Save our Flora

An online independent national project

CONSERVATION THROUGH CULTIVATION

Contact: E. saveourflora@gmail.com W. saveourflora.weebly.com

Project launched on 14th November 2013

Maria Hitchcock OAM
Administrator, Bulletin Editor

Membership
Individuals: 222
Groups: 22
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.

Macadamia jansenii
Image: Flickr

Is your garden a native plants sanctuary?

All you have to do is grow one or more threatened species.

In this issue:

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:

The drought continues in this region although we did have a respite in October with some good falls from thunderstorms. The past week has been very warm with a high rate of evaporation. Trying to keep a garden going in those conditions is pretty difficult. I'm still pulling out large plants which died in our extreme winter this year. Still we are pretty fortunate to be living in one of the best countries on Earth. We have a wealth of biodiversity that can only be envied by other nations. Of course our short history of occupation by Europeans and a lack of suitable arable land helps.

This month in the lead-up to a key international conference to discuss the collapse of ecosystems, Cristiana Pașca Palmer told the Guardian (*Morning Mail 7/11/18*) that high rates of biodiversity loss from habitat destruction, chemical pollution and invasive species will accelerate in the coming 30 years. By 2050, Africa is expected to lose 50% of its birds and mammals, and Asian fisheries to completely collapse. The loss of plants and sea life will reduce the Earth's ability to absorb carbon, creating a vicious cycle.

In September I gave the Bill Tulloch memorial lecture at the Queensland Yabba (Native Plants Queensland Biennial Get-together) held in Warwick this year and attended by representatives from all over Queensland. I encouraged the reps to go back to their NPQ groups and create an annual threatened flora project to propagate and promote one of their local endangered species. The feedback was very positive and I look forward to hearing of any progress.

It was disappointing to get such a poor response to the Myrtle Rust petition which is now in the hands of the new Minister for the Environment. I suppose any publicity of the issue has to be a good step but I fear current complacency around this issue by authorities will result in a major problem in the future. Somehow that's Australia. We let the cat out of the bag then spend huge amounts trying to control an unleashed menace.

It was good to see something being done about our Travelling Stock Routes in NSW. I was unaware that farmers could fence off sections and graze them continually making them useless for genuine travelling stock. Unused railway lines are in the same situation. Neighbouring farmers can graze the land for free - essentially adding to their holdings. These parcels of unused land are often the refuge of rare plants. The practice needs to be halted.

Maria Hitchcock OAM

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
or on a memory stick
Send me a blank memory stick plus a stamped addressed envelope - 2 stamps

Coming Events
are listed on our website
saveourflora.weebly.com

Check it out and bookmark the site.

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.

Macadamia jansenii Endangered

The Bulberin nut is one of four threatened macadamia species endemic to Australia. There are only around 60 plants left in the wild in an area of less than 1 hectare in rainforest around Bundaberg. The community has already begun work to establish four insurance populations in the surrounding area and another at the botanic gardens in Gladstone.

Threats to the species include changed fire regimes, weed invasion, disease, feral pigs, illegal collection and timber harvesting.

The overall objective of this plan is to protect wild populations of the four nominated species from decline, ensure their long-term viability, and raise awareness of flora conservation issues within the community.

Rare nut could save the macadamia industry from global warming
http://www.abc.net.au/local/stories/2009/10/27/2725296.htm
By Scott Lamond and Jodie van de Wetering

Forty-four rare trees in a single rainforest gully could be the macadamia industry's insurance against global warming.

Driving south from the Discovery Coast to Gympie, you'll pass some massive macadamia plantations. So it might come as a surprise to learn that there's a macadamia on the endangered species list. Researchers will soon head bush to a secret location near Miriam Vale, home of the only known population of *Macadamia jansenii*.
The team from the University of the Sunshine Coast will take cuttings of the endangered wild nut and hope to propagate the species.

Ian McConachie from the Macadamia Conservation Trust said the *jansenii* is particularly important because it grows naturally in an area with high temperatures. When crossed with a domesticated strain of macadamia it passes on its heat tolerance, which Ian hopes will give the industry ammunition against the effects of global warming.

