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# WATSNU

*The Newsletter of the Western Australian Threatened Species & Communities Unit*

## **BRISTLEBIRDS ~ they're back!**

*by Allan Burbidge*

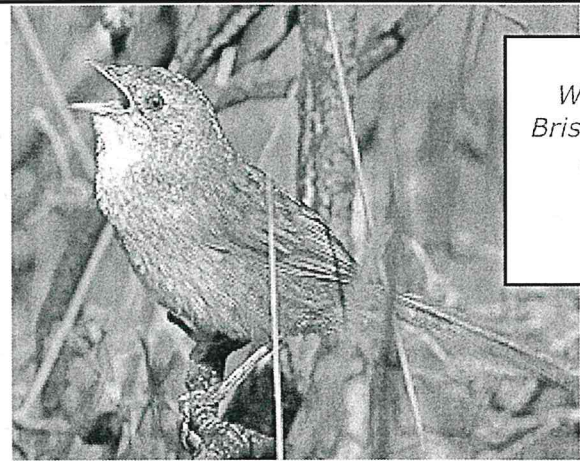
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When F. Lawson Whitlock recorded the loss of the population of Western Bristlebirds following a fire near his home at Wilson's Inlet, he became the last person to see or hear bristlebirds west of Albany for nearly 80 years. All records since 1912 have been from east of Albany (Two Peoples Bay to Fitzgerald River National Park).

But that has now changed - in the last two years, CALM staff and volunteers have worked together to establish a new population in the Nuyts Wilderness, Walpole-Nornalup National Park.

In spring 1999 we caught eight birds at Two Peoples Bay Nature Reserve, ready for translocation to Walpole. Catching them is labour intensive, and very much a team effort. There are lots of things that can go wrong, but success was ensured by the enthusiasm and dedication of all involved. The birds were transported by vehicle to



*The Western Bristlebird  
Photo:  
Simon Nevill*

Walpole-Nornalup NP, and from there spent an hour or so in back packs as we walked in to the release site.

All this amounted to an enormous effort, but would they survive in their new home? Translocations can fail for many reasons, and failure was a possibility with the bristlebirds. Therefore, hearing bristlebirds calling at the release site over the ensuing days and months was exciting enough, but when we monitored the site one year after the release, it was really encouraging and rewarding to be able to confirm that at

least four birds (three males and one female) were still present. Females call only rarely, so this is very much a minimum estimate of the number of birds present. More recent observations suggest that the success rate may have been even higher, with the likelihood of at least one more of the 1999 birds still being present.

Spurred on by this success, we caught another seven birds from Two Peoples Bay and released them at the same site in the Nuyts Wilderness in November 2000. This

**"All this amounted to an enormous effort, but would they survive in their new home?"**

should significantly increase the size of the gene pool and reduce any possible problems from inbreeding in this new population, which we now hope will be self-sustaining.

At the recent meeting of the South Coast Threatened Birds Recovery Team, we decided to not translocate any further birds in the coming year (2001) but to concentrate on monitoring to determine exactly where they have set up their territories and how many birds are in each territory. This is becoming more difficult as some birds have moved some distance from the release site, meaning that we have a much larger area to cover, and we will need extra time and people to do this. Once

again, the contributions of volunteers will be critical in helping ensure the success of the project. If you would like to help in this exciting project, and don't mind long walks, sometimes through dense bush, please contact us: Allan Burbidge at

CALM's Wildlife Research Centre, Woodvale (08 9405 5100), Sarah Comer (CALM Albany 08 9842 4500) or Carl Beck (CALM Walpole 08 9840 1027).

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Volunteer Neil Hamilton releasing a Western Bristlebird in Walpole-Nornalup NP

Photo: Allan Burbidge

## THREATENED SPECIES SCIENTIFIC COMMITTEE

The Western Australian Threatened Species Scientific Committee (WATSSC) met on 27 October to consider nominations for additions to and deletions from the lists of threatened species. It also considered recommendations that some taxa be changed from one IUCN Red List Category of Threat to another.

For the first time, there were more nominations for plant taxa to be delisted than there were for new listings. Six taxa were nominated for listing, while nine were nominated for delisting. Three taxa were proposed for removal from the list of extinct plants and addition to the list of threatened plants. These were *Eremophila vernicosa* ms, found by Dr

Stephen Davies near Coorow, *Gyrostemon reticulatus*, found by Brother W. van Veen near Tardun and *Ptilotus fasciculatus*. Terena Lally, Australian National Herbarium, recently examined the type material of *Ptilotus caespitosus* held at Melbourne Herbarium and concluded that all material in the WA Herbarium determined as this species is actually *P. fasciculatus*. *P. caespitosus* was described by von Mueller in 1868 from material collected by James Drummond. The location was given as 'Western Australia'. No other specimens of this

species are known. So, unfortunately, the recommendation that *P. fasciculatus* be listed as extant had to be accompanied by a recommendation that *P. caespitosus* be listed as Extinct.

There were eight proposed additions to the list of threatened fauna and five proposed deletions. There were no recommended changes to the extinct list.

Recommendations from WATSSC are being forwarded via CALM's Executive Director and the Conservation Commission to the Minister for the Environment.

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OR Wildlife Branch on 9334 0455

## Volunteers Help Locate New Populations of Rare Orchids ~ Val English

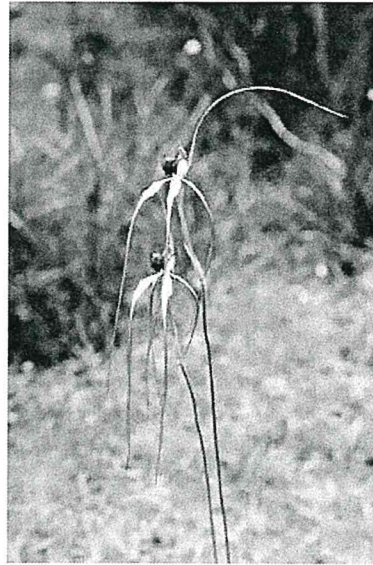
### *Orchid Surveys in the Busselton area*

With the help of volunteers, a number of extremely rare orchids were surveyed during spring 2000.

