

Australian Network for Plant Conservation Inc



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From the President

Prof. Caroline Gross



I am pleased to be here today as the new ANPC President having commenced in July out of session and running for re-election today. I have 38 years' experience studying the reproductive ecology of Australian native plants and introduced species, with a PhD in Plant Ecology from Flinders University. My research interests include plant reproductive ecology as applied to conservation and restoration covering; ecology, pollination, threatened species ecology and management, endangered ecological communities, systematics, impact assessment, invasive species, plant reproductive ecology, extinction risk, field assessments, genetic assessments, seed bank ecology, habitat condition and ecosystem restoration. In Australia I have conducted research in arid, semi-arid, temperate, cool temperate, sub-tropical and tropical ecosystems with further research being undertaken in Bhutan, Borneo, Tanzania and Hawaii. I am a Professor Emerita in Ecosystem Management at the University of New England, currently Acting Chair of the NSW Threatened Species Scientific Committee and a long-term Associate Editor for Austral Ecology.

2024 Overview

2024 has been a very productive year for the ANPC and our role as Australia's key plant conservation organisation. We have continued to receive significant project and grant funding to keep us extremely active in the plant conservation sphere, as well as financially viable. For example, we have extensively collaborated with partners across the country to:

- Coordinate recovery of Queensland's threatened plants through surveys, recovery action coordination and workshops.
- Further enhance the safe custody of Native Guava (*Rhodomyrtus psidioides*) and Scrub Turpentine (Rhodamnia rubescens) which are both at risk of extinction due to Myrtle Rust.
- Successfully receive a federal Recovery Action Coordination grant for "Recovery Action Coordination for High Priority Myrtle Rust Affected Species" to establish and coordinate a Recovery Team for *Rhodomyrtus psidioides*, *Gossia gonoclada*, *Rhodamnia rubescens* and *Rhodamnia maideniana* • Continuing our field surveys and assessments to prevent rare plant extinction and reduce impacts of future fires, of species of national significance potentially adversely impacted by the 2019/2020 fires.
- Prevent extinction of Victoria's threatened flora.
- Collaborate with the Australian Seed Bank Partnership on the Securing the Future project which will prevent extinction and improve the trajectory of 10 threatened plant species
- Hold the highly successful APCC14 conference in Toowoomba in October.
- Coordinated three online Myrtle Rust practitioner webinars focusing on practical aspects of managing and maintaining a conservation collection of Myrtle Rust susceptible species
- Coordinate the Plant Translocation Workshop "Beyond the Guidelines" Kensington WA
- Publish the summary of proceedings of the Australasian Myrtle Rust Conference 2023

Projects

Government



and the Queensland Government Threatened Species Program

Images (L-R) - Boronia repanda (credit: John Hodgon), Grevillea hodgei (credit: Jason Halford), Cymbonotus maidenii (credit: Jennifer Silcock), Rhaponticum australe (credit: Don Butler)

The Queensland Threatened Plant Network (QTPN) is a two-year pilot collaborative project between the ANPC and Threatened Species Operations (TSO) within the QLD Department of Environment, Tourism, Science and Innovation (DETSI) under the Queensland Government's Threatened Species Program to support threatened plant recovery through member engagement, training, communications and reporting.

DETSI's Threatened Species Program 2020-40 (TSP) sets the framework for threatened species recovery in Queensland, identifies priority threatened species and facilitates coordinated recovery actions and research across tenures to support recovery.

The QTPN aims to provide support to stakeholders contributing to threatened plant recovery across the state, and to facilitate collaboration and the formation of partnerships among groups conserving native flora. It is bringing people and organisations together to participate and achieve shared goals and outcomes to advance threatened plant recovery in Queensland. This project commenced in August 2023 followed by the formal launch of the QTPN in March this year. The project is governed by a Steering Committee that meets every 2 months to provide direction and support to the Project Manager. To date, there are 17 organisational members of the QTPN as shown on Page ?. [logos image]

Queensland is the custodian of a globally and nationally significant proportion of Australia's biodiversity. It is home to around a quarter of the nation's threatened species. As of November 2024, there are 1029 threatened plant species listed under Queensland legislation. Of these, more than 70 per cent are endemic to the state.

Using a new DETSI Threatened Species Prioritisation Tool, a working list of 50 priority species has been identified. This process has taken into account cost effectiveness, feasibility and cobenefits such as current and past recovery activities. The priority species list continues to evolve to accommodate opportunities where there is community effort and momentum to deliver long-term recovery outcomes.

Recovery action planning

To date, the QTPN has initiated recovery action planning activities for:

- Olearia hygrophila (Swamp Daisy) management action workshop held and initial recovery-based management actions have been drafted in collaboration with Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) on Minjerribah (North Stradbroke Island) and sent out for comment. A draft Recovery Action Plan continues to be developed and team members are hoping to collect seed this season. Swamp Daisy is a critically endangered daisy found in swampy areas and wet heath only on Minjerribah. It is a cryptic species, with specific habitat requirements, and an incredible ability to blend into the landscape. At present, it appears that less than 10 individual plants survive.
- **Planchonella eerwah** (Black Plum) QTPN and Koalas on the Green convened a threatsbased workshop in October at Logan City Council (with representatives from Scenic Rim, Sunshine Coast, Logan and Gold Coast City Councils). The Black Plum is an endangered tall tree with distinctive blackish fruit found in rainforest communities in Southeast Queensland. It is thought that <500 individuals exist.
- **Tassel Ferns** QTPN and the Australian Tropical Herbarium convened a management action workshop in Cairns in October. Tassel Ferns are some of the rarest and most threatened plant species found in Queensland as they have been subject to extensive poaching and have to contend with extreme weather events such as cyclones.

In addition, the QTPN has supported the finalisation of the following recovery action plans, in collaboration with the Stanthorpe Rare Wildflower Consortium and DETSI TSO staff:

• **Eucalyptus dalveenica** (Blue Box) - a newly identified critically endangered Eucalypt found just north of Stanthorpe that is restricted to approximately 344 individuals on

private property.

• **Grevillea scortechinii subsp. scortechinii** (Black Grevillea) - this unique critically endangered Grevillea with purple-black flowers is largely restricted to roadsides and a total population of just over 1000 plants.

Threatened plant surveys

Many threatened flora species in Queensland are under-surveyed. In addition, baseline data on population size and trajectory is fundamental to being able to implement strategic recovery actions. Three areas of survey opportunity for QTPN have been identified:

• Data deficient species (especially those requiring alignment through the Common Assessment Method process).

• Recording new threatened species populations on recently acquired protected areas (many of which are under-surveyed).

• Population surveys that provide threat-based information that can be used to improve/refine actions in Recovery Action Plans (for example, the endangered *Hakea macrorrhyncha*; both Girraween populations destroyed by the 2019 fires but regenerating from seed; however, we have no baseline population data to suggest an appropriate inter-fire interval).

To date, the QTPN has facilitated the following threatened species surveys:

• **Phebalium glandulosum subsp. eglandulosum** - on the invitation of federal DCCEEW to support the Common Assessment Method (CAM) nomination in July, with Stanthorpe Rare Wildflower Consortium members and QPWS (with 925 individual plants located). This vulnerable species was thought to be extinct in Queensland until its rediscovery by an amateur botanist in 2009 in Girraween National Park The area in Girraween National Park where this Phebalium occurs had been subjected to hot and cool burns over the intervening 15 years.

• **Caladenia atroclavia** (Black Club Orchid) - to assess the persistence of the main Girraween population, with Stanthorpe Rare Wildflower Consortium and QPWS (with 69 individuals recorded). The endangered Caladenia atroclavia is endemic to Girraween National Park and adjacent lands. Consortium members noted that flowering occurred a full month early in 2024.

