

KATANNING DISTRICT THREATENED FLORA MANAGEMENT PROGRAM

**Annual Report
2005**

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For the Katanning District Threatened Flora Recovery Team



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SUMMARY 2005

- Seed was collected and stored at the Department's Threatened Flora Seed Centre (TFSC) for *Acacia lanuginophylla* (VU), *Allocasuarina tortiramula* (VU), *Gastrolobium lehmannii* (VU), *Goodenia integerrima* (EN), *Muehlenbeckia horrida* subsp. *abdita* and *Conostylis setigera* subsp. *dasys* (CR). Seed was collected by the Botanic Gardens and Parks Authority (Kings Park) from *Drakaea isolata* (CR) for research and storage.
- New populations:
 - 1x *Eremophila subteretifolia* (CR)
 - 2x *Austrostipa geoffreyi* (P1)
 - 2x *Acacia mutabilis* subsp. *stipulifera* (P1)
 - 1x *Acacia asepala* (P2)
 - 2x *Acacia drewiana* subsp. *minor* (P2)
 - 1x *Acacia mutabilis* subsp. *incurva* (P2)
 - 2x *Dryandra foliosissima* (P2)
 - 2x? *Gastrolobium rigidum* (P2)
 - 1x *Pimelea halophila* (P2)
 - 1x *Baeckea* sp. Hyden (P3)
 - 1x *Daviesia elongata* subsp. *implexa* (P3)
 - 3x *Dryandra fasciculata* (P3)
 - 1x *Dryandra meganotia* (P3)
 - 3x *Grevillea newbeyi* (P3)
 - 1x *Hakea brachyptera* (P3)
 - 1x *Eremophila serpens* (P4)
 - 1x *Rinzia affinis* (P4)
- Possible new populations:
 - 1x *Conostylis seorsiflora* subsp. Nyabing (A. Coates s.n.) (P2)
 - 2x *Daviesia uncinata* (P3)
 - 2x *Acacia singula* (P3)
 - 1x *Tegicornia uniflora* (P4)
 - 4x *Grevillea aneura* (P4)
- Rare flora markers were erected for a number of Priority and DRF populations they had not been previously marked. A number of markers were repositioned to incorporate extensions of populations.
- The *Roycea pycnophylloides* Interim Recovery Plan (IRP) was updated and draft IRP's prepared for *Acacia lanuginophylla* and *Grevillea involucrata* by Species and Communities Branch (SCB).
- A poster was produced by the Lake Bryde Recovery Catchment staff (CALM Katanning) for *Muehlenbeckia horrida* subsp. *abdita*
- A booklet of the District's DRF was developed by the Flora Conservation Officer, sent for publication in December 2005. This booklet will be for the purposes of educating staff, community members, volunteers and other agencies on what the plants look like and

where they grow. The final version will be an A5 size glossy laminated, spiral bound booklet containing pictures and descriptions of each species

- Nature Reserve files and Wildfire Suppression Maps updated with the locations of various populations of rare flora
- Katanning Herbarium specimens mounted and updated; Katanning District DRF database updated for various species, filing of species information.
- All DRF and Priority flora locations were marked on a large wall map to enable CALM staff to identify where populations are in relation to their work/proposed jobs and for when issues or queries arise from the public or other agencies that need clarification on the presence of rare flora etc.

Recovery Team

The Katanning District Threatened Flora Recovery Team primary focus is the recovery of threatened flora within the Katanning District. The team is structured to allow for the encouragement, promotion and participation of associated groups in the protection of ecosystems across the District. This is done by linking private landowners, community volunteer groups, landcare groups, community catchment groups, local government authorities and other government agencies to carry out recovery projects.

