

# Save our Flora

AN ONLINE INDEPENDENT NATIONAL PROJECT  
CONSERVATION THROUGH CULTIVATION

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Website: <https://saveourflora.weebly.com>

## Project launched on 14th November 2013

**Maria Hitchcock** Administrator  
Bulletin Editor

### Membership

Individuals: 191

Groups: 21

International 3

Membership is free.

Please encourage others to join.

Quarterly Bulletins are sent by email  
only. Feel free to pass them on.

New members will receive the latest  
e-Bulletin only. Earlier Bulletins can be  
accessed online. (See box)

This is an informal interactive sharing  
group. We welcome your emails, articles  
and offers of seed and cuttings at any  
time.

Your privacy is respected and assured  
with this group. You may **unsubscribe**  
at any time.



*Banksia brownii*

Endangered

Image: [Alchetron](#)

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**Unsure if you have any rare or endangered plants? Check them out on the EPBC list**

<http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=flora>

# Save our Flora

## **Maria writes:**

What a year! Well I didn't make it onto Council and in many ways that's not a bad thing. I lost some skin and money but hey! There are lots of other things to do in life. People were shocked at the result - basically the political parties took over and the results are not what a lot of us wanted. Somehow you have to go through a campaign to learn how to run a campaign - not that I'm volunteering for a second go. We'll see - three years can be a long time.

We started off spring with very dry conditions and out came all the hoses and sprinklers to keep the garden alive. Then came the rains and it's amazing how quickly the season can change. Regular falls and occasional storms have seen the Tablelands bloom. Suddenly the ride-on mower becomes my husband's regular companion - the grass seems to grow while you look at it. I have been doing quite a lot of planting - filling bare spots and taking advantage of the good conditions.

November is Open Gardens month all over the Tablelands. Almost every weekend is taken up with visiting interesting gardens - sadly most are full of exotic trees, shrubs, perennials, roses, etc. Dotted throughout are metal sculptures of grass trees, birds, lizards, etc. Crazy, isn't it? The gardeners could just plant the right mix of habitat plants and they would have the real thing. Wouldn't it be fabulous if they put their excellent gardening skills towards providing sanctuaries for our rare and endangered plants?

The NSW Government has a Draft document out for community consultation on the

### [Whole Plant Sustainable Management Plan 2018-22](#)

for the commercial harvest and propagation of whole protected plants.

The plan affects anyone trading in threatened flora and members of societies. You can read more about the plan on pp. 7-8 of this Bulletin.

*Maria Hitchcock*

## **Native Plant Propagators**

**Are you an expert native plant propagator?**

**Would you be interested in propagating for ex-situ plantings of rare and threatened flora?**

**I am compiling a register of propagators with contact details**

**to send to Botanic Gardens.**

\*\*\*\*\*

## **Save our Flora PowerPoint Presentation**

**Ready to go!**

**30 slides approx 30 mins. talk**

**If you are interested in obtaining this presentation please email me**

**I can send it in an email (4.3MB) or as a CD**

**Send me a C5 stamped addressed envelope Attach 2 stamps**

**Do you have a contact at a local school?**

**Why not ask them to join**

**Save our Flora as a group member**

**More and more schools are establishing**

**Endangered Species Gardens**

**featuring rare plants from their local environment.**

# Save our Flora

## *Banksia conferta* subsp. *conferta*

### RARE GLASSHOUSE BANKSIA DISCOVERED

*Australian Geographic* July 12, 2017 AG Staff

A BUDDING POPULATION of Glasshouse banksias (*Banksia conferta*), considered critically endangered, have been discovered in Coorabakh National Park in New South Wales. The rare species of banksia was sighted while researchers conducted soil sampling and plant monitoring in the area.

"We were extremely surprised and excited to find the Glasshouse Banksia in a remote and mountainous area in Coorabakh National Park, as this plant usually prefers a different type of soil and geology," said Andrew Seed, from the Office of Environment and Heritage (OEH).

"The Glasshouse Banksia was previously only known to live in a small area within this park as well as the Glass House Mountains in Queensland - so this new population is great news for this rare plant."

The rarity of the glasshouse banksia can be explained through the plant's fluctuating location preference, which is bolstered by its restricted distribution and small population size. The OEH also explained that, despite that fire typically triggers seed release in banksias; too much exposure to fire regimes in a short time frame could further devastate populations. Road maintenance also poses a potential threat to populations of banksia adjacent to roadsides.

The survey of Coorabakh National Park yielded a number of significant finds including the *Hakea archaeoides* and the *Dracophyllum macranthum*, both considered vulnerable under the Environmental and Biodiversity Conservation Act 1999.

"This trip was very encouraging as finding more plant populations fills us with hope of being able to secure these endangered or vulnerable plants

in the wild into the future," Andrew said. "And we can't wait to get back to Coorabakh National Park for further monitoring - who knows what else we could find."



