Species and Communities Branch newsletter for Threatened Species and Ecological Communities conservation
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Many hands make light work! Management of *Daviesia euphorbioides*

Wongan cactus (*Daviesia euphorbioides*) is a striking plant that has abundant and colourful flowers in June and July. Its cylindrical pithy branches and scattered, spiny 'leaves' give rise to its common name. Wongan cactus' grey-blue branches grow to 80 cm high. The orange-yellow and deep red flowers cluster together along the stems.

Daviesia euphorbioides occurs from the Wongan Hills area to the Dowerin-Goomalling area. Broadscale vegetation clearing for agriculture has taken place over the whole of this range, with remnant vegetation occupying less than six per cent of the landscape in the three shires in which this species occurs. Only some of that remnant vegetation is suitable habitat for *D. euphorbioides*, which occurs on sandplains in heath dominated by sheoak (*Allocasuarina campestris*) and sandplain cypress (*Actinostrobus arenarius*). Associated with the settling of this area for agriculture there has been a reduction in the occurrence of fire, reducing the opportunities for *D. euphorbioides* to complete its life cycle.

At the southern end of its range, all wild populations occur on narrow, degraded road verges. A translocation is now under way in an attempt to establish a population on conservation estate in this area. Seventy four plants were planted into the selected site in August, after approval of the Translocation Proposal.

Wongan cactus (*Daviesia Euphorbiodes*)
Photo – Stephen Hopper

These plants were grown by the Botanic Gardens and Parks Authority nursery from seed collected by the Department of Conservation and Land Management's Threatened Flora Seed Centre. They were planted by staff from CALM's Science Division, Merredin District, Species and Communities Branch, and a volunteer. CALM District staff and a landholder who lives near the translocation site, have installed fencing and reticulation to protect and water the young plants. The landholder and the Dowerin-Goomalling Community Landcare Coordinator will also check the reticulation over the hot summer months.

This species is short-lived with a long-lived soil-stored seedbank, and depends on periodic fire for recruitment events. As its range is limited to areas where fire is actively suppressed, it is likely that *Daviesia euphorbioides* will continue to need active management to stimulate recruitment and keep populations 'turning over'.

CALM staff, the local Landcare Coordinator and volunteers conducted a burn at a roadside population near the translocation site in May 2005. The first response to this burn has been positive, with over 35 seedlings appearing. CALM District staff and a local landholder have been monitoring these seedlings and watering them periodically in hot weather. It is hoped that many will survive the summer months and go on to produce more seed. Some of this may then be collected and utilised in the propagation of more plants for translocation. Disturbance events are planned for at least one other roadside population in autumn 2006, and perhaps also at a Nature Reserve near Wongan Hills, where plant numbers have sharply declined in recent years.

The Natural Heritage Trust has contributed funds to undertake these recovery actions, and this is gratefully acknowledged.

For further information contact Gillian Stack on (08) 9405 5157 or email gillians@calm.wa.gov.au

Inside this issue

New populations of the Critically Endangered species *Eremophila vernicosa* ms (resinous poverty bush) found

Resinous poverty bush is an erect shrub that grows to a height of two m with small leaves 8 to 10 mm long by 5 to 8 mm wide and white to pale pink flowers. The species occurs on the slopes of low lateritic hills with *Melaleuca* and mallee *Eucalyptus* species, flowering in September–October. It was first collected by William Blackall from near Kalannie in 1933 and again, possibly from the same area, in 1938 but then remained elusive despite many searches and was not seen again until rediscovered on private property between Wubin and Coorow by Stephen Davies in 1999. In the small area of remnant bushland plants were found to be common.

Despite first being discovered more than 70 years ago the species remained undescribed until it was recognised as distinct during recent taxonomic studies conducted by Bob Chinnock. Its manuscript name, *vernicosa*, refers to the varnish-like appearance of new growth that, along with its small leaves and pale white flowers, distinguishes it from related species.

