalling. Significant range extension.

Tetralthea retrorsa

- Surveyed new sub-population at Gathercole nature reserve, Dowerin.

5.6 Priority Three

Acacia deflexa

- Surveyed new population on Dowerin-Kalannie road, Dowerin.

Acacia lirellata subsp. *lirellata*

- Surveyed new populations on Quairading south road, Quairading and Moore road and Great Eastern Highway, Cunderdin.

Acacia scalena

- Surveyed new population on Ballidu east road, Wongan-Ballidu.

Bossiaea atrata

- Surveyed new population on Dowerin-Kalannie Rd, Dowerin.

Euryomyrtus leptospermoides

- Two new populations located by members of the Mukinbudin Conservation Group.

Grevillea haplantha subsp. *recedens*

- Surveyed new population on Dowerin-Kalannie Rd, Dowerin.

Grevillea roycei

- Surveyed new population on Berring road, Dowerin.

Melaleuca sclerophylla

- Surveyed new population on property of Rex Glass, Wongan Hills.

Spartothamnella sp. Helena & Aurora Range (P.G. Armstrong 155-109)

- Tried to relocate the collection made at Remlap Station in 1993. Was unable to relocate.

5.7 Priority Four

Acacia merrickiae

- New population located in the Shire of Mukinbudin on private property.

Daviesia oxylobium

- Surveyed 2 new populations on Old Beverley road and Quairading road, Quairading.

Gastrolobium callistachys

- Surveyed new population on rail reserve, west of Berring road, Goomalling.

Wurmbea drummondii

- Monitored population at Mortlock River nature reserve. This taxon has been removed from the priority flora list.

Appendix 1: 2009 Declared Rare and Priority Flora List Central Wheatbelt District

Critically Endangered Taxa

Species/Taxon	WA IUCN Rank	EPBC Rank	Distribution	Flowering period
<i>Acacia cochlocarpa</i> subsp. <i>cochlocarpa</i>	CR	E*	Watheroo	Jun-Jul
<i>Acacia cochlocarpa</i> subsp. <i>velutinos</i>	CR	CR	Manmanning	Jun-Aug
<i>Acacia pharangites</i>	CR	E*	Wongan Hills	Aug-Sep
<i>Acacia sciophanes</i>	CR	E*	Mukinbudin, Victoria Rock	Sep-Jan
<i>Acacia subflexuosa</i> subsp. <i>capillata</i>	CR	E*	S of Cunderdin	Aug-Sep
<i>Acacia vassalii</i>	CR	E*	Wongan Hills-Watheroo	Jul-Aug
<i>Acacia volubilis</i>	CR	E*	Cunderdin	-
<i>Caladenia drakeoides</i>	CR	E*	Meckering-Coorow	Aug-Oct
<i>Cyphanthera odgersii</i> subsp. <i>occidentalis</i>	CR	E*	Cowcowing	Sep-Dec
<i>Darwinia carnea</i>	CR	E*	Narrogin, Mogumber	Oct-Dec
<i>Daviesia cunderdin</i>	CR	E*	Cunderdin	May
<i>Daviesia euphorbioides</i>	CR	E*	Cadoux-Wongan Hills	Jun,Jul
<i>Daviesia microcarpa</i>	CR	E*	NE of Norseman, Southern Cross	Aug-Sep
<i>Eremophila pinnatifida</i>	CR	E*	Dalwallinu	-
<i>Gastrolobium diabolophyllum</i>	CR	*	Dulyalbin	
<i>Gastrolobium glaucum</i>	CR	E*	Wongan Hills	Aug-sep
<i>Gastrolobium hamulosum</i>	CR	E*	Wongan Hills, Calingiri	
<i>Grevillea dryandroides</i> subsp. <i>dryandroides</i>	CR	E*	Ballidu	Sep-Oc,Fe-Ma
<i>Grevillea pythara</i>	CR	E*	Pithara	
<i>Guichenotia seorsiflora</i> ms	CR	*	Youndegin, Corrigin	Jul-Sep
<i>Gyrostemon reticulatus</i>	CR	CR	Wubin, Kalannie, Tardun, Perenjori	Oct-Nov
<i>Haloragis platycarpa</i>	CR	CR	Dalwallinu	Oct
<i>Hemiandra rutilans</i>	CR	E*	Dowerin, York	
<i>Isopogon robustus</i>	CR	*	Parker Range, Marvel Loch	Sep-Oct
<i>Jacksonia pungens</i> ms	CR	E*	Sth of Marchagee	Oct-Feb
<i>Lysiosepalum abollatum</i>	CR	*	Wongan Hills	Aug,Sep
<i>Philotheca basistyla</i>	CR	E*	Trayning	Aug
<i>Pityrodia axillaris</i>	CR	*	Pithara, Morawa, Lake Moore	Jul-Oct
<i>Pityrodia scabra</i>	CR	E*	Cowcowing	Aug-Nov
<i>Rhizanthella gardneri</i>	CR	E*	Wubin-Munglinup	May-Jul
<i>Symonanthus bancroftii</i>	CR	E*	Bruce Rock	Jun(Sep)
<i>Tetratheca deltoidea</i>	CR	E*	Mt Caroline	Aug-Sep
<i>Thomasia</i> sp. Green Hill (Paust 1322)	CR	E*	New Norcia	Oct
<i>Verticordia staminosa</i> subsp. <i>staminosa</i>	CR	E*	Wongan Hills	Jun-Aug

Total Critically Endangered: 34

Endangered Taxa

Species/Taxon	WA IUCN Rank	EPBC Rank	Distribution	Flowering period
<i>Acacia ataxiphylla</i> subsp. <i>magna</i>	E	E	Charles Gardner Reserve, Cunderdin	Jul
<i>Acacia chapmanii</i> subsp. <i>australis</i>	E	E	Bolgart, Wyening	
<i>Acacia lobulata</i>	E	E	Warralakkin	Jun-Jul
<i>Acacia pygmaea</i>	E	E	Wongan Hills	Mar-May
<i>Banksia cuneata</i>	E	E	Beverley-Quairading	Jun-Dec
<i>Conospermum densiflorum</i> subsp. <i>unicephalatum</i>	E	E	Gingin, Gillingarra	
<i>Conostylis wonganensis</i>	E	E	Wongan Hills and Manmanning	Jul-Sep
<i>Darwinia acerosa</i>	E	E	Mogumber, Wannamal, Gillingarra	Sep-Nov
<i>Daviesia dielsii</i>	E	V*	Moora, Watheroo, Marchagee, Dalwallinu	Jul-Aug
<i>Eremophila resinosa</i>	E	E	Yellowdine, Wyalkatchem	Sep-Jan
<i>Eremophila virens</i>	E	E	Mukinbudin, Westonia, Coolgardie	Aug-Oct
<i>Eremophila viscida</i>	E	E	Between Mullewa and Lake Hope, Ballidu	Sep-Oct
<i>Eucalyptus brevipes</i>	E	E	NE of Mukinbudin	Jul-Sep
<i>Eucalyptus crucis</i> subsp. <i>crucis</i>	E	V*	Westonia	Dec-Mar
<i>Eucalyptus pruiniramis</i>	E	E	Mogumber-Three Springs	Jan
<i>Frankenia parvula</i>	E	E	Mortlock River	-
<i>Glyceria drummondii</i>	E	E	Mingenew, Beverley	Jul-Oct
<i>Goodenia arthrotricha</i>	E	*	Wannamal, Moora, Ellis Brook, Bindoon	Nov,Dec
<i>Grevillea bracteosa</i> subsp. <i>bracteosa</i>	E	*	Geraldton, Howatharra,	Aug-Oct
<i>Grevillea christineae</i>	E	E	Mortlock River, Goomalling, Watheroo, Upper Swan	Sep
<i>Hakea aculeata</i>	E	V*	Cunderdin-Brookton	Sep-Oct
<i>Jacksonia quairading</i> ms	E	E	Quairading	Oct
<i>Melaleuca sciotostyla</i>	E	E	Wongan Hills, Cadoux	Aug
<i>Philotheca falcata</i>	E	X	Yellowdine	Oct
<i>Philotheca wonganensis</i>	E	E	Wongan Hills, Northampton	Aug-Sep
<i>Ptilotus fasciculatus</i>	E	E	Cunderdin, Gonyidi, Coorow, Kondinin, Marchagee, Koonbabbie, Yenyening Lakes NR, Seagroatt NR	Oct,Nov
<i>Spirogardnera rubescens</i>	E	E	Bindoon-Eneabba, Alexander Morrison NP	Aug-Nov
<i>Stylidium coroniforme</i> subsp. <i>coroniforme</i>	E	E	Wongan Hills, Latham	Sep
<i>Verticordia hughanii</i>	E	E	Dowerin-Goomalling	Nov-Feb