Native orchid enthusiast, Greg Bussell, helped survey many populations of Declared Rare orchids in the Busselton area in October. The surveys were organised and jointly completed by Andrew Brown and Val English from WATSCU, and Meredith Souter from South West Capes District.

Several new populations of *Caladenia excelsa* ms (giant spider orchid) that Greg had located previously, but were not documented by CALM, were confirmed and documented during the trip. A quick track-side survey within Leeuwin Naturaliste National Park located a total of 37 plants in one area. It is also likely that there are more plants at another area within the park as Greg said that he had located them there previously. Although not found during this survey, the lack of flowering plants at this additional site may be attributed to the drier than normal season. Future surveys in the Park during more favourable seasons may help downgrade the level of threat to this orchid from its current Endangered status.

Another exciting find was made during the survey with a new sub-population of two plants of *Caladenia busselliana*



*Giant spider orchid*  
Photo: Andrew Brown

(Bussell's spider orchid) being recorded from the Carburnup area. This species was discovered by Greg Bussell in 1990, and is named after him. The orchid is currently only known from two other populations totalling eight plants. This makes the Critically Endangered Bussell's spider orchid one of the rarest orchids in Western Australia!

On another field trip in early November, Alan Tinker, a local flora expert accompanied Andrew Brown, Val English and Alice Reaveley (CALM, Moora District) on surveys of rare orchids in the Eneabba area.

Alan had previously discovered many of the currently known

populations of the Endangered *Paracaleana dixonii* (sandplain duck orchid). Some are now under threat from prescribed burns that have the potential to destroy populations if undertaken whilst the orchids are actively growing or flowering. Alan was able to precisely locate the areas in which the orchid had previously flowered. Unfortunately, the populations under threat from burning were not in flower this season, again, possibly due to the drier than normal conditions. However, the group was able to confirm the location of two new populations that had previously been recorded but not documented. One of these populations had been discovered by Alan in 1999.

All of the 14 known populations of the sandplain duck orchid were surveyed by the group, but only two populations containing a total of 10 plants in flower were located. As more plants have been located in previous years, it is hoped that numbers will increase during favourable seasons, otherwise, this species may need to be listed as Critically Endangered!

The two volunteers, Greg Bussell and Alan Tinker have, again, provided extremely valuable assistance in documenting some of the state's rarest flora. Their incredible local knowledge is an invaluable asset to the conservation of Western Australia's biodiversity.

## Orchid Surveys in the Geraldton District

A group of keen volunteers from the Northampton Regional Herbarium (Irene Shepherd, Heidi and David Stinson and Barbara Williams) met with Andrew Brown and Val English from WATSCU, and Alanna Chant (CALM Geraldton District Conservation Officer) to survey *Caladenia elegans* (elegant spider orchid); *Pterostylis* sp. Northampton (Northampton midget greenhood); and *Drakaea concolor* (kneeling hammer orchid) in August this year.

Two new populations of the Endangered hammer orchid totalling about 350 plants were located on private land in the Northampton area. This significant find increases the number of known populations from six to eight, and the total number of plants by 40%.

Two new populations of the spider orchid totalling about 700 plants were also located on private land. This boosts the total number of plants known by almost 20%. Unfortunately no new populations of midget greenhood were to be found, but Alanna Chant has since located likely habitat during a follow up field trip with the owners of land on which one of the new popula-



*Northern dwarf spider orchid*  
Photo: S.D. Hopper

population of *Caladenia bryceana* subsp. *cracens* (northern dwarf spider orchid) that was damaged in 1999. Don and Barbara had helped in the original survey of this newly located population. The habitat appeared to be regenerating well, however, it may take some time before the dwarf spider orchid is able to reinvade the site of the disturbance. Fortunately, plants were found in the undisturbed bushland surrounding the cleared area.

The knowledge and involvement of enthusiastic volunteers has again been a crucial part of documenting the state's rare orchids.

tions of elegant spider orchid occurs.



*Kneeling hammer orchid*  
Photo: Andrew P. Brown

The volunteers also helped survey all of the known populations of the midget greenhood and elegant spider orchid. As with many other species of orchids surveyed in 2000, numbers of

these two Critically Endangered species were generally reduced from previous years, probably due to the low rainfall.

CALM staff then continued north from Northampton to meet up with local flora experts Don and Barbara Bellairs at Kalbarri. At this site, the group examined the regeneration of a

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*Sandplain duck orchid*  
Photo: Andrew Brown

## MONTEBELLO RENEWAL UPDATE ~ Andrew Burbidge

**M**ontebello *Renewal*, a Western Shield project, aims to eradicate feral animals from the Montebello Islands Conservation Park and reintroduce and introduce threatened animals. Progress with this project is as follows.

### *Mala*

In August 2000, track activity and fresh droppings were common in the vicinity of the release site at Cocoa Beach on Trimouille Island. Three Mala were captured on the evening of 27 August. One was a male released in 1998, one was an untagged female with large pouch young and one was a sub-adult male. A further five Mala were sighted in head torches or a spotlight but not captured. A dead animal, one of the original release group, was found at Cocoa Beach. This animal had been dead for about two to three months and there were no obvious signs of predation. Searches south from Cocoa Beach and from Cocoa Beach to Gladstone Point revealed relatively high track densities extended about one-third up Main Beach and up to 500 m southwards. Tracks were also found at four other locations northwards.

The 2000 work confirms that Mala have established on Trimouille Island, are recruiting successfully and extending the area occupied. A significant population should develop. In 2003, once the population has been established for five years, the upgrading of Mala from 'Extinct in the Wild' to 'Vulnerable' (IUCN Red List Categories and Criteria) should be possible.