*Banksia conferta* subsp. *conferta*

Image: [Australian Native Plants Society](#)

*Banksia conferta* subsp. *conferta* is a shrub growing to 4 m, irregular in shape, with bark roughly tessellated and grey in colour. Branchlets can be hairy to hairless and varying in colour from orange to red or brown. The leaves are whorled, elliptic to oval shaped, 3.5-12 cm long by 0.7-4 cm wide, with coarse short hairs on the upper surface and hairy to smooth on the lower surface. The flower clusters are cylindrical, 7-19 cm long and 5-6 cm wide at flowering. Individual flowers are yellowish-green to pinkish-brown in bud and golden when open, the styles are pale yellow and the old flowers may persist for several years. The seeds are egg-shaped 14-17 mm long; the seed body is crescent shaped, 8-9 mm long, 2-3.5 mm wide and smooth. More...

<http://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=20063>

***Banksia brownii*** (Endangered)

Brown's Banksia, Feather-leaved Banksia

Two forms of Brown's Banksia are recognised: a northern form confined to the Stirling Range with short thin hard leaves, and a southern form with long wide soft leaves that occurs north and east of Albany (Kelly & Coates 1995).

Description: *Banksia brownii* is a smooth-barked shrub with linear leaves, 3–12 cm long and 5–10 mm wide, which are finely divided to the midrib, giving them a feathery appearance. The leaves are dark green and hairless above, but white and woolly beneath. Cylindrical reddish-brown flower-spikes form at the ends of the lower branchlets and underlie the upper branchlets (Brown et al. 1998).



*Banksia brownii* Image: [Wikipedia](#)

Flowers are pale brown (George 1999) or reddish to golden brown (Rye & Hopper 1981). The species is usually an erect bushy shrub of 2–3 m, but in sheltered gullies it may become an openly branched small tree to 6 m (Rye & Hopper 1981). On some peaks of the Stirling Range it is a low spreading shrub (George 1999; Hopper et al. 1990).

Distribution: This species is confined to the Stirling Range/Albany district of south-western Western Australia. It extends as small isolated populations over a range of approximately 90 km from Stirling Range National Park south to Albany and Cheyne Beach (Kelly & Coates 1995). There are 17 extant populations. Eight of the known extant populations occur in the Stirling Range National Park with other populations occurring at Millbrook, Cheyne Road, and South Sister Nature

Reserves, Waychinicup and Hassell National Parks and the Vancouver Peninsula.

Three populations are considered to be close to extinction (Hassel National Park, Hassel Beach Road and Southeast Ellen Peak) with less than 15 mature plants remaining in each of these populations. At least four of the populations have greater than 200 plants (Yungermere, Success, Waychinicup and Cheyne Nature Reserve) and three have an estimated 100 to 200 plants (South Sister, Mt Hassell, Vancouver Peninsula) (Gilfillan & Barrett 2008).

*Banksia brownii* leaves Image: [OZ Native Plants](#)



This species grows in shallow sand over laterite in low open-woodland, in shale gullies in woodland, and in rocky soil among low heath on mountains. In the Stirling Ranges the species grows on mountain tops and slopes, in thicket and mallee-heath on rocky sand clay loam soils at altitudes between 500 and 1100 m asl. Southern populations occur in heath and woodland on gradual slopes in gravelly lateritic sands (Brown et al. 1998; George 1981; George 1999; Kelly & Coates 1995; Leigh & Briggs 1992; Robinson & Coates 1995; Taylor & Hopper 1988). It is a non-sprouting species that is killed by fire and regenerates solely from seed (Kelly & Coates 1995). The main identified threat to Brown's Banksia is its high susceptibility to dieback caused by *Phytophthora cinnamomi*.

*Banksia brownii* is in cultivation at the Australian National Botanic Gardens in Canberra, and Burrendong Arboretum in Wellington, NSW, as well as Kings Park and Botanic Garden in Perth (Bunn et al. 1992; Meredith & Richardson 1990). The species is also being grown commercially for its attractive foliage. Seed germinates in two weeks and it is not easily grown in cultivation particularly in humid areas.

Ref: [http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon\\_id=8277](http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=8277)

## Expressions of Interest – Care for the Rare Project – BGANZ Victoria

**Expressions of interest are open for regional botanic gardens in Victoria to participate in the “Care for the Rare” project – a multi-site Conservation Collection of Victorian rare and threatened plant species.**

One of the major aims/goals of botanic gardens worldwide is to play an active role and contribute in a meaningful way to the conservation of plant species.

With the generous support of the Maud Gibson Trust, the Royal Botanic Gardens Victoria (RBGV) and BGANZ Victoria is exploring the feasibility of establishing a multi-site conservation collection of Victorian rare and threatened plant species, which would be held at a number of regional botanic gardens across the State. The emphasis of these collections would be placed on threatened species from Victorian bioregions which are ‘proximate’ to the participating gardens. A Working Group, comprising representatives from RBGV and BGANZ Vic, was established in 2016.