The rediscovered population remained the only one known until an unconfirmed report of a new population was made by a staff member from the Department of Agriculture. In September 2005 staff from CALM's Species and Communities Branch,

Eremophila vernicosa. Photo – Andrew Brown

Moora District and Merredin District met in the area where the putative second population had been discovered and within a very short time found 14 plants, many in full flower. All were growing in a narrow strip of remnant vegetation along the edge of the road.

The group then met up with the owners of the private property on which the only other verified population of the species was known. They had reported a second population nearby and this population needed assessing.

The property owners kindly took the group to a nearby Shire road which had a narrow remnant of natural bushland along its edges and there, growing in a strip each side of the road, 67 plants were in full flower. CALM Merredin and Species and Communities Branch staff then surveyed some remnant areas of bushland to the east of the Moora District. Although historical records showed that it had originally been found in CALM's Merredin District, all three known populations at that time were to the west in the Moora District.

A new population of resinous poverty bush was, indeed located in the Merredin District, just a few kilometres east of the border with the Moora District. Plants were growing on road reserve and in adjacent private property and were in very good health.

Although the species is still considered to be highly threatened, the discovery of three new populations will certainly help its long-term conservation.

For further information contact Andrew Brown on (08) 9405 5166 or email andrewbr@calm.wa.gov.au

Rock-wallaby fence at Querekin

Management of black-flanked rock-wallaby populations in the wheatbelt has been an ongoing concern for some years since the successful recovery of the populations following fox baiting initiated by Dr Jack Kinnear (formerly with CALM's Science Division). A combination of methods has been used to manage the populations including fencing, trapping for translocation and monitoring.

Populations inhabiting Mount Caroline Nature Reserve and the privately owned Querekin Rock, in particular, have come into conflict with local farmers. This is due to the close proximity of rocky outcrops to farm crops and infrastructure.

Howard Robinson from CALM's Narrogin district was successful in applying for an Envirofund grant to fence the population at Querekin. The fence will prevent the rock-wallabies from invading the farmer's machinery sheds and eating his crops. This is expected to result is some attrition within the population. Translocations of rock-wallabies from Querekin are being undertaken to achieve a more humane population reduction before the fence is completed.

On 9 December 2005, 15 rock-wallabies (five males and 10 females) were translocated from Querekin Rock and released at Australian Wildlife Conservancy's Paruna Sanctuary. They join

Black-flanked rock-wallaby (*Petrogale lateralis lateralis*). Photo – Christine Freegard

43 rock-wallabies previously translocated to Paruna Sanctuary. Another translocation will be considered when the fence is near completion.

For further information contact Christine Freegard on (08) 9334 0278 or email christinef@calm.wa.gov.au

Huegelii hunting in Kooljerrenup

In 1995 a CALM scientist discovered one flowering plant of *Caladenia huegelii*, the grand spider orchid in Kooljerrenup Nature Reserve, on the east side of the Harvey Estuary. Before this discovery, the grand spider orchid was known largely from populations around Southern River, Huntingdale and Mardella, then further south near Busselton, so the discovery of the plant in Kooljerrenup Nature Reserve provided a link between those areas.

From the late 1990s, urban expansion began to heavily impact on the grand spider orchid, particularly those populations concentrated around the Southern River area. CALM's Swan Region recognised that the species needed a thorough evaluation and 2004 saw a significant commitment from the Region to conduct extensive surveys. The search was coined the 'Huegelii Hunt'. CALM, with the help of Botanic Gardens and Parks Authority, carried out surveys on known populations and other areas identified as having prospective habitat. In Kooljerrenup Nature Reserve, 32 search hours resulted in the discovery of another flowering plant, located approximately 500 m from the plant located in 1995.

This year, CALM volunteers from Mandurah and Perth joined CALM staff from Swan Region, Species and Communities Branch and Mandurah Work Centre to search more of Kooljerrenup Nature Reserve, in the second instalment of the 'Huegelii Hunt'. So on a fine, sunny day in October, eight hunters took to the bush with high hopes of finding the grand spider orchid. Recent rains in the area deterred searches in some areas, but by late morning a CALM Mandurah volunteer had spotted the first new grand spider orchid! As the group gathered around to have a look, several more plants were spotted. There were a total of 12 within a small area!