The following are members of the Katanning District Threatened Flora Recovery Team and represent specific groups or agencies:

- 1) Wayne Cooper, Engineer/Manager of Works, representing the Shire of Woodanilling, with an interest and experience in protecting threatened flora in road reserves;
- 2) Mary Naisbitt, representing the Shire of Lake Grace, and also a rare flora volunteer;
- 3) Lucy Skipsey, representing the Shire of Kent, also rare flora volunteer with two species of threatened flora on their property;
- 4) Val Crowley represents the community and rare flora volunteer contribution of the western portion of the District, she is also a volunteer with the WA Herbarium and has extensive knowledge of the flora in the Shire of West Arthur and surrounds;
- 5) Anne Rick represents the community and rare flora volunteer contribution (coordinates the Lakes District Regional Herbarium and Rare Flora Group), with extensive botanical knowledge of the eastern portion of the District. Anne also represents the interests of private landowners within the District having threatened flora occurring on their property;
- 6) Mal Graham also representing the community; former District Operations Officer with the Department and Chair of this Recovery Team. Mal is currently working as a private environmental consultant within the Katanning District and has extensive knowledge of Wheatbelt flora and threatened flora management;

- 7) Anne Cochrane is Manager of the Department's Threatened Flora Seed Centre. Anne has extensive expertise in seed collection and research into germination of threatened flora in the District;
- 8) Andrew Brown, Coordinator (Flora) Species and Communities Branch (SCB), CALM;
- 9) Luke Sweedman and Amanda Shade represent the Botanic Gardens and Parks Authority (King's Park);
- 10) Kat Miller represents the WA Threatened Species Network for the World Wide Fund (WWF) for Nature, with interest in threatened flora management activities such as translocations and contact for possible funding of such projects;
- 11) Rosemarie Rees, Project Officer - Threatened Ecological Communities (TEC's) with the Species and Communities Unit (SCB), a division of the Department;
- 12) Carl Beck (Chairperson) represents the Katanning District of the Department of Conservation and Land Management, District Nature Conservation Officer (Note: Carl Beck no longer works for the Department, this position will need to be re-filled);
- 13) Bethea Loudon (Convenor) also represents the Katanning District of the Department of Conservation and Land Management, but more specifically the conservation, implementation and recovery of the District's threatened flora in her role as Flora Conservation Officer.

The Recovery Team also comprises of the following 'observers' to whom a general/open invitation is extended to all meetings. These people represent the wider community and are involved in voluntary threatened flora work in the District:

- 1) Jan Smith, rare flora volunteer from the western portion of the District
- 2) Members of the Lakes District Regional Herbarium and Rare Flora Group, including
 - Elsie Bishop - Sam Walsh - Rosemary Cugley
 - Annie Slarke - Meighan Stewart
 - Lyn Taylor - Judy Stewart
- 3) Jim Parry from Frankland, rare flora volunteer and orchid enthusiast
- 4) Chris Lewis, rare flora volunteer and Regional Herbarium volunteer from Kojonup

Other Technical advisers consulted as a matter of course during the recovery process and who are invited to attend meetings, but are not formally members due to work commitments, include:

- 1) Dr David Coates, Senior Principal Research Scientist with the Department of Conservation and Land Management, based Kensington Research;

- 2) Dr Ken Atkins, Acting Manager of the Department's Species and Communities Branch; and
- 3) Brett Beecham, Regional Ecologist for the Wheatbelt Region of the Department of Conservation and Land Management.

The Recovery Team met at the Katanning District Office of CALM on November 3rd 2005, where works programs were discussed, work carried out to date reviewed, discussions on the production of the District rare flora pictorial booklet for community and staff education and reference, *Conostylis setigera* subsp. *dasys* was introduced for members to become familiar with the species we are working with, and Rosemarie Rees gave a presentation on the TEC's in the Katanning District.

A meeting was planned for the 28th of April 2005 but was cancelled, as the majority of members were not able to attend at the last minute.

Staff and Funding

A contract Conservation Officer position commenced in late May 1999 based at CALM's Katanning District Office. Up until May 2002, NHT Bushcare funding supported the position. NHT Endangered Species Program (ESP) provided funding for July 2002 to May 2003, with Biogene funding supporting the position in the interim.

