

Save our Flora

AN ONLINE INDEPENDENT NATIONAL PROJECT

Conservation through Cultivation

Project launched 14th November 2013

Individual Members: 48

Welcome to the Save our Flora Project

This project aims to create a national register of gardeners and conservationists who are growing or would like to grow threatened native plants. We would like to find out who is growing which plants and if they are available for others to grow. We would like to share seed, cuttings and information as well as articles, photos, videos, websites and blogs about threatened flora in your area or beyond. Several specialist nurseries also supply rare or threatened varieties. Let us know about them. We will share this information through regular electronic bulletins and perhaps a Facebook page where you can post photos and comments. Please pass this bulletin on to anyone interested and encourage them to join in this exciting new venture.



Bob Ross and his wife Wendy joined the Society for Growing Australian Plants (now the Australian Plants Society) in 1967 after Bob moved from America to Cooma, Australia. Since then they have been actively involved in growing and promoting Australian plants. During the early 1970's Bob was the National Secretary, study group coordinator and South Australian president for SGAP, and since then he has been active in native plant groups in Mount Gambier and the Far South Coast of NSW. He is currently the 'Conservation Officer' for the NSW Region of the APS. He is a retired electrical engineer and he and Wendy live near Merimbula, NSW.



Maria Hitchcock is known by many Australians as the 'Wattle Lady'. She is responsible for gazettal of Australia's National Emblem (*Acacia pycnantha*) and gazettal of National Wattle Day. Maria is author of 'Wattle' (AGPS 1991), 'Correas' (Rosenberg 2010) and 'A Celebration of Wattle' (Rosenberg 2012). Maria is a Life Member of APS, the former Leader of the Correa Study Group and holds the National Correa Collection in her garden at Armidale NSW. She is current Leader of the Waratah and Flannel Flower Study Group and is working towards helping average gardeners succeed with these iconic Australian plants. She is a passionate devotee of growing Australian native plants and runs a small hobby nursery 'Cool Natives' from home. Maria believes one of the best ways to preserve plants at risk is to spread them around gardens.

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The Legislation

by Bob Ross

Regarding the acquisition of cuttings and seeds of rare/ endangered/threatened native Australian plants - I attended a field day recently (to map Tura Starhair, a listed endangered native plant growing in our area) organised by Andrew Morrison who is an ecologist working for the local Bega Valley Shire Council. I had an opportunity to talk to Keith McDougal who works for the NSW NPWS Threatened Species Unit located at Queanbeyan: he was attending the survey and taking part in it.

Keith said that it is completely legal under NSW legislation to collect plants, cuttings and seeds from a listed 'threatened' species of native plant from your own property as long as you don't use the collected material to grow and/or sell the plant or plants produced from the material (you can get a permit from NPWS to do this). The implication of this is that if you give the plant, cuttings or seeds of a listed native plant collected from your property to someone else, it is also not against the law.

Keith said that the law is not completely clear regarding the situation where you are growing a listed threatened species of plant, but he doubts that anyone would be prosecuted under the legislation for growing a listed 'threatened' native plant.

My conclusion from all this is that we need, at some time, to have a good look at the legislation and get advice from a body such as the Threatened Species Unit in Queanbeyan. I am happy to do this and I think when I do it I'll try to arrange to go see them, either before or after I phone or write to them and try to get a dialogue going.

I had a long involvement with the Threatened Species Unit when I was chair of the Far South Coast National Parks Advisory Committee. A member of our committee (who is now dead) mounted a long campaign to translocate excess koalas to our area for restocking reserves where koalas were almost extinct, and I got the impression that the Threatened Species Unit was overworked and somewhat dysfunctional... however we will need to tie down the legal requirements up front.

How many lists and pieces of legislation are there regarding rare and threatened flora?

The EPBC list is a national register. Is there also a specific register for each state or does the EPBC list overlap?