• An undescribed **Comesperma sp**. - with participants of the Survey Training Workshop at Rockhampton (locating 20 individuals, currently <5 records existed for this species). This species is one of several threatened plants found on serpentine country, and currently requires listing.

• **Archidendron lovelliae** (Bacon Wood) - with participants of the Survey Training Workshop at Noosa (locating >60 individuals). This vulnerable plant is found on coastal sands in rainforest communities from just north of Noosa to the Fraser Island region and has stunning pink-red and white flowers.



Phebalium glandulosum subsp. eglandulosum - Photo: Paul Donatiu

Communications

Communications form an essential component of the Queensland Threatened Plant Network to promote the work being done to protect rare plants in Queensland, and profiling some of the plant species under threat. Four QTPN updates have been emailed to >200 recipients since June 2024 and a QTPN Facebook page has been established and continues to grow with regular posts and 80 followers (as of 28/10/2024). Find the page <u>here</u>.

Another objective of the project is to seek complementary funding for QTPN coordination and on-ground activities. We are currently preparing 2yr and 5yr budget projections (with key milestones) for the Network to assist with this. A QTPN Prospectus has been drafted this year and various grant funding opportunities have been sought. As a result, QTPN has received operational funding for 2024-25 from DETSI TSO for the Swamp Daisy project on Minjerribah and Tassel Ferns in North Queensland. This funding will support engagement with Traditional Owner groups, recovery planning workshops, and Project Manager travel and accommodation costs.

QTPN workshops and presentations

Due to high and ongoing demand, the QTPN has been holding community-based training workshops on how to conduct meaningful and targeted population surveys of rare flora. These Survey Training Workshops have so far attracted over 125 participants and include an overview of threatened plant species in Queensland, establishing a species profile, survey tools, permits, key information to collect in the field, survey proforma, voucher specimens and standard threatened flora survey techniques (as per Qld Herbarium guidelines) including a component implementing these in the field.

QTPN workshops/presentations delivered so far this year:

• Flora Survey Training Workshops for:

o Stanthorpe Rare Wildflower Consortium in August (23p).

o Native Plants Capricornia in September (27p).

o APCC14 in Toowoomba (52), and for Noosa Shire Council and Kabi Kabi Land and Sea Rangers in October (25p).

o Native Plants Caboolture in November (28p).

• Negotiating DESI permitting protocols to collect material from threatened flora on and off-Park, delivered by DESI Wildlife Assessment Team for the

o Stanthorpe Rare Wildflower Consortium in May (12p).

o Noosa Landcare in July (38p)

- Field day with Capricornia Native Plants and Tondoon Botanic Gardens covering listed flora found in Central Queensland (such as *Denhamia megacarpa*) in June.
- Presentation on QTPN to Caboolture Region Environmental Education Centre in July.
- 'A Network to Conserve our Rarest Plants' to Botanic Gardens ANZ Qld in August.

QTPN also attended a WETMA (Wet Tropics Management Authority) Priority Place Workshop in Cairns hosted by Terrain NRM Group re. proposed multi-species Recovery Action Plans for Tassel Ferns and Single Watercourse Endemics in June.



Attendees from the Capricornia Flora Survey Training workshop in the field identifying and recording an unnamed *Comesperma* species in the Canoona region. Photo: Paul Donatiu

The QTPN contributed enormously to the ANPC's recent highly successful 14th Australasian Plant Conservation Conference in various ways including conference planning and logistics, as well as providing the following:

- Plenary presentation (with Jen Silcock) on "Saving Queensland's Rarest Plant Species".
- Survey Training workshop mentioned above (with Jen Silcock).
- Led the Girraween Field Trip (38p) in collaboration with the Stanthorpe Rare Wildflower Consortium, who provided walk leaders, and QPWS Rangers.

APCC14 also further consolidated the QTPN's presence and role in Queensland.



QTPN Committee member Jen Silcock and Paul Donatiu delivering a plenary talk at APCC14. Photo: Richie Southerton

Recovery Coordination for Myrtle Rust Affected Species

https://www.anpc.asn.au/recovery-action-coordination-for-high-priority-myrtle-rustaffected-species/

The ANPC is excited to announce this new project, funded by the Australian Government under the Saving Native Species program, which will coordinate recovery actions over 18 months, through the recruitment of a Recovery Action Coordinator, for four Critically Endangered plants at risk of near-term extinction or serious decline due to the exotic fungal disease Myrtle Rust:

- Native Guava (Rhodomyrtus psidioides)
- Angle-stemmed Myrtle (Gossia gonoclada)
- Scrub Turpentine (Rhodamnia rubescens)
- Smooth Scrub Turpentine (Rhodamnia maideniana)

All have similar complex recovery needs. A cross-jurisdictional, cross-departmental and cross-disciplinary approach is vital for an effective conservation response. The conservation path entails emergency germplasm capture, propagation, ex situ conservation, research, genetic analysis, the selection of rust-tolerance traits, and eventual reinforcement or reintroduction of populations in the wild.

This project will enable the development of a Recovery Team for the four target species as a lasting foundation for unified recovery actions. It will facilitate the transition of currently separate activities (4 species, 2 States, multiple agencies) into an agreed common action framework, along with reporting and communications, and help assist with securing operational resourcing for ongoing Recovery Actions.

This project is supported by funding from the Australian Government.



Australian Government



Rhodomyrtus psidioides flower. Photo: Richie Southerton

Post-Fire Flora Surveys with San Diego Zoo Alliance

https://www.anpc.asn.au/prevent-rare-plant-extinction-and-reduce-impacts-offuture-%20fires/

This four-year project aims to prevent rare plant extinction from the 2019/20 mega fires and reduce impacts of future fires in eastern Australia. Our progress to date:

1/ Working in collaboration with Associate Professor Philip Zylstra at Curtin University, the SDZWA funding (in combination with other funding sources) has enabled the nomination of 'Fire regimes that cause biodiversity decline' as a Key Threatening Process (KTP) under the EPBC Act through supporting the assessment and preparation process. The KTP was listed in April 2022.

<u>https://www.dcceew.gov.au/environment/biodiversity/threatened/key-threatening-</u> processes/fire-regimes-that-cause-declines-in-biodiversity

Funding also helped to develop guidance on recovery actions to build the resilience of biota to future fires, through lead authorship of a major technical report (Department of Agriculture, Water and the Environment, 2022), two chapters in Australia's megafires: Biodiversity impacts and lessons learned from 2019-2020 (Gallagher et al. 2023 and

Lindenmayer et al. 2023), and the publishing of five journal papers: Zylstra (2021); Zylstra et al. (2022), Zylstra (2022), Zylstra (2023) and Zylstra (2024). These papers are aimed at building the human contribution to the resilience of biota to future fires by quantifying the mechanisms of risk and investigating new approaches to reduce the incidence of future fires. This first component of the project is now complete, however we will continue to monitor and report on Prof. Zylstra's crucial research.



Burnt peat in rainforest in northern NSW. Photo: Philip Zylstra

2/ Species of national significance that were potentially adversely impacted by the 2019/2020 fires were identified with a focus on those not currently recognised as threatened and with restricted geographic ranges that were below the thresholds in IUCN Red List Criterion B. A priority list of species for field surveys and extinction risk assessments was developed to identify factors threatening their recovery after fire. Two groups of taxa were chosen (which were not targeted by other similar efforts such as state and federal government initiatives):

Two groups of taxa were chosen:

i) Species which allowed comparisons of those with canopy versus soil seed banks and between resprouting versus obligate seeding plants. In collaboration with University of New South Wales (UNSW) and Western Sydney University (WSU), we have been undertaking surveys and working on IUCN Red List assessments and Conservation Assessments for 13 NSW endemics with a narrow geographic range. Key summaries of the work are presented in Le Breton et al. (2023). Table 1 provides an update on the progress of these assessments for this year, with three species now listed under the EPBC Act: *Banksia paludosa* subsp. *Astrolux, Banksia penicillata* and *Hakea macrorrhyncha*. A number of others are recommended for listing whilst there are still some assessments to be finalised over the next 12 months.