"It's as rare as the wollemi pine," Mr McConachie said. "Initially 23 wild trees were found in a rainforest gully, and they've now extended that to 44. Virtually by coincidence they did cross with the commercial macadamia, and they found it produced a very attractive, different macadamia, with 60 per cent more kernel recovery."

Last week in Bundaberg a hundred kilos of macadamia kernel has sold for more than $13,000 in a charity auction at the annual macadamia conference gala dinner. Growers and processors contributed to the final bid, which will go to the Macadamia Conservation Trust's work to protect the species. Ian McConachie said the money will help employ a part time co-ordinator to work on conserving the *jansenii*.

"Once we start engaging in conservation in the wild, in undertaking essential research, the whole momentum will start flowing and it will give continuity to conservation."

Image: Tondoon BG FB page

30 Trees for 30 Years
Thanks to the combined efforts of volunteers, invited guests, & the Tondoon Team, 30 macadamia nut trees (Macadamia jansenii) were planted to represent each year since the gardens were established.

To celebrate, the official birthday cake was cut by Curator Brett Braddick & Volunteer Ruth Crosson (Save our Flora member). Brett has been with the gardens since they opened & became curator in 2005, shaping the gardens into the great space they are today. While Ruth has volunteered her time since the gardens' inception representing the excitement for nature we want to encourage & the community spirit we hope to foster for many more years!

Project update: Macadamia nut propagating begins

The Foundation for Australia's Most Threatened Species (FAME)
https://www.fame.org.au/news-and-media/project-update-macadamia-nut-propagating-begins

Last week Fame's CEO Tracy McNamara was on site at the Tondoon BG in Gladstone. Important work is now underway to propagate Bulburin Nut trees to create insurance populations that will guard against the extinction of this endangered macadamia nut species.

All made possible by donations to FAME, the Foundation has partnered with the Macadamia Conservation Trust with the involvement of the Gidarjil Rangers (Traditional Owners of *M. jansenii* habitat), the Queensland Parks and Wildlife Service, the University of the Sunshine Coast and the Tondoon Botanic Gardens at Gladstone.

Over 80% of wild native macadamia trees have been lost since European settlement. Faced with this statistic, it is no wonder that all four of the macadamia species are listed on the EPBC List as threatened species. In particular, there are only 90 known trees of the rarest Bulburin Nut or *Macadamia jansenii* remaining in one small area of natural habitat.

Why is it urgent to protect *Macadamia jansenii* from extinction?

The macadamia nut is a national icon of Australia. It is an important part of our country's history and culture and is one of very few Australian native foods to be exported all over the world. More specifically, *Macadamia jansenii* is part of an ecosystem providing habitat for a complex range of other native flora and fauna species, including the Spotted-tailed Quoll, the Silver-headed Antechinus (both endangered) and the vulnerable Tusked Frog. This tiny population of Bulburin Nut is 180km north of the other macadamia species and represents a time when sub-tropical rainforest extended along the east coast. As is our vision, FAME has committed to this project so that together, we can prevent the extinction of *Macadamia jansenii*. To lose it would be devastating to the macadamia genus.

For further project information, please contact the Foundation on 08 8374 1744 or email fame@fame.org.au

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

Spencer Shaw
We operate two nurseries,
Brush Turkey Enterprises Wholesale
www.brushturkey.com.au and
Forest Heart Eco-Nursery
www.forestheart.com.au
and specialise in SE QLD native plants, particularly rainforest.
spencer.shaw@brushturkey.com.au
0428 130 769

Helen Howard
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.

Myrtle Rust Petition

Email sent to Mr Ted O'Brien MP,
Federal Member for Fairfax (Sunshine Coast)

Dear Mr O'Brien,
I lead an online national independent group called 'Save our Flora'. The aim of this group is to protect our rare and endangered native Australian plants through research, horticulture, volunteering and much more. South East Queensland BioRegion has 287 documented rare, endangered or near threatened species. Queensland as a whole has thousands more. One family of plants, the Myrtaceae is now being severely threatened by Myrtle Rust. This disease was accidentally introduced into the Gosford area 8 years ago and has rapidly spread along the coast devastating many rainforest species and is currently affecting plants in the Daintree. Our hardwood and native oils industries as well as ornamental horticulture are at great risk. Queensland has many tropical and sub-tropical eco-systems and has the most to lose if this disease is not stopped in its tracks.