### *Djoongari*

Thirty Djoongari or Shark Bay Mice (*Pseudomys fieldi*) were released on North West Island in June 1999. Post-release radio-tracking showed some predation by Bungarra (*Varanus gouldii*). The release site was checked for tracks on 25 August 2000; but no evidence of Djoongari was found. Fifty medium Elliott traps laid on an approx. 25 m grid at the release site that day did not result in any captures. On 26 August, foot searches over the remainder of the island revealed tracks in *Spinifex longifolius* south west of Moselle Bay and in and above a cliff southwest of Leopard Hill. This area is about 1 km east of the release site. Low level track activity was also found up to 300 m east of this area in *Spinifex longifolius* and in open sandy areas.

The fifty Elliotts were relocated to the Leopard Hill area on 26 August. On 27 August one Djoongari was captured—a female released in 1999. This animal appeared pregnant but had not previously borne young. No further trapping was conducted at this time. On 29 August, 29 Djoongari bred at Perth Zoo were released at late dusk at the Leopard Hill site.

In late October, a *Landscape* Expedition visited the Montebellos and expedition members released a fur-

ther 32 captive-bred Djoongari, and carried out more intensive trapping of North West Island. Nineteen Djoongari were trapped, five from the 1999 release and 14 from the August 2000 releases. There was evidence of breeding among the 1999 animals.

The translocation of Djoongari to the Montebellos appears to be going well; however, further monitoring will be needed.

### *Feral cats*

A project to eradicate Feral Cats was carried out on Hermite Island in 1999 (see *Landscape* 15 (3), 18-22 and *WATSNU* December 1999). During the 2000 visit, all significant sandy areas of Hermite Island were checked for cat tracks. No tracks were located, confirming that Feral Cats have been eradicated.

### *Black Rats*

Rat eradication was attempted on all islands in 1996. In 1999 rats were detected on Hermite, Campbell and Delta Islands, while all other islands appeared rat-free. Aerial baiting was carried out on the three infested islands in October 1999. Work in 2000 showed that rats still remain on Hermite Island, but there were no signs of them on Campbell or Delta. Plans are being prepared for a further eradication attempt on Hermite in 2001.

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## THE ACTION PLAN FOR AUSTRALIAN BIRDS

Senator Robert Hill, Commonwealth Minister for the Environment, launched the 2000 Bird Action Plan in October. Environment Australia commissioned the Action Plan, which was prepared by Stephen Garnett and Gabriel Crowley on behalf of Birds Australia. The 2000 action plan replaces the previous one published in 1992.

*The Action Plan for Australian birds 2000* is based on recent taxonomies, especially that of Schodde and Mason (1999) who resurrected many subspecies previously ignored by most earlier reviews as well as defining new ones. The Action Plan lists 25 taxa as Extinct, 32 as Critically Endangered, 41 as Endangered, 82 as Vulnerable and 81 as Near Threatened. Of those taxa known to have been present in Australia when Europeans settled in 1788, 1.9% are extinct and 11.5% are threatened.

The action plan was developed with wide consultation with many Australian ornithologists and conservation biologists. CALM provided extensive input, coordinated by Andrew Burbidge, Allan Burbidge and John Blyth, with contributions from Peter Mawson, Stuart Halse, Alan Danks and others. At 673 pages, the Action Plan is a marvelous source of information on threatened and near threatened birds and will be an extremely useful document for conservationists for years to come.

The two Extinct taxa in Western Australia are the western subspecies of the Rufous

WA BIRDS	
Extinct	2
Critically Endangered	2
Endangered	7
Vulnerable	32
Near Threatened	31

Bristlebird and the western subspecies of Lewins Rail. The habitat of both of these species was dense vegetation, some of which still occurs in areas in which the birds were last known. For the Lewins Rail in particular there are still many densely vegetated swamps along the south coast and within State forest that could conceivably still act as refuges for small numbers of the subspecies. The Rufous Bristlebird was known only from the southern part of the Naturaliste-Leeuwin ridge and has not been reliably reported since 1906.

The two critically endangered WA taxa are the Amsterdam Albatross and Night Parrot. The former breeds on Amsterdam Island in the southern Indian Ocean and is a very rare visitor to seas near WA. The Night Parrot, for which an Interim Recovery Plan was published by CALM in 1997, has not been reliably sighted in WA for some decades, although it is still reported.

The eight Endangered taxa are: Tristan Albatross, Northern Royal Albatross, Carnaby's Black-Cockatoo, Muir's Corella, Ground Parrot (western), Crested Shrike-tit

(northern), and Gouldian Finch.

It is notable that some Western Australian birds have had their conservation status improved due to conservation action, including survey and research, since 1992. These include the Hooded Plover (western) (from Vulnerable to Near Threatened), Noisy Scrub-bird (from Endangered to Vulnerable), Thick-billed Grass-wren (western) (from Vulnerable to Near Threatened), Western Bristlebird (from Endangered to Vulnerable) and Western Whipbird (western heath) (from Endangered to Vulnerable). On the other hand, Carnaby's Black-Cockatoo and Muir's Corella have changed from Vulnerable to Endangered since 1992.

The Action Plan was published too late for its conclusions to be considered by the October 2000 meeting of WA's Threatened Species Scientific Committee. CALM staff will develop recommendations for the Committee's next meeting.

Hard copies of the Plan are available from Environment Australia's Community Information Unit on 1800 803 772 or by emailing [ciu@ea.gov.au](mailto:ciu@ea.gov.au). The Plan will be available on the Environment Australia website at:

<http://www.biodiversity.environment.gov.au/threaten/plans/action/index.htm>

## PHOSPHITE ANALYSIS OF SITES IN THE STIRLING RANGE ~ Sarah Barrett

**P**hosphite analysis was conducted on samples from three selected sites after phosphite application in autumn 2000. Two of these sites were in the Critically Endangered Stirling Range Montane Community and were originally sprayed in autumn 1997 when some analysis was also conducted. A new non-ionic surfactant, BS1000 was trialled in 2000 as well as a new application rate (18 kg/ha) for the Montane Community. As several species at the third site assessed (Ellen Track) showed considerable phytotoxicity (leaf burn) after the first spray of 12 kg/ha, the second spray of 12 kg/ha (to give a total of 24 kg/ha) was cancelled.

