



AN ONLINE INDEPENDENT NATIONAL PROJECT  
**CONSERVATION THROUGH CULTIVATION**

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**Project launched on  
 14th November 2013**

**Maria Hitchcock OAM**  
 Founder, Bulletin Editor  
 Armidale NSW 2350

**Membership**

Membership is free.

Please encourage others to join.  
 eBulletins are sent by email only.  
 Feel free to share them with  
 friends and colleagues..

New members will receive the  
 latest e-Bulletin. Earlier Bulletins  
 can be accessed on our website.  
 (See address above)

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.



*Graptophyllum ilicifolium*

Image: [burringbaarrainforestnursery.com.au](http://burringbaarrainforestnursery.com.au)

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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>

*Maria writes:*

This morning I took a trip to the north-eastern part of our Armidale Regional LGA. This area near Warra National Park was severely burnt out two years ago. The regeneration has been quite remarkable. We are having one of the best spring seasons that I can remember and the countryside is an almost iridescent green. The cattle and sheep in the paddocks look quite happy and the farmers are probably rubbing their hands together thinking of the returns to come. That's Australia. A land of extremes. You just have to be able to hold your nerve and have something in reserve.

This area called Backwater is wooded and any grazing done here would be fairly marginal. The sandy roadsides are regularly graded which destroys anything interesting but back from the edges is a treasure trove of granite flora. Here and there glimpses of purple revealed *Viola betonicifolia*, the recovering *Dillwynia retorta* plants were covered in red and yellow pea flowers, yellow donkey orchids could be seen in small drifts, *Leptospermum juniperinum* were putting on a bit of height and the vulnerable *Grevillea scortechinii* var *sarmentosa* had regenerated in pockets but was difficult to find in the grasses.

Most people driving past would be totally unaware of these treasures on the roadsides which is probably just as well as the plants can be left alone to grow and flower and seed until the next major fire comes along.

The news is full of COP26 in Glasgow and how nations are being urged to cut emissions. It's always such a tug of war between rampant capitalism and environmental protection. The winner is usually the one with rich backers who want to get even richer. We hear the spin from our politicians about 'caring for the regions', looking after the farmers, etc.' What a load of BS. I do hope the Australian people don't fall for this tripe.

My region of New England (yes I know - Barnaby Joyce's seat) is a NSW declared Renewable Energy Zone. Wind farms and solar farms are popping up all over with the support of local residents, many of whom are farmers. They see these developments as drought proofing their properties in that they can earn a tidy income regardless of the rainfall. We have a new interconnector line being installed between



Liddell Power Station and south east Queensland. The renewables will feed into that. I believe these Renewable Energy Zones will become future technological hubs as well as helping to power industrial expansion.

People everywhere are reporting that this spring is remarkable for an explosion of wildflowers which bodes well for regeneration of rare species. Let's get those cameras out and start snapping, enjoy the spring and the freedom of movement in our soon to be post pandemic country. What a journey we had!

Have a happy Christmas and I'll catch up with you again early next year.

## Australian Network for Plant Conservation News - Oct 21

### World's smallest wattle plant found blooming on K'gari (Fraser Island) a year after bushfire – ABC News, 23/10/21

<https://www.abc.net.au/news/2021-10-23/worlds-smallest-wattle-survives-kgari-fraser-island-bushfire/100556326>

The world's smallest wattle plant has been found blooming in the bushfire-scorched grounds of K'gari (Fraser Island), with experts saying it shows the island is in full recovery mode. Queensland Parks and Wildlife Service (QPWS) rangers were amazed to find the miniature bright yellow flowers of the *Acacia baueri*, a threatened species commonly known as the tiny wattle, during recent surveys of areas affected by fire a year ago.

"It's great to see that even after the fires have gone through, these vulnerable species are still doing well," ranger in charge Linda Behrendorff said. "Such a small, fragile plant, it really is a resilient, hardy little shrub that is important for the island's regeneration. They are even growing on the side of fire breaks, which is generally a disturbed area, so that's pretty exciting too."

She said the small stature of the plant made it difficult to find.

"This little gem only grows to 50 centimetres high and is found on infertile sands in wallum habitat from Queensland's Burrum Coast to just north of Botany Bay in New South Wales. You can only pick them out when they're flowering because they generally blend in with everything



*Acacia baueri*

Image: QPWS

else. If you look closely, another identifying feature is the small down-turned curve at the end of the leaves, which is somewhat similar to rosemary."