Forum

Here's where we can start a discussion going about the legislation and perhaps the need for an amendment to the Act. I know some of you are unhappy with the current situation. It seems to me that thousands of Australians are unwittingly breaking the law by selling native plants listed by EPBC. This includes many nurseries and seed suppliers. That's an unsatisfactory situation in my opinion and highlights the impracticality of some of the rules. Please email your comments to:

saveourflora@gmail.com

and I will include them in the next bulletin.

ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 - SECT 196D

Trading etc. member of listed threatened species or community taken in Commonwealth area

(1) A person is guilty of an offence if:

- (a) the person trades, keeps or moves a member of a species or a member of an ecological community; and
- (b) the member is a member of a listed threatened species (except a conservation dependent species) or a listed threatened ecological community; and
- (c) the member has been taken in or on a Commonwealth area.

Note 1: Chapter 2 of the *Criminal Code* sets out the general principles of criminal responsibility.

Note 2: This section does not apply in the circumstances described in section 197. A defendant bears an evidential burden in relation to those circumstances. See subsection 13.3(3) of the *Criminal Code*.

(2) Strict liability applies to paragraphs (1)(b) and (c). Note: For **strict liability**, see section 6.1 of the *Criminal Code*.

(3) The offence is punishable on conviction by imprisonment for not more than 2 years or a fine not exceeding 1,000 penalty units, or both.

http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/

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Links

Jackie Miles' photographic library of native plants and weeds in SE NSW. Her web address is:

<http://thebegaalley.org.au/plants.html>

You can enter the above in your browser and when the site opens you select Browse the Index.

You will then get a huge list of photos of all the native plants, weeds and fungi of the Bega Valley, (it extends from the Victorian border to north of the town of Bermagui, and from the ocean on the east to the edge of the Tablelands - a distance of about 60 to 80 kilometres in an east-west direction and about 200 kilometres from north to south.

Please send us links to similar photographic collections in other areas

The Australian Network for Plant Conservation

<http://www.anbg.gov.au/anpc/about.html>

The Atlas of Living Australia (ALA) has an amazing amount of information including lists of native plants in your area, species profiles and access to the Virtual Herbarium and other botanical collections. It's a great research tool.
<http://www.ala.org.au/australias-species/>

NSW National Parks

www.nationalparks.nsw.gov.au

Native Plant Nurseries

Do you run a native plant nursery specialising in flora from your area? The number of specialist native nurseries has shrunk dramatically over the past few years. Our members and some professional landscapers are interested in knowing where they can obtain certain species. Please send us your details and we will list them in the next bulletin.

Endangered Wattles

Acacia aprica WA
 Acacia aristulata WA
 Acacia ataxiphylla ssp magna WA
 Acacia auratiflora WA
 Acacia brachypoda WA
 Acacia chapmanii ssp australis WA
 Acacia cochlocarpa ssp cochlocarpa
 Acacia cretacea SA
 Acacia enterocarpa SA Vic
 Acacia gordonii NSW
 Acacia imitans WA
 Acacia insolita ssp recurva WA
 Acacia lanuginophylla WA
 Acacia leptalea WA
 Acacia lobulata WA
 Acacia pharangites WA
 Acacia pinquifolia SA
 Acacia porcata Qld
 Acacia pygmaea WA
 Acacia recurvata WA
 Acacia rhamphophylla WA
 Acacia ruppii NSW (pictured below)



A. terminalis ssp terminalis

Acacia sciophanes WA
 Acacia spilleriana SA
 Acacia splendens WA
 Acacia subflexuosa ssp capillata WA
 Acacia terminalis ssp terminalis NSW
 Acacia vassalii WA
 Acacia volubilis WA
 Acacia whibleyana SA

Plants of Sydney website.

This site aims to enable locals and visitors to identify some of the most common and conspicuous species of native plants around the Sydney metropolitan area.

<http://www.capricornica.com/plants/plants.htm>

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The 'Bali Wattle' *Acacia pycnostachya*

by Maria Hitchcock

The tragic events of October 12th, 2002 in Kuta on the Indonesian island of Bali startled most Australians and frightened them to the core. Altogether 202 people, many of them Australians died in the carnage and a further 209 were injured in the worst act of terrorism in Indonesian history and the first time that innocent Australians, targeted as Westerners, were victims of the fundamentalist Islamic terrorists that currently plague the planet. As events unfolded and countless funerals and memorial services were held for the dead, Australians reached for their symbols, the flag and the wattle, any *Acacia* flowering at the time.