The aims of phosphite analysis were to :

- determine phosphite concentrations at two weeks post spray after phosphite application at 18 (a new rate) and 24 kg/ha
- determine whether any residual phosphite levels persisted since the 1997 spray
- determine phosphite levels in *Dryandra anatona* after phosphite application at 12 kg/ha.

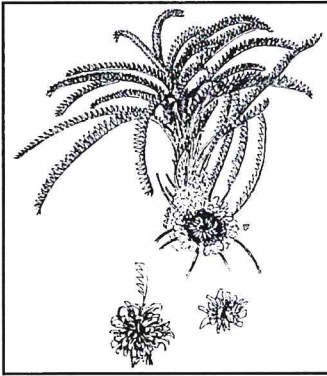
The species sampled and target DRF in the spray area for each site are shown in **Table 1**. Four of these species (Montane Community) are currently ranked Critical with three at the Ellen Track site proposed Critical. Phosphite levels at two weeks post-spray and application rates are shown in **Table 2**.

Site	Target DRF	Species sampled
Bluff Knoll (Montane TEC)	<i>Dryandra montana</i> , <i>Andersonia axilliflora</i> , <i>Leucopogon gnaphalioides</i> , <i>Perossonia micranthera</i> , <i>Darwinia collina</i> , <i>Sphenotoma drummondii</i>	<i>Sphenotoma</i> sp. Stirling Range
Success (Montane TEC)	<i>Andersonia axilliflora</i> , <i>Sphenotoma drummondii</i> , <i>Banksia brownii</i> , <i>Lambertia fairallii</i>	<i>Sphenotoma</i> sp. Stirling Range
Ellen Track	<i>Dryandra anatona</i> , <i>Daviesia glossosema</i> , <i>D. pseudaphylla</i>	<i>Dryandra anatona</i>

Species	Site / Date sampled	Application rate (kg/ha)	No. of samples	Phosphite (ppm)
<i>Sphenotoma</i> sp. Stirling Range	Bluff Knoll autumn 1997	24	12	242 ± 31
<i>Sphenotoma</i> sp. Stirling Range	Bluff Knoll pre-spray autumn 2000	24	5	3.9 ± 0.9
<i>Sphenotoma</i> sp. Stirling Range	Bluff Knoll autumn 2000	18	10	223 ± 27.9
<i>Sphenotoma</i> sp. Stirling Range	Success autumn 2000	24	12	352.5 ± 86.9
<i>Dryandra anatona</i>	Ellen Track autumn 2000	12	10	190.4 ± 43.9

Results of phosphite analysis show that low levels of phosphite persisted in *Sphenotoma* at the Bluff Knoll site. The vegetation at this site is characterized by slow growth due to extreme environmental conditions. These low levels may still be effective at controlling *Phytophthora cinnamomi* up to three years post spray in this environment.

Relatively high levels were achieved at the Bluff Knoll site and Success site in autumn 2000 compared with the autumn 1997 application, this may be due to the change in surfactant however it is difficult to compare between sprays due to different conditions on the day.



*Stirling Range dryandra*  
Drawing: Susan J Patrick

Phosphite concentrations in *Dryandra anatona* were also high and help explain why foliar necrosis was observed in a range of species at this site. Similar symptoms were observed in 1998 after application of 24 kg/ha. Compared with analysis of other species of *Dryandra* (*D. cirsioides* in Barrett 1999 and *D. tenuifolia* in Barrett, Ph.D. in prep), the levels for *D. anatona* were considerably higher which may be explained by differences in leaf morphology (Barrett Ph.D. in prep). Other unknown site factors e.g. water relations or topography may also contribute to greater phosphite retention at this site.

In summary the results of this phosphite analysis will help the Phosphite program in refining its application methodology and in assessing the results of the on-going monitoring of these DRF species.

Sarah Barrett is the Flora Conservation Officer for the South Coast Region and can be contacted at CALM's Albany office on 98424500 or by  
Email: sarahb@calm.wa.gov.au

## Critically Endangered Flora in Albany District ~ Robyn Phillimore

**I**nterim Recovery Plans are being developed for eight Critically Endangered flora in the Albany District using funds received from the Natural Heritage Trust. Most of the species for which plans are being developed are endemic to Stirling Ranges, and some are components of the Critically Endangered plant community that occurs in the eastern Stirlings – the “Montane Heath and Thicket of the South West Botanical Province”.

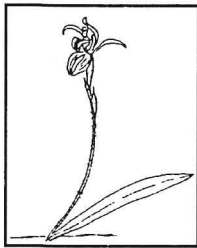
Sarah Barrett (Albany Conservation Officer) and Robyn Phillimore (WATSCU project Officer) surveyed and monitored the eight Critically Endangered plant taxa mentioned above. Initially the area on Mondurup Peak in which Greg Keighery had previously located *Darwinia oxylepis* (Gillham's Bell) in 1986 was searched. The population was relocated and a new population of the Critically Endangered *Leucopogon gnaphalioides* (Stirling Range Beard Heath) was also discovered. Other populations of *Darwinia oxylepis* and other Critically Endangered species including *Drakaea confluens* ms (Late Hammer Orchid), *Leucopogon gnaphalioides*, *Dryandra anatona* (Cactus Dryandra), *Daviesia glossema* (Maroon-flowered Daviesia) and *D. pseudaphylla* (Stirling Range Daviesia) were also surveyed during this trip. Other species that do not occur in the Stirling Range, *Isopogon uncinatus* (Albany Cone Bush)

and *Lambertia orbifolia* subsp. *orbifolia* (Round-leaved Honeysuckle) were also surveyed.