**Is your garden  
a threatened species  
sanctuary?  
All you have to do is  
grow one or more  
endangered species  
Many are already  
widespread in gardens  
around Australia  
Look for a nursery  
licensed to sell  
rare flora**

Check out this website!

[Millennium Seed Bank Partnership Data Warehouse: E-Newsletter - BRAHMS Online \(kew.org\)](https://www.kew.org/millennium-seed-bank-partnership-data-warehouse)

## Flora Connections

Flora Connections aims to link valuable plant groups to the scientific committees making decisions about threatened native plants across Australia. We believe that community groups across Australia have a wealth of knowledge about plant species that could be better used to inform threatened species decisions and management.

Flora Connections will develop resources and an online data portal to help citizen scientists collect data about the population numbers and distribution of potentially threatened native plant species. These data can help scientific committees assess e.g. how the 2019-20 bushfires have affected rare plant species, and whether particular native species or ecosystems need more protection.

If you think this project is of interest to you or a group you belong to please let me know and I'll be in touch when we develop our training materials and online data portal.

Ruby E. Stephens  
Research Assistant  
Flora Connections Citizen Science Project  
Hawkesbury Institute for the Environment  
M: 0424 072 107  
E: [r.stephens3@westernsydney.edu.au](mailto:r.stephens3@westernsydney.edu.au)

## 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)**

## Available Propagators

The following people have indicated a willingness to work with projects that require good propagation skills. If you would like to be added to this list please let Maria know.

### **Maria Hitchcock** Armidale NSW

Life member NSW - APS

Over 40 years propagating experience.

Cool Natives Online Nursery

<https://coolnativesnursery.com>

### **Col Jackson**

Over 20 years propagating experience

Member of the Latrobe Valley APS Victoria

[coljackson57@hotmail.com](mailto:coljackson57@hotmail.com)

### **Spencer Shaw**

We operate two nurseries,  
Brush Turkey Enterprises Wholesale

[www.brushturkey.com.au](http://www.brushturkey.com.au) and

Forest Heart Eco-Nursery

[www.forestheart.com.au](http://www.forestheart.com.au)

and specialise in SE QLD native plants,  
particularly rainforest.

[spencer.shaw@brushturkey.com.au](mailto:spencer.shaw@brushturkey.com.au)

0428 130 769

### **Helen Howard**

[grevillea.hh@gmail.com](mailto:grevillea.hh@gmail.com)

I have grafted Eucalypts, Grevilleas,  
Eremophilas and Brachychitons. My  
teacher was Merv Hodge. If any BG has a  
project I could help out with let me know.

## Graptophyllum ilicifolium

ANPSA website

<http://anpsa.org.au/g-ili.html>

Known to occur only in the Eungella region to the west of Mackay, Queensland. Listed as Vulnerable under the EPBC Act\* (ie. facing a high risk of extinction in the medium-term future, as determined in accordance with prescribed criteria).



*Graptophyllum ilicifolium*

Image: [burringbaarrainforestnursery.com.au](http://burringbaarrainforestnursery.com.au)

Medium shrub 3-5m high found in fairly dry rainforest areas or along creek banks. Leaves are broadly egg-shaped or oval, to 5cm x 3cm, with toothed margins. They are borne alternately on the stem but opposing the leaf is a flower cluster usually accompanied by a small leaf bract which has the appearance of a dwarf leaf. If the flower does not develop (or after it has fallen) the leaf and bract appear to be opposite leaves of differing sizes.

Bright scarlet flowers occur in spring and early summer and are borne in pairs or clusters along the stems, opposite the leaves. They are tubular, about 3cm in length. Seed capsules are club shaped, dry and woody and contain 2 seeds.

*G.ilicifolium* is an attractive plant which is becoming more common in cultivation. It is fairly quick growing in warmer climates but may be slow in cool temperate areas. The species prefers light shade for best results. Judicious pruning will maintain a bushy habit and promote prolific flowering. This species would quite probably be suitable for tub growing.

Propagation is easy from cuttings and seed also germinates well from fresh seed.