The project has been branded “Care for the Rare” and dovetails into [an existing Botanic Gardens Conservation International \(BGCI\) program](#) of the same name. The BGCI program provides free, easy-to-use interpretation resources that any garden can use to clearly communicate conservation stories of threatened plants in their collections. <https://www.bgci.org/usa/carefortherare>

The first stage of the RBGV/BGANZ Vic project, an assessment of the Victorian rare and threatened flora for inclusion in the project, was completed in 2016.

The second stage of the project is to seek expressions of interest from regional botanic gardens to participate in the program. John Arnott as Project Officer will undertake an assessment of the capacity for individual gardens to participate.

This would be facilitated through onsite inspections and assistance in the development of specific Conservation Collections Plans.

**How will this happen?** Once Expressions of Interest have been received, the Working Group will shortlist applicants. For each of the shortlisted gardens, we will arrange a suitable time to facilitate the key step in the process - a site visit and inspection.

The site inspection will provide the opportunity for the Project Team and the interested gardens to discuss and explore a number of specific factors that will inform an overall approach to participating in the project. Factors such as but not limited to:

- Existing collections
- Landscape character
- Relationship the project may have to site Masterplan/Conservation Management Plan and other strategic planning documents
- Exploring options for holdings – eg. a stand-alone display, or integration of R&T plants into existing garden/s/landscapes
- Amount of time/resources that can be dedicated to the project
- Capacity to keep detailed records

The final output of this phase of the project is the documentation of Conservation Collection Plans for each of the participating gardens. Again, this will be facilitated with the support of the Project Team. The aim of Conservation Collection Plans is to pull together all of the information gathered in the process and set in place an agreed approach or scope for establishing collections at each site.

- The Conservation Collection Plans would aim to:
- Capture information about site and growing conditions
- Set broad objectives for the collection/s: priorities for collections development, species lists, documentation and record keeping

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- Set interpretative aims and key messages for the collection/s
- Establish strategies and actions to achieve collection objectives
- Horticultural and management notes
- Useful contacts and references

The final stage/s of the project, plant production and distribution of plant material to participating gardens, are yet to be fully scoped. The Working Group will actively be seeking funding support to implement these stages.

## **EOI Methodology and Timelines:**

July 2017: Expressions of Interest opened to BGANZ Victoria member gardens to participate in the project. (John Arnott)

19 August 2017: Expression of Interest close

August 2017: Initial evaluation and shortlisting of EOIs. (John Arnott & BGANZ/RBGV Working Group).

August - September 2017: John Arnott (and potentially other members of the BGANZ Vic Executive) to travel to shortlisted gardens in regional Victoria to assess their capacity to deliver on project goals. This would involve visiting and inspecting each interested garden and to actively workshop what would be needed for them to successfully hold, document, display and interpret a conservation collection.

September - Dec 2017: Facilitate collections planning workshop/s with successful gardens and complete living collection planning templates for each participating garden (John Arnott and participating garden staff).

If you have any questions or would like to discuss any aspect of the application process (or the project) please contact:

### **John Arnott Project Officer**

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BGANZ

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Canberra, ACT 2601 Australia

# Save our Flora

## Whole Plant Sustainable Management Plan 2018–22

for the commercial harvest and propagation of whole protected plants.

Excerpts from the document which affect growers and nursery people trading in threatened flora with comments from my submission below in blue.

### **4.5 Grower licence**

A grower licence is required to grow protected plants for the purpose of sale. Grower licences may permit the propagation and sale of threatened species...Growers may access propagating material from a number of sources including stock plants or through other licensing provisions under this plan...Growers fall into distinct sectors within the industry, such as tube-stock and production nurseries, and societies and species interest groups.

It appears that people will be able to take out a 1 year, 3 year or 5 year licence. The fees are reasonable but the conditions are not. There is a requirement to list all the species to be traded when applying for the licence. This would be impossible with a 5 year licence. Much better would be an annual return of species traded and the numbers sold.

#### **4.5.1 Tube-stock nurseries**

Tube-stock nurseries propagate a range of protected plants with seed obtained from seed merchants or wild stands. Despite some questions about the source of seed material, this sector supports sustainable use of material through low-impact methods. Products are generally sold in tubes or similarly small size classes.

This is the category that most small scale enthusiasts fit into. Often they run small hobby nurseries. They will still need to be licensed if they want to sell plants which are on the list.

### **4.5.3 Societies and special interest groups**

Possession and trade of protected whole plants by and between hobbyists have specific defences in the BC Act under Section 2.8(l). There has been some confusion surrounding the extent of this defence and how it applies.

Societies and special interest groups may possess and trade protected plants between members and small-scale growers without the requirement for a licence when:

- the trade occurs at a society meeting at their nominal meeting venue, or between members of the society at any time
- the material has been obtained according to this plan or is lawfully in the possession of the person supplying it.

Societies and special interest groups will require a grower licence to sell to the general public where the material has not been sourced under this plan.

### **4.5.4 Small-scale and hobby growers**

Without limiting the application of sections 4.5.1 to 4.5.3, individuals who propagate and sell protected native plants to the general public, or to wholesalers or retail outlets require a grower licence.