A few weeks later two fires went through the Stirling Range. The first fire was in the eastern Stirlings (Bluff Knoll to Ellen Peak), and the second was in the western Stirling Ranges (Mondurup Peak and Baby Barnett Hill). An aerial survey of the burn area, conducted by CALM Albany staff on 1 November 2000, revealed that huge areas in both sections had been burnt. Ground surveys of populations of rare flora in the eastern Stirlings were undertaken on Bluff Knoll, southeast Ellen Peak and south of Bluff Knoll by Sarah and Robyn on 8 and 9 November 2000. In some cases all known populations of a number of threatened flora were destroyed.

Species that were burnt and were part of the threatened montane community included *Andersonia axilliflora* (Giant Andersonia), *Persoonia micranthera* (Small-flowered Persoonia), *Dryandra montana* (Stirling Range Dryandra), *Leucopogon gnaphalioides* and *Deyeuxia drummondii* (Drummond Grass). Several of these species take a number of years to reach maturity and were just beginning to set seed after a previous fire in 1991. In combination with dieback caused by the plant pathogen *Phy-*





*tophthora cinnamomi*, too frequent fire is having a severe impact on the threatened flora.

Other Declared Rare Flora (DRF) that occur outside of the montane community and were burnt in the fires include *Dryandra anaton*, *Daviesia glosossema*, *Daviesia pseudaphylla*, *Caladenia bryceana* subsp. *bryceana* (Dwarf Spider Orchid), *Lambertia fairallii* (Fairall's Lambertia), *Banksia brownii* (Feather-leaved Banksia), *Xyris exilis* (Stirling Range Xyris), *Darwinia collina* (Yellow Mountain Bell), *Darwinia squarrosa* (Fringed Mountain Bell), *Darwinia* sp. Stirling Range (Red Mountain Bell), *Sphenotoma drummondii* (Mountain Paper Heath), and *Verticordia carinata* (Stirling Range Featherflower).

The second fire that went through the western Stirlings was a high intensity fire and no remnant unburnt areas were observed on Mondurup Peak. All known populations of *Darwinia oxylepis* (including the population relocated just a few weeks earlier) were burnt as well as the recently discovered population of *Leucopogon gnaphalioides*. Other DRF burnt were *Darwinia macrostygia* (Mondurup Bell), *Sphenotoma drummondii*, *Banksia brownii*, and *Pleurophascum occidentale* (Western Giant-leaved Moss). The response of the threatened community and flora popula-

tions to the recent fires in the Stirling Range will be carefully monitored by Albany staff, and the results will help determine future management of dieback disease and fire in the park.

For further information contact Robyn Phillimore on 94055 165 or by Email: [robypn@calm.wa.gov.au](mailto:robypn@calm.wa.gov.au)

## STATEWIDE THREATENED ECOLOGICAL COMMUNITIES

~ Sally Claymore

This calendar year, one or more occurrences of more than 25 communities on the list of possible TECs outside the south-west have been investigated in the field by the Project Officer. These communities span 5 CALM Districts (East and West Kimberley, Pilbara, Exmouth and Gascoyne) and 5 bioregions (Victoria-Bonaparte, Dampierland, Pilbara, Gascoyne and Carnarvon Basin).

The main purpose of field survey was to confirm the existence, distribution, boundaries, and condition of occurrences of particular communities on the list of possible TECs; to assess threatening processes and management requirements; and, to liaise with stakeholders. Biological sampling of flora and fauna was also a priority where sufficient data were not already available to adequately define and describe certain community types. In the field, valuable assistance has been provided by stakeholders such as pastoralists, aboriginal people, and CALM and Agriculture Western Australia's district and regional staff. They have also helped locate previously unrecorded occurrences of particular community types under investigation, and have suggested numerous

new communities for addition to the list of possible TECs.

The project "To conserve threatened ecological communities (TECs) throughout the State (especially outside the south-west)," commenced in 1998 with funding assistance from the Natural Heritage Trust (NHT). While there are currently 240 communities on the list of possible TECs for this study area, only 21 of these communities have been formally assessed by CALM's Threatened Communities Scientific Advisory Committee. The assessment of communities against the criteria for defining categories of conservation status requires detailed information on their defining characteristics and extent. For the majority of communities on the list, this level of information is lacking and further research is required.

For further information contact Sally Claymore on 94055 168 or by Email: [sallyc@calm.wa.gov.au](mailto:sallyc@calm.wa.gov.au)

## Natural Heritage Trust's Endangered Species Program - Western Australian projects funded in 2000-2000

### CONTINUING PROJECTS

Title of project	Project officer	Amount funded
Wongan Ballidu Threatened Flora Management Program initial implementation	Mike Fitzgerald	32,700
Albany District Threatened Flora Management Plan	Sarah Barrett/ Alan Danks / Andrew Brown	112,100
Western Swamp Tortoise Recovery Plan (implementation)	Andrew Burbidge	100,000
Noisy Scrub-bird Recovery Plan Phase 2	Alan Danks	56,300
Gilbert's Potoroo Recovery Plan (Survey and implementation)	Tony Friend	40,000
Merredin District Threatened Flora Management Plan - implementation including community involvement	Paul Roberts	56,700
Conservation Status of Rare and Poorly Known WA Flora	Sue Patrick	70,000
Dibbler Recovery Plan (partial implementation)	Tony Friend	20,000

### NEW PROJECTS

Implementation of Recovery Plan for Western Long-billed Corella ( <i>Cacatua pastinator pastinator</i> )	Peter Mawson	12,200
Conservation of Nine Critically Endangered Plant Taxa in the Moora District	Val English	99,300
Conservation of the Critically Endangered "Southern Ironstone" Community in Busselton	Val English	50,000
Conservation of seed genetic resources of National Threatened Plant Species	Anne Cochrane	38,000
Minnivale Trapdoor Spider Recovery Plan - Implementation	Andrew Burbidge	5,100
Optimising phosphite prescriptions for protection of Threatened Communities from <i>Phytophthora cinnamomi</i>	Bryan Shearer	62,400

