2021-22 Annual Report



Safeguarding Australia's flora, through a national network of germplasm collections

The Australian Seed Bank Partnership recognises First Nations Peoples throughout Australia, including their continuing connection to Country. We pay our respects to Elders past, present and future.

The Partnership recognise that these connections to Country include the people, plants, animals, land, water and sky. As we continue to work across Australia to support long-term conservation of Australia's rich and endemic flora, we will strive to build and maintain honest and trusting relationships with First Nations Peoples.

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Prepared by: Bradley Desmond and Damian Wrigley, with thanks to the Partnership for their contributions.

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Contents

Letter from the Chair	1
Letter from the National Coordinator	2
Who we are	3
Year in review	15
Partnership highlights for 2021–22	28
Looking to the future	38
Annual financial report	40
Acknowledgements	52
Get involved	53

Cover: The Endangered Matchstick Banksia (*Banksia cuneata*) found in Southern WA (Image: Andrew Crawford).

This page: Flowering response of the Crimson Bottlebrush (*Callistemon citrinus*) after fires near Imlay Creek, NSW (Image: Peter Cuneo).

Letter from the Chair

As the Partnership completed another incredible year of seed conservation and research, the latest five-yearly *State of the Environment* report was published, providing a stark assessment of the poor and deteriorating health of Australia's natural landscapes. This vast continent has a rich and unique floral diversity, but the combined impacts from climate change, habitat loss, introduced and invasive species, and pollution mean that all Australians have a responsibility to do better for our environment.

The work of the Council of Heads of Australian Botanic Gardens (CHABG) and the Australian Seed Bank Partnership (the Partnership) is already contributing to national and global efforts to safeguard native plants for generations to come. Reflecting on this year, I am proud of the efforts and achievements across the Partnership. We have learned a great deal from our bushfire recovery projects and from our many contributions to seed science internationally. Not only have we improved our understanding of how various species respond to fire, but also of the ways we work and deliver on our conservation goals, particularly when faced with unprecedented global challenges. I am pleased to say that, like our recovering flora, we remain resilient, adaptable and invigorated by our shared purpose.

I am excited by the forthcoming release of the Partnership's next 10-year Strategic Plan. With a focus on building diversity across our collections and collaborations, the Partnership aims to continue driving meaningful engagement with governments, business, First Nations people, and the conservation and scientific communities. Building networks and working towards common goals is key to securing Australia's environmental and cultural heritage values for the future. As a Council,

we recognise the

responsibility that botanic

gardens and seed banks have as custodians of living collections of Australia's diverse native flora. We are focused on embracing the unique opportunities and challenges we may face in the years ahead and are committed to growing the size and diversity of these collections together. With an uncertain road ahead, it is imperative that we continue to foster and support ongoing partnerships, networks and collaborations. These will be essential for achieving the plant conservation priorities under the Post-2020 Global Biodiversity Framework under the UN Convention on Biological Diversity.

I want to thank both Dale Arvidsson and Gary Davies for their tenures as Council Chair over the past year, and for providing guidance during this turbulent time. I would also like to thank David Reid for representing the Royal Tasmanian Botanical Gardens following Gary's departure. I also want to extend my sincere thanks to Damian Wrigley and Bradley Desmond for their brilliant work, energy, enthusiasm, and expertise.

On behalf of the Council of Heads of Australian Botanic Gardens I encourage you to read about our achievements this year and to consider joining us in our efforts to safeguard Australia's flora.

Denise Ora

Chair, Council of Heads of Australian Botanic Gardens Inc.

Letter from the National Coordinator

In reviewing the Partnership's achievements this year I have found it worthwhile to reflect on the Partnership's recent past to provide context for our achievements. In our first decade, our Partners completed over 1,500 conservation actions for 1,400 plant taxa. In comparison, during the two and a half years since the 2019-20 bushfires, the Partnership has completed 1227 conservation actions for 605 taxa, with the vast majority of these delivered over the past 12 months. Despite the challenging conditions, rolling COVID-19 lockdowns and impacts of La Niña during this time, it is clear there has been a significant increase in Partnership effort to help recover and secure Australian plants. This represents not only a substantial contribution to the understanding and conservation of our native flora, but also an increase in capacity and capability across the Partnership to respond to crisis.

An additional sense of achievement this year comes from the contribution the Partnership made to the pursuit and dissemination of seed science both within Australia and overseas. In September 2021, we presented the Australasian Seed Science Conference, which brought together 425 delegates from 34 countries. This conference showcased the breadth of seed science being undertaken internationally and highlighted the continued global effort to understand and protect plants.

The conference also provided a platform to launch the 3rd edition of *Plant germplasm conservation in Australia* (the Germplasm Guidelines). This labour of love provides future conservation practitioners with access to current research findings and techniques to maximise the value of every seed or plant in their collections. Read more about the Conference and Germplasm Guidelines on pages 23 and 25.

It is always a

pleasure hearing stories from our Partner organisations, and I encourage you to read the *Partnership highlights* section (page 28) to join our collectors for their adventures on coastal cliffs, rivers, mountain tops and islands across the country. Keep up to date with our project achievements in the *Year in review* section (page 15) to discover why the Stirling Range Banksia was treated to a helicopter ride, and how the iconic Blue Mountains turned a mesmerising shade of pink.

Finally, I would like to farewell three incredible drivers for Australian plant conservation— Dr Peter Cuneo, Mr Neville Walsh and Mr Ben Wirf. Their contributions to the Australian Seed Bank Partnership and their respective institutions have been invaluable and will be wholeheartedly missed. While we are saddened to see them go, we are confident that they will find the same success and happiness in their future pursuits as they experienced during their time shared with the Partnership.

This report is a testament to the monumental efforts and outstanding achievements of our people over the last year. We hope you enjoy reading it as much as we enjoyed living it.

Damian Wrigley

National Coordinator, Australian Seed Bank Partnership

Who we are

Our vision

A future where Australia's native plant diversity is valued, understood and conserved for the benefit of all.



Our strategic focus



To deliver a national effort that contributes to the conservation of Australia's native plant diversity through collaborative and sustainable seed and germplasm collecting, banking, research and knowledge sharing.

The Australian Seed Bank Partnership is a national collaboration of seed banks and flora-focused organisations delivering strategic conservation actions for Australia's native seed. Our dedicated Partners and Associates undertake widespread collecting and complex research to support *ex situ* seed conservation, as well as seed science that underpins these efforts. Our main areas of focus include:

Seed banking

Our native flora face an uncertain future due to the impacts of a rapidly changing climate, biological

invasions, land clearing and severe weather events. *Ex situ* seed banking is an essential tool for the safe and efficient storage of wild plant genetic material. This cost-effective method for maintaining genetically diverse and representative collections allows a network of seed banks to strategically store, conserve and research our diverse Australian flora.

Science and research

Our seed science endeavours are critical to understanding the biology and ecology of the seeds we collect and for developing specific methodologies for germinating and storing seed. Our research into the evolution and adaptability of native species informs restoration projects across the country.

Knowledge sharing

Our national network of experts contribute to the development of policies, programs, research and on-ground projects that seek to improve biodiversity outcomes.



We do this by sharing our knowledge and expertise, highlighting good news stories and updating national guidelines and standards. We continuously strive to improve our plant conservation data and make it openly available through the Australian Seed Bank Online platform.

Using our collections

The seeds we secure are always collected for a reason beyond a life in the bank. Collections are used for growing on and planting out at both *in situ* and *ex situ* locations. These plants play an important part in translocation or restoration projects to bolster wild populations and ecosystem

management. Germinants from germination trials are also used for seed production areas or living collections in botanic gardens to help educate the public about our work.



Our Partners

The Partnership is an alliance of organisations including at least one conservation seed bank in every Australian state and territory, as well as state environment agencies and non-government organisations such as the Australian Network for Plant Conservation, Greening Australia and the Millennium Seed Bank Partnership of the Royal Botanic Gardens, Kew, in the UK. Our links across conservation and restoration seed banks, governments and the NGO sector allows for strategic national collaborations, enabling our plant conservation goals to be achieved on a country-wide scale.



Our Partners are located across the country and work together to safeguard Australian plants.



Partner organisations of the Australian Seed Bank Partnership

1. George Brown Darwin Botanic Gardens – Parks and Wildlife Commission of the Northern Territory (GBDBG)

2. Alice Springs Desert Park – Parks and Wildlife Commission of the Northern Territory (ASDP)

3. The Western Australian Seed Centre, Kings ParkBotanic Gardens and Parks Authority (BGPA)

4. The Western Australian Seed Centre, Kensington – Department of Biodiversity, Conservation and Attractions (DBCA)

5. South Australian Seed Conservation Centre – Botanic Gardens and State Herbarium, South Australia (BGSH)

6. Australian Grains GeneBank – Agriculture Victoria Research Division, Department of Jobs, Precincts and Regions (AGG)

7. The Victorian Conservation Seedbank – Royal Botanic Gardens Victoria (RBGV) 8. Tasmanian Seed Conservation Centre – Royal Tasmanian Botanical Gardens (RTBG)

9. National Seed Bank – Australian National Botanic Gardens, Parks Australia (ANBG)

10. The Australian PlantBank – The Australian Botanic Garden, Mt Annan, The Royal Botanic Gardens and Domain Trust (RBGDT)

11. Brisbane Botanic Gardens Seed Bank – Brisbane City Council (BBG)

12. The Queensland Herbarium – Department of Environment and Science, Queensland (DESQ)

13. Greening Australia (GA)

14. Australian Network for Plant Conservation (ANPC)

15. Millennium Seed Bank Partnership – Royal Botanic Gardens, Kew, UK (MSBP)







Grains

Genebank



ADDEN









The Royal

BOTANIC GARDENS

& Domain Trust



Dedicated to a better Brisbane



Royal

Tasmanian Botanical Gardens



Australian Network for Plant Conservation Inc



Roval

Botanic Gardens

Victoria



Associate organisations of the Australian Seed Bank Partnership

The Partnership delivers across a diverse range of operational and theoretical areas in collaboration with like-minded individuals, organisations and institutions both within and external to Australia. These Associates support the Partnership to deliver on our objectives across seed collection and banking, applied research, restoration and translocation action and the development of guidelines, standards and scientific advice to governments, business, individuals and land managers. Our current associates include:

- Atlas of Living Australia
- Australian Government Department of Climate Change, Energy, the Environment and Water
- Botanic Gardens of Australia and New Zealand Inc.
- Centre for Australian National Biodiversity Research
- Plant Health Australia
- CSIRO
- Society for Ecological Restoration Australasia

A list of the organisations that supported the Partnership this year can be found in our *Acknowledgements* section.