In 2003 the Flora Conservation Officer position was made permanent with the Department providing ongoing funding for salary as of the 2003/04 financial year. Funding for operational and running costs (for the implementation of on-ground activities) has been sought through NRM catchment groups, namely the Avon Catchment Council and the South West Catchment Council, on an ongoing basis from 2003 to date. In 2003/04 funding was also received from SCB to undertake surveys and fieldwork to gather information for the preparation of IRP's.

In 2005, \$18,000 was received from the Avon Catchment Council, with the remaining amount of the first portion of SCB IRP funding exhausted mid-year.

OBJECTIVES

To implement recovery, research and management actions for Critically Endangered (CR), Endangered (EN) and Vulnerable (VU) flora in CALM's Katanning District. Assess the status, on a priority basis, if time permits, for approximately 240 other poorly known taxa (Priority Flora) in CALM's Katanning District.

Recovery actions implemented during 2005 are listed summarised below.

CRITICALLY ENDANGERED FLORA

In 2005, eleven species in the Katanning District were ranked as Critically Endangered:

- *Adenanthos pungens* subsp. *effusus*
- *Caladenia graniticola*
- *Caladenia melanema*
- *Eremophila subteretifolia*
- *Eremophila verticillata*
- *Hemigenia ramosissima*

- *Conostylis setigera* subsp. *dasys*
- *Drakaea isolata*
- *Dryandra mucronulata* subsp. *retrorsa*
- *Verticordia fimbrialepis* subsp. *fimbrialepis*
- *Verticordia staminosa* subsp. *cylindracea* var. *erecta*

Adenanthos pungens* subsp. *effusus

Monitoring

Population 1 was surveyed for plant numbers and threats by the Flora Conservation Officer, two Reserves Officers and the Indigenous Trainee in March. Flowering and fruit production were observed in late November.

Protection from Road Maintenance

The old DRF markers at Population 1 were replaced with new ones and repositioned to incorporate two plants on the road verge that were outside the original area marked.

Weed Control

Weed control of Veldt and African Love-grass along the road verge of Population 1 was carried out in August using Fusilade. Numerous plants of Bridal Creeper were also treated with Roundup at the same time.

Disease Control

Population 1 aerial sprayed with phosphite in May with a repeat spray in late November.

Rabbit Control

Population 1 was baited with 1080 oats in April to reduce rabbit numbers.

Liaison

Liaised with adjacent landowners/managers of Population 1 for permission to conduct aerial phosphite spraying.

Caladenia graniticola

Rabbit Control

Population 3 and 5 were baited with 1080 oats in February to reduce rabbit numbers.

Caladenia melanema

Monitoring

Population 1 observed in early October – finished flowering although a couple of late flowers present, many fertilised ovaries some in the process of splitting and releasing seed.

Weed Control

Some hand-weeding of thistles (*Hypochaeris ?glabra* – Smooth Cats-ear) from around plants in patch close to road of Population 1A.

Conostylis setigera* subsp. *dasys

Monitoring

Population 1C observed. Good flowering season.

Liaison

Liaison with Main Roads WA (MRWA) regarding the widening and spraying of road edges along Albany Hwy adjacent to Population 1A. DRF markers were repositioned to incorporate the extension of Population 1A. Markers were also repositioned for Population 1D in the correct location.

Rabbit Control

Population 1B was baited with 1080 oats in April to reduce rabbit numbers.

Seed Collection

Seed was collected by Anne Cochrane.

Drakaea isolata

Monitoring

Population 1 observed early October – flowering almost finished with flowering being quite good perhaps due to wetter season, lots of plants with fertilised ovaries, several plants bagged or marked for seed collection.

Seed Collection

Botanic Gardens and Parks Authority collected seed for research studies and genetic preservation.

Dryandra mucronulata subsp. retrorsa

Monitoring

Population 1 observed.

Eremophila subteretifolia

Monitoring

Population 5 (Lake Milarup) surveyed. Population 6 observed.