**\$754,800**

### TOTAL AMOUNT FUNDED

#### Non-CALM ESP Projects funded

Threatened mammals - reintroduction to Heirisson Prong	Useless Loop Community Biosphere Project Group Inc	70,000
Actions for Recovery of the Endangered Carnaby's Black Cockatoo	Birds Australia	40,800

## Threatened Ecological Communities in the Wheatbelt: *It's not over yet* ~ Sheila Hamilton-Brown

*The Natural Heritage Trust* ceases funding the 3 year project to identify and conserve Threatened Ecological Communities (TECs) in the Wheatbelt in February 2001. Of the 133 possible Wheatbelt TECs identified, there has been enough information gathered for 25 TECs to go on the database. Recovery actions for many of these TECs have been relatively straightforward: fencing, weed control and fire management plans. The rest, however, are threatened by salinity and inundation and remedial strategies are complex, and require additional efforts to conserve them. The good news is that funding from the State's Salinity Action Plan will allow the project to continue for a further 16 months. This will go a long way towards continuing recovery actions on listed TECs affected by salinity and waterlogging. It will also pick up TECs identified by the Wheatbelt biological survey, also funded by the Salinity Action Plan.

My focus this spring was, therefore, to wrap up identification and set in motion recovery actions for TECs not affected by salinity and inundation. Some action carried out were:

- Established quadrats on the Vulnerable plant assemblages of the Moonagin and Koolanooka systems – the latter with the assistance of Central West College Land Man-

agement class. The quadrats help better define the associations for the data to be used for rehabilitation and restoration work. And on the Koolanooka Hills, another association was also found - a gimlet *Eucalyptus salubris* woodland associated with gullies.

- Re-scored quadrats on the Vulnerable plant assemblages of the Billeranga system.
- Small-scale restoration work on the Critically Endangered Greenough Flats community – with National Trust and Walkaway Primary School.
- Surveyed herbaceous-dominated wetlands on the Swan Coastal Plain, Wheatbelt and Dandaragan Plateau to assess the regional significance of the herbaceous lake bed community on the bentonite lakes of the Watheroo area.
- Identified more occurrences of the Data Deficient *Melaleuca megacephala* and *Hakea pycnoneura* scrub on Moresby Range.

### **Cairn Hill**

Cairn Hill not only contains the best example of the heath community found on the restricted Noondine chert hills, it is home to two declared rare (*Synaphea quartzitica* and *Acacia aristulata*) and four priority taxa (*Regelia megacephala*, *A. congesta* subsp. *cliftoniana*, *Baeckea* sp. Moora,

and *Daviesia dielsii*). Just recently, we were able to increase the number of populations of all but the *Synaphea quartzitica* with a thorough survey of 70% of the site - practically every square metre of Cairn Hill is covered with a DRF or Priority taxa. With the additional information from quadrats established a month previously, we have also been able to map the vegetation of 70% of Cairn Hill.

WATSCU have always been keen to acquire this ecological treasure; and with the Department of Land Administration's help, we have been negotiating with Westrail, who recently have been keen to let us have it. And it seems we are well on the way to getting 'Cairn Hill Nature Reserve' - Westrail have requested that DOLA issue a Crown Land Title in favour of CALM. It will take some time before the acquisition is complete, and with a prospecting lease over the northern section, we are unlikely to be able to declare it a Class A reserve, but it will become a protected area.

**Watch this space for more news.**

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## Up to date with Translocations ~ *summary for the year* ~ Jill Pryde

*Translocations of plants and animals continued throughout 2000. Threatened flora seedlings germinated at CALM's Threatened Flora Seed Centre (TFSC) and grown on by the Botanic Gardens and Parks Authority (BGPA) have been planted into secure sites or have been used to supplement existing populations of Critically Endangered flora. Egg masses of a threatened frog have been placed into creek systems in the southwest and two south coast threatened birds are now building up their stocks from previous translocations (see story on page 1). Mammal work include Bilbies translocated to Peron Peninsula and Marl and Boodies flying interstate!*

### Fauna

South Australia received 25 Western Barred Bandicoots (*Perameles bougainville*) for a trial reintroduction as well as 20 Burrowing Bettongs (*Bettongia lesueur*). These animals were sourced from Bernier Island and re-introduced to the Arid Recovery Reserve at Roxby Downs, South Australia.

Western Barred Bandicoots or Marl (*Perameles bougainville*) were re-introduced to Dryandra Woodland from the Captive Breeding and Field Breeding Centres in WA.

Bilbies (*Macrotis lagotis*)

have been translocated from the Perup Captive Breeding Centre to Francois Peron National Park and also from the captive breeding colonies to Dryandra Woodland.

A trial introduction to a new site of the Western Swamp Tortoise (*Pseudemadura umbrina*) took place in August this year from the captive breeding population at Perth Zoo to new CALM-acquired land at Mogumber.

Two bird species have been translocated including the Noisy Scrub-bird (*Atrichornis clamosus*). This follows earlier translocations. The Western Bristlebird (*Dasyornis longirostris*) has been translocated from Two Peoples Bay to Nuyts Wilderness in the Walpole-



*Orange-bellied Frog*  
Photo: Grant Wardell-Johnson

Nornalup National Park.

In the creek systems north of the Blackwood River, egg masses of the Orange-bellied Frog (*Geocrinia vitellina*) have been introduced to create two new populations to act as insurance against catastrophic loss of

the highly geographically restricted known population of this species.

### Flora

Following the success of the 1998/9 translocations, many threatened species of flora have had additional seedlings planted in the year 2000. The methods and techniques followed those from previous years.