Cheiranthera volubilis flowering post-fire on Kangaroo Island (Image: Dan Duval)

Our history

The drive to bank Australian seed for conservation began well before the year 2000, though efforts increased significantly with the start of the Millennium Seed Bank Project supported by the Royal Botanic Gardens, Kew, UK. This international project aimed to safeguard 24,000 global plant species from extinction by 2010, in line with the targets of the Global Strategy for Plant Conservation (GSPC). Australia's contribution to this effort was significant, supported greatly by the establishment of the Australian Conservation and Research Network (AusCAR). AusCAR provided Australian seed banks with the opportunity to collaborate more effectively at the multi-jurisdictional level, providing more strategic species targeting for conservation and research across several states.

Building on the success of AusCAR, the Council of Heads of Australian Botanic Gardens formally established the Australian Seed Bank Partnership (the Partnership) in 2010. The Partnership was the first country-wide alliance of seed banks and other organisations delivering collaborative seed collecting, banking, research and knowledge sharing. The Partnership focused on contributing to the second decade of targets of the GSPC by delivering projects in the key areas of threatened species and those taxa previously unrepresented in seed banks. Our efforts contributed to safeguarding against the effects of *Phytophthora cinnamomi* (dieback), securing collections from priority tree and grass species, and banking crop wild relatives. All of these efforts enabled the Partnership to secure over 1,400 species under our 1,000 Species Project.

Since the 2019–20 summer bushfires, the Partnership has worked tirelessly to deliver emergency post-bushfire seed collecting and research through six concurrent projects (see *Year in review*). With these projects due to finish by the end of 2023, we welcome you to join us as together we write the next chapter in Australian seed banking.

Our governance

The Council of Heads of Australian Botanic Gardens Incorporated (CHABG Inc.) draws on the expertise of senior executives from Australia's capital city botanic gardens, who guide the strategic direction of the Partnership's work, ensuring it addresses national plant conservation priorities and contributes to international conservation targets.

Members of the Management Committee of the Council in 2021–22

Ms Denise Ora – Chief Executive, Royal Botanic Gardens and Domain Trust, Sydney (Chair Jun 2022–present)

Mr Gary Davies – Director, Royal Tasmanian Botanical Gardens (CHABG Chair Feb 2022–May 2022)

Mr Dale Arvidsson – Curator, Brisbane Botanic Gardens (CHABG Chair Jul 2021–Jan 2022)

Mr Alan Barrett – Chief Executive Officer, Botanic Gardens and Parks Authority (Kings Park) (CHABG Secretary)

Prof Tim Entwisle – Director and Chief Executive, Royal Botanic Gardens Victoria

Mr Bryan Harty – Director, George Brown Darwin Botanic Gardens

Mr Michael Harvey – Director, Botanic Gardens and State Herbarium, South Australia

Mr David Reid – A/g Director, Royal Tasmanian Botanical Gardens (May 2022–Jun 2022)

Dr Judy West – Executive Director, Australian National Botanic Gardens







Mr Gary Davies



Mr Dale Arvidsson



Mr Alan Barrett



Prof Tim Entwisle



Mr Michael Harvey



Dr Judy West



Mr Bryan Harty



Mr David Reid

Other position holders

Mr Peter Byron – General Manager, Australian National Botanic Gardens, Canberra (CHABG Public Officer)

Dr Brett Summerell – Director Research & Chief Botanist, Royal Botanic Gardens and Domain Trust (CHABG Treasurer)

Australian Seed Bank Partnership Secretariat

The role of the National Coordinator is to provide strategic leadership and program management to oversee the implementation of the Partnership's strategic plan, policy and operations. The Assistant Coordinator supports the coordination of national ex situ seed conservation programs, capacity building and research collaborations. Both positions work with the members of the Partnership to secure the necessary funds for operations and programs that will realise the strategic plan for the Partnership. These positions are supported by the Director of National Parks and are hosted at the Australian National Botanic Gardens, Canberra.





Mr Peter Byron

Dr Brett Summerell



Mr Damian Wrigley

Mr Bradley Desmond

Mr Damian Wrigley – National Coordinator, Australian Seed Bank Partnership

Mr Bradley Desmond – Assistant Coordinator, Australian Seed Bank Partnership

Staff of the National Seed Bank collecting *Celmisia pugioniformis* below Ramshead, Kosciuszko National Park (Image: Lydia Guja)

National Steering Committee

The National Steering Committee brings together a team of leading experts from across the Partnership, who help guide the delivery of practical plant germplasm conservation programs and projects. These experts range from seed scientists, botanists, taxonomists and ecologists to horticulturalists and plant conservation ambassadors. In 2021–22 the committee members were:

- Ms Samantha Craigie Senior Ecologist, Greening Australia
- Dr Andrew Crawford Committee Member, Australian Network for Plant Conservation; Seed Bank Manager, Western Australian Seed Centre, Kensington, Department of Biodiversity, Conservation and Attractions, Western Australia
- Dr Peter Cuneo Manager, Seedbank and Restoration Research, PlantBank, Royal Botanic Gardens and Domain Trust, New South Wales
- Mr Bradley Desmond Assistant Coordinator, Australian Seed Bank Partnership

- Mr Dan Duval Seed Research Officer, South Australian Seed Conservation Centre, Botanic Gardens and State Herbarium, South Australia
- Dr Aisyah Faruk Oceania Coordinator, Millennium Seed Bank Partnership, Royal Botanic Gardens, Kew, UK
- Dr Jenny Guerin Seed Research Officer, South Australian Seed Conservation Centre, Botanic Gardens and State Herbarium, South Australia
- Dr David Merritt Principal Research Scientist, Kings Park Science, Department of Biodiversity, Conservation and Attractions, Western Australia
- Dr Andre Messina Botanist, Royal Botanic Gardens Victoria, Victoria
- Dr Rebecca Miller Research Scientist, Royal Botanic Gardens Victoria, Victoria
- Mr Tom North Seed Bank Curator, Australian National Botanic Gardens, Australian Capital Territory
- Mr Scott Pullyblank Curator Life Sciences, Alice Springs Desert Park
- Mr Matthew Stray Curator, Western Australian Seed Centre, Kings Park
- Mr James Wood Seed Bank Manager, Royal Tasmanian Botanical Gardens, Tasmania
- Mr Damian Wrigley National Coordinator, Australian Seed Bank Partnership

Our people

Each year we feature a selection of staff and volunteers from across our Partner organisations. These are just some of the people who make what we do possible.

Bradley Bianco – Technical Officer at the South Australian Seed Conservation Centre

Growing up, my family spent much time camping and exploring regional South Australia. Those trips were formative in fostering my love for the outdoors and the solitude and sense of remoteness that the South Australian bush provides. Although we spent a lot of time enjoying the landscape, the concept of 'nature conservation' was not part of my upbringing in childhood or adolescence. It wasn't until my late teens while bushwalking with friends that I asked myself, "What is this tree I'm looking at?" By this point in life I had seen thousands of trees, and like many people in the modern world, those trees were viewed with a sense of banality. But that day, asking myself that question, I was shocked by my answer to myself: "I don't know". Alarming to me was that, in an historical context, I was an abnormality. An exception among generations of humans before me who knew their environment intimately. People who knew the names of the creatures they shared their world with. It was this moment that put me on the trajectory I have been on since that day.

Shortly after, I enrolled in a Diploma of Conservation and Land Management at TAFE and a new world opened to me. I began learning skills in plant identification and started to familiarise myself with the local flora. This is really where my passion for plant conservation and habitat restoration was born. After completing my Diploma, I started working with a Bushcare crew, addressing pressures from invasive plants and working on revegetation projects.



Bradley Bianco

After four years, I wanted to go further and increase my efficacy as a conservation practitioner. This led me into a Bachelor of Science in Conservation Biology at the University of Adelaide. While still studying, I started working for the Nature Conservation Society of South Australia (NCSSA) on vegetation surveys of the Yorke Peninsula for an ambitious rewilding project. After completing my degree, I dove headfirst into other conservation projects with the NCSSA, as well as working for the NGO BioR undertaking envelope-pushing habitat restoration work in the Mount Lofty Ranges to address the decline in woodland birds.

For the past year, I have had the privilege of working at the SA Seed Conservation Centre with some of the most dedicated conservationists I have thus met. My colleagues inspire and motivate me to dream big, set lofty goals and get things done. I am honoured to have the opportunity to work on plant conservation projects that I believe are making a genuine contribution to the safeguarding of some of the State's rarest and most threatened species.

Tom North – Curator of the National Seed Bank

I am the Curator of the National Seed Bank (NSB) at the Australian National Botanic Gardens. I've been involved in seed banking for over 20 years, with both the horticultural and native plant conservation and research industries. I like to think I have a strong background in plant science and plant conservation, having earned a Bachelor of Horticultural Science from the University of Western Sydney, and a Master of Science in Biodiversity and Taxonomy of Plants from the University of Edinburgh. My love of plant biodiversity led me to seed collecting and curation for the purpose of ex situ conservation. In particular, I'm interested in the ex situ conservation of native species and the use of seed in restoration and recovery programs across threatened ecological communities.

In my role as Curator of the NSB I oversee the collection and curation program. This includes ensuring that seed collections are made, stored and maintained to international standards. In this role, I coordinate conservation projects with a broad range of stakeholders, government agencies, conservation agencies, land managers and individuals to promote, protect and conserve Australia's threatened native flora. I'm also often asked to provide specialist advice and technical



Tom North

expertise in seed collecting and banking, and supervise and train a large number of students and dedicated volunteers who assist in the work of collecting and curating the NSB collections. I have been fortunate to lead seed collecting missions all over Australia; often in remote and challenging environments, with courage, determination and plenty of cake.

My colleagues insist that my knowledge and guidance have been critical in the design of the new NSB facility, construction of which is due to begin in late 2022. The new building will greatly increase the NSB's seed banking and research capacity and capability, ensuring that my work and that of our team can continue into the future.

Ruby Paroissien – Seedbank Officer at the Australian PlantBank

My undergrad was a dual degree in both science and fine arts: I described my choice as the two things I couldn't give up. The main question asked when people learned about my degree was "do they go together?", and for me I've found I can't separate them. While being inspired by nature in my painting, I have also found this gives me a unique perspective to perceiving dynamics in nature.

I developed a fascination in seed ecology while volunteering in my third year for a PhD student working on seed herbivory in arid zones. This led me to complete a research scholarship project in 2019, investigating the germination requirements of the bushfire ephemeral and now famous Pink Flannel Flower, *Actinotus forsythii*. How ecology responds to fire has always fascinated me and I couldn't help but focus on this for my honours. My thesis looked at how fire season was able to impact the reproduction of another famous species in the Sydney area, the Gymea Lily, *Doryanthes excelsa*. This included a large component looking at the impacts on seeds.