Total Endangered: 29

Vulnerable Taxa

Species/Taxon	WA IUCN Rank	EPBC Rank	Distribution	Flowering period
<i>Acacia aphylla</i>	V	V	Perth - Northam	Aug-Sep
<i>Acacia brachypoda</i>	V	E*	Brookton, Beverley, Darkin Swamp	May
<i>Acacia caesariata</i>	V	*	Wyalkatchem, Lake Grace, Corrigin	Jul-Sep
<i>Acacia denticulosa</i>	V	V	Beacon-Mt Churchman, Neale Junction NR	Aug-Nov
<i>Acacia lanuginophylla</i>	V	E*	Newdegate-Pingaring	Aug-Oct
<i>Allocasuarina fibrosa</i>	V	V	Tammin, Beverley	Sep-Nov
<i>Banksia mimica</i>	V	E*	Whicher Range, Kalamunda, Mogumber, Gingin	Dec-Jan
<i>Banksia serratuloides</i> subsp. <i>serratuloides</i>	V	V	Mogumber, Moora, Boothendarra, Gillingarra	Jun-Sep
<i>Banksia sphaerocarpa</i> var. <i>dolichostyla</i>	V	V	Ironcaps, Forrestania, Mt Hampton, Woollocutty	Mar-May
<i>Boronia adamsiana</i>	V	V	Mukinbudin	Jun-Jul
<i>Boronia revoluta</i>	V	E*	Ironcaps, Hatter Hill	Sep-Oct
<i>Calectasia pignattiana</i>	V	V	Quairading, Coorow, Frankland, Toolibin	Aug-Oct
<i>Eleocharis keigheryi</i>	V	V	Kenwick, Lesueur, Cataby, Wannamal, Ellenbrook, Boyanup, Waterloo, Julimar, Lesueur, Bolgart	-
<i>Eremophila ternifolia</i>	V	E*	Wongan Hills region	Oct-Feb
<i>Eremophila vernicosa</i>	V	V	Wubin/Dalwallinu, Coorow	Sep
<i>Eucalyptus recta</i>	V	*	Cadoux, Manmanning	
<i>Eucalyptus steedmanii</i>	V	V	E of Hyden	Jan-Mar
<i>Eucalyptus synandra</i>	V	V	Paynes Find-Koorda, Morawa	Feb
<i>Frankenia conferta</i>	V	X*	Ballidu, (East of York)	-
<i>Gastrolobium graniticum</i>	V	E*	Coolgardie, Gnamma Hill, Naremben, Yellowdine, Bullabulling	Aug-Nov
<i>Grevillea dryandroides</i> subsp. <i>hirsuta</i>	V	E*	Cadoux - Corrigin, Dowerin	Sep-Oct, Fe-Ma
<i>Lechenaultia larcina</i>	V	E*	SW of Northam, Brookton	Oct-Dec
<i>Microcorys eremophiloides</i>	V	V	Wongan Hills, Konningorring, Ejanding	Jul-Nov
<i>Muelleranthus crenulatus</i>	V	*	Lake Cronin	Jul
<i>Myriophyllum lapidicola</i>	V	E*	NW of Chiddarcooping Hill, Yowie Rock, Juardi, Yanneymooring	Sep
<i>Rhagodia acicularis</i>	V	V	Wongan Hills	Oct-May
<i>Roycea pycnophylloides</i>	V	E*	Meckering, Cunderdin, Pingrup, Kondinin	Nov
<i>Stylidium merrallii</i>	V	V	Near Lake Brown, Mukinbudin, Mouroubra Station	-
<i>Thomasia glabripetala</i>	V	V	E of York	Sep-Oct
<i>Thomasia montana</i>	V	V	Wyalgima Hill	Sep-Oct

Total Vulnerable: 30

Presumed Extinct Taxa

Species/Taxon	WA IUCN Rank	EPBC Rank	Distribution	Flowering period
<i>Thomasia gardneri</i>	X	X	Mt Holland	Sep

Total Presumed Extinct: 1

Total DRF (CR+ E+ V+ X) = 94

Priority One Taxa

Species/Taxon	Distribution	Flowering period
<i>Acacia desertorum</i> var. <i>nudipes</i>	Ghooli, Southern Cross, Yellowdine	
<i>Acacia inceana</i> subsp. <i>latifolia</i>	Kalannie, Jibberding	Aug-Sep
<i>Acacia leptoneura</i>	Dowerin	Aug
<i>Acacia nigripilosa</i> subsp. <i>latifolia</i>	Maya, Latham, Caron, Bunjil	Aug-Sep
<i>Acacia sclerophylla</i> var. <i>teretiuscula</i>	Bendering, Bruce Rock, Lake Grace, Merredin, Kondinin	Aug-Sep
<i>Acacia</i> sp. Goodlands (BR Maslin 7761) [aff. <i>resinosa</i>]	Lake Moore	Jul, Aug
<i>Acacia</i> sp. Kalannie North (BR Maslin 7702) [aff. <i>baxteri</i>]	Kalannie, Goodlands	Jun-Jul
<i>Acacia</i> sp. Kalannie North East (BR Maslin 7519) [aff. <i>rigens</i>]	Kalannie, Carlyarn	Jul, Aug
<i>Acacia</i> sp. Manmanning (BR Maslin 7711) [aff. <i>multispicata</i>]	Kalannie, Manmanning	Aug-Sep
<i>Acacia</i> sp. Petrunder Rocks (BR Maslin 7714) [aff. <i>ancistrophylla</i>]	Petrunder Rocks, Kalannie, Koorda	Jun-Aug
<i>Acacia stanleyi</i>	Mollerin, Lake Moore	Jul-Sep
<i>Acacia tetraneura</i>	Bruce Rock, Pingaring, Corrigin	Jun-Aug
<i>Acacia torticarpa</i>	Kumminin, Yorkrakine	Jul
<i>Acacia trinalis</i>	Wongan Hills, Goomalling, Miling, Marchagee	Sep
<i>Acacia websteri</i>	Bencubbin, Coolgardie	-
<i>Andersonia saxatilis</i> ms	<small>Beverley, Amadale, Serpentine Jarrahdale, Mt Vincent, Wandering, North Bannister</small>	
<i>Aotus lanea</i>	The Basin, east of Lake King, Salmon Gums	Apr
<i>Aotus</i> sp. Cunderdin (B.J. Lepschi et al. 3587)	Tammin, Cunderdin	
<i>Arthropodium</i> sp. Yenyenning (G.J. Keighery & N. Gibson 2957)	Yenyenning Nature Reserve	Oct
<i>Baeckea grandibracteata</i> subsp. Parker Range (K. Newbey 9270)	Parker Range	Oct
<i>Baeckea</i> sp. Baladjie (PJ Spencer 24)	Westonia, Bullfinch	Jun
<i>Baeckea</i> sp. Beringbooding (AR Main 11/9/1957)	Beringbooding, Cunderdin Hill, Mukinbudin, Barbalin	Aug
<i>Baeckea</i> sp. Blue Haze Mine (P. Armstrong 06/910)	Forrestania	
<i>Baeckea</i> sp. Bullfinch (K.R. Newbey 5838)	Bullfinch, Southern Cross, Mt Hampton	Sept
<i>Baeckea</i> sp. Crossroads (B.L. Rye & M.E. Trudgen 241186)	Forrestania	Nov
<i>Baeckea</i> sp. Eujinyn (J Buegge D99)	Bruce Rock, Eujinyn	Nov
<i>Baeckea</i> sp. Forrestania (KR Newbey 1105)	Forrestania, Hyden	
<i>Baeckea</i> sp. Kellerberrin (CA Gardner sn PERTH 03351009)	Kellerberrin	
<i>Baeckea</i> sp. Koorda (WE Blackall 3371)	Wongan Hills, Bencubbin, Koorda, Kalannie	Oct
<i>Baeckea</i> sp. Lake Cronin (KR Newbey 9191)	Lake Cronin	Oct
<i>Baeckea</i> sp. Muntadgin (ET Bailey 231)	Muntadgin	
<i>Baeckea</i> sp. Sheoaks Rocks (ME Trudgen MET5452)	Sheoaks Rocks	
<i>Baeckea</i> sp. Stockton Road (ME Trudgen MET22077 & B Rye)	Mukinbudin	Oct
<i>Baeckea</i> sp. Tampia Hill (J.C. Anway 327)	Kellerberrin, Quarading, Naremben, Bruce Rock	Aug-Sep
<i>Baeckea</i> sp. Upper Swan (Miss M Eaton s.n. 1888)	? Northam	
<i>Baeckea</i> sp. Wialki (GM Storr 4/10/1958)	Wialki, Bonnie Rock, Diemals	Oct-Nov
<i>Baeckea</i> sp. Yacke Yackine Dam (KR Newbey 9195)	Yacke Yackine Dam, Bullfinch	Oct
<i>Baeckea</i> sp. Youndegin Hill (AS George 15772)	Cunderdin, Tammin, Gnowangerup, Mt Cole, Wandoo NP	Nov
<i>Beyeria apiculata</i>	Wongan Hills	Sep
<i>Beyeria constellata</i>	Cadoux, Manmanning	Sep
<i>Beyeria disciformis</i>	Wubin, Buntine	
<i>Brachyloma nguba</i>	Forrestania, Dragon Rocks, NW of	Apr-May