I am assisting Native Plants Queensland which has members all over the State. One of your constituents suggested you as a committed parliamentarian who could present our petition to the Parliament. This petition is calling on the appropriate Minister to authorise a National Myrtle Rust Summit which would bring together all the stakeholders and media in an effort to find a way forward quickly. There is an Action Plan currently being circulated but it appears to be more of an academic exercise rather than a serious plan of attack. I fear that just leaving the problem to academics and researchers to find a solution will take many years and I don't think we can afford that. We need to inform the general public most of whom are unaware of the problem and enlist their support in reporting outbreaks.

I do hope you will agree to present our petition to the parliament. The petition currently has 316 signatures, most of whom are members of Native Plants Queensland. You will appreciate that this is a select group which is small in number but has great influence in their various communities.

Ed: Mr O'Brien did not present the petition. I have had no feedback from his office. The petition was presented to parliament on 15/10/18 and then forwarded on to the Minister for the Environment. I am less than hopeful about any further action. I am also disappointed that so few APS members chose to sign the petition. If native plants enthusiasts do not care about the spread of Myrtle Rust, how do we expect the public to care?

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CA-RANG-GEL SANCTUARY

Reprinted from Caleyi - September 2018
North Head Sanctuary Foundation;
Sydney Harbour Federation Trust.

Eastern Suburbs Banksia Scrub is a Critically Endangered Ecological Community that once occupied around 5,300 hectares of land between North Head and Botany Bay in Sydney's eastern suburbs. Much of it tragically has been destroyed and built on, leaving only surviving stands totalling approximately 146 hectares that have been recorded from the local government areas of Botany, Randwick, Waverley and Manly.

Ca-rang-gel Sanctuary (also called North Head Sanctuary) at Manly is the closest area to Willoughby where this complex and beautiful habitat of heathland and hanging swamps can be easily explored. A network of boardwalks throughout the site not only make for easy walking but also protect the habitat from foot traffic.

Rich in history and a special place for the Aboriginal people, the dramatic cliffs of North Head form a memorable entry to Sydney Harbour. You'll see not only diverse wildlife and flora but military fortifications and memorials as well as stunning views of the city and harbour from the cliff tops.

As we head towards spring, the heathlands start to bloom with an awe inspiring array of wildflowers including Monotoca elliptica, Sydney Golden Wattle (Acacia longifolia); Red Spider Flower (Grevillea speciosa); Heathy Parrot Pea (Dillwynia retorta); Blunt-leaf heath (Epacris obtusifolia; and Wax Flower (Philotheca salsolifolia).

An excellent guide to the wildflowers of this area and more information about this fascinating place can be found on the North Head Sanctuary Foundation's website at
www.northheadsanctuaryfoundation.org.au/

Save our Flora

Restoring the endangered Yass daisy

Ammobium craspedioides

Threatened Species Recovery Hub

Project Leaders: Damian Michael

Research in Brief

Land clearing has resulted in the loss of approximately 85% of the box gum woodland vegetation community and what remains is often highly degraded. The woodlands are important to a number of threatened ground cover species including the Yass daisy. This project addresses the problem of how to best conserve this critically endangered vegetation community. The project will run as an adaptive management experiment trialling and testing techniques while restoring ground cover species within threatened box-gum grassy woodlands. The research team will collaborate with key partners to develop best practice methods for propagating threatened plants off-site, and then reintroduce them into appropriate habitat, including on private property.

Ammobium craspedioides

Image: Australian Network for Plant Conservation

Why is the research needed?

Land clearing has resulted in the loss of approximately 85% of 'white box–yellow box–Blakely's red gum grassy woodland and derived native grassland' (box gum grassy woodlands), and what remains on private property is often highly degraded and impacted by ongoing grazing or other threats.

