

PEOPLE PROTECTING PLANTS

BY ANDREW BROWN



The responsibility for Western Australia's endangered flora lies not just with CALM, but with each and every one of us. Only by working together can we hope to preserve our precious heritage for future generations to enjoy.

The flora of Western Australia is extremely rich, particularly in the South West Land Division. Here, about 8,000 of the 12,000 named Western Australian (WA) plant species are found, including more than 90 per cent of the State's 341 threatened flora. Threats to these plants are many and varied, but massive land clearing in the past for agriculture and, to a lesser extent, housing development, are largely responsible for their current vulnerability. In many areas, much of the remaining natural vegetation is fragmented and only represented in small reserves, remnant vegetation on private land, and along narrow road reserves.

The most fragmented areas of vegetation are in the Wheatbelt region. In this area, about 80 per cent of the land (15 million hectares) has been cleared. Some 70 of the 95 WA plant species listed as Critically Endangered are found here and are thought to be under imminent threat of extinction. Threats include lack of available habitat and habitat degradation from weeds, salinity, dieback, chemical overspray, continued clearing and road works. To a lesser extent, this is also true of other areas including the Swan Coastal Plain and the area between Busselton and Augusta.

Vital recovery actions to protect natural populations of these, and other plant species listed as threatened, are currently being implemented by the Department of Conservation and Land Management (CALM). However, with so many plants and so few resources, the job of protecting these plants would be almost impossible were it not for the help of many members of the community.

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Main: Underground orchid (*Rhizanthella gardneri*). Several new populations of this rare and unusual orchid have been discovered through the efforts of volunteers.

Inset: Members of the Western Australian Native Orchid Study Group having a break during surveys for the underground orchid.

Right: Cinnamon sun orchid (*Thelymitra dedmaniarum*). A species rediscovered through the efforts of Fred and Jean Hort.

Photos – Andrew Brown

Volunteer flora conservation officers, recovery teams, Land Conservation District Committees (LCDCs), conservation-minded landowners and Shire workers, members of wildflower societies, conservation groups and naturalists' clubs, and many other members of the community, are working in conjunction with CALM to improve the conservation and understanding of our threatened plant species.

VOLUNTEER FLORA CONSERVATION OFFICERS

Although many threatened plant species have been subject to surveys by CALM staff, not all areas of suitable habitat can be covered during the limited time available. Volunteer flora conservation officers have, therefore, provided an invaluable service in being able to concentrate on a single species

at a time and survey them intensively over many days—often resulting in the discovery of new populations. The information they provide is also invaluable in alerting CALM to any imminent threats.

A fine example of the rewards provided by volunteers can be seen in the work done by Fred Hort (a retired primary school Principal who has a keen interest in the conservation of our threatened flora). Fred and his wife Jean started by looking for more populations of the cinnamon sun orchid (*Thelymitra dedmaniarum*), of which only a few populations were known from near Gidgegannup. However, as the original discovery of the species was made by Mrs and Miss Dedman near York, they also searched areas along the eastern side of the State forest. There, they found many more



populations of the species.

In follow-up studies, it was found they had actually rediscovered the true *T. dedmaniarum*, and the species near Gidgegannup was in fact an undescribed sun orchid, which will be named *T. manginiae*, in honour of Bill Mangini, the person who first discovered it.

The Horts then concentrated on two other threatened species. The first was the pink starbush (*Asterolasia grandiflora*)—an attractive pink flowered species—previously known from just a few populations to the west of York, until they found a large population in State forest. Now looked after by CALM, this viable population ensures the long-term conservation of the species.

The second species surveyed by the Horts was the summer pimelea (*Pimelea rara*), which, until 1987, was living up to its name (*rara*). Having not been found for some 68 years, it was listed as presumed extinct. (This is not so surprising, as it blooms during summer—a time of the year that would put most people off searching for it.) Rediscovered during surveys in 1987 by L. Graham, a member of the Eastern Hills Wildflower Society, it was not realised at the time just how common the species was until the Horts started their own surveys in late 1997 and early 1998. During that time, they discovered many new populations along the edge of the Darling Scarp. Perhaps the species should be renamed '*Pimelea commoner*'.

The discovery of new populations of threatened flora has many ramifications. It may result in the species being placed in a lower category of threat or even being removed from the list of Declared Rare Flora. Either way, limited resources can be released for genuinely threatened species and the new populations that have been found can be protected.

OTHER NEW DISCOVERIES

Following the publication of a book on WA's endangered flora by CALM in 1990, members of the community have rediscovered several species previously listed as presumed extinct. For example, staff from CALM and Kings



Top left: Bill Mangini standing next to the rare sun orchid he discovered and which will be named *Thelymitra manginiae* in his honour.

Photo – Emma Holland



Top right: Fred and Jean Hort, CALM volunteer conservation officers, who have discovered many new populations of threatened flora.

Photo – Jim Tonkin



Above: More than 26 per cent of populations of threatened flora in the Wheatbelt are found on Shire road reserves, many much narrower than the one pictured above.