	Munglinup	
Brachyloma sp. Forrestania White (M Hislop & F Hort MH2591)	Forrestania	May
Caesia sp. Ennuin (N. Gibson & M.N. Lyons 2737)	Ennuin	
Caladenia cristata	Miling-Dalwallinu	Sep-Oct
Caladenia ornata x	Pithara	Sep
Calandrinia sp. Piawaning (A.C.Beauglehole 12257)	Piawaning, Arthur River	Oct
Calothamnus superbus	Pigeon Rocks	
Calytrix acutifolia subsp. brevifolia	Calingari	Aug-Sep
Chorizema circinale	Grasspatch, Ninety Mile Tank, NW Esperance	Sep
Commersonia sp. Bindoon (C. Wilkins & F. & J. Hort CW 2155)	Wongan Hills	Feb/Oct
Conospermum galeatum	Kellerberrin, Yilgarn	
Conostylis caricina subsp. elachys	Gunyidi, Goomalling, Dowerin, Bindoon	Aug, Sep
Dampiera glabrescens	Ballidu	May
Dampiera scaevolina	Bencubbin, Holt Rock, Beacon	Oct-Nov
Dampiera triloba	Cunderdin	Aug-Dec
Darwinia sp. Wyalgima Hill (L.W.Sage et al LWS 1549)	Beverley	Sep
Dicrastylis capitellata	Mt Heywood, Hyden, Clyde Hill	Nov-Dec
Dillwynia sp. Capel (P.A. Jurjevich 1771)	Forrestania	Sep-Oct
Drummondita wilsonii	Parker Range	Jun-Jul
Eremophila adenotricha	Holleton, (North of Hyden - Glenelg Hills)	Sep-Nov
Eremophila glabra subsp. Kokeby (R. Davis 5080)	Mt Kokeby	
Eremophila glabra subsp. York (P.G. Wilson 12172 B)	York	Aug
Eremophila sp. Beverley (K. Kershaw KK 2438)	Mt Kokeby	
Eucalyptus myriadena subsp. parviflora	Hyden, Mt Holland	
Eucalyptus sp. Mukinbudin (D. Nicole & M. French DN 3486)	Mukinbudin	
Euryomyrtus sp. Parker Range (N. Gibson & M. Lyons 2269)	Parker Range	Oct
Frankenia bracteata	Mullewa, Cunderdin	Oct
Gastrolobium tenue	Belka, Shackleton, Naremben, South Doodlakine, Bruce Rock	
Glossostigma trichodes	Chiddarcooping, Warrachupin Rock	Sep
Gnephosis intonsa	Gibraltar, Boorabbin, Dundas	Sep
Gnephosis setifera	Bunjil, Morawa	-
Gnephosis sp. Norseman (KR Newbey 8096)	Jaurdi Stn, Norseman	Sep, Oct
Goodenia heatheriana	Parker Range, Marvel Loch	Sep, Oct
Grevillea lissopleura	North of Mt Holland	Aug, Sep
Grevillea luffitzii	Digger Rock, South Ironcap	Dec
Grevillea marriottii	Mt Holland	Sep, Oct
Grevillea minutiflora	Bencubbin, Mukinbudin	Sep
Grevillea phillipsiana	Norseman, Yardina, Kambalda, Widgiemooltha	Aug-Sep
Grevillea pinifolia	Coorow, Miling, Wubin, Bindi Bindi	Jul-Sep
Grevillea sp. Trayning (W. Johnston WJ 071)	Trayning	Dec
Grevillea squiresiae	Mukinbudin, Coorancooping	Dec
Guichenotia glandulosa	Uberin Rock	
Hakea chromatropa	Bolgart, Carani	Jul-Oct
Hemigenia dulca	Bullfinch, Chutawalakin Hill	Apr, Oct
Hibbertia axillibarba	South Ironcap	Sep, Oct
Hydrocotyle corynophora	Eastern source of Swan River	
Hypocalymma puniceum subsp. Cadoux (H Demarz 10533)	Cadoux	

Jacksonia debilis	Newdegate, Pantapin, Kukerin	Sep-Oct
Lechenaultia magnifica	Bindoon, Julimar SF	Nov
Lepidosperma amantiferrum	Forrestania	
Lepidosperma diurnum	Mt Holland	July
Lepidosperma ferriculmen	Forrestania	July
Lepidosperma sp. Mt Caudan (N. Gibson & M. Lyons 2081)	Parker Range	
Lepidosperma sp. Parker Range (N. Gibson & M. Lyons 2094)	Mount Caudin	
Leucopogon validus	Parker Range	Jun-Sep
Melaleuca grieviana	Cowcowing, Narembeen, Parker Range, Wyalkatchem	
Melaleuca manglesii	Meckering, Kellerberrin, Cowcowing, Tammin	
Micromyrtus redita	Wongan Hills, Wialki	Sep
Millotia newbeyi	Marvel Loch	Sep
Mirbelia taxifolia	Karalee	Sep
Persoonia leucopogon	Between Coolgardie & Laverton, Comet Vale (Menzies)	-
Philotheca langei	Chiddarcooping	
Philotheca nutans	Ninghan	Aug
Philotheca sp. Mukinbudin (M. Hancock s.n. 08/09/1999)	Barbalin	
Pseudactinia sp. Bruce Rock (J Buegge D36)	Bruce Rock	
Ptilotus stirlingii var. pumilus	Shark Bay, Tamala Stn	
Scaevola tortuosa	Kellerberrin, Wyola, Cunderdin, Hines Hill	Nov
Schoenus pennisetis	Cannington, Byford, Kenwick, Wongan Hills	Aug-Dec
Scholtzia eatoniana	Cunderdin	Nov-Dec
Senecio gilbertii	Bindoon, York, Wooroloo	Sep-Nov
Stenanthemum liberum	South Ironcap, Digger Rocks	Aug-Sep
Stenanthemum yorkense	York	
Stylidium coroniforme subsp. amblyphyllum	Quairading	
Stylidium validum	Forrestania, Bremer Range, Lake Johnson	Sep,Oct
Synaphea panhesya	Bindoon, Mogumber	Aug-Sep
Tecticornia flabelliformis	Lake Yindarigooda, Lake Deborah, Widgiemooltha, Eastern States	
Tecticornia sp. Lake Wallambin (K.A. Shepherd KS 1157)	Lake Wallambin	
Tetratheca plumosa	New Norcia	Aug-Oct
Teucrium sp. Dwarf (R. Davis 8813)	Mt Gordon, Norseman	April
Thomasia sp. New Norcia (Cayser s.n. Nov 1918)	New Norcia	
Thryptomene salina	Emu Rock	Oct
Thryptomene sp. Mt Clara (R.J. Cranfield 11702)	Mt Clara	Dec
Trymalium densiflorum	Trayning	Aug
Urodon sp. Narkal (BH Smith 1440)	Narkal, Koorda	Nov
Verticordia roei subsp. meiogona	Beacon, Mukinbudin, Dalwallinu, Wialki	Oct
Vittadinia cervicalis var. oldfieldii	Merredin, Laverton	
Westringia acifolia	Bodallin	Dec
Xanthoparmelia sargentii	Yilliminning Rock, Kalannie, Holt Rock	
Xanthoparmelia subimitatrix	Kamballup	

Total Priority One: 130

Priority Two Taxa

Species/Taxon	Distribution	Flowering period
<i>Acacia arcuatilis</i>	Camel Peaks, Kulin, Jitarning, Bending, Pallarup River	Jul-Sep
<i>Acacia ascendens</i>	Chiddarcooping Hill	Jul-Oct
<i>Acacia asepala</i>	Frank Hann NP, Marvel Loch, Lake Cronin, Forrestiana	Sep
<i>Acacia browniana</i> var. <i>glaucescens</i>	Bindoon, Julimar, Mogumber	
<i>Acacia concolorans</i>	Marvel Loch, Parker Range, Karlgarin	Jul-Sep
<i>Acacia congesta</i> subsp. <i>wonganensis</i>	Wongan Hills, Elphin	Aug-Sep
<i>Acacia cowaniana</i>	Mt Caroline, Mooranoppin Rock, Jilakin Rock, (Kellerberrin)	Apr-Sep
<i>Acacia drewiana</i> subsp. <i>minor</i>	Wongan Hills, Newdegate-Lake King, Nyabing	
<i>Acacia dura</i>	Piawaning, Wongan Hills, Elphin, Yerecoin	Aug-Oct
<i>Acacia heterochroa</i> subsp. <i>robertii</i>	Bottle Rock, Varley, Digger Rock, South Ironcap	
<i>Acacia kerryana</i>	Norseman, Jimberlana Hill, Bremer Range, Lake Cronin, Spargoville	Dec-Feb
<i>Acacia lirellata</i> subsp. <i>compressa</i>	Ballidu, Bruce Rock, Holleaton, Muntadgin	
<i>Acacia sclerophylla</i> var. <i>pilosa</i>	Dumblebung, Doodlakine, Tammin	Aug-Oct
<i>Acacia subrigida</i>	Mukinbudin, Walyahmoning Rock, Ida Valley Stn, Nanga Stn, Tamala Station	Sep, Oct
<i>Acacia synoria</i>	Lake Moore, Kalannie, Carlyarn Rock, Moorine Rock	Oct-Dec
<i>Acacia tuberculata</i>	Mt Vernon, Camel Peaks, Hyden	
<i>Acacia vittata</i>	Lake Logue, Arrowsmith, Mount Kokeby	
<i>Aluta aspera</i> subsp. <i>localis</i>	Gabbin, Korrelocking, Mukinbudin	-
<i>Amperea micrantha</i>	Mokine, Yoongarillup, Busselton, Capel, Whicher Range, Ruabon NR	Sep-Oct
<i>Andersonia carinata</i>	Wagin, Pingelly, Dongolocking, Corrigin	
<i>Baeckea</i> sp. <i>Calingiri</i> (F Hort 1710)	Calingiri	
<i>Baeckea</i> sp. <i>Narembeen</i> (GJ Keighery & N Gibson 3010)	Narembeen	Sep
<i>Baeckea</i> sp. <i>North Ironcap</i> (RJ Cranfield 10580)	North Ironcap, Boodarding Rock	Oct, Nov
<i>Banksia dallanneyi</i> subsp. <i>agricola</i>	Jubuck, Traysurin, Brookton, Corrigin, Pingelly	Sep
<i>Banksia rufa</i> subsp. <i>tutanningensis</i>	Tuatanning NR, Mawson	Sep-Oct
<i>Banksia splendida</i> subsp. <i>splendida</i>	Tammin, Bruce Rock	Jul-Aug
<i>Bentleya diminuta</i>	Mt Ragged, Cape Arid N.P.	Sep
<i>Boronia ericifolia</i>	Moora, Wongan Hills, Wongamine N.R.	Aug-Oct
<i>Boronia westringioides</i>	Forrestania, Lake Cronin	Jul-Sep
<i>Brachysola halganiacea</i>	Karroun Hill, Mt Jackson	Oct
<i>Calandrinia kalanniensis</i>	Kalannie, Petrudor Rock, Xantippe Rock, Karara Station, Bonnie Rock, Yanneymooning NR, Hughden Rock	Dec-Jan
<i>Calytrix oncophylla</i>	Wongamine N.R.	Sep-Oct
<i>Calytrix parvivalis</i>	Minnivale	Oct
<i>Calytrix</i> sp. <i>Jingaring</i> (Obbens, Davis & Sage LWS 1332)	Pingelly, Narembeen	Oct-Nov
<i>Chamelaucium croxfordiae</i> ms	Dryandra, Boyagin Rock	Oct
<i>Comesperma griffinii</i>	Eneabba, Indarra	
<i>Conospermum sigmoideum</i>	Frank Hann NP, Forrestania	
<i>Conostylis albescens</i>	Booraan	Aug
<i>Cyanicula ixioides</i> subsp. <i>candida</i>	Bindoon, Smiths Mill, York, Wooroloo	Aug-Oct
<i>Darwinia</i> sp. <i>Westdale</i> (F Hort 864)	Beverley	
<i>Daviesia newbeyi</i>	near Barker Lake, Fitzgerald River NP, Ravensthorpe, Near Mt Buraminya	
<i>Daviesia sarissa</i> subsp. <i>redacta</i>	E of Yellowdine	
<i>Daviesia smithiorum</i>	Nammelkatchem, Dowerin	Jun-Jul