One year later, as memorial services were planned in Bali, the Prime Minister of Australia, Mr John Howard, called for Australians to wear a sprig of wattle on the day to commemorate the tragedy and to show solidarity with other Australians. Dignitaries at the service were seen wearing sprigs of wattle, sourced by the government department responsible for the service.

This use of our emblem as a symbol of mourning was begun by William Deane, when he was Governor General. The canyon disaster in Switzerland that claimed the lives of several Australian tourists spurred him to throw a sprig of wattle into the canyon. It was a meaningful gesture, in which the wattle symbolised the lives of Australians lost. Somehow a new tradition had been born.

At the time of the memorial service, the townspeople of Armidale were participating in a Relay for Life and I looked for some *Acacia* blooms to hand out. The best form available was *Acacia pycnostachya*, which was much admired for its beautiful blooms. As it flowers in October, it is a perfect *Acacia* for the purpose, so I rang 'Australia All Over' on ABC Radio and offered seed to anyone who wanted some wattle for future commemorations. I was overwhelmed with the response and eventually sent out over 500 small packets of seed, collected from trees planted in my school grounds the previous year.

Do you have an article on a listed EPBC plant you would like to contribute to our next Bulletin?

Acacia pycnostachya F.Muell. ex Benth.

This very attractive small tree is a rare and endangered species growing to 7 m high and listed as Vulnerable on the EPBC list. The bark is dark and scaly, almost reddish and the purplish branchlets are sharply angled and ridged. It has bluish grey lanceolate-elliptic glabrous phyllodes which contrast beautifully with the large dark yellow flowering rods which can be up to 7.5 cm long and which are prolific on the tree. It flowers in late Spring from August to October and seeds are usually ready for collection in early January.

This endemic species occurs near the Queensland border on the Northern Tablelands of N.S.W., particularly on Bolivia Range, from Bluff Rock to Bolivia Hill near Tenterfield, where it grows amongst boulders on granite slopes in sandy soil, in dry heath and in *Eucalyptus - Callitris* woodland. It is a very adaptable frost and drought hardy species but does best in well-drained soil. This species is densely bushy for several years until the central trunk develops and may be pruned to maintain bushiness if so desired. My tree in the garden is taller than most specimens in the wild which could be due to the sheltered position and better nutrition.



Acacia pycnostachya Photo: M. Hitchcock

References:

World Wide Wattle Bruce Maslin: www.worldwidewattle.com

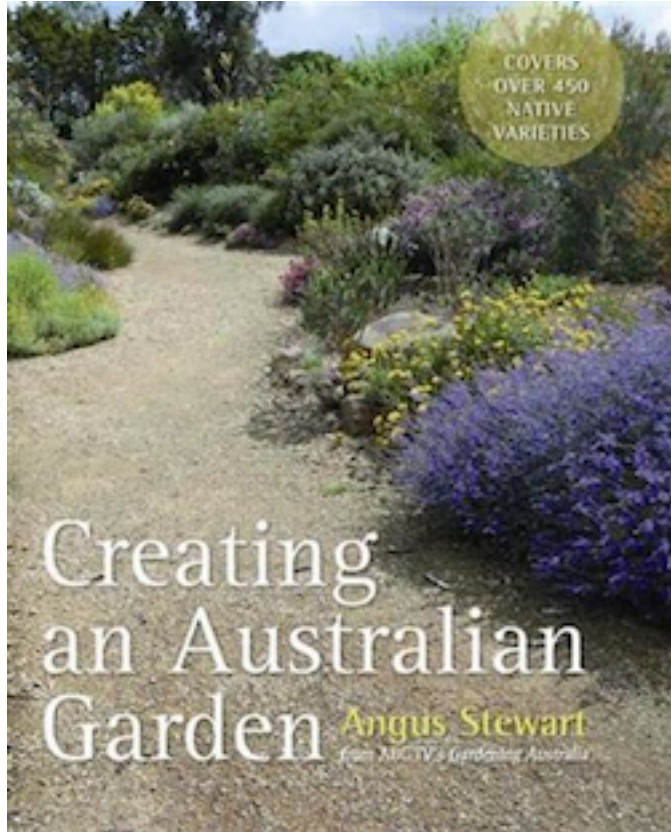
Royal Botanic Gardens: <http://plantnet.rbgsyd.gov.au>