After finishing my honours I started working for the Australian PlantBank in the seedbank team. We travel state-wide across New South Wales, collecting seed of threatened and fire-affected species. I have now travelled to parts of New South Wales I never thought I'd see. There is so much variability in the job, and we're involved in all parts of the process; collecting, processing, germinating and storing those seeds. There's a big sense of future conservation, we have very little idea of how plants will respond to changes in the future, but we're preparing for this change by protecting vulnerable species.

I have now also started a PhD, and my work has informed a broader scope of my research—instead of a single species, I now want to know how fire impacts entire plant communities, in particular; wet sclerophyll forest threatened ecological communities. While I started out finding curiosity and beauty in nature, I have since adopted a drive to safeguard it. These are not mutually exclusive, and we must employ creativity when approaching difficult environmental challenges.



Ruby Paroissien

Matthew Stray – Curator of the Western Australian Seed Centre, Kings Park

As Curator of the WA Seed Centre at Kings Park, my time is divided into planning, organising and leading seed and plant collecting field trip programs, managing collecting activities as well as post-harvest handling and storage, testing and data management. My primary focus is to build Botanic Gardens and Parks Authority collections for use in botanic gardens displays, conservation, education and research activities. I promote and contribute to strategic planning and to the development of *ex situ* conservation programs, I am proud to be involved in national and international conservation partnerships such as the Australian Seed Bank Partnership. I feel extremely privileged in having the opportunity and responsibility to work in this important role. It takes me to all corners of the state which is so diverse and incredibly beautiful.

Prior to commencing my role in August 2021, my background lay in Horticulture and Landscape Architecture. I grew up on Sydney's Northern Beaches, where I was most at home exploring coastal rockpools and making cubbies in the heath along headland tracks. At that time, it seemed like pockets of bushland were never far away and these treasured memories play a large part in my love and connection to nature. I picked up my first job in a retail nursery at age 15. The idea of surrendering my school summer holidays was soon outweighed by the joy of discovering and being surrounded by plants. After school I moved to Canberra, where I completed a Bachelor of Landscape Architecture and went on to work as a landscape architect for a further 10 years, including two years overseas in the UK.

Following a return to work in Sydney, family life took me in a new direction in 2015 when I relocated to Perth and shortly after commenced a Horticultural Traineeship at Kings Park. The traineeship impressed on me not only the wonder that is WA flora, but importantly the role the Botanic Garden plays in maintaining representative collections



Matthew Stray

for reference and for scientific purposes, such as understanding resilience to climate change and susceptibility to a range of man-made and biological threats. Prior to moving into my current role, I spent time working within Kings Park's Nursery and Horticultural Displays teams, gaining experience with seed and vegetative material collection, seed banking, germination testing, propagation and plant establishment through to curation of living collections.

After almost a year in this position, I am enjoying the challenge. While it feels like we have a long road ahead, I look forward to tackling some of the current issues and threats we face.

Dr Magali Wright – Environmental Consultant, Enviro-dynamics

I work as an environmental consultant in Tasmania, splitting my time between plant conservation projects, biosecurity extension and environmental impact assessments. My plant conservation work has included supporting the Tasmanian Seed Conservation Centre on Partnership projects with field collection of a range of plant species, with a focus on the island's orchids and Eucalypts.

My interest in plant conservation started with a fascination of the mechanics of plant-fungal interactions. After focusing on plant pathology during my botany degree, I did an Honours year following the process of mycorrhizal colonisation and germination of terrestrial orchid seed using microscopic techniques. This project involved learning how to grow terrestrial orchids with their mycorrhizal fungi, something I have now been doing for over 20 years. Seeing little green shoots on 3-month-old orchid protocorms still hasn't lost its wow factor, especially when it has the potential to improve the conservation status of a species on the brink of extinction.

My interest in orchid conservation has taken me from a PhD and then a research and teaching role at Burnley (University of Melbourne), a stint as an Orchid Conservation Officer at the Royal Botanical Gardens Melbourne and now a role as the Program Lead at the Tasmanian Orchid Conservation and Research Program (TOCRP). The TOCRP is a partnership between the Landscape Recovery Foundation and the Royal Tasmanian Botanical Gardens, which aims to improve the conservation status of Tasmanian threatened orchids. Over the last 10 years we have propagated seed orchards of some of Tasmanian's most threatened orchids and are now starting work on our first translocation program. To find out more about the TOCRP see: https://landscaperecovery.com.au/projects.

My move from Victoria to Tasmania broadened my plant conservation interests, cultivating an obsession with the island's Eucalypts. My involvement in the recovery of Morrisby's Gum has brought the importance of getting the timing right with seed collection efforts into sharp focus. With signs of decline widespread in this Tasmanian endemic, diverse seed collections for the establishment of seed orchards have allowed the inclusion of a degree of genetic diversity that no longer exists in the wild in assisted migration plantings. This foresight is something I would like to replicate for a range of our endemic Eucalypts that are struggling with a changing climate. For more information on the role of *ex situ* conservation in Morrisby's Gum recovery see: https://www.envirodynamics.com.au/morrisbysgum.



Dr Magali Wright

Year in review

Collecting, research and restoration

The Partnership has worked over the past year to further *ex situ* conservation, plant science and species recovery across Australia. We have made progress on six projects that target priority plants within each state and territory. Join us as we explore these projects, outlining how collaboration has led to both local and nationwide outcomes.

Completed projects

Australian Bushfire Emergency Assessment and Collection Project

PROJECT OUTCOMES



9 collections of 9 taxa

21 rapid flora surveys of **15** taxa

In 2020, the MSBP and the Garfield Weston Foundation generously provided additional funding to the Partnership to support our bushfire response work through emergency flora assessments and seed collections in fire-affected areas in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia. This project was completed this year, allowing us to survey 15 taxa and secure nine taxa in conservation seedbanks.

As part of this work, the Victorian Conservation Seedbank secured a large seed collection from a subalpine population of *Trachymene composita* var. *composita*. Also banked was the carnivorous Kangaroo Island Sundew (*Drosera schmutzii*), with seeds now held in the South Australian Seed Conservation Centre.

The Partnership is a long-standing partner in the international Millennium Seed Bank Partnership



The Kangaroo Island Sundew (*Drosera schmutzii*). This island endemic can be seen germinating from experiments conducted at the South Australian Seed Conservation Centre (Images: South Australian Seed Conservation Centre & Denzel Murfet).

(MSBP) managed by the Royal Botanic Gardens, Kew. In 2014 the MSBP established the Global Tree Seed Bank Programme through funding provided by the Garfield Weston Foundation. This program involved partner organisations in 35 countries with the aim to conserve over 3,000 of the rarest, most threatened and useful trees.

Banking on Seeds for Bushfire Recovery

PROJECT OUTCOMES



20 collections of **16** taxa



24 rapid flora surveys

of **15** taxa

18 germination trials of **8** taxa

670 plants propagated from **12** taxa

Our 'Banking on Seeds for Bushfire Recovery' project aimed to limit the decline of plant species from fire-affected areas in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia. It included a comprehensive program of seed collection, propagation, reintroduction, germination trials and rapid flora assessments across areas impacted by the 2019–20 bushfires.

Completed this financial year, the project allowed 16 taxa to be banked and resulted in over 600 plants being propagated for living collections, seed orchards and for translocation trials. In April 2021 seedlings of *Banksia solandri* were planted in an establishment trial at two locations in the Bluff Knoll area of the Stirling Range National Park, Western Australia. Seedlings were transported to the site by helicopter to reduce the spread of *Phytophthora cinnamomi* (dieback). The Australian Network for Plant Conservation also produced fact sheets for six of the project's priority plants. To read the fact sheets and for more information about the project please visit our project page.

This work was part of a national project funded through the Australian Governments' Wildlife and Habitat Bushfire Recovery Program.





Banksia solandri seedlings were transported by helicopter and planted in the Stirling Range National Park (Images: Andrew Crawford).

Going full bottle on Callistemon germination

Forrester's Bottlebrush (*Callistemon forresterae*) is a striking shrub that only grows along the Upper Genoa River, flowing from New South Wales into Victoria. This mauve flowered bush is listed as Vulnerable both nationally and in Victoria.

Staff at the Royal Botanic Gardens Victoria conducted germination testing for this plant under our 'Banking on Seeds for Bushfire Recovery' project. This research determined the optimal temperature range for *Callistemon forresterae* germination and produced multiple seedlings for use by the local community. These will be reintroduced to the wild by the Friends of Mallacoota to increase population numbers of the species. This work was part of our 'Banking on Seeds for Bushfire Recovery' project. To learn more about this species download our fact sheet.



Forrester's Bottlebrush (Image: Neville Walsh).

Ongoing projects

Four Partnership projects are ongoing, with project outcomes current as of 30 June 2022.

Emergency Seed Collecting Fund to Save Australian Native Flora

PROJECT OUTCOMES



63 collections of 53 taxa



21 rapid flora surveys of **17** taxa

198 germination trials of **110** taxa

Plants propagated for **16** taxa In February 2020, the Australian Foreign Minister met with her UK counterpart to discuss strategic collaborations between Australia and the UK. As part of those talks, the UK Government offered to support Australia's bushfire recovery efforts by funding the Partnership's emergency response efforts over two years. This very generous offer of support is enabling the Partnership to undertake a comprehensive and strategic collecting program in bushfire-affected areas across the country.

The project has so far completed germination trials for over 110 taxa. This crucial activity reveals the process needed to germinate plants from seeds, allowing practitioners to understand the germination requirements of the seeds used in the restoration and management of bushland areas. The project has so far secured 53 taxa in conservation seed banks, including the endangered *Boronia imlayensis* from Mt Imlay National Park in south-east New South Wales. The only known population of this species was burned during the 2019–20 bushfires, but thankfully natural regeneration from the soil seed bank has already been observed during surveys of the area. In August 2021, staff from the National Seed Bank and Booderee National Park and Botanic Gardens collected 60 seedlings to create an *ex situ* insurance population, illustrating the importance of plant germplasm in all its forms when working to conserve Australia's native flora.



Boronia imlayensis seedlings at Booderee National Park and Botanic Gardens (Image: Julie Percival).

This project also enabled the Tasmanian Seed Conservation Centre to bank conservation collections from plants that have notoriously hard-to-collect seeds. Good regrowth after fires in the Liawenee area allowed collections of three *Geraniaceae* species (*Geranium brevicaule*, *Geranium potentilloides*, and *Pelargonium inodorum*) to be made and secured in the Hobart-based seed bank. Collectively, these collections total more than 112,500 seeds, providing options for future research or restoration in Tasmania.