Darwinia fascicularis ssp oligantha unburnt low shrub in foreground, with Banksia paludosa ssp. astrolux in background. Photo: Tony Auld

Table 1. NSW endemics with a narrow-range surveyed and being assessed

Scientific Name	Seed bank type	Respons e to fire	Risk Drivers (from Gallagher, 2020 and Auld et al. 2020)	Who is doing survey/ assessme nt	Status
Banksia paludosa subsp. astrolux	Canopy	OS	Drought / High fire frequency / Herbivory / Fire severity / Fire sensitivity / Cumulative fire risk	ANPC/ANPC & UNSW	Finalised. Listed as Critically Endangered under EPBC Act in 2024.
Banksia penicillata	Canopy	OS	Drought / High fire frequency / Fire severity / Fire sensitivity / Cumulative fire risk	Experts/UNS W & ANPC	Finalised. Listed as Endangered under EPBC Act in 2024.
Bursaria calcicola	Soil	R	Drought / Herbivory / Other threats	DPE/UNSW & ANPC	Finalised. Under consideration for listing under EPBC Act
Darwinia fascicularis subsp. oligantha	Soil	OS or possibly R	Drought / High fire frequency / Disease / Fire severity / Cumulative fire risk	ANPC/ANPC & UNSW	Finalised. Not considered to be threatened.
Dillwynia crispii	Soil	OS?	Drought / High fire frequency / Herbivory / Fire severity / Cumulative fire risk	DPE/UNSW & ANPC	Finalised. Not considered to be threatened.
Dillwynia stipulifera	Soil	R	Drought / High fire frequency / Herbivory / Fire severity	NSW DPE/ANPC	Drafting started
Grevillea buxifolia subsp. ecorniculata	Soil	OS	Drought / High fire frequency / Herbivory / Fire severity / Cumulative fire risk	WSU/ DPE/UNSW & ANPC	Finalised. Under consideration for listing under EPBC Act.
Hakea constablei	Canopy	OS	Drought / High fire frequency / Fire severity / Fire sensitivity / Cumulative fire risk	DPE/ANPC	Drafting started
Hakea macrorrhyncha	Canopy	OS	High fire frequency / Herbivory / Fire severity / Fire sensitivity / Cumulative fire risk	DPE/UNSW & ANPC	Finalised. Listed as Endangered under EPBC Act in 2023.
Leptospermum macrocarpum	Canopy	R	Drought / High fire frequency / Disease / Fire severity	DPE/ANPC	Drafting started
Leptospermum rotundifolium	Canopy	R, but occasionall y OS	Drought / High fire frequency / Disease / Fire severity	DPE/ANPC	Drafting started
Leptospermum spectabile	Canopy?	?	Drought / High fire frequency / Disease / Fire severity	DPE/UNSW & ANPC	Finalised. Requires further survey work to resolve threat status.
Melaleuca capitata	Canopy	R	Drought / High fire frequency / Disease / Fire severity	DPE/ANPC	Drafting started

Legend:

R - resprouter; OS - obligate seeder, ? - uncertain response EPBC Act (*Environment Protection and Biodiversity Conservation Act 1999*) ANPC (Australian Network for Plant Conservation) UNSW (University of New South Wales) DCCEEW (NSW Department of Climate Change, Energy, the Environment and Water) WSU (Western Sydney University) **ii)** Epiphytic orchids in north-eastern NSW. A group of eleven of these orchids were selected, to examine the risk of fire severity on their survival, as data was lacking and assessment difficult, as was understanding of their ecology and in particular response to fire. In addition, some epiphytic orchids are affected by taxonomic uncertainty, particularly issues in species delimitation. Surveys of four species were completed in 2023, for *Plectorrhiza purpurata, Sarcochilus aequalis, Tropilis angusta* (syn. *Dendrobium aemulum* sens.lat.) and *Adelopetalum argyropum*, with many populations found to be heavily impacted by the 2019/2020 fires, with most host plants dead and all epiphytes killed. All four species were found to likely meet the thresholds for listing as Endangered according to the IUCN Red List criteria which has informed Conservation Assessments undertaken by CSIRO over the last year. In addition, planning has been undertaken for surveys of three or four more species over the next 12 months. A future APC article is planned to report on the outcomes of these surveys and assessments.



Top: *Sarcochilus aequalis* growing in Oxley Wild Rivers National Park.

Bottom: *Tropilis angusta* growing in Whian Whian State Conservation Area.

Photos: Lachlan Copeland

3) The SDZWA project contributed towards the production of the "*Myrtle Rust, the Silent Killer*" video in conjunction with the Queensland and NSW governments, and Indigenous stakeholders, which can be viewed here: <u>https://www.anpc.asn.au/myrtle-rust-videos/</u>

The video addresses a sample of species and ecological communities at risk from the pathogen, both burnt and unburnt in the 2019–20 fires. As quoted in the video *"the combination of fire and Myrtle Rust has affected the regeneration of a range of plant species, killing seedlings and reshooting trees"*.

Planning has also been undertaken this year to undertake conservation measures over the next 12 months regarding the impacts of Myrtle Rust on *Melaleuca nodosa* (Prickly-leaved Paperbark). A widespread shrub to small tree of fire-prone shrublands and woodlands in eastern NSW and southern Queensland, it is rated as highly to extremely susceptible, and routinely exposed, to Myrtle Rust. A large proportion of its range was in the footprint of the 2019-20 fires. Post-fire surveys have quantified high to very high levels of damage and mortality in post-fire resprouts and seedlings at study sites. This project will involve germplasm collection from across its range, ex situ conservation, genetic analysis, representative seed bank collections, and explore design of later-stage resistance-trait field trials. M. nodosa is not currently listed as threatened, and this project will assist the process of assessment for listing if required.

Thank you to the Plant Conservation Team at the San Diego Zoo Wildlife Alliance for generously funding this project.



Preventing the extinction of Victoria's threatened flora

https://www.anpc.asn.au/preventing-extinction-of-victorias-threatened-flora/

The ANPC is collaborating with the Royal Botanic Gardens Victoria, La Trobe University and various other partners over three years on this Victoria-wide project which commenced in June 2023. The project aims to prevent the extinction of 24 endangered or critically endangered Victorian plants.

The focus is on two botanical hotspots, the Gippsland and Grampians regions, as well as threatened flora from the Barwon South West and Port Phillip Regions. The project will address key threatened species recovery actions from 11 threatened species Action Statements and 11 National Recovery Plans and work to optimise conservation actions across the life cycle of the plants.

In 2025/26, the ANPC will coordinate three one-day workshops on Victorian threatened flora conservation, in the Port Phillip, Gippsland and the Grampians (Gariwerd) regions, as part of the project.

The ANPC is also undertaking project promotion and publicity activities such as 9 social media and website news posts and maintaining the webpage on the project. An article reporting on Year 1 of the project will be featured in the upcoming Spring edition of APC.

The project will lead to long-term conservation benefits for the 24 plant species, both in situ and ex situ. Ex situ actions include collecting seeds, spores, rhizobia and mycorrhiza, which will be kept in seed and spore banks and nursery facilities at the Royal Botanic Gardens Victoria. These ex situ plant collections will act as long-term insurance populations, a source of material for future reintroductions, and will help us carry out further research. The project will follow an integrated conservation framework which includes the following activities:

- 1. Threat assessments, field surveys and community surveys.
- 2. Seed and spore collection.
- 3. Conservation genetics.
- 4. Germination trials.
- 5. Pollination studies.
- 6. Developing permanent ex situ living collections.
- 7. Establishing new populations through propagation.