The plan recognises that some businesses may overlap between these sectors. Only a single grower licence will be required where the business undertakes growing activities across more than one of the above sectors.

### **4.11 Whole plant tagging requirements**

Under the BC Regulation it is an offence to contravene a requirement of a licence to affix tags to a protected plant. This plan requires plant species at high conservation risk, in high demand or at significant risk of illegal harvest, to have tags attached.

Tagging is a useful way to ensure continuity of lawful possession throughout the supply chain, from harvest site to end user, particularly when they are on-sold many times. The use of tags eliminates the need for all parties in the supply chain to be licensed. Tags also identify legally sourced plants, making it easier for consumers to preferentially select cultivated specimens.

Tags attached legally to protected plants from interstate are recognised under this plan. Sellers should ensure that suppliers (whether in NSW or elsewhere) are appropriately licensed and that products comply with the tagging requirements set down in a relevant flora management plan.

Two types of tags referred to as 'NPWS tags' and 'grower tags' are specified in this plan and their use will vary according to licence type and species.

#### 4.II.2 Grower tags

All growers will be required to attach a grower tag to any plant they produce under their licence. In certain circumstances, such as described above for Xanthorrhoea species, an NPWS tag will also be required.

Grower tags may take the form of a sticker, label or sleeve and must be attached to the plant or container directly. They must have sufficient information to trace the product to its origin, for example, the species' scientific name with the term 'plantation grown' and the supplier's name.

If possible, it is recommended that grower tags comply with the National Plant Labelling Guidelines produced by the Nursery and Garden Industry Australia, but they may be attached separately if required. Grower tags must not be placed on a plant harvested under an approved harvester or wild harvester licence.

I believe that nursery people will not comply unless it becomes easy for them. A generic sticker which can be bought in bulk and applied to labels as necessary would be an easy option. It can include the following information:

- the name of the grower
- NSW Threatened Plant
- Plantation Grown

I don't believe it needs to have the species name as that is already on the label.

#### 4.II.3 Tags for plant hybrids

Because plant species have been intentionally hybridised, many recognised varieties and cultivars have been developed that are now registered under the Plant Breeders Rights Act 1994 (PBR Act). Many hybrids cannot be readily distinguished from the parent stock until flowering occurs, making identification of hybrids very difficult without flowering parts.

Tags for plant hybrids produced under a grower licence must include the word 'hybrid' and identify the parent material. However, material that has been accepted under the PBR Act will not be subject to tagging or licensing requirements under the NPW BC Act. It is the licensee's responsibility to demonstrate the status of varieties under the PBR Act, should an exemption be required.

In my submission I stated that I don't believe hybrids should be tagged as many occur as garden seedlings with unknown origin. There really is no need for hybrids to be included under this Act which aims to protect straight species in the wild.

#### 4.I4 Licence fees

Licence fees vary depending on the cost incurred by OEHL to assess, regulate and monitor the various licensed activities. A schedule of fees is published on the OEHL website. People seeking licences to undertake multiple activities at the same location will pay a single licence fee, which is based on the activity with the highest fee. The term will be that of the shortest licence.

Fees for grower licences are currently as follows:

1 year: \$30  
 3 years: \$75  
 5 years: \$100

The Draft Plan can be downloaded from the following website:

<http://www.environment.nsw.gov.au/research-and-publications/publications-search/draft-whole-plant-sustainable-management-plan>



# Save our Flora

## ANPC News

### SUCCESSFUL THREATENED PLANTS TRANSLOCATION INFORMATION DAY HELD ON 1 AUGUST AT THE ROYAL BOTANIC GARDEN, SYDNEY.

Organised by the ANPC and the Threatened Species Recovery Hub, with support from the NSW Office of Environment and Heritage and the Royal Botanic Garden Sydney, 'Plants Going Places' attracted a capacity audience of 80 people (with a waiting list) demonstrating a huge interest in plant translocation. It was held as part of the 'Review of the ANPC's Guidelines for Translocation of Threatened Plants in Australia' project, whilst many experts were in Sydney attending a 2 day consultation workshop.

Local and national experts held a range of presentations on the science of translocation, provenance, orchids, monitoring, licensing, policy and numerous case studies including *Asterolasia buxifolia*, *Fontainea oraria*, *Persoonia pauciflora* and *Wollemia nobilis*.