A number of threatened species rely on this habitat type, such as the Yass daisy (Ammobium craspedioides) and button wrinklewort (Rutidosis leptorhynchoides). Currently, we lack effective methods for returning threatened plants to areas of box-gum woodland from which they have been lost, or including them in revegetation and restoration projects aimed at bringing back this habitat type. Techniques are particularly lacking for ground cover plants like forbs (flowering herbs).

Methods are needed to improve conservation of box-gum grassy woodland conservation on private land. In addition to biodiversity benefits, past research shows involving private landowners in land restoration can have substantial benefits for the people themselves.

As much restoration will rely on plant material propagated from collected seed, there is a need to establish guidelines to achieve genetically viable plant populations. Guidance is also needed on the most effective propagation methods and techniques for reintroductions of threatened plants.

How will the research help?

The project will identify best practice approaches for establishing threatened forbs in agricultural landscapes. It will have direct application for the establishment of broad suites of threatened ground cover species of the endangered box gum grassy woodland ecosystem and derived native grassland vegetation communities.

The work will build on and feed into work underway through the Australian Network for Plant Conservation to develop guidelines for threatened plant translocations. It will also provide Greening Australia with information to help improve future on-ground establishment of threatened ground cover species in the woodlands.

The project will offer a practical case study of in-situ reintroduction, applying research on germination and propagation tested in ex-situ sites by Australian National Botanic Gardens. Further, the project will contribute significantly to the body of knowledge about the effects of grazing and bush rock removal and other threatening processes.

Yass Daisy (cont.)

The project will contribute to a synthesis of best-practice monitoring and management of threatened species across the Threatened Species Recovery Hub. It will inform work being undertaken towards integrated recovery planning for threatened woodlands. It will also evaluate principles for establishing genetically viable plant population and propagation methods, as well as methods for monitoring to evaluate the effectiveness of reintroductions of threatened plants.

What research activities are being undertaken?
This project is an important experimental trial to test the effectiveness of direct replanting programs of endangered ground cover plant species under a range of grazing regimes.

This research builds on previous work to establish three form species for which viable seed was available: the yellow bulbine-lily (Bulbine bulbosa), variable plantain (Plantago varia) and yam daisy (Microseris lanceolate). Early indications are that these reintroductions were successful. Analysis will be conducted to assess factors contributing to the successful of the reintroductions of these species, in order to benefit reintroduction strategies and techniques for other threatened plant species such as the Yass daisy and the button wrinklewort.

Greening Australia also has seed stock for the button wrinklewort, a Threatened Species Strategy priority target species.

Greening Australia will propagate the Yass daisy using standard techniques to provide the tubestock ready for hand planting into previously established grazing and ungrazed plots, on farms that also have differing land use and grazing histories.

Who is involved?
The project work will be undertaken in collaboration with Greening Australia, Riverina Local Land Services, Central Tablelands Local Land Services, local Landcare groups, and around 12 private landowners on the Central Tablelands who are keen to see threatened local plant species return to their properties.

Where is the research happening?
The research is being carried out in the regions managed by the Central Tablelands Local Lands Services and Riverina Local Land Service, in an area within 100 km of Cowra, New South Wales.

When is the research happening?
The project will run for three years from 2018 to 2020.

Further information

For more information, please contact project leader,
Damian Michael - damian.michael@anu.edu.au

Does anyone have this species growing in their garden? Would it be possible to save seed and share it with our members?

Save our Flora

Banksia conferta* subsp. *conferta
Critically Endangered

Image: Wikipedia

B. conferta ssp conferta is an endemic Australian shrub. In NSW, it is currently known from a single population occupying c. 14 ha, a very highly restricted geographic range, in the Coorabakh National Park, north west of Lansdowne. The population here comprises a low number of mature individuals (approximately 500-1000 plants at varying stages of development) with c. 10% of individuals occurring along a roadside (I. Turner, pers. comm.). Here it survives on exposed rocky slopes in well-drained skeletal soil derived from high-quartz conglomerate. It occurs in comparatively low open forest with a dry sclerophyll understorey (Griffith 2005).

It is also known from the Lamington Plateau and the Glass House Mountains in Queensland, more than 400 km to the north of Lansdowne, where it occurs on steep rocky slopes of granite and sandstone in scrub (George 1999).