Photo – Jiri Lochman

Park and Botanical Garden (KPBG) had searched for several years for the many-stemmed lily (*Sowerbaea multicaulis*), but it was a trio of the public—Kevin and Evonne Coate and Mary Hancock—who, in November 1990, recognised the species (from the drawings done by Sue Patrick of CALM) while driving along the Mt Jackson road north of Southern Cross.

Since then, more populations have been found and the species has been removed from the list of threatened flora.

This is only one example of a presumed extinct species that has been rediscovered by members of the community. But it clearly illustrates the importance of providing the public with descriptive information and

involving them in surveys for these plants.

A revised edition of the book on WA's threatened flora will be published by CALM in late 1998. The new book will illustrate and describe all of WA's threatened flora species, and give details of their distribution. It will explain why the species are threatened, their flowering times, recovery actions that are under way and the legislation in place that protects them. There will also be information on presumed extinct species. The book should prove to be an invaluable reference for the community and government departments alike.

SHIRE WORKERS

More than 26 per cent of populations of threatened flora found in the Wheatbelt occur on Shire road reserves. Therefore, CALM has to rely on the goodwill of Shire workers when it comes to the protection of these population. Accidents do happen, and populations have been damaged following road maintenance, but workers are becoming increasingly conservation-conscious.

In the Shire of Three Springs, for example, the efforts of Shire gardener Charles Straughan have led to the discovery and subsequent protection of many new populations of threatened flora. The Three Springs daviesia (*Daviesia bursarioides*) is one. It was known from only a few plants along a narrow road reserve before Mr Straughan found several more populations on road reserves and a relatively large population on private property. The private property population has since been fenced off from an adjoining gravel pit. Had Mr Straughan not brought them to CALM's attention, the extraction of more gravel may have led to their destruction at that site.

RECOVERY TEAMS

CALM has set up Threatened Flora Recovery Teams in many districts and regions to coordinate the preparation and implementation of Threatened Flora Management Programs, Interim Recovery Plans and Recovery Plans. As a general rule, membership includes representatives of all groups that have a stake in, or may be affected



Top left: The Corrigin LCDC is working closely with CALM and KPBG in re-establishing a population of Corrigin grevillea (*Grevillea scapigera*) on Hartley's Reserve.

Above: Hinged dragon orchid (*Drakonorchis drakeoides*). A rare species that is now protected on private property largely due to the cooperation of the landowner Mr KJ Mailey.
Photo - Emma Holland

Top right: New populations of the beautiful elegant spider orchid (*Caladenia elegans*) have been discovered during surveys by members of WANOSCG.
Photos - Andrew Brown

Above: Due to the efforts of Fred Hort it is now known that this is an undescribed species to be named *Thelmitra manginia*, not the cinnamon sun orchid (*T. dedmaniarum*) as previously thought.
Photo - Andrew Brown

by, the recovery plan—such as CALM staff and staff from other government agencies, persons from local government, landowners, and members of the community (for example, local wildflower societies, LCDCs and so on).

The inclusion of community

members and landowners has proved vital. The intimate knowledge these people have of their districts, and their established rapport with other members of the community, led to many populations of threatened flora being discovered on private property and subsequently fenced.



Top: Rose mallee (*Eucalyptus rhodantha*). A new population of this beautiful species was brought to the attention of CALM staff by local farmer Bob Scott.

Photo – Babs & Bert Wells/CALM

Above: A group of volunteers searching for shy featherflower (*Verticordia fimbrilepsis* subsp. *fimbrilepsis*.)

Photo – E. Berndt

LANDOWNERS

In the Wheatbelt area, some 25 per cent of populations of threatened flora occur in remnant bushland on private property. Despite their livelihood depending on the use of their land for agriculture, there are many examples of cooperation between landowners and

CALM. Many have set aside land for the conservation of threatened flora and been actively involved in the recovery of those species. (In some cases landowners have received official recognition for their efforts by means of environmental awards and grants to further their efforts.)

One example of cooperation is in the case of the hinged dragon orchid (*Drakonorchis drakeoides*). This species is found on the margins of salt lakes and flats in the northern Wheatbelt—areas that are becoming increasingly more saline and degraded. So, there was much excitement when a relatively large population was found in an area of pristine vegetation on a farm to the north of Wongan Hills owned by Mr K J Mailey. In meeting with Mr Mailey,

CALM staff were delighted when he said he was not only happy for the population to be fenced, but that a much larger area could be excised for the purpose of conservation, and that he would take it upon himself to provide a fire break around it. This has resulted in the protection of not only the orchid, but also its increasingly rare habitat.

Such a sense of cooperation and conservation is not unusual in the farming community. Farther west, near Coorow, Alison and John Doley have fenced areas of remnant vegetation on their property containing prostrate flame-flower (*Chorizema humile*), creeping darwinia (*Darwinia repens*) and hinged dragon orchid (*Drakonorchis drakeoides*).

Near Dowerin, local landowners Robert and Beth Boase have fenced off an area of some 800 hectares that once contained the only remaining plant of colourful snakebush (*Hemiandra rutilans*). Although the plant has since died (probably due to old age), the habitat is now protected, and it is possible that more plants will appear in time from soil-stored seed. The landowners have encouraged smoke treatment trials in the hope that they will promote germination.