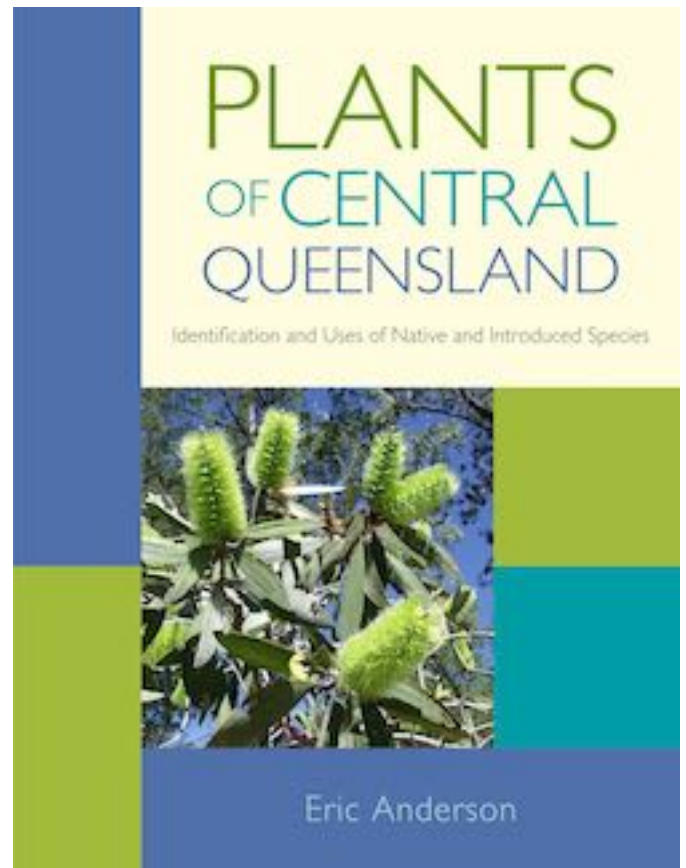
Attendees included threatened species project coordinators, environmental consultants, local government officers, NGOs, NRM organisations, bushcare volunteers and community members who were involved, or had an interest, in policy and/or the implementation of planned translocations (including population augmentation and/or establishment of new populations).

Most of the presentation slides and audio files from the day are available below!

[View Flickr photo slideshow here](#)

## Book Review By CSIRO: **Plants of Central Queensland**

Eric Anderson



A guide for identifying and understanding the plants of the Central Queensland region. Conservation and sustainable productivity are vital issues for Australia. In order to manage vegetation well from an agricultural, recreational or conservation point of view, an understanding of individual plant species is important. *Plants of Central Queensland* provides a guide for identifying and understanding the plants of the region so that pastoralists and others can be better equipped to manage the vegetation resource of our grazing lands. Central Queensland straddles the Tropic of Capricorn, although many of the plants in the book will also be found outside this area, as shown by their distribution maps. The book provides information on the habit, distribution, foliage and fruits of 525 plant species. Informative notes highlighting declared, poisonous, weed and medicinal plants are included, and plants useful for bees and bush tucker are also noted.



## ***Geosiris australiensis*: the recently discovered flower of the Daintree**

*Australian Geographic* JULY 24, 2017



*Geosiris australiensis* Image: Tim Hawkes

A NEW FLOWER, *Geosiris australiensis*, was discovered by amateur botanists Tim Hawkes and Tony de Groot in the [Daintree Rainforest](#).

*Geosiris australiensis* was native to the [Gondwana Rainforests](#) - the ancient super continent that formed 250 million years ago, before the land mass then broke up into the continents we know today.

Botanists say that the new discovery demonstrates how little we know about the ancient rainforest, situated in the north east coast of Queensland.

“The Daintree is living up to its name of being a very, very old piece of rainforest,” Bruce Gray, a researcher from the Australian Tropical Herbarium, who formally identified the flower as a new species, [told the Cairns Post](#).

“Obviously these flowers were growing here a long time ago, before the separation of the continents.”

Amateurs, Tim and Tony discovered *Geosiris australiensis* after catching the flower's white petals peeking above the leaf litter at Cooper Creek.

“We were looking for another plant, which myself and a friend found in Mossman Gorge a year earlier,” Tim explained.

“We were looking at other potential spots where this plant could be, so decided to go up into the rainforest, to see whether it was on the other side of the Daintree River.

“We found this plant, which is virtually a stem and nothing else, which had a little bud on it. We looked at it and thought it could be something new,” he added.

The flower is said to be closely related to *Geosiris albiflora* and *Geosiris aphylla* species of flower that are only found on the islands of Madagascar and Mayotte, which experts said exposed the evolutionary link between Africa and Australia.

The flower, while a pretty addition to the plentiful flora of the Daintree rainforest, is really a food stealing parasite, according to Darren Crayn, the director of the Australian Tropical Herbarium, who explained that the *Geosiris australiensis* uses fungi to wreak havoc on other plants.

“The fungus forms filaments in the soil that invade the roots of both the victim and the recipient, which then act as a tunnel through which the food flows to the latter. A nifty little trick,” he told the Cairns Post.

## Wee Jasper Grevillea flowers in nature reserve for the first time in 20 years

*Australian Geographic August 29, 2017*



The flower of the Wee Jasper Grevillea.  
Image: L. Lindsay/ Environment and Heritage NSW

THE WEE Jasper Grevillea (*Grevillea iaspicula*) — a critically endangered member of the *Proteaceae* family, has flowered in the Burrinjuck Nature Reserve for the first time in two decades.

The creamy-pink flower can only be found in areas outside of Wee Jasper in southern New South Wales and on the limestone slopes near Burrinjuck Dam in the south-west of the state, where conservationists have worked to recover the species for over 30 years.