Further Survey

Searched a wider area at Population 5 (Lake Milarup) and located one more plant bringing the total population to two. Also searched for a distance north of Population 6 at Lake Ronnerup without success, cut short by heavy rain. A new population was found in Dunn Rock Nature Reserve by a volunteer from Hopetoun, this population surveyed, vouchered and DRF markers erected by the Flora Conservation Officer.

Eremophila verticillata

Research Trial

Trial Plot #5 (Treatment: natural seed bank/fire) monitored for survival of the seedlings found in November 2004, all 3 were dead.

Hemigenia ramosissima

Monitoring

Population 1 observed.

Verticordia fimbrilepis subsp. fimbrilepis

Monitoring

Population 1, 5B (part), 12 and 15 surveyed for numbers and threats.

Liaison

Onsite visit with adjacent landowner upon his enquiry regarding the location of plants at Population 2, concerned that his fence replacement activities may affect plants.

Verticordia staminosa subsp. cylindracea var. erecta

Further Survey

Members of the Lakes District Regional Herbarium and Rare Flora Group searched some more granite outcrops near Lake King in the hope of finding new populations, however no new populations of var. *erecta* were located. The Flora Conservation Officer searched Sugg Rock (granite outcrop) north of Lake King without success.

ENDANGERED FLORA

In 2005, fifteen species in the Katanning District, were ranked as Endangered:

- *Acacia depressa*
- *Adenanthos pungens* subsp. *pungens*
- *Adenanthos velutinus*
- *Anigozanthos bicolor* subsp. *minor*
- *Banksia oligantha*
- *Caladenia christineae*
- *Caladenia dorrienii*
- *Centrolepis caespitosa*
- *Conostylis drummondii*
- *Conostylis seorsiflora* subsp. *trichophylla*
- *Goodenia integerrima*
- *Grevillea involucrata*
- *Jacksonia velveta*
- *Muehlenbeckia horrida* subsp. *abdita*
- *Thelymitra stellata*

Acacia depressa

Monitoring

Population's 5 and 7 surveyed.

Adenanthos pungens subsp. pungens

No surveys were conducted in 2005.

Adenanthos velutinus

No surveys were conducted in 2005.

Anigozanthos bicolor subsp. minor

No surveys were conducted in 2005.

Banksia oligantha

Rabbit Control

Population 1 was baited with 1080 oats in April to reduce rabbit numbers.

Caladenia christineae

No surveys were conducted in 2005.

Caladenia dorrienii

Monitoring

Observed Population 2 to view weeds on western edge.

Further Survey

Jim Parry searched on private property north of Frankland for a possible population without success. The owners believed they had seen the orchid. This is the second season Mr Parry has searched at this site and not seen any orchids.

Community Awareness

Short article placed in Frankland newspaper to discourage the use of motorbikes in Location 440 to prevent damage to plants at Population 2.

Centrolepis caespitosa

Further Survey

A new population was located by Greg Keighery in the Beaufort Reserve identified.

Conostylis drummondii

Liaison

Searched area of proposed work for plants in the vicinity and liaised with telecommunications contractor regarding Population 7. Liaised with Main Roads WA (MRWA) regarding the widening and spraying of road edges along Albany Hwy adjacent to Population 2A.

Conostylis seorsiflora subsp. trichophylla

No surveys were conducted in 2005.

Goodenia integerrima

Monitoring

Population's 1, 2 and 4 surveyed for numbers.

Further Surveys

Searched gypsum lunettes in Lake Kathleen for more populations without success.

Rabbit Control

Population 2A was baited with 1080 oats in May to reduce rabbit numbers.

Seed Collection

Seed collected by Anne Cochrane.

Grevillea involucrata

Monitoring

Surveyed Population 11B and 3A thoroughly, observed 11A and 12 (while marking plants to be avoided during Fire Access Track maintenance). Searched for plants in recently rehabilitated gravel pit which equates to Population 18, without any success. Observed Population 6C for fruit production and ripeness in early November – still green with lots of flowers – located a new young plant on backslope of road between existing DRF markers.