Project partners are:

- Royal Botanic Gardens Victoria
- La Trobe University
- Australian Network for Plant Conservation
- DEECA
- Trust for Nature
- ENVITE
- Bairnsdale and far East Gippsland Field Naturalists
- Friend of the Grampians Gariwerd
- Halls Gap Botanic Gardens
- Australasian Native Orchid Society Victorian Branch
- Nillumbik Shire

This project is funded by the Victorian Government Department of Energy, Environment and Climate Action (DEECA) Nature Fund.



Caladenia ancyclosa, one of the 24 threatened plant species. Photo: Noushka Reiter

Securing the Future

https://www.seedpartnership.org.au/home/initiatives/securing-the-future/

The **Australian Seed Bank Partnership** have a new project underway, made possible with funding from the **Australian Government's Saving Native Species Program**.

This project will prevent extinction and improve the trajectory of 10 threatened plant species by delivering a comprehensive program of seed collecting, germination trials, propagation, reintroductions, research and long-term seed banking of native flora from SA, Vic and WA. This work will improve the representation and genetic diversity of collections in Australian seed banks, with seeds and data available for research and restoration. The project will also support public awareness of action to conserve priority plant species.

The ANPC is proud to be a collaborating partner on the project, through the production of communications materials including fact sheets and case studies in **APC**, so keep an eye out for those later in the project.



14th Australasian Plant Conservation Conference (APCC14)

https://www.anpc.asn.au/conferences/apcc14/

Our biennial conference was held 13-17 October in Toowoomba QLD. Under the overarching theme '*From little things...*' 115 delegates descended on the Oaks Hotel (and 12 attended virtually) for 3 days of 42 captivating talks, 5 interactive workshops and 11 posters which covered topics under four subthemes: **Northern Connections**, **Navigating Natural Disasters**, **Living on the Edge** and **Fighting Feral Pathogens**.

The workshops covered the following subjects:

• Ex-situ conservation threatened plants through metacollections.

- How to undertake threatened flora surveys.
- Emerging minimum data requirements for environmental markets and mandatory climate and nature reporting (e.g. Nature Repair Market, Land Restoration Fund) to prove conservation benefits to threatened species.
- How to raise political and community awareness of threatened plants and the actions required to save them.
- Harnessing the power of citizen science for plant conservation.

The formal part of the conference was followed by a day of 3 fantastic field trips to choose from (a tough choice for many!):

- 1. Wildflowers of the Granite Belt with Stanthorpe Rare Wildflower Consortium
- 2. Bunya Mountains Experience with Bunya Peoples' Aboriginal Corporation (BPAC) and Darling Downs Grasslands.
- 3. Gummingurru Aboriginal historical site and Peacehaven Botanic Park.



Attendees on the Wildflowers of the Granite Belt field trip. Photo: Paul Donatiu

You can view the final program on our conference website to gain an overview of the speakers and topics. Hot topics at the conference included: Resilient Country through the use of Rightfire, conservation genetics and translocations, building resilience to pathogens such as Phytophthora and Myrtle Rust, OCBILs (old, climatically-buffered, infertile landscapes), the threatened species situation in Queensland and prioritisation frameworks, and embracing citizen science with effective science communication.

If you're interested in hearing more about the research and topics covered in the conference, the plan is for two special APCC14 editions of Australasian Plant Conservation (Autumn and Winter 2025 editions), so don't forget to renew your ANPC membership for 2025 to take advantage of those <u>https://www.anpc.asn.au/membership/</u>.

Photos from the conference and a conference commentary for each session have been shared on our Facebook page here: https://www.facebook.com/AustralianNetworkForPlantConservation.



All the formal presentations were recorded and will be made available soon to all delegates through our website for those who may have missed a session or would like to watch a talk again.

On behalf of the ANPC and the APCC14 organising committee, I would like to sincerely thank all those who attended APCC14 as well as all our wonderful presenters, chairs, volunteers and workshop and field trip coordinators, and to all our conference partners who helped make the event such as success:

Queensland Government, Australian National Botanical Gardens, Southern Queensland Landscapes, Bunya People's Aboriginal Corporation, Biodiversity Council, Stanthorpe Rare Wildflower Consortium, Alcoa, University of QLD, Toowoomba Regional Council, Australian Flora Foundation, Botanic Gardens of Sydney, Kiambram Country Cottages, Native Plants QLD



I would also like to thank our conference organising committee for all their time and hard work organising the conference:

Bob Makinson – ANPC, Daniel McKinnon – ANPC, Paul Donatiu – ANPC & Queensland Threatened Plant Network, Jo Lynch – ANPC, Richie Southerton – ANPC, Mike Gregory – QLD Department of Environment, Science and Innovation, Jen Silcock – Centre for Biodiversity and Conservation Science, University of Queensland, Kate Reardon-Smith – University of Southern Queensland, and Jayne Thorpe – Stablish Pty Ltd.



Most of the conference organising committee with ANPC Presidents past and present on the final day of talks at the conference – Credit: Richie Southerton (photo taken by Lucy Commander)

The conference overall was a big success with so many great discussions between attendees during the breaks and social functions, and an overwhelmingly positive response in our Evaluation Survey feedback received so far, with an overall rating of 4.5 stars. We really appreciated this and for the next conference we will be focusing on how to encourage more university students, NRMs and local community environmental organisations to attend and present. We will also investigate how to include more time for more interactive learning from the different participants and where researchers can hear and learn from practitioners.

We look forward to seeing everyone again for the 15th Australasian Plant Conservation Conference to be held in 2026! "Great attendees, great venue, loved the regional area, great topics."

"The opportunity to hear from and meet others involved with plant conservation."

> "I loved the focus on First Nations perspectives."

"Making connections with amazing people! I learned a ton and have some wonderful experts to draw upon now."

Conference Feedback

"High quality and interesting presentations throughout, including excellent indigenous presentations. Costa was the entertainment (also topical and energising) cream!"

"Catching up with interstate colleagues, hearing about the latest research and practice."

"Appreciated hearing from both VERY experienced researchers about emerging trends and the new research from recent graduates / scientists." "Interesting topics and speakers, interactive workshops, great networking opportunity."

"Hearing and learning about all the different threatened plant projects happening across Australia, particularly the different approaches and the importance of community groups in driving some of this work."

> "Learnt more about myrtle rust, importance of genetics, and phytophthora which was good. It was inspiring overall."

Other Events

Plant Translocation Workshop "Beyond the Guidelines" – Kensington WA

<u>https://www.anpc.asn.au/events-cat/plant-translocation-workshop-beyond-the-guidelines/</u>

This workshop was held on 16 November 2023 as part of the <u>**3rd International**</u> <u>**Conservation Translocation Conference**</u> in Fremantle, Western Australia with a variety of speakers (including international experts) covering pre-translocation, planting, and posttranslocation topics. Targeted at a range of plant translocation practitioners including researchers, government, consultancy and community groups, it focused on aspects of planning and practice that can improve the likelihood of establishing healthy, resilient and recruiting plant populations, that will persist over the long term. The talks included practical examples of sourcing seed or other germplasm types, selecting recipient sites (macro and microsites), post planting management techniques and genetic health assessments. They also addressed creation of populations that are resilient to disturbance. Thanks to ANPC Project Manager Chantelle Doyle and ANPC Committee member Leonie Monks for all their efforts in organising the workshop, all the speakers, and the WA Department of Biodiversity Conservation and Attractions and the UNSW's Threatened Rare and Endemic Plant Ecology Research Group for their support.

Recordings from the workshop are available on the ANPC YouTube channel here <u>https://www.youtube.com/playlist?list=PLuPMH5OJZz0FGyFljYca8kmwWMzXd3mq0</u>.