## Wild Pollinator Count

14-21 November

<https://wildpollinatorcount.com/>

Australia has lots of wild pollinator insects that are often overlooked. European honey bees get a lot of attention because they are an adaptable, generalist forager, which means they are happy to visit almost any flower, in most climate zones. They are also a social species, so their hives are easy to domesticate and manage.

However, many native insects also contribute to pollination in crops and gardens all around the country. We still need to do a lot of research to identify all our pollinator insect species, understand their ecology and how they are affected by human activities. So far, we know that Australia has around 2,000 native bee species, all of which are important pollinators. We also know there are a couple of thousand butterfly, wasp, fly, moth, beetle, thrips and ant species, some of which are documented pollinators. Unfortunately, we don't have a lot of information on the ecology of many of these insects, what flowers they pollinate, or where they are found.

The Wild Pollinator Count gives you an opportunity to contribute to wild pollinator insect conservation in Australia. We invite you to count wild pollinators in your local environment and help us build a database on wild pollinator activity.

You can **join in** by watching any flowering plant for just ten minutes sometime in our count week.

- You don't need to be an insect expert.
- You don't need fancy gear.
- You may be surprised by what you see!

Find out [how to count pollinators](#), identify [the insects](#) you see and [submit your observations](#) through the links at the top of the page. You can also download our [Run Your Own Count kit](#) and organise to count with a group.

If you have any questions or comments about the count, please contact us via the [Keep in Touch](#) page.

## Australian Flora Foundation

No. 34, July 2021

### Seeds, seed banks and cultivation of endangered coastal salt marsh plants under climate change

Todd Minchinton: Centre for Sustainable Ecosystem Solutions and School of Earth, Atmospheric and Life Sciences, University of Wollongong, NSW

#### Project summary

Coastal saltmarsh is an intertidal estuarine community comprised of plant species (succulent herbs, grasses, rushes, sedges, reeds, and shrubs) adapted to inundation by the tides and harsh environmental conditions in the air, water, and soil (e.g., temperature, salinity, oxygen availability). Coastal saltmarsh is recognised in Australia and globally as an important ecological community, providing habitat and food for ecologically and economically important species (e.g., fish, shellfish), acting as a natural buffer and pollution filter, and storing carbon.

Despite its ecological significance, coastal saltmarsh is one of the most highly impacted and threatened communities in NSW (with estimated losses across estuaries in NSW since 1950 ranging from 25 to 80%) and this has led the New South Wales government to list Coastal Salt Marsh as an Endangered Ecological Community (under the NSW Biodiversity Conservation Act 2016) and to protect Marine Vegetation, including saltmarsh plant species examined here (under the NSW Fisheries Management Act 1994).

Moreover, the Commonwealth government has listed Subtropical and Temperate Coastal Saltmarsh as a Vulnerable Ecological Community (under the Environment Protection and Biodiversity Conservation Act 1999).

Despite recognition of the ecological importance of coastal saltmarsh, we understand little about the resilience of the plant species that constitute the community, including their potential for natural regeneration through the production of viable seed following disturbance under varying environmental and climatic conditions or how to germinate and grow seed for restoration now and into the future.

The outcomes of this research will help to identify and cultivate key plant species for restoration of coastal saltmarshes in NSW. More broadly, this

Now more than ever do we need the public to join together and help preserve our endangered species

Do you help out in the preservation of a coastal estuarine community?

Please tell us about it

research will inform climate change adaptation and conservation strategies for important plant species in endangered coastal saltmarsh communities.

#### Publications

The research has been presented in two Honours theses in the School of Biological Sciences (now School of Earth, Atmospheric and Life Sciences) at the University of Wollongong. Some of the data will be included in manuscripts that are being prepared for publication in peer-reviewed international scientific journals.

Atton IL (2017) Reproductive biology of saltmarsh chenopods *Sarcocornia quinqueflora* and *Suaeda australis*: multiple pollination mechanisms and germination success. Honours Thesis, School of Biological Sciences, University of Wollongong, New South Wales, Australia. (co-supervised by Dr Karen Sommerville, The Australian Botanic Garden Mount Annan and Dr Amy-Marie Gilpin, Western Sydney University).

Leahy KJ (2017) Factors influencing the recruitment of coastal saltmarsh plants. Honours Thesis, School of Biological Sciences, University of Wollongong, New South Wales, Australia. (co-supervised by Dr Karen Sommerville, The Australian Botanic Garden Mount Annan and Dr Amy-Marie Gilpin, Western Sydney University).