Tasmanian Seed Conservation Centre volunteer Tim Rudman collects seed from *Pelargonium inodorum* at Rats Castle, Tasmania (Image: © Royal Tasmanian Botanical Gardens).

The Rare Bloom Project™



The Rare Bloom Project[™] is a three-year program delivered in partnership with WWF-Australia in collaboration with Botanica by Airwick. It aims to improve conservation outcomes for 120 Australian native wildflowers from fire-affected areas through seed banking, germination research and restoration.

By the end of June 2022, over 66 taxa have been banked and five taxa propagated for conservation work across the country. Staff at the Western Australian Seed Centre, Kings Park propagated the endangered Bussell's Spider-orchid (*Caladenia busselliana*) from seed originally collected and banked in 1999. The wild sub-population where the seed was originally collected no longer exists, so these germinants represent a very precious source of genetic diversity for a species that had reduced to only 13 known individuals in the wild. Similarly, in early August 2021, the team at the South Australian Seed Conservation Centre translocated 250 seedlings of the critically endangered Corunna Daisy (*Brachyscome muelleri*) at Secret Rocks Nature Reserve. These plants were grown from seed produced at a Seed Production Area at the Adelaide Botanic Garden, and if the initial success continues, the translocated plants will act as a crucial insurance population for the species.

In April this year, WWF-Australia and Botanica by Airwick established a pop-up fundraising boutique in Sydney called The Rare Bloom Florist. The aim of the pop-up was to raise further funds to support the project. More information about this initiative is provided in our *Partnership highlights* section.





Bussell's Spider-orchid in the Kings Park Nursery, and the Corunna Daisy transplanting at Secret Rocks Nature Reserve.

Blue mountains awash with pink!

The Pink Flannel Flower (*Actinotus forsythii*) is a bushfire ephemeral, meaning its seeds germinate after fire. Given the species does not flower annually, it can be difficult to obtain conservation collections for seed banks. Luckily, after the 2019–20 fires, we observed mass emergence throughout the Blue Mountains National Park. The team from the Australian PlantBank at The Australian Botanic Garden, Mount Annan, jumped at the chance to collect and bank half a million seeds as part of the Rare Bloom Project[™].

In collaboration with the horticulture team at Mount Annan, 73 plants were successfully propagated and planted at the garden in March 2022, helped by staff from Botanica by Air Wick and WWF-Australia. This botanic gardens' living collection of the Pink Flannel Flower will act as a reference for further research, and provide opportunities for ongoing conservation, education and display.

Pink Flannel Flowers were planted at the Australian Botanic Garden, Mount Annan, in March 2022. Display gardens like this help to educate visitors about the importance of native plant conservation (Images: Gavin Phillips and Bradley Desmond).





Protecting Plants with Proctor & Gamble

PROJECT OUTCOMES



19 collections of **19** taxa

10 germination trials of **8** taxa

This project is another practical collaboration between our Australian Partners and the MSBP. Target species for the project were selected based on their threatened species status, and their ability to provide new information to seed science. Partners across five conservation seed banks in New South Wales, South Australia, Victoria and Western Australia undertook germplasm collection and germination trials. To date we have secured seeds of 19 taxa and completed germination trials for eight taxa. This includes seed collected from a native Creeping Mint (*Mentha satureioides*) by the Australian PlantBank at the Australian Botanic Garden, Mount Annan. This highly aromatic species can be found throughout eastern New South Wales; however, these collections were gathered from endangered Cumberland Plain Woodland in the Sydney region. Woodland understorey species such as the Creeping Mint are now regionally rare due to extensive clearing and subsequent weed invasion. This important collection will remain available for future research and local conservation projects.

The Procter & Gamble Company provided philanthropic support to the MSBP to help save endangered species in various countries through their 'P&G Save 20 in 2020' program. Under this program, the MSBP provided funding to the Partnership to secure threatened Australian plants but, due to COVID-19, implementation of the project was delayed beyond 2020.

Mentha satureioides flower by Harry Rose, available under a Creative Commons Attribution licence 2.0 at www.flickr.com/photos/macleaygrassman/43582561432.



Island, Alps and Forests

PROJECT OUTCOMES



61 collections of **59** taxa

48 rapid flora surveys of **45** taxa

The 'Island, Alps and Forests' project is supporting the Partnership to continue our bushfire recovery work across seven heavily affected regions in eastern and south-eastern Australia. Our Partners are undertaking seed collections, rapid flora surveys and germplasm collection activities to safeguard our native flora. Working alongside Traditional Owners and community groups in the affected regions is also a crucial element to the project.

To the end of June 2022, we have been able to secure 59 taxa and undertake important flora surveys of 45 taxa for this project. One target species, listed as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), for this project—the Kyandra Dampiera (*Dampiera fusca*)—is known only from a few scattered records along a ridgeline on the Nunniong Plateau in Victoria. In February 2022, a population not seen for almost 40 years was relocated by staff of the Victorian Conservation Seedbank. This population had responded impressively to the 2019–20 fires, with well over one million plants estimated to have regenerated. This represents the largest population of this species in Victoria, and vastly increases the number of known individuals for this species. Unfortunately, most plants are sterile, but some seed was obtained during this trip and is now in storage in the Victorian Conservation Seedbank.

This project is being supported by a grant awarded under the Australian Government's '*Regional Bushfire Recovery for Multiregional Species and Strategic Projects Program*'.



Dense regeneration of *Dampiera fusca* and *Acacia lucasii* at Nunniong Plateau, Victoria (Image: Andre Messina).

Community support makes our daisy!

As part of our Island, Alps, and Forests project, the National Seed Bank at the Australian National Botanic Gardens worked alongside the Bowning and Bookham Landcare Group to secure the vulnerable Yass Daisy (*Ammobium craspedioides*). This group helped to arrange access to new populations on private property and kept an eye on the developing seed to ensure their harvest was well-timed. Collaborating with communities across the country means we have eyes on the ground in regional locations, monitoring for seasonal changes in the flora. These valuable community resources are crucial to conserving Australia's most threatened native plants.



Yass Daisy flower (Image: Dave Bishop).

Guidelines, data and standards

The Partnership has again been working to contribute to the development of guidelines and standards for seed and germplasm conservation and to improve access to seed bank data for research and use, and we are excited to share the progress the Australian plant conservation community has made in the past 12 months.

Publication of the Germplasm Guidelines

At the September 2021 Australasian Seed Science Conference, Professor Tim Entwisle launched the 3rd edition of *Plant germplasm conservation in Australia – Strategies and guidelines for developing, managing and utilising ex situ collections* (the Germplasm Guidelines).

The Germplasm Guidelines provide an evidence-based, best practice guide for the management of *ex situ* (off-site) collections of seeds or plant tissues, or plants in nurseries and living collections. The guidelines aim to provide access to current research findings and practice to maximise the value of every seed or plant collection. They showcase the latest techniques, literature and procedures for optimising germplasm storage and use, and are intended for conservation agencies, scientists, seed banks, nurseries and those interested in applied plant biology.

Production of the 3rd edition was a collaborative and inclusive project, with 78 contributors from seed banks, botanic gardens and other organisations including CSIRO and universities throughout Australia, with additional contributors from New Zealand, the US and the UK.

The Germplasm Guidelines are a joint publication of the Australian Network for Plant Conservation and the Australian Seed Bank Partnership, funded by the Ian Potter Foundation. You can download a free PDF version or order a hard copy at: https://www.anpc.asn.au/plant-germplasm/, and read more about this incredible updated resource on page 36.



The Germplasm Guidelines are a practical, science-based handbook for *ex situ* conservation of plant material.



Upgrade of the Australian Seed Bank Online portal

The Australian Seed Bank Online portal is a site for the Australian Seed Bank Partnership to provide open access to our Partners' seed data, ensuring it can be shared and analysed. This online resource is a virtual seed bank for seed collectors, researchers, students and government agencies to examine the status of various *ex situ* collections across Australia. It can also be used to identify national collecting priorities to ensure the diversity of species, as well as the genetic diversity within a species.

The Atlas of Living Australia hosts the current version of the Australian Seed Bank Online. As mentioned in previous annual reports, the current portal is now 10 years old and in need of a significant upgrade in order to ensure the software meets current industry and accessibility standards. The update will ensure seed collection and germination data is displayed and exportable to support research, *ex situ* conservation and *in situ* management of Australia's native flora.

This year we began the process of updating the portal. Over the coming months we will run several workshops to consult with our Partner and Associate organisations to determine how the portal can be made more accessible and useful to the conservation, restoration and research community. The new portal is scheduled for completion by the end of the 2022–23 financial year.



The portal will host information about seed collections such as *Davesia obovata* secured by the Western Australian Seed Centre (Image: Andrew Crawford).

Collections review project

Australia is globally unique for many reasons, including its high levels of plant endemism and our coordinated national Partnership dedicated to safeguarding it. Nowhere else is there a continent-wide, formal network of seed banks and conservation organisations working together to save threatened flora. This unique collaboration presents Australia with an exciting opportunity to interrogate the country's seed collections to better understand the status and value of Australia's germplasm meta-collection.

The Partnership's new Collections Review Project aims to examine seed and other germplasm collections made between 2020 and 2022 that are secured in Australia's conservation seed banks. The review will culminate in a paper that illustrates the representativeness, functionality and value of these germplasm collections.

The project will enable the Partnership to better understand and prioritise future collecting and research at the national and sub-national levels, leading to more targeted investment in staff and facilities; local, regional and national collecting priorities; and leading-edge biological and ecological research. With the Partnership launching its new Strategic Plan in the second half of 2022, this review will help to shape our priorities over the next ten years.

Following an open and competitive expression of interest process, Dr Nathan Emery from the Australian PlantBank was selected to lead the data analysis components of the project. Dr Emery will work closely with the Partners to consolidate datasets from Partner facilities and undertake statistical analysis to assist in the review of collections and preparation of the paper for publication. The outcomes of this project will be reported in the Partnership's next annual report.

Communications

To increase awareness of the work of seed banks in plant conservation, the Partnership works across various communication platforms. Publicising our achievements is crucial for increasing stakeholder engagement, generating support and sourcing donations that allow our work to continue.

Conferences

Our Partners and Associates attend conferences to increase our networks, learn more about the plant conservation efforts taking place nationally and globally, and promote the conservation and research conducted across the Partnership. The following three key conferences were hosted or supported by the Partnership over the past 12 months, providing valuable opportunities to showcase and improve the work we collectively deliver.

Australasian Seed Science Conference 2021

From 6 to 10 September 2021, the Partnership presented the Australasian Seed Science Conference. Hosted virtually by the Australian National Botanic Gardens, this global event included five days of plenary sessions, workshops and social events. Opened by Costa Georgiadis, the conference brought together 425 delegates from 34 countries.