Myrtle Rust Management for Practitioners open series

https://www.anpc.asn.au/myrtle-rust-management-for-practitioners-open-series/



To further expand communications, the ANPC has collaborated with UNSW and the BGANZ Collections and Records Management group (BCARM) this year to co-ordinate a quarterly series of informal virtual get togethers, commencing in February 2024. These sessions were organised due to a perceived need for horticulturists and practitioners managing Myrtle Rust susceptible collections to collaborate, share ideas and workshop problems.

The series is exclusively focused on practical aspects of managing and maintaining a conservation collection of Myrtle Rust susceptible species and has an open forum structure. The series is open to any practitioners across Australia and Aotearoa New Zealand managing collections impacted by Myrtle Rust including local council nurseries.

To date, three sessions have been coordinated and held by Chantelle and Veronica Viler from Botanic Gardens of Sydney. A fourth session, scheduled for 5 December, will focus on local government enabling community-led recovery of Myrtle Rust impacted species in Auckland.

The first session, called "*Fundamentals of managing a Myrtle Rust sensitive collection*", was held in February. Bob Makinson's introductory talk about Myrtle Rust in Australia and Botanic Gardens of Sydney Veronica Viler's talk on managing Myrtle Rust sensitive collections were recorded and are available at:

https://www.youtube.com/watch?v=ZqyyjPwOmeA

and https://www.youtube.com/watch?v=wMa9MkvekWc

The second session, called "*Pest and Disease Control - Chemical Use and Permits*", was held in May. Veronica's presentation on 'Chemical and Cultural methods of Myrtle Rust Management' was recorded and is available at:

https://youtu.be/eEN5WEa-K9I

The third session in August was on "*Monitoring and Collecting from Wild Populations of Myrtle Rust Susceptible Species*". Craig Stehn from NSW Saving Our Species shared his experience in surveying, monitoring and collecting from wild populations of Myrtle Rust impacted species. Craig's talk is also available at:

https://youtu.be/AzzU3hWYMj8

Rainforest Connections 2024

https://rainforestconnections.com.au/



Rainforest Connections 2024 held in Ballina NSW in June was the first dedicated rainforest conservation conference in over two decades. Rainforests are some of Australia's most special places and the conference brought together many of the people working with communities to restore these precious ecosystems. The ANPC was proud to collaborate on this conference through publicity and publishing selected papers from the conference in the 2024 Spring and Summer editions of APC.

Myrtle Rust

Myrtle Rust Project extension wrap

https://www.anpc.asn.au/news/myrtle-rust-project-extension-2/



The ANPC would like to thank the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) for funding this extension of the federally funded '**Safe Custody for Native Guava**' project completed in 2023, for a further 12 months.

The initial project established a successful pilot dispersed-custody model for Native Guava (*Rhodomyrtus psidioides*) with representative sampling and propagation of surviving wild germplasm, dispersal and planting, along with genetic analysis and communications and training activities. This resulted in the creation of an in-ground ex situ living collection of Native Guava at five locations across NSW, Victoria and the ACT.

ANPC Project Manager Chantelle Doyle coordinated this project which was completed in August this year, with the following results:

- Continued monitoring of the already-dispersed Native Guava (*Rhodomyrtus psidioides*) collection, with all plants in excellent health and fruit production at 3 of 5 locations. Frequent application of fungicide was required in the high infection zones.
- A total of 91 plants from 34 unique genetic lineages of Native Guava have now been dispersed to partner gardens (32 of which were dispersed under this project).
- A total of 16 plants from 8 genetic lineages of Scrub Turpentine (*Rhodamia rubescens*) were dispersed to 5 gardens including new partner Booderee Botanic Gardens.

- Continued integration of germplasm collection, dispersal and monitoring activities between QLD and NSW, including collection of genetic material from healthy R. psidioides appearing in response to drying climate.
- Continued and improved EpiCollect app training and monitoring of the ex situ collections at all partner locations enabling spatial aggregation of flowering, fruiting and health data.
- Collection of Native Guava and Scrub Turpentine fruit being sent to Botanic Gardens of Sydney for storage and viability testing.
- Genetic material collected from healthy *Rhodamia maideniana* and *Rhodamia whiteana* plants observed in the field and sent for additional genetic analysis.
- Ongoing monthly meetings of the Myrtle Rust Consortium where members networked and shared information, discussed issues and lessons, gave presentations and reported on germplasm collection, propagation, planting, research findings and maintenance of the ex situ collections. For example, ReCER reported on *Rhodamnia rubescens* Myrtle Rust resistance screening.
- Consortium meetings also facilitated the submission of several collaborative grant funding applications.
- Collaboration with UNSW and the BGANZ Collections and Records Management group (BCARM) on a quarterly series of informal virtual get togethers, the "Myrtle Rust Management for Practitioners – open series" which commenced in February 2024, focusing on practical aspects of managing and maintaining a conservation collection of Myrtle Rust susceptible species.
- The development of a new and improved **Myrtle Rust information hub** on the ANPC website which was launched in May 2024 The new page is simpler and more structured, with additional pages for videos and publications, as well as for our current and past Myrtle Rust projects. In the near future, we'll include an illustrated identification guide and image library, to aid early detection and identification.
- Updating of the Myrtle Rust ID and collection methods brochure.
- Development of an outreach **partner garden flyer** explaining the project, for the general public when visiting the partner gardens' ex situ collections and which can be used for guided walks, signs etc.
- Flyer explaining ReCER resistance screening trial was developed and installed at ABG Mt Annan
- Continued project communications (inc. social media, website, APC)
- Preparation to publish a paper on the establishment of emergency conservation collections and subsequent dispersal of safe meta collections which is, to our knowledge, undocumented in publicly accessible literature.

The planting of the collections in-ground has been extremely successful with only 3 deaths reported from the 107 distributed plants, with these replaced. All deaths were accidental/human induced, one due to watering failure, one was broken during transit and a third damaged by grazing after fence damage.

EpiCollect monitoring over the course of the project determined that control of Myrtle Rust infection was very successful but frequent application of fungicide was required in the high infection zones. Monthly monitoring reported 77 instances of planted Native Guava plants flowering (the majority of which occurred in Summer 2023) and 128 instances of fruit production (the majority of which were in Summer and Autumn 2023). 22 of these fruits were mature. A total of 6 Scrub Turpentine fruit were recorded (2 in Summer and 4 in Autumn 2024) and 1 instance of flowering was recorded. The production and collection of mature fruit will be critical to the conservation of both these species.

Thank you to all our partner organisations for their generous support and commitment to this project:

- NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW).
- QLD Dept of Environment, Science and Innovation.
- QLD Dept of Agriculture and Fisheries.
- Australian National Botanic Gardens
- Australian Botanic Garden Mount Annan (Botanic Gardens of Sydney)
- Blue Mountains Botanic Garden (Botanic Gardens of Sydney)
- Research Centre for Ecosystem Resilience (Botanic Gardens of Sydney)
- Dandenong Ranges Botanic Garden
- Lismore Rainforest Botanic Gardens
- Booderee Botanic Gardens.
- Council of Heads of Australian Botanic Gardens/Australian Seed Bank Partnership



Native Guava ex situ collection at Lismore Rainforest Botanic Gardens. Photo: Chantelle Doyle

Australasian Myrtle Rust Conference 2023 – summary of proceedings

https://www.anpc.asn.au/news/australasian-myrtle-rust-conference-2/

Myrtle Rust threatens an estimated 350 Australian plants, killing new growth, buds and flowers, meaning severely impacted species can no longer reproduce. Worst affected species will disappear from the wild. Myrtle Rust is having such a devastating impact on some native plants, that scientists, community groups and First Nations groups in Australia and New Zealand are working together to devise an Australasian response.