According to the [Australian National Botanic Gardens](#), apart from being a stunning native floral, the Wee Jasper is a food source for native nectar feeding birds.

However, the flower is also a favourite treat of feral goats, which almost ate the plant to extinction by the mid-1990s. But tailored protection measures have yielded positive results.

“As well as undertaking intensive feral goat control, we fenced the site to protect the few seedlings that emerged unscathed by the goats,” said John Briggs, the threatened species

coordinator for the ‘[Saving Our Species](#)’ program.

“We paddled out to this remote site on the shores of Lake Burrinjuck and were greeted with small clusters of spider-like pink flowers nestled in among flourishing pointed green leaves. The plants will continue to flower in the coming months and over summer should start producing seed, hopefully resulting in even more recruitment at the site,” he explained.

The Saving Our Species team counted around 150 seedlings that have emerged due to increased protections, which they say will dramatically improve the species long-term survival on the site.

### [Victorian Biodiversity Conference 2018 - Melbourne, 6-7 February 2018](#)

The Victorian Biodiversity Conference aims to provide graduate students and early career researchers with an opportunity to showcase their work locally, and hopes to facilitate discussion with industry, government, senior academics and the public. The call for abstracts for talks, posters and workshops is now open. For more information [click here](#).

### [Australian Citizen Science Conference 2018 - Adelaide, 7-9 February 2018](#)

The Australian Citizen Science Conference 2018 will bring together citizen science practitioners, participants, thought leaders and decision makers and showcase best practice in citizen science and share project outcomes from across Australian and the world. The [call for abstracts is now open](#) and registrations open on 1 November. [Click here for more information.](#)

## Protecting threatened plants at the Royal Tasmanian Botanical Gardens

ABC Radio Hobart By [Carol Rääbus](#)

Posted 7 Sep 2017, 2:21pm

Walking through the native plant section at the Royal Tasmanian Botanical Gardens is like taking a quick journey through the various landscapes of the island.



*Ozotamnus reflexifolius, or reflexed everlasting, was discovered in 2000 and is found only on the Meehan Range on Hobart's eastern shore. (ABC Radio Hobart: Carol Rääbus)*

From Huon pines to banksias, small flowering shrubs and spiky grasses, hundreds of different species of plant are on display — many of them are very rare.

Chris Lang, curator of Tasmanian flora at the gardens, said he found all of the state's varieties remarkable.

"We have such an incredibly diverse flora composed of over 1,900 species, but unfortunately a percentage of those are listed as rare or threatened," he said.

There are 400 species of Tasmanian plants listed as threatened and many of those are grown in the gardens, which uses red labels to signpost to visitors the species' status.

"There's a disproportionate number [of threatened species] in this part of the collection," Mr Lang said of the grassland plant section.

"Our grasslands and grassy woodlands have been subject to clearing activity post European settlement, so those have declined dramatically over the past 200 years."

Mr Lang said educating the public about Tasmania's unique and under-threat plants was key to helping the community better protect the environment.

In order to grow these threatened plants, the gardens has to collect them from various places which are often hard to get to.

Natalie Tapson, the horticultural botanist at the gardens, spent last summer on Macquarie Island collecting seeds.

"I collected from 13 different species," she said. "We've got a critically endangered cushion plant [on the island] and I was collecting seeds from that ... what you do is you get a pair of tweezers and you get down on a mat (and you cope with the conditions as they come at you) and you pick out the seed from the plant."

Some of the seeds and plants collected by Ms Tapson are now grown in shipping containers in a controlled environment at the gardens, while others are on display in its sub-Antarctic plant house.

### Seed orchards for the seed bank

Lorraine Perrins is the curator of the Conservation Collections and sub-Antarctic flora at the gardens. Ms Perrins also works to collect seeds for the Tasmanian Seed Conservation Centre.

"We have a series of seed orchards here in our nursery," she said. "It's very similar to your general apple orchard where you're growing the plant to get the fruit ... to get a good collection of seeds from a rare and threatened plant, you need a minimum of 10,000 seeds.

"Sometimes our seed orchards will take 12 months to harvest the 10,000 seeds off in one season ... sometimes it can take six to 10 years."

## Germination of Wollemi Pine Seeds

Maria Hitchcock

It appears that this year is a good year for harvesting Wollemi Pine seeds. Instructions for growing these seeds can be found online on

<https://www.rbgsyd.nsw.gov.au/Science-Conservation/Our-Work-Discoveries/Science-News/Wollemi-Pine-Seed-Production>

I harvested my seeds by accident. I was looking for a plant to take some cuttings when I looked up at my Wollemi Pine and noticed one of the female cones was woody and starting to break up. They usually fall off and don't produce anything but this year was different.