Drummondita sp. Trayning (AM George 97)	Billyacatting Hill, Kununoppin	Jun
Eremophila brevifolia	Geraldton, Mt Caroline, Northampton	Aug-Sep
Eremophila complanata	Chiddarcooping Hill, Wilgoyne Hill	Sep-Oct
Eremophila sargentii	Wongan Hills	-
Eucalyptus educta	Dromedaries Hill	-
Eutaxia lasiocalyx	Jilbadji, Mt Holland, Forrestania, Lake Barker, Parker Range	Sep-Nov
Fitzwillia axilliflora	Lake Magenta, Lake Bryde, Cowcowing, Moora, Lake Cairlocup, (Newdegate)	Oct
Gastrolobium wonganense	Wongan Hills	Sep, Oct
Goodenia granitica	Mukinbudin, Westonia	Nov-Feb
Grevillea endlicheriana subsp. wonganensis (S. D. Hopper 1999)	Wongan Hills	Jul
Grevillea kenneallyi	Wongan Hills, Elphin	Aug
Grevillea nana subsp. abbreviata	Wubin, Dowerin, Mukinbudin, Xantippe Reserve	May-Oct
Grevillea rosieri	Mollerin, Bunketch, Xantippe Reserve, Doodarding	Jul
Guichenotia asteriskos ms	Newdegate, Dunn Rock, Lake King	Oct
Hakea pendens	Parker Range, East Forrestania	Sep
Hakea rigida	Campion, Bullfinch, Wallaroo Rock, Mt Burges	Sep
Hibbertia chartacea	Bodallin, Carrabin, Bruce Rock	Sep
Hyalosperma stoveae	Perrinvale Station, Burnabinmah	-
Jacksonia rubra	Tammin, Moora - Badgingarra	Oct
Lasiopetalum sp. Northam (F Hort 1196)	Northam, Clackline	Oct, Nov
Lechenaultia hortii	York	Nov-Jan
Lepidium merrallii	Marvel Loch, Mt Jackson, Koolyanobbing, Burnabinmah	Aug-Sep
Lepidosperma sp. Billyacatting (S.D. Hopper 8630)	Billyacatting N.R.	
Leucopogon amplexans	Tammin, North of Kellerberrin	Apr-Sep
Leucopogon cymbiformis	Mt Many Peaks, Porongurup NP, Cheynes Beach	-
Leucopogon sp. Flynn (F Hort, J Hort & A Lowrie 859)	Wandoo CP, York	Dec-Feb
Lilaeopsis polyantha	Elyaring Brook	Nov
Lissanthe scabra	Jaurdi Stn, Marvel Loch, Southern Cross, Frog Rock Nature Reserve	Aug, Sep
Logania exilis	South Ironcap, Mt Holland, Hatter Hill, Boodarding Rock, Digger Rocks	Sep-Oct
Melaleuca oldfieldii	Kalbarri	Nov
Microcorys lenticularis	Tarin Rock, Ongerup, Beaufort Inlet, Quairading	Nov-Jan
Millotia pilosa	Mt Stirling, Mt Caroline	Sep
Millotia tenuifolia var. laevis	Hagboom Lake	Sep-Oct
Olearia laciniifolia	Lake Grace, Mt Beaumont	Aug, Sep
Opercularia rubioides	Jerramungup, Lake Cairlocup, North of Stokes Inlet, Harrismith, Quairading	-
Papistylus grandiflorus	Watheroo, Coorow, Wongan Hills	Aug-Sep
Petrophile clavata	Calingiri, Coorow, Alexander Morrison NP	May-Aug
Petrophile trifurcata	Wongan Hills, Pithara	Sep
Phlegmatospermum eremaeum	Coolgardie, Norseman, Cocklebidy, Forrest	Aug-Oct
Podotheca pritzelii	Wongan Hills, Kwolyin, Lake Anneen, Nannine	Oct
Pultenaea indira subsp. pudoides	Arthur River, Yilliminning, Corrigin	
Scholtzia sp. Gunyidi (JD Briggs 1721)	Dalwallinu, Gunyidi, Watheroo	Sep-Nov
Stylidium chiddarcoopingense	Chiddarcooping NR	Sep, Oct
Stylidium pseudosacculatum	Charles Gardner Reserve, Tammin	Nov
Stylidium sp. Moora (J.A. Wege 713)	Gillingarra	Oct
Synaphea boyaginensis	Boyagin NR, Lake Bryde NR	Sep-Oct
Synaphea rangiferops	Calingiri, Mogumber, Gillingarra	Aug-Sep
Synaphea sparsiflora	Eneabba, Gillingarra	Aug-Sep

Synaphea tamminensis	Tammin	Aug-Sep
Torrendia grandis	Kellerberrin	
Torrendia inculta	Kellerberrin, Corrigin	
Trichocline sp. Treeton (BJ Keighery & N Gibson 564)	Treeton, Meelon, Beaufort River	-
Tricoryne sp. Wongan Hills (BH Smith 794)	Yandanooka Hill, Wongan Hills, Depot Hill, Mingenew	Oct, Nov
Verticordia dasystylis subsp. dasystylis	Yellowdine, Duladgin	Nov
Verticordia multiflora subsp. solox	Cockatoo Tank, Mt Holland Road, Lookout Hill, Norpa	Oct
Verticordia pulchella		Sep-Oct
Verticordia wonganensis	Wongan Hills	Nov