The conference program boasted seven keynote speakers, 61 presentations and 17 posters. These covered topics including seed dormancy and germination; seed storage, conservation and utilisation; establishment and management of seed conservation facilities; seed ecology and cultural knowledge and use of native seeds. Conference recordings and materials are available open-access at https://www.seedpartnership.org.au/events/ australasian-seed-science-conference-2021/

Papers from the conference will be compiled into special issues of the *Australasian Plant Conservation Bulletin* and the *Australian Journal of Botany*, to be published in 2022 and 2023 respectively. The next Australasian Seed Science Conference will be hosted by the Australian Grains GeneBank in Horsham, Victoria, in 2025.



The Partnership would like to thank the conference sponsors, partners, organisers and attendees who made this event possible.

13th Australasian Plant Conservation Conference

The Australian Network for Plant Conservation hosted the 13th Australasian Plant Conservation Conference (APCC13) in Albury, New South Wales, over 3–7 April 2022. Under the conference theme 'Seeds to Recovery', presentations, workshops and field trips covered topics such as recovery of native plants and vegetation after fire, and native seed supply.

APCC13 brought plant conservation scientists and practitioners together from across Australia to discuss the latest scientific findings and how best to approach the key threats to plant conservation in Australia. Several Partners and Associates attended the conference, providing updates on the Partnership's six bushfire projects, as well as



Dr Lydia Guja, Dr Gemma Hoyle, Leah Dann and Amy Buckner presenting their National Seed Bank research at APCC13.

participating in a workshop on the UN's Decade on Ecosystem Restoration, highlighting the need for data integration to capture the diverse range of seed species and ecosystem functions more effectively around the country.

Fenner Conference on the Environment – 'Exceptional times, exceptional plants'

The latest Australian Academy of Science's Fenner Conference on the Environment was delivered by the Australian Network for Plant Conservation over two days this financial year. The first was hosted online in September 2021 during the Australasian Seed Science Conference, and the second in person at the Shine Dome in Canberra in June 2022. A focus of the conference was the release of the 3rd edition of *Plant germplasm conservation in Australia – strategies and guidelines for developing, managing and utilising ex situ collections* (the Germplasm Guidelines). This important resource contains methods for conserving plant germplasm with the aim of facilitating species recovery and protecting species from extinction.

In the context of the Germplasm Guidelines, presenters discussed techniques to identify seed storage behaviour and short-lived species, as well as the importance of tissue culture and living collections for conserving exceptional species. Cryopreservation of different tissue types for exceptional species (including shoot tips and fern spores) was also discussed as an option for halting the decline of non-orthodox plant populations *in situ*. The Fenner Conference also highlighted the urgent need for scientists to collaborate and identify gaps and priorities for responding to present and future threats to biodiversity. You can view the full Fenner Conference proceedings and a suite of videos relating to the Germplasm Guidelines on the Australian Network for Plant Conservation's YouTube page.

Australian Academy of Science Fenner Conference on the Environment 2021: Exceptional times, exceptional plants Thursday 9 Sept 2021 A workshop on identification and conservation of plant species that are difficult to bank using conventional techniques

Fenner Conference on the Environment banner.

Digital media

During the 2021–22 financial year the Partnership invested in improving our social media presence by sharing weekly partner highlights from project reporting, and promoting the Australasian Seed Science Conference 2021. When compared to the previous financial year, the Partnership increased our content by 36 per cent on Twitter, 51 per cent on Facebook and 69 per cent on Instagram. The additional effort has also resulted in an increase in followers and online engagement across the three platforms when compared to the previous year (see Table 1).

Our followers are primarily located in Sydney, Melbourne, Canberra, Adelaide and Perth. Our largest follower group on Instagram are women aged 25–34 years, and women aged 35–44 years are our primary audience on Facebook. We have low engagement with users between the ages of 18 and 24 years, and with people over 55 years. Modifying content to engage better with underrepresented groups will be a focus for the next financial year. Table 1: Partnership social media metrics during the 2021–22 financial year, compared to the previous financial year.

Metric	Twitter	Facebook	Instagram
Number of posts	143 (+36%)	70 (+51%)	48 (+69%)
- Reach/impressions	99,639 (+21%)	117,092 (+85%)	5,832 (-17%)
– Likes/reactions	1,628 (+58%)	5,897 (+90%)	881 (+71%)
– Shares/retweets	422 (+59%)	315 (+75%)	26 (+62%)
Followers	788 (+24%)	3,284 (+12%)	348 (+42%)

* Instagram reach is lower this year because of a paid promotion in 2020–21 that resulted in a significantly higher artificial reach during that period.



The two most popular posts this financial year involved work under the Rare Bloom Project[™] on the Bussell's Spider Orchid (*Caladenia busselliana*) and the Pink Flannel Flower (*Actinotus forsythii*).

Partnership publications

Apart from the many research publications developed by our Partners, the Partnership has prepared articles and papers to promote awareness of our work at the project and national levels. These can be viewed following the links below:

Samara – The International Newsletter of the Millennium Seed Bank Partnership.

- Issue 2: In case of fire: Collaborate to conserve
- Issue 3: A new edition of the Australian
 Germplasm Guidelines provides a benchmark for *ex situ* conservation practice

Australasian Plant Conservation – The bulletin of the Australian Network for Plant Conservation.

- Issue 30(2): A national partnership approach to bushfire recovery through seed conservation for Project Phoenix
- Issue 30(4): Bushfire recovery through two years of collaboration

Partnership highlights for 2021–22

Learn about our Partners' highlights for this financial year.

George Brown Darwin Botanic Gardens

The year kicked off with a new start for the seed bank in Darwin, with the facility moving from its previous location, in the nursery compound in the northern tip of the gardens, to be co-located within the Administration Building. This move has provided greater flexibility and space for the seed bank and will enable it to expand both staff and equipment in the years ahead as the collecting and conservation program continues to grow. Following the successful move, Ben Wirf joined a Bush Blitz expedition to Groote Eylandt off the coast of the Northern Territory, in the Gulf of Carpentaria, for a week of collecting seed never before secured in seed banks anywhere in the world. Unfortunately for Ben, his trip was cut short when he took a fall and suffered injuries that saw him withdraw from the collecting activities. He has recovered well but work on the seed bank has since revolved around collection maintenance and record keeping.

Alice Springs Desert Park

Working with the Partnership this year has been helpful for linking up Alice Springs Desert Park (ASDP) with other seed banks around the country, to better understand the challenges and opportunities shared in common by all. Working with other seed banks around Australia to improve national responses for threatened species is an important part of the Partnership's work and ASDP welcomes the opportunity to contribute. As with all facilities, the ASDP faced challenges with COVID-19 lockdowns and field restrictions, but haven't stopped refining their *ex situ* conservation priorities and target species for the season ahead. The ASDP is now collecting seed for the UK Governmentfunded Emergency Seed Collecting Fund project, with several of the species collected intended for both long-term conservation in the bank, as well as for use in displays for education within the Park. Having access to funding opportunities provided through the Partnership is important for those working in such remote locations. The distances covered to collect seed can be significant and very remote, often requiring multiple vehicles and larger teams heading into the field; this can also mean the costs of consumables is higher than in coastal capital cities, making ASDP's conservation programs that little bit more expensive to deliver. The ASDP is looking forward to the season ahead and the chance to once again be in the field searching for their next collections.



As part of the Emergency Seed Collecting Fund project, the ASDP will germinate the MacDonnell Ranges Cycad (*Macrozamia macdonnellii*) seen here in Cycad Gorge, Finke Gorge National Park. (Image: Cycad Gorge by C Goowin is licensed under CC BY 3.0 at https://commons.wikimedia. org/wiki/File:CycadGorge.jpg).

The Western Australian Seed Centre, Kings Park

This year saw Matthew Stray move into the role of Curator of the Seed Bank following the retirement of long-standing Curator, Luke Sweedman. During his first year, Matthew has largely been involved in progressing Kings Park's preparedness actions towards the threat of Myrtle Rust entering Western Australia. In what was the second of a three-year program towards safeguarding WA flora from Myrtle Rust, funded by the WA Government Department of Primary Industries and Regional Development, the Western Australian Seed Centre, Kings Park has continued to fulfil its objectives in collecting and banking seed of species determined to be at risk of the disease.

Over the course of 2021-22, field collection activities included trips to Western Australia's Mid-West Region, Stirling Range and Kimberley as well as various day trips made in the areas surrounding Perth. With 45 days spent in the field, 186 collections of 122 species were made, most of which have now undergone germination testing and are safely stored in the seed bank as conservation collections. These are also now available for use in research activities. Collections were made across a broad cross-section of the species' ranges to gather a suitable representation of the genetic diversity within a species, and future collecting activities will focus on increasing the number of populations from which the seeds are sourced.

With the benefit of additional funding made available by the Australian Seed Bank Partnership through the UK Government Emergency Bushfire Fund, Kings Park was able to send a team of four staff to collect within bushfire-prone areas of Western Australia's Stirling Range National Park over five days. A highlight of this trip was the collection of seed of the Dwarf Kangaroo Paw (*Anigozanthos gabrielae*), which is a beautiful little perennial plant that grows in sand, throughout winter-wet areas in southern Western Australia.



Eucalyptus lehmannii subsp. *parallela*, Stirling Range National Park (Image: Matthew Stray).

This plant has become a showstopper when on display within the botanic garden in recent years, but over time the quantity of seed available for propagation has dwindled.

Other noteworthy and highly ornamental species collected on this trip included *Eucalyptus lehmannii* subsp. *parallela, Beaufortia decussata* and *Verticordia pennigera*. In total, this successful trip yielded more than 30 collections which have now been processed, X-rayed and germination tested, with all relevant data recorded. The germination data will soon be made available for use by seed bank partners and hopefully inform and build upon future research and conservation initiatives taking place in the region.

The Western Australian Seed Centre, Kensington

Rising out of an otherwise flat landscape, the mountains of the Stirling Range National Park provide a distinctive geological feature in the south-west of Western Australia. This unique location is home to an incredible diversity of plants; over 1,500 species, more than 80 of which are endemic to the park. The higher reaches of the eastern peaks (> 900 m altitude) are recognised as a Threatened Ecological Community (the Eastern Stirling Range Montane Heath and Thicket) and are home to a dozen threatened plant species and numerous other plants of conservation significance. This eastern range is also the location for what is regarded as one of Western Australia's most spectacular but also most difficult walks, the Stirling Ridge Walk. This walk follows the mountain ridges from Ellen Peak in the east, to Bluff Knoll (the highest peak in southern Western Australia), to the west.