## Loved to death: Australian sandalwood is facing extinction in the wild

[Richard McLellan](#), [David M Watson](#),  
[Kingsley Dixon](#)

*The Conversation*, October 7, 2021

The sweet, earthy fragrance of sandalwood oil has made it immensely popular in incense sticks, candles and perfumes. But its beautiful scent may also be its downfall – Australian sandalwood (*Santalum spicatum*) is facing extinction in the wild. Despite this, the iconic outback tree is still being harvested in the wild in Western Australia where it's considered a "forest product", all to satisfy incense-burners and perfumeries.

Our research, published today, reveals the WA government has known for more than a century that sandalwood is over-harvested and is declining in numbers, with no new trees regenerating. We estimate 175 years of commercial harvesting may have decreased the population of wild sandalwood by as much as 90%. Today, walking into most sandalwood communities is like walking into a palliative care hospice. There are only old folk there, most of them in terminal decline. There are no youngsters and there are certainly no babies. It's time to list sandalwood as a threatened species nationally, and start harvesting only from plantations to give these wild, centuries-old trees a fighting chance at survival.

### The tree behind the fragrance

Australian sandalwood, one of about 15 different species of sandalwood that grows across Oceania, is a highly valued economic resource as one of the main types of sandalwood traded internationally. But it's also immensely important ecologically and culturally. Aboriginal people have revered it for thousands of years, using it, for example, in smoking ceremonies and bush medicine. These uses take only small portions of the tree and do not endanger the plant, compared to commercial harvesting which kills the tree.

Ecologically, it's a keystone resource in the arid outback, often flowering and fruiting



*Santalum spicatum* Image: abc.net.au

when other plants are not. It attaches its roots to host plants such as acacias, enabling it to derive some of its nutrients and water from nearby trees and shrubs. Sandalwood trees can live an estimated 250–300 years, and are capable of withstanding extremely harsh conditions. And yet, the species is extremely fragile in the first few years after germination.

Sandalwood populations have been slowly collapsing for decades from commercial harvesting, land clearing, fire, and grazing (by introduced herbivores such as goats, sheep, cows, rabbits, and camels, and some native species such as kangaroos). The biggest problems are its lack of regeneration and the rapidly changing climate. Studies suggest there have been virtually no new trees emerging in most sandalwood populations for 60–100 years. There are two main reasons for this.

First, sandalwood has lost its seed dispersers, such as burrowing bettongs (small marsupials), which went extinct across most of their range about the same time sandalwood stopped recruiting. Second, climate change. Sandalwood seeds will only germinate, establish, and survive as seedlings if they get three consecutive good years of rainfall. Under Australia's increasingly variable rainfall conditions, that's rarely happening.

[Read more](#)

## Gondwana Link

<https://gondwanalink.org/>

### Our vision

Reconnected country across south-western Australia, from the wet forests in the south west corner to the dry woodlands and mallee bordering the Nullarbor Plain, in which ecosystem function and biodiversity are restored and maintained.

### Who's involved

Like the remarkable ecosystems of Gondwana Link, the groups and individuals involved in achieving the Gondwana Link vision are diverse and broad in scope, and can change across the years while our overall system stays strong.

### Individual champions

Many individuals actively contribute to the Gondwana Link program. Volunteers contribute their time and energy and donors contribute significant financial resources. And then there are the conservation buyers who purchase and restore properties across the Link. There are too many individual champions to list! It seems unfair to pluck out the names of just a few individuals from the many hundreds of wonderful people we have worked with, but here are a few of their stories. More are being gathered to share.