Total Priority Two: 100

Priority Three Taxa

Species/Taxon	Distribution	Flowering period
<i>Acacia anarthros</i>	East of Wannamal, Hay Flat NR, Calingiri, Yerecoin, Lake Mears, Pingelly	May-Jun
<i>Acacia ancistrophylla</i> var. <i>perarcuata</i>	Bruce Rock, Carrabin, Mukinbudin, Korbel, Dundas, Mt Andrew	
<i>Acacia campylophylla</i>	York, Northam, Tammin, Wyalkatchem, Dowerin, Quairading, Pantapin, Meckering	Jun-Sep
<i>Acacia crenulata</i>	Southern Cross, Carrabin, Bullabulling, Walyahmoning Rock, Chiddarcooping	Sep-Oct
<i>Acacia cummingiana</i>	Moora, Barberton, Badgingarra, Wannamal, Dandaragan, Watheroo N.P., Boonanaring	
<i>Acacia cylindrica</i>	Southern Cross, Mt Correll, Kulja, Hunt Range	
<i>Acacia deflexa</i>	Toolibin, Bendering, Wickepin, Wongan Hills, Corrigin	Aug
<i>Acacia dissona</i> var. <i>indoloria</i>	Kulja, Bruce Rock, Muntadgin, Frank Hann N.P., Ballidu	Aug-Sep
<i>Acacia drummondii</i> subsp. <i>affinis</i>	Bindoon, Muchea, Julimar, Wannamal, Mullewa, New Norcia, Drummond NR	
<i>Acacia eremophila</i> var. <i>variabilis</i>	Ardath, Comet Vale, Zanthus, Balladonia	
<i>Acacia filifolia</i>	Wongan Hills, Burracoppin, Southern Cross, Coorow, Marchagee	May-Nov
<i>Acacia formidabilis</i>	Wanarra, Perenjori, Paynes Find, Southern Cross, Warralackin, Bungabin Hill	
<i>Acacia horridula</i>	Helena Valley - Serpentine	May-Aug
<i>Acacia inophloia</i>	Pederah, Bendering, Muntadgin, Moora, Mt Bebb, Kulin	
<i>Acacia insolita</i> subsp. <i>efoliolata</i>	Brookton, Pingelly, Tutanning, Darkin Swamp	Aug
<i>Acacia isoneura</i> subsp. <i>nimia</i>	Billabong, Murchison River, Ajana, Coorow, Watheroo	
<i>Acacia lirellata</i> subsp. <i>lirellata</i>	Coorow, Watheroo, Northam, Quairading, Tammin, Meckering	Jun-Sep
<i>Acacia oncinophylla</i> subsp. <i>oncinophylla</i>	Mogumber, Mundaring, John Forrest NP, Serpentine, Mt Lennard, Dwellingup	
<i>Acacia phaeocalyx</i>	Kellerberrin, Wongan Hills, Tammin, Quairading	Apr-Dec
<i>Acacia pulchella</i> var. <i>reflexa</i> acuminate bracteole variant <small>(R. C. Brown 1999)</small>	Wannamal, Bindoon, York, Boonanaring	
<i>Acacia repanda</i>	Lake Hurlstone, Lake Carmody, Wongan Hills, The Basin	
<i>Acacia ridleyana</i>	Northampton, Gregory, Murchison River, Mogumber	
<i>Acacia scalena</i>	Wubin, Buntine Reserve, Nugadong, Ballidu, Latham, Maya, Petruder Rocks	May-Sep
<i>Acacia singula</i>	Lake Grace, Lake King, Hatter Hill, Pyramid Lake, South Ironcap, Digger Rocks	
<i>Acacia undosa</i>	Belka, Lake King, Hyden, Lake Magenta, Tammin, Warralackin, Forrestania	Aug-Sep
<i>Adenanthos cygnorum</i> subsp. <i>chamaephyton</i>	Chidlow, Mundaring, Collie, Bindoon, Muchea, Sawyers Valley	
<i>Allocasuarina grevilleoides</i>	Three Springs - Mogumber, Ellis Brook, Darling range	Sep-Nov
<i>Angianthus micropodioides</i>	Perth, Meckering, Mongers Lake, Bunjil, Warriedar, Mollerin	
<i>Angianthus prostratus</i>	Glenom Stn, Baladjie Lake NR, Quairading, Lake Barlee, Bulga Downs Stn, Kalgoorlie	Jul-Sept
<i>Anigozanthos bicolor</i> subsp. <i>exstans</i>	Meckering, Pingelly, Meenaar	-
<i>Arnocrinum drummondii</i>	Gunyidi, Watheroo, Kalbarri, Cooloomia, Mullewa, (Monkopen)	Mar-Sep-Dec
<i>Austrostipa blackii</i>	Merredin, Dalwallinu, Jaurdi, Widgiemooltha, eastern States, Tutanning Nature Reserve	
<i>Baeckea</i> sp. Elsewhere Road <small>(ME Trudgen 5420)</small>	Chiddarcooping, Walyahmoning, Yandegin Hill, Mukinbudin	Sep-Oct
<i>Baeckea</i> sp. Hatter Hill <small>(KR Newby 3284)</small>	Yokrakine, Hatter Hill, Frank Hann NP	July, Oct
<i>Baeckea</i> sp. Hyden (JM Brown 141)	Hyden, Dongolocking, Tarin Rock, Pingaring, Bendering, Dragon Rocks	May, Aug-Oct
<i>Baeckea</i> sp. Merredin <small>(K.R. Newbey 2506)</small>	Merredin, Norpa, Varley, Hatter Hill, Gibb Roack, Lucy Rock, Burracoppin	Aug-Oct
<i>Baeckea</i> sp. Parker Range <small>(M Hislop & F Hort MH2968)</small>	Parker Range, Die Hardy Range	Aug
<i>Baeckea</i> sp. Tammin <small>(R Coveny 8319 & B Habberley)</small>	Billycatting Hill, Mt Stevens, Kellerberrin, Waddouring, Yellowdine, Welbungin, North Bungulla NR, Tammin, Younegin	Aug-Sep
<i>Banksia dallanneyi</i> subsp. <i>pollostata</i>	Moore River, Moora, Watheroo, Wongan Hills, Gillingarra	Aug
<i>Banksia horrida</i>	Tammin, Corrigin, Naremben, Goomalling, Bruce Rock, Quairading	Oct-Dec
<i>Banksia kippistiana</i> var. <i>paenepeccata</i>	Warradarge Hill, Lesueur NP, Eneabba, Wannamal, Regans Ford, Gingin	Sep-Oct
<i>Banksia lullfitzii</i>	Southern Cross, Frank Hann N.P., Coolgardie	Mar-May
<i>Banksia pteridifolia</i> subsp. <i>vernalis</i>	Dandaragan, Alexander Morrison N.P., Three Springs, Forrestfield, Gillingarra, Boonanaring NR, Maida Vale, Gooseberry Hill	Sep

Banksia rufa subsp. flavescens	Ravensthorpe, Lake King, Frank Hann, Forrestania, Hatters Hill, Bodallin	Aug
Banksia rufa subsp. obliquiloba	Corrigin, Dudinin, Bending, Boolanelling NR	Sep-Oct
Banksia viscida	Hatter Hill, Digger Rocks, South Ironcap	Jul-Sep
Beaufortia eriocephala	Mt Lesueur, Cataby, Coorow, Mogumber, York, St Ronans N.R.	Sep-Oct
Bossiaea atrata	Ongerup, Dragon Rocks, Hatter's Hill, Dowerin, Lake King, Buniche, Manmanning	May,Jun,Aug
Bossiaea concinna	Cunderdin, Woolgangie, Coolgardie, Lake Mason Stn, Jerramungup, Pithara	Sep,Oct
Brachyloma mogin	Katanning, Corrigin, Brookton, Cherry Tree Pool, Gorge Rock, Kulin, Mt Kokeby, Dalyup, Gibson	May-Jun
Calandrinia porifera	Boorabbin, Jilbadji, Fitzgerald River NP, Queen Victoria Spring, Southern Cross, Mukinbudin, Muntagin, South Tammin, Yanneymooing Hill	Oct
Calytrix nematoclada	Lake King, Lake Lockhart, Cairlocup, Bending	Nov-Jan
Calytrix plumulosa	Wubin, (Bencubbin), Koorda, Chiddarcooping, Mt Churchman, Mollerin, Mt Gibson, Bencubbin, Bunjit	Oct-Nov
Chamaescilla gibsonii	Ellen Brook, Yule Brook, Mogumber, Muchea, Drakesbrook, Capel, Brunswick Jun	
Chamelaucium sp. Wongan Hills (B.H. Smith 1140)	Coorow, Moore River, Winchester, Hamelin Pool, Damboring, Watheroo	
Comesperma calcicola	Kau Rock, Pine Hill, Norseman, Forrestania	
Conospermum eatoniae	Goomalling, Quairading, Coorow, Tammin, Watheroo, Hines Hill, Dowerin	
Conospermum scaposum	Mogumber, Cataby, Tincurrin, Nomans Lake, Nambung, Badgingarra, Wandoo Conservation Park, Darkin Swamp	Jan
Cryptandra beverleyensis	Beverley, Narrogin, Kellerberrin, Goomalling, Beaufort River, Bokal	Aug-Sep
Cryptandra dielsii	Manmanning, Tammin, Holt Rock, Durokoppin	Jul-Sep
Cryptandra polyclada subsp. polyclada	Tammin, Lake King, Boorabbin, Hyden, Forrestania	Ja-F,M,Au-Oc
Cryptandra stellulata	Morawa, Yandanooka, Carnamah, Kellerberrin	Aug-Sep
Cyanicula fragrans	Paynes Find, Bimbijy Stn, Beacon, Mullewa	Aug-Sep
Daviesia debilior subsp. sinuans	Wongan Hills	May-Jul
Daviesia elongata subsp. implexa	Hopkins NR, Kulin, Newdegate, Lake Grace	
Daviesia epiphyllum	Gairdner Range, Warradarge Hill	May-Jul
Daviesia uncinata	Quairading, Yoting, Varley, Newdegate, Tammin, Yilliminning	
Dicrasytis reticulata	Kumminin, Yorkrakine, Wongan Hills, Damboring	Aug-Dec
Dicrasytis velutina	Watheroo NP, Yorkrakine, Bindi Bindi, Elphin	Nov-Dec
Dillwynia acerosa	Coolgardie, Scaddan, Hyden, Condingup, Boxwood Hills, Ravensthorpe, Grass Patch	-
Elatine macrocalyx	Lake Cronin, Googarrie, Northern Territory	May-Oct
Eucalyptus exigua	Lake Cronin, Hyden, Mt Day, Middle Ironcap, Lake Varley, Naremben, Benari	-
Eucalyptus histophylla	Newman Rock, Balladonia, W of Lake Johnson	Apr-Jun
Eucalyptus macrocarpa x pyriformis	N of Bolgart, Calingiri, Piawaning, Wongan Hills, Watheroo, Irwin View, Moora	-
Eucalyptus sargentii subsp. onesia	Meckering, Carani, Gomalling, Piawanning, Cunderdin, York	
Eucalyptus spathulata subsp. salina	Tammin, Quairading, Corrigin, Beverley, Pingaring, Kondinin	
Eucalyptus subangusta subsp. virescens	Manmanning, Watheroo, Naremben, Cowcowing, Tandegin	
Euryomyrtus leptospermoides	Koorarawalyee, Burracoppin, Korbel, Karalee, Merredin, Muntagin, Boodarding Rock, NW of Norseman	Aug-Nov
Euryomyrtus patrickiae	Burnerbinmah Stn, Sandstone, Yalgoo, Youanmi Downs, Gossan Hills, Warrawagine Stn	Mar,Jul,Sep,Oct
Euryomyrtus recurva	Wubin, Youanmi, Lake Austin, Wanarie Stn, Lake Moore	
Eutaxia acanthoclada ms	Hatter Hill, Forrestania, Mt Gibbs, Hyden	-
Eutaxia actinophylla	Norseman, Salmon Gums, Mt Newmont	Sep-Dec
Eutaxia nanophylla	Stirling Range, Gnowangerup, Borden, Duranillin, Lake Magenta, Murdong, Lake Cronin	Sep-Nov
Eutaxia rubricarina	Quairading, Beverley, Yellowdine, Forrestania	Aug-Oct
Frankenia drummondii	Hyden, Lake King, Johnston Lake	-
Frankenia georgei	Kalgoorlie, Laverton, Mt Manning Range	-
Frankenia glomerata	Waeel, Cunderdin, Lake King, Northam, Little Sandy Desert, Carnarvon Range, Norseman	Mar,Nov
Gastrolobium axillare	Mt Lesueur, Coomallo Creek, Moora, Wanneroo, Avon Valley NP, Yandan NR	Jul-Sep
Gastrolobium rotundifolium	Yerecoin, Carani, Calingiri	Aug-Sep
Gastrolobium semiteres	Boorabbin Rock, Southern Cross	Aug-Oct