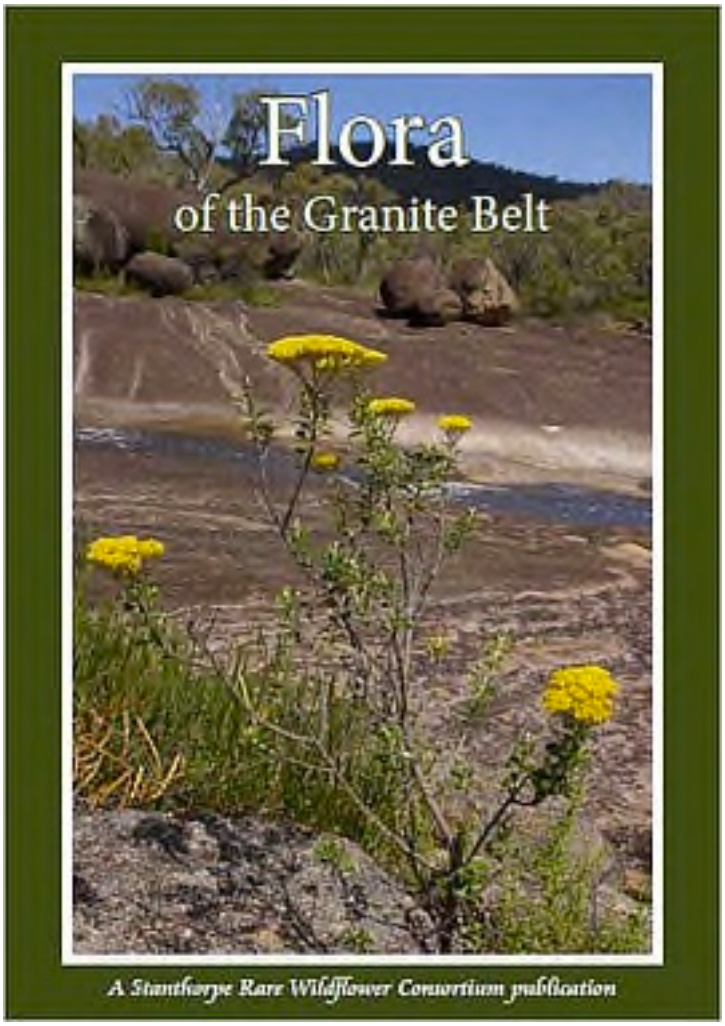
B. conferta ssp *conferta* is a spreading open large shrub growing up to 4m high with rough grey bark and red to brown branchlets. The whorled elliptic to obovate leaves (3.5-12 cm long x 0.7-4 cm wide) are slightly wavy and smooth above and covered in tiny white hairs below. Brushes are cylindrical, 7-19 cm long, 5-6 cm wide yellowish-green to pinkish-brown in bud and golden with pale yellow styles. Old flowers may be persistent on the shrub for several years. Seed follicles mostly remain closed until burnt. They contain winged seeds separated by a woody spacer similar to other Banksias.

The remaining stands of *B. conferta* subsp. *conferta* are single-stemmed and likely to be killed by fire, while its seeds are held within woody cones, and are released after fire (George 1999). Plant species with these life-history characteristics are entirely dependent on canopy-stored seed for persistence after fires, and their populations are susceptible to declines or extinctions when fires recur at very short or very long intervals (Keith 1996). The death of standing plants in a fire and reliance on a canopy seed bank for regeneration may result in no overlap between successive generations of plants at a site. Extreme fluctuations in population size may thus be inferred to occur depending on the time between fires and establishment success of seedlings (Griffith 2005).

George AS (1981) The genus *Banksia* L.f. (Proteaceae). *Nuytsia* **3**, 239-473.
George AS (1999) *Banksia.* In: 'Flora of Australia 17B' (Ed. A Wilson), pp. 175-251. (ABRS, Canberra/ CSIRO: Melbourne.)
Griffith SJ (2005) *Banksia conferta* subsp. *conferta* in Coorabakh National Park: Preliminary observations and guidelines for fire management. Report to the Manning Area of the Parks and Wildlife Division, Department of Environment and Conservation NSW
Keith DA (1996) Fire-driven mechanisms of extinction in vascular plants: a review of empirical and theoretical evidence in Australian vegetation. Proceedings of the Linnean Society of New South Wales **116,** 37-78.

