

LOST JEWELS

IN THE BUSH

Western Australia is aptly described as the Wildflower State. Some 12,500 different species are known from the wild, with a huge range of colours, shapes and characters. But many species once found are lost again, and it's always an event when a species thought to be extinct is rediscovered. This is the story of some of those rediscoveries.

BY MIKE O'DONOGHUE
AND KEN ATKINS



Native plants not only provide enjoyment and a sense of place to the individual enthusiast, but also provide shelter and food for many of the State's fauna species, which depend on them for their survival. However, some of these species are rare, or their continued existence is threatened.

Although species may be considered extinct, there is always a chance that they may be rediscovered. Indeed, some plants can persist for many years, as seed or underground tubers, just waiting for the right climatic event to stimulate them back to 'life'. Thus, once

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Until recently, Mt Lesueur grevillea was presumed to be extinct, but while it was relocated in 1991, no further populations have been found.
Photo - Sue Patrick/CALM

Below: Famous botanist Ferdinand von Mueller described the long-leaved myrtle in 1860.
Photo - Sue Patrick/CALM

Below right: Drummond's grass was rediscovered by Sara Bennett in 1995, but was only identified in 1997.
Photo - Ellen Hickman/CALM

a 'last' population has disappeared, if the habitat is still available, the species may persist for long periods until the appropriate stimulation to germinate occurs, and the plants reappear like Lazarus.

Other plant species may be very cryptic and easily overlooked in the field, while others may occur in far away places just waiting to be found again by an astute observer. Consequently, there is always a chance that a plant species believed to be extinct will eventually be rediscovered. Hence, we refer to plants optimistically as being 'Presumed Extinct'. During the 1970s and 1980s, for example, an upsurge in botanical collecting in the State saw the rediscovery of some 70 species of plants that had not been collected for more than 50 years.

Species that have been listed as Presumed Extinct have generally been collected opportunistically in the past, and not been found since. Often these species were collected by such prolific early botanical collectors as James Drummond, who did not have the benefit of road maps, or even place

names, to give accurate location descriptions of their collections. Hence there has been very little for modern-day searchers to work with.

In 1991, 53 species were included on the formal list of Presumed Extinct Flora. Over the past decade, however, there has been much survey work undertaken by a range of professional and amateur botanists and volunteers keen on documenting the State's flora, and, in particular, undertaking specific investigations into Presumed Extinct species. A further 19 of the State's presumed extinct plants have been rediscovered in the field during this time.

Within the Department of Conservation and Land Management (CALM), the Western Australian Herbarium has also been instrumental in reducing the list, with taxonomic work undertaken by professional botanists determining that 10 of the species listed as Presumed Extinct were wrongly given separate names. Often, these names were given to plants collected under very difficult circumstances, and the quality of the



material made it difficult for subsequent botanists to study. More recent investigations into our State's flora have provided new information, and these 10 species are now considered to be the same as other more common species.

Staff at the Herbarium, and visiting experts, have also been progressively reviewing the specimens held in the main Herbarium and the various regional centres and including the specimen details onto the computer database, WAHERB. Through this review and the ability to access information electronically, recently collected specimens of another seven species listed as Presumed Extinct were discovered. In many cases, the collection localities of these specimens were surveyed, and the species confirmed as being 'back from the dead', but in some cases we still have not been able to find plants in the wild. Searches are continuing.

During the same period, four species have been added to the list of Presumed Extinct Flora, as a result of unsuccessful field surveys. These were *Acacia kingiana*, *Eremophila vernicosa* ms (recently rediscovered and not yet removed from the formal list), *Lepidium aschersonii* (subsequently removed from the list due to the discovery of a recently collected specimen in the Herbarium) and *Leptomeria dielsiana* (removed in 1996 due to the discovery of a specimen, but reinstated following unsuccessful survey efforts to find the plant in the wild).

The current list of Presumed Extinct Flora, as gazetted on 17 December 1999, stands at 22 species, which includes the recently discovered *Eremophila vernicosa* ms.

Although much has been achieved in a relatively short time, much more needs to be done. Further specific surveys may lead to the rediscovery of those species currently listed as Presumed Extinct. CALM will continue to encourage the participation of all interested groups and individuals to accomplish this task.