And, when a new population of the rose mallee (*Eucalyptus rhodantha*) was brought to CALM's attention by Bob Scott (a local farmer who noticed a large population on private land), so much interest was shown by local members of the community that the species has now been adopted by the Three Springs Shire Council as its floral emblem. Without the help of many conservation-minded landowners, numerous species of threatened plants may now be extinct.

LAND CONSERVATION DISTRICT COMMITTEES

LCDCs (particularly active throughout the Wheatbelt) are involved in land care projects, many of which will directly affect the improved conservation of threatened flora. Landcare plans that have resulted in revegetation, water control and changed land management practices have helped in the control of rising salinity and degradation of remnant

bush areas, particularly in lower catchment areas.

The fine work done by LCDCs has resulted in the purchase of private land by Landcare groups. Hartley's Reserve, near Corrigin, for example, was purchased by funding from a State Landcare grant. The Corrigin LCDC is now working closely with CALM and KPBG in re-establishing a population of the Critically Endangered Corrigin grevillea (*Grevillea scapigera*) at the site.

In the Tunney area, the LCDC obtained a grant from the WA Government to produce a pamphlet informing local landholders of the significance of bushland on their property, and giving details of the Remnant Vegetation Protection Scheme to assist with fencing. An example of the outcome of this is the joint effort between Agriculture WA and the Sandstone LCDC, wherein a population of the rare Cue grevillea (*Grevillea inconspicua*) was fenced from grazing.

WILDFLOWER SOCIETIES AND OTHER COMMUNITY GROUPS

Many other community groups are also actively involved in the conservation of our threatened flora. The Western Australian Native Orchid Study and Conservation Group (WANOSCG), for instance, has conducted many successful surveys for threatened orchid species. Several locations containing populations of the underground orchid (*Rhizanthella gardneri*), which were discovered during the surveys, have now been reclassified as nature reserves. New populations of the Critically Endangered elegant spider orchid (*Caladenia elegans*) and Dunsborough spider orchid (*C. viridescens*) were also found during such surveys. As a result, CALM has developed Interim Recovery Plans for these species and involved various local community members in their conservation.

More recently, Bancroft's symonanthus (*Symonanthus bancroftii*) was rediscovered in September 1997 by Robyn Campbell, a member of both the Merredin and Narrogin District Threatened Flora Recovery Teams. While only a single female plant was found, further surveys by volunteers and CALM staff have been



planned for this year.

Community groups are applying for and obtaining funding from the Natural Heritage Trust (NHT) Bushcare Programs, World Wide Fund for Nature (WWF) and other funding bodies for a variety of natural ecosystem conservation projects. These include the preservation of natural areas of remnant bushland on private property and the rehabilitation of degraded areas of bushland along road reserves, on Shire reserves, and various other types of land—many containing populations of threatened flora.

We are all responsible for the impact of development on the landscape, and governments can only do so much. The only way we are going to effectively conserve what is left, is for landholders, community groups, scientists, government departments and funding bodies to work together.

Top: Volunteers found so many plants of Carrick's mintbush (*Prostanthera carrickiana*) that the species has been removed from the schedule of threatened flora.

Above: Through the efforts of landowners, in cooperation with CALM, a population of the Critically Endangered silky eremophila (*Eremophila nivea*) has been protected with fencing and the site is undergoing rehabilitation.

Photos – Andrew Brown

Andrew Brown is a botanist with CALM's Threatened Species and Communities Unit at the Wildlife Research Centre, Woodvale. He can be contacted by phone on (08) 9405 5166, by fax on (08) 9306 1066, or by e-mail (andrewbr@calm.wa.gov.au).

LANDSCOPE

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Can WA's sharefarming plantations also help fight greenhouse gases? See 'Farming Carbon' on page 17.



With increased numbers of travellers, the Canning Stock Route is in need of some TLC. See 'A Track Winding Back' on page 10.



The job of a CALM Wildlife Officer is as much about dealing with people as it is about protecting our native wildlife. See 'On the Wild Side' on page 23.



The Esperance Lakes Nature Reserves are a haven for water birds and a significant international wetland. See 'Picture the Lakes' on page 36.



There are billions of tiny white shells lining the 150-km Shell Beach in Shark Bay. But why are there so many concentrated here? Find out more on page 49.

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COVER

Two years into the Western Shield program and already three Western Australian native species have been brought back from the edge of extinction, and others are growing in abundance. 'Bouncing Back', on page 28, looks at the successes of the first two years and at where we hope to be at the turn of the century.

Illustration
by Philippa Nikulitsky



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Scientific/technical advice: Andrew Burbidge, Ian Abbott, Paul Jones and staff of CALM's Science and Information Division
Design and production: Tiffany Aberin, Maria Duthie, Sue Marais
Illustration: Ian Dickinson, Gooitzen van der Meer
Marketing: Estelle de San Miguel ☎ (08) 9334 0296 Fax: (08) 9334 0498
Subscription enquiries: ☎ (08) 9334 0481 or (08) 9334 0437
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