Save our Flora

The Flora of the Granite Belt
Stanthorpe Border Post 19th Sep 2018



A COMMUNITY-BASED project many years in the making came to fruition with the launch of The Flora of the Granite Belt book at Ballandean in September. Published by the Stanthorpe Rare Wildflower Consortium, the book is the first comprehensive guide to the unique plants of the Granite Belt region.

The enormous range of habitats in the region due to its elevation, topographic variation and granite geology has resulted in a profusion of flowering plants with diverse forms and habits, colour and structure. Group secretary Liz Bourne said more than 900 species of flowering plants were covered in the book and this was complemented by stunning photographs of over 700 of them.

"This project has really been a labour of love by members of our Consortium over many years and we are proud the book has finally been published," she said. "Our group was formed in 2004 and since then we have produced a range of publications to help promote enjoyment and understanding of our local flora. However, this book is the icing on the cake for us, combining local knowledge from a range of botanical experts plus some stunning photos."

The book contains a full index of common and scientific names, as well as keys and indexes for the major plant groups which made it easy to navigate and assist with plant identification.

"We hope it will be treasured as an indispensable resource by plant enthusiasts, botanists, visitors to the Granite Belt as well as local residents and landholders" Liz said. The book will be available for sale for $50 at several local outlets as well as from the Consortium with details on their website:

https://www.granitebeltwildflowers.com/

Ed: Excellent publication - includes many rare and threatened species.

Drovers say Australia's legendary outback stock routes in danger of collapse

ABC News
By national rural and regional correspondent
Dominique Schwartz and Aneeta Bhole
30 Jun 2018, 2:00pm

https://www.abc.net.au/news/2018-06-30/drovers-say-australian-outback-cattle-routes-in-peril/9916168

Australia's iconic stock routes are languishing after years of neglect and are in danger of being privatised, drovers and ecologists warn.

The historic network of reserves for travelling sheep and cattle are etched into the national psyche by writers Henry Lawson and Banjo Paterson. They're also a refuge for endangered flora and fauna, and are rich in Indigenous heritage.

"I'd say there's been a rapid decline, really, in the last three years — they've just got worse and worse," laments drover Brad Brazier. The drover has been on the road with 600 cattle around New South Wales for the past year. The routes cover 45,000 square kilometres of New South Wales and Queensland, with 76,000 kilometres of tracks in the Sunshine State alone.

"There are a lot of changes [on the routes]. Fences going up everywhere, leasing and permanent grazing set-ups and things like that," Mr Brazier said." [The government] will probably end up trying to start selling those areas off which would have to open up a real can of worms. It'd be a real mess if they ever tried that. It's a big-enough mess now.

"Drovers and graziers pay to use the stock reserves through a series of permits, and that money is channelled back into weed control, water infrastructure and maintenance. But it's not value for money, according to Brad Brazier. He said the cattle owner that he droves for would have spent half a million dollars on travelling permits over the past year, only to find that pasture has been eaten out along the route by resident herds.

NSW says there are 'no plans' to sell off cattle routes. The New South Wales government is waiting for the final report of a review looking at the management of the Travelling Stock Reserves.

"There are no plans to sell off our travelling stock routes," NSW Primary Industries Minister Niall Blair told the ABC. Traditionally the upgrade and investment [comes] from the income that has been generated from those that have used the reserves. We've increased that funding by a million dollars and we'll be looking to provide more funding," Mr Blair said. His office did not provide figures on how much revenue is raised by those who use the routes, saying that "it varies greatly from year to year depending upon seasonal conditions."

But NSW Opposition spokesman for lands and primary industries Mick Veitch said he's concerned they've slated the travelling stock reserve estate for sale.