The inaugural **Australasian Myrtle Rust Conference 2023 (AMRC2023)** held in Sydney last year brought together more than 90 researchers and experts, including many from New Zealand, to discuss developments across the rapidly expanding field of Myrtle Rust research, management and conservation action. Attendees included plant health and plant pathology researchers, biodiversity conservation researchers and practitioners, and (particularly in Aotearoa New Zealand) First Nations stakeholders who are all responding to the threat of Myrtle Rust in the region.

The conference was followed by a two-day workshop on the screening potential for rusttolerant genotypes in some of the most severely affected species, as a basis for reinforcing the declining populations. Conference attendee and guest speaker Dr Richard Sniezko (US Department of Agriculture Forest Service), who has a long history in breeding North American trees for disease resistance, has helped take this management option to a firmer level. Recordings from the conference were made available on the ANPC's YouTube Channel.



A written summary of proceedings for AMRC2023 was released online this year after it was approved by the Department of Climate Change, Energy, Environment and Water. Compiled by ANPC Outreach Delegate Bob Makinson, it reports on the outcomes and achievements of the conference and workshop, to help increase knowledge and awareness of current research and conservation practice and feed into planning at the state and national levels. It also summarises the talks and presentations in some detail. Several key themes emerged from the 50 presentations, giving rise to potential simultaneous directions to tackle Myrtle Rust incursions and extinctions:

- Status of Myrtle Rust in Aotearoa (New Zealand) and Australia, including current ex situ holdings.
- Understanding host:pathogen interactions and well as genetic lineages and spread.
- Resistance breeding program using examples from the white pine blister rust programs and genomics informed programs.
- First Nations response for Taonga impacted by Myrtle Rust and in QLD and NSW.
- Ex situ conservation methods such as specialised seed banking, cryopreservation and tissue culture, as well as dispersed collections of emergency species.
- Genetics for planning conservation collections including identification of genetic diversity of impacted species.
- Resistance identification and screening using biomarkers and genomics to optimise ex situ holdings for reintroduction and resistance.
- Emerging detection options including remote rust spore detection and thermal imaging.
- Predictive modelling of refugia.

- Local management actions to eradicate and contain.
- Pre and post infection treatments such as dRNA foliar treatment.

The ANPC was honoured to collaborate on this conference with the University of Sydney Institute of Agriculture, DCCEEW, Australasian Plant Pathology Society, Plant Health Australia, Biosecurity New Zealand and QLD Department of Environment and Science. Thank you to Bob for pulling the report together.

Download the report here: https://www.anpc.asn.au/wpcontent/uploads/2024/03/ANPC_MyrtleRustConferenceReport_WEB_270324.pdf

ASBP 'PlantChat' lunchtime webinar on Myrtle Rust recovery

ANPC Outreach Delegate Bob Makinson presented at the second of the Australian Seedbank Partnership (ASBP)'s **'PlantChat' lunchtime webinar series** in September on "Rust Alert: recovery strategies for Myrtle Rust species - issues of germplasm capture, maintenance and use". Bob talked about the challenges posed by Myrtle Rust for the survival of susceptible Myrtaceae species and how translocation and breeding for resistance traits can be harnessed to help save them. He also talked about the role botanic gardens and seed/tissue banks are already playing and could further play in achieving positive outcomes for these species with greater investment. You can watch Bob's presentation in full on the ASBP's Youtube channel here:

https://youtu.be/6uiDHHzQj6k?si=CEZsQdri632mo3Ne



In late October, ANPC staff and delegates were privileged to be among 30 people who attended the '*From Research to Resistance*' roadshow held in Sydney to hear and see first-hand the research and conservation efforts underway to save some of our Myrtle Rust susceptible native plants from extinction.

On the first day they met at the Research Centre for Ecosystem Resilience (ReCER) based at the Botanic Gardens of Sydney where they heard all about recent genetic research and results for various species including Native Guava (*Rhodomyrtus psidioides*), Scrub Turpentine (*Rhodamnia rubescens*), *Lenwebbia* sp. Main Range, Broad-leaved Paperbark (*Melaleuca quinquinervia*) and Prickly-leaved Paperbark (*M. nodosa*), and toured their impressive new laboratories.

On the second day they drove out to the Australian PlantBank at the Australian Botanic Garden Mount Annan to tour their potted nursery collections of Native Guava and Scrub Turpentine and hear about the collections' development and management along with a propagation demonstration. They then toured their state-of-the-art seed research labs and learnt all about their in vitro research such as tissue culture and cryopreservation, which was great to see in person.

After lunch they toured the nearby University of Sydney Plant Breeding Institute at Cobbitty to view their facilities used for the screening and resistance breeding of different wheat strains for four types of rust, along with a demonstration of resistance screening. They have already undertaken some screening of Scrub Turpentine recently, linking back full circle to the ReCER research above.

The '*From Research to Resistance*' roadshow was a collaboration between the **NSW Saving Our Species program**, **ReCER**, **Botanic Gardens of Sydney**, the **University of Sydney Plant Breeding Institute** and the ANPC.



Safe Custody for Native Guava documentary on display at Botanic Gardens of Sydney



The ANPC's short documentary on the "Safe Custody for Native Guava" project was featured as part of an exhibit held at the Botanic Gardens of Sydney recently. "Florilegium: Rainforest Species at Risk" was an exhibition which included artworks focused on the impacts of climate change, pathogens and human activities on rainforest ecosystems. The video can be viewed on the ANPC YouTube page here:

https://www.youtube.com/watch?v=L9kH7QSiXRc

A new Myrtle Rust information hub for the ANPC website

https://www.anpc.asn.au/myrtle-rust/



A new and improved Myrtle Rust information hub on the ANPC website was launched in May. The new page is simpler and more structured, with additional resources and pages for videos and publications, as well as for our current and past Myrtle Rust projects. In the near future, it will include an illustrated identification guide and image library, to aid early detection and identification.

Australasian Plant Conservation (APC)

https://www.anpc.asn.au/apc/

We were delighted to welcome our new APC Editor Alyssa Weinstein this year. Alyssa has great enthusiasm for plants, science communication, and bringing science, government, industry, and community together to effectively conserve biodiversity. These interests have led her to roles with United Nations Environment Programme, the Australian federal government, as well as in academia. Alyssa is currently working in the climate change space for the Department of Climate Change, Energy, the Environment, and Water, having previously worked in environmental regulation under the Environment Protection and Biodiversity Conservation Act and in the international policy space.

Alyssa's love for plants flourished growing up in the southwestern Australian biodiversity hotspot, where she completed her Honours at Kings Park and Botanic Garden, before moving to Canberra to pursue a PhD at ANU. In her thesis she investigated the pollination ecology of sexually-deceptive orchids, focussing on the genera *Cryptosylis* and *Drakaea*. Fortuitously, her work with *Drakaea* led Alyssa to a role assisting in the production of the hammer orchid sequence in David Attenborough's Green Planet, a true highlight of her experiences as a science communicator.



Alyssa posing with Button wrinklewort (Rutidosis leptorrhynchoides) flowers while on fieldwork

Alyssa's first edition was the 23/24 Summer edition 32(3) and has done an incredible job collating, reviewing and chasing up articles for APC. Under her editorship our quarterly bulletin has continued to publish high-quality articles relevant to a broad range of plant conservation practitioners and managers.. I would like to sincerely thank Alyssa for all her work this year as editor, ensuring that APC continues to be a quality and well-respected publication communicating Australasian plant conservation issues. Thank you also to the many authors who have contributed to these editions this year.

Over the past 12 months, APC has featured a wide range of articles on such diverse topics as post 2019/20 fires assessments and research; rediscovery of critically endangered species; threatened plant translocation; the update on the Flora of Australia; Plant conservation, microbial diversity, and human health; Myrtle Rust; plant endemism and threat assessment in Australia; ex situ conservation for threatened subtropical rainforest species; as well as the regular news from the Australian Seed Bank Partnership and ANPC News.