Female cone (immature) of the Wollemi pine

Image: [National Arboretum Canberra - ACT Government](#)

I removed the cone from the tree and took it to my glasshouse where I pulled it apart and extracted the seeds. It reminded me of a Deodar cone I pulled apart earlier this year. I then filled a punnet with seed raising mix - sat it in some water until wet through, then sprinkled the seed on top and lightly covered it with more mix. The punnet went into a Chinese fast food plastic container with a lid. The container is now sitting on the bottom of my fridge and will stay there for two weeks. After that I'll remove the punnet from the fast food container and relocate it to my igloo which gets misted once a day. It will be interesting to see how many seeds germinate and how long they take to do so.



Seed and cone segments of the Wollemi pine

Image: [B'z Backyard Greenhouse](#)

**Have you successfully germinated  
Wollemi pine seeds?  
Please tell us your experience.**

## ENVIRONMENTALISTS FIGHT TO BRING RARE PLANT BOMADERRY ZIERIA BACK FROM BRINK OF EXTINCTION

ABC Illawarra 26 Jun 2017 Jessica Clifford  
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Researchers and environmentalists are in a race against time to bring a rare plant back from the brink of extinction. The Bomaderry Zieria (*Z. baeuerlenii*) is native only to the town of Bomaderry on the NSW south coast, and is not found anywhere else. The shrub is small and delicate, covered in clover-like leaves and velvety hairs. It also produces small, pinkish-white flowers during winter and spring. It has been monitored by researchers for the past 20 years. They have found that since 1997 the population of the plant has declined 60 per cent.



*Zieria baeuerlenii* Image: [Friends of Bomaderry Creek](#)

Cuttings have been taken during the past few years and grown in special greenhouse conditions at botanic gardens in Canberra, Wollongong and the Shoalhaven. Earlier this year, 300 cutting grown plants were reintroduced to a nature reserve in Bomaderry to try and increase the plant population.

Office of Environment and Heritage (OEH) senior threatened species officer, Kylie Coutts-McClelland, said the first post-planting observation took place last week. She said she was concerned about the variation in how the plants

were responding to being relocated back into their natural habitat.

"It may just be the initial shock of being planted out, but we'll track their progress for at least the next three years," Ms Coutts-McClelland said. "We are looking at whether we can increase the survival rates of plants we re-introduce from botanic gardens' collections into the wild through additional watering and fencing to protect against browsers such as wallabies."

In the course of their research on the rare shrub, researchers have also discovered the plant appears to have lost its ability to reproduce. While other plants, including other closely related zierias, normally seed at certain times of the year, this one no longer does. There is no explanation as to why this might be the case, but it makes the replanting of the unusual species all the more important.

The Bomaderry Zieria is one of many endangered species being cared for as part of the NSW Government's Saving Our Species program. The program sets out actions required to save specific plants and animals from extinction. Shoalhaven City Council is working with the OEH and volunteers to try and get more Bomaderry Zierias growing. Shoalhaven council Bushcare coordinator Alasdair Stratton said they would probably lose some of the newly planted zierias.

"They're being planted into a pretty harsh environment and they've been sitting in a nursery for the last five or six years," Mr Stratton said. "They're going to be getting watered and closely monitored by us and OEH."

"It's not just about us replacing the wild population, it's just an experiment to see if we can actually get these plants that have been sitting in the nursery established."

The newly planted shrubs will continue to be monitored for another couple of years as part of the program to see whether it is possible for them to survive in the wild.

# Save our Flora

## Seed and Cuttings Exchange

Please send all requests directly to the person making the offer or the group email [saveourflora@gmail.com](mailto:saveourflora@gmail.com)

Please follow the correct protocols for requests of seed or cuttings. These are detailed on the next page. Please note that some species are in very short supply and cutting material may be limited.

### Maria Hitchcock

16 Hitchcock Lane Armidale NSW 2350

*Correa eburnea*

*Correa calycina*

*Callistemon pungens*

*Grevillea wilkinsonii*

*Zieria adenodonta*

*Zieria prostrata*

*Zieria floydii*

I also sell some species through my online nursery

[coolnatives.com.au](http://coolnatives.com.au)

### Arthur Baker

55 Moran ST Gatton Qld 4343

*Gardenia psidiodes*

*Grevillea quadricauda*

*Grevillea glossadenia*

*Eucryphia wilkiei*

*Graptophyllum ilicifolium*

*Xanthostemon formosus*

*Phaius tancarvilleae*

*Plectranthus nitidus*

*Zieria prostrata*

*Grevillea mollis?*

*Eremophila nivea*

*Dodonaea rupicola*

*Xanthostemon arenaris*

*X verticulatus/seeds or cuttings*

*Kunzea flavescens*

*K graniticola*

*Callistemon pearsonii*

*Callistemon flavovirens{seeds}*

*Melaleuca irbyana*

*Lilaeopsis brisbanica {Water plant}*

*Hernandia bivalis*

*Spathoglottis pauliniae {Tropical ground orchid}*

*Rhododendron Lachiae*

### Charles Farrugia (email [saveourflora@gmail.com](mailto:saveourflora@gmail.com))

*Eremophila denticulata ssp trisulcata*

*Eremophila denticulata ssp denticulata*

*Eremophila nivea* (blue form)

*Eremophila nivea* (white form) - limited.