NSW National Parks: www.nationalparks.nsw.gov.au

Save our Flora

Creating an Australian Garden Angus Stewart
(Allen & Unwin, 255pp., \$49.99)

Review by Gordon Rowland



This latest book by ABC TV Gardening Australia presenter Angus Stewart, takes the reader step-by-step through each stage of designing a new garden or redesigning an old one.

Illustrated with colour photographs throughout, **Creating an Australian Garden** is packed with detailed information on soil preparation, irrigation, drainage, water saving, planting techniques, fertiliser use and much more. Whether you're a complete beginner or a seasoned professional, there's plenty here you need to know that you may not already know.

So far, so fine.

Until you reach the 'Native Plant Cultivar List'. This unrepresentative collection will disappoint the eco-aware reader intent on protecting the local ecology or integrating the local flora.

Sydney readers, for example, will lament the omission of desirable locals such as *Grevillea sericea*, *G. speciosa*, *Lambertia formosa* and many other species, from groundcover plants to trees, that are steadily disappearing from our gardens, beneath a deluge of exotics and hybrids.

Nursery-bred hybrids dominate the Native Plant Cultivar List that comprises 85 species in 194 cultivated varieties, outnumbered by 291 garden or nursery-bred hybrids (including no less than 96 grevilleas!), and one naturally occurring hybrid, *Banksia ericifolia* x *B. spinulosa*.

Many production nurseries breed genetically different species to concoct new hybrids – regardless of the parent species natural distribution – for characteristics such as enlarged or double flowers, novel or intensified flower colour and/or extended flowering. A typical example is *Grevillea* 'Superb', a nursery-bred hybrid between *G. bipinnatifida* (endemic to south-west Western Australia) and *G. banksii* (endemic to coastal southern Queensland).

The Macquarie Dictionary defines 'native' as *originating naturally in a particular country or region, as animals or plants; found in nature rather than produced artificially*; an animal or plant indigenous to a particular region.

As nursery-bred hybrids do not originate naturally and are not found in nature, to label them as native is therefore misleading.

Why should this matter? It matters for several reasons:

- Every nursery-bred hybrid displaces a local species, thereby contributing to a shrinking gene pool and loss of biological diversity.
- Selective breeding of hybrid plants with enlarged or double flowers reduces or obliterates the protein-rich, pollen-producing stamen. This process usually renders the plant sterile and of little or no food value to nectar-feeding birds. Where nectar is present, pollinating insects may be unable to reach it, rendering the plant of little or no value to pollinating insects and insectivorous birds.
- Hybrid native plants with enlarged flowers and/or extended flowering, grevilleas in particular, attract territorial nectar feeders such as the Yellow Wattlebird and Noisy Miner that are neither vulnerable nor endangered. These aggressive birds often monopolise the surrounding area and drive out smaller birds such as the vulnerable Painted Honeyeater and Pied Honeyeater, the endangered Regent Honeyeater and other birds that now face serious decline or extinction.

The aesthetics of nursery-bred hybrids with enlarged flowers or novel colours conflicts with aesthetic principles, deduced from nature. (Still, beauty, as we all know, is in the eye of the beholder). Yet when unexamined views are challenged and examined, they sometimes change.

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Creating an Australian Garden continued

In my experience, the change is always in the same direction: Nursery hybrids like these seldom appeal to people already inspired by the unspoilt beauty of wildflowers. Conversely, once the eye is opened to the subtle beauty of wildflowers, the allure of nursery hybrids tends to fade. Which raises the question: Are we looking for beauty in all the wrong places?