A few years ago, two fires, one in Autumn 2018 and one on Boxing Day 2019, had resulted in more than two thirds of the park being impacted by fire. The areas affected included the montane ecological community and the threatened species it contains. To assist these species in their recovery, a concerted management effort has been underway including post-fire surveys to help understand species' response to fire, seed collection and translocation.

Thanks to bushfire recovery funding obtained from the UK Government by the Australian Seed Bank Partnership, seed collections were made from a number of these threatened species. Over the summer of 2021–22, staff from the Western Australian Seed Centre, Kensington, made numerous trips to the park, including its highest peaks, seeking unburnt populations, then bagging fruit as they formed to allow seed collection later in the season.

Staff on the Stirling Ridge Walk below Pyungorup (Image: Megan Dilly).





Sunrise over the Stirling Range (Image: Andrew Crawford).

The culmination of this work was a three-day expedition following the route of the ridge walk and retrieving seed that was bagged on earlier trips. What can already be considered a challenging walk-due to the difficult terrain, extreme weather conditions and the need to carry all required water—was made even more difficult thanks to the additional equipment required when making in situ seed collections. The team managed to secure 15 seed collections of six threatened species and an additional five collections of conservation significant species. The bulk of the seed will be stored for safekeeping in the vault at the Seed Centre. However, for some of the species, seedlings produced from germination testing of the collections are destined to augment existing plantings in two seed orchards. These seed orchards aim to bulk the quantities of seed available to facilitate future recovery of these unique and highly threatened Stirling Range species.

South Australian Seed Conservation Centre

In a bid to safeguard Kangaroo Island's threatened flora from extinction, the South Australian Seed Conservation Centre has been working to launch a Threatened Flora Seed Production Garden at the Cygnet Park Sanctuary. The 5,000 m² herbivoreproof exclosure will host more than 60 of the island's at-risk species and will allow future seed collections for banking and biodiversity recovery projects on the island. A collaboration between the SA Seed Conservation Centre, the Nature Conservation Society of South Australia and BioR, the garden will contain tailored habitats to mimic the conditions found across various parts of the island. These include a range of soil types, rocky outcrops, wetland areas and ponds.



Once established, the garden will be a hub for exciting conservation outcomes in the years to come (Image: Troppo Architects).

Over 1,500 plants have been propagated for the garden by botanists at the SA Seed Conservation Centre, which will be planted out by Kangaroo Island community members and project partners in July 2022. To ensure the garden's success, a 'Friends of KI Threatened Flora group' will be formed, upskilled and mobilised to collect seed, monitor plants, propagate and translocate species from the garden to the wild, giving the island's natural habitat a biodiversity boost.



Seedlings have been grown for planting at the Seed Production Garden in July 2022 (Image: Bradley Desmond).

Support for this initiative has been provided through:

- the Nature Conservation Society of South Australia's 'Mobilising and Supporting a Community Led Fire Recovery for Kangaroo Island's Threatened Flora' project—funded by the Landcare Led Bushfire Recovery project
- the Australian Seed Bank Partnership's 'Island, Alps and Forests' project—funded by the Australian Government's Bushfire Recovery Program for Wildlife and their Habitat
- the Paton family's contribution of land to Cygnet Park Sanctuary
- BioR and the Nature Conservation Society of South Australia providing project assistance
- garden concept designs by Troppo architects
- SeaLink providing passage to and from Kangaroo Island.

The Victorian Conservation Seedbank

This past year has been another busy one for the Victorian Conservation Seedbank (VCS), whose staff undertook 13 trips throughout the summer, making more than 90 seed collections. One of the most significant collections was of a very rare *Commersonia.* This species was first observed back in December 2020 while botanists from the VCS were out on the Genoa River in East Gippsland undertaking species assessments and seed collecting as part of Project Phoenix.

During a search for Pomaderris helianthemifolia subsp. hispida we discovered a small population of this unknown Commersonia. Members of this genus are quite rare in Victoria and often only seen following disturbance, such as after fires. So, despite not knowing which species it was, we were sure it would be a significant find. Plants were sterile, so cuttings were taken and grown on at the Royal Botanic Gardens Victoria. In October 2021, plants in the nursery produced fruit, providing all the features needed for identification. We were then able to establish that plants were *Commersonia rugosa*, a species not previously recorded in Victoria. This is the fourth species of Commersonia recorded in Victoria, three of which are only ever seen following fire and known from only one or two sites.





Commersonia rugosa fruiting along the Genoa River in East Gippsland (Image: Andre Messina).

In December 2021, less than two months after establishing the identity of these plants, we returned to the spot on the Genoa River and collected seed from this population as part of the Partnership's 'Island, Alps and Forests' project. During this work we were able to find eight plants in two small clusters on a rocky river terrace, making this one of the rarest and most enigmatic species in Victoria. We were able to collect seed from six plants which are now secured in long-term storage at the VCS.

Tasmanian Seed Conservation Centre

Work carried out in the Tasmanian Gel River area this year proved to be very fruitful, with six species collected from the ridgeline of The Needles, located in the north-west tip of the Southwest National Park. Most notable among the collections was a recollection of the endemic *Anemone crassifolia*, which proved to be more successful than the previous season, with 4,800 seeds harvested. Other species collected were *Stylidium graminifolia* and the charismatic endemics *Blandfordia punicea*, *Dracophyllum milliganii*, *Isophysis tasmanica* and *Campynema lineare*.

Collecting and surveying work on the Central Plateau uncovered a new population of the rare Euphrasia scabra. This was the first record for this bioregion since 1981, and 12,000 seeds were harvested from this new population. Also notable was a collection of 14,400 seeds of the endemic Coprosma moorei, following a tip-off of a heavily fruited, large population near Lake Mackenzie. This species is typically problematic as the fruit only holds a maximum of two seeds and the populations typically tend to be small and very scattered. The Coprosma population was found during the monitoring of a Pencil Pine replanting trial. The area was consumed by fire back in 2016 and had destroyed stands of the fire-vulnerable pine. Trials are being conducted to see whether the pines can be successfully reintroduced, using seed



Dracophyllum milliganii and *Isophysis tasmanica* flowering on a burnt hillside in the Southwest National Park (Images: James Wood and Liam White).



Coprosma moorei fruiting in an alpine bog south of Lake Mackenzie (Image: James Wood).

collected by the Tasmanian Seed Conservation Centre. It was a novel and rewarding experience collecting seed among young plants established through previous work.

National Seed Bank

One of the highlights at the National Seed Bank this year was the successful collection and germination of *Dracophyllum oceanicum*; a shrub species restricted to a small part of the Jervis Bay area in New South Wales. Collecting and germinating this species was significant, as historical botanical descriptions indicated seeds had not been observed and the species may be sterile. The seed collections mark the first time this species has been represented in an Australian seed bank and ensures that this species is safeguarded into the future.

Dracophyllum oceanicum plants around the Jervis Bay area and at Booderee Botanic Gardens were netted to catch falling seed. This resulted in three small collections, totalling 200 seeds.





Dracophyllum oceanicum occurs on coastal cliffs (Images: M. Fagg and J. Fitz Gerald).

The dust-sized seeds had to be carefully handled, with debris and chaff meticulously removed from the collections under a microscope. Seed was then X-rayed to ensure the seeds were filled before a tetrazolium staining test was conducted to check whether the seeds were viable. All collections were found to be viable, and the seeds germinated readily under standard conditions. Germinated seeds have been transferred to Booderee Botanic Gardens at Jervis Bay where the seedlings will be grown and used for future seed collections.

Seed collections of *Dracophyllum oceanicum* were made possible by funding from the UK Government to support plant conservation after the 2020 bushfires. Because of this funding, the National Seed Bank has been able to collect, store and research the germination requirements of several species that have been bushfire affected or that inhabit areas that are at risk of future fires.

The Australian PlantBank

The PlantBank team have witnessed some impressive regeneration of native plants out of the ashes of the 2019–20 summer fires. A spectacular and aromatic plant that germinates prolifically after bushfire is the Incense Plant. Calomeria amaranthoides, which is a biennial herb from the daisy (Asteraceae) family and which has been flowering and fruiting profusely this season, in fire-disturbed areas, like road verges, south from Hexham. The reddish plume of their inflorescence can be seen from quite a distance. The PlantBank team stumbled across a large population of this species in Nadgee Nature Reserve while searching for the more elusive Hibbertia notabilis-however it was not then producing seed. The area had been severely burned by the fires, but is now thick with regenerating plants. When returning to the site six months later to collect the bags from Hibbertia notabilis, the team could not resist making a seed collection of this stunning two-metre tall herb, which can be seen in the photos dwarfing seed collector Lily.



PlantBank staff surrounded by *Calomeria amaranthoides* foliage at Nadgee Nature Reserve, New South Wales (Images: Laura Watts and Gavin Phillips).



The Queensland Herbarium

The Queensland Herbarium has teamed up with Quandamooka Yoolooburrabee Aboriginal Corporation (QYAC) to survey and collect seeds from the endangered Swamp Daisy, *Olearia hygrophila*, as a part of the Australian Seed Bank Partnership's 'Island, Alps and Forest' project.

The Swamp Daisy is a highly restricted rare plant from Minjerribah (North Stradbroke Island) and is the only known endemic plant species from the island. As its common name suggests, it occurs in dense coastal swamps of *Melaleuca quinquenervia* and *Eucalyptus robusta*, with species of *Gahnia* dominating the ground layer. The species appears to be highly dependant on groundwater for survival and seems unable to tolerate soil desiccation. Access to a high water table therefore appears essential to its survival. Swamp Daisy is known to persist only at one location while being ephemeral at several others.

In collaboration with QYAC and with the assistance of QYAC Rangers, active steps have been taken to ensure this species' ongoing survival. This work so far has involved surveying sites where the species currently exists and in locations it was previously recorded, collecting seed for *ex situ* conservation, and DNA sampling for future investigations into population genetics. The work has enabled invaluable data to be gathered on current population size, the number of locations where

it currently occurs and the threatening processes faced by this endangered species. This information is currently being utilised to prepare a new threatened species assessment on *Olearia hygrophila* under the Common Assessment Method.





Collecting the Swamp Daisy (*Olearia hygrophila*) on Minjerribah (Images: Jason Halford).

Australian Network for Plant Conservation

The fully revised 3rd edition of *Plant germplasm* conservation in Australia (the Germplasm Guidelines) was launched in September 2021 at the Australasian Seed Science Conference, as a joint publication of the Australian Network for Plant Conservation and the Australian Seed Bank Partnership, funded by the Ian Potter Foundation. The Germplasm Guidelines are a resource for sharing knowledge of seed banking and other forms of ex situ plant conservation, which helps safeguard plant diversity for future use in restoration, translocation, horticulture and research. The guidelines are practical, technical and evidence-based, providing a workflow to address each step of acquiring, maintaining and utilising genetically representative collections.