*Eremophila vernicosa* – extremely limited

Russell Dahms (email [saveourflora@gmail.com](mailto:saveourflora@gmail.com))

*Boronia clavata*

### Denise & Graeme Krake

752 Warrigal Range Rd. Brogo NSW 2550

Seed of

*Hakea dohertyi*

*Hakea ochroptera*

*Hakea longiflora*

*Grevillea maccutcheonii*

### Geoff & Gwynne Clarke

*Grevillea humifusa* - cuttings

*Angophora robur* - seed

*Dodonaea crucifolia* - cuttings or seed

This was named a couple of years ago by Ian Telford who came down from Armidale to look over our block. Many people were calling it *Dodonaea hirsuta*, but it is not very hairy and has no hairs at all on the fruits. It also grows in a nearby flora reserve. If people would like to try this I can make it available when the material is ready. I have grown it successfully from cuttings, but it does not live long after planting out. It also produces seed and I can collect that after the next flowering (spring fruits). It grows happily around the block, popping up from seed here and there, produces plenty of seed, but it is not long lived even when self sown. Fruits are showy reds.

Bob O'Neill

7 Hillsmeade Drive, Narre Warren South, Vic. 3805

I want to increase our range of Lechenaultias and *Correa pulchellas*. Can anyone help us out? Both of these groups of plants are doing well for us at Narre Warren South, Vic. I would be delighted to offer cuttings from our range to interested people. Some plants may be available to people who are able to come to our home address.

Paul Kennedy (Leader ANPSA Hakea SG) (email

[saveourflora@gmail.com](mailto:saveourflora@gmail.com))

I have seed of *Hakea dohertyi* and a large plant of *Hakea ochroptera* from which cutting material could be taken. I also have a plant of *Callistemon megalongensis* which has not flowered yet, but cutting material would be available in autumn. The seed originally came from the Melaleuca Study Group seed bank many years ago.

*Do you have any EPBC plants growing in your garden with sufficient foliage to share cuttings with our members? Let me know and I'll print it here. It would be easier if we can add your address so that members can contact you directly. Please make sure you follow the protocols on the back page. (Ed)*

# Save our Flora

## Requesting and sending seed by post

Please follow these simple steps.

### Make a request

1. Send your request by email first. It will be forwarded to the grower so you can request seed and ask for the address.
2. Send your request enclosing a self-addressed envelope with two 60c stamps attached. Post the envelope.

### Send seed

1. When you receive an envelope with a seed request, package up the required seed which includes the name, provenance (if known) and date of collection. Add any tips on germinating the seed and post.

### Receiving seed

1. Seed should be stored in paper (small manilla seed packets are best but any cheap envelopes will do) and kept in a cool dark place. Some people use those small paper lolly bags and staple them at the top. Add mothballs if you like. This will prevent insect attack. I save moisture absorbers from medicine bottles and add them to my seed drawer to ensure the seeds do not rot.

Seed life varies according to species. Acacias will last for many years while Flannel Flower needs to be really fresh. Old seed may not germinate and needs to be thrown out. Test some of your seed periodically. It's worth asking seed suppliers for the age of certain species of seed before purchasing.

## Requesting and sending cuttings by post

Please follow these simple steps.

### Make a request

1. Send your request by email first. It will be forwarded to the grower so you can request cuttings and ask for the address.
2. Purchase an Express Post small satchel for \$10.55. it will hold up to 500 gms.
3. Self address your satchel and place it in an envelope with your cuttings request. Add a label/s with the name of the species and sender. Pencil is best for writing on labels.
4. Post the envelope.

### Send cuttings

1. When you receive an envelope with a satchel inside, cut about 6 stems of the requested species. The best time to do this is early morning. Store cuttings in the crisper part of the fridge until they are ready to be posted.
2. Wrap the cuttings in damp newspaper and place them in a cliplok plastic bag. Make sure you label each parcel with the names of the species and sender. Squeeze air out of the bag and fasten top.
3. Put the bag in the satchel and post.

### Receiving cuttings

1. As soon as you receive your cuttings put the unopened plastic bag in the crisper part of the fridge until you are ready to prepare them.

## Group Members

### ANPSA Groups

APS Melton Bacchus Marsh Vic  
 SGAP Ipswich Qld  
 SGAP Sunshine Coast and Hinterland Qld  
 APS Echuca Moama Vic  
 Crommelin Native Arboretum NSW  
 Swan Reserve Garden Vic

### Botanic Gardens and Reserves

Hunter Regional BG NSW  
 Tamworth Regional BG NSW  
 Lindum Park Flora and Fauna Res.  
 Burrendong Arboretum Wellington

### Nurseries

Bilby Blooms Binnaway NSW  
 Cool Natives Armidale NSW  
 Mole Station Tenterfield NSW

### Seed Suppliers

Victorian Native Seeds

### Study Groups

Acacia SG  
 Correa SG  
 Epacris SG  
 Garden Design SG  
 Grevillea SG  
 Hakea SG  
 Waratah & Flannel Flower SG