Included are the Blunt Wattle (*Acacia aprica*), Spiral-fruited Wattle (*Acacia cochlocarpa* subsp. *cochlocarpa*), Mogumber Bell (*Darwinia carnea*) Three Springs Daviesia (*Daviesia bursarioides*), Kamballup Dryandra (*Dryandra ionthocarpa*), Foote's Grevillea (*Grevillea calliantha*), Prickly Honeysuckle (*Lambertia echinata* subsp. *echinata*), Western prickly Honeysuckle (*Lambertia echinata* subsp. *occidentalis*) and Round-leaf Honeysuckle (*Lambertia orbifolia*). New translocations that have taken place include the Phalanx Grevillea (*Grevillea dryandroides* subsp. *dryandroides*) from seed collected and germinated at TFSC, and McCutcheon's Grevillea (*Grevillea maccutcheonii*).

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## Flora news ~ Andrew Brown

### Wyalkatchem foxglove from Wyalkatchem to Widgiemooltha

You may remember that just a few years ago the Wyalkatchem foxglove (*Pityrodia scabra*) was thought to be our rarest and most threatened plant species. My, how times change! From being known from just a few plants on a weedy road and rail reserve and nearby private land, the species is now known from 7 or 8 populations and many thousands of plants. This is largely due to recent surveys that show the plant is much more widespread than originally thought. In fact Wyalkatchem foxglove is now known to occur over a range of some 400 km between Wyalkatchem and Widgiemooltha.

In September and October this year Andrew Brown from WATSCU had the opportunity to visit several of the newly located populations south of Southern Cross. In the process more new populations were discovered - one south-east of Marvel Loch contained many hundreds of plants and one north-west of Koolyanobbing consisted of over 50 plants. These populations are in remote areas in large uncleared tracts of land. This will hopefully ensure that they are safe for many years to come. It is quite likely that further surveys in these isolated areas will result in the discovery of more populations and, if so, may result in the removal of the species from the Threatened Flora list. If this

occurs Wyalkatchem foxglove will have gone from the most threatened plant in Western Australia to Priority 4 in just a few years.

The lesson to be learnt from this is the value of continued surveys for rare Wheatbelt species in the large uncleared tract of land east of Hyden. Who knows what other species are lurking out there?

### Metallic-flowered eremophila from Kulin to Kondinin

A new population of this unusual metallic-green flowered poverty bush was recently found between Kulin and Kondinin. Some 17 plants were located in full flower in late October on road and rail reserves. This now brings the number of populations to 15 with over 3000 plants known. Metallic-flowered eremophila (*Eremophila veneta*) is currently ranked Vulnerable, pending further survey that may result in it being removed from the Threatened Flora list.

The species was first collected in 1962 but was not seen again until 1976. For many years it was thought to be extremely rare but over the last five years or so further populations have been located. Unfortunately, most of these are on narrow weedy road reserves and so an Interim Recovery Plan has been prepared and is being implemented by the Narrogin and Katanning District Threatened Flora Recovery Teams.

### Prickly honeysuckle

The following was extracted from a report from Sarah Barrett and Leonie Monks.

On October 2<sup>nd</sup> 2000, with the help of funds from the Natural Heritage Trust (NHT), the single known population of the Critically Endangered Prickly Honeysuckle (*Lambertia echinata* subsp. *echinata*) was re-surveyed by Sarah Barrett and Leonie Monks with the assistance of Coral Turley, Esperance Wildflower Society. During the survey three new sub-populations (16 individuals) were discovered.

The habitat of the new sub-populations consisted of mallee-heath and thicket. Associated species included *Eucalyptus lehmannii*, *Hakea ruscifolia*, *Melaleuca striata*, *Allocasuarina trichodon*, *Leucopogon apiculatus*, *Acacia nigricans*, *Agonis obtusissima* and *Dryandra armata*. Soils were sandy loams on granite.

With the exception of one new sub-population in long unburnt vegetation, the new sub-populations were in small patches of open vegetation following localised fire due to lightning strike. Several plants, including juvenile plants had necrotic limbs and foliage possibly due to drought or aerial canker. As well as dead individuals of *Lambertia*, several dead individuals of *Dryandra armata* were observed, since then *Phytophthora cinnamomi* has been confirmed from a *Lambertia* sample.

The original population

in the gravel pit persists as three mature plants in two islands of vegetation, three juvenile plants and one seedling. Twenty-four translocated plants remain in good health and some are now flowering. Many plants have died due to die-back infestation.

Excluding translocated plants, Population 1 now consists of 42 individuals (38 mature, four seedlings), 19 dead plants were observed.

New population in Cape le Grand

On Oct 3<sup>rd</sup> 2000 an area in Cape Le Grand was surveyed by Sarah Barrett and Leonie Monks with the assistance of Andrew Waters (Greencorp Co-ordinator) and a Greencorp team. A new population of Prickly Honeysuckle was located consisting of seven sub-populations and a total of 33 plants.

Habitat was similar to that of Population 1 with plants found mid-slope below the base of granite summits, on sandy loam soils. The population consisted of largely old mature plants with the exception of three 'juvenile' individuals. The vegetation of this area appeared to be long unburnt. Six dead plants were observed and scattered plant deaths were also observed in other species, in particular *Dryandra armata*. Contributing factors

may include drought or aerial canker as the vegetation did not appear to be infested by dieback, however this requires further assessment.

## Interim Recovery Plans ~ towards saving threatened fauna, flora and ecological communities

**Interim Recovery Plans** (IRPs) are developed within the framework laid down in CALM's Policy Statements Nos 44 and 50. These plans outline recovery actions that are required to urgently address those threatening processes most affecting the ongoing survival of threatened taxa or ecological communities, and to begin the recovery process.

Another twelve IRPs have been approved since our last issue. Seven were written for flora and five for ecological communities.