In her 1958 classic *Garden Design*, the late, great landscape architect Sylvia Crowe (1901-1997), addresses this design-related issue:

"One of the more subtle qualities of plants is a certain relationship in colour and proportion between the stem, the leaves and the flowers, and the poise of the flowers upon their stems. It is these qualities which give the plant species a grace often lacking in the garden hybrids . . . The intensifying of flower colours by hybridisation can also throw out the subtle harmony of the wild plant."

In his posthumously published *La Botanique*, Jean-Jacques Rousseau (1712-1778), reaches much the same conclusion. He dismisses hybrid plants with enlarged or double flowers, as *"nature disfigured by man. Waste no time examining them"*, he cautions: *"Nature is no longer there; she refuses to be reproduced by such deformed monsters."*

Aesthetics aside, Rousseau wasn't entirely correct. A significant minority of nursery-bred hybrids do produce pollen, and these pose a further threat to the environment: Birds that feed on them may pollinate local native species, thus polluting the local gene pool. For example, CSIRO scientists have discovered that pollen from fertile, nursery-bred hybrid grevilleas in gardens close to Wee Jasper NSW bushland, has contaminated the rare *Grevillea iaspicula*.

So why, despite their disadvantages, does the nursery industry continue to promote these products? The short answer is increased profits, as the nursery industry follows the manufacturing industry's necessarily competitive 'economies of scale' and 'export or die' business model.

Plant Breeders Rights (PBR) are exclusive commercial rights (like patents and copyright), administered under the Plant Breeder's Rights Act 1994. Plant breeders have exclusive rights to reproduce the plant, offer it for sale and export it.

What do you think?

Send us your comments and we'll continue the discussion in the next bulletin.

By promoting these plants through media exposure and eye-catching labels, nurseries that sell them gain competitive advantage, albeit to the detriment of wildlife and the environment.

The time is ripe for a cooperative business model supported by continuing public consultation and education, and a cooperative marketing campaign. This will involve establishing an eco-aware, Australia-wide network of nurseries offering an informed selection of desirable local and regional species, suited to garden cultivation.

To quote Griffith Review editor Dr Julianne Schultz in her introduction to the February 2011 edition, 'Ways of Seeing', we need to develop *"a hunger for . . . understanding and respect for indigenous and traditional ways of life, for pathways that make it possible to create a thriving future by working within sustainable environmental limits."*

I hope that Angus will address the above issues in a revised edition of his otherwise excellent **Creating an Australian Garden**.

By replacing his list of cultivars and nursery hybrids with bio-regional lists of selected indigenous species, Angus will score a win for the environment, a win for regional identity and a win for aesthetics.



Grevillea iaspicula

Image: asgap.org.au

Attached with this bulletin are two plant lists compiled by Gordon Rowland.

**Great Lakes Plant List
Sydney Flora Plant list**

Save our Flora

Ecological Integrity

Creating an eco-house and garden was a labour of love and a legacy for future generations.

Words and photos by Gordon and Marie Rowland



In 2002, we sold our Sydney house of 19 years and bought 10 hectares (25 acres) of partly cleared wet-sclerophyll forest adjoining Wallingat National Park at Pacific Palms on the mid north coast of new South Wales. It was one big step towards the vision we shared: an eco-friendly house and garden in harmony with nature. We hired a local earthmover to upgrade the forest track to a driveway; excavate a lagoon/wetlands and a safe spillway downstream from the wide swamp/slow-moving creek crossing the property; adjust creek entry from upstream to prevent run-off and siltation; and extend the treed knoll to create an island retreat for birds about 600mm above water level to escape flooding. We specified varying water depths, from 200mm for wading birds to six metres for diving birds, and as a retreat for native fish during periods of high temperatures and low water levels.