But perhaps the real challenge over the next decade is to ensure effective management to conserve all species of West Australian wildflowers. CALM is working with the community through

Presumed Extinct Species Rediscovered in the Field:

- 1992 *Eucalyptus rameliana*
Gonocarpus intricatus
Grevillea batrachioides
Hypocalymma longifolium
Meziella trifida
Verticordia plumosa var
Serpentine (L. Preiss 174)
- 1993 *Schoenus natans*
Stylidium merrallii
Tetralia australiensis
- 1994 *Stylidium neglectum*
- 1996 *Beyeria lepidopetala*
Glyceria drummondii
Hemigenia exilis
Leucopogon marginatus
- 1997 *Acacia volubilis*
- 1998 *Deyeuxia drummondii*
Lasiopetalum rotundifolium
- 1999 *Hydatella leptogyne*
Eremophila vernicosa ms*

Presumed Extinct Species Rediscovered during Herbarium Curation:

- 1994 *Centrolepis caespitosa*
Plectrachne bromoides
- 1996 *Leptomeria dielsiana*
Menkea draboides
Phlegmatospermum drummondii
Scaevola macrophylla
- 1999 *Lepidium aschersonii*

Presumed Extinct Species Determined to be Taxonomic Errors:

- 1992 *Cryptandra nudiflora*
Cryptandra tubulosa
Spyridium kalganense
Spyridium microcephalum
- 1993 *Scaevola attenuata*
- 1996 *Dicrasyllis morrisonii*
Hemigenia obtusa
Leptomeria laxa
Platysace dissecta
- 1997 *Tetralthea elliptica*

recovery teams to accomplish this task, because it will be through this cooperative approach that we may retain those precious jewels in the bush.

The remainder of this article looks at some of the flora species that have

been found in recent times, and some of the enthusiastic individuals who through a combination of good luck, hard work and commitment have been rewarded with the rediscovery of a presumed extinct plant—a lost jewel in the bush.

James Drummond made the first collection of the zig-zag grevillea, (*Grevillea flexuosa*), sometime before 1839 from a location given simply as the 'Swan River Colony', which could have meant anywhere from Moore River to Albany and beyond. No further sightings or collections were made from this species, and it was presumed extinct.

In 1985, after an absence of almost 150 years, it was rediscovered by Gwen Abbott, a member of the Western Australian Wildflower Society, during a flora survey on a high granite hill in the Darling Range east of Perth. Following its rediscovery, CALM officer Les Robson undertook further surveys of the area and located several other populations near Toodyay. Two thousand plants are now known from the wild.

This rare Western Australian grevillea is a spreading, prostrate shrub to 30 cm high and 70 cm diameter, with spikes of sweet-scented cream to pink flowers. Its common name describes the characteristic zig-zagged nature of the main axis of its divided leaves.



Photo - Andrew Brown

Giles' mallee, (*Eucalyptus rameliana*), was only known from the type (original) collection made by Ernest Giles in 1876. Giles collected it in the Gibson Desert 'beyond the Alfred and Marie Ranges'. No specific location details were available, which made surveys difficult.

Giles' mallee was referred to by some botanists as the 'holy grail' of the eucalypts, as it was the only presumed extinct eucalypt in the State. CALM listed the species as presumed extinct in 1989.

Many expeditions were undertaken by both local and interstate botanists in an attempt to relocate this species following its listing as presumed extinct. However, all surveys proved fruitless. The mystery surrounding its location was finally resolved when a local wildflower enthusiast and amateur botanist, Nick Foote, rediscovered the species in 1991 on the edge of the Little Sandy Desert. The location, south-east of Newman, was some 500 km beyond the Alfred and Marie Ranges! Again, this demonstrated the problem of the lack of maps or locality names for early explorers.

Great excitement followed the Foote collection; local and interstate botanists hurried to the collection site. The identification of the species was confirmed and further surveys of the area were undertaken. Several thousand plants are now known from several sites in the wild (see 'In the Footsteps of Giles', *LANDSCOPE*, Autumn 1992).

E. rameliana is a mallee that grows to a height of 1-2 metres. It has large smooth solitary buds and fruits, with large pink to yellow flowers.



Photos - Andrew Brown

Southern tetralia (*Tetralia australiensis*) is a perennial grass-like herb originally collected from the Serpentine River area in 1872. Like many of the early collections, its precise location was not accurately recorded, and it was presumed to be extinct in the wild due to extensive land clearing, weed invasion, and urban growth.