IRP No. 63 Elegant Spider Orchid, *Caladenia elegans* ms by Robyn Phillimore, Andrew Brown, Kim Kershaw, Emma Holland & Val English

No. 64 Phalanx Grevillea, *Grevillea dryandroides* subsp. *dryandroides* by Robyn Phillimore & Andrew Brown

No. 67 Narrow Curved-leaf Grevillea, *Grevillea curviloba* subsp. *incurva* by Robyn Phillimore and Val English

No. 68 Northampton Midget Greenhood, *Pterostylis* sp. Northampton by Robyn Phillimore, Diana Papenfus, Andrew Brown, Felicity Bunny & Val English

No. 69 Blue Babe-in-the-cradle Orchid, *Epiblema grandiflorum* var. *cyaneum* ms. by Gillian Stack, Andrew Brown & Val English

No. 70 Wongan Cactus, *Daviesia euphorbioides* by Robyn Phillimore & Andrew Brown

No. 72 Curved-leaf Grevillea, *Grevillea curviloba* subsp. *curviloba* by Val English & Robyn Phillimore

No. 65 Heath dominated by one or more of *Regelia megacephala*, *Kunzea praestans* and *Allocasuarina campestris* on ridges and slopes of the chert hills of the Coomberdale Floristic Region by Sheila Hamilton-Brown

No. 66 Perched wetlands of the Wheatbelt region with extensive stands of living sheoak (*Casuarina obesa*) and paperbark (*Melaleuca strobophylla*) across the lake floor (occurrences other than Toolibin Lake) by Sheila Hamilton-Brown and John Blyth

No. 71 Plant assemblages of the Billeranga System by Sheila Hamilton-Brown

No. 73 Plant assemblages of the Koolanooka System by Sheila Hamilton-Brown

No. 74 Aquatic Root Mat Community of Caves of the Swan Coastal Plain by Val English *et al.*

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## Recovery Team Annual Reports

Two summaries of the 1999 Recovery Team Annual Reports that were not included in the last issue of *WATSNU* are now reprinted.

### Numbat Recovery Team Annual Report 1999

By Tony Friend for the Numbat Recovery Team

The conservation status of the Numbat has improved significantly since the commencement of intensive research on the species in 1980. At that stage, there were probably only 200-400 individuals in existence, in three populations. Since the discovery that fox control using meat baits containing 1080 caused numbat numbers to increase, recovery of existing populations and re-introductions have increased estimated numbers towards 2000. There are now 12 populations in 3 States.

#### *Significant events in Western Australia during 1999 include:*

- Recovery of the Dryandra population from the 1993 post-peak slump
- Persistence of all six populations monitored intensively during 1999
- Sightings recorded at two other populations
- Seven young radio-collared at Hills Forest
- Second release at Stirling Range National Park
- Assessment of new methods to transfer numbats from captivity into the wild
- Re-stocking release at Karakamia Sanctuary

#### *In other States:*

- Growth of the Yookamurra Sanctuary (SA) population to the point where it can be harvested
- Re-introduction to Scotia Sanctuary (NSW)

The successes of the program are attributable to close cooperation between stakeholder organisations, including CALM, Perth Zoo, Earth Sanctuaries Limited, South Australian Department of Environment and Heritage, New South Wales National Parks and Wildlife Service and Karakamia Sanctuary (WA), as well as the dedicated work of many individuals.

### Swan Region Threatened Flora and Communities Recovery Team Annual Report 1999

By David Mitchell for the Swan Region Threatened Flora and Communities Recovery Team

The Recovery Team includes representatives from three districts, CALM specialist branches, Kings Park and Botanic Garden, local government and community groups. The Team met three times in 1999.

The Region continued searches for new populations of DRF and priority species resulting in discovery of 79 populations of 10 DRF species and 121 new populations of 33 species of Priority listed Flora Species. This includes 11 species (3 DRF, 8

Priority) where greater than 10 new populations and/or tens of thousands of plants have been found. A large number of these discoveries were by volunteers. In addition over 15% of DRF populations known in the Swan Region were re-surveyed in 1999.

Management of threatened flora in 1999 included installation of roadside markers, weed control, liaison with other agencies, establishment and monitoring of fire research plots, translocation and ex-situ propagation.

An application submitted to the NHT to write a threatened flora recovery plan for the Swan region was successful and the project commenced in September 1999.

The program to translocate *Lechenaultia laricina* continued with an additional 155 plants planted in 1999. Two hundred and forty nine plants survived in October 1999.

There are nine Critically Endangered, five endangered and six Vulnerable communities recorded from the Swan Region. Interim Recovery Plans were prepared for the nine Critically Endangered Communities occurring in Swan Region in 1999 and separate Recovery Teams are established for three of the Critically Endangered Communities.

Reduction in groundwater levels at Yanchep continues to require urgent action to protect occurrences of the caves aquatic root mat community, including artificial watering of individual root mats.

## Giving nature a helping hand – the BankWest *Landscape Conservation Visa Card* ~ Jill Pryde

The Trust Funds from the Bankwest *Landscape Conservation Visa Card* continues to support some very good high quality research projects. Many of these projects have provided enough information that enables scarce funds to be directed into key areas for future recovery and management or research. In each case a report is written and lodged in CALM's Woodvale Library. A brochure summarising the projects completed once a year and is sent out to customers using this affinity card. Amongst those completed this year include:

- ◆ Construction of an effective barrier gate to protect the Critically Endangered Cameron's Cave Community
- ◆ Printing of 27 more Critically Endangered Plant posters
- ◆ Clarification of the distribution of Roebuck Bay Community
- ◆ Search for the Guildford Springtail
- ◆ Characterising the subterranean aquatic fauna of the Lake Way Basin
- ◆ Fencing and signage of the Gingin Ironstone threatened community
- ◆ Status of the Western whip-bird (heath subspecies)
- ◆ Clarifying the distribution and status of the bentonite plant community in a regional context
- ◆ Seed collection and germination of two rare *Adenanthos* from southwest WA: *A. velutinos* and *A. pungens* subsp *pungens*
- ◆ Seedbank dynamics and fire response of the Critically Endangered *Cyphanthera odgersii* subsp *occidentalis* (Solanaceae)
- ◆ Comparing the subterranean aquatic fauna downstream of the Fortescue Marsh with that of the Millstream Aquifer

### **WATSNU**

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