Liaison

Onsite meeting with Engineer from Shire of Lake Grace regarding the realignment of Dyke Road/Newdegate Road intersection. Permit to take (all) plants at Population 3A sort by Shire and approved. Road realignment and clearing completed with disused section of Dyke Road ripped and debris/topsoil from clearing process respread.

Review

Draft IRP written by SCB.

Jacksonia velveta

No surveys were conducted in 2005.

Muehlenbeckia horrida subsp. abdita

Monitoring

Six monthly monitoring of Population 1 and 2 (in July 2005) continued, with monitoring conducted with assistance from the Lake Bryde Recovery Catchment Officer and Assistant Catchment Officer – number of stems (living and dead) counted, canopy diameters measured, condition and new plants recorded in a number of existing plots.

Seed collection

The Lake Bryde Recovery Catchment staff (CALM Katanning) collected seed for long term storage and research at the TFSC.

Poster

A poster was produced by the Lake Bryde Recovery Catchment staff to promote public awareness of the taxa.

Thelymitra stellata

No surveys were conducted in 2005.

VULNERABLE FLORA

In 2005, fourteen species in the Katanning District were ranked as vulnerable:

- *Acacia auratiflora*
- *Acacia lanuginophylla*
- *Acacia leptalea*
- *Allocasuarina tortiramula*
- *Calectasia pignattiana*
- *Conostylis rogeri*
- *Diuris drummondii*
- *Eleocharis keigheryi*
- *Gastrolobium lehmannii*
- *Orthrosanthus muelleri*
- *Roycea pycnophylloides*
- *Tetratea aphylla*
- *Tribonanthes purpurea*
- *Verticordia staminosa* subsp. *cylindracea* var.

cylindracea

Acacia auratiflora

Monitoring

Population 12 observed – healthy with lots of new growth, no fruit present!

Acacia lanuginophylla

Survey

Population 1B surveyed. Population 2 observed (fruit still green and not much present).

Seed Collection

A very small amount of seed was collected by the Flora Conservation Officer from Population 1B. Fruit production severely reduced perhaps from severe frosts, hail storms and late heavy rains experienced in the area.

Liaison

Onsite meeting with John Holland contractors proposing to redo culverts and drains under railway line at Population 1A. No plants affected.

Review

Draft IRP written by SCB.

Acacia leptalea

Monitoring

Population 2B observed, little to no fruit produced, aborted flowers perhaps from severe frosts, hail storms and late heavy rains. Population 3 observed - good flowering and fruit production.

Allocasuarina tortiramula

Seed Collection

Anne Cochrane collected seed from Population 1.

Calectasia pignattiana

No surveys were conducted in 2005.

Conostylis rogeri

No surveys were conducted in 2005.

Diuris drummondii

Monitoring

Population 16 surveyed by Jim Parry with 8 plants located. Another 25 plants were seen in adjacent property (new subpopulation).

Further Survey

The Flora Conservation Officer surveyed a new population in a swamp in Warrenup Nature Reserve near Frankland with Jim Parry whom he found the plants. Mr Parry also located a new population in Location 440 within the Frankland townsite, and searched for a possible siting at Peringillup Nature Reserve south of Broomehill without success.

Eleocharis keigheryi

No surveys were conducted in 2005.

Gastrolobium lehmannii

No surveys were conducted in 2005.

Seed Collection

Anne Cochrane collected some seed.

Weed Control

Population 6 planned for weed control action but was not carried out due to weather, time and personnel constraints.

Orthrosanthus muelleri

No surveys were conducted in 2005.

Roycea pycnophylloides

Monitoring

Population 17 observed in early November – still flowering. Population 2B observed in early October – majority finished flowering but some plants, mainly females still/about to, some immature fruit seen.

Review

IRP updated by SCB.

Tetratheca aphylla

Monitoring

Population 6 and 8(?) surveyed for numbers and extent.