<i>Gastrolobium spectabile</i>	Lake Grace, Fitzgerald River NP, Muntadgin, Cunderdin, Trayning, Kununoppin	
<i>Gastrolobium stenophyllum</i>	Narembeen, Fitzgerald River	Oct-Nov
<i>Gnephosis multiflora</i>	Meckering - Mortlock River Flats	Nov
<i>Gompholobium cinereum</i>	Wongan Hills, Mullewa, Wilroy, Mt Burges, Merredin, Koolyanobbing, Boorabbin	Sep-Oct
<i>Gompholobium wonganense</i>	Wongan Hills, Ballidu	Sep-Nov
<i>Gonocarpus pycnostachyus</i>	Israelite Bay, Merivale, Mt Heywood, Mt Baring, Little Sandy Desert	Oct-Jan, Apr
<i>Goodenia perryi</i>	Bunjil, Mt Gibson, Mollerin, Lake Moore, Ballidu, Kalannie, Wonganderrah	-
<i>Goodenia trichophylla</i>	Eneabba, Lake Grace, Cascades, Yellowdine, Jitarning	-
<i>Grevillea asparagoides</i>	Bindi Bindi, Perenjori, Wubin, Wongan Hills, Morawa, Latham	Jul-Sep
<i>Grevillea brachystylis</i> subsp. <i>brachystylis</i>	Busselton, Ruabon, Yoongarillup, Jarrahwood, Margaret River	Aug-Nov
<i>Grevillea candicans</i>	Dalwallinu, Mingenew, Geraldton, Galena, Yuna, Mullewa	Jul-Oct
<i>Grevillea eriobotrya</i>	Ninghan, Koorda, Mollerin to Mukinbudin, Bodallin, Beacon, Lake Moore	-
<i>Grevillea fastigiata</i>	Bandalup, Ravensthorpe, Phillips River, Jerdacuttup	Aug-Oct, Jan
<i>Grevillea florida</i>	Bindoon, New Norcia, Cataby	Jul-Sep
<i>Grevillea fulgens</i>	Mt Desmond, Mt Short	Aug-Sep
<i>Grevillea georgeana</i>	Die Hardy Range, Mt Manning, Mt Correll, Helena and Aurora Range, Bungalbin Hill	Jul
<i>Grevillea granulosa</i>	Mullewa, Bowgada, Morawa, Pintharuka	Jul
<i>Grevillea haplantha</i> subsp. <i>recedens</i>	Manmanning, Kodjodjin, Mollerin, Cowcowing, Yorkrakine, Cunderdin	Jun-Aug
<i>Grevillea insignis</i> subsp. <i>elliottii</i>	Hatters Hill, South Ironcap, Middle Ironcap, Digger Rocks, Gibbs Rock	Jul-Nov
<i>Grevillea manglesii</i> subsp. <i>dissectifolia</i>	North Bannister, Gleneagle, Helena Valley, Dwellingup, Wandering	Nov
<i>Grevillea pilosa</i> subsp. <i>redacta</i>	Holt Rock, Lake Cronin, Mt Holland	Sep
<i>Grevillea roycei</i>	Goomalling, Cunderdin, Dowerin, Brookton	Aug
<i>Grevillea tenuiloba</i>	Kirwan, Dandaragan, Canna, Pindar, Morawa	Sep
<i>Guichenotia impudica</i> ms	Konnongorring, Wongan Hills, Corrigin, Kellerberrin, Tammin, Mogumber, Walgoolan	-
<i>Guichenotia tuberculata</i> ms	Mogumber, New Norcia, Gillingarra, Wannamal, Bullsbrook	Aug, Sep
<i>Gunniopsis rubra</i>	Perenjori, Paynes Find, Ballidu, Bullfinch, Laverton	Sep-Oct
<i>Hemiandra coccinea</i>	Mullewa, Tardun, Wongan Hills, Quairading	Aug-Oct
<i>Hibbertia glabriuscula</i>	S of Carrabin	Sep
<i>Hibbertia glomerata</i> subsp. <i>wandoo</i>	Beverley, Wandoo CP, Boyagin NR, Brookton	Feb, Apr, Aug, Oct
<i>Hibbertia graniticola</i>	Chiddarcooping Hill, Chutawalakin Hill, Warralakin Rock	Sep
<i>Hibbertia pachyphylla</i>	Frank Hann NP, Forrestania	Sep-Nov
<i>Hopkinsia anoetocolea</i>	Arrowsmith, Eneabba, Meckering, Cunderdin (Mortlock River), Tammin	-
<i>Isoetes brevicula</i>	Graham Rock, Lake Varley, Jilakin, Muntadgin, Glenelg Hills, Narembeen, The Humps	Sep
<i>Isolepis australiensis</i>	East of Coujinup Hill, Lake Cronin, Eastern States, NZ	Jun, Sep
<i>Keraudrenia adenogyna</i> ms	Forrestania, Cairlocup, Frank Hann NP, Mt Holland	Sep
<i>Lasiopetalum fitzgibbonii</i>	Jilbadji, Jilakin, Nyabing, Jerramungup, Boxwood Hill, Bendinger	Sep-Nov
<i>Lechenaultia galactites</i>	Kokardine, Nth Beacon, Latham, Perenjori, Dandaragan, Koorda, Wubin, Buntine	Jun, Sep, Oct
<i>Lepidium genistoides</i>	Walyahmoning Rock, Boorabbin, (Cowcowing), Marvel Loch, (Mukinbudin)	Oct-Dec
<i>Lepidobolus densus</i> ms	Coorow, Marchagee, Dirk Hartog Is., Shark Bay, Kalbarri NP, Three Springs, Morawa	Oct
<i>Leucopogon</i> sp. <i>Bungulla</i> (RD Royce 3435)	Wongan Hills, North Bungulla, Kellerberrin, Manmanning	May, Jun
<i>Leucopogon</i> sp. <i>Ironcaps</i> (N Gibson & K Brown 3070)	South Ironcap, Middle Ironcap, Hatters Hill, Frank Hann NP, Welsh NR, Holleton	Aug
<i>Levenhookia octomaculata</i>	Kalbarri, Northampton, Bolgart, Canna, Lesueur, Ravensthorpe, Wicherina, Dinninup, Perenjori	Nov
<i>Melaleuca barlowii</i>	Latham, Koolanooka Hills, Yandanooka, Morawa	Apr
<i>Melaleuca sclerophylla</i>	Manmanning, Marchagee, Wongan Hills, New Norcia, Dalwallinu, Moora, Miling, Morawa, Caljie	-
<i>Microcorys tenuifolia</i>	Morawa, Kalbarri NP, Yuna, Wongan Hills, Marchagee	Oct-Jan
<i>Microseris scapigera</i>	Scaddan, Marvel Loch, Lake Grace, Fraser range, Norseman, Southern Hills Stn	Sep-Oct