The Germplasm Guidelines provide a flowchart of the decision-making process for plant germplasm conservation (Image: Offord et al. (2021). Available at https://www.anpc.asn.au/plant-germplasm/).

They bring together decades of research and experience from 78 contributors actively conserving Australian plants in seed banks, botanic gardens and conservation nurseries. They take readers through the genetics and practice of acquiring collections and the processes of seed banking, tissue culture, cryopreservation, and living collections maintenance, along with 50 case studies to highlight the application of research and theory.

This edition is a testament to the increased understanding of the Australian flora, with mentions of more than 116 genera and 117 plant families. The Germplasm Guidelines include information on common plant families, including those known to be difficult to store and germinate. They address the need to collect, store and grow plants with 'special' life history stages or growing requirements and 'special' types of germplasm.

The Germplasm Guidelines have been downloaded more than 700 times and are being incorporated into conservation management and policy documents nationally. They are available for free download at https://www.anpc.asn.au/plantgermplasm/ and are supported by a video series and webinar recordings available on the Australian Network for Plant Conservation's YouTube channel.



Australian Seed Bank Partnership Secretariat

2022–32 Strategic Plan

The Australian Seed Bank Partnership is currently working on its next ten-year Strategic Plan. Following consultation of the Partnership in Darwin in 2019, and after reflecting on the challenges faced by the Partnership as a result of the 2019–20 bushfires and COVID-19, the new Strategic Plan will be streamlined to provide greater flexibility to adapt to our key challenges. The plan will include four key outcomes:

- growing our collections, research and restoration contributions
- growing our investments in our facilities and people
- improving engagement and partnerships with Australia's First Nations Peoples
- developing and sharing knowledge.

Our new Strategic Plan will also outline how we will contribute to reversing the decline of biodiversity across the continent over the coming decade, and assist with delivering meaningful progress towards the UN Decade on Ecosystem Restoration. The Strategic Plan will be released at the 7th Global Botanic Gardens Congress in September 2022.

Rare Bloom Florist

To raise awareness of The Rare Bloom Project[™], Botanica and the World Wide Fund for Nature (WWF-Australia) opened a pop-up boutique over 28–30 April 2022. Located at The Rocks in Sydney, the 'Rare Bloom Florist' showcased handcrafted paper flowers made by Jo Neville, as well as a series of unique vases painted by Shelby Sherritt, Brooke Styles and Rachael Sarra. These pieces were inspired by the more than 30 threatened wildflowers that were secured during the first year of the project. A silent auction allowed visitors to bid on the different pieces, with all proceeds donated to WWF-Australia to contribute towards the project. With over \$2,500 raised, this funding will go towards a Partnership scholarship in 2023 that focuses on seed-related research and supports the conservation of Australian flora. The scholarship will support an early- to middle-career researcher, or a student completing an Honours/Masters/PhD project in one of our Partnership facilities.







Paper flowers and vases from the Rare Bloom Florist Pop-up (Images: Damian Wrigley).

Looking to the future

The Australian Seed Bank Partnership is working towards a future where Australia's native plant diversity is valued, understood and conserved for the benefit of all. To achieve this we will focus on the following themes in 2022–23 and beyond.

First Nations engagement

The Australian Seed Bank Partnership recognises First Nations Peoples throughout Australia, including their continuing connection to Country. We pay our respects to Elders past, present and future.

Our facilities are located on many different lands throughout Australia, and we undertake collecting, research, translocations and restoration activities across many more. The Partnership is therefore committed to Reconciliation with Australia's First Nations Peoples. Over the coming years, we will build on our existing collaborations with Indigenous groups to support best practice conservation in line with cultural expectations. We will seek to learn together and improve our understanding and approaches to working on Country for better biodiversity outcomes.

We will also strive to secure funding that supports co-development and co-delivery of seed conservation projects on Country, and share any benefits realised through these collaborative efforts, including knowledge and expertise, to complement the work of traditional custodians in conserving flora on Country.

> Ben Wirf and Bobby Maralngurra; collecting seed from *Eucalyptus koolpinensis* at Kakadu National Park (Image: Tom North).

Improve capacity building in the Australasian region

Enhancing capacity in-country and across the broader Asia-Pacific is an essential component of achieving long-term, sustained conservation impact within the Australasian region. Developing Australia's capacity as a regional leader in seed science will allow for skills and capability to be shared with neighbouring seed scientists, and will allow for additional plant species to be secured in local and international seed banks.

Potential future projects in Australasia will be dependent on funding availability but could include reviewing current capacity of Pacific neighbours, identifying key challenges in the region, and taking steps to provide openly accessible training resources to all.

Improving corporate collaborations

An important source of support for the Partnership are the resources and funding provided from government, corporate sponsorships, grants and donations. These enable our Partners to maintain their world-class facilities and to safeguard Australia's native plant species. To ensure our work to conserve Australia's unique flora continues, we welcome collaborations with individuals, organisations and governments around Australia and further afield.

Our Partnership Champions manage and oversee donations provided to the Partnership and are actively working to develop new fundraising initiatives and facilitate future corporate sponsorships. It is our hope that with cooperation and consistent funding, we will be capable of overcoming many future challenges and threats and create a future where Australia's plant diversity is recognised for the ecosystem services it supports across the continent. With the support of like-minded people and organisations, we can continue to grow our national effort to conserve Australia's native plant diversity through collaborative and sustainable seed collecting, banking and research, and by sharing our knowledge about Australian plants across the equally diverse plant conservation community.



Translocations of the Corunna Daisy (*Brachyscome muelleri*) at Secret Rocks Nature Reserve would not have been possible without a corporate collaboration with WWF-Australia and Airwick for the Rare Bloom Project[™] (Image: Jenny Guerin).

Collections review

As previously discussed in the Year in review section, the Partnership has pledged to undertake a review and gap analysis of seed collections secured from 2000 through to 2020 that are currently held in Partnership conservation seed banks. This review aims to illustrate the representativeness, functionality and value of the germplasm collections held in seed banks across Australia.

The review will directly inform future initiatives and investments. It will also enable the Partnership to better understand and prioritise upcoming collecting and research efforts at the national and sub-national levels, providing confidence in supporters and collaborators about the outcomes we seek to achieve over the next decade of the Partnership.

Financial Report Review

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

Contents

- 41 Reviewer's Independence Declaration
- 42 Committee's Report
- 44 Income and Expenditure Statement
- 45 Assets and Liabilities Statement
- 46 Notes to the Financial Statements
- 48 True and Fair Position
- 49 Review Report
- 52 Certificate By Members of the Committee

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Reviewer's Independence Declaration

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

I declare that, to the best of my knowledge and belief, during the year ended 30 June 2022, there have been:

- 1. no contraventions of the independence requirements as set out in Associations Incorporation Act (ACT) 1991; and
- 2. no contraventions of any applicable code of professional conduct in relation to the review.

UL

Bernard Hardy

Unit G10 Quayside 50 Eastlake Parade Kingston ACT 2604

Dated: 1 September 2022

Committee's Report

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

Committee's Report

Your committee members submit the financial report of The Council of Heads of Australian Botanic Gardens Incorporated for the financial year ended 30 June 2022.

Committee Members

The names of committee members throughout the year and at the date of this report are:

Committee Member	Date Started	Position
Dale Arvidsson	18/03/2015	Ordinary Member
Alan Barrett	18/10/2018	Secretary / Ordinary Member
Brett Summerell	09/09/2013	Treasurer
Gary Davies	01/12/2015 (retired May 2022)	Ordinary Member
David Reid	21/06/2022	Ordinary Member
Tim Entwistle	04/03/2013	Ordinary Member
Bryan Harty	01/07/2013	Ordinary Member
Belinda Townend	10/06/2021	Proxy for Bryan Harty
Denise Ora	19/11/2020	Interim Chairperson
Michael Harvey	05/07/2021	Ordinary Member
Judy West	14/09/2011	Ordinary Member

Meetings of Committee Members

During the financial year, a number of committee meetings were held. Attendances by each of committee member during the year were as follows:

Committee Members Name	Number Eligible to Attend	Number Attended
Dale Arvidsson	3	3
Alan Barrett	3	3
Brett Summerell	3	3
David Reid	1	1
Tim Entwistle	3	3
Bryan Harty	3	1
Denise Ora	3	3
Michael Harvey	3	3
Judy West	3	2
Gary Davies	2	2
Belinda Townend	2	2

Principal Activities

The Council of Heads of Australian Botanic Gardens Incorporated is a not-for-profit Association established for the purpose of supporting:

- the protection, conservation and enhancement of Australian plants and their ecosystems.
- the provision of information and education.
- undertaking research about plants and plant communities.

Significant Changes

No significant change in the nature of these activities occurred during the year.

Operating Result

The loss after providing for income tax for the financial year amounted to (\$9,019.28).

Going Concern

This financial report has been prepared on a going concern basis which contemplates continuity of normal business activities and the realisation of assets and settlement of liabilities in the ordinary course of business. The ability of the association to continue to operate as a going concern is dependent upon the ability of the association to generate sufficient cashflows from operations to meet its liabilities. The members of the association believe that the going concern assumption is appropriate.

Signed in accordance with a resolution of the Members of the Committee on:

Denise Ora (Chairperson)

Dated: 5 September 2022

Broth Sumerel

Brett Summerell (Treasurer) Dated: 5 September 2022

Income and Expenditure Statement

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

	2022
Income	
Donations	3,607
Total Income	3,607
Gross Surplus	3,607
Expenditure	
Accounting Fees	4,542
Computer Expenses	4,426
Insurance	2,159
Printing & Stationery	1,500
Total Expenditure	12,627
Current Year Surplus/ (Deficit) Before Income Tax Adjustments	(9,019)
Current Year Surplus/(Deficit) Before Income Tax	(9,019)
Net Current Year Surplus After Income Tax	(9,019)

The accompanying notes form part of these financial statements. These statements should be read in conjunction with the attached compilation report.

Assets and Liabilities Statement

The Council of Heads of Australian Botanic Gardens Incorporated As at 30 June 2022

	NOTES	30 JUN 2022
Assets		
Current Assets		
Cash and Cash Equivalents		1,222,204
Trade and Other Receivables	3	1,100
Total Current Assets		1,223,304
Total Assets		1,223,304
Liabilities		
Current Liabilities		
Bank Overdraft		200
GST Payable		26,967
Total Current Liabilities		27,167
Other Current Liabilities		
Accrued Expenses		3,950
Total Other Current Liabilities		3,950
Non-Current Liabilities		
Other Non-Current Liabilities		
Projects		1,134,058
Total Other Non-Current Liabilities		1,134,058
Total Non-Current Liabilities		1,134,058
Total Liabilities		1,165,175
Net Assets		58,129
Member's Funds		
Capital Reserve		58,129
Total Member's Funds		58,129

The accompanying notes form part of these financial statements. These statements should be read in conjunction with the attached compilation report.