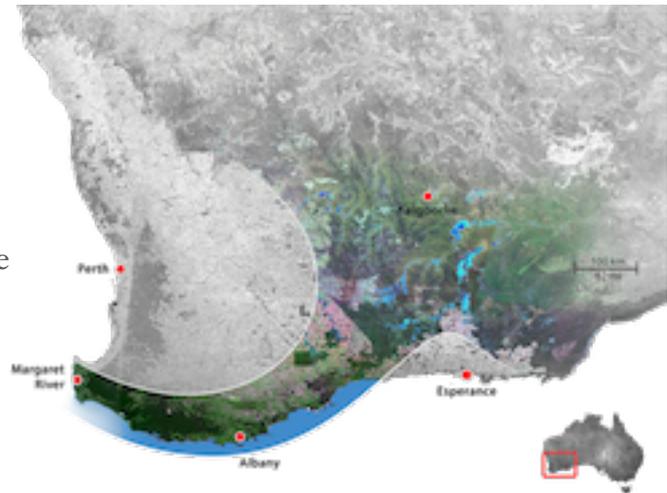
Eddy and Donna Wajon's [story](#)

Bill and Jane Thompson's [story](#)

Find out more about how you can [get involved](#).

### Protecting bushland

A first step for any restoration program is to protect what natural habitat we already have. This is extra important in south-western Australia, where so much has been cleared and many very small patches invariably have plants, and sometimes animals, that occur nowhere else. Even a lone tree in a paddock can be the home to an astounding plethora



of insects, birds and lizards, and an essential stepping stone for wildlife on the move.

### National Parks, Nature Reserves and more

Gondwana Link contains most of the large intact habitats remaining across south-western Australia. We are doubly fortunate that many very large areas, like the D'Entrecasteux, Walpole Wilderness Area, Stirling Range and Fitzgerald River National Parks, have received legal protection, along with many Nature Reserves, like Lake Magenta, Dunn Rock and Dundas.

Many of these protected areas were achieved through immense public pressure – such as the forest fights through the 1970's that led to D'Entrecasteaux and Walpole being declared, the mining battle in the early 1970's that preceded establishment of Fitzgerald River, and the 1980's battle to extend the park north and prevent more land clearing. These are the strategically placed habitats we are building Gondwana Link from.

To this impressive array can be added the recently declared Ngadju Indigenous Protected Area, of some 4.4 million ha. We are proud of having worked with Ngadju Conservation Aboriginal Corporation to achieve this. While IPA's don't have the same high level of protection that National Parks and Nature Reserves enjoy, they do have good funding for management.

[More](#)

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

*Boronia clavata*, *Boronia keysii*, *Correa eburnea*, *Correa calycina*, *Correa baeuerlenii*, *Callistemon pungens*, *Grevillea iaspicula*, *Grevillea juniperina*, *Melaleuca irbyana*, *Phebalium daviesii*, *Phebalium speciosum*, *Prostanthera askania*, *Prostanthera staurophylla*, *Zieria adenodonta*, *Zieria prostrata*, *Zieria floydii*.

I am also licensed to sell some endangered species through my online nursery. All are grown from seed and cuttings taken from established garden plants. <https://coolnativesnursery.com>

**Denise & Graeme Krake** (seed only)

752 Warrigal Range Rd. Brogo NSW 2550  
*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. 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. 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.

**Paul Kennedy** (Leader ANPSA Hakea SG)

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

*Hakea dohertyi*, *Hakea ochroptera*, *Callistemon megalongensis*. The seed originally came from the Melaleuca Study Group seed bank many years ago.

**Will Chance**

*Senna acclinis*

*Do you have any EPBC plants growing in your garden with sufficient foliage to share cuttings (or seed) 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)*

**Don't forget to update your listing at least once a year!**

**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 \$1.10 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. 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 Echuca Moama Vic  
 APS Melton Bacchus Marsh Vic  
 APS Sutherland NSW  
 NPQ Ipswich Qld  
 NPQ Sunshine Coast and  
 Hinterland Qld

**Botanic Gardens and Reserves**

Burrendong Arboretum Wellington  
 Crommelin Native Arboretum  
 NSW  
 Hunter Regional BG NSW  
 Lindum Park Flora and Fauna  
 Res Tamworth Regional BG NSW  
 Swan Reserve Garden Vic

**Nurseries**

Bilby Blooms Binnaway NSW  
 Cool Natives Armidale NSW  
 Mole Station Tenterfield NSW  
 Forest Heart Eco-Nursery SEQld

**Seed Suppliers**

Victorian Native Seeds

**Study Groups**

Acacia SG  
 Correa SG  
 Garden Design SG  
 Grevillea SG  
 Hakea SG

**Landscapers**

Brush & Bush Tamworth NSW  
 Indigenous Landscape Design  
[www.ilda.com.au](http://www.ilda.com.au)