After browsing the Australian Institute of Architects' website (www.architecture.com.au) and speaking with several architects, we hired Sydney architect Kevin Snell, whose designs and eco-credentials stood out above the others. We discussed with him the house we had in mind:

- modern, unpretentious, low-profile, functional, energy-efficient
- Independent of fashion, fads and the architecture of bygone eras and other cultures
- Bushfire safety features integral to the design

- Earthen/mud brick and weatherboard construction, with a Zincalume roof to reflect heat and plantation or recycled timber windows and doors
- In visual harmony with the surrounding landscape
- Centrally located open-plan kitchen/dining/ living area, opening to a wide verandah with overhang to screen summer sun and admit winter sun
- orientation between 30° east and 15° west of true north (depending on land contours) for maximum solar gain
- Passive solar design and through-flow ventilation to control temperature and reduce the need for active heating and cooling
- Slow-combustion heater, underground rainwater tank and reed-bed waste-water system.



After completion of the lagoon and driveway in December 2003, we hired an eco-aware local builder, the Sugar Creek Building Company's Bruce Brown. Bruce's team laid the foundations in July 2004 and completed the house in march 2005. We have since revegetated with about 2000 local native trees and shrubs, mainly scattered along previously cleared sections of the north and south boundaries. These provide wildlife corridors into Wallingat national Park and screening from neighbouring properties.

In 2006, we turned our attention to the gardens, starting with the south-facing front entrance garden. after deep ripping the clay base, compacted during construction, we mixed the stockpiled clay-loam topsoil with grit, horse and chicken manure and worm castings, and then re-laid it. To screen the visitors' car parking area and provide a sense of enclosure, we then installed a timber fence and lined it with a natural, fire-resistant cladding product, natureed®.

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During the laying of the house foundations, a buried pipe and electric wiring were installed, running from the lagoon to beneath the house, the pipe emerging in the front entrance garden. From here we dug a dry creek bed that winds through the garden to the far end and around the house to the lagoon. It always looks attractive and serves as an effective means of above-ground drainage during periods of high rainfall.

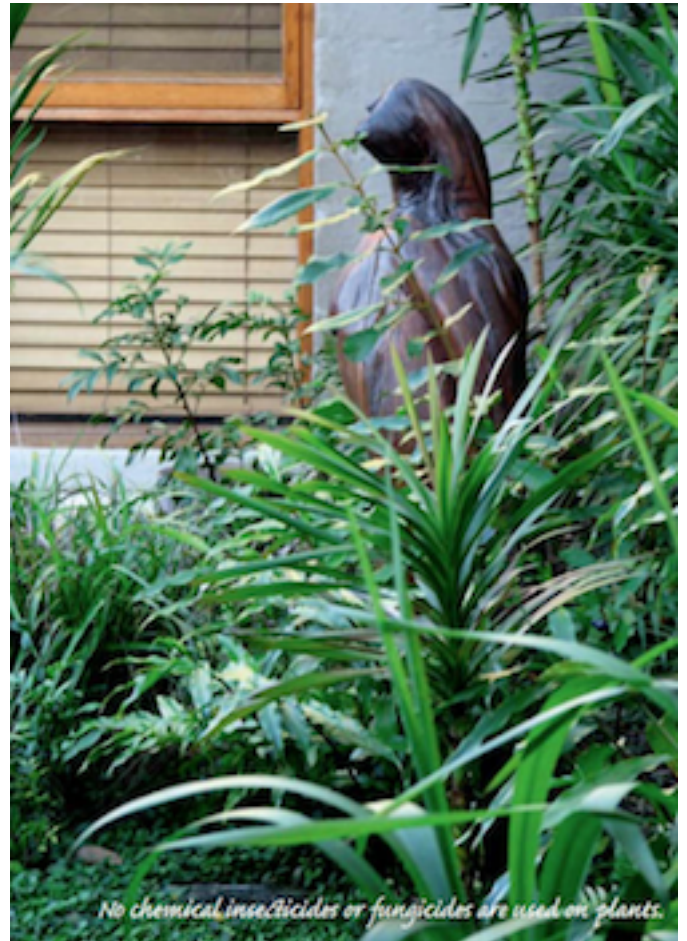


With the lagoon end of the pipe attached to a waterside pump, the flick of a kitchen switch brings water splashing into the creek from a hidden “spring”. The water flows through the creek before returning to the lagoon. It’s a favourite feature with visitors, particularly our grandchildren, Ben and Olivia. It also cools the air and brings colourful dragonflies and frogs — including tiny green tree frogs — and other wildlife. and it’s an easy way to water nearby plants during establishment and prolonged dry periods.