Kooljerrenup Volunteers. Photo – Murray Love

The grand spider orchids were abundant in this area, and were very healthy with many standing 70 cm high and some 'double-headers' (two flowers per stem). Each plant was counted and a GPS location taken. A total of 246 plants were located. This population is now the largest on a nature reserve, and the third largest known population.

The revised status of this population significantly improves the species' conservation prospects. Further surveys are planned for 2006. Many thanks to the volunteers for their invaluable effort.

For further information contact Nicole Willers on (08) 9474 7056 or email nicolew@calm.wa.gov.au

The 'Great Cocky Count' Can you help?

When Sunday 26 March and Sunday 14 May 2006.

What Counting Carnaby's cockatoos on the Swan Coastal Plain.

Why To see how many there are to plan for the future conservation needs for this endangered species in the Swan Region.

Where Good vantage points within local parks, reserves and home gardens on the Swan Coastal Plain—you may count cockatoos at your home, or go to another location.

Who Anyone.

How Go to the webstie at www.birdsaustralia.com.au (select Carnaby's from quick menu).

Surveys for possible Ironstone TEC in the Porongurups

Restricted areas of shallow ironstone soils associated with unusual plant communities occur in several areas of the South-West including the Gingin, Busselton and Scott River areas and restricted sites near Kalbarri and Eneabba. Each of these areas contain plant communities that are characterised by different flora. These ironstone soils are thought to be historically associated with bogs—the iron being deposited by water percolating through the soil and bacterial action on the surface, or as a result of precipitation of iron oxides associated with fluctuating groundwater levels.

Many of these ironstone soils have been found to contain unique vegetation assemblages including many rare and priority flora species and has lead to the Perth to *Gingin Ironstone Association, Shrublands on southern Swan Coastal Plain Ironstones* (Busselton area), the *Scott River Ironstone Association* and the *Ferricrete (bog-ironstone) floristic community* in the Eneabba area all being listed as Threatened Ecological Communities (TECs).

Recently a consultant botanist has completed a quadrat-based flora survey in another ironstone community in the Porongurups area to provide a more detailed species list for this wet heath community. This may lead to this area also being assessed as an additional TEC. The site occurs in an ironstone flat adjacent to a seasonal stream in Twin Creeks Reserve. It contains several priority species including *Hakea tuberculata* (P3), *Hakea lasiocarpha* (P3) and *H. oldfieldii* (P3).

Porongurup Ironstone Community.
Photo – Rosemarie Rees

The predominant shrubs are *Kunzea recurva, K. preissiana, K. micrantha, Hakea lasiocarpha, H. tuberculata, H. oldfieldii, H. cucullata, H. sulcata, Petrophile squamata, Dryandra tenuifolia* subsp. *tenuifolia, Adenanthos apiculatus, Melaleuca suberosa, M. violacea* and *Gastrolobium spinosum*. The understorey consists of various moisture-loving species including sedges, Drosera, mosses and several orchid species and there are taller shrubs and eucalypt trees in thickets at the margins of the heath area.

The current survey will provide a better picture of the species composition of this community and allow comparison with the species present within the Scott River and Busselton Ironstone TECs. Further surveys are planned for the coming year to try and locate additional occurrences of this wet ironstone heath community within the Albany District.

For further information please contact Rosemarie Rees, Project Officer, Species and Communities Branch, 9405 5167, rosemarier@calm.wa.gov.au

Scott River Ironstone Community

Staff from CALM's Species and Communities Branch and Blackwood District undertook a site visit to the Scott River area to survey the Endangered 'Scott River Ironstone Association' in early December 2005.

The Scott River threatened ecological community (TEC) consists of winter wet shrubland occurring on skeletal soils over massive ironstone. It is confined to the Scott Coastal Plain and is threatened by dieback disease caused by *Phytophthora* species, altered hydrology, grazing and clearing. These heathlands and shrublands are variously dominated by *Melaleuca preissiana, Hakea tuberculata, Kunzea micrantha* or *Melaleuca incana* subsp. *Gingilup* depending on the degree of waterlogging. The understorey is generally dominated by *Loxycarya magna*.