Photo - Greg Keighery

CALM Principal Research Scientist Greg Keighery rediscovered the southern tetralia while undertaking surveys for the Urban Environmental Audit of remnant bushland near Mundijong in 1993, more than 100 years after the original collection! More than 1,000 plants, in full bloom, were located on a nature reserve in the middle of summer. The plants were located in an area that had been fire-blackened a year earlier and at a time of the year when surveys are often limited.

The rediscovery of this species was significant, not only because of the time lapse since its original collection, but because it was the last known plant species presumed to be extinct in the Perth Metropolitan area.

Merrall's triggerplant (*Stylidium merrallii*), was originally collected by E. Merrall in 1888 from 'somewhere west of Lake Brown'. No further collections were made and the species was presumed to be extinct. However, property owners Basil and Mary Smith collected a small amount of material from an unknown *Stylidium* east of Bonnie Rock in the eastern Wheatbelt in 1976. *Stylidium* expert Allen Lowrie suspected that the material may have been the presumed extinct Merrall's triggerplant and requested additional material so that its identification could be confirmed. Unfortunately, the area of collection was extremely dry and Mr Smith was not able to provide further material. He did, however, provide detailed maps showing the area of his collection that were used in subsequent surveys.

It was not until 1992, when a joint inspection of the site with Allen Lowrie, Daphne Edinger and CALM's Kevin Kenneally, revealed that Merrall's triggerplant had indeed been rediscovered in the wild.



Photo - Allen Lowrie

Corrigin grevillea (*Grevillea scapigera*), was originally collected by N H Brittan in 1954 and described as a new species in 1974 by A S George.

The species was only known from the Corrigin area and was considered to be extremely rare, with fewer than 10 plants known from the wild. Unfortunately, the plants are relatively short-lived. The last known naturally occurring plant died in 1986 and the species was presumed to be extinct in the wild. No other populations had been located, despite extensive surveys of the Corrigin area in areas of suitable habitat.

CALM initiated enquiries, both locally and interstate, and received information which indicated that there was a single grafted Corrigin grevillea plant in existence at the Royal Botanic Gardens in Sydney. This material had been taken under licence from an earlier collecting trip to Western Australia.

CALM staff alerted the Botanic Gardens and Parks Authority (formerly Kings Park and Botanic Gardens) to the plight of this rare Western Australian wildflower in 1989. The Parks Authority liaised with the Royal Botanic Gardens, who forwarded material to them. The Authority successfully tissue-cultured the species for propagation.

During this period, wild populations of the species were found in the Corrigin area, but the species was still ranked as Critically Endangered.

Subsequent translocation programs have seen the reintroduction of this beautiful wildflower to the Corrigin area.



Photo – Chris French

Stylidium neglectum was only known from the L Diels type collection made from a now old and abandoned railway siding at Wyola east of Cunderdin. Diels made the type collection in 1901 during one of his many botanical surveys in the south-west of Western Australia. It was well known that Diels commonly used railway transport, and it was likely that the specimen was collected during a refreshment stop on one of his trips.

No further collections were made, however, and *Stylidium* expert Allen Lowrie undertook to search for this species. He began studying an old 1938 railway map in an attempt to trace the footsteps of the early collectors. The area was easily identified on the old map and Mr Lowrie set out to undertake a survey. Several areas at Tammin were surveyed, but without success. An area near Merredin, which contained suitable habitat, was also explored and, to the delight of Mr Lowrie, a small population consisting of a few clumps of *S. neglectum* was located. Further surveys in the Hyden area were also very fruitful and many new populations were discovered. Thanks to the efforts of Mr Lowrie, this species is now no longer listed as presumed extinct.



Photos – Allen Lowrie



Above: One complete plant of the creeping triggerplant *Stylidium neglectum*.

Left: Habitat of *Stylidium neglectum* (the pink flowering clumps) on the aprons of Holt Rock, Western Australia

Photos – Allen Lowrie

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One of the best selling books from CALM has recently been fully revised. See 'The Best of the South-West' on page 10.



A new weapon against the scourge of feral cats was recently tested on Hermite Island. See 'Isle of Cats' on page 18.



In the far north of WA, there is evidence of not one, but two cosmic impacts. See 'Cosmic Impacts in the Kimberley' on page 28.



Satellite imagery is helping us to fight maritime pollution. See 'Looking Through the Surface' on page 41.



A unique network links volunteer groups and regional herbaria with the CALM flora database. See 'Name That Plant' on page 35.

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