Protection from Road Maintenance

DRF markers were erected for Population 8(?). Markers were already present at Population 6 as two Priority species also occur at this site.

Tribonanthes purpurea

Further Survey

A new population was located by Greg Keighery in the Beaufort Reserve identified.

Verticordia staminosa* subsp. *cylindracea* var. *cylindracea

Further Survey

Members of the Lakes District Regional Herbarium and Rare Flora Group searched some more granite outcrops near Lake King in the hope of finding new populations, however no

new populations of var. *cylindracea* were located. The Flora Conservation Officer searched Sugg Rock (granite outcrop) north of Lake King without success.

PRIORITY FLORA

In 2005, 33 species in the Katanning District were ranked as **Priority 1**. Surveys were conducted for the following:

<i>Acacia microneura</i>	<i>Jacksonia debilis</i>
<i>Acacia mutabilis</i> subsp. <i>stipulifera</i>	<i>Mirbelia densiflora</i>
<i>Austrostipa geoffreyi</i>	

Liaison with Main Roads WA (MRWA) regarding the shoulder widening, verge slashing and drain improvement of road edges along Albany Hwy adjacent to Population's 1, 3 and 4 of *Acacia microneura*. All four populations surveyed. Hand-weeding around the two plants at Population 2, as well as replacement of DRF markers with new ones. Erection of markers for extensions of Population 3.

A new population of *Acacia mutabilis* subsp. *stipulifera* vouchered and surveyed in Lake Magenta Nature Reserve. A new population also located near Lake Bryde on CALM's purchase block.

A new population of *Austrostipa geoffreyi* located in Lake Milarup in the Lake King Nature Reserve and Lake King Nature Reserve.

Population 3 of *Jacksonia debilis* was relocated and surveyed by a consultant in the Tarin Rock area. A new population was located (and recorded) in the process.

Located and briefly surveyed a population of *Mirbelia densiflora* on the Lake King-Norseman Rd adjacent to Frank Hann National Park while undertaking gravel pit surveys for the Shire of Lake Grace.

In 2005, 72 species in the Katanning District were ranked as **Priority 2**. Surveys were conducted on the following:

<i>Acacia asepala</i>	<i>Dryandra acanthopoda</i>
<i>Acacia drewiana</i> subsp. <i>minor</i>	<i>Dryandra foliosissima</i>
<i>Acacia mutabilis</i> subsp. <i>incurva</i>	<i>Gastrolobium rigidum</i>
<i>Bentleya diminuta</i>	<i>Microcorys lenticularis</i>
<i>Conostylis seorsiflora</i> subsp. <i>Nyabing</i>	<i>Pimelea halophila</i>
<i>Daviesia lineata</i>	

Located four populations (some possibly new ones) of *Gastrolobium rigidum* and one population of *Acacia asepala* on the Lake King-Norseman Rd adjacent to Frank Hann National Park while undertaking gravel pit surveys for the Shire of Lake Grace.

Possibly located a new population of *Acacia drewiana* subsp. *minor* at the site of Population 7 of *Acacia depressa* (DRF) and at Population's 1A and 1B of *Daviesia lineata*.

One new population of *Acacia mutabilis* subsp. *incurva* was located by volunteer from Ongerup. DRF markers were erected for Population's 2 and 5. Liaised with Works Supervisor from the Shire of Gnowangerup regarding road grading/widening and maintenance of P-Jones Road.

Population 2(?) of *Bentleya diminuta* surveyed and DRF markers erected.

A possible new population of *Conostylis seorsiflora* subsp. Nyabing (A.Coates s.n.) found and surveyed in Breakaway Ridge Nature Reserve.

Surveyed Population's 1A and 1B of *Daviesia lineata*.

Surveyed Population 3 near Woodanilling of *Dryandra acanthopoda* that has not been surveyed since collected many years ago.

Two new populations of *Dryandra foliosissima* surveyed in Tarin Rock Nature Reserve at the *Acacia depressa* (DRF) sites.