Notes to the Financial Statements

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

1. Summary of Significant Accounting Policies

The financial statements are special purpose financial statements prepared in order to satisfy the financial reporting requirements of the ACT Associations Incorporation Act 1991. The committee has determined that the association is not a reporting entity.

The financial statements have been prepared on an accruals basis and are based on historic costs and do not take into account changing money values or, except where stated specifically, current valuations of non-current assets.

The following significant accounting policies, which are consistent with the previous period unless stated otherwise, have been adopted in the preparation of these financial statements.

Property, Plant and Equipment (PPE)

Leasehold improvements and office equipment are carried at cost less, where applicable, any accumulated depreciation.

The depreciable amount of all PPE is depreciated over the useful lives of the assets to the association commencing from the time the asset is held ready for use.

Leasehold improvements are amortised over the shorter of either the unexpired period of the lease or the estimated useful lives of the improvements.

Impairment of Assets

At the end of each reporting period, the committee reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have been impaired. If such an indication exists, an impairment test is carried out on the asset by comparing the recoverable amount of the asset, being the higher of the asset's fair value less costs to sell and value in use, to the asset's carrying amount. Any excess of the asset's carrying amount over its recoverable amount is recognised in the income and expenditure statement.

Provisions

Provisions are recognised when the association has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured. Provisions are measured at the best estimate of the amounts required to settle the obligation at the end of the reporting period.

Cash on Hand

Cash on hand includes cash on hand, deposits held at call with banks, and other short-term highly liquid investments with original maturities of three months or less.

Accounts Receivable and Other Debtors

Accounts receivable and other debtors include amounts due from members as well as amounts receivable from donors. Receivables expected to be collected within 12 months of the end of the reporting period are classified as current assets. All other receivables are classified as non-current assets.

These notes should be read in conjunction with the attached compilation report.

Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the ATO is included with other receivables or payables in the assets and liabilities statement.

Financial Assets

Investments in financial assets are initially recognised at cost, which includes transaction costs, and are subsequently measured at fair value, which is equivalent to their market bid price at the end of the reporting period. Movements in fair value are recognised through an equity reserve.

Accounts Payable and Other Payables

Accounts payable and other payables represent the liability outstanding at the end of the reporting period for goods and services received by the association during the reporting period that remain unpaid. The balance is recognised as a current liability with the amounts normally paid within 30 days of recognition of the liability.

	2022
2. Cash on Hand	
Pay Pal	(200)
Westpac 224159 Project Management	1,082,826
Westpac 224167 Administration	131,093
Westpac 642852 Public Fund	8,286
Total Cash on Hand	1,222,004
	2022
3. Trade and Other Receivables	
Trade Receivables	
Other Debtors	1,100
Total Trade Receivables	1,100
Total Trade and Other Receivables	1,100

These notes should be read in conjunction with the attached compilation report.

True and Fair Position

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

Annual Statements Give True and Fair View of Financial Position and Performance of the Association

We, Denise Ora, and Brett Summerell, being members of the committee of The Council of Heads of Australian Botanic Gardens Incorporated, certify that –

The statements attached to this certificate give a true and fair view of the financial position and performance of The Council of Heads of Australian Botanic Gardens Incorporated during and at the end of the financial year of the association ending on 30 June 2022.

Denise Ora (Chairperson)

Dated: 5 September 2022

Broth Sumerel

Brett Summerell (Treasurer)
Dated: 5 September 2022



Review Report

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

Report on the Financial Report

We have reviewed the accompanying financial report, being a special purpose financial report, of The Council of Heads of Australian Botanic Gardens Incorporated which comprises the committee's report, the assets and liabilities statement as at 30 June 2022, the income and expenditure statement for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information, and the certification by members of the committee on the annual statements giving a true and fair view of the financial position and performance of the association.

Committee's Responsibility for the Financial Report

The Council of Heads of Australian Botanic Gardens Incorporated is responsible for the preparation and fair presentation of the financial report, and has determined that the basis of preparation described in Note 1 is appropriate to meet the requirements of the *Australian Charities and Not-for-profits Commission Act 2012* (ACNC Act) and is appropriate to meet the needs of the members. The committee's responsibility also includes such internal control that the committee determines is necessary to enable the preparation and fair presentation of a financial report that is free from material misstatement, whether due to fraud or error.

Reviewer's Responsibility

Our responsibility is to express a conclusion on the financial report based on our review. We conducted our review in accordance with Auditing Standard on Review Engagements ASRE 2415 *Review of a Financial Report: Company Limited by Guarantee or an Entity Reporting under the ACNC Act or Other Applicable Legislation or Regulation*, in order to state whether, on the basis of the procedures described, anything has come to our attention that causes us to believe that the financial report does not satisfy the requirements of Division 60 of the ACNC Act including: giving a true and fair view of the registered entity's financial position as at 30 June 2022 and its performance for the year ended on that date; and complying with the Australian Accounting Standards and the *Australian* Charities and Not-for-profits Commission Regulation 2013 (ACNC Regulation). ASRE 2415 requires that we comply with the ethical requirements relevant to the review of the financial report.

A review of a financial report consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, which is not an audit, nothing has come to our attention that causes us to believe that the financial report of The Council of Heads of Australian Botanic Gardens Incorporated does not satisfy the requirements of Division 60 of the *Australian Charities and Not-for-profits Commission Act 2012* including:

(a) giving a true and fair view of the registered entity's financial position as at 30 June 2021 and of its financial performance and cash flows for the year ended on that date; and

(b) complying with Australian Accounting Standards to the extent described in Note X, and Division 60 of the *Australian Charities and Not-for-profits Commission Regulation 2013.*



Basis of Accounting

Without modifying our opinion, we draw attention to Note 1 to the financial statements, which describes the basis of accounting. The financial report has been prepared to assist The Council of Heads of Australian Botanic Gardens Incorporated to meet the requirements of the ACNC Act. As a result, the financial report may not be suitable for another purpose.

1UL

Bernard Hardy

Unit G10 Quayside 50 Eastlake Parade Kingston ACT 2604

Dated: 1 September 2022

Certificate By Members of the Committee

The Council of Heads of Australian Botanic Gardens Incorporated For the year ended 30 June 2022

I, Denise Ora, c/o Australian National Botanic Gardens, Clunies Ross Street, ACTON ACT 2601 certify that:

- 1. I attended the annual general meeting of the association held on 5 September 2022.
- 2. The financial statements for the year ended 30 June 2022 were submitted to the members of the association at its annual general meeting.

Denise Ora (Chairperson) Dated: 5 September 2022

Acknowledgements

The Australian Seed Bank Partnership would like to thank all of our supporters.

The financial support we receive through grants, philanthropy and public donations makes a significant contribution to conserving Australia's native plant diversity. A special thank you to all the organisations and individuals who provided funding and donated to the Partnership this year.

Our Partner and Associate organisations also provide crucial in-kind contributions that make what we do possible. The time, effort and expertise that is provided by Partner organisations for the love of native plants makes a tangible difference in what we can achieve.

Our work benefits greatly from the invaluable dedication and skills of volunteers who join us in

the field and in seed banks to secure and process the seeds we collect. Their generous contributions ensure our native plants are provided with the best chance to survive in an uncertain future, and allow our seed scientists to focus their time on solving complex challenges with seed dormancy and germination.

Anyone in Australia or around the world can help us in our mission to conserve Australia's native plant diversity. Please contact us if you have an interest in supporting our work into the future.

The Partnership also acknowledges the Partners and Sponsors of the Australasian Seed Science Conference 2021. See our *Year in review* for a full list of organisations that helped to make the conference a success.

Organisation/individual	Support provided
Australian Government	Funding for the:
Department of Climate Change, Energy, the Environment and Water	 'Banking on Seeds for Bushfire Recovery' project through Tranche 2 of the 'Wildlife and Habitat Bushfire Recovery Program' 'Island, Alps and Forests' project through the 'Regional Bushfire Recovery for Multiregional Species and Strategic Projects Program'
WWF-Australia & Botanica	Funding for The Rare Bloom Project™
by Airwick	
Woolworths Group	Additional funding to support The Rare Bloom Project™
UK Government	Provision of funding for the 'Emergency Seed Collecting Fund to Save
	Australian Native Flora' project
The Royal Botanic	Funding for the:
Gardens, Kew, UK	 'Australian Bushfire Emergency Assessment and Collection' project
	\cdot 'Emergency Seed Collecting Fund to Save Australian Native Flora' project
Garfield Weston	Funding for the 'Australian Bushfire Emergency Assessment and
Foundation	Collection' project
Proctor & Gamble	Funding for the 'Protecting Plants with Proctor & Gamble' project
March4Earth	Funding as an environmental champion for the 2022 March4Earth campaign
Director of National Parks	Hosting the Partnership Secretariat
Hogan Lovells	Pro bono legal services
Anna Moreing	Volunteer with the Partnership Secretariat

Get involved

Check out our website to learn more about our initiatives





Partner with us to conserve Australian native plants

Donate to support our efforts





Connect with us on social media to follow our journey

Colobanthus nivicola flowers, Kosciuszko National Park (Image: Tom North)

Your donations will make a difference

People like you enable the Partnership to secure plant species for generations to come. With your help we can find and collect our native flora, and invest in world-leading science to unlock their germination secrets. Our nationwide network of seed banks can then safely store these precious genetic parcels of hope until they are needed for the restoration of Australia's landscapes.

Your donation will support the work of the Partnership. Our governing body, (The Council of Heads of Australian Botanic Gardens) has established a Public Fund Committee to oversee the management of donations, so you can rest assured that your gift will go directly to the conservation of Australia's native flora. Donating to the Partnership is simple when using the secure PayPal portal on our website. We welcome contributions of any size and can work with you to design a package that suits the parts of our work that you would like to support.

CHABG Inc. (trading as the Australian Seed Bank Partnership) is a registered charitable organisation,

with deductible-gift recipient status (item 1), and operates the Council of Heads of Australian Botanic Gardens Public Fund. Donations of \$2 and above are tax deductible. ABN: 58 153 442 365



Contact us

Australian Seed Bank Partnership c/o Australian National Botanic Gardens GPO Box 1777 Canberra ACT 2601 Australia

coordinator@seedpartnership.org.au +61 (0)2 6250 9473 seedpartnership.org.au

(a) AustralianSeedBankPartnership
 (a) SeedPartnership
 (a) SeedPartnership

Chorizema humile (the Prostrate flame pea) is a Threatened plant currently found only in three distinct population clusters in Western Australia (Image: Andrew Crawford).