The Spring 2024 edition will be out soon. Submissions for articles for the Autumn edition of APC, which will feature papers from APCC14, are due 1 February 2024. We are also seeking submissions on relevant book reviews, ANPC member profiles and the new "Photos from..." section. Do you have a great photo from the field, nursery, garden or lab? We'd love to share it. This is your chance to capture a project highlight, show what's growing in the garden or flaunt that scenic field work location. We're seeking one high resolution photo (preferably 300ppi) with a 1-2 paragraph summary to highlight what's happening around Australia in plant conservation. Send your images and captions to Alyssa at **editor@anpc.asn.au**. More information on how to submit articles can be found here **https://www.anpc.asn.au/apc/**









Communications & Website

Social media

ANPC channel analytics

Channel	Subscribers as of 15 October 2024	Changes since 18 October 2023
E-newsletter	1,303	Up by 127
<u>Twitter (discontinued)</u>	1,523	Down by 23
Facebook	4,459	Up by 183
YouTube	356	Up by 66
LinkedIn	309 (324 in private group)	Up by 232 (private group up by 15)
<u>Instagram</u>	430	Up by approx 25% (don't have exact figures)

Our outreach efforts continue to expand through social media with the regular sharing of general or conference news and events via Facebook and staffing and conference updates via LinkedIn. Posting several times a week has seen an increase in subscribers across all channels except for Twitter, as our account there is now inactive. We experienced another increase in our numbers of YouTube subscribers, thanks in large part to the posting of the recordings of the *"Beyond the Guidelines"* translocation workshop presentations, and a few Myrtle Rust practitioner presentations. We have also resumed posting on the ANPC Instagram page to coincide with the conference and will continue to post more casual content there (such as the *"steal their look"* dress up theme for the conference).

Highlights of our posting for the past few months have been centred around APCC14, including the speaker, fieldtrip and workshop announcements, registration and abstract submission deadlines, and when the program became available. There was also the announcement of Caroline as the new President, Alyssa as the new APC editor and the

advertising for the new Recovery Action Coordinator for Myrtle Rust position. Additionally, there was the formal announcement of the QTPN, along with regular (6-weekly) updates via Mailchimp and the website. Lastly there was also advertising of the Myrtle Rust practitioner series, as each session has been announced, and a reminder in the lead up.

ANPC in the News

ANPC Business Manager Jo Lynch was interviewed as part of an ABC Rural article on the importance of protecting threatened plant species, and the role these species can play to benefit us in the future. The article also follows Australian Tropical Herbarium's Brendan Espe while out in the field collecting seed from rare native plants and includes quotes from ex-National Seed Bank Manager Lydia Guja.

You can read the article here.



Jo at home with the locally threatened Wee Jasper Grevillea (Grevillea iaspicula). Credit: Isla McLeod

Other outreach

Roots of Resilience

The ANPC helped promote the new First Nations environmental biosecurity film - "Roots of Resilience" which was produced by a collaboration between QLD DAFF's Environmental

Biosecurity Office through the Environmental Biosecurity Project Fund, the Queensland and NSW governments, and Aboriginal communities and partners in Aotearoa, New Zealand.



Roots of Resilience tells a story of the importance of environmental biosecurity, and what is at risk of being lost due to the threats posed by Myrtle rust and other plant pathogens. The film gives voice to First Nations' perspectives, connections and concerns around forests and forest health.

First Nations people have lived in harmony with this country for thousands of years. This video describes a need to share knowledge and walk together to protect what we love. It highlights the importance of forests to people, culture and ecosystems both here and abroad. It was filmed and produced by **ThunderBox Films** across various locations including Coffs Harbour, Bunya Mountains and Cairns. You can watch the video here: https://www.agriculture.gov.au/biosecurity-trade/policy/environmental/first-nations

Gum Tree Guardians

The ANPC also helped promote the Atlas of Living Australia's Myrtle Rust citizen science campaign this year. A big thanks to everyone who took part. The results can be seen in the graphic below. The Gum Tree Guardians project for Myrtle Rust observations on iNaturalist.org remains active and you can check it out at: https://www.inaturalist.org/projects/gum-tree-guardians



Website update

Richie Southerton, our Communications Manager, has continued updating and modernising our website, predominantly the webpages for the APCC14 (which ended up being a mini website within a website) and the QTPN, in addition to the new Myrtle Rust information hub. When the work related to the conference dies down a bit, the plan is to progress reorganising current and archiving outdated information.

Office, Staffing and Funding

Staffing

Many thanks to all our staff who work above and beyond the call of duty for the ANPC. Their dedication, advice and support make my role and the work of the Committee much more effective and ensures that the ANPC continues to function as a highly respected conservation organisation.

We said farewell to our Project Manager Chantelle Doyle who did an amazing job coordinating the Myrtle Rust extension project and helping coordinate the Perth plant translocation workshop. This all tied in nicely with her other roles at the UNSW and the Research Centre for Ecosystem Resilience. She has been a pleasure to work with and we wish her all the best in her future endeavors. Thank you Chantelle and I'm sure we'll still be working closely with you on other projects in the future.

I am very excited to announce that Philippa Walsh started with us this week as the Recovery Action Coordinator for the high priority Myrtle Rust affected species project mentioned above. Philippa comes to us with extensive expertise in coalition building, adaptive management and securing resources, and has worked in the past for WWF,

Greening Australia and Bush Heritage Australia in senior roles. Welcome Philippa, we look forward to working with you over the next 18 months.

Project Manager for the Queensland Threatened Plant Network, Paul Donatiu, commenced in the role in early December 2023 and hit the ground running to successfully establish the QTPN this year after some initial background planning. Paul has brought exceptional skills in project management, communication and stakeholder engagement, masters-level qualifications in Environmental Science, and 25yrs experience in conservation, species recovery and environmental management into the role, as demonstrated earlier in this report.

Our Communications Manager Richie Southerton has been focusing primarily on promoting the conference, improving the website, social media, ANPC e-news, project and other event

promotions, along with doing some long term thinking towards developing and implementing communication strategies.

Our Business Manager, Jo Lynch, has continued her excellent work in the office with grant applications and reports, along with overall project and budget management.

Sincere thanks to our office volunteer Robert Hawes, who has helped enormously with various administrative and financial tasks this year.

I am grateful to all the Committee members for their tremendous support over the year. They all have significant commitments outside the ANPC, and it is often challenging to devote the time required to be active committee members. The involvement in the committee by all members is a clear demonstration of their dedication to the ANPC and its goals in improving plant conservation.

I would especially like to thank David Coates who acted in the position of President earlier this year.

Funding

Our financial situation will be reported on in detail separately at the AGM but our key sources of income this year have included:

- Australian Government.
- NSW Department of Climate Change, Energy, the Environment and Water.
- QLD Department of Environment, Tourism, Science and Innovation
- Victorian Government.
- San Diego Zoo Wildlife Alliance
- Memberships and donations.

The hosting of the ANPC by the Australian National Botanic Gardens remains a crucial support for us, and a major contribution by the ANBG to the national effort for plant conservation. This includes provision of office space, computers, phones, electricity, furniture, and a printer. I would like to sincerely thank the Gardens for this support and look forward to continuing this close relationship into the future.