The Scott ironstone area is often inundated for many months of the year, and this makes access difficult. The primary aim of the site visit was to confirm boundary information inferred from soils mapping, and to check the condition of occurrences of the TEC. Threats and condition were also observed and species were collected from one reserve for inclusion into a small field herbarium.

The CALM staff met the owner of land containing a very large, intact occurrence of the Scott River ironstone TEC in excellent condition. This occurrence was very species-rich with many plants flowering including *Boronia, Verticordia* and *Stylidium* species. The landowner had a good knowledge of the local area, and land management issues were discussed. Other private land visited contained occurrences that were impacted by grazing.

Rosemarie Rees at the Scott River Ironstone Community.
Photo – Mia Morley

Nature Reserves that contain the Scott ironstone TEC and all roadside occurrences of the community were surveyed. All except one road reserve which is threatened by disturbance, weed invasion and *Phytophthora cinnamomi*, were in excellent condition. Healthy populations of the Declared Rare Flora *Lambertia orbifolia* subsp. Scott River Plains and *Darwinia ferricola* ms and populations of the priority species *Calothamnus crassus, Grevillea papillosa, Hakea tuberculata* and *Loxycarya magna* were surveyed.

The visit resulted in new information about private property occurrences that had not been surveyed in detail in the past. The information kindly provided by private landowners can also be considered in future planning for this unique threatened ecological community.

Many thanks to Janine Liddelow (Blackwood District) for her assistance and input of local knowledge.

For further information contact Mia Morley on (08) 9405 5170 or email miam@calm.wa.gov.au

Population characteristics of three rare wheatbelt plant species

Research into the population characteristics of three rare wheatbelt species (*Frankenia parvula, F. conferta* and *Roycea pycnophylloides*) was undertaken in 2003 and 2004 by contract staff working with CALM's Species and Communities Branch.

The project was funded through the State Salinity Strategy project 'Writing and implementing Interim Recovery Plans for Declared Rare Flora and threatened ecological communities in areas at risk from hydrological change due to broad-scale clearing'. The aims of this project were to establish a quantitative monitoring framework and baseline data on populations and species growth characteristics and for detecting changes in population abundance, health, life stage structure and reproductive potential. The project included establishing permanently marked quadrats; permanently labelling plants for long-term monitoring; and examining a suite of biological characteristics for each species. Results from the project are listed below.

Frankenia conferta

Frankenia conferta was found to recruit both sexually and vegetatively. Fruit set and viable seed production in the species were low with a high proportion of empty and predated fruits. The pattern of recruitment by seed of juveniles in clumps around adult plants along residual stems suggest that seeds are held in fruits

Saltmat (*Roycea pycnophylloides*). Photo – Phil Roberts

on the plant for at least one season and are not immediately dehisced until conditions for germination are favourable. Clonal reproduction of plants from adventitious roots (roots coming from unusual places) dominated in four of five populations. Adventitious roots may be advantageous for survival through unfavourable seasons. Smaller sized populations may have limited variability with a smaller gene pool, resulting in less tolerance to various stresses and threats. Some populations may be in decline and regular monitoring using the framework established will be necessary for verification.

Frankenia parvula

This species was found to recruit both sexually and vegetatively but less than half of the fruits had viable seed. There was evidence of re-sprouting, which suggests the species may have the ability to recovery vegetatively from disturbance events. Frankenia parvula plants have the capacity to spread with the largest plant recorded measuring nearly two metres square. A high number of plant deaths also occurred close to the waterline at Yellowdine (Population 1).

Roycea pycnophylloides

Although the species numbers have increased significantly through surveys, the plants occupy a highly specialised habitat that is restricted within largely cleared agricultural areas. Roots of *Roycea pycnophylloides* plants are capable of storing reserves and evidence of resprouting was observed. These characteristics enable the recovery of the species from disturbance events and also to endure periods of unfavourable growing conditions. *R. pycnophylloides* plants throughout the study sites were healthy. Fruit production was low throughout all study sites, however nearly half of the seed produced was viable.