After we’d spread a coarse mulch layer and lined the creek with crushed rock and pebbles, we installed our first garden plant, *Cyathea cooperi* (scaly tree fern) next to the creek. Since then, we’ve installed many more plants, with more to come during the next few years.

To impart a relaxed ambience and sense of unity, and for ecological integrity, we plant mainly local and bio-regional species. These all thrive without chemical fungicides or insecticides and attract many native songbirds including birds that feed on insects. With such an abundance of insectivorous birds and frogs, we are seldom bothered by mosquitoes.

We’re both passionate about uniting aesthetics with biodiversity and conservation and we seize every opportunity to promote a wider, deeper appreciation of local and regional natural heritage. our aim is to leave a legacy of timeless beauty for our children, our children’s children and future generations of Australians.



Gordon Rowland is Managing Director of Indigenous Landscape Design Australia; Marie Rowland its researcher.

This article was published in Green Garden and Home p. 64-65

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ZIERIA FORMOSA

A progress report on another ENDANGERED native plant
by Bob Ross

In a previous issue of 'Native Plants' there was some discussion about growing native plants as a way of saving endangered species from extinction. Another way is to conserve plants in situ on private property.

APS members (Sue and Brian Sullivan) have protected a native Australian plant from becoming extinct. The plant is *Zieria formosa* and its natural habitat is 30 kilometres away from the Imlay mallee that has only been found on the top of Mount Imlay, 850 metres above sea level.

Zieria formosa is also restricted to a few plants in only one spot – in this case a rhyolite rock outcrop 50 metres above sea level on what used to be farmland (6 km west of the town of Pambula). Rhyolite is an igneous, volcanic rock composed mostly of silica (SiO₂). Most of the *Zierias* are now on the Sullivan's 2 hectare house block that has been protected from grazing since 1997. It may have survived the 100 years when it was exposed to cattle grazing partly because it is not very tasty – *Zierias* are members of the Rutaceae family and are closely related to boronias. The plants are also growing in a rocky area that was not subject to clearing for agriculture.

There are at least 50 *Zieria* species native only to Australia and one species of *Zieria* that is native to New Caledonia. Two other species of *Zieria* (*Z. buxijugum* and *Z. parrisiae*) are also listed as endangered under the NSW Threatened Species Conservation Act 1995 and are found in isolated spots 4 to 5 kilometres further west of the Sullivans, on a farming property. These *Zieria* species are reported to be growing on ignimbrite rock – an igneous volcanic rock similar to rhyolite in chemical composition.

There are other *Zierias* around NSW that are also listed as endangered, but the 3 species west of Pambula are not found in any protected national parks and they are in small numbers in very restricted spots, so they are especially vulnerable to future changes that might wipe them out. Sue and Brian have reported that recently wallabies have been eating the *Zierias* on their place, and the nearby *Zierias* have also been reported as being heavily grazed by wallabies.

What does all this tell us about the future of these endangered native plants? The protection of the native plants growing in their native habitat seems to be assured for the next few years – in part because of the care and protection provided by the Sullivans. *Zieria formosa* plants have also been grown off-site at the Australian National Botanic Gardens (ANBG) in Canberra. However in the future, the outlook is not so encouraging. Climate change is already here and future swings in rainfall, average annual temperature and competition from other plants may affect the viability of this *Zieria*. But this plant has already shown that it is a survivor and we will need tough native plants in future that have proven they can cope with difficult conditions.



Zieria formosa Image: Bob Ross

If you want to know more about these endangered plants please have a look at the article on the *Zieria formosa* plants on the Sullivan's place in the June 2008 issue of Australian Plants (Vol. 24, pg. 274). There is also an Approved Recovery Plan that you can download for the three *Zieria* species on the following website.

<http://www.environment.nsw.gov.au/resources/nature/approvedZieriaMultiSpecies.pdf>