The Coming Year

2025 will again be a very busy year for the ANPC as we plan to undertake the following:

- Start planning the 15th Australasian Plant Conservation Conference to be held in 2026.
- Hold our strategic planning day in February to plan for the future of the organisation and produce a Strategic Plan document to lay out our priorities and vision for the next decade and what success looks like.
- Continue the project 'Supporting coordinated recovery of Queensland threatened plants' through the Queensland Threatened Plant Network (QTPN) and aim to secure funding for the network to continue.
- Design and launch a 2025 QTPN themed ANPC calendar, ideally before the end of the year.
- Continue to hold our quarterly series of informal virtual get togethers to discuss Myrtle Rust management for practitioners o fulfill an identified need for horticulturists and practitioners managing Myrtle Rust susceptible collections to collaborate, share ideas and workshop problems.
- Develop communications and teaching materials for a project aimed at encouraging young people into plant related fields, a project to be led by committee member Leonie Monks and in collaboration with the Biodiversity Council
- Organise further plant conservation webinars and training workshops.
- Undertake surveys and assessments of *Dillwynia stipulifera, Hakea constablei, Leptospermum macrocarpum, Leptospermum rotundifolium* and *Melaleuca capitata.* affected by the 2019/20 fires.
- Undertake surveys and assessments of the three epiphytic orchid species affected by the 2019/20 fires Adelopetalum bracteatum, Australorchis schneiderae (syn. Dendrobium schneiderae) and Sarcochilus dilatatus.
- Undertake conservation measures for *Melaleuca nodosa* affected by the 2019/20 fires.
- Undertake further fundraising to build on our work on the Myrtle Rust threat.
- Seek further funding for essential projects and ANPC Project Manager roles.
- Develop a ten-year strategic plan for the ANPC.
- Plan for Stage 2 of the Healthy Seeds project.

- Future work: Sampling and post-fire surveys of the impacts of Myrtle Rust will be undertaken on selected Myrtaceae species.
- Plan for Stage 2 of the Healthy Seeds project.

A big thanks to everyone involved in all the ANPC's activities for the year, your efforts are greatly appreciated. I look forward to building and expanding upon our successes over the next year.

Dr Caroline Gross

President

Australian Network for Plant Conservation Inc.



The national network that links people, research and action in plant conservation

Zig Zag Grevillea (Grevillea flexuosa) - Vulnerable (WA) Photo credit: Richie Southerton, ANPC

Contact us.

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Appendix 1: References and further reading

Auld, T.D., Mackenzie, B.D.E., Le Breton, T., Keith, D.A., Ooi, M.K.J., Allen, S., Gallagher, R.V. (2020). A preliminary assessment of the impact of the 2019/2020 fires on NSW plants of national significance. NSW Department of Planning, Industry and Environment.

Auld, T.D., Keith, D.A., Gallagher, R.V., Tozer, M., Ooi, M.K.J., Le Breton, T., Allen, S., Yates, C., van Leeuwen, S., Williams, R.J. and Mackenzie, B.D.E. (2022). Frameworks for identifying priority plants and ecosystems most impacted by major fires. *Australian Journal of Botany* 70(7), 455–493.

Auld, T.D., Zylstra, P., Makinson, B., Coates, D. and Lynch, J. (2024). **Preventing rare plant extinction and reducing impacts of future fires**. *Australasian Plant Conservation* 33(1), 12-17.

Baird, I.R.C. and Benson, D. (2021). Population ecology of two endemic, fire-sensitive, Blue Mountains Banksia taxa (Proteaceae) in response to fire. *Proceedings of the Linnean Society of New South Wales* 143, 87-108.

Department of Agriculture, Water and the Environment (2022). *Fire regimes that cause biodiversity decline as a key threatening process*. Canberra, ACT.

Gallagher, R.V., Allen, S. and Auld, T.D. (2018). *Identifying species at risk across current and future landscapes: Theme 3. Using range metrics to identify plants at risk.* Report to NSW Office of Environment and Heritage from Macquarie University Bionode of NSW Adaptation Hub.

Gallagher, R.V. (2020). *Final national prioritisation of Australian plants affected by the 2019-2020 bushfire season*. Ver 1.4. Report to Commonwealth Wildlife and Threatened Species Bushfire Recovery Expert Panel.

Gallagher, R.V., Allen, S. Mackenzie, B.D.E., Yates, C.J., Gosper, C.R., Keith, D.A., ... and Auld, T.D. (2021). High fire frequency and the impact of the 2019–2020 megafires on Australian plant diversity. *Diversity and Distributions* 27 (7), 1166-1179.

Gallagher, R.V., et al. and Auld, T.D. (2022). An integrated approach to assessing abiotic and biotic threats to post-fire plant species recovery: lessons from the 2019-20 Australian fire season. *Global Ecology and Biogeography* 31, 2056-2069.

Gallagher, R.V., et al. and Auld, T.D. (2023). Blackened roots and green shoots: emerging trends in decline and recovery in Australian plant species after the 2019–20 wildfires. In: *Australia's megafires: Biodiversity impacts and lessons learned from 2019-2020*. Eds Van Leeuwen, S., Wintle, B.A., Woinarski, J.C.Z., Rumpff, L. and Legge, S.M. CSIRO Clayton South, Vic. Pp. 111-126.

IUCN Standards and Petitions Committee (2022). *Guidelines for Using the IUCN Red List Categories and Criteria. Version 15.* Prepared by the Standards and Petitions Committee.

Le Breton, T., Zimmer, H.C., Gallagher, R.V., Cox, M., Allen, S. and Auld, T.D. (2019). Using IUCN criteria to perform rapid assessments of at-risk taxa. *Biodiversity and Conservation* 28, 863-883.

Le Breton, T., Ooi, M., Hay, S. and Auld, T. (2023). **Conservation assessments from species assessments after the 2019-2020 fires**. *Australasian Plant Conservation* 32(2), 3-6.

Lindenmayer, D.B., Bowd, E., Taylor, C. and Zylstra, P.J. (2023). Interacting and compounding impacts: fire and forestry in the 2019–20 wildfires. In: *Australia's megafires: Biodiversity impacts and lessons learned from 2019-2020*. Ed Van Leeuwen, S., Wintle, B.A., Woinarski, J.C.Z., Rumpff, L. and Legge, S.M. CSIRO Clayton South, Vic. pp 255–68

Makinson, R.O., Pegg, G.S. and Carnegie, A.J. (2020). *Myrtle Rust in Australia – a National Action Plan*. Australian Plant Biosecurity Science Foundation, Canberra, Australia.

Zimmer H, Clements M, Cooper E, Jones D, Makinson R, Nargar K, Stevenson K. (2023). **Collateral damage: epiphytic orchids at risk from myrtle rust**. *Australian Journal of Botany*, 71(8), 523–536.

Zylstra, P.J. (2021). Linking fire behaviour and its ecological effects to plant traits, using FRaME in R. *Methods Ecol. Evol.*, 12, 1365–1378.

Zylstra, P.J., Bradshaw, S.D.A. and Lindenmayer, D.B. (2022). **Self-thinning forest understoreys reduce wildfire risk, even in a warming climate**. *Environ. Res. Lett.*, 17, 044022. Zylstra, P.J. (2022). Quantifying the direct fire threat to a critically endangered arboreal marsupial using biophysical, mechanistic modelling. *Austral Ecology*, 00, 1-23.

Zylstra, P.J., Wardell-Johnson, G.W., Falster, D.S., Howe, M., McQuoid, N. and Neville, S. (2023). **Mechanisms by which growth and succession limit the impact of fire in a south-western Australian forested ecosystem** *Funct. Ecol.* 37 1350–65.

Zylstra, P. (2023). Fires of the future. Wild 52–5

Zylstra, P. (2024). **Reconciling fire behaviour science and forest ecology**. *Australasian Plant Conservation* 32(3), 18-20.

Zylstra, P. J., Bradshaw, S. D. and Lindenmayer, D. B. (2024). **Reply to comment on "Self-thinning forest understoreys reduce wildfire risk, even in a warming climate**" *Environ. Res. Lett.* 19 058001.