For further information contact Robyn Luu on (08) 9405 5177 or email robynl@calm.wa.gov.au

Information courses on threatened flora and communities

Another successful Flora Conservation Course was held in Jurien in September 2005. The aim of the course is to improve conservation of flora in WA through improved awareness and understanding.

The week-long course covers aspects as diverse as conservation of genetic diversity through to the need to consider landscape-scale issues such as salinisation to achieve protection of flora and ecological communities. The course was extremely well received by the 20 staff from CALM who attended the course, and will be repeated in spring 2006.

Some changes that were incorporated in the 2005 course were the inclusion of weed control as a major issue for recovery, more focus on taxonomy and monitoring techniques, and increased time spent on outcome-based field work. As a consequence of very careful site-selection by CALM Jurien staff, participants located a total of four new populations of Declared Rare Flora and two populations of Priority flora, collected 240 voucher specimens for lodging at the herbarium, and recorded detailed flora data from four permanent quadrats in three different vegetation types.

A trial preliminary field day was then held in November 2005 to familiarise CALM staff with identification, threats and management issues for threatened ecological communities (TECs), on the Swan Coastal Plain near Perth. The field visits were a precursor to a field day that is planned to be offered more widely to CALM staff in 2006. This first field day focussed on the plant communities on the Muchea limestone and ironstone soil types near Gingin and massive limestone ridges at Yanchep; the invertebrate communities of the mound springs, and caves; and two wetland plant communities on heavy soils. The next field day will focus on threatened floristic plant communities located between Wanneroo and Mandurah.

For more information about the field day for TECs planned for 2006, please contact Val English on vale@calm.wa.gov.au. This second field day will be offered to CALM staff on an as-needs basis.

Flora course at Lake Thetis. Photo – Val English

Monitoring Threatened Ecological Communities (TECs) on the Swan Coastal Plain — an update

A monitoring program to detect change in condition of some of the Swan Coastal Plain's Endangered and Vulnerable Threatened Ecological Communities (TECs) began in the spring of 2003. Condition is a reflection of the major threatening processes likely to impact TECs, such as weed invasion, dieback and fire.

A total of 22 transects have now been established in 12 occurrences of TECs. The TECs chosen include Floristic Community Type 2 *Southern Wet Shrublands* (Endangered), Type 8 *Herb rich shrublands* in clay pans (Vulnerable), *Type 18 Shrublands on calcareous silts* (Vulnerable), Type 15 Forests and Woodlands of deep seasonal wetlands (Vulnerable). The locations of the sites extend from as far north as Bambun Reserve, Gingin to the southern most site at Ambergate Reserve in Busselton.

Techniques for monitoring, and the priority for monitoring, varies between occurrences. Some issues that are considered include the degree of threat, the extent to which the threats can be abated, and the difficulty/cost of that abatement.

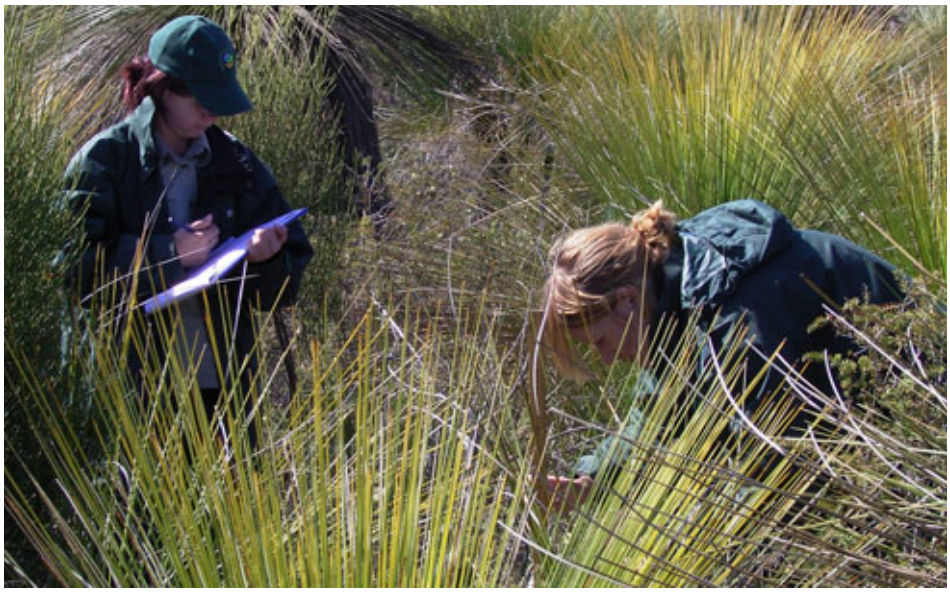
At this stage transects with point-intercept have been used in each occurrence and at most of the locations transects have been established from near the occurrence edge where disturbance and threats are most evident. Transects have also been established after wildfire. The transects have been used to gain a representation of each occurrence to gauge the feasibility of this type of monitoring.