Mimulus repens	Yalgoo, Murchison River, York, Lake Edith Withnell, Little Sandy Desert, NT, NSW	Aug-Nov
Mirbelia densiflora	Frank Hann NP, Kumarl, Hatter Hill	Jan
Monotoca leucantha	Mogumber, New Norcia, Bruce Rock, Pederah, Pingaring, Flat Rock, Fitzgerald River NP, Buniche Siding	Sep
Myriocephalus appendiculatus	Eneabba, Midland, Mt Ragged, Ellen Brook, Nallan Stn, Three Springs	Sep-Dec
Neurachne annularis ms	Bungalbin Hill, Helena & Aurora Range, Mount Manning Range	
Opercularia rubioides	Quarading	Sep-Nov
Oxymyrrhine plicata	Hyden, Lake King, Kulin, Frank Hann NP	Oct-Dec
Parmeliopsis macrospora	Kalgoorlie, Ninghan Stn, Wanjarri NR	
Persoonia chapmaniana	Carnamah, Moora, Koorda, Marchagee, Eneabba, Kalannie	Sep-Nov
Persoonia cymbifolia	Grass Patch, Scaddan, Mt Burdett	
Persoonia pungens	Dowerin, Kellerberrin, Manmanning, Bruce Rock, Coorow, Cadoux	
Persoonia rudis	Gairdner Range, Muchea, Jurien, Alexander Morrison NP, Lesueur N.P., Eneabba	Sep-Nov
Petrophile biternata	Jurien, Moora, Marchagee, Mogumber, Coorow	Sep
Petrophile pauciflora	Bimbiji, Mt Magnet, Mileura, Woolgorong	Aug
Petrophile plumosa	Bindoon, Mogumber, New Norcia	Jul-Nov
Petrophile sp. Pithara (P. Armstrong s.n. PERTH 06592090)	Pithara	
Phebalium brachycalyx	Wongan Hills, (Southern Cross), Wialki, Muntadgin, Tandagin, Digger Rocks	-
Phebalium drummondii	Dowerin, Bonnie Rock, Wialki, Koorda-Mollerin, Manmanning	Oct-Nov
Pityrodia sp. Yilgarn (AP Brown 2679)	Forrestania, Marvel Loch, Jilbadji, Norseman, Southern Cross (Barker Lake), Widgiemooltha	Oct, Nov
Podotheca pritzelii	Wongan Hills, Kwolyin, Lake Anneen, Nannine, Nangeen Hill, Lake Champion, Shackelton, Derdibin Rock, Baladjie Lake NR, Wannarra Stn, Mullewa, Morawa	Oct
Podotheca uniseta	Mongers Lake, Lake Moore, Koolanooka, Watheroo, Morawa, Lake O'Grady	Sep
Prostanthera nanophylla	Cadoux, Southern Cross, Jilbadji, Hyden, Mt Day	Oct-Nov
Psammomoya implexa	Wilroy, Whitewells - Ninghan, Wubin, Gabyon Stn, Morawa	Aug-Oct
Pseudactinia sp. Bungalbin Hill (FH & MP Mollmans 3069)	Between Bimbigy and Diemals, Helena Aurora Range	Jun-Jul
Pultenaea daena	Fitzgerald, West River, Lake Cobham, Digger Rocks, Frank Hann NP, Lake Johnston	Oct
Rhodanthe pyrethrum	Dobaderry Swamp	Oct-Dec
Sarcocornia globosa	Cunderdin, One Mile Rocks, Lake Fox, Meckering, Coorow	
Schoenus benthamii	Mogumber, Kenwick, Busselton, Elgin, Pinjarra, Kodjilup N.R., Bunbury, Condingup, Bremer Bay	
Schoenus capillifolius	Botherling, Beverley	Oct-Nov
Schoenus griffinianus	Wongan Hills	Sep-Oct
Spartothamnella sp. Helena & Aurora Range (JPC Armstrong 155-168)	Helena & Aurora Range, Blue Hill Range, Remlap, Koolyanobbing	
Stenanthemum bremerense	Bremer Range, Marvel Loch	Apr-Jun, Oct-Nov
Stenanthemum newbeyi	Bungalbin Hill, Koolyanobbing, Die Hardy Range, Ennuin Stn, Mt Manning	Au-Sep, De-Ja
Stylidium choreanthum	Helena & Aurora Range, Ghooli, Southern Cross, Kambalda, Koolyanobbing, Jaurdi Station	Sep-Oct
Stylidium cymiferum	Calingiri, Bindoon, Chittering, Toodyay	Oct
Stylidium longitubum	Upper Swan, Bullsbrook, Bunbury, Midland, Busselton, Arthur River, Jandakot	Nov
Stylidium pulviniforme	Dulagin Rock, Lake Johnston, Mt Madden, Lake King, Pallarup, Jerdacuttup, Weowanie Rock, Frank Hann NP	Sep-Nov
Stylidium sacculatum	Wongan Hills, Bolgart, Gillingarra, Coomberdale	Oct-Nov
Stylidium sejunctum	Ironcaps, Forrestiana	Sep-Oct
Styphelia sp. Bullfinch (M.Hislop 3574)	Bullfinch, Koolyanobbing, Die Hardy Range, Bullabulling	Apr/Jul
Synaphea constricta	Bendering, Kellerberrin, Dowerin, Minnivale, Wongan Hills, Manmanning, Duracoppin NR	Jun-Sep
Synaphea diabolica	York	Aug-Nov
Synaphea tripartita	Dragon Rocks, Flat Rock	Jul-Oct
Tecticornia fimbriata	Damboring	
Tetrateca pilifera	Two Rocks, Chidlow, John Forrest NP	Aug-Sep
Tetrateca retrorsa	Wongan Hills, Tutanning	Oct

<i>Tetratheca similis</i>	Bindoon, Mt Dale area, Wandoo CP	Aug-Sep
<i>Thomasia tenuivestita</i>	Wongan Hills, Winchester, Bending, York, Dingo Rock, Konongorong, Champion Bay, Boothendarra	Jul, Sep-Oct
<i>Thysanotus cymosus</i>	Muntadgin, Karlgarin, Hyden, Lake Grace, Ongerup, Kulin, Pingelly, Kojonup	Sep-Oct
<i>Thysanotus tenuis</i>	Northam, Wagin, Tincurrin, Pingelly, Toolibin NR	Sep
<i>Trachymene croniniana</i>	Stirling Range, Bruce Rock, Muntadgin, Lake Grace	Sep-Dec
<i>Tricoryne</i> sp. Morawa (GJ Keighery & N Gibson 6759)	Bimbijy, Billiburning Rock	Oct
<i>Urodon capitatus</i>	Wyalkatchem, Ballidu, Mollerin, Wubin, Miling, Koorda, Watheroo, Perenjori	Sep-Dec
<i>Verticordia gracilis</i>	Mt Holland Rd, Korbel Siding, Koonadgin Siding, Dragon Rocks, Hyden, Merredin, Forrestania	Nov
<i>Verticordia huegelii</i> var. <i>tridens</i>	N of Porongurups, Wongan Hills, Williams, Wansborough, Barberton, Cunderdin, Calingiri, Cranbrook, Toodyay	Oct
<i>Verticordia insignis</i> subsp. <i>eomagis</i>	Watheroo N.P., Doodenoo Creek, Coorow - Greenhead Road, Moora	Oct
<i>Verticordia mitodes</i>	Chiddarcooping, Moorine Rock to Mt Holland, Boorabbin NR	Dec
<i>Verticordia muelleriana</i> subsp. <i>muelleriana</i>	Coorow to S of Three Springs - Eneabba Road	Nov, Dec
<i>Verticordia rutilastra</i>	Eneabba	Oct
<i>Verticordia serrata</i> var. <i>linearis</i>	Muchea, Glen Forest, Clackline, St Ronan's Well	Sep
<i>Verticordia stenopetala</i>	Mt Holland, Moorine Rock, Queen Victoria Rock, Marvel Loch, Carrabin	Oct
<i>Verticordia venusta</i>	Perenjori to Moonijin, Wongan Hills, Buntine	Nov
<i>Xanthoparmelia hypoleiella</i>	South west coast, S. Africa	
<i>Xanthoparmelia nashii</i>	King Rocks	