An old record of a population of *Microcorys lenticularis* was relocated and surveyed by a consultant in the Tarin Rock area. A new population was located (and recorded) in the process.

A new population of *Pimelea halophila* surveyed in Lake King Nature Reserve.

In 2005, 89 species in the Katanning District were ranked as **Priority 3**. Surveys were conducted on the following:

<i>Acacia brachyphylla</i> var. <i>recurvata</i>	<i>Daviesia uncinata</i>
<i>Acacia singula</i>	<i>Dryandra fasciculata</i>
<i>Acacia undosa</i>	<i>Dryandra meganotia</i>
<i>Baekkea</i> sp. Hyden	<i>Grevillea newbeyi</i>
<i>Boronia penicillata</i>	<i>Gyrostemon prostratus</i>
<i>Daviesia elongata</i> subsp. <i>implexa</i>	<i>Hakea brachyptera</i>

DRF markers erected for the population of *Acacia brachyphylla* var. *recurvata* on the Dumbleyung-Lake Grace Road. Good flowering observed.

Possibly located two new populations of *Acacia singula* on the Lake King-Norseman Rd adjacent to Frank Hann National Park while undertaking gravel pit surveys for the Shire of Lake Grace.

Searched for an old record of *Acacia undosa* in a salmon gum woodland in Lake Magenta Nature Reserve without success.

An old record of *Baekkea* sp. Hyden was relocated and surveyed by a consultant in the Tarin Rock area. A new population was located (and recorded) in the process.

An old record of *Boronia penicillata* and *Daviesia uncinata* were relocated and surveyed by a consultant in the Tarin Rock area. Possibly a new population of *D. uncinata* located at the site of Population 7 of *Acacia depressa* (DRF) and at a Population 1 of *Daviesia lineata* (P2).

Found a new population of *Daviesia elongata* subsp. *implexa* in Newdegate townsite while undertaking searches for proposed Water Corporation work.

An old record of *Dryandra fasciculata* was relocated and surveyed by a consultant in the Tarin Rock area. Three new populations were located (and recorded) in the process.

An old record of *Dryandra meganotia* was relocated and surveyed by a consultant in the Tarin Rock area. A new population was located (and recorded) in the process.

One new population of *Hakea brachyptera* located. Two new populations of *Grevillea newbeyi* located/recorded and several other new ones observed in road reserves but not recorded due to time constraints. One new population of *G. newbeyi* located and surveyed on private property just east of Katanning in conjunction with Land for Wildlife visit.

Liaison with the Shire of Gnowangerup regarding road verge maintenance adjacent to a population of *Grevillea newbeyi* and *Hakea brachyptera*.

An old record of *Gyrostemon prostratus* was searched for but not found by a consultant in the Tarin Rock area.

In 2005, 42 species in the Katanning District were ranked as **Priority 4**. Surveys were conducted on the following:

<i>Bentleya spinescens</i>	<i>Grevillea aneura</i>
<i>Calamphoreus inflata</i>	<i>Regelia cymbifolia</i>
<i>Eremophila serpens</i>	<i>Rinzia affinis</i>
<i>Eremophila veneta</i>	<i>Tegicornia uniflora</i>
<i>Gastrolobium densifolium</i>	<i>Xanthorrhoea brevistyla</i>

Searched Population 1 of *Bentleya spinescens* in the Newdegate townsite for plants in proposed Water Authority work. Liaised with Water Corporation contractors.

Searched for Population 1A of *Calamphoreus inflata* without success.

A new population of *Eremophila serpens* was located adjacent to Lake Kathleen. The population at Lake Milarup was surveyed and the Lake Lockhart population observed – immature fruit present, some plants with an abundance of fruit.

Onsite meeting with John Holland contractors proposing to redo culverts and drains under railway line at Population 1 of *Eremophila veneta*. Three to four plants affected.

An old record of *Gastrolobium densifolium* was relocated and surveyed by a consultant in the Tarin Rock area.