This program compliments CALM's Swan Coastal District's monitoring of Critical TECs and CALM's South West Region's monitoring program.

The monitoring program will be continually reviewed and liaison will continue with the Regions involved.

The aim is to eventually install transects in all occurrences of each TEC.

For further information contact
Jill Pryde on (08) 9405 5128 or email
jillp@calm.wa.gov.au



From top right Monitoring in Hay Park, Dundas Road and Ellis Road.
Photos – Jill Pryde and Mia Morley

Interim recovery plans approved

Another 13 Interim Recovery Plans (including 10 for flora and three for Threatened Ecological Communities) have been approved by the Director of Nature Conservation. Some of these plans have been updated to include new information. These recovery plans were written with funding assistance from the Natural Heritage Trust and will be sent to the Commonwealth Department of Environment and Heritage for adoption under the Environment Protection and Biodiversity Act 1999.

Number	Recovery plan	Author
195	Montane mallee thicket of the Stirling Range mallee-thicket community on mid to upper slopes of Stirling Range mountains and hills 2004–2009	S Barrett
196	Assemblages of organic mound springs of the Three Springs area 2005–2010	Rosemarie Rees, Gina Broun
197	Shrublands and woodlands on Perth to Gingin ironstone 2005–2010 **updated**	Rachel Meissner and Val English
199	Wittwer's mountain bell, *Darwinia wittwerorum*	Renée Hartley, Sandra Gilfillan and Sarah Barrett
200	Manypeaks rush, *Chordifex abortivus*	Renée Hartley, Sandra Gilfillan and Sarah Barrett
201	Yellow mountain bell, *Darwinia collina*	Renée Hartley and Sarah Barrett
202	Albany woollybush, *Adenanthos x cunninghamii*	Renée Hartley, Sandra Gilfillan and Sarah Barrett
203	Kundip wattle, *Acacia rhamphophylla*	Renée Hartley and Sarah Barrett
204	Hairy-fruited marianthus, *Marianthus villosus*	Renée Hartley and Sarah Barrett
205	Fairall's lambertia, *Lambertia fairallii*	Renée Hartley and Sarah Barrett
206	Bennett's mallee, *Eucalyptus x bennettiae*	Renée Hartley, Sandra Gilfillan and Sarah Barrett
207	Stirling Range dryandra, *Dryandra montana*	Sandra Gilfillan, Sarah Barrett, Renée Hartley and Colin Yates
208	Kamballup dryandra, *Dryandra ionthocarpa* subsp. *ionthocarpa* ms	Renée Hartley and Sarah Barrett







From far left Wittwer's mountain bell (*Darwinia wittwerorum*), Manypeaks rush (*Chordifex abortivus*), yellow mountain bell (*Darwinia collina*), Albany woollybush (*Adenanthos x cunninghamii*), Kundip wattle (*Acacia rhamphophylla*) Fairall's lambertia (*Lambertia fairallii*) and Bennett's mallee (*Eucalyptus x bennettiae*).

Below from top Stirling Range dryandra (*Dryandra montana*) and Kamballup dryandra (*Dryandra ionthocarpa* subsp. *ionthocarpa* ms).