"The new Crown Land Management Act says the minister can transfer Crown Land to state-owned corporations or departments without notifying the public," Mr Veitch said. "They could transfer a Crown Land parcel to Property NSW — that is the real estate arm of the New South Wales government — and it would just make it so much easier to sell without telling the community, and anyone else that may be interested in looking after that parcel of land."

In north-western New South Wales alone, there are 38,000 cattle on the routes. "It's one of the only main drought relief things we've got," Brad Brazier said. He has been droving for more than three decades and says he's never seen the state so dry — or the routes so poorly maintained. At Krui Bore near Moree, the windmill turns slowly, but there's no water to be pumped, and it's not even connected to the tank or troughs. "I've passed through Krui Bore many times over the last 30 years and I've never actually seen this dam dry," he said. That's an indication not only of how bad things are out here, he said, but also the lack of resourcing to clean out the drains feeding the dam before a storm dumped four inches of rain in April. The dry dam meant his herd had to walk 25 kilometres between drinks, when anything over 10km is a stretch for the cattle.

Save our Flora

PHOTO: Ecologist Phil Spark examines one of the rare grasses, Digitaria porrecta, found along the stock routes. (ABC News: Dominique Schwartz)

Like drover Brad Brazier, ecologist Phil Spark is deeply concerned about areas of the routes being fenced off by landholders, with permits to graze for one month or up to five years.

"We are losing a lot of diversity in plants through more constant grazing. Vast areas, really large areas are now fenced for long-term grazing permits," he said. He has just finished an ecological assessment of the north-west region, and said it identified 60 threatened species of plants and animals. The problem, he said, is that the Travelling Stock Reserves (TSRs) are "not resourced at all".

"That's what brought on this new grazing regime of long-term permits to supposedly get money to feed into the management of them, but that hasn't worked. It's contributing to the decline of the travelling stock routes."

From 1 July 2018, travelling cattle won't be allowed onto the stock routes in north-western New South Wales, unless they are moving to a clear destination.

"Our TSR network is just about exhausted," said Wayne Gransey, the team leader for the North-West Land Services, the New South Wales government agency which manages the stock reserves."

We've had to make difficult decisions on future management." He said the number of cattle allowed on short-term grazing permits held by landowners would also be reduced. Mr Gransey said grazing permits were an important part of managing the stock routes. The successful tenderer of a long-term permit promises to manage the land as their own, and is responsible for care and maintenance and weed control. Mr Gransay said that arrangement eases pressure on his staff.

"We've got an incredibly dedicated team of rangers and field officers. Yes, we can't get it all done, but we cover a massive area and they do an excellent job." He said fences were also used to keep stock off busy roads, and to restrict illegal activity such as woodcutting and rubbish dumping.

In central-western Queensland, which has battled drought for the best part of seven years, there are similar concerns. Regional councils manage the stock routes but receive only $800,000 between them from the state government — not nearly enough, according to the Mayor of Longreach, Ed Warren. He said Longreach ratepayers kick in an extra $100,000 a year and neighbouring councils would contribute similarly.

"There's a lot of watering points and infrastructure getting further behind and it would be millions of dollars to spend to bring them up into a working condition," he said. Mayor Warren would like to see a wider system of grazing permits to generate more revenue for the stock routes. He said 70 per cent of the landholders that graze stock on the routes pay nothing.

Professional drover Billy Little, who has worked the routes across both states, would like a better user-pays system, but cautions against fencing off sections for local grazing. More than anything, he wants the stock routes kept in public hands.

Seed and Cuttings Exchange

Please send all requests directly to the person making the offer or the group email 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
Zieria adenodonta, Zieria prostrata, Zieria floydii
I also sell some rare species through my online nursery
https://coolnativesnursery.com

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 verticulutus/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)
Eremophila denticulata ssp trisulcata
Eremophila denticulata ssp denticulata
Eremophila nivea (blue form)
Eremophila nivea (white form) - limited.
Eremophila vernicosa – extremely limited

Russell (email 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)
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.

Verna Aslin
20-22 Bega St Cobargo NSW 2550
Asterolasia beckersii and *Grevillea iaspicula*

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)

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 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 SE Qld

Seed Suppliers
Victorian Native Seeds

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

Landscapers
Brush & Bush Tamworth NSW