Total Priority Three: 200

Priority Four Taxa

Species/Taxon	Distribution	Flowering period
<i>Acacia alata</i> var. <i>platyptera</i>	Mogumber, New Norcia, Wandoo CP, Brookton, Tutanning	Jun-Aug
<i>Acacia botrydion</i>	Wongan Hills	Jul-Dec
<i>Acacia cuneifolia</i>	Pony Hill, Boyagin Rock, Wandoo CP, Collie, Kojonup	Sep-Oct
<i>Acacia merrickiae</i>	Kellerberrin, Bungulla	Jan-Dec
<i>Acacia semicircularis</i>	Wongan Hills	Sep-Jan
<i>Anigozanthos humilis</i> subsp. <i>chrysanthus</i>	S of Moora, Mogumber, Morre River, Toodyay	Jul-Sep
<i>Asterolasia grandiflora</i>	Toodyay-York	Jul-Oct
<i>Astroloma</i> sp. <i>Cataby</i> (EA Griffin 1022)	Eneabba, Gairdner Range, Cataby, Calingiri, Bindoon, New Norcia	Feb-Jul
<i>Banksia bella</i>	Wongan Hills	Aug-Sep
<i>Banksia benthamiana</i>	Dalwallinu, Mullewa	-
<i>Banksia chamaephyton</i>	Mogumber, Coomallo Creek, Eneabba, Boonanarring	Oct-Dec
<i>Banksia comosa</i>	Wongan Hills	Aug-Sep
<i>Banksia insulanemorecincta</i>	Brady Block, Gibbs SF, W Brookton, Leona SF	Jun-Sep
<i>Banksia platycarpa</i>	Watheroo, Badgingarra, Alexander Morrison N.P., Gillingarra, Tathra	Jul-Oct
<i>Banksia shanklandiorum</i>	Dowerin, Merredin, Cadoux, Mt Hampton, Nth of Hyden, Tandagin, Manmanning	Jun-Aug
<i>Banksia wonganensis</i>	Wongan Hills	Sep
<i>Boronia tenuis</i>	Kalamunda, Lesmurdie Falls, Oakley Dam, North Dandalup, Dunsborough	
<i>Caladenia integra</i>	York-Kendenu, Pingelly	Sep-Oct
<i>Caladenia speciosa</i>	Mogumber	Sep-Oct
<i>Calamphoreus inflatus</i>	E of Hyden, Mt Holland, Forrestania	Nov-Dec
<i>Calothamnus accedens</i>	Piawaning, Moora, Bindi Bindi	Feb
<i>Calothamnus brevifolius</i>	Marchagee, Tammin, Dowerin, Piawaning, Quairading, Pingelly, Corrigin, North Kalbarin NR	Jan-Feb
<i>Calothamnus pachystachyus</i>	Bindoon, Mogumber, New Norcia	Aug-Oct
<i>Calothamnus rupestris</i>	Red Hill, Gosnells, St Ronans N.R., Boyagin Rock	Aug-Oct
<i>Calytrix sylvana</i>	New Norcia, Bindoon, Julimar, Mooliabeenee, Suzanne Brook, Moore River	Aug-Oct
<i>Centrolepis caespitosa</i>	South Stirling, Pearce, Meckering, (Byford), Youngs Siding, Narrikup, Orange Grove	Nov
<i>Chordifex chaunocoleus</i>	Darling Scarp, Badgingarra, Clackline	Aug-Sep
<i>Cyanicula ixioides</i> subsp. <i>ixioides</i>	Beechina, Wooroloo, Datatine, Perth, Toodyay, Calingiri, Walpole, Gingin	Sep
<i>Darwinia</i> sp. <i>Chiddarcooping</i> (SD Hopper 6944) (aff. <i>purpurea</i>)	Chiddarcooping Hill, Billyacatting Hill, Corrigin, Nungarin	Jul-Sep
<i>Darwinia</i> sp. <i>Dryandra</i> (GJ Keighery 9295)	Dryandra, Westdale	
<i>Darwinia thymoides</i> subsp. <i>St Ronans</i> (J.J. Allford & G.J. Keighery 64)	St Ronans N.R., Dryandra, Gunapin	Oct-Nov
<i>Daviesia oxylobium</i>	Bruce Rock-Meckering	Jul-Aug
<i>Daviesia purpurascens</i>	Great Victoria Desert, Kondinin, Hyden, Bending, Dragon Rocks	Aug-Sep
<i>Daviesia spiralis</i>	Wongan Hills	Sep-Jan
<i>Diuris recurva</i>	Kalbarri-Moora, W of Northampton	Jul-Aug
<i>Eremaea blackwelliana</i>	Clackline, Hoddy Well	Sep-Oct
<i>Eremophila biserrata</i>	Lake Cronin, Hyden, Mt Holland, Mt Heywood	
<i>Eremophila caerulea</i> subsp. <i>merrallii</i>	Bruce Rock, Jilbadji, Hunt Range, Burra Rock	Aug-Jan
<i>Eremophila racemosa</i>	E of Hyden, Lake Cronin	Oct-Dec
<i>Eremophila serpens</i>	Hyden-Newdegate, Esperance, Lake Magenta, Ravensthorpe, Lake Milarup	Jan-Dec
<i>Eucalyptus caesia</i>	Boyagin Rock, Mt Caroline, The Humps, Yanneymooning Rock, Chiddarcooping Hill, Billyacatting Hill, Chutawalakin Hill, Coorancooping Hill	May-Aug
<i>Eucalyptus cerasiformis</i>	Mt Day-Lake Hope	Aug-Mar
<i>Eucalyptus deflexa</i>	Mt Day, Mt Gibbs, Coujinup Hill, Mt Madden, Lake King, Frank Hann NP	Aug-Oct
<i>Eucalyptus exilis</i>	Mt Lesueur, Coorow, Boyagin Rock, Wandering, Bindoon, Gunapin, Coomallo NR, Beverley	Dec-Apr

<i>Eucalyptus georgei</i> subsp. <i>fulgida</i>	Hyden, Mt Holland, Lake Cronin,	Jan-Mar
<i>Eucalyptus loxophleba</i> x <i>wandoo</i>	Clackline, Mundaring, Highbury, Katanning	-
<i>Eucalyptus rugulata</i>	South Ironcap, Hatter Hill	Nov
<i>Eucalyptus carnabyi</i> x	Yerecoin, Piawanning, Moora, Calingiri, York, Cooljarloo	-
<i>Gastrolobium callistachys</i>	Kellerberrin, Wongan, Moora, Dandaragan, Northam, Quairading, Gingin, (Esperance)	
<i>Gastrolobium densifolium</i>	Quairading	Sep-Oct
<i>Gonocarpus intricatus</i>	Kellerberrin, Cape Riche, Karoun Hill, Kokerbin, Northcliffe	Oct-Dec
<i>Grevillea aneura</i>	Lake King, Frank Hann, Peak Charles, Grass Patch, Sheoak Hill, North Cascade	Sep-Mar
<i>Grevillea asteriscosa</i>	Narembeen, Bending, Kulin, Lake Grace, Bullaring, Kondinin	May, Aug-Nov
<i>Grevillea dissecta</i>	Mt Holland	Feb
<i>Grevillea drummondii</i>	Bindoon, Hay Flat, New Norcia, Yandan Hill	Jun-Oct
<i>Grevillea pimeleoides</i>	Helena Valley, Glen Forrest, Mundaring, Mundaring Weir	Jun-Nov
<i>Grevillea prostrata</i>	Newdegate-Lake King, Ravensthorpe, Marvel Loch, Forrestania	Aug-Oct
<i>Grevillea tetrapleura</i>	Yellowdine, Duladgin Rock, Bungalbin Hill, Mt Correll, Lake Deborah	Jul
<i>Gyrostemon ditrigynus</i>	Lake King, Cascades North, Forrestania, Ravensthorpe, Pingaring, Mt Ridley, Bandalup Hill	-
<i>Haegiela tatei</i>	Grass Patch, Lake Lockhart, Lake King, Badja Station	-
<i>Hemiantra hancocksiana</i> ms	Eneabba-Moora, York	Oct-Jan
<i>Hemigenia conferta</i>	Wongan Hills	Sep-Oct
<i>Hemigenia platyphylla</i>	Mt Bakewell, Stirling Range, Wandering, Harvey	Sep-Oct
<i>Hibbertia miniata</i>	Hay Flat, Bindoon Hill, Julimar, Wannamal	Jul-Oct
<i>Hibbertia montana</i>	Mt Bakewell, Bodakine Hills, Boyagin Rock, Dryandra	Jul-Sep
<i>Hydrocotyle lemnoides</i>	Perth-Bolgart, Lane Poole, Eneabba	Sep-Oct
<i>Lechenaultia pulvinaris</i>	York-Wickepin-Lake Grace, Quairading	Oct-Dec
<i>Lepidium pseudotasmanicum</i>	Yanchep, Wongan Hills, Denmark, Albany, Porongurup R, Jerramungup, Munglinup, Stirling Range, Lake Clifton	
<i>Loxocarya albipes</i>	Wongan Hills	Aug-Sep
<i>Microcorys</i> sp. <i>Forrestania</i> (V English 2004)	Mt Holland, Forrestania	Nov-Jan
<i>Microtis quadrata</i>	Albany-Augusta, Pinjarra, Jandakot, Varley	Dec-Jan
<i>Myriophyllum petraeum</i>	Sth Cross-Mt Ragged, Narembeen, Mt Madden, Norseman	Aug-Sep
<i>Persoonia sulcata</i>	John Forrest N.P., Wongamine N.R., Bindoon, Dardadine, Calingiri	Sep-Nov
<i>Regelia cymbifolia</i>	Tambellup, Trayning, Kojonup	Aug-Feb
<i>Regelia megacephala</i>	Moora, Coomberdale, Dalaroo	Dec
<i>Rumex drummondii</i>	Regan's Ford, (Gingin), Kalgan River, Manypeaks, Pinjarra	
<i>Schoenus natans</i>	Pinjarra, (Cannington), Lake Muckenburra, Gingin, Busselton, Beaufort River, West Dale, Lake Muir	Aug-Nov
<i>Sowerbaea multicaulis</i>	Bullfinch, Karroun Hill, Lake Deborah (Bremer Range - Lake Hope, Lake Cronin)	Nov
<i>Stachystemon axillaris</i>	Wanneroo, Mogumber, Mt Lesueur, Eneabba, Arrowsmith River	Jul-Sep
<i>Stylidium diuroides</i> subsp. <i>paucifoliatum</i>	Strawberry, Mt Lesueur, Burma Road, Watheroo, Tathra	Sep
<i>Stylidium scabridum</i>	Wyening-Narembeen, York, New Norcia	Sep-Oct
<i>Stylidium tenuicarpum</i>	S of York	Sep-Nov
<i>Synaphea grandis</i>	New Norcia	Oct-Nov
<i>Thelymitra apiculata</i>	Mogumber	May-Jul
<i>Verreauxia verreauxii</i>	Dale, Dobaderry, Dowerin	Dec-Jan
<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	Mogumber	Nov-Jan
<i>Verticordia paludosa</i>	Mogumber	Jan-May
<i>Wurmbea murchisoniana</i>	Murchison R., Jingemarra, Wanarra Rk, 71 Mile Rk, Coonmine Well, Balladonia	Jul-Sep

Total Priority Four: 88

Total Priority Flora (P1+ P2+ P3+ P4) = 518