Possibly located four new populations of *Grevillea aneura* on the Lake King-Norseman Rd adjacent to Frank Hann National Park while undertaking gravel pit surveys for the Shire of Lake Grace.

Liaison with Water Corporation regarding the proposed development of a waste-water treatment plant at Tambellup in the vicinity of a *Regelia cymbifolia* population.

Population 1 of *Rinzia affinis* was relocated and surveyed by a consultant in the Tarin Rock area. A new population was located (and recorded) in the process.

Possible new population of *Tegicornia uniflora* located near Lake Milarup in the Lake King Nature Reserve.

Surveyed a known population of *Xanthorrhoea brevistyla* near Katanning which has not been surveyed for some time.

Full and Interim Recovery Plans for the Katanning District

In 2005 draft IRP's were prepared by SCB for *Acacia lanuginophylla* and *Grevillea involucreta*. The *Bentleya spinescens* IRP was updated ready for publishing.

Critically Endangered

Adenanthos pungens subsp. *effusus*, *Caladenia graniticola*, *Conostylis setigera* subsp. *dasys*, *Drakaea isolata*, *Dryandra mucronulata* subsp. *retrorsa*, *Eremophila subteretifolia*, *Eremophila verticillata*, *Hemigenia ramosissima*, *Verticordia fimbrialepis* subsp. *fimbrialepis* and *Verticordia staminosa* subsp. *cylindracea* var. *erecta* have Interim Recovery Plans. An IRP is required for *Caladenia melanema*.

Endangered

Anigozanthos bicolor subsp. *minor*, *Banksia oligantha*, *Centrolepis caespitosa*, *Conostylis seorsiflora* subsp. *trichophylla*, *Goodenia integerrima*, and *Muehlenbeckia horrida* subsp. *abdita* have IRP's.

Vulnerable

Acacia auratiflora, *Orthrosanthus muelleri*, *Roycea pycnophylloides* and *Verticordia staminosa* subsp. *cylindracea* var. *cylindracea* have Interim Recovery Plans. Drafts were prepared for *Acacia leptalea*, *Conostylis rogeri* and *Conostylis seorsiflora* subsp. *trichophylla* in 2004.

No Full Recovery Plans exist for any of the Katanning District's Declare Rare Flora.

Translocations

No new translocations were initiated or developed in 2005.

Monitoring of the *Eremophila verticillata* trials continues. In November 2004, three seedlings were observed in one plot where fire was used on a natural soil seed-bank. These seedlings were found to have died in 2005.

Education and Publicity

During 2005, the Katanning District was involved in a partnership with the local community group, the Lakes District Regional Herbarium and Rare Flora Group and a number of individual volunteers and flora enthusiasts.

The Newdegate Field Days were attended in September where a Rare Flora display was held. This showed the DRF in the district, pictures of rare plants and explained recovery actions and the need to protect rare flora. It also involved discussions with members of the public and the distribution of species posters. A display was also erected at the Katanning Show in October.

Several media articles were printed in local newspapers and the Department's 'Conservation News' detailing recovery actions and important finds.

Proposed major activities for the Recovery Team in 2006 include:

- Write or initiate an Interim Recovery Plan for *Caladenia melanema*
- Produce a poster and postal drop for *Adenanthos velutinus*, and a postal drop for *Adenanthos pungens* subsp. *effusus*
- Attempt to collect seed from *Grevillea involucreata*, *Tetratheca aphylla*, *Conostylis setigera* subsp. *dasys*, *Acacia depressa* and *Hemigenia ramosissima* for long-term storage
- Review the ranking/status of a number of Priority species and make recommendations to the Threatened Species Scientific Committee
- Continue to undertake rabbit control at a number of populations
- Implement weed control at a number of sites
- Search for new populations of DRF
- Survey a number of DRF populations that have not been observed for some time
- Concentrate on surveys of a number of Priority species

Bethea Loudon

Convenor/Flora Conservation Officer

Katanning District Threatened Flora Recovery Team/CALM Katanning District