All photos – CALM


Translocation of threatened flora and fauna

Five translocation proposals have been approved since the last edition of *Watsnu*. A full translocation proposal for Gilbert's potoroo to Bald Island has been approved, following an earlier trial.

Species	Translocation details	Proponent
Quartz-loving synaphea (*Synaphea quartzitica*)	Plants grown using tissue culture techniques from leaf shoot material collected from plants in population 2A to be introduced to a C Class Nature Reserve nearby	Leonie Monks, Gina Broun, Maria Lee, CALM
Split-leaved grevillea (*Grevillea althoferorum*)	Sourced from the northern clonal population near Eneabba. Translocated to habitat around the population from which propagation material was sourced.	Leonie Monks, Gina Broun, CALM
Gilbert's potoroo (*Potorous gilbertii*)	Mt Gardner, Two Peoples Bay Nature Reserve to Bald Island Nature Reserve	Tony Friend, CALM
Western barred bandicoot (*Perameles bougainville*)	Reintroduction from Heirisson Prong to Faure Island	Andre Schmitz (Australian Wildlife Conservancy), J Richards (CSIRO)
Daviesia euphorbioides	To Hindmarsh Nature Reserve	Gillian Stack, Joel Collins, Paul Blechynden, Leonie Monks and David Jolliffe, CALM

Recovering (Western) Australia's rich endemics

With funding assistance from the Commonwealth's Natural Heritage Trust Program, Interim Recovery Plans (IRPs) are currently being drafted for several threatened flora species found in the WA wheatbelt. These include the Critically Endangered *Acacia sciophanes*, *Acacia pharangites* and *Haloragis platycarpa* and the Endangered *Eremophila resinosa* and *Grevillea involucrata*. Funding was also provided for the Priority 4 species *Bentleya spinescens*.

Acacia sciophanes, that is known only from the Shire of Mukinbudin, has been the focus of recent research that has provided crucial biological and ecological knowledge on this species. Seeds have been found to have narrow tolerance limits for fire temperature and exposure time, favouring low intensity fires—a fact that needs to be taken into account in conservation management.

Senescence and lack of a suitable stimulus for recruitment has resulted in populations of *Acacia pharangites*, known only from the Shire of Wongan-Ballidu, to decline in size by nearly 90 per cent over a period of approximately 16 years. However, it is thought that soil seed banks are large and that future fire or other disturbance will result in the recruitment of this species.

Until rediscovered in the Shire of Dalwalinu in October 2000 by staff from CALM's WA Herbarium, *Haloragis platycarpa* was presumed extinct as it had not been seen for 150 years. The single population of this species was resurveyed in 2001 but only 30 dead plants were located. Based on taxonomic evidence

Acacia sciophanes. Photo – Rebecca Evans

H. platycarpa has no close relatives so it has particularly high conservation significance.

Eremophila resinosa is known from the Shires of Westonia, Mukinbudin, Nungarin, Koorda, Mt Marshall and Wyalkatchem. In 2004, mining operations resulted in the removal of 15 plants from a population of 441 located on land leased for mining. Funding from the mining company has enabled clones of six of these plants to be used to propagate a successfully translocated population numbering 571 individuals.

Grevillea involucrata is known from the Shires of Lake Grace, Kulin and Kent. Although currently ranked as Endangered using IUCN Red List criteria, recent reassessment of its status indicates that it currently meets Critically Endangered.

Bentleya spinescens is found in the Shires of Lake Grace and Kent, and has been down-listed to priority 4 following the discovery in 2001 of a population numbering approximately 160,000 mature individuals. Despite this, the species is of significant conservation value – representing the sole member of its genus and possibly a new family.

For further information contact
Craig Douglas on (08) 9405 5172 or email craigd@calm.wa.gov.au





Far left Yellow mountain bell (*Darwinia collina*), photo – Babs and Bert Wells/CALM; *Caladenia huegelii,* photo – Emma Adams; Lake Clifton thrombolites, photo – CALM; *Davesia euphorbiodes,* photo – Andrew Brown; *Eremophila vernicosa,* photo – CALM.

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